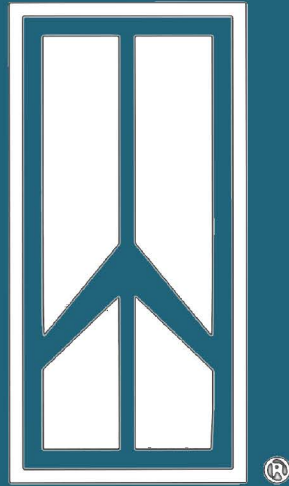


1970

F-85 / Cutlass / 4-4-2



Oldsmobile

ASSEMBLY  
MANUAL

PRODUCT INFORMATION MANUAL

**INTRODUCTION**  
**1970 PRODUCT INFORMATION MANUAL**

404411 F-85 SERIES

404412 FULL SIZE CAR SERIES

404413 TORONADO SERIES

THIS MANUAL CONTAINS REDUCED COPIES OF PICTORIAL INSTALLATION DRAWINGS, CHARTS, PROCEDURES, AND OTHER DRAWINGS USED FOR THE ASSEMBLY OF 1970 OLDSMOBILES.

IN ORDER TO PROVIDE A LOGICAL PRODUCT MANUAL FOR THE FINAL ASSEMBLY PLANTS, THE 1970 INFORMATION HAS BEEN ARRANGED TO SHOW BOTH THE STANDARD CAR AND ALSO THE ACCESSORY COMPONENT PARTS AND FASTENINGS IN THE AREAS OF THE CAR WHERE THEY ARE ASSEMBLED. IF DIFFICULTY IS EXPERIENCED IN LOCATING A PART IN THE MANUAL, THERE IS A U.P.C. ORIENTED INDEX FOLLOWING THIS INTRODUCTION WHICH LISTS PARTS AND WHERE THEY MAY BE FOUND IN THE MANUAL.

THIS MANUAL UTILIZES THE BASIC GROUPS AND ELIMINATES THE NEED OF AN OPTION SECTION. THE ARRANGEMENT OF THE PICTORIAL VIEWS ARE IN AGREEMENT WITH ACTUAL PRODUCTION PRACTICES WHEREVER POSSIBLE.

EACH MANUAL IS RELEASED UNDER A BLANKET PART NUMBER FOR ITS PARTICULAR SERIES. WHILE THE MAJORITY OF THE DRAWINGS IN THE MANUAL APPEAR UNDER THE BLANKET OR BASIC MANUAL PART NUMBER, OTHER DRAWINGS, WHICH ARE RELEASED UNDER ANOTHER NUMBER, ARE ALSO INTEGRATED WITH THE REGULAR MANUAL PAGES. THESE DRAWINGS SHOULD BE FILED IN THE MANUAL BY THEIR SECTION AND PAGE NUMBER WITH THE REGULAR MANUAL PAGES.

ALL THE PARTS OR ITEMS DEPICTED IN THE MANUAL HAVE BEEN INDIVIDUALLY RELEASED IN THEIR RESPECTIVE U.P.C. GROUPS PRIOR TO THEIR MANUAL ISSUANCE (UNLESS OTHERWISE NOTED). THEREFORE, ONCE THE INITIAL RELEASE FOR THE MANUAL HAS BEEN ISSUED, SUBSEQUENT RELEASES FOR EACH PAGE WITH A MANUAL NUMBER ARE NOT WRITTEN EACH TIME THE PAGE IS ISSUED.

CERTAIN SYMBOLS ARE USED THROUGHOUT THE MANUAL TO FACILITATE MANUAL USAGE. THESE SYMBOLS ARE:

- △ TORQUE SYMBOL
- Ⓐ REVISION SYMBOL
- ② REFERENCE OR PART NOTE SYMBOL
- Ⓛ LUBRICATION MATERIAL SYMBOL

A TRANSMITTAL SHEET IS ISSUED WITH NEW OR REVISED MANUAL SHEETS, ITEMIZING THE NUMBER OF MANUAL PAGES.

EVERY EFFORT WILL BE MADE TO HAVE THE DRAWINGS IN THE MANUAL REFLECT THE LATEST DESIGN AND INSTALLATION CHANGES. HOWEVER, FOR COMPLETE DETAILED INFORMATION RELATIVE TO THE APPEARANCE OF THE PARTS OR ASSEMBLIES, THE ACTUAL DRAWINGS OF THE PARTS OR ASSEMBLIES SHOULD BE USED.

IF ANY ERRORS OR OMISSIONS ARE FOUND IN THE BOOK, PLEASE NOTIFY:

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**EXPLANATION OF THE MANUAL GROUPING**

- INDEX NO GROUP NUMBER: PLACE IN THE FRONT PART OF YOUR MANUAL
- GROUP 0 GENERAL REFERENCES, CHARTS, LAYOUTS AND SPECIAL DRAWINGS.
- GROUP 1-1 ITEMS GENERALLY DEPICTED INSIDE THE FRONT PART OF THE BODY BEFORE THE INSTRUMENT PANEL IS ASSEMBLED.
- GROUP 1-2 ITEMS INSTALLED ON THE FRONT OF THE DASH PANEL AND RELATED AREAS.
- GROUP 1-3 INSTRUMENT PANEL AND RELATED PARTS.
- GROUP 1-4 MISCELLANEOUS BODY PART ITEMS, INCLUDING THOSE IN TRUNK AREA.
- GROUP 1-5 HOSE AND CABLE ROUTINGS.
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- GROUP 6-1 V-8 ENGINE DRESS - FINAL ASSEMBLY.
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- GROUP 7 TRANSMISSION AND RELATED PARTS.
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VACUUM -		
HOSE ROUTING	5	110
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A

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OPTION LIST, SEE ADVANCE  
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70 - 514.

B-C

FOR ENGINEERING U. P. C.  
OPTION LIST, SEE ADVANCE  
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E

FOR ENGINEERING U. P. C.  
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FOR CANADIAN BUILT MODEL SPECIAL  
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GENERAL TORQUE SPECIFICATIONS

ASSEMBLY LINE INSTALLATION TORQUE

THIS IS THE TORQUE ON PRODUCT INFORMATION DRAWINGS AND APPLIES TO THE SPECIFIC FASTENER BEFORE THE CAR PASSES THE TEST ROLLS AT THE END OF THE ASSEMBLY LINE.

THE ASSEMBLY LINE INSTALLATION TORQUE ALSO APPLIES TO ANY REPAIR LINE INSTALLATION.

AUDIT TORQUE ON COMPLETED CARS

THIS TORQUE APPLIES TO THE FINISHED PRODUCT AFTER IT HAS PASSED THE ASSEMBLY LINE TEST ROLLS AND UP TO THE TIME THE CAR RECEIVES ITS GATE RELEASE. THIS TORQUE RANGE IS INTENDED TO RECOGNIZE NORMAL CHANGES IN THE ASSEMBLY LINE INSTALLATION TORQUE AFTER THE CAR HAS BEEN DRIVEN. THEREFORE, THE ASSEMBLY LINE INSTALLATION TORQUE MUST BE WITHIN THE SPECIFIED RANGES IN ORDER TO MEET THE AUDIT TORQUE RANGE.

NOTE

PRODUCT ENGINEERING CAN ASSURE PRODUCT RELIABILITY ONLY WHEN ASSEMBLY LINE INSTALLATION TORQUES ARE WITHIN THE SPECIFIED RANGES. AUDIT TORQUE IS IN NO WAY INTENDED TO RELAX OR AFFECT ASSEMBLY LINE INSTALLATION TORQUE.

R. L. KIRKPATRICK  
FASTENER ENGINEER

TITLE											CHART - GENERAL WRENCH TORQUE SPECIFICATIONS									
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OLDSMOBILE DIVISION GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

APPLICATION	AUDIT TORQUE ON COMPLETED CARS	APPLICATION	AUDIT TORQUE ON COMPLETED CARS
<b>GROUP #1</b>		<b>GROUP #8</b>	
<u>BODY MOUNTING</u>		<u>FUEL TANK</u>	
ALL BOLTS	25 - 55 LB. FT.	FUEL TANK TO UNDERBODY (EXC. S.W.)	(SEE NOTE)
<b>GROUP #3</b>		<b>GROUP #9</b>	
<u>FRONT SUSPENSION</u>		<u>STEERING</u>	
LOWER ARM TO FRAME BRACKET	60 - 110 LB. FT.	STEERING COLUMN TO STEERING GEAR	10 - 30 LB. FT.
LOWER ARM TO FRAME FRONT CROSS BAR	60 - 110 LB. FT.	★ TIE ROD END TO INTERMEDIATE ROD	25 - 50 LB. FT.
BUSHING TO UPPER ARM SHAFT	35 - 70 LB. FT.	TIE ROD ADJUSTING CLAMP BOLTS	10 - 35 LB. FT.
UPPER ARM SHAFT TO FRAME BRACKET	35 - 65 LB. FT.	PITMAN & IDLER ARMS TO INTERMEDIATE ROD	25 - 50 LB. FT.
★ KNUCKLE TO UPPER CONTROL ARM	30 - 90 LB. FT.	IDLER ARM TO FRAME	30 - 95 LB. FT.
★ KNUCKLE TO LOWER CONTROL ARM	55 - 125 LB. FT.	★ TIE ROD END TO STEERING ARM	25 - 50 LB. FT.
<b>GROUP #4</b>		PITMAN ARM TO STEERING GEAR	100 - 200 LB. FT.
<u>DIFFERENTIAL</u>		POWER STEERING PULLEY TO PUMP	45 - 75 LB. FT.
RING GEAR TO DIFFERENTIAL CASE	75 - 85 LB. FT.	STEERING GEAR TO FRAME	45 - 95 LB. FT.
PROPELLER SHAFT TO COMPANION FLANGE	10 - 20 LB. FT.	STEERING WHEEL TO SHAFT	20 - 40 LB. FT.
DIFFERENTIAL CARRIER BEARING CAPS TO CARRIER	60 - 75 LB. FT.	<b>GROUP #10</b>	
<b>GROUP #5</b>		<u>WHEELS</u>	
<u>REAR SUSPENSION</u>		WHEEL TO HUB	50 - 90 LB. FT.
UPPER ARMS TO FRAME CROSS MEMBER	60 - 110 LB. FT.	<b>GROUP #11</b>	
UPPER ARMS TO DIFFERENTIAL CARRIER	60 - 110 LB. FT.	<u>HOOD</u>	
LOWER ARM ASSEMBLY TO FRONT BRACKET	60 - 110 LB. FT.	LATCH ASSEMBLY TO RADIATOR SUPPORT ASSEMBLY	10 - 25 LB. FT.
LOWER ARM ASSEMBLY TO REAR BRACKET	60 - 110 LB. FT.	(A) FENDER FILLER PLATES, FAN SHROUDS, STONE SHIELDS, ETC., WHERE SCREW #3960314 WITH AN INSTALLATION TORQUE OF 15 - 22 LB. FT. IS USED IN ATTACHMENT OF PLASTIC COMPONENTS, THE AUDIT TORQUE WILL ALSO BE USED AS THE CHECKING TORQUE AT INSTALLATION.	8 LB. FT. MIN.
<b>GROUP #5</b>		<b>GROUP #12</b>	
<u>BRAKES</u>		(C)	
ANCHOR BOLT - BACKING PLATE TO KNUCKLE	75 - 130 LB. FT.	NOTE:	★ AFTER REACHING MINIMUM TORQUE REQUIRED, NUT MUST ALWAYS BE TIGHTENED FURTHER, NEVER BACK OFF, TO INSERT COTTER PIN. MAXIMUM AUDIT TORQUE NOT TO BE EXCEEDED FOR RE-INSTALLATION OF COTTER PIN AFTER AUDIT.
BRAKE TO AXLE HOUSING	20 - 50 LB. FT.	24 LB. IN. MIN. & BOLT MUST EXTEND THROUGH NUT A MINIMUM OF 1 1/4 INCH. THIS TORQUE ALSO USED FOR CHECKING TORQUE AT INSTALLATION.	
PEDAL BRACKET TO DASH PANEL	15 - 30 LB. FT.		
MASTER CYLINDER TO PEDAL BRACKET	15 - 30 LB. FT.		
(B) PARKING BRAKE ADJUSTING NUT	36 - 150 LB. IN.		

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										NOTE ADDED				
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**CRUISE CONTROL AUDIT SPECIFICATIONS**

1. TURN DASH CRUISE SWITCH TO "ON" POSITION. CHECK THAT DASH SIGNAL LIGHT IS "ON".
2. DRIVE CAR AT STEADY SPEED OF 50 M. P. H.
3. PUSH ENGAGE BUTTON AND RELEASE. CRUISE CONTROL SHOULD ENGAGE SMOOTHLY AT 50 M. P. H.  $\pm 2$   
 $- 0$  M. P. H.
4. CHECK ENGAGE BUTTON DISENGAGEMENT. PUSH BUTTON TO FULL TRAVEL AND ALLOW CAR SPEED TO DROP TO 40 M. P. H. AND RELEASE BUTTON SLOWLY. CRUISE CONTROL SYSTEM SHOULD LOCK IN AT 40 M. P. H.
5. A. CHECK FOR CRUISE RELEASE BY DEPRESSING BRAKE PEDAL 3/4" TO 1".  
 B. CHECK LOW SPEED CUTOUT: DRIVE CAR AT SPEED OF 20 M. P. H. PUSH ENGAGE BUTTON AND RELEASE. CRUISE CONTROL SHOULD NOT ENGAGE.
6. TURN DASH SWITCH TO "OFF" POSITION. CHECK THAT DASH LIGHT IS "OFF".

		TITLE		CHART - CRUISE CONTROL AUDIT SPECIFICATIONS					
DATE	SYM	REVISION	DR. OR. APPR.	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	
10/28/68	B	SPEC. NO. 5 REV.	GA	OCT. 5, 1968	1970		0	14	
1/9/69	A	REISSUED ON NEW FORMAT NO CHANGE	GA	CHECKED John Ames					
				APPR. A. HAAS					
				APPR. T. P. FONAD					
						REV.		PART NO.	
						A-B-C-E		404411-2-3	

**EVAPORATION EMISSION CHECKING PROCEDURE (35NA9)**

**1. PRESSURE LEAK DOWN TEST**

THIS TEST CONSISTS OF PRESSURIZING THE FUEL SYSTEM AT THE CANISTER BETWEEN 1.65 AND 2.25 PSIG. AIR PRESSURE. A PRESSURE DROP OF NOT GREATER THAN .125 PSIG. IN 30 SECONDS IS DEFINED AS A LEAK-FREE SYSTEM. TO MAKE SURE THE SYSTEM HAS NO PLUGGED LINES IN THE VENTING SYSTEM, THE GAS CAP IS REMOVED TO MAKE SURE PRESSURE WAS BUILT IN THE TANK.

**2. VISUAL INSPECTION**

INSPECT SYSTEM FOR COMPLETE ASSEMBLY OF PARTS AS RELEASED AND FOR PROPER LOCATION.

DATE	SYM	REVISION	DR	CHK	DATE	SYM	REVISION	DR	CHK	DATE	SYM	REVISION	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
													EVAPORATION EMISSION AUDIT	1970		0	15
													DATE: <i>SEPT 12 1969</i>				
													DR BY: <i>B. BREYER</i>				
													CHECKED: <i>John P. ...</i>				
													APPR. <i>B. Breyer</i>		SERIES: <i>A-P-C-E</i>	PART NO.:	<i>407510</i>

PAINT STRIPES			
SERIES	LOCATION	LAYOUT NO.	NOTES
A	BODY SIDE	406101	STD. ON 4400
	BODY SIDE	406787	W30, W31
	REAR DECK PAD	405623	STD. ON 4400
	HOOD	406102	(Y73) ON 35, 3677, 87
	HOOD PAINTING	406736	W30, W31
B/C	BODY SIDE	406010	STD. ON 6600
	BODY SIDE	406435	(Y70) ON 5437, 67, 6437
	DECK LID	405141	STD. ON 6600
	UPPER BODY SIDE	402708	(Y70) ON 84, 8600
	DECK LID	405626	(Y70) ON 84, 8600
E	UPPER BODY SIDE	406100	(Y70)
	LOWER BODY SIDE	406888	W34

				TITLE				CHART - PAINT STRIPE INFORMATION					
				DATE <i>FEB. 11, 1969</i>				FIRST USED		OLDSMOBILE PRODUCT		MANUAL SEC. PAGE	
				DR BY <i>J. ACKERT</i>				1970		INFORMATION MANUAL		O 16	
<i>7965 C. REISSUED ON NEW</i>				CHECKED <i>JOHN AMES</i>						SERIES		PART NO.	
<i>FORMAT - NO CHANGE</i>				APPR. <i>JOE POHL 2/12</i>						A-B-C-E		404411-2-3	
DATE	SYM	REVISION	DR.	CK.	APPR.								

**COMFORTRON DE-ICE AND DEFROST  
FUNCTIONAL CHECK - B, C, E SERIES**

1. IDLE ENGINE FOR TWO (2) MINUTES OR UNTIL THERMOSTAT OPENS.
2. SET CONTROL TO DE-ICE POSITION.
3. SET TEMPERATURE DIAL TO 65.
4. CHECK DEFROSTER OUTLETS AIR FLOW.
  - A. FAST AIR FLOW FROM BOTH OUTLETS.
  - B. MAIN AIR FLOW FROM DEFROSTERS, SOME FLOW FROM HEATER, NONE FROM A/C OUTLETS.
5. CHECK AIR TEMPERATURE - WARM.
6. SET CONTROL TO DEFROST POSITION.
7. CHECK DEFROSTER OUTLETS AIR FLOW - FAST.
8. CHECK AIR TEMPERATURE - COOL.

**AIR CONDITIONING DEFROSTER  
FUNCTIONAL CHECK - ALL SERIES**

1. IDLE ENGINE FOR TWO (2) MINUTES OR UNTIL THERMOSTAT OPENS.
2. SET CONTROL TO DEFROST POSITION.
3. CHECK DEFROSTER OUTLETS AIR FLOW.
  - A. BLOWER SWITCH ON "LO" - SLIGHT AIR FLOW.
  - B. SWITCH ON M1 - MODERATE AIR FLOW.
  - C. SWITCH ON M2 - MODERATE AIR FLOW.
  - D. SWITCH ON "HI" - FAST AIR FLOW FROM BOTH OUTLETS (MAIN AIR FLOW FROM DEFROSTERS, SOME AIR FLOW FROM HEATER).
4. CHECK AIR TEMPERATURE.
  - A. TEMPERATURE LEVER TO RIGHT STOP - WARM AIR.
  - B. TEMPERATURE LEVER TO LEFT STOP - COOL AIR.

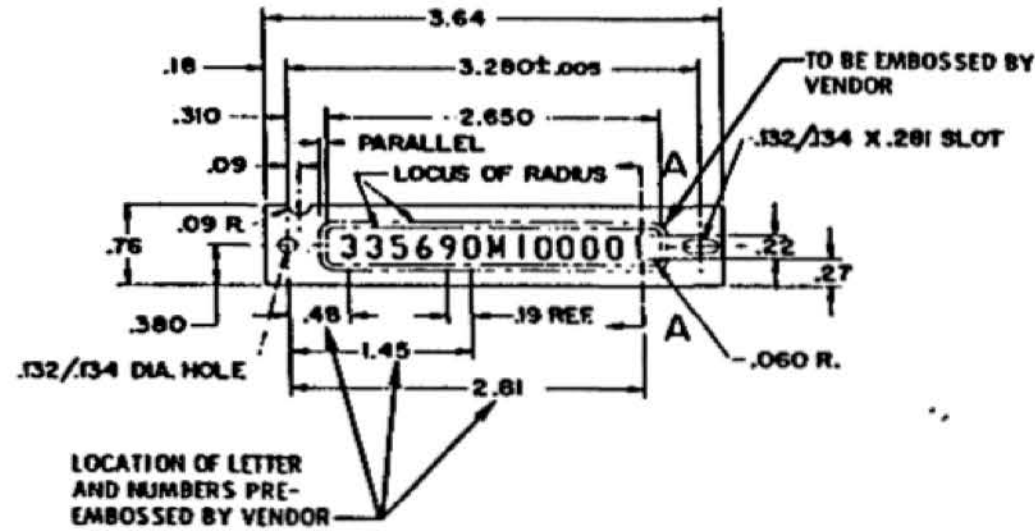
**STANDARD HEATER DEFROSTER  
FUNCTIONAL CHECK - ALL SERIES**

1. IDLE ENGINE FOR TWO (2) MINUTES OR UNTIL THERMOSTAT OPENS.
2. SET CONTROL TO DEFROST POSITION.
3. CHECK DEFROSTER OUTLETS AIR FLOW.
  - A. SWITCH ON "LO" - SLIGHT AIR FLOW.
  - B. SWITCH ON "MED" - MODERATE AIR FLOW.
  - C. SWITCH ON "HI" - FAST AIR FLOW FROM BOTH OUTLETS (MAIN AIR FLOW FROM DEFROSTERS, SOME AIR FLOW FROM HEATER).
4. CHECK AIR TEMPERATURE.
  - A. TEMPERATURE LEVER IN RIGHT STOP - WARM AIR.
  - B. TEMPERATURE LEVER TO LEFT STOP - COOL AIR.

				TITLE CHART - DEFROSTER FUNCTIONAL CHECKS			
DATE		OCT. 1, 1968		FIRST USED		1970	
DR BY		GALE GRAY		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL DEC. PAGE	
CHECKED		JOHN AMES		SERIES		O 18	
DATE		7-29-68 A		REISSUED ON NEW FORMAT - NO CHG.		PART NO. 404411-2-3	
REVISION		KL FT		APPR. H. SCHATTENBERG			
DATE	SYM	REVISION	DR.	CK.	APPR.		

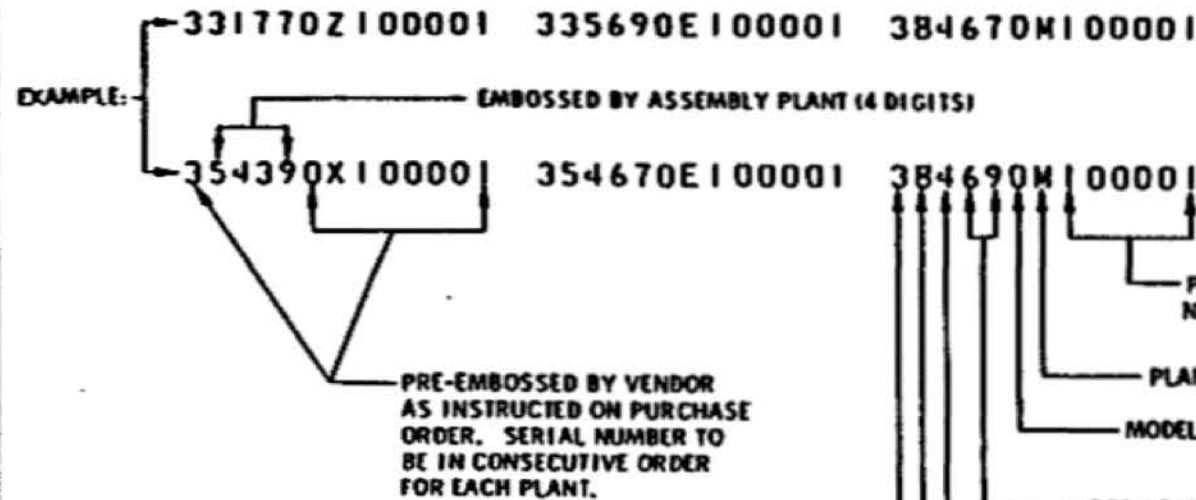
**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

PART NO.	MODEL YEAR & PLANT IDENTITY	PLANT	STARTING SERIAL NO.
★1385614	NONE		BLANK
405188	OM	LANSING, MICHIGAN	100001
405189	OZ	FREMONT, CALIFORNIA	100001
405190	OX	FAIRFAX, KANSAS	100001
405191	OE	LINDEN, NEW JERSEY	100001
405192	OC	SOUTH GATE, CALIFORNIA	100001
405193	OD	DORAVILLE, GEORGIA	100001
406476	OG	FRAMINGHAM, MASS.	100001



ALL PLANTS TO BE FURNISHED PRE-EMBOSSED PLATES

NAME	SERIES	SERIES & ENGINE NO. (TO BE EMBOSSED AT ASSEMBLY PLANTS AS THE SECOND & THIRD PREFIX DIGIT)
F85 L6 ENGINE	33100	31
F85 V8 ENGINE	33200	32
CUTLASS L6 ENGINE	33500	35
CUTLASS V8 ENGINE	33600	36
CUTLASS SUPREME	34200	42
"442" V8 ENGINE	34400	44
CUSTOM VISTA CRUISER	34800	48
DELTA 88	35400	54
DELTA 88 CUSTOM	36400	64
DELTA 88 ROYALE	36600	66
NINETY-EIGHT SERIES	38400	84
NINETY-EIGHT LUXURY	38600	86
DRIVEAWAY CHASSIS (LANSING ONLY)	39800	98



BCDEKMRXZ  
1234567890

SHAPE MANDATORY ON THESE LETTERS & NUMBERS

MATERIAL:  
STEEL - SAE 1008-1010  
.014 STOCK

PRODUCTION SAMPLE TO BE APPROVED BY PRODUCT ENGINEERING FOR OLDSMOBILE PARTS.

BODY TYPE	BODY CODE
STATION WAGON - 2 SEAT	35
HARDTOP COUPE (5400-6400)	37
HOLIDAY SEDAN	39
HARDTOP COUPE (6600)	47
STATION WAGON - 2 SEAT (EXTENDED)	55
HARDTOP COUPE (4200-8400)	57
STATION WAGON - 3 SEAT (EXTENDED)	65
CONVERTIBLE	67
4 DOOR SEDAN	69
CLUB COUPE (F-85) (EXC. 4200)	77
HARDTOP COUPE (F-85) (EXC. 4200)	87
SHORT SILL COWL	60

FINISH:  
PAINT FLAT BLACK PER G.M. 4350-M, CLASS CD.

DOCUMENTATION REQUIRED

REV.	DATE	DESCRIPTION	BY	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
1		ADDED E, LINE REVISED	KLJ	CHART - VEHICLE IDENTIFICATION NUMBER PLATE	1970			20
2		ADDED D WRS 405940	KLJ	DATE NOV 29, 1968				
3		ADDED C 405940 ADDED	LSJ	OR BY DON MALIN				
4		ADDED B NOTE ADDED	LSJ	CHECKED BY				
5		ADDED A NOTE ADDED	KLJ	APPR. [Signature]				

SERIES A-B-C PART NO. 405187

**1. VEHICLE IDENTIFICATION NUMBER**

ON EMBOSSED PLATE LOCATED ON THE BODY LEFT HAND UPPER INSTRUMENT PANEL. SEE SECTION "D", CHART 405187, PAGE 20 FOR VEHICLE PLATE STARTING SERIAL NUMBERS.

**2. ENGINE UNIT NUMBER: (FOR MANUFACTURING AND SERVICE USE)**

**V-8 ENGINES:**

UNIT NUMBER IS STAMPED ON THE ENGINE OIL FILL TUBE. THE ENGINE CODE TAPE IS INSTALLED DIRECTLY ABOVE THE ENGINE NUMBER. THE COMPLETE ENGINE NUMBER SHALL CONSIST OF THE ENGINE CODE FOLLOWED BY THE SEVEN DIGIT NUMBER.

STARTING ENGINE UNIT NUMBERS: SEE SECTION 6-1, CHART 405775, PAGE 80  
EXAMPLE: QA00000001

**L-6 ENGINES:**

THERE IS NO L-6 ENGINE UNIT NUMBER. A DATE CODE IS STAMPED ON A PAD ON THE RIGHT HAND SIDE OF THE CYLINDER BLOCK TO THE REAR OF THE DISTRIBUTOR.

EXAMPLES: F0204VA, F1112VB  
"F" WILL DESIGNATE FLINT MOTOR PLANT. THE FIRST TWO (2) DIGITS DESIGNATE THE MONTH AND THE SECOND TWO (2) DIGITS DESIGNATE THE DAY THE UNIT WAS PRODUCED (0207 - FEBRUARY 4, 1112 - NOVEMBER 12.) THE LAST TWO (2) LETTERS DESIGNATE THE TYPE OF ENGINE.

VB - SMT WITH C60 OR Y72                      VF - AUTO. TRANSMISSION WITH C60 OR Y72  
VJ - SMT EXPORT ENGINE                        VK - AUTO. TRANSMISSION EXPORT ENGINE

**3. TRANSMISSION UNIT NUMBER: (FOR MANUFACTURING AND SERVICE USE)**

**MANUAL TRANSMISSION:**

DEPENDING ON THE TYPE OF 3-SPEED OR 4-SPEED MANUAL TRANSMISSION, THE DATE CODE AND SERIAL NUMBER WILL BE AS FOLLOWS:

STANDARD SMT - DATE CODE STAMPED ON LEFT HAND SIDE ON BOSS BELOW THE SIDE COVER.

EXAMPLE: S0S08 (S - SAGINAW TRANSMISSION PLANT, 0 - 1970, S - NOVEMBER, 05 - 5TH DATE)

MOC11 (MUNCIE TRANSMISSION PLANT, 0 - 1970, C - MARCH, 11 - 11TH DAY)

MONTH CODES FOR THE ABOVE ARE AS FOLLOWS:

A - JANUARY                      E - MAY                              P - SEPTEMBER  
B - FEBRUARY                    H - JUNE                            R - OCTOBER  
C - MARCH                        K - JULY                            S - NOVEMBER  
D - APRIL                         M - AUGUST                        T - DECEMBER

1" HIGH CODE LETTERS TO ALSO APPEAR ON THE R.H. SIDE OF THE CASE.

M14 HEAVY DUTY MANUAL 3-SPEED TRANSMISSION - SERIAL PLATE LOCATED ON THE R.H. SIDE OF THE CASE.

EXAMPLE: HEGAF (MODEL CODE)  
10001 (SERIAL NUMBERS - CONSECUTIVE STARTING WITH 10001.)

2" HIGH CODE LETTERS DB TO ALSO APPEAR ON R.H. SIDE OF THE EXTENSION.

M20 AND M21 MANUAL 4-SPEED TRANSMISSION - DATE CODE STAMPED ON THE REAR R.H. SIDE OF CASE, OUTBOARD OF THE REAR FACE FLANGE.

EXAMPLE: POR03 (P - MUNCIE TRANSMISSION PLANT, 0 - 1970, R - OCTOBER, 03 - 3RD DAY.)

MONTH CODES SAME AS FOR STANDARD SMT.

1" HIGH CODE LETTERS TO ALSO APPEAR ON THE R.H. SIDE OF THE CASE.

TURBO HYDRA-MATIC 350 TRANSMISSION YEAR, MODEL AND DATE CODE INFORMATION IS STAMPED ON THE BAND SERVO COVER WHICH IS LOCATED ON THE R.H. SIDE OF THE TRANSMISSION. THIS INFORMATION CONSISTS OF TWO DIGITS FOR THE MODEL YEAR, TWO LETTERS FOR THE MODEL CODE, THREE DIGITS TO INDICATE THE DAY OF PRODUCTION THAT THE TRANSMISSION WAS BUILT AND N OR D TO INDICATE NIGHT OR DAY SHIFT.

TURBO HYDRA-MATIC 400 TRANSMISSION SERIAL NUMBER IS STAMPED ON A PLATE LOCATED ON THE RIGHT HAND SIDE OF THE CONVERTER HOUSING.

EXAMPLES: 700G1001, 700L1001, ETC.

FOR MODEL CODE AND TRANSMISSION USAGE, SEE SECTION "7", CHART 405690, PAGE 98.

**4. REAR AXLE ASSEMBLY NUMBERS (FOR MANUFACTURING AND SERVICE USE)**

A. DATE CODE IS STAMPED ON THE CARRIER COVER AT TOP. MONTH IS CODED AND ACTUAL NUMBER IS USED FOR THE DAY BUILT.

A - JANUARY                      E - MAY                              K - SEPTEMBER  
B - FEBRUARY                    G - JUNE                            L - OCTOBER  
C - MARCH                        H - JULY                            M - NOVEMBER  
D - APRIL                         J - AUGUST                        N - DECEMBER

EXAMPLE: AXLE BUILT OCTOBER 10 WOULD BE STAMPED L10.

B. RATIO CODE IS STAMPED ON THE REAR OF THE R.H. AXLE TUBE ADJACENT TO THE CARRIER. SEE SECTION 4, CHART 404524, PAGE 93 FOR CODES AND RATIO.

**5. PROTECTIVE NUMBERS:**

A. THE LAST EIGHT (8) SYMBOLS OF THE VEHICLE NUMBER ARE STAMPED AT SEVERAL LOCATIONS ON EVERY CAR.

LOCATIONS OF THIS NUMBER MAY BE OBTAINED BY CONTACTING EITHER OF THE FOLLOWING OFFICES: PRODUCTION MANAGER OR STANDARDS ENGINEER  
LANSING, MICHIGAN

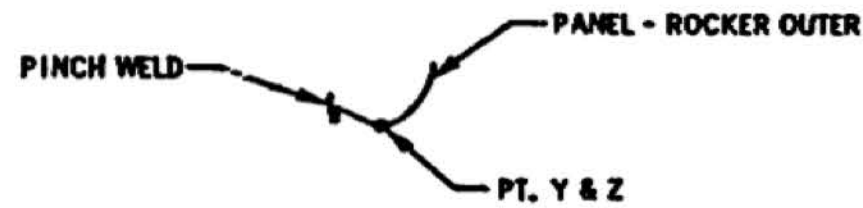
B. IN ADDITION TO THESE CONFIDENTIAL NUMBERS, EACH VEHICLE ENGINE AND TRANSMISSION MUST BE STAMPED WITH A DERIVATIVE OF THE VEHICLE IDENTIFICATION NUMBER. THIS NUMBER OMITTS THE SERIES AND BODY STYLE FROM THE VEHICLE IDENTIFICATION NUMBER AS FOLLOWS:

VEHICLE IDENTIFICATION NUMBER - 336690M10001  
ENGINE AND TRANSMISSION PROTECTIVE NUMBER - 30M10001

SEE SECTION "D", CHART 404411-2-3, PAGE 116 FOR LOCATION OF EACH COMPONENT

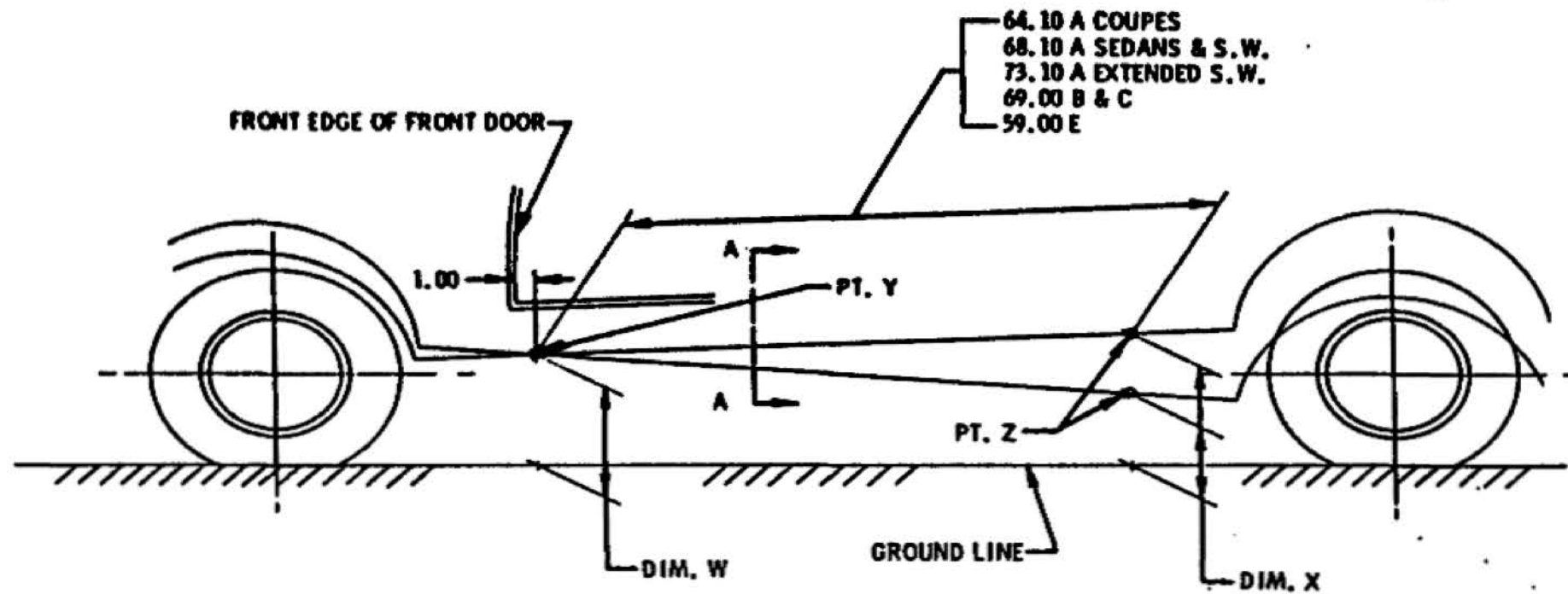
TITLE				CHART - VEHICLE IDENTIFICATION				
DATE	JUNE 25, 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	0	PAGE	22
DR. BY	BOB HOST	CHECKED		SERIES	A	PART NO.	404411	
APPR.		APPR.						
DATE	SYM	REVISION	DR.	CL.	APPR.			





SECTION A-A

← FRONT OF CAR →



CHECK POINTS Y & Z LOCATED AS SHOWN ON BOTTOM OF ROCKER PANEL.

ROCKER SPECIFICATION: DIM. X - DIM. W  $\begin{matrix} + 1.00 \\ - 1.80 \end{matrix}$  AT 5 PASSENGER LOAD AND FULL TANK OF GASOLINE (300 LB. FRONT SEAT & 450 LB. REAR SEAT)

ROCKER PANEL SLOPE MUST BE MAINTAINED WITHIN LIMITS SHOWN IN ORDER TO COMPLY WITH MOTOR VEHICLE SAFETY STANDARD NO. 111

				TITLE CHART - ROCKER PANEL SLOPE SPECIFICATION			
				DATE OCT 15, 1968	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE 0 24
				DR. BY G. GRAY			
				CHECKED J. RMES			
				APPR. D TUTTLE			
DATE	SYM	REVISION	DR.	CK.	APP.	SERVICE A-B-C-E	PART NO. 40441-2-3

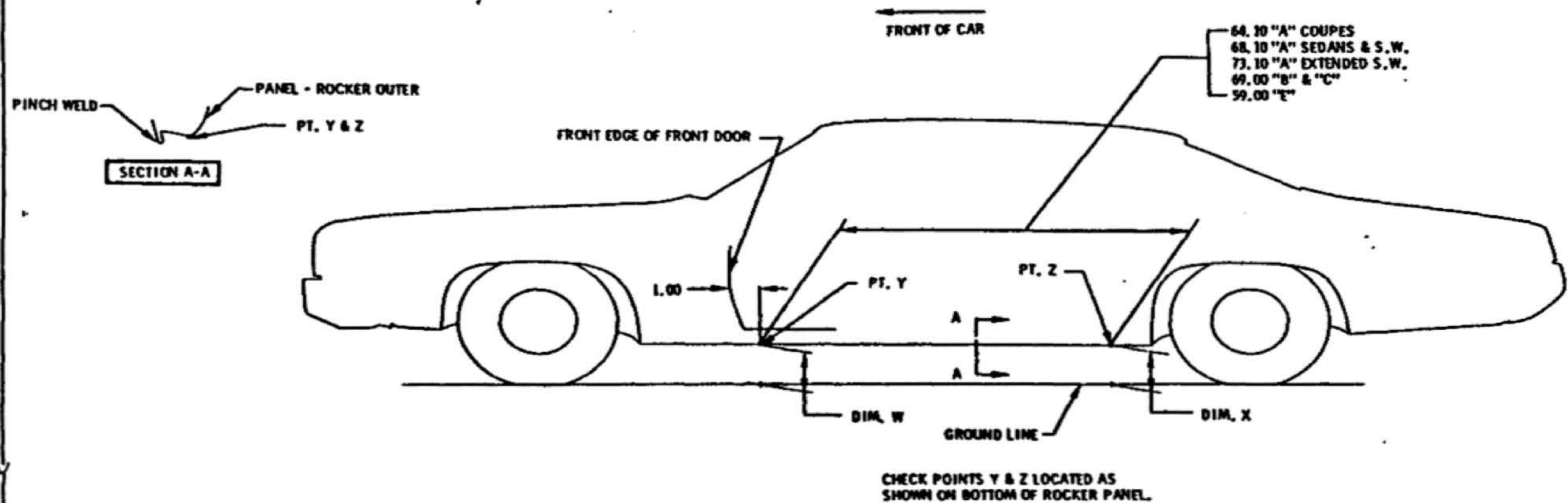
(A)  
INITIAL FILL 16.5 OZ. MINIMUM OF SOLUTION.  
(THE RATIO OF SOLVENT TO WATER REQUIRED FOR 0° F. AND 24° F.  
PROTECTION IS SHOWN BELOW.)

TIME PERIOD	FREEZING POINT	MIXTURE SOLVENT TO WATER	AMOUNT OF #9985129 SOLVENT TO MAKE 55 GAL. OF SOLUTION (ADD WATER)
OCTOBER 2 THRU MARCH 31	0° F.	1:2	18.3 GAL.
APRIL 1 THRU OCTOBER 1	24° F.	1:10	5.0 GAL.

PRODUCTION SAMPLE TO BE APPROVED BY PRODUCT ENGINEERING FOR OLDSMOBILE PARTS.  
SOLVENT TO BE USED IS SHOWN UNDER G.M. STANDARD PART NO. 9985129.

										TITLE		CHART - WINDSHIELD WASHER SOLUTION									
										DATE		1970		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC.		PAGE	
										DR. BY		K. LOVELL		CHECKED		C. H. [Signature]		0		26	
										REVISION		112268 A		WAS 1.5 PINTS		APPR.		SERIES		PART NO.	
										DR. CK.		APPR.		ABCE		404570					
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.	SERIES	PART NO.				

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN



1970 ROCKER TO GROUND SPECIFICATIONS

SERIES	MODEL	TIRE PRESSURE (PSI) (C)		STD. & A/C HEIGHT		F41 HEIGHT		FE2 HEIGHT		B07 HEIGHT	
		FRONT	REAR	DIM. W	DIM. X	DIM. W	DIM. X	DIM. W	DIM. X	DIM. W	DIM. X
		A	L-6 COUPE	22	22	9.75	9.55	10.25	10.05	NA	NA
A	L-6 SEDAN	22	22	9.85	9.85	10.35	10.35	NA	NA	NA	NA
A	V-8 COUPE	22	22	10.05	9.85	10.55	10.35	9.61	9.48	NA	NA
A	V-8 SEDAN	22	22	10.15	10.15	10.65	10.65	NA	NA	NA	NA
A	442	24	24	9.61	9.48	NOT AVAILABLE		NA	NA	NA	NA
A	REG. S.W.	22	25	10.86	11.08	11.36	11.58	NA	NA	NA	NA
A	EXT. S.W.	22	25	11.16	11.38	11.66	11.88	NA	NA	NA	NA
(B) (A)	B ALL	22	22	9.60	9.20	10.10	9.70	NA	NA	10.34	10.12
(A)	C ALL	22	22	9.90	9.45	10.40	9.95	NA	NA	NA	NA
E	ALL	25	21	8.00	7.93	8.50	8.43	NA	NA	NA	NA

THE NORMAL AMOUNT OF ACCESSORIES HAS BEEN INCLUDED IN ABOVE SPECS. CARS SHOULD BE CHECKED WITH TIRE PRESSURES SET AS SHOWN, FULL FUEL TANK OR EQUIVALENT WEIGHT IN THE TRUNK AND FRONT SEAT IN REAR POSITION.

PRODUCTION TOLERANCES

1. EACH DIMENSION  $\pm .40$ .
2. SIDE TO SIDE VARIATIONS FROM SPECS. NOT TO EXCEED .50.
3. FRONT TO REAR VARIATIONS FROM SPECS. NOT TO EXCEED .40.

4610 C	TIRE PRESSURE REVISED:	RA/JT	TITLE	CHART - VEHICLE CARRYING HEIGHT SPECIFICATIONS AT CURB WEIGHT.		
0948 B	9.20 DIM. (STD. & A/C)	RA/JT	DATE	AUGUST 21, 1969	FIRST USED	1970
10169 A2	STD. A/C & F41 HEIGHTS REVISED	RA/JT	DR. BY	BOB HOLT	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
			CHECKED	John Peterson		0 27
			APPR.	1.2.6 [Signature]	SERIES	A-B-C-E
					PART NO.	407515

**OLDSMOBILE DIVISION**

GENERAL MOTORS CORPORATION  
LANSING 21, MICHIGAN

G.M. SPEC. PART NO.	DESCRIPTION	USAGE	SERIES	APPROVED SOURCES																																																		
9985156	OIL SOLUBLE ONE PART OIL TO 99 PARTS WATER	TO BE APPLIED TO ALL BUMPERS IMMEDIATELY AFTER PLATING, FOR PROTECTION DURING HANDLING, PACKAGING AND STORAGE	A, B, C, E	PILLSBURY G-65-GO																																																		
9985156	OIL, SOLUBLE ONE PART OIL TO 3 PARTS WATER	EFFECTIVE ALL YEAR ALL EXTERIOR TRIM	EXPORT ONLY	PILLSBURY G-65-GO																																																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="5" style="text-align: center;">TITLE CHART - CORROSION PROTECTION (SHIPPING)</td> </tr> <tr> <td style="width: 15%;">DATE</td> <td style="width: 15%;">SYM</td> <td style="width: 15%;">REVISION</td> <td style="width: 15%;">DR. CK.</td> <td style="width: 40%;">APPR.</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="3">1969 A REISSUED ON NEW FORMAT - NO CHANGE LSJ</td> <td colspan="2">                 DATE OCT 5, 1968                  DR. BY D. MARKIN                  CHECKED J. AMES                  APPR. T. GIEVIN             </td> </tr> <tr> <td colspan="2"></td> <td colspan="2">FIRST USED</td> <td>MANUAL, SEC.</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">1970</td> <td>0</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">SERIES</td> <td>PAGE</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">A-B-C-E</td> <td>28</td> </tr> <tr> <td colspan="3"></td> <td>PART NO.</td> <td></td> </tr> <tr> <td colspan="3"></td> <td>404411-2-3</td> <td></td> </tr> </table>					TITLE CHART - CORROSION PROTECTION (SHIPPING)					DATE	SYM	REVISION	DR. CK.	APPR.						1969 A REISSUED ON NEW FORMAT - NO CHANGE LSJ			DATE OCT 5, 1968 DR. BY D. MARKIN CHECKED J. AMES APPR. T. GIEVIN				FIRST USED		MANUAL, SEC.			1970		0			SERIES		PAGE			A-B-C-E		28				PART NO.					404411-2-3	
TITLE CHART - CORROSION PROTECTION (SHIPPING)																																																						
DATE	SYM	REVISION	DR. CK.	APPR.																																																		
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		FIRST USED		MANUAL, SEC.																																																		
		1970		0																																																		
		SERIES		PAGE																																																		
		A-B-C-E		28																																																		
			PART NO.																																																			
			404411-2-3																																																			

CARBURETORS ARE TO BE PRIMED IN PRODUCTION BY SUPPLYING FUEL THROUGH THE FUEL PUMP INLET FITTING AT A PRESSURE OF 8 PSI (6 PSI TO 9 PSI IS SATISFACTORY). THIS PROCEDURE REQUIRES 5 TO 6 SECONDS. PRIMING IN THIS MANNER CANNOT CAUSE DAMAGE TO THE CARBURETOR OR FUEL PUMP.

AN ALTERNATE BUT LESS PREFERRED METHOD IS TO FEED A MEASURED AMOUNT OF FUEL (70 CC) INTO THE CARBURETOR BOWL VENTS AT VERY LOW PRESSURE PREFERABLY JUST BY GRAVITY.

**CAUTION:** UNDER NO CONDITION IS THE FUEL TANK TO BE PRESSURIZED TO PRIME CARBURETORS.

				<b>TITLE</b> CHART-CARBURETOR PRIMING PROCEDURE			
				DATE <i>OCT. 5, 1968</i>		FIRST USED	
				DR. BY <i>K. LOYELL</i>		1970	
				CHECKED <i>J. AMES</i>		OLDSMOBILE PRODUCT	
				APPR. <i>T. BURR</i>		INFORMATION MANUAL	
				REF.		MANUAL SEC. <b>0</b>	
				SERIES		PAGE <b>30</b>	
				A-B-C-E		PART NO. <b>404411-2-3</b>	
DATE	SYM	REVISION	DR.	CR.	APPR.		

**INITIAL CHECK**

1. MAKE SURE NEUTRAL START SWITCH IS CORRECTLY ADJUSTED SO CAR DOES NOT START IN REVERSE OR DRIVE. **(B)**
2. MAKE SURE SHIFT LINKAGE IS CORRECTLY ADJUSTED SO THAT COLUMN STOPS DO NOT INTERFERE WITH THE TRANSMISSION QUADRANT DETENTS IN NEUTRAL, DRIVE OR LOW.
3. MAKE SURE SHIFT LINKAGE IS FREE FROM BINDS.
4. MAKE SURE OIL LEVEL IS CORRECT.

**IMPORTANT**

1. DO NOT EXCEED 1/2 THROTTLE OPERATION, EXCEPT WHEN MAKING A DOWNSHIFT.
2. DO NOT EXCEED 50 MPH.
3. DO NOT SHIFT TO PARK OR REVERSE WITH ROLLS TURNING.
4. IF CAR HAS EXCESSIVE CREEP, CHECK IDLE RPM.
5. CHECK FOR GEAR NOISE LEVEL DURING FUNCTIONAL CHECKS IN DRIVE, LOW AND REVERSE.
6. DO NOT ACCELERATE OR DECELERATE RAPIDLY WHILE PERFORMING CHECKS.

**CHECK PROCEDURE**

1. MAKE LIGHT THROTTLE START AND OBSERVE THE 1-2 UPSHIFT AT 15 - 20 AND THE 2-3 UPSHIFT AT 25 - 35 MPH. (THESE SHOULD OCCUR AT APPROXIMATELY THE SAME THROTTLE OPENING.)
2. CHECK PART THROTTLE 3-2 SHIFT AT 25 - 30 MPH.
3. SHIFT TO SUPER AND OBSERVE BREAKDOWN.
4. AT 20 MPH IN SUPER OPEN THROTTLE THRU DETENT TO OBSERVE 2-1 SHIFT.
5. LET OFF THROTTLE AND OBSERVE UPSHIFT.
6. SHIFT TO LOW RANGE AND OBSERVE BRAKE DOWN.
7. STOP WHEELS, SHIFT TO REVERSE AND ACCELERATE LIGHTLY.
8. CHECK OPERATION OF PARKING PAWL ON 10% GRADE OR EQUIVALENT AS FOLLOWS:
  - A. BRAKE CAR TO STOP.
  - B. PUT IN PARK BEFORE RELEASING BRAKE.
  - C. AFTER RELEASING BRAKE, PAWL SHOULD ENGAGE AND RELEASE FREELY WITHOUT RATCHETING.
9. CHECK FOR OIL LEAKS.

				<b>TITLE CHART - AUTOMATIC TRANSMISSION VEHICLE CHECK</b>			
		DATE <u>OCT 5 1960</u>		FIRST USED		MANUAL SEC. PAGE	
		OR BY <u>R. LOVELL</u>		<b>1970</b>		<b>0 32</b>	
<i>(PAGES 13 &amp; 14 CAR ONLY) NOTE REMOVED</i>				CHECKED <u>JOHN RME</u>			

**INITIAL CHECK**

1. MAKE SURE CLUTCH START SWITCH DOES NOT ALLOW ENGINE TO START UNTIL CLUTCH IS DISENGAGED.
2. MAKE SURE THAT SHIFT LINKAGE IS CORRECTLY ADJUSTED SO THAT NEUTRAL CROSS-OVER IS FREE, THAT IGNITION CAN BE LOCKED IN REVERSE, AND THAT IT CANNOT BE LOCKED IN 2ND GEAR (1ST GEAR ON 4 SMT).
3. MAKE SURE SHIFT LINKAGE IS FREE FROM BINDS.

**IMPORTANT**

1. DO NOT EXCEED 1/2 THROTTLE OPERATION.
2. DO NOT EXCEED 60 MPH.
3. DO NOT SHIFT TO REVERSE WITH ROLLS TURNING.
4. CHECK FOR GEAR NOISE LEVEL IN 3RD GEAR (4TH IN 4 SMT).
5. DO NOT ACCELERATE OR DECELERATE RAPIDLY WHILE MAKING CHECKS.

**CHECK PROCEDURE**

1. ACCELERATE IN 1ST GEAR AT LIGHT THROTTLE TO 15-20 MPH, AND SHIFT INTO 2ND GEAR.
2. ACCELERATE AT 1/2 THROTTLE TO 25-35 MPH IN 2ND GEAR, AND OBSERVE FOR CLUTCH SLIP AND TRANSMISSION SLIPPING OUT OF GEAR.
3. DECELERATE AT CLOSED THROTTLE JUST LONG ENOUGH TO OBSERVE FOR TRANSMISSION SLIPPING OUT OF GEAR.
4. DISENGAGE CLUTCH AND BRAKE TO A STOP.
5. CHECK FOR OIL LEAKS.

				TITLE CHART - SYNCHROMESH TRANSMISSION VEHICLE CHECK			
				DATE <i>OCT. 5, 1968</i>	FIRST USED	OLDSMOBILE PRODUCT	MANUAL SEC. PAGE
				DR. <i>BY G. GEAY</i>	<b>1970</b>	INFORMATION MANUAL	<b>0 33</b>
				CHECKED <i>J. AMES</i>	REV.	SERIES	PART NO.
				APPR. <i>M. DANEN</i>		<b>A-B</b>	<b>404411-2</b>
DATE	SYM	REVISION	DR. CK.	APPR.			

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

FRONT SHOCK ABSORBERS			
SERIES	FEZ	F41 (A)	STD.
		FG2	
33177	--	DD	CM
33277	RZ	DD	CM
33535	--	DD	CM
33539	--	DD	CM
33569	--	DD	CM
33577	--	DD	CM
33587	--	DD	CM
33635	--	DD	CM
33639	--	DD	CM
33669	--	DD	CM
33677	RZ	DD	CM
33687	RZ	DD	CM
34239	--	DD	CM
34257	RZ	DD	CM
34267	RZ	DD	CM
34467	--	--	RZ
34477	--	--	RZ
34487	--	--	RZ
34855	--	DD	CP
34865	--	DD	CP

REAR SHOCK ABSORBERS					
SERIES	FEZ	F41 (A)		FG2	STD.
		G66			
		R.H.	L.H.		
33177	--	ZB	ZC	DE	CR
33277	WE	ZB	ZC	DE	CR
33535	--	ZB	ZC	DE	SB
33539	--	ZB	ZC	DE	CR
33569	--	ZB	ZC	DE	CR
33577	--	ZB	ZC	DE	CR
33587	--	ZB	ZC	DE	CR
33635	--	ZB	ZC	DE	SB
33639	--	ZB	ZC	DE	CR
33669	--	ZB	ZC	DE	CR
33677	WE	ZB	ZC	DE	CR
33687	WE	ZB	ZC	DE	CR
34239	--	ZB	ZC	DE	CR
34257	WE	ZB	ZC	DE	CR
34267	WE	ZB	ZC	DE	CR
34467	--	ZB	ZC	--	WE
34477	--	ZB	ZC	--	WE
34487	--	ZB	ZC	--	WE
34855	--	ZD	ZE	DF	CV
34865	--	ZD	ZE	DF	CV

CODE	PART NUMBER	VALVING	
		REBOUND	COMPRESSION
ZD	3197575	C3.25 (2) M	C3
ZE	3197576	C3.25 (2) M	C3
WE	3192931	C2.75 (8) L	K2-.073
CM	3192148	C4.25 (22) H	T1.75
CP	3192149	C3.75 (20) G	B1.25
RZ	3192803	C2.50 (9) R	H1.50
SB	3192805	C2.75 (2) G	D3.25
CV	3192209	C2.25 (12) H	A4L.25
ZB	3197573	C3.5 (2) F	p3.75
ZC	3197574	C3.5 (2) F	p3.75
DF	3192257	C2 (11) G	C1.5-73
DD	3192255	C2 (8) K	C1-60
DE	3192256	C1.5 (17) H	B2-60
CR	3192207	C3.75 (22) H	A1.25

**NOTE:**

G66 SHOCK ABSORBERS FOR 33100 THRU 34400 EXCEPT 34855, 65 BODY STYLES (ZB AND ZC), ARE PART OF SUPERLIFT SHOCK PACKAGE 3196951 AS PURCHASED. G66 SHOCK ABSORBERS ARE AVAILABLE ON 34400 MODELS WITH M40 TRANSMISSION ONLY. IDENTIFICATION CODES WILL NOT BE ON THE SHOCK ABSORBERS.

G66 SHOCK ABSORBERS FOR 34855, 65 (ZD AND ZE) ARE PART OF SUPERLIFT SHOCK PACKAGE 3196925 AS PURCHASED. IDENTIFICATION CODES WILL NOT BE ON THE SHOCK ABSORBERS.

**MEANING OF CODES FOR VALVING:**

FIGURE 2 ORIFICE PLATE - .125/9-.073.  
 FIGURE 8 ORIFICE PLATE - .093/4-.073.  
 FIGURE 9 ORIFICE PLATE - .108/6-.073.  
 FIGURE 11 ORIFICE PLATE - .161/6-.073.  
 FIGURE 12 ORIFICE PLATE - .125/6-.073.  
 FIGURE 17 ORIFICE PLATE - .144/4-.073.  
 FIGURE 20 ORIFICE PLATE - .144/12-.073.  
 FIGURE 22 ORIFICE PLATE - .108/12-.073.

TITLE CHART - SHOCK ABSORBER USAGE										
DATE APRIL 17, 1969					FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. 0	PAGE 34
DR. BY C. R. PARKER					CHECKED John Arnold		REF.		SERIES A	
2469 RE WAS F40 OR F41 ESJA					APPR. P. B. Allen		PART NO. 406574			
REVISION DR. CK. APPR.										



EXTERIOR PAINT CHART							
COLOR CODES & NAMES			SOURCE REFERENCES			WHEEL ENAMEL	
GM CODE	"WA" CODE	COLOR	RINSHED-MASON	DU PONT	FORBES	RINSHED-MASON	DU PONT
10	3465	PORCELAIN WHITE	L67WD020	926-97686	870-3465	E29WD009	G766-97686
14	3927	PLATINUM	L68AD007	927-99480	870-3927	E29AD003	G767-99480
19	848	EBONY BLACK	L61KD005	926-96459	870-848	E29KD001	G766-76600
20	4041	AZURE BLUE	L67BD017	926-99922	870-4041	E29BD014	G766-99922
25	4026	ASTRO BLUE	L68BD034	927-99751	870-4026	E29BD016	G767-99751
28	4027	TWILIGHT BLUE	L68BD035	927-99752	870-4027	E29BD017	G767-99752
34	3977	REEF TURQUOISE	L68BD033	927-99731	870-3977	E29BD015	G767-99731
45	4025	ASPEN GREEN	L68GD020	927-99750	870-4025	E29GD012	G767-99750
48	3970	SHERWOOD GREEN	L68GD021	927-99728	870-3970	E29GD013	G767-99728
50	4024	BAMBOO	L67YD007	926-99749	870-4024	E29YD008	G766-99749
55	4023	GALLEON GOLD	L68LD013	927-99748	870-4023	E29LD006	G767-99748
58	3973	BURNISHED GOLD	L68LD014	927-99729	870-3973	E29LD007	G767-99729
63	4042	COPPER	L68RD026	927-99921	870-4042	E29RD011	G767-99921
75	3975	MATADOR RED	L67RD012	926-99730	870-3975	E29RD012	G766-99730
78	3307	BURGUNDY MIST	L68RD008	927-97213	870-3307	E29RD009	G767-97213

NOTE: UNDERSIDE OF FENDERS ARE TO BE PAINTED PER PAINT SPECIFICATION CHART #386230, SECTION 1, PAGE 1A.

**(B)**

PAINT STRIPE COLORS				
SALES CODE	"WSA" CODE	COLOR	RINSHED-MASON	DU PONT <b>(D)</b>
B	848	BLACK	L55KD006	898-98685
A	3465	WHITE	L55WD002	898-97686
C	4114	BLUE	L55BD009	898-AF109
H	3918	GOLD	L55LD005	898-99617
R	3894	RED	L55RD003	926-99569

**(A)**

SPECIAL ORDER COLORS (EXTRA COST OPTION)			
CODE	COLOR	RINSHED-MASON	DU PONT
38	AECEAN AQUA	L68BD064	927-99918
51	SEBRING YELLOW	L67YD001	926-99568
53	NUGGET GOLD	L68LD010	927-99659
73	RALLY RED	L67RD023	926-99539

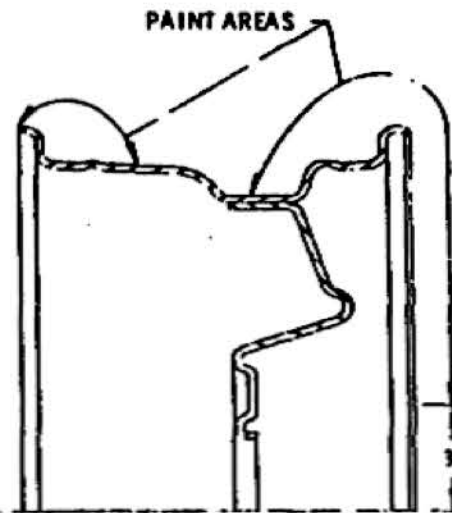


FIG. 1 EXCEPT P05 OR N66 WHEELS

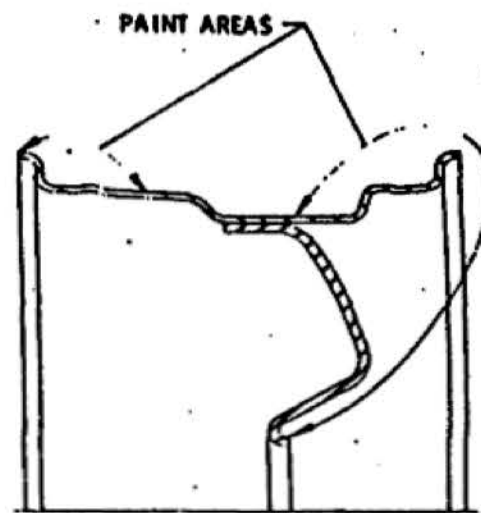


FIG. 3 N66 WHEEL ONLY

NOTE: WHEELS ARE TO BE PAINTED EBONY BLACK ENAMEL WITH WHEEL DISCS.

WHEELS ARE TO BE PAINTED IN ENAMEL TO MATCH LOWER BODY COLORS WITH HUB CAPS.

**(E)** FOR CARS ORDERED WITH SPECIAL ORDER COLORS AND EQUIPPED WITH HUB CAPS, WHEELS ARE TO BE PAINTED IN LOWER BODY SPECIAL ORDER LACQUER.

BACK SIDE OF WHEEL AND WITHIN A THREE INCH RADIUS OF THE WHEEL CENTERLINE ARE NOT TO BE PAINTED, ALTHOUGH FOGGING IS PERMITTED. (SEE FIG. 1).

BRAKE DRUM OUTER SURFACE IS TO BE PAINTED CODE #384 WHEN P05 OR N66 WHEELS ARE SPECIFIED AS SHOWN IN THE PRODUCT INFORMATION MANUAL, SECTION "O" PAGE 44.

P05 WHEELS ARE TO BE PAINTED EBONY BLACK ENAMEL IN AREAS SHOWN. (SEE FIG. 2).

**(C)** N66 WHEELS ARE TO BE PAINTED DARK GRAY LOW GLOSS ENAMEL CODE #372 IN AREAS SHOWN. (SEE FIG. 3)

**(F)** W45 WHEELS TO BE PAINTED SEBRING YELLOW IN AREAS SHOWN (SEE FIG. 3)

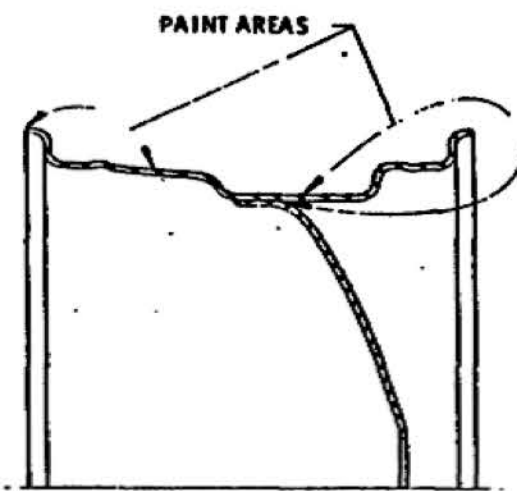


FIG. 2 P05 WHEEL ONLY

TITLE: CHART - PAINT & TRIM SPECIFICATIONS							
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION

DATE: MARCH 18, 1969	FIRST USED: 1970	OLDsmobile PRODUCT INFORMATION MANUAL: 0	MANUAL SEC. PAGE: 36
DR. BY: L. SPITZLEY	CHECKED: [Signature]	SERIES: A	PART NO.: 406477
APPR. BY: [Signature]	REF.		

INTERIOR PAINT CHART

COLOR	"W" CODE	RINSHED-MASON			DU PONT			STEERING WHEEL PLASTIC	
		SEMI-GLOSS LACQUER W30A-	FLAT LACQUER W0A-	SEMI-GLOSS ENAMEL W30DE-	SEMI-GLOSS LACQUER W30A-	FLAT LACQUER W0A-	SEMI-GLOSS ENAMEL W30DE-	CELANESE FORTICEL	EASTMAN TENITE II
BLACK	348	L49K0028	L54K0011	E51K0008	864-94446	864-56562	796-94446	W1020A	R20167
DK. GREEN	3971	L49G0005	/	E51G0022	864-99667	/	796-99667	W5627-B(3)	R2518-B2A
DK. GREEN MET.	3970	L50G0004	L54G0008	E51G0021	863-99660	863-56744	799-99660	/	/
MED. BLUE MET.	3981	L50B0019	/	E51B0039	863-99663	/	799-99663	/	/
DK. BLUE	3984	L49B0014	/	E51B0042	864-99666	/	796-99666	/	R2530-51B
DK. BLUE MET.	3983	L50B0020	L54B0010	E51B0040	863-99664	863-56743	799-99664	/	/
MED. GOLD MET.	3922	L50L0016	/	E51L0016	863-99661	/	799-99661	/	/
DK. GOLD	3974	L49L0012	/	E51L0017	864-99670	/	796-99670	W5626-B(2)	R2537-7C
DK. GOLD MET.	3973	L50L0017	L54L0003	E51L0018	863-99669	863-56746	799-99669	/	/
IVORY	3988	L49H0007	/	E51H0014	864-99713	/	796-99713	/	/
MED. SANDALWOOD	3989	L49H0006	/	E51H0013	864-99714	/	796-99714	/	/
DK. BROWN	3985	L49ND004	L54ND007	E51ND020	864-99710	864-56748	796-99710	W5640-B (2)	R2528-3B

										TITLE CHART - PAINT & TRIM SPECIFICATIONS									
										DATE <i>MAR 19, 1969</i>		FIRST USED <b>1970</b>		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. <b>0</b>		PAGE <b>37</b>	
										DR. BY <i>K. LOVELL</i>									
										CHECKED <i>John P. ...</i>									
										APPR. <i>K. ...</i>				SERIES <b>A</b>		PART NO. <b>406477</b>			
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.



RECOMMENDED COLOR USAGE

CODE	EXTERIOR COLORS	INTERIOR TRIM COLORS						
		BLACK	GREEN	BLUE	GOLD	IVORY	SANDALWOOD	SADDLE
10	PORCELAIN WHITE	X	X	X	X	X	X	X
14	PLATINUM	X		X		X		
19	EBONY BLACK	X	X	X	X	X	X	X
20	AZURE BLUE	X		X		X		
25	ASTRO BLUE	X		X		X		
28	TWILIGHT BLUE	X		X		X		
34	REEF TURQUOISE	X				X		
45	ASPEN GREEN	X	X			X		
48	SHERWOOD GREEN	X	X			X	X	X
50	BAMBOO	X			X	X	X	X
55	GALLEON GOLD	X			X	X	X	X
58	BURNISHED GOLD	X			X	X	X	
63	COPPER	X				X	X	X
75	MATADOR RED	X				X		
78	BURGUNDY MIST	X				X		
38	AEGEAN AQUA *	X				X		
51	SEBRING YELLOW *	X			X	X		
53	NUCKET GOLD *	X			X	X		
73	RALLY RED *	X				X		

EXTRA COST COLOR \*

(A) (A) (A) (A)

CONVERTIBLE TOP USAGE:

CODE	COLOR	RECOMMENDED USAGE
B	BLACK	RECOMMENDED WITH ALL COLORS.
A	WHITE	RECOMMENDED WITH ALL COLORS.
C	BLUE	RECOMMENDED WITH 10, 14, 19, 20, 25, 28.
H	GOLD	RECOMMENDED WITH 10, 14, 19, 20, 25, 28.
H	GOLD	RECOMMENDED WITH 10, 19, 20, 51, 53, 55, 58.

(B)

VINYL ROOF COVER USAGE:

CODE	COLOR	RECOMMENDED USAGE
B	BLACK	RECOMMENDED WITH ALL COLORS.
A	WHITE	RECOMMENDED WITH ALL COLORS.
C	BLUE	RECOMMENDED WITH 10, 14, 19, 20, 25, 28.
H	GOLD	RECOMMENDED WITH 10, 19, 20, 51, 53, 55, 58.
F	BROWN	RECOMMENDED WITH 10, 19, 20, 50, 55, 63.
G	GREEN	RECOMMENDED WITH 10, 19, 20, 50.

(C)



RECOMMENDED COLOR USAGE FOR PAINT STRIPES

CODE	EXTERIOR COLOR	PAINT STRIPE COLOR & CODE				
		B - BLACK	A - WHITE	C - BLUE	H - GOLD	R - RED
10	PORCELAIN WHITE	X		X	X	X
14	PLATINUM	X	X	X		X
19	EBONY BLACK		X	X	X	X
20	AZURE BLUE	X	X	X		
25	ASTRO BLUE	X	X	X		
28	TWILIGHT BLUE	X	X	X		
34	REEF TURQUOISE	X	X			
45	ASPEN GREEN	X	X			
48	SHERWOOD GREEN	X	X		X	
50	BAMBOO	X	X		X	
55	GALLEON GOLD	X	X		X	
58	BURNISHED GOLD	X	X		X	
63	COPPER	X	X			
75	MATADOR RED	X	X			
78	BURGUNDY MIST	X	X		X	X
38	AEGEAN AQUA ★	X	X		X	
51	SEBRING YELLOW ★	X	X			
53	NUGGET GOLD ★	X	X			
73	RALLY RED ★	X	X			

★ EXTRA COST COLOR.

NOTE: IF STRIPE COLOR PREFERENCE IS NOT SPECIFIED ON A 4-4-2 ORDER, STRIPES WILL BE FURNISHED AS INDICATED BELOW.

STRIPE CODE	STRIPE COLOR	EXTERIOR COLORS
B	BLACK	10, 14, 20, 25, 34, 45, 50, 51, 53, 55, 63, 73, 75
A	WHITE	19, 28, 38, 48, 58, 78

PAINT STRIPES ARE STANDARD EQUIPMENT ON 4-4-2 MODELS, OPTIONAL ON CUTLASS "S" MODELS.

IT IS RECOMMENDED THAT PAINT STRIPES MATCH TOP COLOR OR INTERIOR TRIM COLOR WHENEVER POSSIBLE.

VINYL MOLDING INSERTS	
INSERT COLOR	EXTERIOR COLOR USAGE
BLACK	10, 14, 19, 34, 38, 51, 53, 73, 75, 78
DK. GOLD	50, 55, 58
DK. GREEN	45, 48
DK. BLUE	20, 25, 28
LT. SADDLE	63

NOTE: BLACK VINYL MOLDING INSERTS ARE SPECIFIED FOR ANY SPECIAL ORDER COLOR ORDERED BY CUSTOMER.

										TITLE		CHART - PAINT AND TRIM SPECIFICATIONS			
										DATE		FIRST USED			
										MAR. 24, 1969		1970			
										DR. BY		OLDSMOBILE PRODUCT			
										JACKERT		INFORMATION MANUAL			
										CHECKED		MANUAL SEC. PAGE			
										John Pinner		0 41			
										APPR.		SERIES			
										J. J. ...		A			
										PART NO.		406477			
DATE	SYM	REVISION	DR.	CL.	DATE	SYM	REVISION	DR.	CL.	DATE	SYM	REVISION	DR.	CL.	APPR.

MISCELLANEOUS TRIM PARTS

SEAT / SHOULDER BELTS: (STANDARD TYPES) OLDS I. B. M. CODE 7

WEBBING COLOR	RETRACTOR COLOR	BUCKLE COLOR	TRIM COLOR USAGE (SALES NAMES)
BLACK	BLACK	BLACK	BLACK, IVORY, SANDALWOOD, SADDLE
DK. GREEN	DK. GREEN	DK. GREEN	GREEN
DK. BLUE	DK. BLUE	DK. BLUE	BLUE
MED. GOLD	DK. GOLD	MED. GOLD	GOLD

SEAT / SHOULDER BELTS: (INCLUDE TYPES) OLDS I. B. M. CODE 7

WEBBING COLOR	RETRACTOR COLOR	BUCKLE FINISH	TRIM COLOR USAGE (SALES NAMES)
BLACK	BLACK	SATINBRITE	BLACK, IVORY
DK. GREEN	DK. GREEN	SATINBRITE	GREEN
DK. BLUE	DK. BLUE	SATINBRITE	BLUE
MED. GOLD	DK. GOLD	SATINBRITE	GOLD
SANDALWOOD	DK. BROWN	SATINBRITE	SANDALWOOD
DK. BROWN	DK. BROWN	SATINBRITE	SADDLE

TRUNK TRIM (OLDS I. B. M. CODE 5)

TRUNK LINING	TRUNK (C. B.) BOARD	USAGE
TURQ./BLACK NON-WOVEN BAYON OR FOAM (1-1-1769)	TURQ./BLACK RANDOM PRINT (602-1-4266)	ALL MODELS

AUXILIARY FLOOR MATS: (OLDS I. B. M. CODE 4)

COLOR	TRIM COLOR USAGE
BLACK	BLACK, IVORY
DK. GREEN	GREEN
DK. BLUE	BLUE
DK. GOLD	GOLD
DK. BROWN	SANDALWOOD, SADDLE

CONSOLES: (OLDS I. B. M. CODE 4)

TRIM COLOR	PAINTED BODY	HARDID GRAIN MAP CASE APPLIQUE (VINYL LAMINATED)
BLACK	BLACK W30A-948	BLACK 3200-7
GREEN	DK. GREEN MET. W30A-3970	DK. GREEN MET. 5159-7
BLUE	MED. BLUE MET. W30A-3981	MED. BLUE MET. 5153-7
GOLD	MED. GOLD MET. W30A-3922	MED. GOLD MET. 5159-7
SADDLE	DK. BROWN W30A-3985	DK. BROWN 5154-7
IVORY	BLACK W30A-948	BLACK 3200-7

(A)  
(B)  
(C)

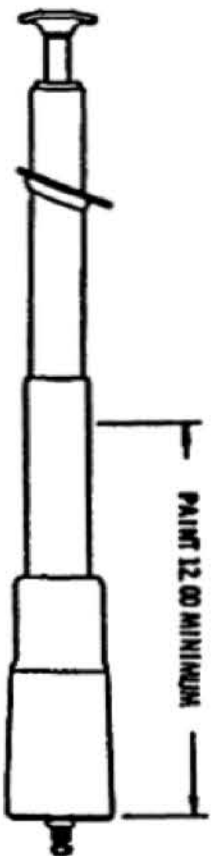
TITLE										CHART - PAINT & TRIM SPECIFICATIONS		SHEET 7				
DATE <u>MARCH 20, 1969</u>										FIRST USED		1970				
DR. BY <u>C. SPIZZLEY</u>										OLDSMOBILE PRODUCT		INFORMATION MANUAL				
CHECKED <u>JOHN BARR</u>										MANUAL NO.		0 42				
APPR. <u>L. FALLU</u>										SERIES		A				
REVISION										PART NO.		406477				
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM

1969 C CONSOLE FOR IVORY TRIM CLARIFIED.  
1969 B IVORY CONSOLE FOR...  
1969 A IVORY CONSOLE ELIMINATED

MISCELLANEOUS PARTS REQUIREMENTS

THE PARTS LISTED BELOW ARE REQUIRED IN THE COLORS INDICATED.  
(REFER TO SHEET 3 FOR SPECIFIC MODEL TRIM COMBINATION NUMBERS)

	COLUMN 1	COLUMN 2	COLUMN 3
TRIM COLORS	UPPER INSTRUMENT PANEL (W/OA) - OLDS IBM CODE 1 SAFETY PAD (W/OA) - OLDS IBM CODE 1 CONTROL PANEL (W/OA) - OLDS IBM CODE 8 GLOVE BOX DOOR (W/OA) - OLDS IBM CODE 8 RADIO HOLE COVER (W/OA) - OLDS IBM CODE 8 ASH TRAY DOOR (W/OA) - OLDS IBM CODE 8 HEATER HOLE COVER (W/OA) - OLDS IBM CODE 8 LOWER INSTRUMENT PANEL (W/OA) - OLDS IBM CODE 2 COVER-STEERING COLUMN (W/OA) - OLDS IBM CODE 2 STEREO CASE (W/OA) - OLDS IBM CODE 2 STEREO CASE PAD (VINYL PAINT W/OA) - OLDS IBM CODE 2 PACKAGE SHELF (W/OA) DEFROGGER GRILLE (W/OA) CONVERTIBLE WINDSHIELD PILLAR PADS (MOLDED VINYL)	STEERING COLUMN (W/OA) - OLDS IBM CODE 3 JACKET-STEERING COLUMN (W/OA) - OLDS IBM CODE 3 TURN SIGNAL HOUSING (W/OA) - OLDS IBM CODE 3 STANDARD STEERING WHEEL (PLASTIC) - OLDS IBM CODE 3 DELUXE STEERING WHEEL (PLASTIC) - OLDS IBM CODE 3 STEERING WHEEL PADS (MOLDED VINYL)	WINDOW FRAMES (W/OA) CENTER PILLARS (POLYPROPYLENE) STA/TION WAGON REAR SPEAKER GRILLE (W/OA) VISTA-CRUISER ROOF GARNISH (W/OA) WINDSHIELD PILLARS - EXCEPT CONVERTIBLE (W/OA)
	BLACK W-848	BLACK W-848	BLACK W-848
	GREEN DK. GREEN MET. W-3970	DK. GREEN W-3971	DK. GREEN MET. W-3970
	BLUE DK. BLUE MET. W-3983	DK. BLUE W-3984	MED. BLUE MET. W-3981
	GOLD DK. GOLD MET. W-3973	DK. GOLD W-3974	MED. GOLD MET. W-3972
	IVORY BLACK W-848	BLACK W-848	IVORY W-3988
	SANDALWOOD DK. BROWN W-3985	DK. BROWN W-3985	MED. SANDALWOOD W-3989
	SADDLE DK. BROWN W-3985	DK. BROWN W-3985	DK. BROWN W-3985
	FOR ALL MODELS EXCEPT 33667-33667. (SEE COLUMN 1 FOR CONVERTIBLES.)		



LOWER INSTRUMENT PANEL APPLIQUES:  
VINYL CLAD STEEL, "CARPATHIAN ELM BURL" GM, 7-329-X1  
STANDARD EQUIPMENT ON 4200, 4400 & 4600  
OPTIONAL ON ALL OTHER MODELS.

CLUSTER APPLIQUE:  
VINYL CLAD STEEL, "CARPATHIAN ELM BURL" GM, 7-329-X1  
STANDARD EQUIPMENT ON ALL MODELS.

TITLE CHART - PAINT & TRIM SPECIFICATIONS												SHEET 8	
DATE MARCH 29, 1968						FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE			
DR. BY L. SPITZEL								O		43			
CHECKED [Signature]								SERIES A		PART NO. 406477			
APPR. [Signature]													
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM		





THE SUB ASSEMBLIES, AS SHIPPED FOR FINAL ASSEMBLY, WILL BE DEHYDRATED, LEAK TESTED, AND CAPPED. THE COMPRESSOR WILL CONTAIN A HOLDING CHARGE.

FOLLOWING IS A LIST OF PRECAUTIONARY MEASURES TO BE TAKEN PRIOR TO AND DURING ASSEMBLY OPERATIONS OF THE FINAL UNIT AND TESTING REQUIREMENTS.

**"A" GENERAL PRECAUTIONS AT ASSEMBLY**

1. ALL SUB ASSEMBLIES SHIPPED DEHYDRATED AND SEALED TIGHT ARE TO REMAIN SEALED UNTIL JUST PRIOR TO MAKING CONNECTIONS.
2. ALL SUB ASSEMBLIES SHOULD BE AT ROOM TEMPERATURE BEFORE UNCAPPING. THIS PREVENTS THE ENTRANCE OF AIR INTO THE SYSTEM AND FORMING CONDENSATION.
3. IF FOR ANY REASON THE CAPS REMOVED DURING ASSEMBLY OPERATION AND CONNECTIONS ARE NOT MADE, THE TUBES SHOULD NOT REMAIN UNSEALED FOR A PERIOD OF MORE THAN FIFTEEN (15) MINUTES. RESEAL, IF PERIOD IS LONGER.
4. RECEIVER DEHYDRATOR SHOULD NEVER BE LEFT UNCAPPED MORE THAN 5 MINUTES.
5. COMPRESSORS ARE SHIPPED WITH TEN AND ONE HALF (10.5) FLUID OUNCES OF OIL AND A TWO (2) OZ. HOLDING CHARGE OF 80% NITROGEN AND 20% REFRIGERANT 12.
6. AT NO TIME SHOULD THE COMPRESSOR SHAFT BE ROTATED UNTIL THE COMPLETE SYSTEM IS ASSEMBLED AND CHARGED WITH REFRIGERANT 12.
7. DURING ALL OPERATIONS, NECESSARY PRECAUTION SHOULD BE TAKEN TO KEEP THE SYSTEM CLEAN AND DRY. PREVENT ANY DIRT OR MOISTURE FROM GETTING ON OR IN THE CONNECTIONS. IT IS PARTICULARLY IMPORTANT THAT NO DIRT OR MOISTURE GET WITHIN THE SYSTEM.

**"B" ASSEMBLY**

1. ALL PRECAUTIONS SHOULD BE TAKEN TO PREVENT DAMAGE TO FITTINGS OR CONNECTIONS. EVEN MINUTE DAMAGE TO THE CONNECTION COULD CAUSE IT TO LEAK.
2. ANY FITTINGS GETTING GREASE OR DIRT ON THEM SHOULD BE WIPED CLEAN WITH AN ALCOHOL DAMPENED CLOTH. DO NOT USE CHLORINATED SOLVENTS FOR A CLEANING AGENT, AS THEY ARE CONTAMINANTS. IF DIRT, GREASE, OR MOISTURE GET INSIDE THE PIPES AND CANNOT BE REMOVED, THE PIPE IS TO BE REPLACED.
3. SEALING CAPS SHOULD BE REMOVED FROM SUB ASSEMBLIES JUST PRIOR TO MAKING CONNECTIONS FOR FINAL ASSEMBLY.
4. DISCARD "O" RINGS ON PIPES. INSTALL NEW "O" RINGS COATED WITH CLEAN COMPRESSOR OIL ON PIPE ENDS. KEEP OIL CONTAINER SEALED.
5. MANDATORY, WHEN TIGHTENING OR LOOSENING PIPE FITTINGS, ALWAYS USE TWO (2) WRENCHES. USE AN OPEN END WRENCH TO HOLD THE SEAT STATIONARY.
6. SET COMPRESSOR BELT TENSION WITH BURROUGHS BELT GAGE #33-70.
7. CHECK AIR GAP BETWEEN CLUTCH ARMATURE PLATE AND PULLEY. GAP SHOULD BE .022 - .057.
8. IN ASSEMBLY, CARE MUST BE EXERCISED TO BE SURE THAT PIPES ARE NOT BENT OR MULTILATED THROUGH CARELESSNESS, OR DELIBERATELY BENT TO FACILITATE ANOTHER OPERATION.
9. FLEXIBLE HOSES ARE TO BE ROUTED AND FITTINGS ARE TO BE TIGHTENED SO THAT HOSES ASSUME NATURAL CURVES, FREE OF TWIST OR STRAIN.
10. COMPLETED SYSTEMS ARE TO BE CHECKED FOR PIPES GROUNDING OUT ON SHEET METAL COMPONENTS. ANY DIRECT CONTACT OF PIPES AND SHEET METAL PARTS IS TO BE ELIMINATED.

**"C" EVACUATION AND CHARGE**

1. AIR CONDITIONING SYSTEM MUST BE EVACUATED TO A MINIMUM OF 25 MM HG ABSOLUTE SYSTEM PRESSURE (A). AFTER A 15 SECOND HOLD TIME (B), THE SYSTEM PRESSURE MUST NOT EXCEED 28 MM HG ABSOLUTE PRESSURE.
  - (A) SYSTEM PRESSURE - THE LEVEL OF EVACUATION OF THE VEHICLE'S A/C SYSTEM ONCE THE VACUUM SOURCE HAS BEEN REMOVED.
  - (B) HOLD TIME - ELAPSED TIME WHICH OCCURS BETWEEN VACUUM DISCONNECT AND CHARGE CONNECT.
2. FOR THOSE PLANTS WHICH HAVE A LONGER THAN 15 SECOND HOLD TIME, THE SYSTEM PRESSURE MAY BE ALLOWED TO RISE TO THE VALUES SHOWN BELOW IN TABLE #1.

**TABLE #1**

ELAPSED TIME BETWEEN EVACUATION AND CHARGE	ACCEPTABLE EVACUATION LEVEL (MM HG) PER EVACUATION AND CHARGE SPECIFICATION	P. C. U. SET POINTS	
		ACCEPT	REJECT
15 - 30 SECONDS	28 MM HG	25 MM HG	30 MM HG
31 - 60 SECONDS	30 MM HG	27 MM HG	32 MM HG
61 - 90 SECONDS	35 MM HG	32 MM HG	37 MM HG
91 SECONDS AND OVER	40 MM HG	37 MM HG	42 MM HG

REFRIGERANT CHARGE: 4.0<sup>±</sup> F-12 ALL

**"D" LEAK TESTING**

AFTER SYSTEM HAS RUN FOR AT LEAST 60 SECONDS, CHECK HIGH SIDE COMPONENTS FOR LEAKS USING A ONE POUND IN 40 YEARS ELECTRONIC LEAK DETECTOR. CHECK LOW SIDE COMPONENTS IMMEDIATELY AFTER SHUT DOWN OF ENGINE AND COMPRESSOR.

NOTE: A LEAK OF ONE POUND IN 40 YEARS MUST BE REPAIRED (EXCEPT FOR COMPRESSOR FRONT SEAL). LEAKAGE OF COMPRESSOR FRONT SEAL MUST NOT EXCEED ONE POUND IN 8 YEARS.

										TITLE		CHART - AIR CONDITIONING PROCEDURE							
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										SEPT. 28 1968		1970		O		46			
										DR. BY		K. LOVELL							
										CHECKED		Bill Brown 1/75							
										APPR.				SERIES		PART NO.			
														A-B-C-E		404650			
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.				

# OFF LINE TESTING AND REPAIRS

## "A" LEAK TESTING

1. INSTALL CHARGING MANIFOLD GAUGE SET LINES TO GAUGE FITTINGS ON FREEZE CONTROL VALVE AND DISCHARGE HOSE ASSEMBLIES. (PURGE LINES BEFORE CONNECTING TO SYSTEM).
2. OPEN GAUGE VALVES, PULL VACUUM UNTIL 28" VACUUM IS OBTAINED. CLOSE VACUUM PUMP VALVE AND STOP PUMP. OBSERVE GAUGE, IF LOSS OF VACUUM OCCURS, A LEAK IS IN SYSTEM. CHECK ALL CONNECTIONS IN SYSTEM FOR TIGHTNESS, ADD SMALL AMOUNT OF REFRIGERANT 12 TO SYSTEM. CHECK FOR LEAK WITH G. E. ELECTRONIC DETECTOR OR EQUIVALENT. REGULAR MAINTENANCE AND PERIODIC CHECKS FOR SENSITIVITY LEVEL ARE A MUST: TWICE PER SHIFT - ONCE EVERY FOUR (4) HOURS IS RECOMMENDED. CORRECT LEAK, REPEAT PROCEDURE UNTIL ALL LEAKS ARE CORRECTED.
3. PULL VACUUM FOR CHARGING PROCEDURE TO 28". (SUBTRACT 1.00" HG. FOR EACH 1000' OF ALTITUDE) (EXAMPLE FOR 5000' USE 23" HG.).

## "B" CHARGING SYSTEM

1. ALWAYS PURGE CHARGING LINES BEFORE PERMITTING CHARGE TO ENTER SYSTEM.
2. CHARGING SHOULD BE DONE AT 70° F. MINIMUM TEMPERATURE.
3. WITH ALL LEAKS CORRECTED AND VACUUM HELD IN SYSTEM TO 28", CHARGE SYSTEM WITH INITIAL CHARGE OF REFRIGERANT 12.
- ★ 4. CLOSE HIGH PRESSURE LINES ON GAUGE SET.
- ★ 5. START ENGINE OR AUXILIARY POWER AND OPERATE AT SPEED CORRESPONDING TO 1500 ENGINE R. P. M. NORMAL CONTROL POSITION MUST BE SELECTED AND CONTROL MUST BE SET TO FULL COLD POSITION AND FAN POSITION AS SHOWN BELOW DEPENDING ON THE ATMOSPHERIC TEMPERATURE.



- (A) CHARGE UNTIL LIQUID LINE INDICATOR SHOWS CLEAR, THEN ADD ONE QUARTER (1/4 POUND) REFRIGERANT 12 CHARGE: 4.5#F-12 (BC) (E) AND 4.0#F-12 (A).
6. SHUT OFF ENGINE AND DISCONNECT CHARGING LINES. INSTALL CAPS ON SERVICE VALVES.
  7. MAKE FINAL CHECK FOR LEAKS AT THIS TIME, MAXIMUM LEAK RATE: ONE (1) POUND IN FIFTY (50) YEARS AT ALL POINTS EXCEPT COMPRESSOR SEAL WHERE A LEAK RATE OF ONE (1) POUND IN FIFTEEN (15) YEARS WILL BE ACCEPTABLE.

## "C" VALVE CHECKS AND CORRECTIVE ADJUSTMENT

1. SUCTION THROTTLING VALVE
  - A. THE PROPER CONTROL ACTION OF THE VALVE IS TO BE CHECKED AS FOLLOWS:
    1. CONNECT PRESSURE GAUGE TO FITTING PROVIDED ON SUCTION THROTTLING VALVE.
    2. RUN ENGINE AT 2000 R. P. M., INSTRUMENT PANEL TEMP. CONTROL HELD TO FULL COLD POSITION.
    3. WHEN VALVE STARTS TO CONTROL, GAUGE POINTER WILL DIP SLIGHTLY BELOW OPERATING PRESSURE AND THEN RISE AND HOLD AT OPERATING PRESSURE. OBSERVE OPERATING PRESSURE, WHICH SHOULD BE 28 - 30 P. S. I. (10900' ALTITUDE) THREE (3) MINUTES AFTER VALVE HAS STARTED TO CONTROL.
  - B. THE VALVE IS NOT ADJUSTABLE EXTERNALLY.
2. PRESSURE GAUGES
  - A. IT IS IMPORTANT THAT ALL PRESSURE GAUGES USED TO CHECK VALVE OPERATION BE CHECKED AT PERIODIC INTERVALS FOR ACCURACY. (WEEKLY INTERVALS SUGGESTED). GAUGES MUST BE OF THE PROPER RANGE FOR READING ACCURACY (0 - 60 RECOMMENDED FOR EVAPORATOR BACK PRESSURE).

## "D" COMPRESSOR OIL LEVEL CHECK (SEE ITEM "E" I. B. BELOW)

CHECK THE OIL LEVEL IN THE COMPRESSOR BY DRAINING AND MEASURING THE AMOUNT OF OIL. DO NOT ATTEMPT TO CHECK THE OIL LEVEL BY PARTIALLY UNSCREWING THE OIL FITTING AT THE BOTTOM OF THE COMPRESSOR.

## "E" REPLACEMENT OF COMPONENTS AFTER THE SYSTEM HAS BEEN CHARGED AND OPERATED

1. COMPRESSOR
  - A. DRAIN AND ACCURATELY MEASURE THE AMOUNT OF OIL IN THE DEFECTIVE COMPRESSOR. DO NOT RECHARGE THE COMPRESSOR WITH OIL IF IT WILL BE RETURNED TO VENDOR.
  - B. EXAMINE OIL FROM DEFECTIVE COMPRESSOR FOR IMPURITIES. IF OIL CONTAINS METALLIC PARTICLES, ALL LINES MUST BE PURGED AND EXPANSION VALVE AND RECEIVER-DEHYDRATOR CHANGED. (REFERENCE FOLLOWING ITEM A-2).
  - C. DRAIN ALL OIL FROM THE NEW COMPRESSOR.
  - D. RECHARGE THE NEW COMPRESSOR WITH THE SAME AMOUNT OF OIL THAT WAS DRAINED FROM THE DEFECTIVE COMPRESSOR.
  - E. THIS PROCEDURE IS REQUIRED TO INSURE THAT THE COMPLETE SYSTEM IS NOT OVERCHARGED WITH OIL WHICH WILL HAPPEN IF A NEW COMPRESSOR WITH A FULL OIL CHARGE IS INSTALLED.
2. OTHER COMPONENTS
  - A. OPERATE THE SYSTEM AT IDLE SPEED FOR APPROXIMATELY FIVE MINUTES TO RETURN AS MUCH OIL AS POSSIBLE TO THE COMPRESSOR CRANKCASE PRIOR TO REPLACEMENT OF A COMPONENT.
  - B. ADDITIONS OF OIL INTO NEW COMPONENTS SHALL BE MADE IMMEDIATELY PRIOR TO ASSEMBLY OF THE COMPONENT INTO THE CAR. THE OIL SHALL BE ADDED IN SUCH A MANNER THAT THERE WILL BE NO LOSS OF OIL WITH THE COMPONENT IN ITS NORMAL POSITION ON THE CAR. WHEN IT IS DESIRABLE, THE OIL MAY BE ADDED DIRECTLY TO THE COMPRESSOR INSTEAD OF THE COMPONENT.
  - C. OIL REQUIRED
    1. EVAPORATOR - 3 FLUID OUNCES.
    2. RECEIVER-DEHYDRATOR - 1 FLUID OUNCE.
    3. CONDENSER RECEIVER-DEHYDRATOR - 3 FLUID OUNCES.

## "F" PERFORMANCE TEST

1. TEST WITH HOOD UP, DOORS OPEN, CONTROL LEVER TO FULL LEFT AND "NORMAL" BUTTON ENGAGED - FAN ON HIGH AND TRANSMISSION IN NEUTRAL.
2. USE AUXILIARY AIR VELOCITY OF 1100 FEET PER MINUT INTO CONDENSER.
3. ATMOSPHERIC AIR TEMPERATURE AND RELATIVE HUMIDITY TO BE TAKEN AT FRONT OF CONDENSER.
4. THE AIR VOLUME FROM BOTH OUTER NOZZELS SHOULD BE APPROXIMATELY EQUAL, IF NOT, CHECK AIR HOSES FOR OBSTRUCTION AND PROPER INSTALLATION.
5. ADJUST ENGINE R. P. M. TO MAINTAIN 2000 R. P. M.

★ NOT REQUIRED IF EQUIPMENT IS USED TO FORCE COMPLETE CHARGE INTO SYSTEM

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										DATE	SEPT 20, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
										DR. BY	K. LOVELL	REF.				47
										CHECKED	John H. Hume	SERIES	A-B-C-E	PART NO.	404650	
										APPR.						
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	

TYPICAL TEST DATA FOR 1970 "A"

IN FRONT OF CONDENSER		EVAPORATOR PRESSURE AT SUCTION THROTTLING VALVE ± 1 PSI	ENGINE RPM	DISCHARGE AIR TEMP. R. H. NOZZLE ± 2° F.	HEAD PRESSURE (DISCHARGED) ± 20 PSI
RELATIVE HUMIDITY	AIR TEMP. ° F.				
20	70	28.5	2000	63.0	205
	80	28.5	2000	62.9	240
	90	28.5	2000	62.8	282
30	100	32.0	2000	54.6	308
	110	34.0	2000	62.0	338
	70	28.5	2000	62.0	205
40	80	28.5	2000	62.5	250
	90	28.0	2000	51.5	273
	100	35.0	2000	58.3	315
40	110	42.0	2000	64.9	367
	70	28.5	2000	62.4	205
	80	28.5	2000	61.0	260
50	90	29.5	2000	54.1	285
	100	37.2	2000	63.1	335
	110	46.0	2000	70.8	390
60	70	28.5	2000	63.5	212
	80	29.0	2000	51.5	278
	90	32.0	2000	56.5	296
60	100	42.0	2000	66.5	349
	110	51.0	2000	76.5	422
	70	28.5	2000	67.4	218
70	80	29.2	2000	54.0	278
	90	35.0	2000	59.6	308
	100	42.5	2000	70.0	362
70	70	28.5	2000	69.0	226
	80	30.5	2000	57.0	284
	90	37.2	2000	62.5	316
70	100	45.0	2000	73.5	375
	70	28.5	2000	61.5	233
	80	32.2	2000	59.5	290
80	90	39.5	2000	65.5	325
	100	47.5	2000	76.5	389
	70	28.5	2000	52.4	217
90	80	34.0	2000	62.0	296
	90	42.0	2000	68.5	333
	100	50.5	2000	80.0	404

FOR AIR CONDITIONING  
PROCEDURE SEE CHART 404650

TITLE AIR CONDITIONING TEST DATA																					
DATE <u>JULY 16, 1969</u>					FIRST USED <b>1970</b>		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE <b>0 48</b>												
DR. BY <u>BOB HOLT</u>					CHECKED <u>John Williams</u>		SERIES <b>A</b>		PART NO. <b>407139</b>												
APPR. <u>R.E. Malizia</u>					REV.		APPR.														
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM

# EXHAUST EMISSION TEST PROCEDURE

## 1970 EXHAUST EMISSION AUDIT

- ENGINE DISPLACEMENTS OF 350 AND 455 CU. IN. WILL BE AUDITED AT 2% OF PRODUCTION VOLUME.
- SAMPLES SHOULD BE RANDOMLY SELECTED WITHIN A GIVEN ENGINE SIZE PROPORTIONAL TO THE VARIOUS CARBURETOR-TRANSMISSION-EMISSION SYSTEM-AIR CONDITIONING COMBINATIONS BEING PRODUCED.
- EACH TEST FACILITY WILL SUPPLY MONTHLY CALIFORNIA AND NATIONWIDE BUILD INFORMATION IN TERMS OF MODEL-ENGINE SIZE-CARBURETOR-TRANSMISSION-EMISSION SYSTEM-AIR CONDITIONING COMBINATIONS.
- TESTS ARE TO BE PERFORMED WITH EVAPORATIVE SYSTEMS INOPERATIVE. AIR PURGE LINE (LINE FROM AIR CLEANER TO CANISTER) DISCONNECT AT CANISTER. VAPOR PURGE LINE (LINE FROM PCV VALVE TO CANISTER) DISCONNECT AT CANISTER AND PLUG LINE.
- PRIOR TO TESTING, EACH VEHICLE IS TO RECEIVE A BRIEF INSPECTION (SYSTEMS AND ENGINE) FOR OBVIOUS ASSEMBLY DEFECTS WHICH ARE TO BE RECORDED AND CORRECTED. 50% OF EACH ENGINE TEST SAMPLE IS TO BE TESTED AS RECEIVED, WITHOUT ANY ENGINE ADJUSTMENTS, AND THE OTHER 50% OF EACH SAMPLE IS TO RECEIVE ONLY AN IDLE ADJUSTMENT BEFORE TEST (IDLE SPEED ADJUSTED ONLY IF OFF BY MORE THAN  $\pm$ 25 RPM). SELECTION OF VEHICLES FOR THESE SPLIT SAMPLES MUST BE ON A RANDOM BASIS, INDEPENDENT OF IDLE RPM INFORMATION.
- ALL TESTS SHOULD BE COLD START 7-CYCLE TESTS USING INDOLINE '90' TEST FUEL.

- TEST DATA ARE TO BE RECORDED ON DATA FORM SHOWN; DATA SHEETS WILL BE SUPPLIED BY PROVING GROUND AND EL SEGUNDO FACILITIES. THE TEST NUMBERS FOR EACH FACILITY START AT 1 AND ARE NUMBERED CONSECUTIVELY FOR EACH SUBSEQUENT TEST. ALL RERUNS ON A VEHICLE WILL USE - 1, - 2, ETC., AFTER THE ORIGINAL FIRST TEST NUMBER. THE INSPECTION SUMMARY AND NOTES SECTION ARE TO BE USED TO RECORD DEFECTS AND CORRECTIONS FOUND DURING THE PRE-TEST INSPECTION AND PRIOR TO RE-TEST. FOR RERUN TESTS, IT IS NOT NECESSARY TO REPEAT THE VEHICLE DESCRIPTION SECTION.

8. THE DATA TO BE SUBMITTED PER TEST IS THE FOLLOWING:

TYPE TEST	SUBMIT
HOT START	INSPECTION AND TUNE-UP SHEET PER TEST.
COLD START	INSPECTION AND TUNE-UP SHEET AND ATTACHED COPY OF TEST CYCLE PRINT-OUT PER TEST.
RERUNS	INSPECTION AND TUNE-UP SHEET PER RERUN ATTACHED TO THE FIRST TEST.

- EMISSION SYSTEM QUALITY CONTROL WILL BE EVALUATED FOR THESE COLD START, GREEN ENGINE TEST CONDITIONS IN TERMS OF CERTIFICATION LEVELS OF 2.2 GRAMS/MILE HC AND 23 GRAMS/MILE CO. FAILURE OF A GIVEN ENGINE TO MEET STANDARDS WILL BE DETERMINED WHEN IT CAN BE STATISTICALLY PROVEN WITH 95% CONFIDENCE THAT 10% OF AN ENGINE POPULATION EXCEEDS CERTIFICATION LEVELS.
- AS MANY VEHICLES AS POSSIBLE WHICH EXCEED CERTIFICATION LEVELS BY MORE THAN 25% MUST BE CONSIDERED FOR CORRECTION AND RETEST. SELECTION OF RETEST VEHICLES SHOULD BE ON A RANDOM BASIS AND NOT A FUNCTION OF KNOWN EMISSION SYSTEM PROBLEMS. CORRECTIONS AND RETEST RESULTS MUST BE REPORTED.

## DATA TEST FORM

1970 VEHICLE EMISSION TEST DATA

Plant \_\_\_\_\_ Test No. \_\_\_\_\_

AUDIT REPORT INFORMATION

Code No. \_\_\_\_\_ Vehicle Serial No. \_\_\_\_\_ Year \_\_\_\_\_ Weight \_\_\_\_\_ HC PPM \_\_\_\_\_ CO PCT \_\_\_\_\_ (Filled out by PCV) Revers Cold Start Type

---

VEHICLE DESCRIPTION

Vehicle Model \_\_\_\_\_ Car Line \_\_\_\_\_

Engine Disp. \_\_\_\_\_ cu. in. Engine R/P \_\_\_\_\_ Engine Serial No. \_\_\_\_\_

Transmission - 2 Spd.  4 Spd.  3 Spd. Auto.  5 Spd. Auto.  Air Cond.

Emission System - C.C.P.  A.I.R.  Evap. System

Carb. - 1 SBL  2 SBL  4 SBL  3 x 1 SBL  Carb. Part No. \_\_\_\_\_

Sensor - RPD  Bay City  Carter  Honey

---

TUNE-UP SPECIFICATIONS

	AS-RECEIVED	SPECIFIED	BUM SETTING
Idle Speed	_____	_____	_____
Timing	_____	_____	_____
Swirl	_____	_____	_____

---

INSPECTION SUMMARY

Distributor Shaft Park - Visible  Aligned  Eng. Oil  Clamp Tight

Induction System \_\_\_\_\_

Ignition System \_\_\_\_\_

Vacuum Connections \_\_\_\_\_

Engine Mechanics \_\_\_\_\_

Evaporative System \_\_\_\_\_

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TEST SUMMARY

Test Purpose \_\_\_\_\_ Date \_\_\_\_\_

Type:  As Rec'd  Speed Adj.  Mts. & Speed Adj. Other \_\_\_\_\_  Ret  Cold

Cycle No. 1 2 3 4 5 7

Idle Speed \_\_\_\_\_

Idle CO \_\_\_\_\_

Driving Comments \_\_\_\_\_ Driver \_\_\_\_\_

Test Fuel - \_\_\_\_\_ Indolene 90 \_\_\_\_\_ HP @ 50 mph \_\_\_\_\_

\*Temp. \_\_\_\_\_ F \*Bar Pressure \_\_\_\_\_ "Hg. \*Bar Humidity \_\_\_\_\_ %

Notes \_\_\_\_\_

\_\_\_\_\_ Bench Operator

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.

TITLE EXHAUST EMISSION AUDIT SPECIFICATIONS		FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL 0 60		MANUAL SEC. PAGE	
DATE SEPT. 27, 1969		1970		A-B-C-E		PART NO. 407827	
DR. BY D.D. WOOD		REF.		SERIES		PART NO.	
CHECKED [Signature]		REF.		SERIES		PART NO.	
APPR. [Signature]		REF.		SERIES		PART NO.	

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

BODY SERIES	VEHICLE MODELS	INERTIA WEIGHT
A	F-85 L-6	3500
	F-85 V-8	3500
	CUTLASS L-6	3500
	CUTLASS V-8	4000
	CUTLASS S	4000
	CUTLASS SUPREME	4000
	CUTLASS SUPREME SX 4-4-2 VISTA-CRUISER	4500 4500 5000
B	DELTA 88	5000
	DELTA 88 CUSTOM	5000
	DELTA 88 ROYALE	5000
C	NINETY-EIGHT	5000
E	TORONADO	5000

ENGINE DISP.	MODEL	TRANS.	CARB. BBLs.	INERTIA WEIGHT	DYNO HP		CERT. LIMITS		25% OVER LIMITS	
					WITH A/C	WITHOUT A/C	HC-PPM	CO-%	HC-PPM	CO-%
250 (REF. ONLY)	F-85	AUTO.	1	3500	8.8	8	190	1.06	238	1.32
		MAN.	1	3500	8.8	8	212	1.18	264	1.47
350	F-85	AUTO.	2 & 4	4000	8.8	8	173	.97	217	1.21
		MAN.	2 & 4	4000	8.8	8	193	1.08	241	1.34
	B	AUTO.	2	4500	11	10	162	.90	202	1.13
		MAN.	2	4500	11	10	180	1.00	225	1.25
455	F-85	AUTO.	4	4500	11	10	162	.90	202	1.13
		MAN.	4	4500	11	10	180	1.00	225	1.25
	B	AUTO.	2	5000	11	10	153	.85	191	1.07
		MAN.	2	5000	11	10	171	.95	225	1.25
B/C & E	AUTO.	4	5000	11	10	153	.85	191	1.07	

NOTE: THESE CERTIFICATION LIMITS ARE BASED ON MASS EMISSION LIMITS OF 2.2 GRAMS/MILE HC AND 23 GRAMS/MILE CO

										TITLE EXHAUST EMISSION AUDIT SPECIFICATIONS		FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE 0 61	
										DATE SEPT. 27 1969		CHECKED [Signature]		SERIES A-B-C-E		PART NO. 407827	
										DR. W.L. SPITZLEY		APPR. [Signature]					
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.		

MATERIALS TO BE PLACED IN GLOVE BOX, IF APPLICABLE		
PART NO.	DESCRIPTION	GROUP
405521	WALLET ASM (EXC. EXT. S.W.) (EXC. CANADA CARS)	0
405520	WALLET ASM (EXT. S.W.) (EXC. CANADA CARS)	0
734307	OWNER OPERATION MANUAL (EXC. EXT. WAGON)	96Z49
405527	OWNER OPERATION MANUAL (EXT. WAGON)	96Z49
734320	WARRANTY CERTIFICATE	96Z49
407712	BOOKLET - CONSUMER INFORMATION (EXC. S.W.) (WITH DRUM BRAKES)	0
407966	BOOKLET - CONSUMER INFORMATION (EXC. S.W.) (WITH DISC BRAKES)	0
407713	BOOKLET - CONSUMER INFORMATION (S.W.)	0
7025281	KEY - DOOR & IGNITION & S.W. REAR WINDOW	1A1
7025287	KEY - GLOVE BOX & TRUNK & CONSOLE	1A1
404266	LICENSE PLATES PARTS PACKAGE (EXC. S.W.)	14C
405931	LICENSE PLATES PARTS PACKAGE (S.W.)	14C
3171538	SUPERLIFT - OWNER'S GUIDE	35G66
406180	ALBUM - STEREO TAPE	35U57
3904868	FLASHER ASSEMBLY	35U89

— (CANADIAN EXPORT ONLY)

— (CANADIAN EXPORT ONLY)

— (CANADIAN EXPORT ONLY)

CODE 0-1

CODE 0-2

CODE 0-3

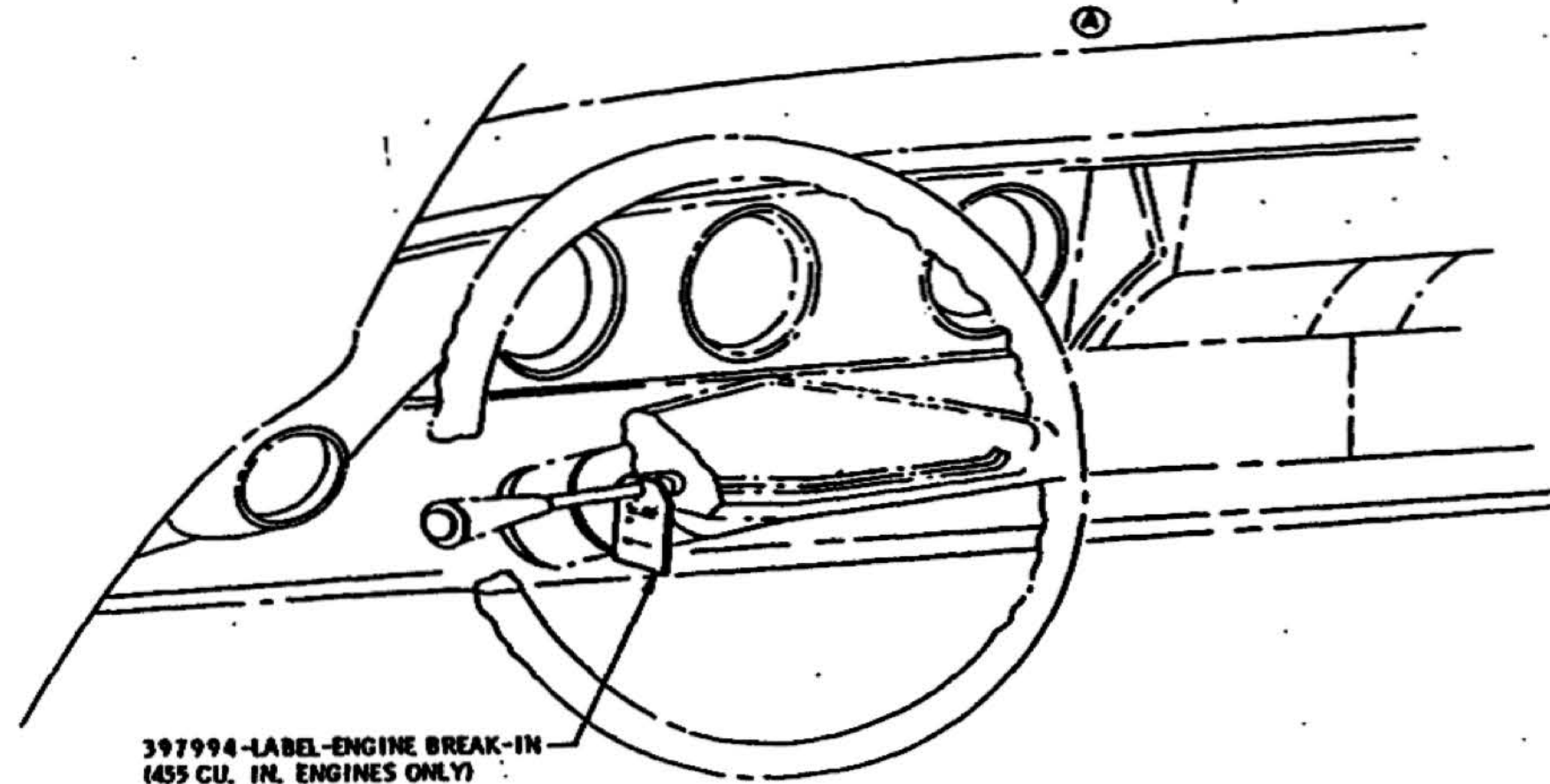
☐ INSERT THESE ITEMS TOGETHER  
IN 3958690-ENVELOPE. (1A2E)

MATERIALS TO BE PLACED IN TRUNK (OR BODY OF S.W.), IF APPLICABLE			
PART NO.		GROUP	PACKAGING SPEC. NO.
395225	HUB CAPS	10B	S-1776
9796919	WHEEL TRIM RING ASSEMBLY	35N66	
402495	WIRE WHEEL COVERS	35N95	
397932	TIRE VALVE EXTENSION PACKAGE		
404977	WHEEL DISCS	35P01	
397932	TIRE VALVE EXTENSION PACKAGE		
404692	WHEEL DISCS (DELUXE)	35P02	
397931	TIRE VALVE EXTENSION PACKAGE		
9796919	WHEEL TRIM RING ASSEMBLY	35P05	
9796919	WHEEL TRIM RING ASSEMBLY	35P06	
9796919	WHEEL TRIM RING ASSEMBLY	35Y74	
★	FRONT FLOOR MATS (AUXILIARY)	35B32	
★	REAR FLOOR MATS (AUXILIARY)	35B33	
405335	FRONT LICENSE PLATE SUPPORT	14C	
983101	ROOF AIR DEFLECTOR PACKAGE	35C51	

NOTE: PACKAGING SPECIFICATIONS ARE ISSUED BY METHODS PACKAGING DEPARTMENT.

★ SEE PARTS LIST FOR PART NUMBERS AND COLORS.

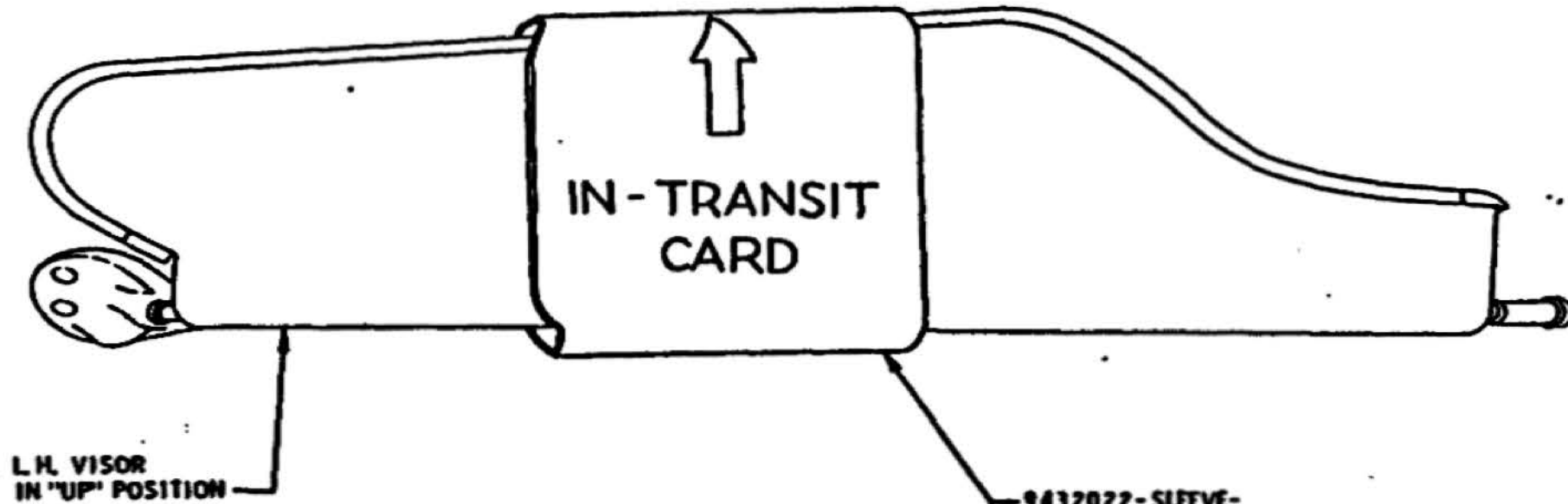
TITLE		LOOSE PARTS STOWAGE	
DATE	JAN. 22, 1969	FIRST USED	1970
DR. BY	F. JANTZ	OLDSMOBILE PRODUCT	INFORMATION MANUAL
CHECKED	M. J. JANTZ	MANUAL NO.	0 100
DATE	4-1-70	REVISION	405527 MAN. ADD. 210
DR. BY		SERIES	A
APP. BY		PART NO.	404411



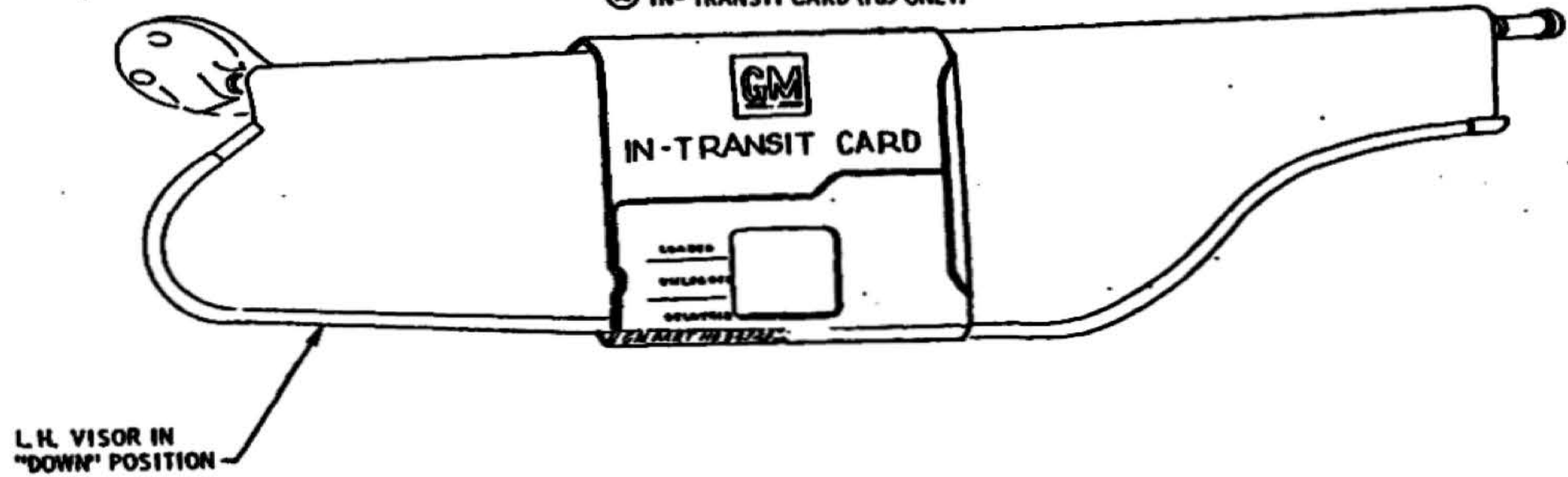
397994-LABEL-ENGINE BREAK-IN  
 (455 CU. IN. ENGINES ONLY)

REV.		DATE		TITLE		FIRST USED		MANUAL NO.		PAGE	
1-18-70	C	TITLE REVISED	MAY 12, 1969	DR. BY	D. PARKER	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	O	102		
6-9-68	B	VIEW REMOVED		CHECKED	JTB						
6-1-68	A	402923-TRG REMOVED		APP'D	P.C. FRENCH					404411	

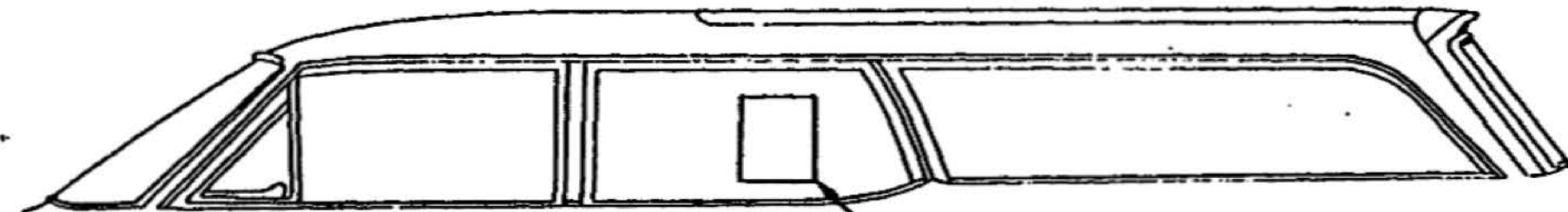




9432022 - SLEEVE-  
 IN-TRANSIT CARD (EXCEPT F85)  
 9432339 - SLEEVE-  
 (A) IN-TRANSIT CARD (F85 ONLY)



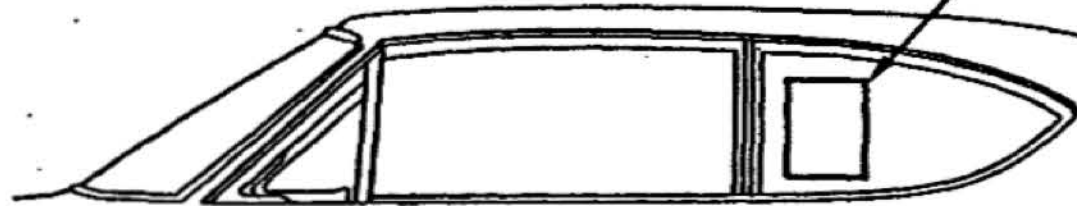
		TITLE		SLEEVE-IN-TRANSIT CARD		MANUAL SEC.		PAGE	
		DATE <i>JULY 31, 1969</i>		FIRST USED		OLDSMOBILE PRODUCT		O	
		DR. BY <i>B. PARKER</i>		1970		INFORMATION MANUAL		103	
		CHECKED <i>f. Sant</i>		REV.		SERIES		PART NO.	
<i>1-12-70 A</i>		<i>PART NO. ADDED</i>		<i>146</i>		<i>A-B-C-E</i>		<i>404411-2-3</i>	



**STATION WAGON MODELS**



**FOUR DOOR MODELS**



**TWO DOOR MODELS**

ⓑ RETAIL PRICE LABEL (OLDS FORM 677)  
9428351 - "FOR EXPORT ONLY" LABEL  
(97V78 - 98V78)

Ⓒ TYPING REQUIREMENTS FOR RETAIL PRICE LABEL

KEELOX 41-75 (BLACK OFFSET SILK RIBBON  
(FOR TYPEWRITERS))

KEELOX 41-78 (BLACK OFFSET SILK RIBBON  
(FOR I. B. M. TYPE TABULATING MACHINES))

RIBBON MUST BE REPLACED AS SOON AS IT  
STARTS TO LOSE ITS ORIGINAL DARKNESS.

IT IS ESSENTIAL THAT THE TYPING REQUIREMENTS  
BE STRICTLY ADHERED TO. IF THE "KEELOX"  
RIBBONS SPECIFIED ARE NOT USED, THERE IS THE  
POSSIBILITY THAT THE TYPED LETTERS WILL FADE  
OUT WHEN SUBJECTED TO SUNLIGHT.

METHOD OF APPLICATION:

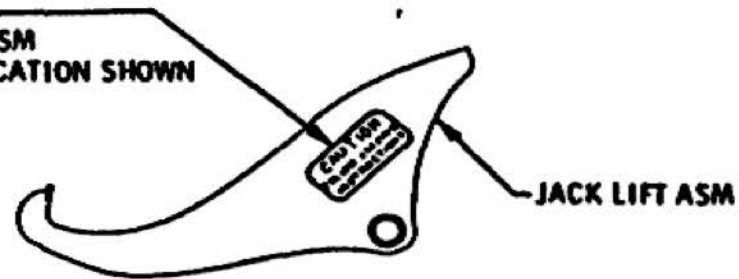
WET LABEL, USING A POTDEVIN OR SIMILAR  
MACHINE CONTAINING WATER INSTEAD OF GLUE.  
THE LABELS ARE TO BE PASSED THROUGH THE  
MACHINE SO THAT THE FACE (ADHESIVE) SIDE IS  
MOISTENED. THEN AFFIX LABEL INSIDE OF L. H.  
REAR SIDE WINDOW IN POSITIONS SHOWN.

AFTER LABEL IS ATTACHED TO THE INSIDE OF THE  
GLASS, A SQUEEGE SHOULD BE USED TO REMOVE  
ALL AIR POCKETS.

Ⓒ

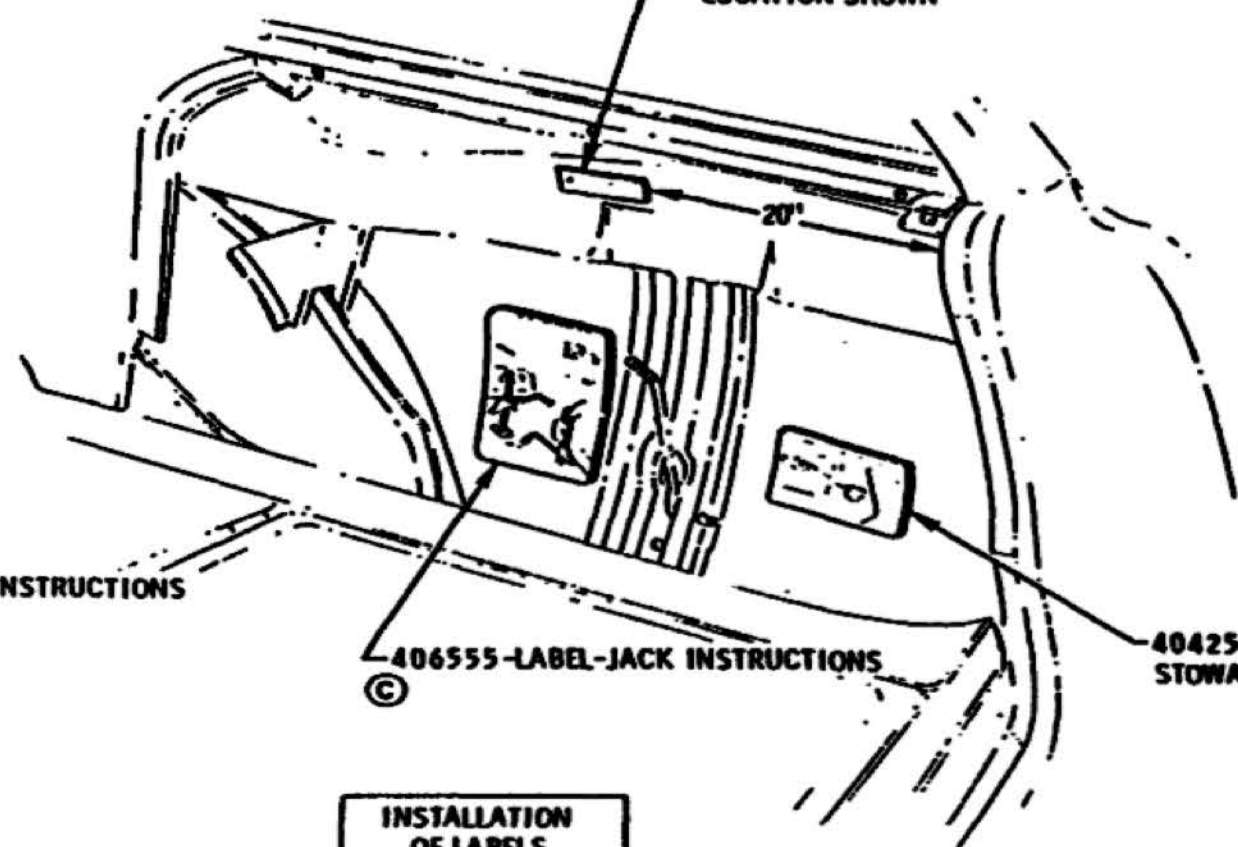
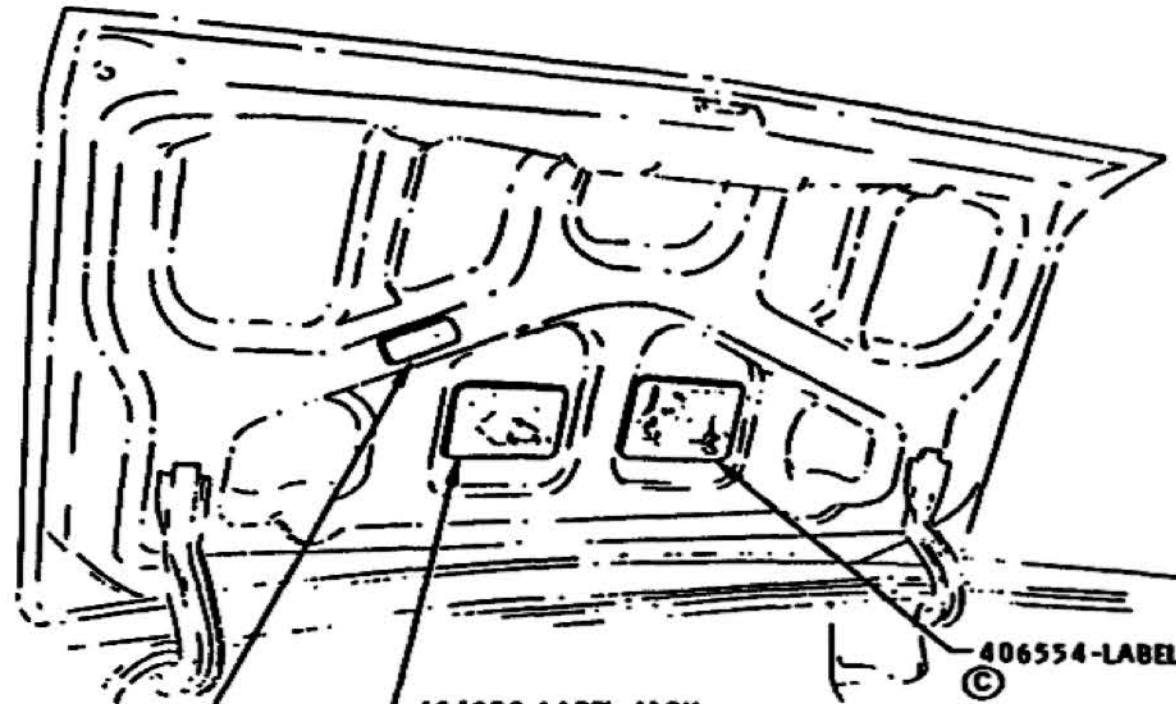
		TITLE LABEL LOCATIONS		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO. PAGE	
10-27-69	D	393088 LABEL CANCELLED	DT	DATE	FEB. 2, 1969	1970		0	106
9-5-69	C	NOTE REVISED	DT	DR. BY	P. J. McKESSY				
9-5-69	B	WAS 583831 LABEL	DT	CHECKED	ZH				
2-27-69	A	9428351-LABEL ADDED	DT	APPR.	[Signature]	REF. 141 97V78-1A2E 96-14	A		404411

580822-LABEL  
AFFIX TO LIFT ASM  
IN APPROX. LOCATION SHOWN



JACK CAUTION LABEL

587514-LABEL  
ANTI SPIN DIFFERENTIAL  
LOCATE APPROX.  
LOCATION SHOWN



406554-LABEL-JACK INSTRUCTIONS

404252-LABEL-JACK  
STOWAGE INSTRUCTIONS  
(EXC. 35N66, 35P05) (A)  
404303-LABEL-JACK  
STOWAGE INSTRUCTIONS  
(35N66, 35P05) (B)

406555-LABEL-JACK INSTRUCTIONS (C)

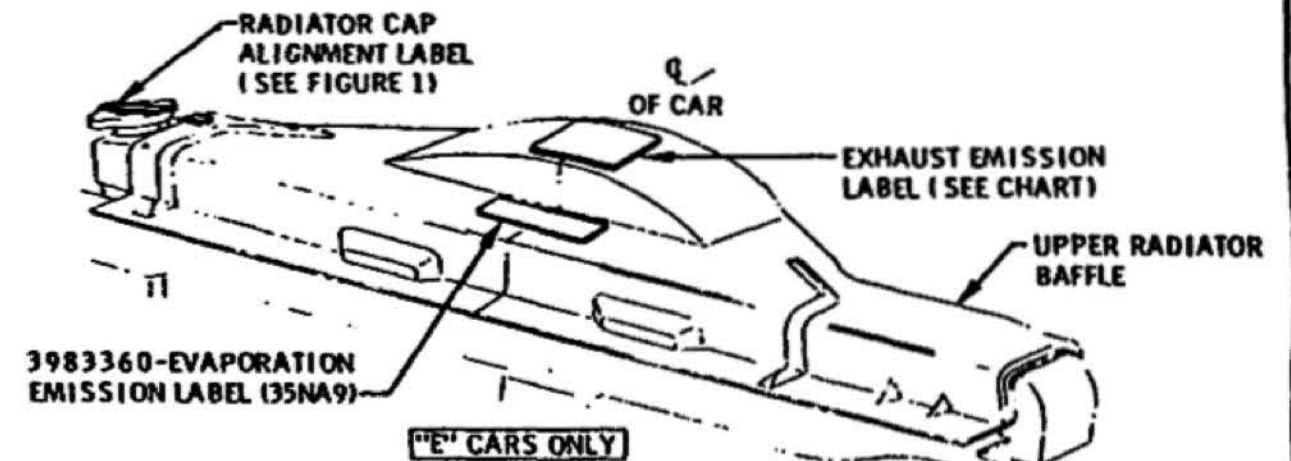
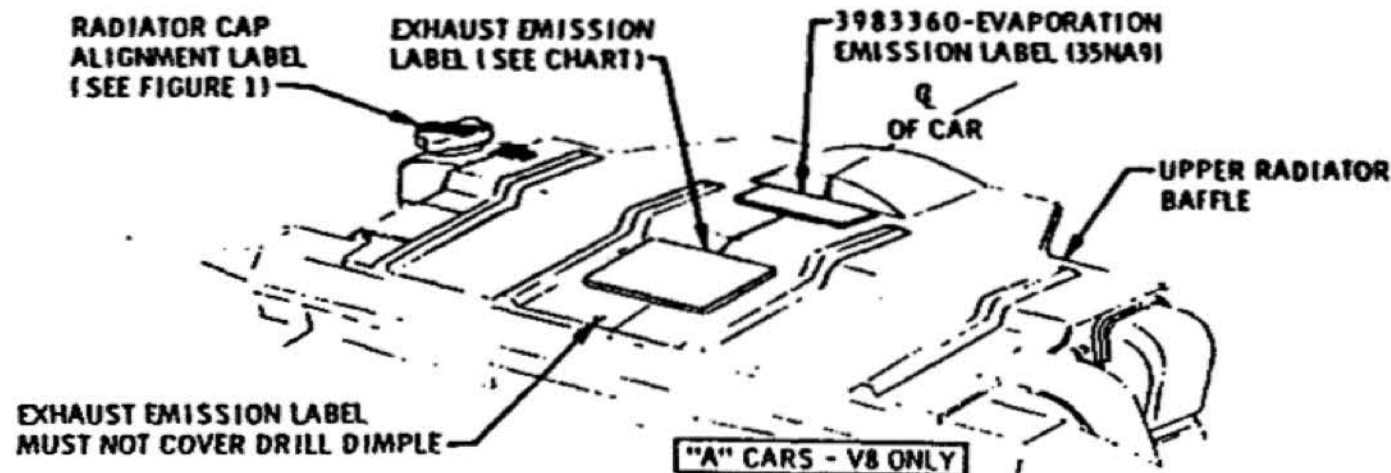
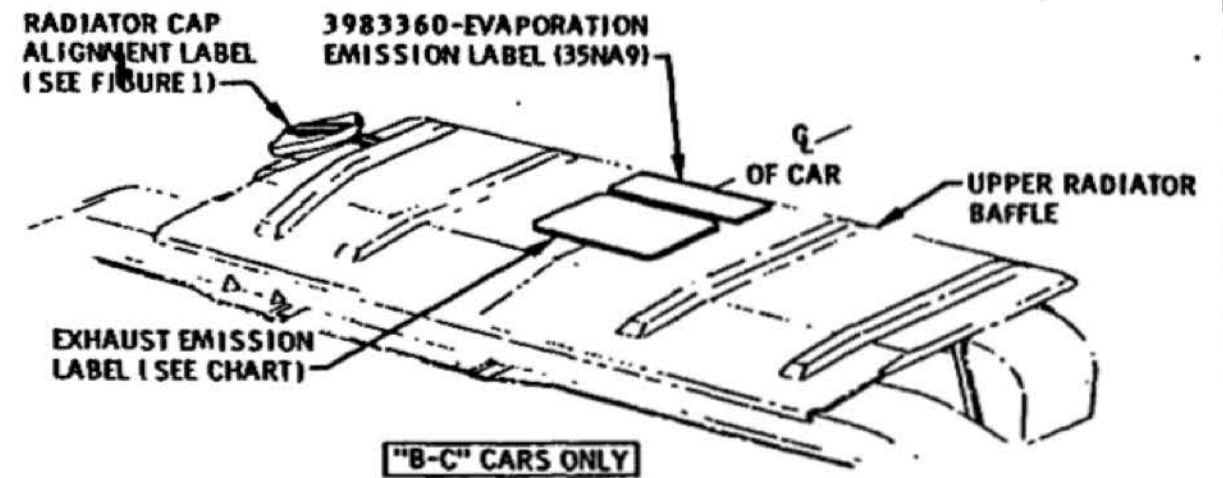
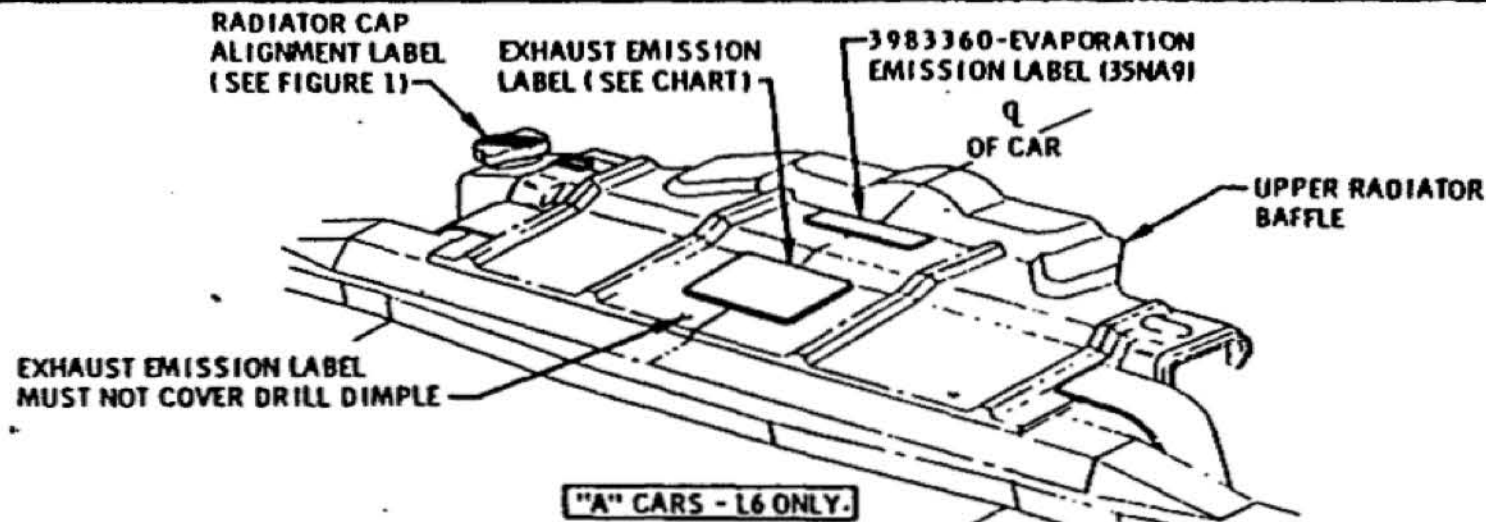
404251-LABEL-JACK  
STOWAGE INSTRUCTIONS

587514-LABEL-ANTI SPIN  
DIFFERENTIAL

INSTALLATION  
OF LABELS  
STATION WAGONS

INSTALLATION OF LABELS  
(EXCEPT STATION WAGONS)

				TITLE		LABELS			
5-7-69	C	LABEL PT NOS. ADDED	BY	DATE	FIRST USED	OLDSMOBILE PRODUCT	MANUAL SEC.	PAGE	
5-8-69	B	404303-LABEL ADDED	BT	JAN. 6, 1969	1970	INFORMATION MANUAL	O	104	
2-7-69	A	LABEL USAGE REVISED	BA/DT	DR. BY B. PARKER	REV. 14E	SERIES	A	PART NO. 404411	
				CHECKED	35660				
				APPR.					



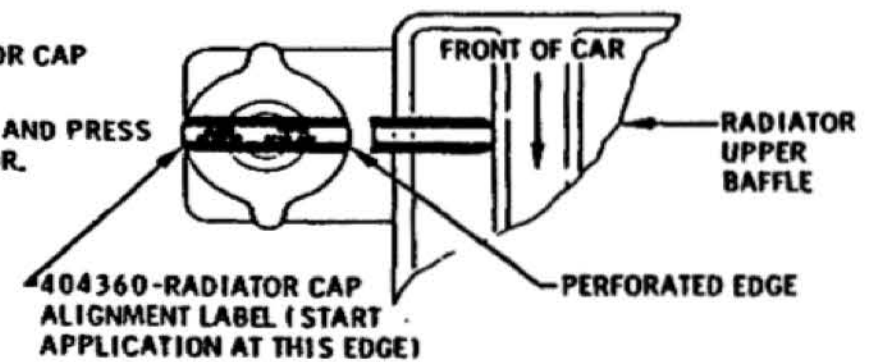
EXHAUST EMISSION LABEL					
PART NO.	PROD. CODE	ENGINE CODE	PART NO.	PROD. CODE	ENGINE CODE
408816	SA	TP-TQ-UN-UO	408825	SI	QD-QX
408817	SB	VB	408826	SJ	QN-QP
408818	SC	VF	408827	SK	US-UT
408819	SD	UC-UD-UJ	408828	SL	UV-UW
408820	SE	TU	408829	SM	TV-TW-UL
408822	SF	QB			
408823	SG	TT	408831	SO	TC-TQ-QA-QJ
408824	SH	TL-QI	408832	SP	TS

MANDATORY PROCEDURE

1. FULLY TIGHTEN CAP.
2. APPLY LABEL ACROSS RADIATOR CAP AND UPPER BAFFLE.
3. BREAK LABEL AT PERFORATION AND PRESS LABEL EDGE DOWN ON RADIATOR.

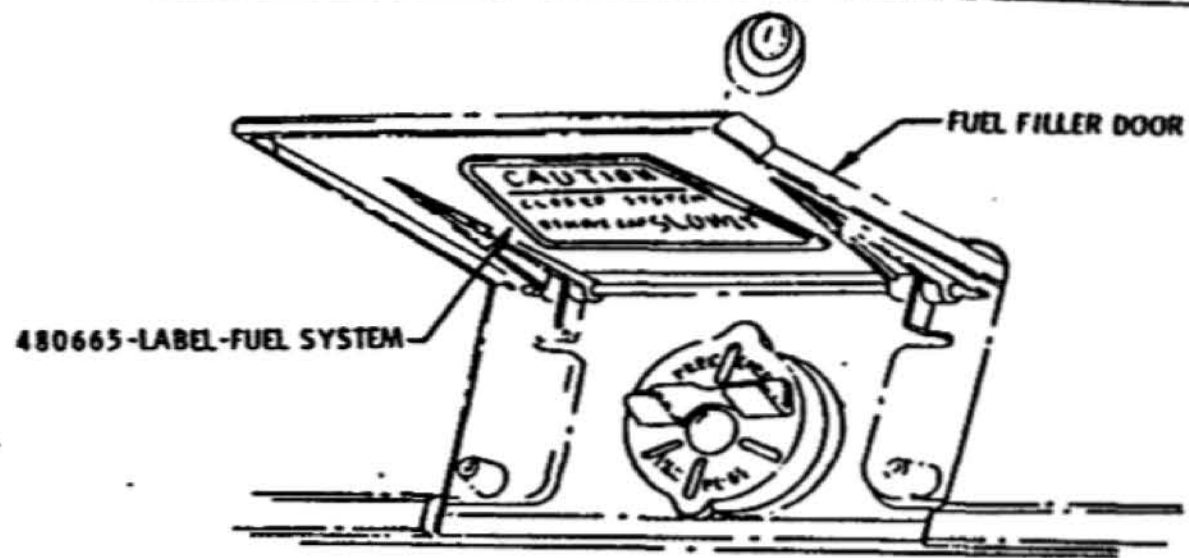
TYPICAL APPLICATION OF RADIATOR CAP ALIGNMENT LABEL

FIGURE 1

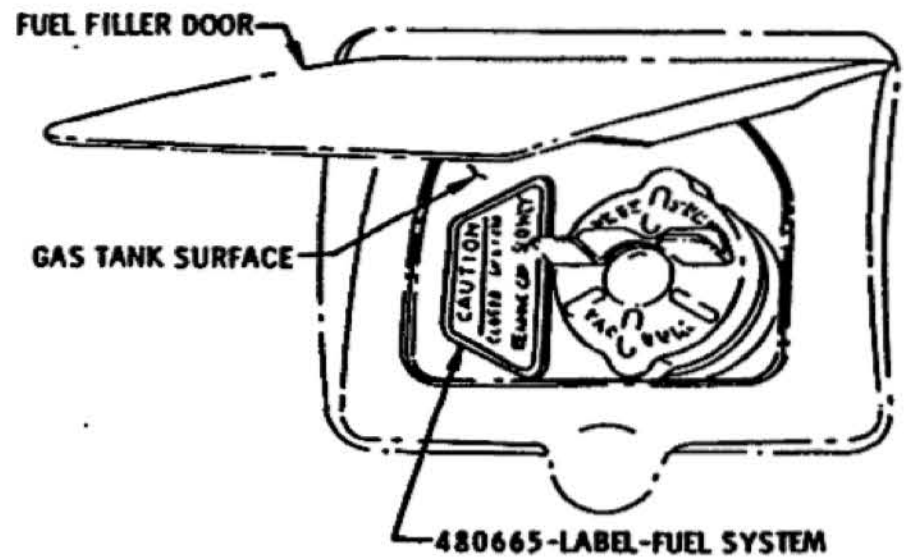


ATTACH LABEL SO THAT IT CAN BE READ FROM FRONT OF CAR. BE SURE AREA IS CLEAN OF GREASE & DIRT BEFORE ATTACHING LABEL.

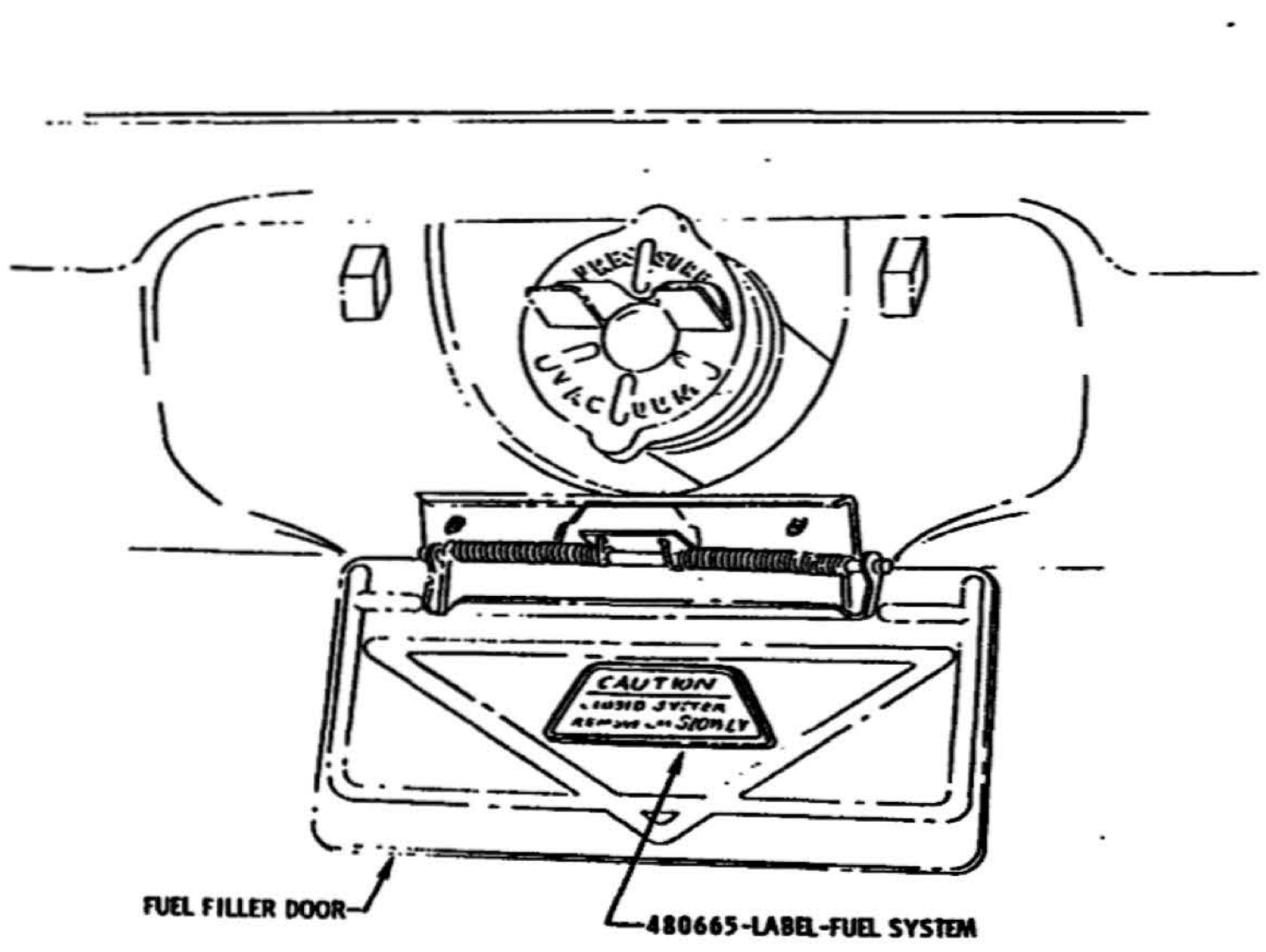
DATE	SYM	REVISION	DR	CK	APPR	TITLE	LABELS	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
3-2-70	K	408830 REMOVED				DATE	APRIL 11, 1969	DR. BY	P.J. McKESSY	1970	O	108
						CHECKED		REF.	GB			
						APPR.		13A		A-B-C-E		404411-2-3



LABEL LOCATION FOR ALL "E" SERIES



LABEL LOCATION FOR STATION WAGONS

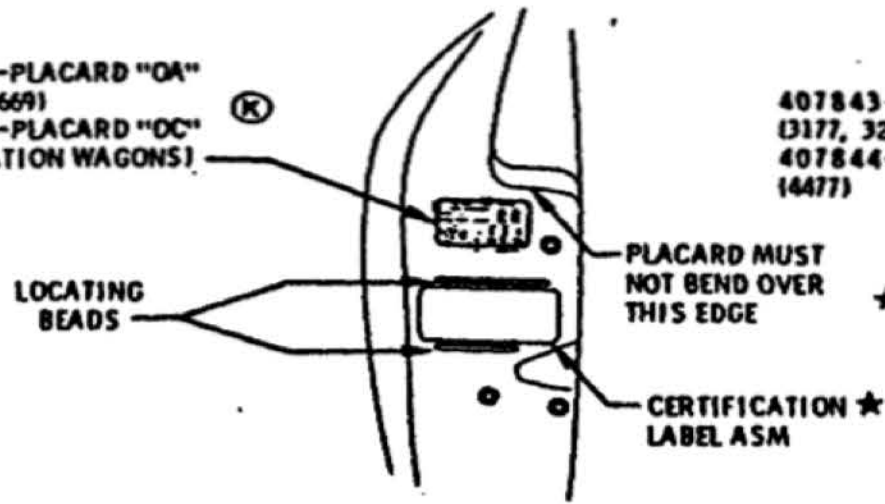


LABEL LOCATION FOR "B-C" AND "A" SERIES (EXCEPT STATION WAGONS)



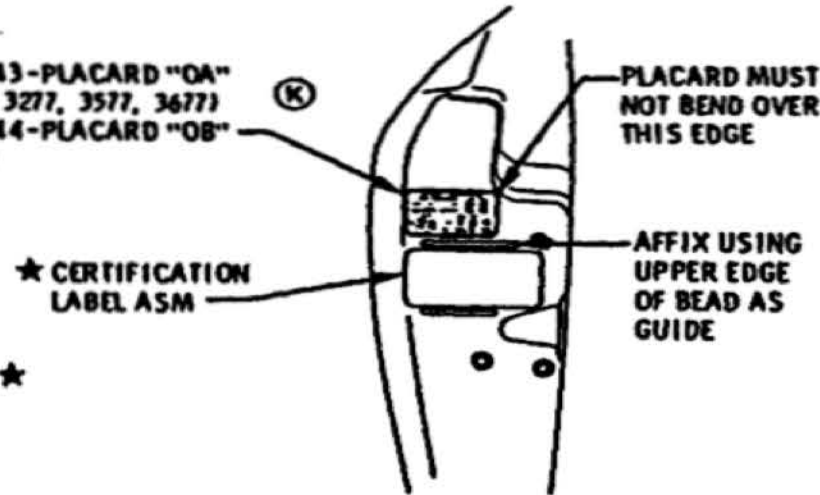
				TITLE LABEL-FUEL FILLER DOOR (35NA9)					
DATE	SYM	REVISION	DR.	CK.	APPR.	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. 0	PAGE 109
DATE	SYM	REVISION	DR.	CK.	APPR.	REF. 35NA9	SERIES A-B-C-E	PART NO. 40441-2-3	

407843-PLACARD "OA"  
(3569 - 3669)  
407845-PLACARD "OC"  
(ALL STATION WAGONS)



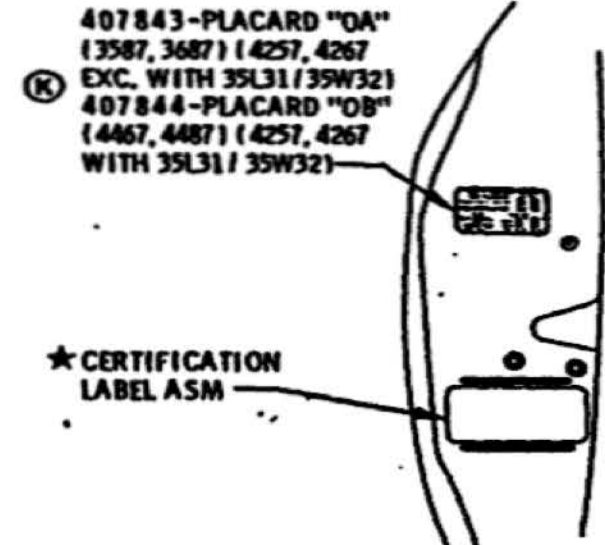
F-85  
FOUR DOOR SEDANS  
AND STATION WAGONS

407843-PLACARD "OA"  
(3177, 3277, 3577, 3677)  
407844-PLACARD "OB"  
(4477)



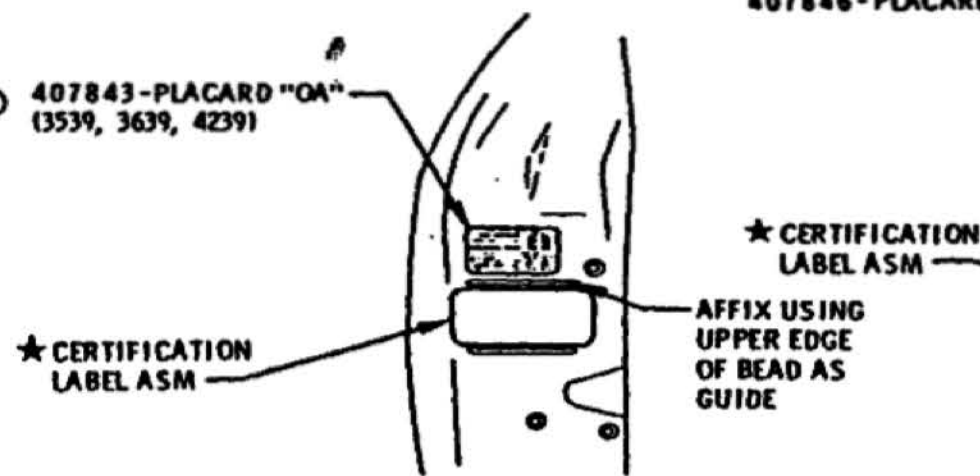
F-85  
CLUB COUPES

407843-PLACARD "OA"  
(3587, 3687) (4257, 4267)  
EXC. WITH 35L31/35W32)  
407844-PLACARD "OB"  
(4467, 4487) (4257, 4267  
WITH 35L31/35W32)



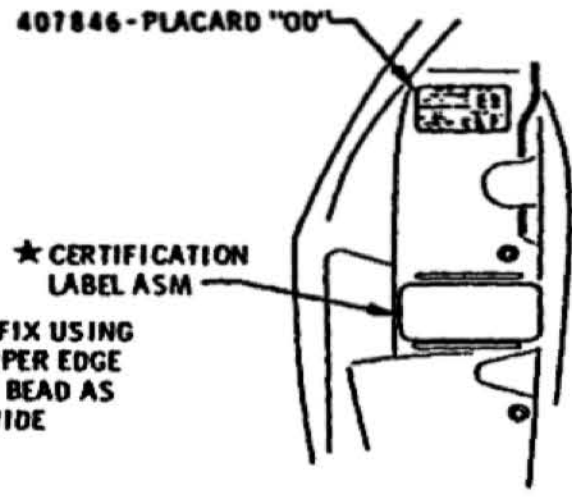
F-85  
HARDTOP COUPES  
AND CONVERTIBLES

407843-PLACARD "OA"  
(3539, 3639, 4239)



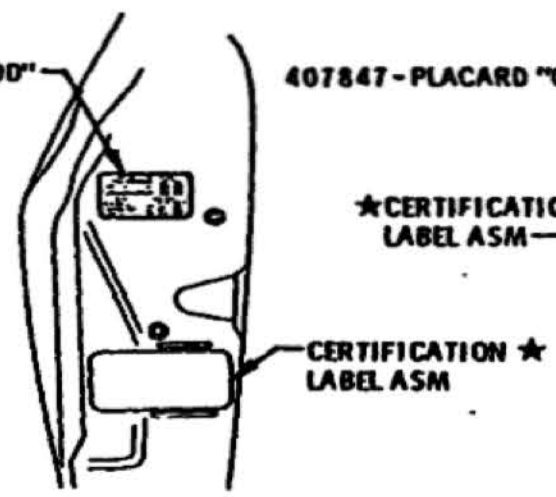
F-85  
4 DOOR HARDTOP

407846-PLACARD "OD"



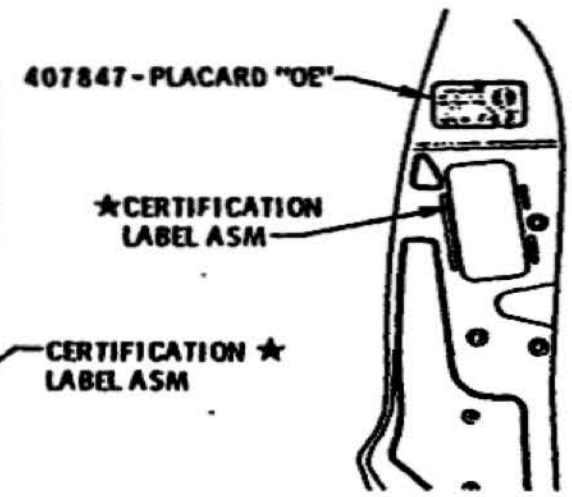
88 AND 98  
4 DOOR HARDTOPS  
AND SEDANS

407846-PLACARD "OD"



88 AND 98  
HARDTOP COUPE  
AND CONVERTIBLE

407847-PLACARD "OE"



TORONADO

AFFIX PLACARD  
USING THIS BEND  
AS A GUIDE.

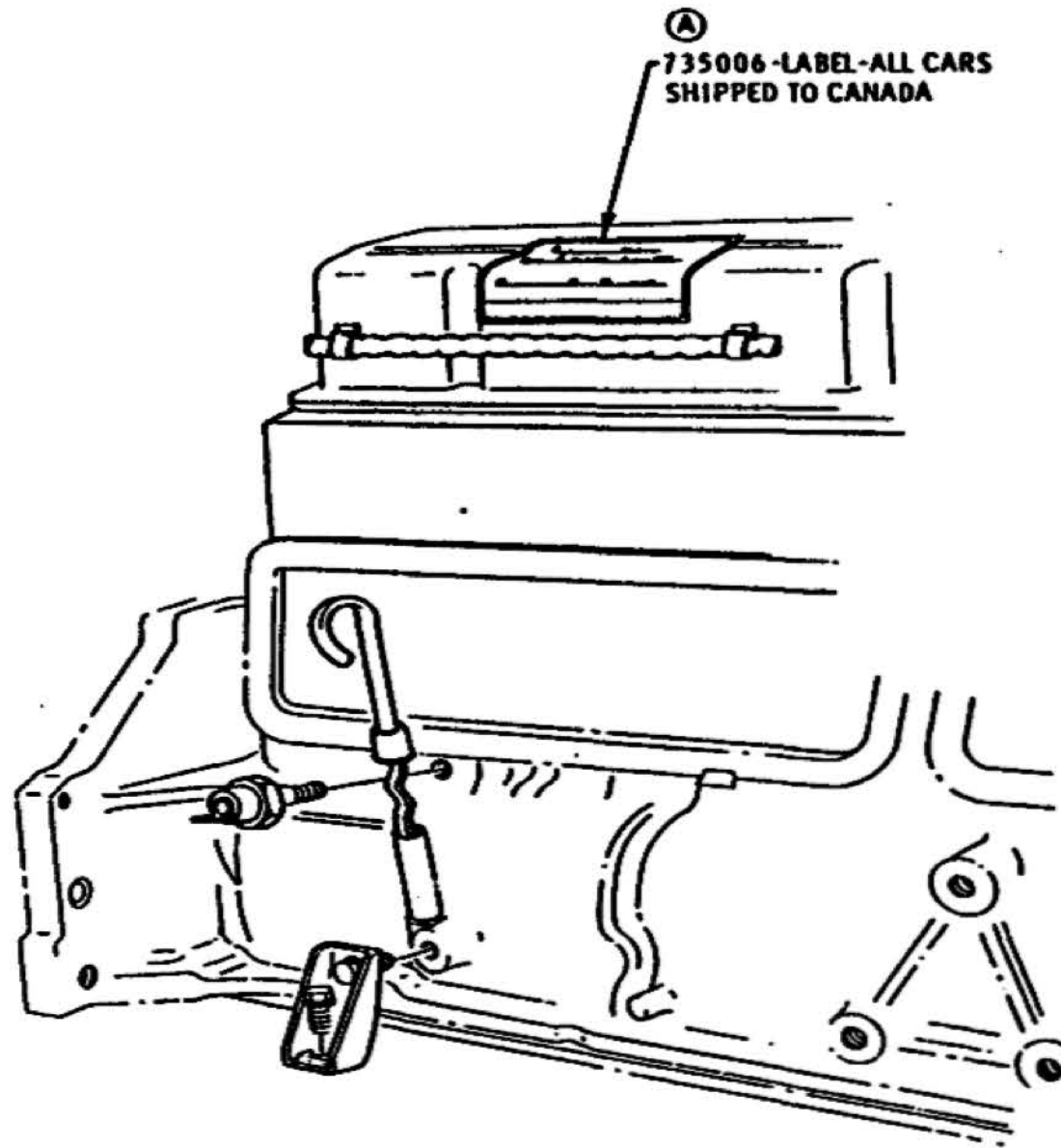
VIEW A

REMOVE BACKING PAPER & DOUBLE  
ROLL PLACARD ON FACE OF L.H. FRONT  
INNER PANEL IN AREA AS SHOWN WITH  
12 LB. MINIMUM FORCE ON A FISHER  
FS111 RUBBER ROLLER OR EQUIVALENT.

PLACARD MUST BE HORIZONTAL AND ON  
A FLAT SURFACE FOR ITS ENTIRE AREA  
(EXCEPT E CAR)

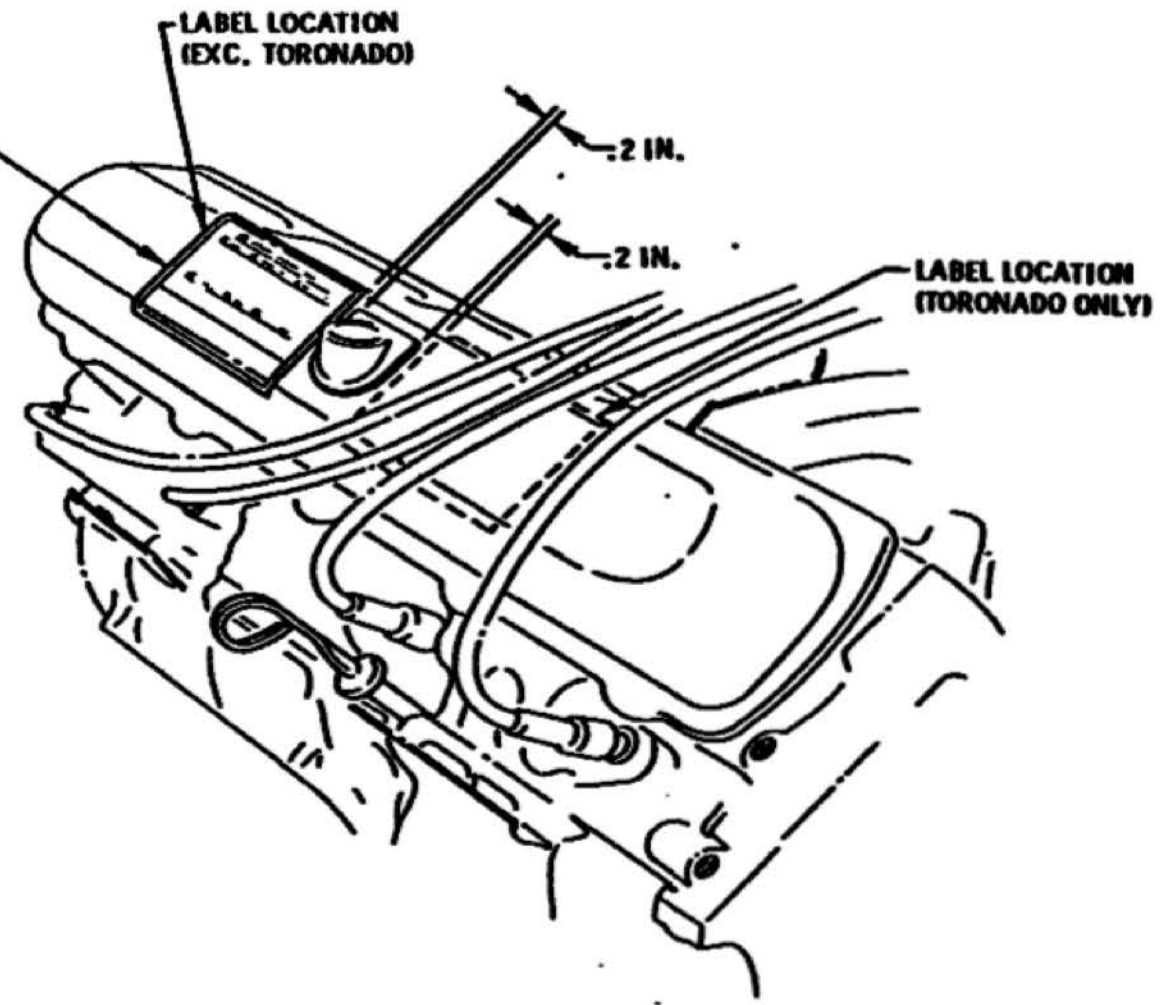
★ CERTIFICATION LABEL ASM CONSISTS OF:  
3975433-LABEL-VEHICLE CERTIFICATION (EXC. 97V78, 98V78).  
3983908-OVERLAY-VEHICLE CERTIFICATION (EXC. 97V78, 98V78).

REVISION				TITLE				FIRST USED		MANUAL SEC.		PAGE	
3-5-70	K2	35L33 REMOVED	PLT	TIRE PRESSURE PLACARD AND CERTIFICATION LABEL				1970		O		110	
11-20-69	J	REVISED + REDRAWN	PLT	DATE NOVEMBER 11, 1968									
10-14-69	H	401A57 ADDED	PLT	DR. BY P. LOCATELLI									
10-14-69	G	35W32 ADDED	PLT	CHECKED BY [Signature]									
				APPR. L.A. [Signature]				6978-3224		A-B-C-E		40441-2-3	



L-6

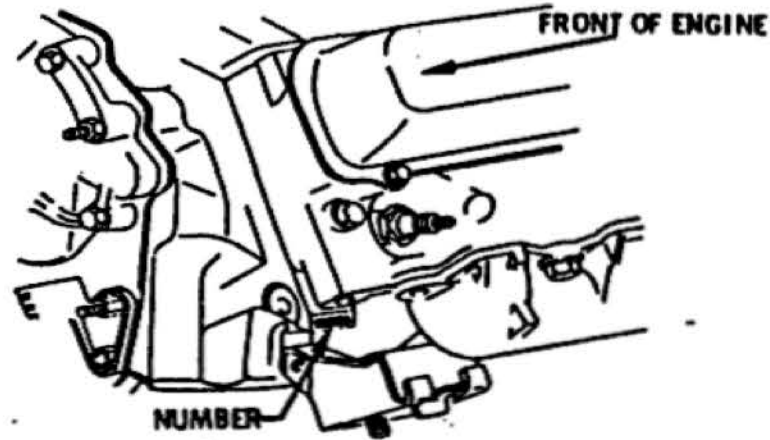
(A) 735006-LABEL-ALL CARS SHIPPED TO CANADA



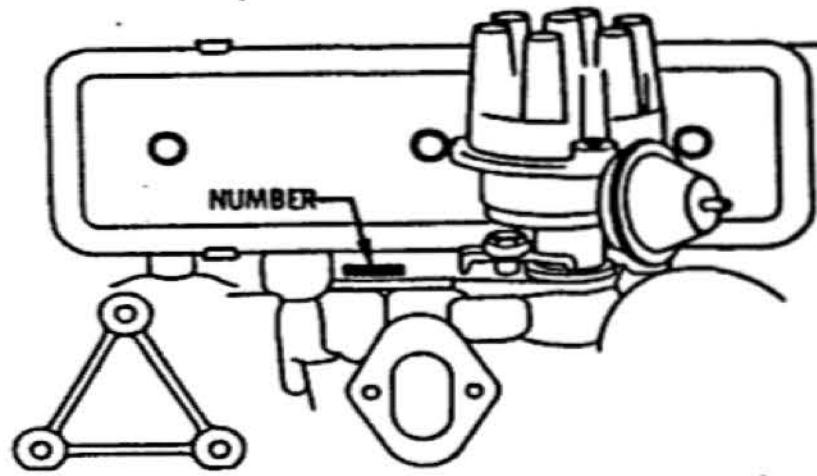
V-8

LOCATE LABEL ON ENGINE OIL  
DIPSTICK SIDE OF ENGINE ON  
VEHICLES EXPORTED TO CANADA

TITLE		LABEL - RECOMMENDED OIL CHANGE (CANADIAN)			
DATE	MAY 13, 1969	FIRST USED	1970	MANUAL SEC.	0
DR. BY	Goodwin	OLDSMOBILE PRODUCT INFORMATION MANUAL		PAGE	112
CHECKED	M. J. Amhart				
6-19-69	A. HAS 3406985-LABEL	REV.		SERIES	A-R-C-E
				PART NO.	404411-7-3



V-8 ENGINE  
CYLINDER BLOCK - L.H. SIDE



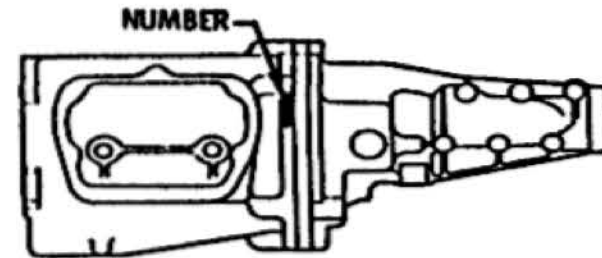
L-6 ENGINE  
CYLINDER BLOCK - R.H. SIDE

EACH VEHICLE ENGINE AND TRANSMISSION MUST BE STAMPED WITH A DERIVATIVE OF THE VEHICLE IDENTIFICATION NUMBER. THIS NUMBER OMITTS THE SERIES AND BODY STYLE AS FOLLOWS:

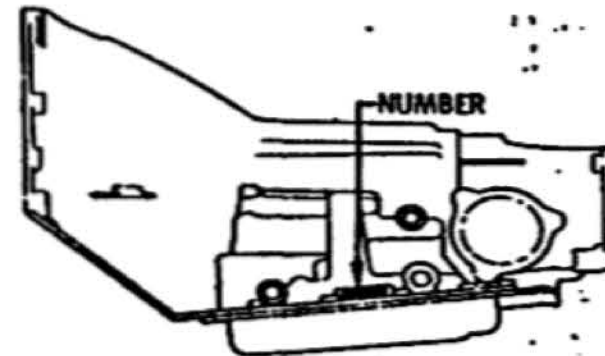
VEHICLE IDENTIFICATION NUMBER - 394870M600001  
ENGINE & TRANSMISSION PROTECTIVE NUMBER - 30M600001

SEE PAGE 22 FOR ADDITIONAL INFORMATION.

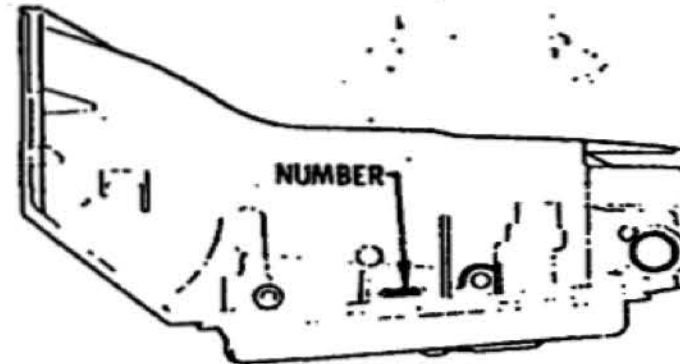
THE FOLLOWING REPAIR PROCEDURE WILL APPLY TO THE ABOVE STAMPED NUMBERS: "WHEN NO MORE THAN TWO (2) OF THE NINE CHARACTERS ARE INCORRECT IT WILL BE PERMISSIBLE TO OBLITERATE ONLY THE INCORRECT CHARACTER(S) WITH AN "X" STAMP AND RESTAMP THE CORRECT CHARACTER(S) ABOVE OR BELOW. IN THOSE INSTANCES WHERE THREE (3) OR MORE CHARACTERS ARE ERRONEOUS THE ENTIRE NUMBER IS TO BE OBLITERATED WITH AN "X" STAMP AND RESTAMP THE CORRECT NUMBER ABOVE OR BELOW THE ORIGINAL. IN THOSE CASES WHERE SPACE DOES NOT PERMIT OBLITERATION AND RESTAMP, ABOVE OR BELOW, THE ENTIRE NUMBER IS TO BE GROUND OFF AND RESTAMPED".



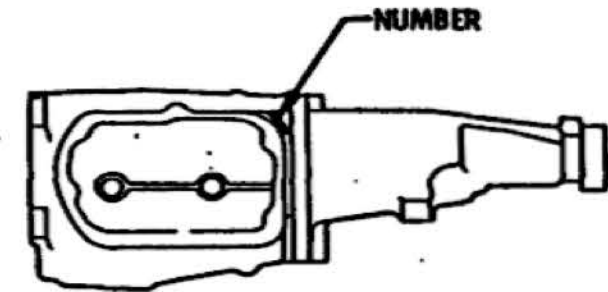
4 SPEED MANUAL TRANS.  
(35M20 - 35M21)



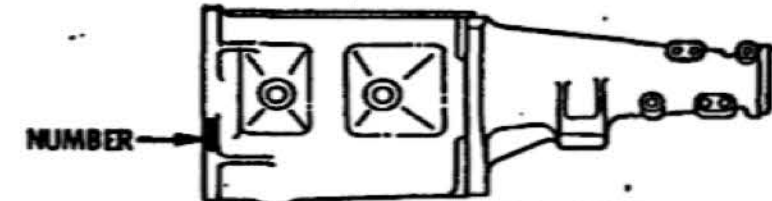
35M38 TRANS.



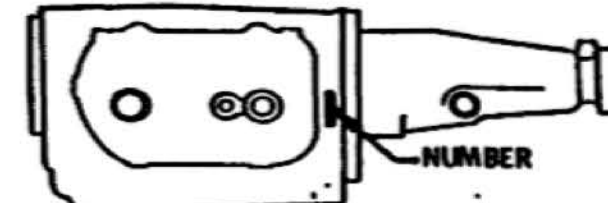
3 SPEED AUTOMATIC TRANS.  
(STD. ON 84, 8600)  
(35M40 - 35M41)



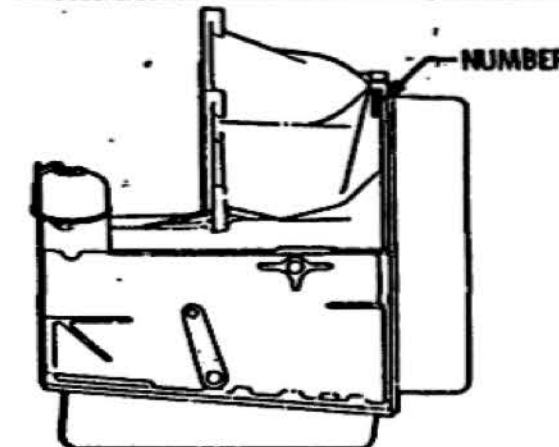
3 SPEED MANUAL TRANS.  
(STD. ON 31, 32, 35, 36, 42, 4800)



3 SPEED MANUAL TRANS. - HEAVY DUTY  
(STD. ON 54, 64, 6600)



3 SPEED MANUAL TRANS. - HEAVY DUTY  
(STD. ON 400) (35M14)



3 SPEED AUTOMATIC TRANS.  
(STD. ON 94, 9600)

**NOTE**

STAMP PROTECTIVE NUMBER ON L.H. SIDE OF TRANSMISSION AT LOCATION SHOWN

TITLE				PROTECTIVE NUMBER STAMPING - ENGINE AND TRANSMISSION			
DATE	2-26-69	BY	B	DATE	OCTOBER 30, 1968	FIRST USED	1970
TITLE	TITLE REVISED	DR. BY	P. LOCATELLI	CHECKED	M. Barnhart	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
2-26-69	A	TRANS. ADDED	PLM	APPR.	M...	A-B-C-E	0 116
				SERIES		PART NO.	
				A-B-C-E		104411-2-2	

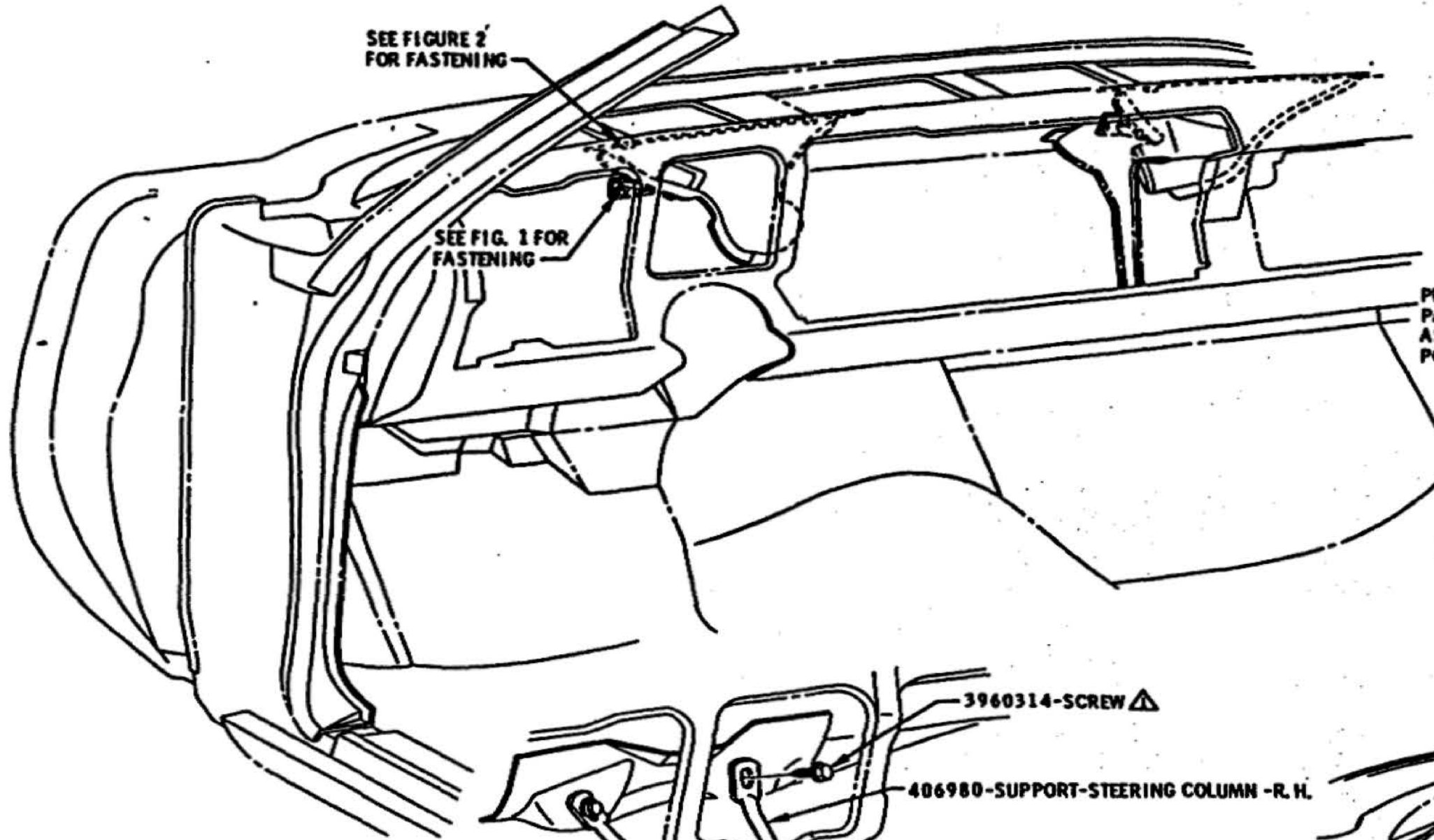


OLDSMOBILE DIVISION GENERAL MOTORS CORPORATION  
LANSING MI, MICHIGAN

NAME OF INSTALLATION	INSTALLATION REFERENCE NUMBER	PACKAGE NUMBER	TEMPLATE PART NUMBER	TEMP. DWG. SIZE	DESCRIPTION OF TEMPLATE
ANTENNA-MANUAL	406604	983115	406572	B	FENDER DRILLING FRONT
AUTO-THROTTLE CONTROL	406606	983184 (ADAPTER) 983176	406683	B	INSTRUMENT PANEL CUTOUT
AUXILIARY OIL COOLER	406617	230828 (EXC. C60, V01, V02 & Y72) 230849 (WITH C60, V01, V02 & Y72)			
CARRIER-LUGGAGE STATION WAGON	404860	983105 (35, 3600) 983106 (4800)			
CARRIER-SKI STATION WAGON	401548	982997			
CLOCK	406605	983151			
DEFLECTOR-ROOF STATION WAGON	404333	983101			
DEFOGGER-REAR WINDOW	406607	983155			
HEADLAMP OFF DELAY CONTROL	407410 (C)	983187			
HOOD LOCK CONTROL	406621	983168			
LAMP-COURTESY	406608	983153			
LAMP-GLOVE BOX	406609	983150			
LAMP-TRUNK	(A) 407235	983186			
LAMP-UNDERHOOD	406610	983173			
LOCK-DOOR SAFETY	403757	983096			

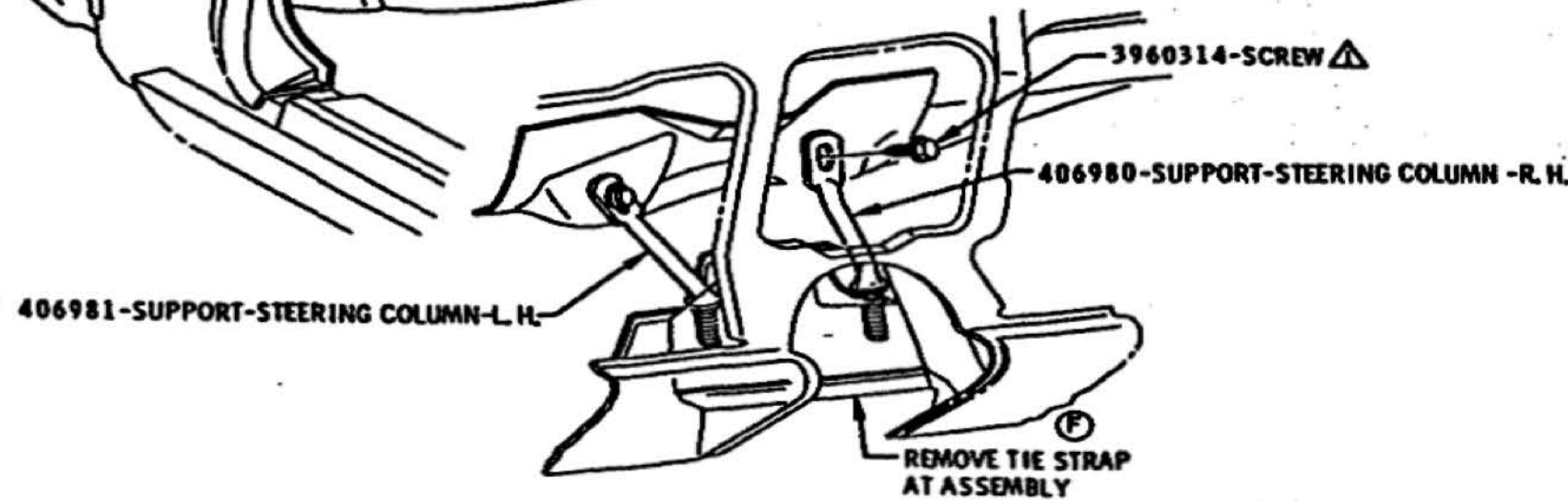
NAME OF INSTALLATION	INSTALLATION REFERENCE NUMBER	PACKAGE NUMBER	TEMPLATE PART NUMBER	TEMP. DWG. SIZE	DESCRIPTION OF TEMPLATE
MIRROR-SPORTS	407264	983185	403770 407265	C D	DOOR TRIM PANEL CUTOUT R. H. DOOR PANEL DRILLING
(B) MIRROR-OUTSIDE-R. H.	406612	983138	406508	D	R. H. DOOR PANEL DRILLING
MIRROR-REMOTE	406613	983137	403770	C	DOOR TRIM PANEL CUTOUT
MIRROR-VISOR VANITY	403760	983075			
POWER BRAKE L-6 & V-8	406618	983166 (L6) 983167 (V8)			
POWER STEERING L-6	406619	983169 983174 (ADAPTER WITH A/C)			
POWER STEERING V-8	406620	983170 983171 (ADAPTER WITH A/C)			
RADIO	406614	983160 (DELUXE) 983161 (STEREO)			
SEAT BELT RETAINER	406470	983154			
SPEAKER-REAR SEAT	406615	983157 (EXC. STA. WGN. & CONV.) 983159 (CONV.) 983158 (STA. WAGON)	406291	C	L. H. REAR TRIM CUTOUT
TAPE PLAYER	406616	983139	406656	C	VALANCE PANEL CUTOUT
TISSUE DISP.	403765	983009			
TRUNK RELEASE	406611	983181			
(D) SPOILER-DECK LID	407637	983190			

3-8-70 D INSTALLATION ADDED		PL	DT	TITLE CHART - DEALER INSTALLATIONS AND TEMPLATES	
12-1-69 C INSTALLATION ADDED		PL	DT	DATE JUNE 25, 1969	FIRST USED 1970
8-29-69 B SPORTS MIRROR ADDED		PL	DT	DR. BY E. G. BOBNIH	OLDSMOBILE PRODUCT INFORMATION MANUAL
8-11-69 A TRUNK LAMP NOS. REV.		PL	DT	CHECKED [Signature]	MANUAL SEC. 0 PAGE 120
DATE	BY	REVISION	DR. CR.	APPR. [Signature]	SERIES A PART NO. 404411

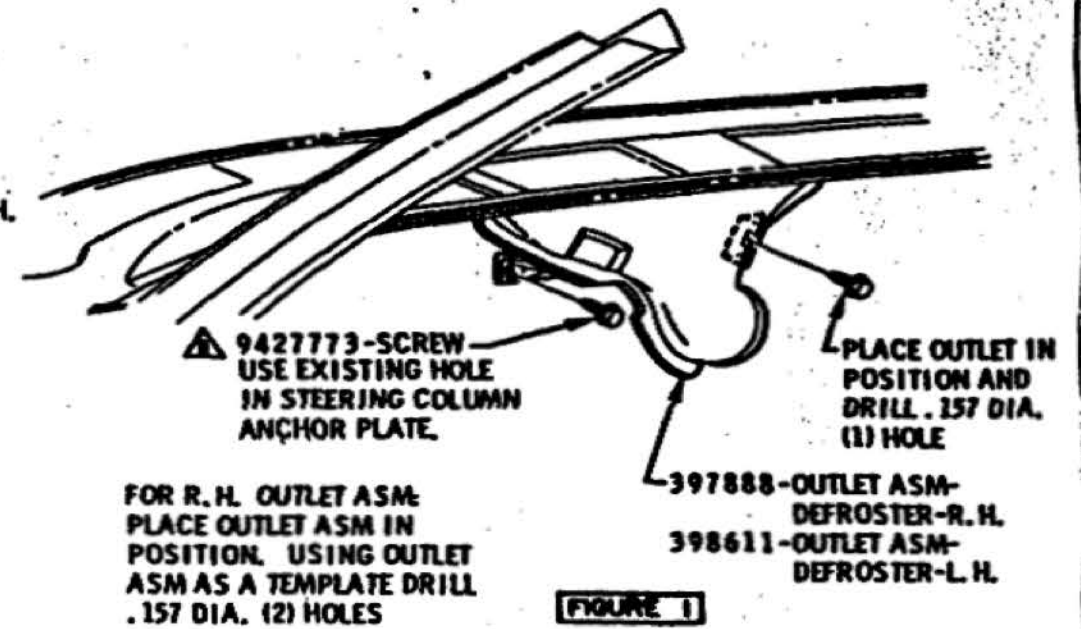


PLACE OUTLET ASM IN POSITION WITH TAB ON PANEL PASSING THROUGH SLOTS IN TOP FLANGE ON OUTLET ASM. TWIST OR BEND TAB TO HOLD OUTLET ASM IN POSITION UNTIL SCREWS ARE INSERTED.

FIGURE 2



STEERING COLUMN SUPPORT INSTALLATION

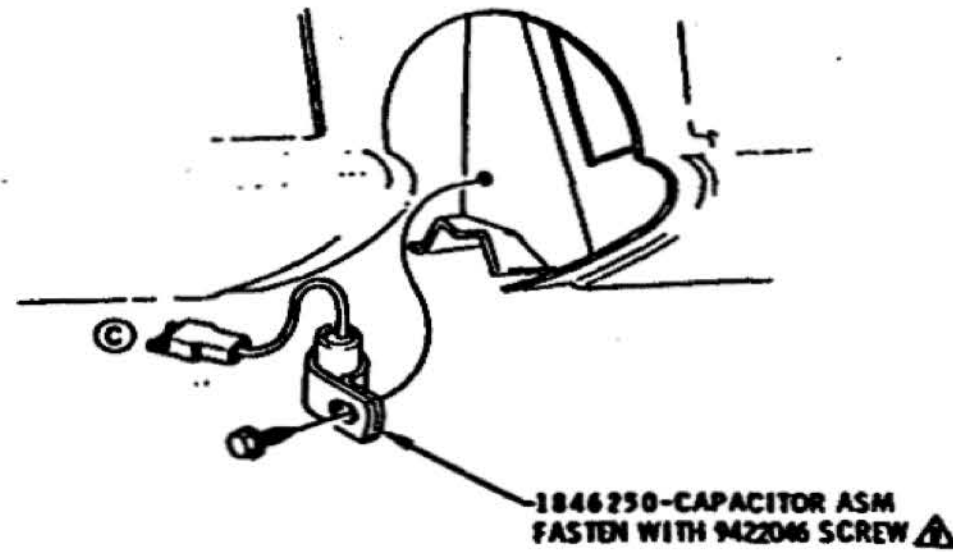


FOR R. H. OUTLET ASM PLACE OUTLET ASM IN POSITION. USING OUTLET ASM AS A TEMPLATE DRILL .157 DIA. (2) HOLES

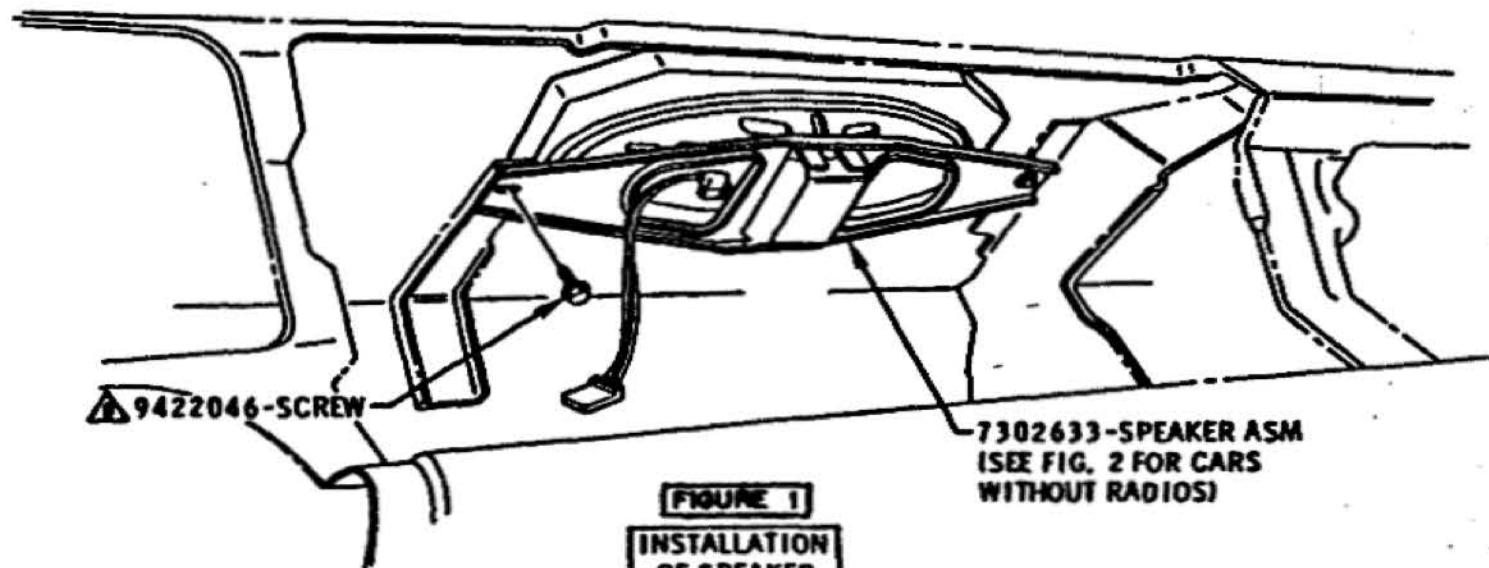
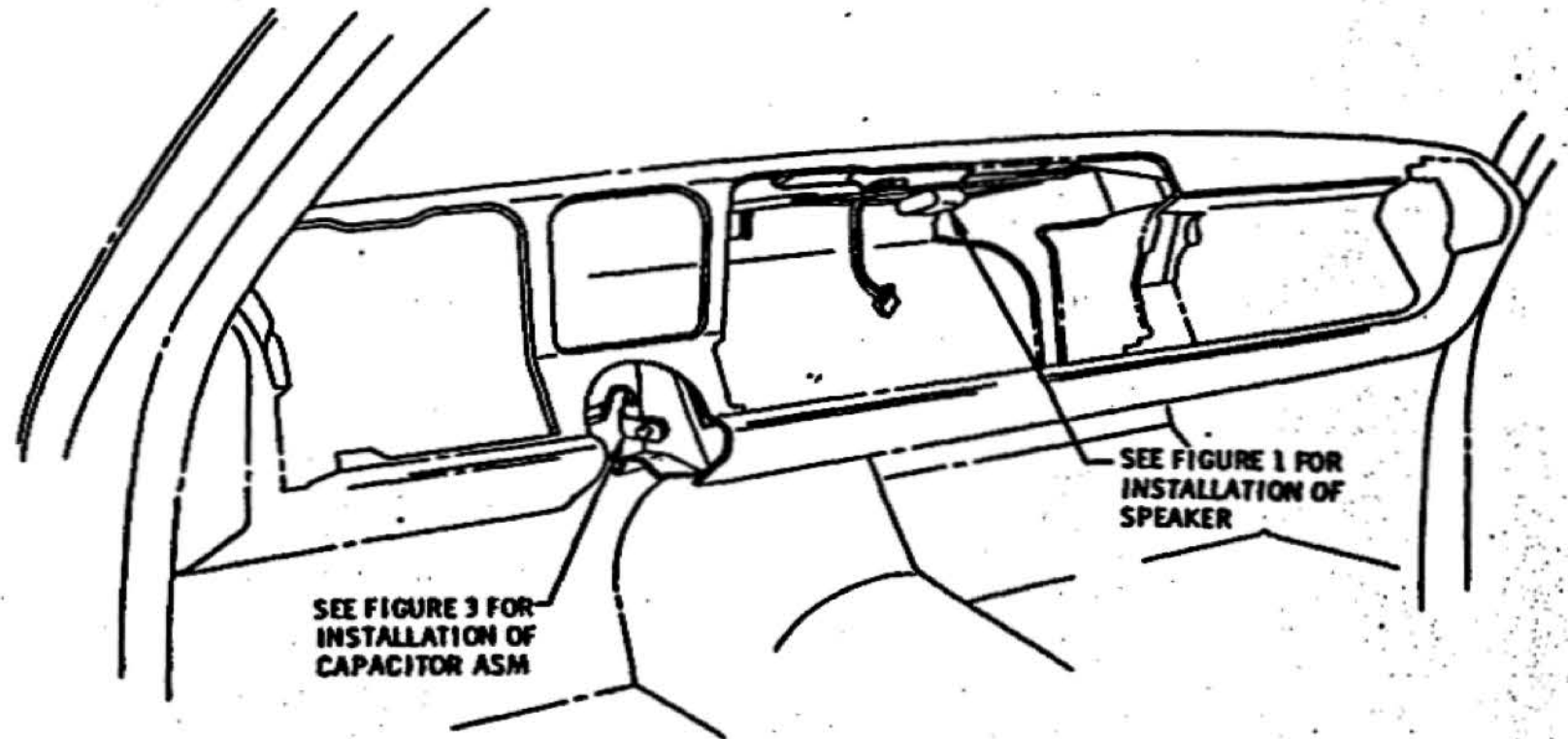
FIGURE 1

▲ 15-22 LB. FT.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED

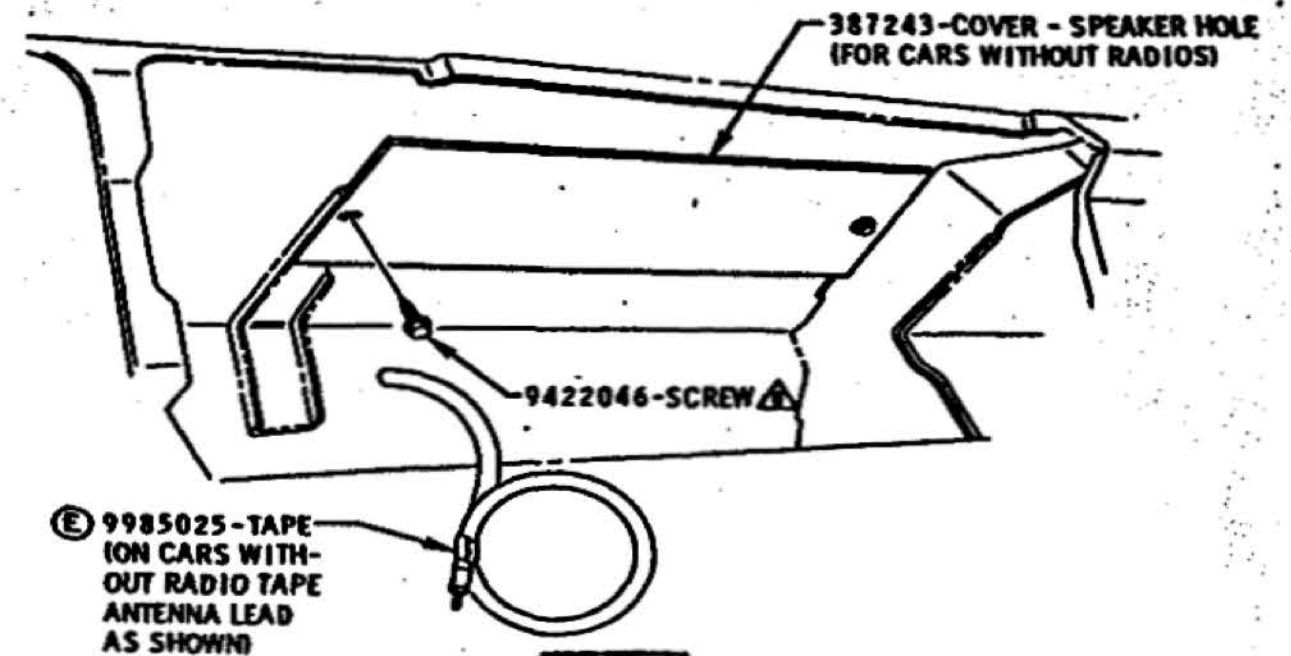
				TITLE DEFROSTER OUTLETS AND STEERING COLUMN SUPPORTS			
DATE DEC 5 1968				FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	
DR. BY P. J. McKESSY				REF. 1A2C 9C		SERIES A	
CHECKED [Signature]				SERIES		PART NO. 404411	
APPR. [Signature]				SERIES		PART NO. 404411	
9-5-69	F	NOTE REVISED	J13	DR. CK.	APPR. [Signature]		
DATE	SYM	REVISION	DR.	CK.	APPR.		



**FIGURE 5**  
**INSTALLATION OF CAPACITOR ASSEMBLY**  
(CARS WITH 35U58 OR 35U63 ONLY)



**FIGURE 1**  
**INSTALLATION OF SPEAKER**

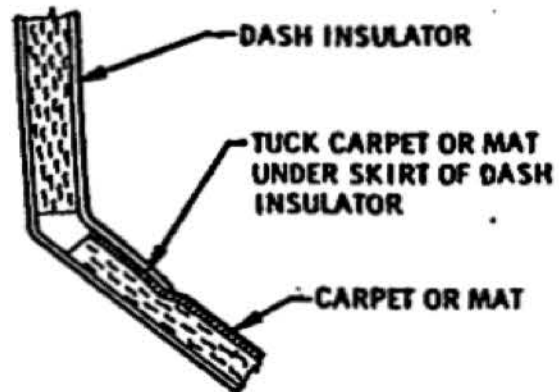


**FIGURE 2**  
**INSTALLATION OF SPEAKER HOLE COVER**

▲  
▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR	CHK	APPR	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
10-26-69	E	TAPE ADDED	FL	ED		SPEAKER AND SPEAKER HOLE COVER	1970	35U58-63-69	A	404411
8-11-69	D	USAGE ADDED	B	ED						
7-28-69	C	CONNECTOR REVISED	B	PT		DATE DEC. 8, 1968				
7-22-69	B	1846250 CAR ADDED	B	PT		DR. BY P.J. McKESSY				
4-25-69	A2	PARTS RELEASED	MD	DT		CHECKED [Signature]				
						APPR. [Signature]				





**FIGURE 1**

**TYPICAL SECTION THROUGH  
CARPET OR MAT AND DASH INSULATOR**

**DASH INSULATOR  
(FISHER FURNISH, OLDS INSTALL)  
SEE FIGURE 1 FOR INSTALLATION  
OF CARPET OR MAT AT DASH  
INSULATOR**

**▲9416208-SCREW**

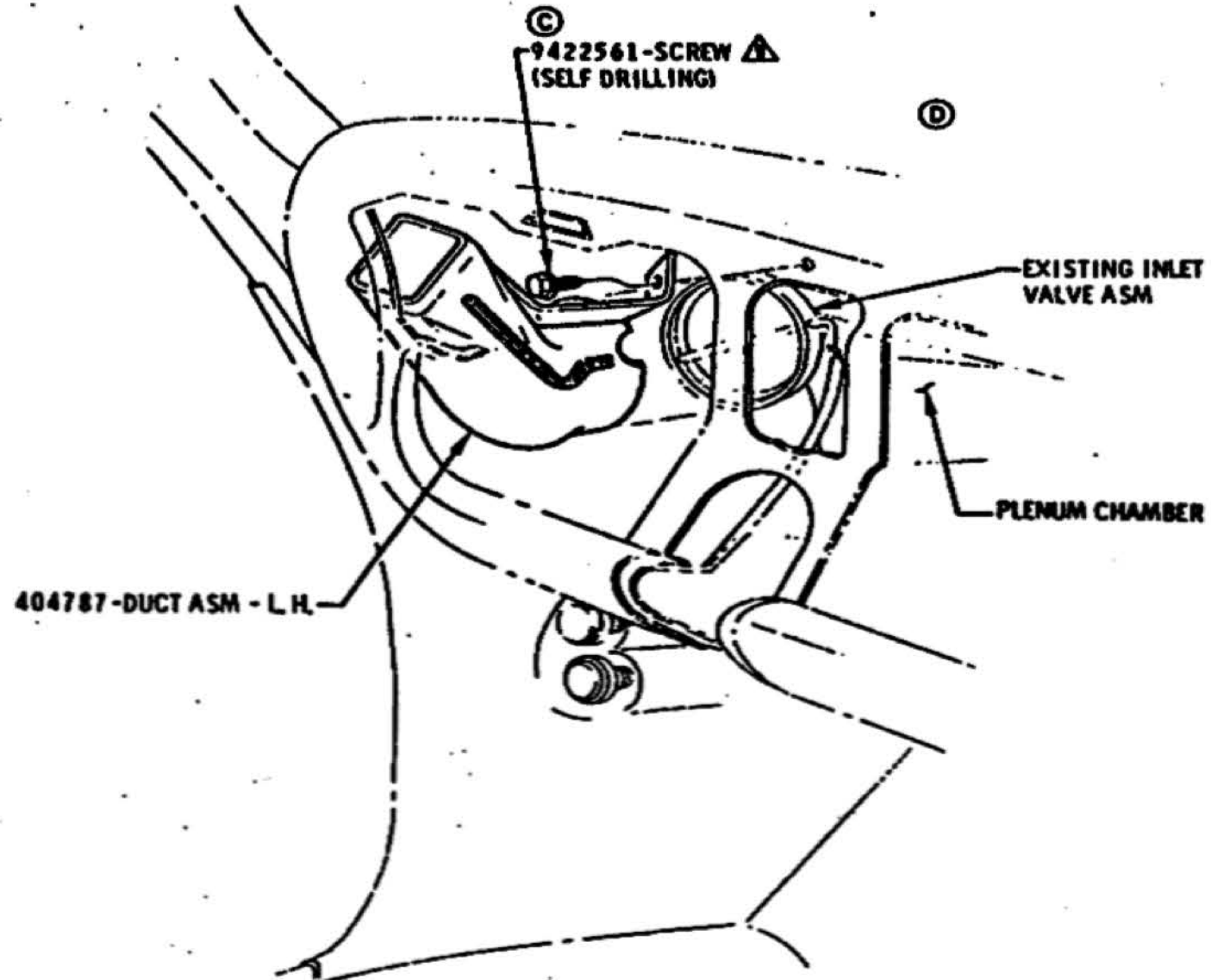
**7753966-PLATE ASM-R. H.  
7753967-PLATE ASM-L. H.  
(2 DOOR CARS)  
7725701-PLATE ASM  
(4 DOOR CARS)**

**INSERT CARPET OR MAT  
UNDER SILL PLATE AND  
TIGHTEN SCREWS**

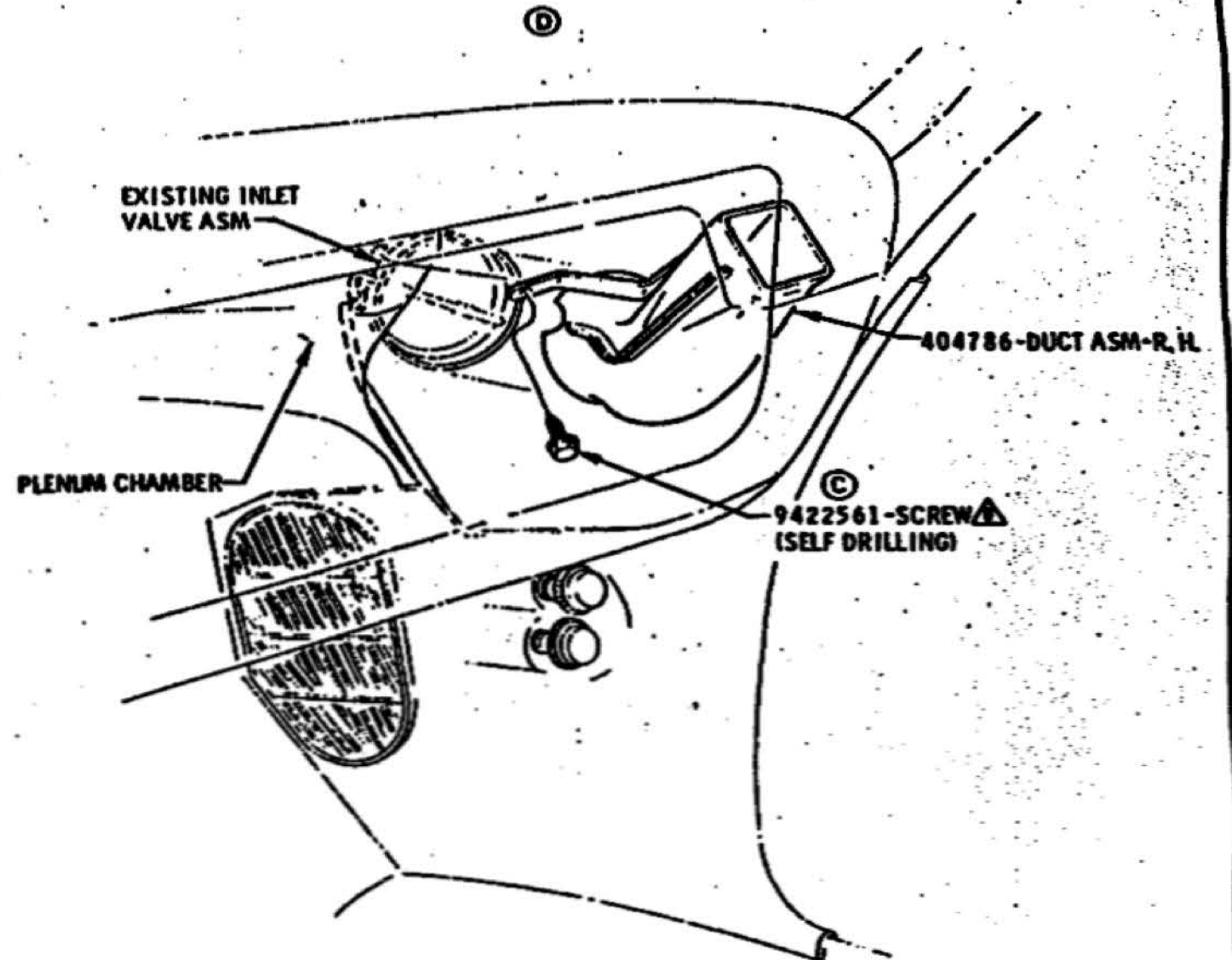
**CARPET OR MAT ASM  
(FISHER FURNISH, OLDS INSTALL)**

**▲  
▲  
▲  
▲  
▲**  
**FULLY DRIVEN, SEATED  
AND NOT STRIPPED**

TITLE											
						CARPET OR MAT AND SILL PLATES					
DATE			NOV. 25, 1968			FIRST USED		1970.		MANUAL SEC.	PAGE
DR. BY			B. PARKER			OLDSMOBILE PRODUCT		INFORMATION MANUAL		1-1	106
CHECKED			TJL			REV.		141-35830		SERIES	PART NO.
APPR.			JF			A		404411			
APPR.			JL								
DATE	SYM	REVISION	DR.	CL.	APPR.						



L.H. INSTALLATION

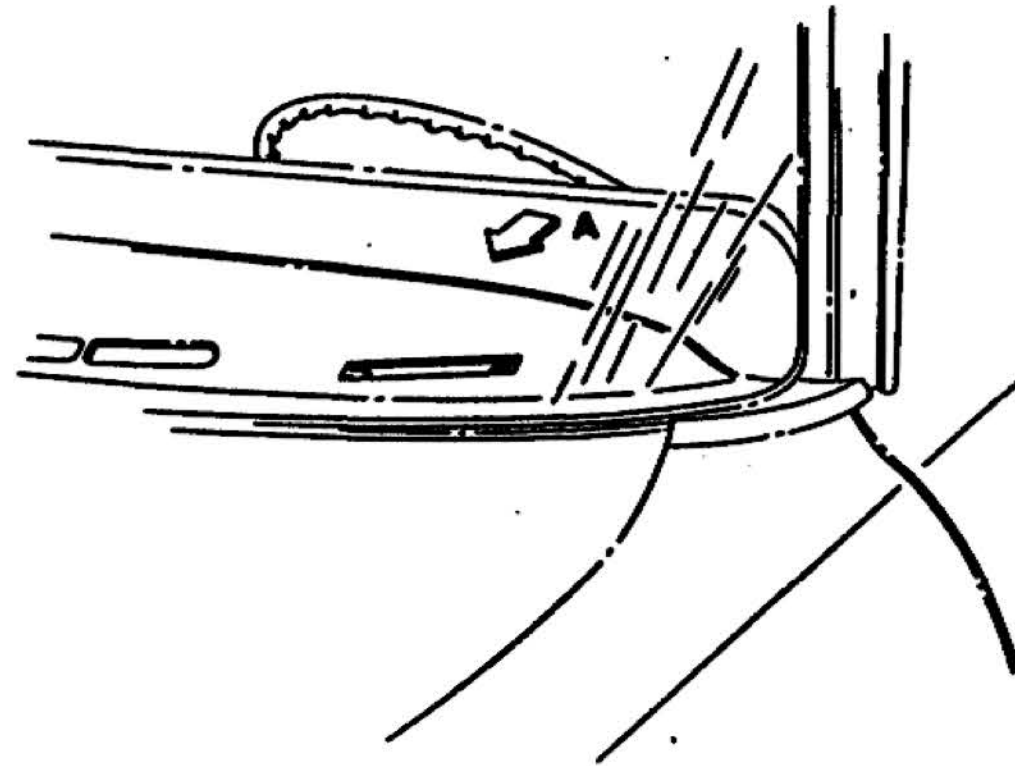


R.H. INSTALLATION

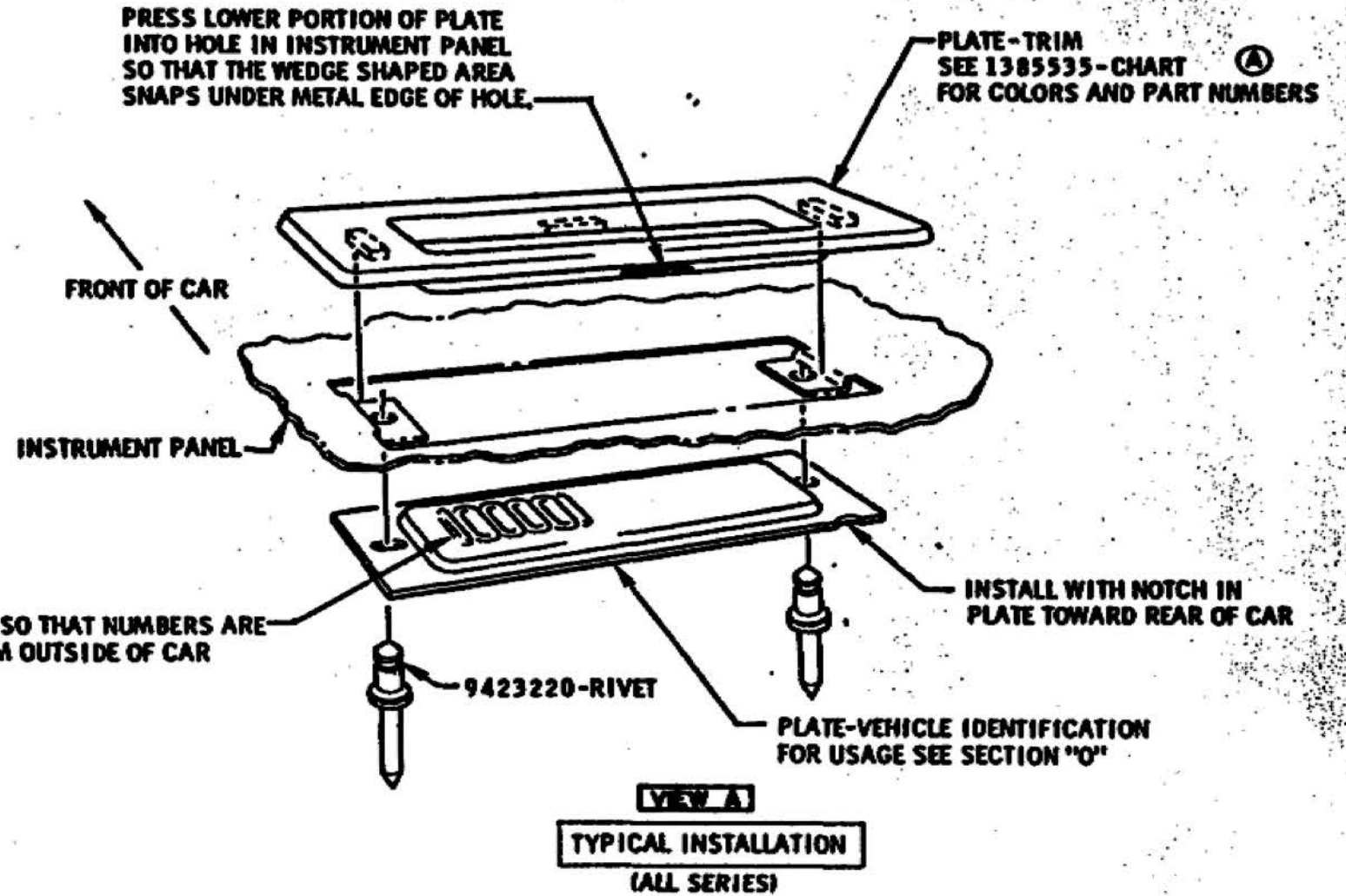
DUCT ASSEMBLY-UPPER LEVEL VENTILATION  
ALL 57, 67 AND 87 MODELS

▲  
▲  
▲  
▲  
▲  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

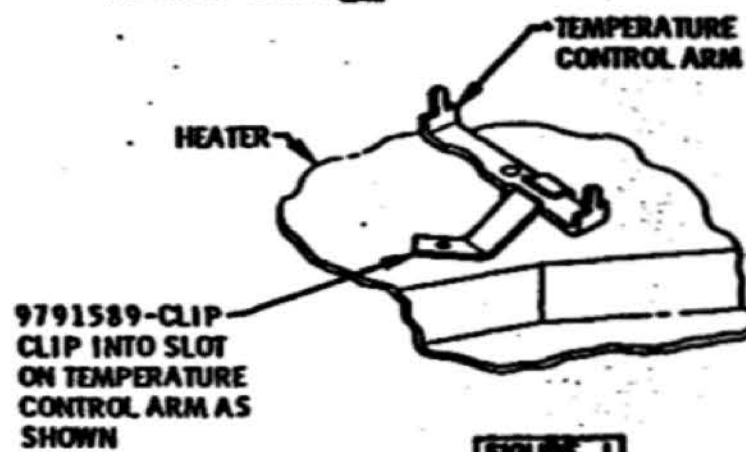
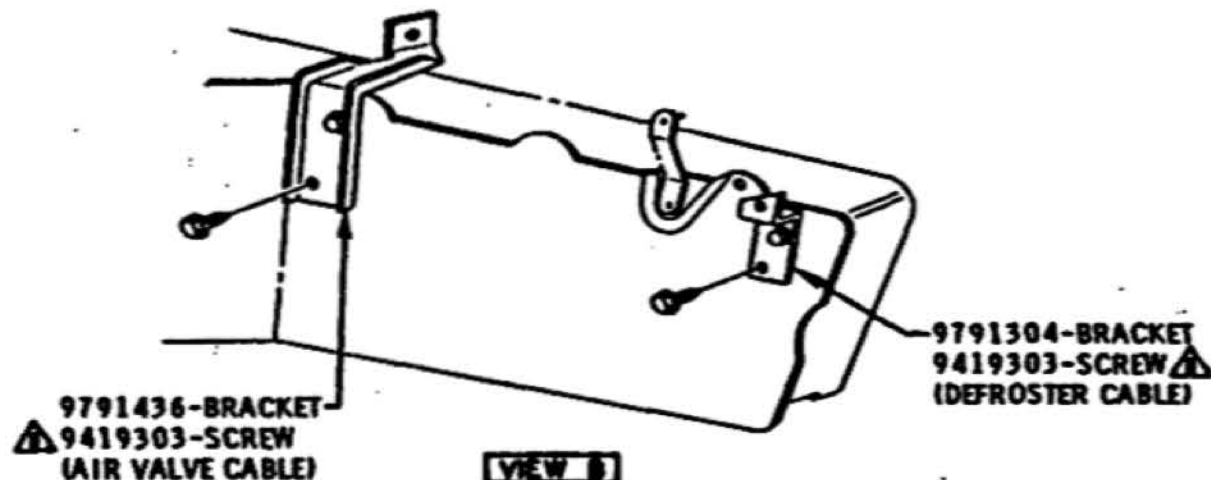
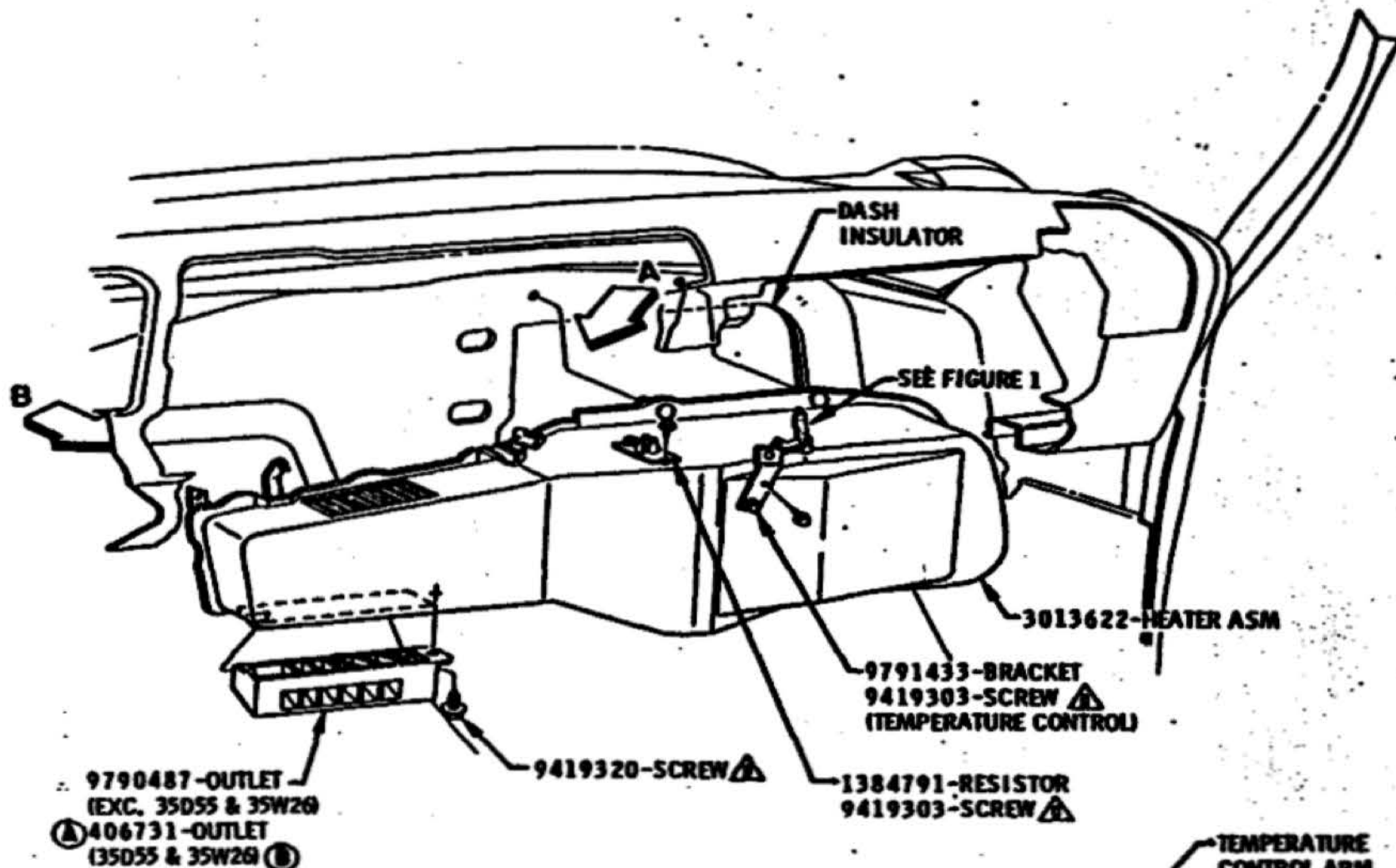
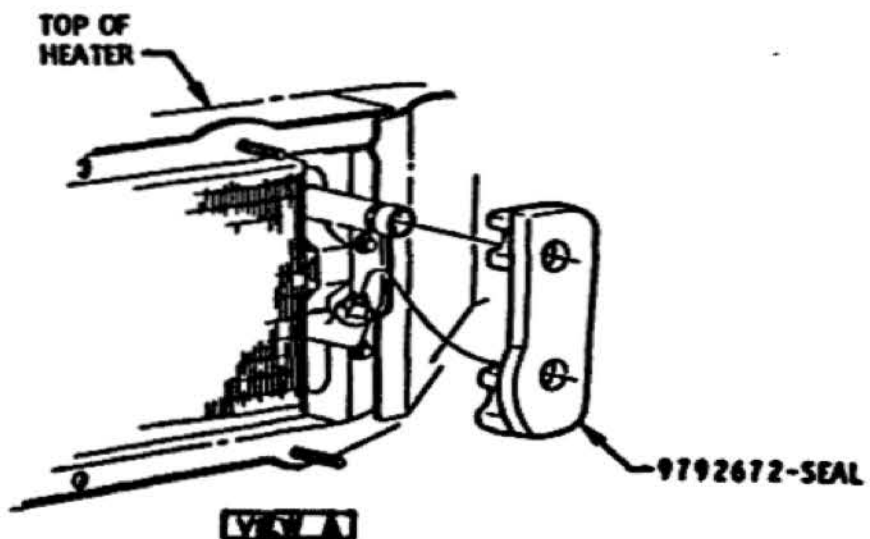
REV.		DESCRIPTION	DATE	TITLE	FIRST USED	MANUAL SEC.	PAGE
2	1	DRILLING HOLES REMOVED	DEC 7 1968	VENTILATION-UPPER LEVEL	1970	1-1	112
3	1	WAS 9419663 - SCREW					
4	1	TITLE REVISED					
5	1	DWG. REINSTATED BY 3557					
CHECKED BY [Signature] APPR. BY [Signature]				REF. 7127-	SERIES	PART NO.	
				35C57	A	404411	



TYPICAL LOCATION OF IDENTIFICATION  
PLATE AND TRIM PLATE  
ALL SERIES



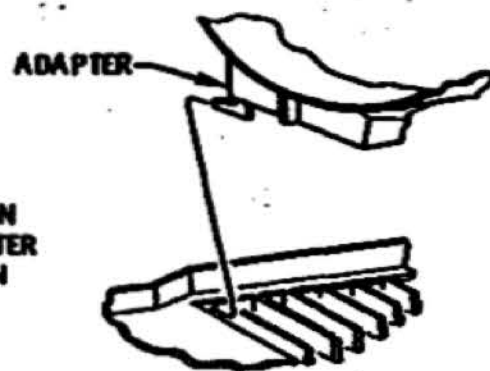
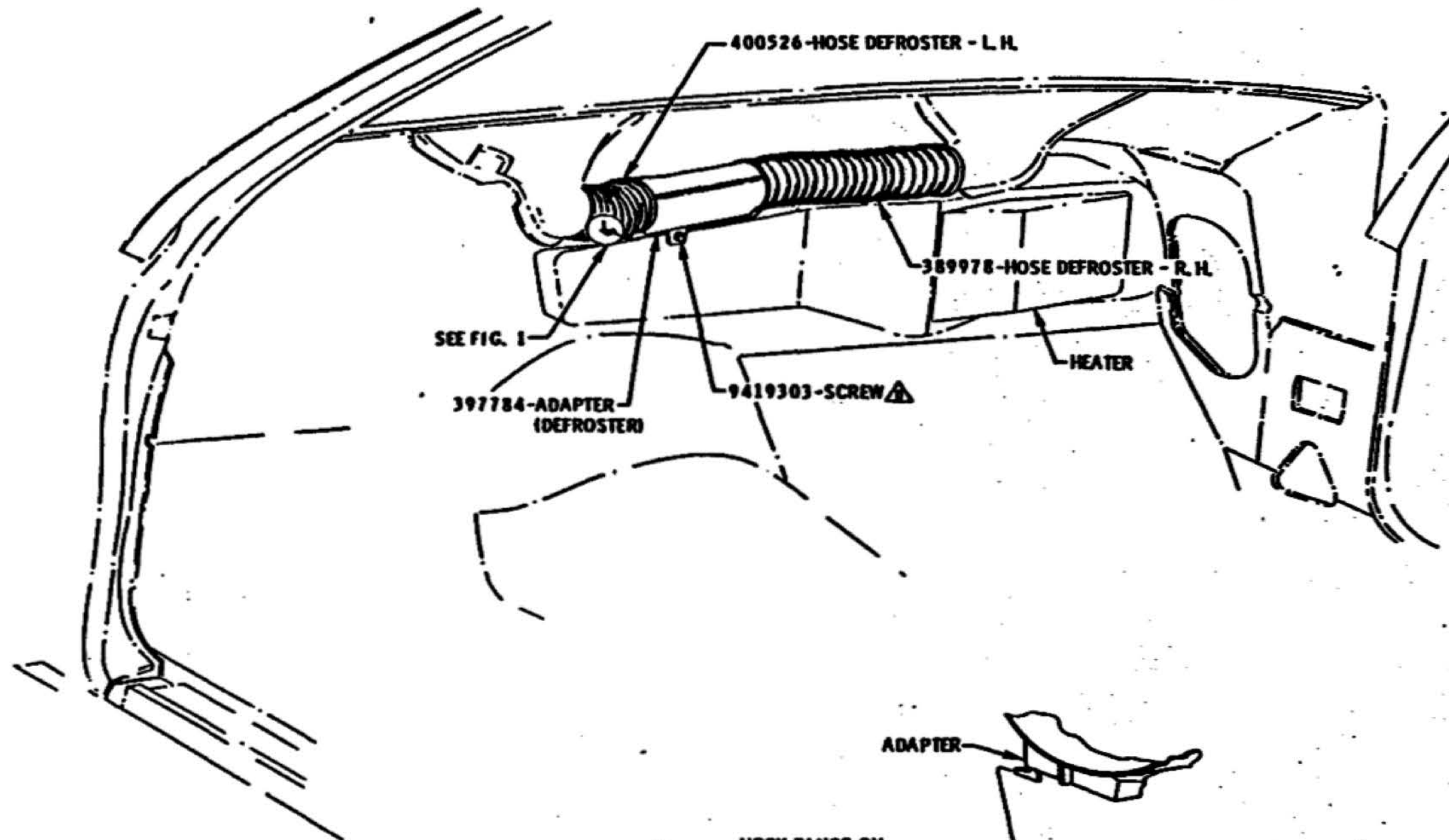
		TITLE		VEHICLE IDENTIFICATION PLATE AND TRIM PLATE	
		DATE	REVISED	OLDSMOBILE PRODUCT	MANUAL SEC. PAGE
		DEC 1969	1970	INFORMATION MANUAL	1-1 114
		DR. BY			
		B. PARKER			
		CHECKED			
		J. J. J.			
FIG. A NOTE REVISED		APP.		SERIES	PART NO.
				A-B-C-F	404411-2-3



FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE		HEATER ASSEMBLY		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO.		PAGE	
				DATE		DEC. 7, 1966		1970				1-1		118	
				DR. BY		P. J. McKESSY		REV. 1A2C				A		404411	
				CHKD BY		T. J. ...									
				PL. DT		APR. 15, 1967									
DATE	BY	REVISION		DR. CK.	APP. FILED										



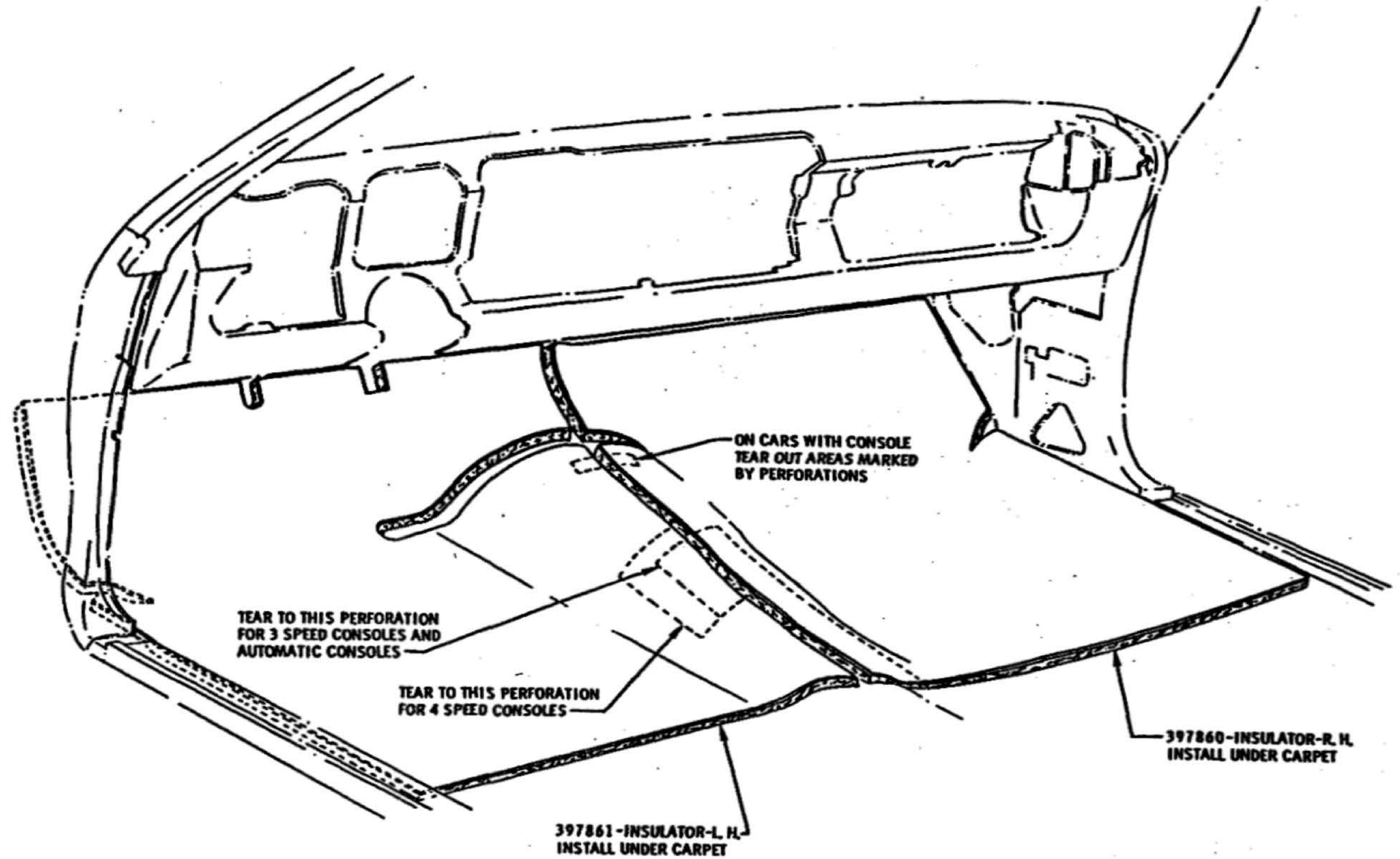


HOOK TANGS ON REAR OF ADAPTER INTO POSITION SHOWN

FIGURE 1

▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE DEFROSTER ADAPTER				
				DATE DEC 5, 1968	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO. 1-1	PAGE 120
				DR. BY P.J. McKESSY				
				CHECKED [Signature]	REV. 1A2C	SERIES A	PART NO. 404411	
DATE	SYM	REVISION	DR. CK.	APPR. [Signature]				



TITLE		AIR CONDITIONING INSULATORS	
DATE	DEC 5 1968	PRINTED	1970
DR. BY	B. PARKER	OLDSMOBILE PRODUCT	MANUAL SEC. FILE
CHECKED	J. J. [Signature]	INFORMATION MANUAL	1-1 124
APPD.	C. P. [Signature]	REV.	404411
		REV.	A

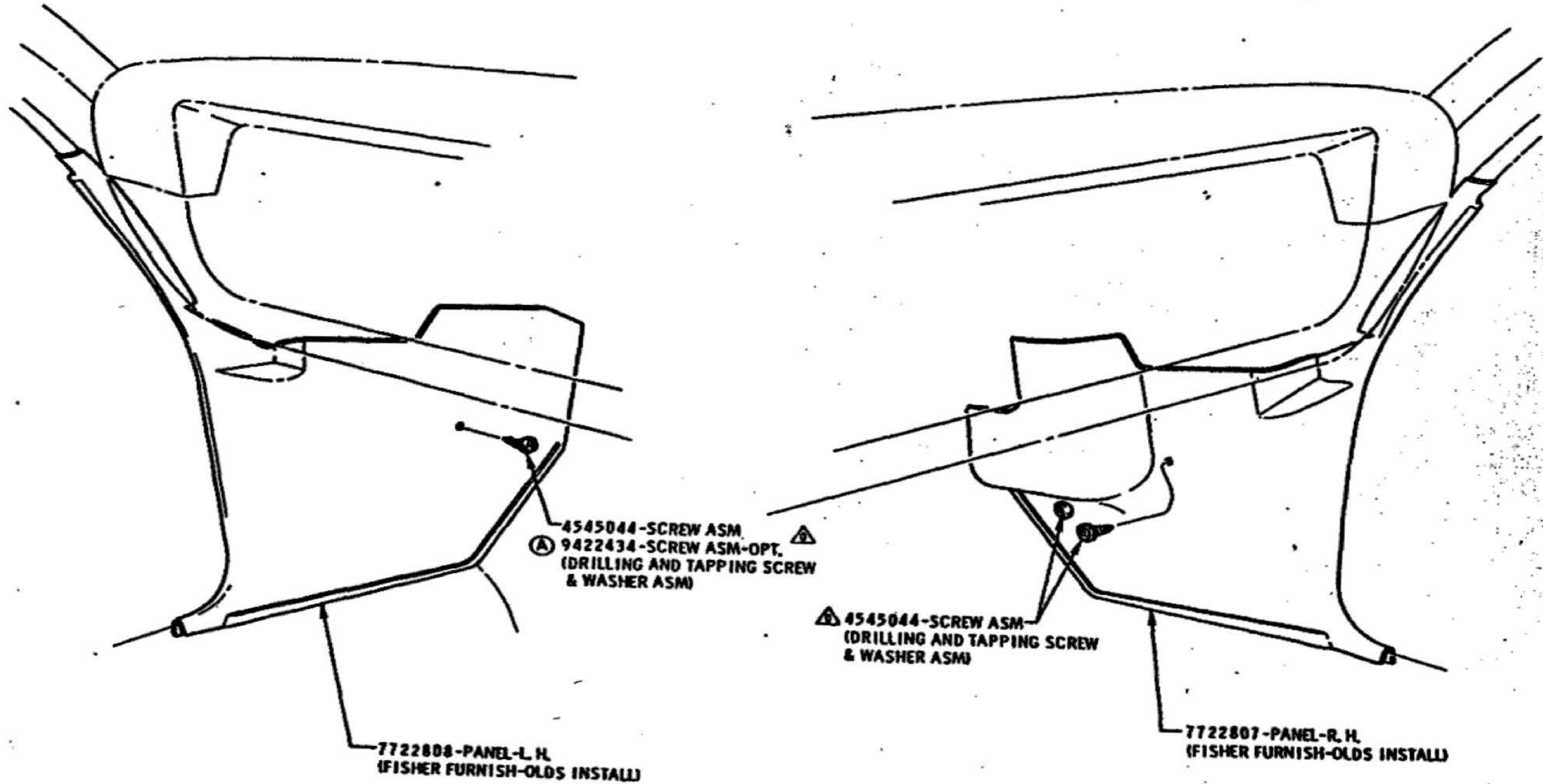










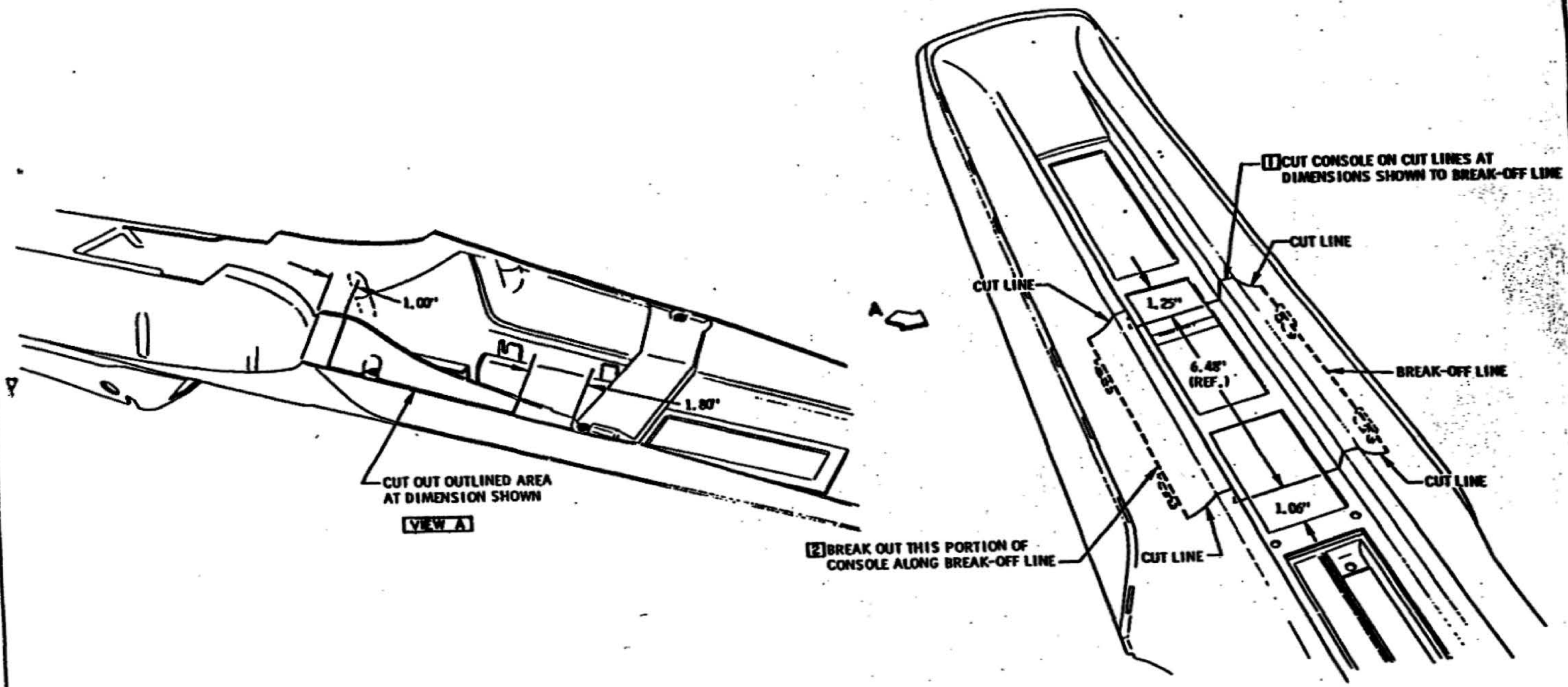
OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING 21, MICHIGAN



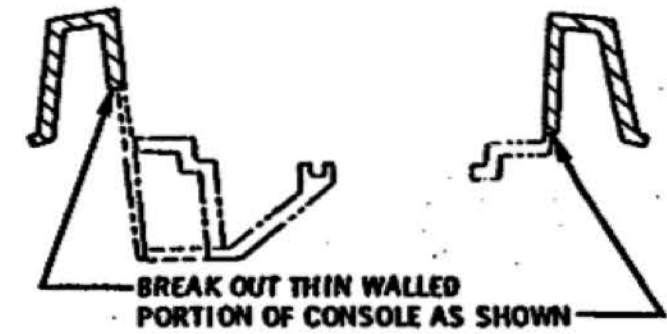
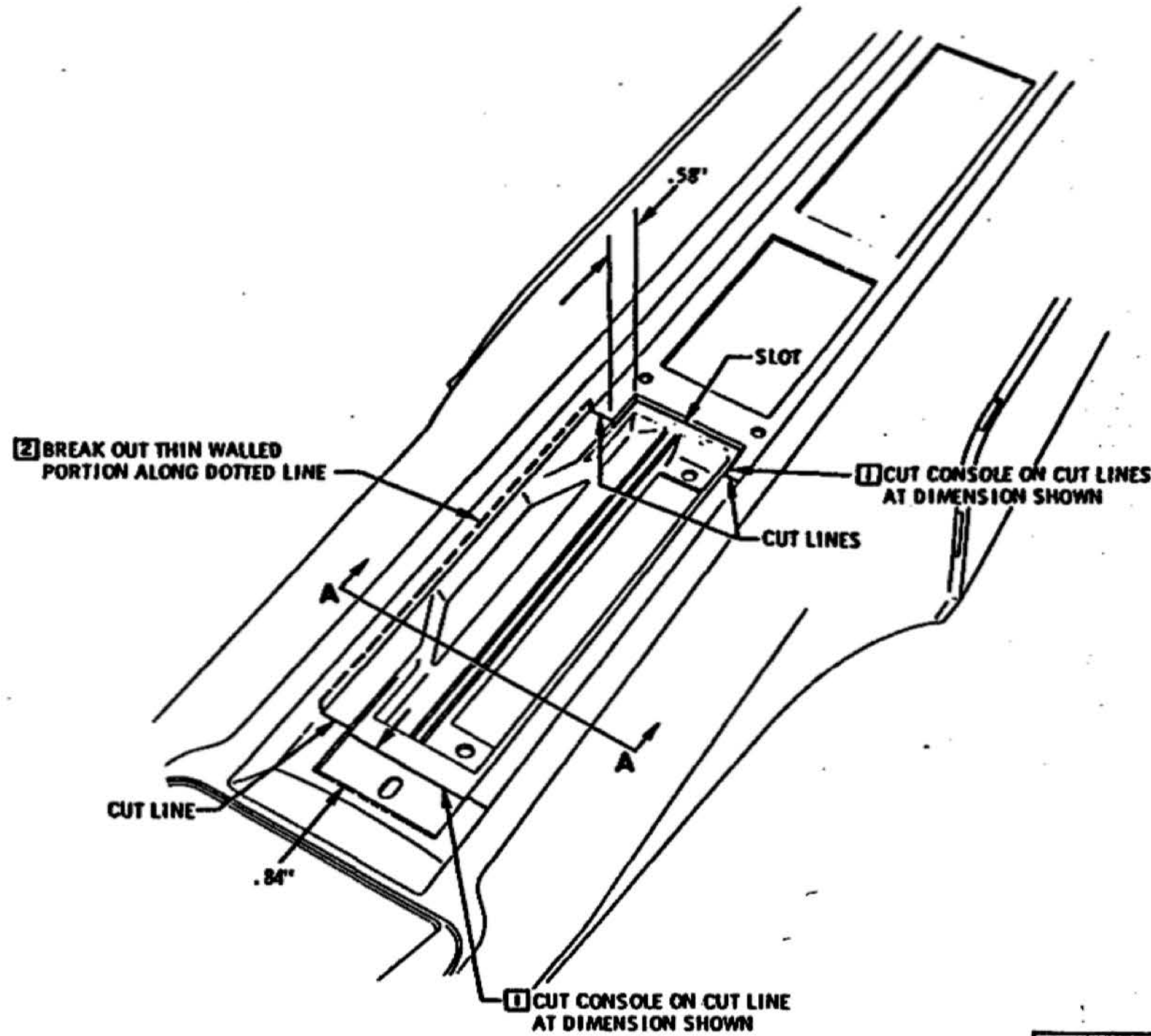
  
  
  
  
 FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE		AIR CONDITIONING SHROUD SIDE FINISHING PANEL	
DATE	DEC 5 1968	FIRST USE	1970
DR. BY	B. PARKER	OLDSMOBILE PRODUCT	INFORMATION MANUAL
CHECKED	J. [Signature]	MANUAL NO.	1-1.134
APP. E. E. Malibon	REV. 95110	SERIES	A
PART NO.		404411	



**CUT CONSOLE IN SEQUENCE SHOWN STARTING WITH [1]**

TITLE		SMT CONSOLE CUT OUT		MANUAL SEC.	PAGE
DATE	MAR. 28, 1969	FIRST USED	1970	1-1	137
DR. BY	W. L. MASON	OLDSMOBILE PRODUCT INFORMATION MANUAL			
CHECKED	<i>[Signature]</i>	REV. BR-43242	ORIG. A	PART 404137	

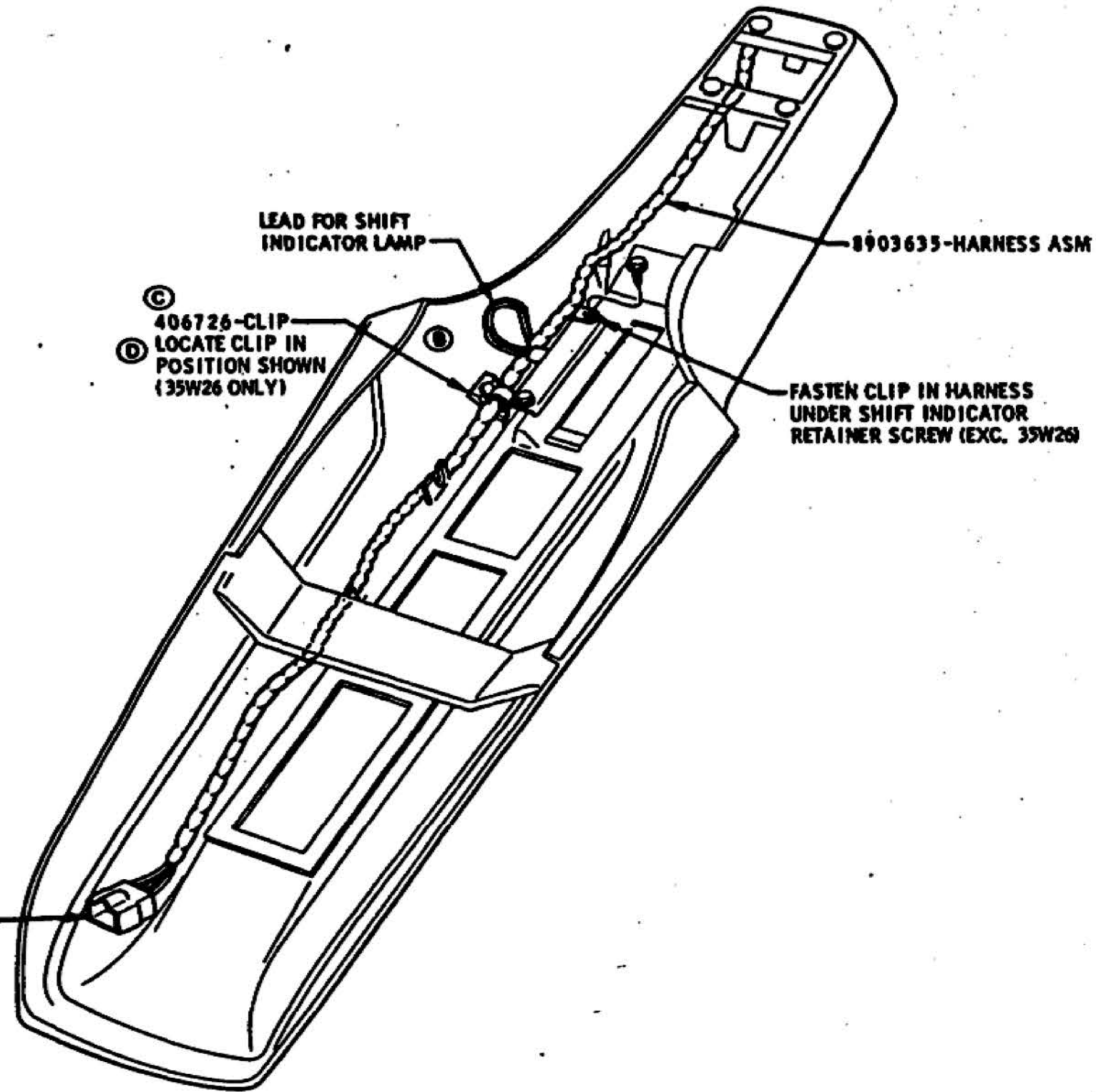


SECTION A-A

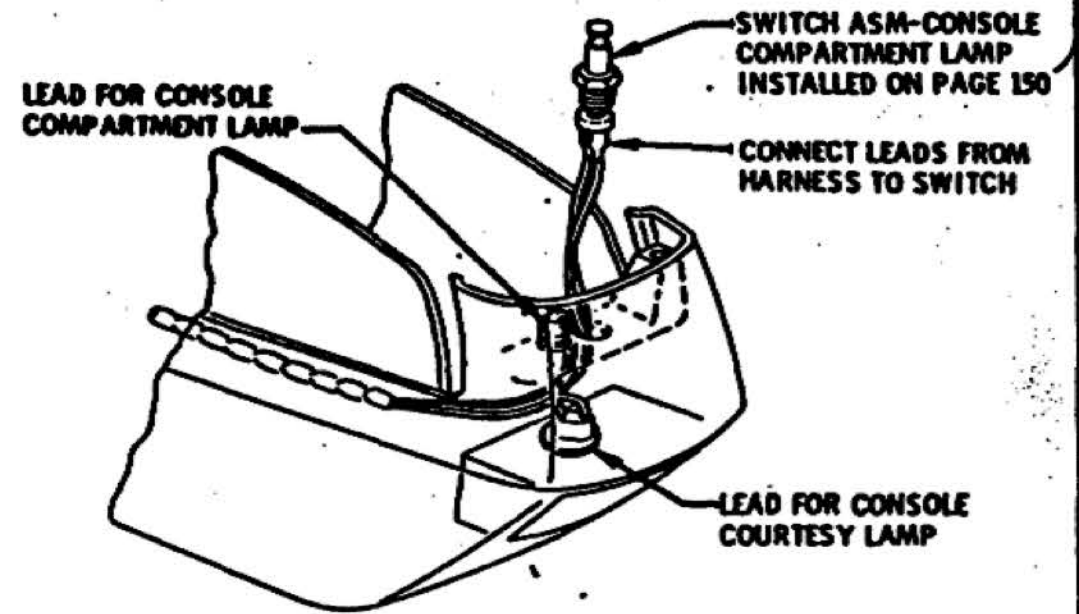
CUT CONSOLE IN SEQUENCE SHOWN STARTING WITH 1

TITLE		35W26 CONSOLE CUT OUT		MANUAL SEC.	PAGE
DATE	MAR 22 1969	FIRST USED	1970	1-1	138
DR. BY	KE. MASON	CHECKED	[Signature]		
APPR.	[Signature]	REF. NO.	80-43600	SERIES	A
6-469 A	TITLE REVISED	REV. NO.		PART NO.	404411





**BOTTOM VIEW**



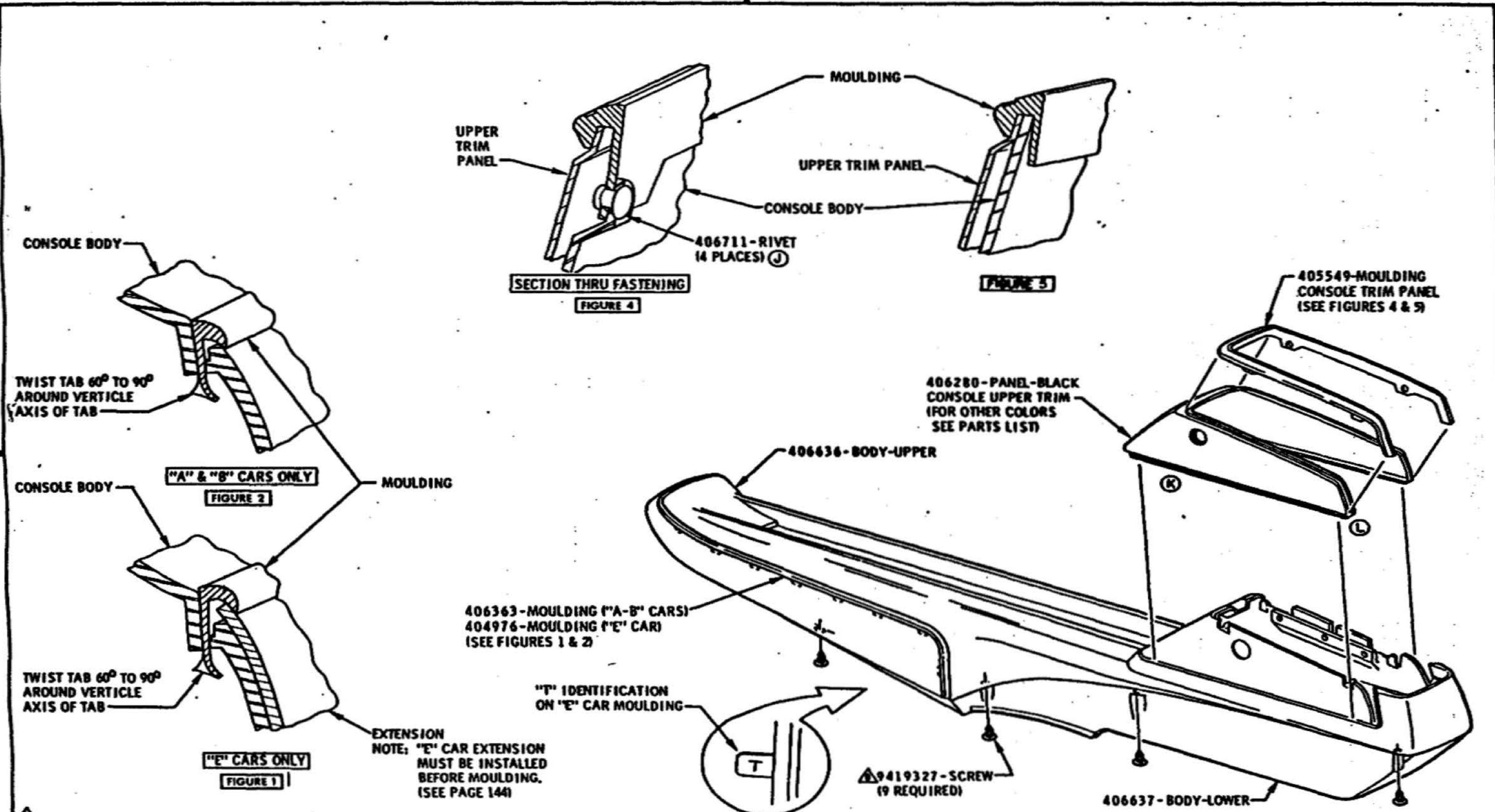
**REAR OF CONSOLE**

FASTEN TO CONNECTOR FROM I.P.-TO-CONSOLE HARNES (SEE SECTION 12)

▲ FULLY DRIVEN, SEATED AND NOT S' 78

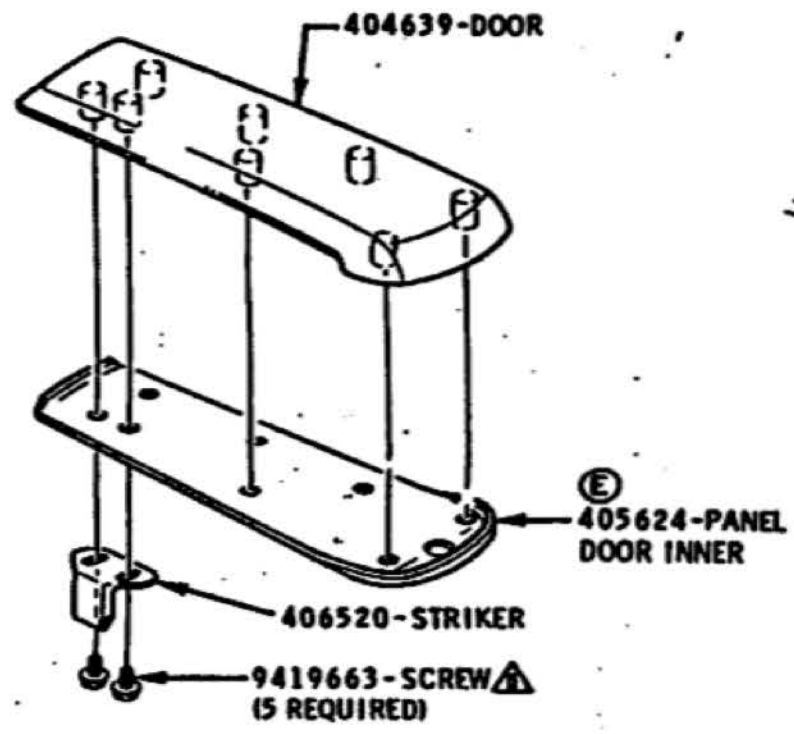
REVISION		TITLE	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL INC.	PAGE
2-18-69	D	CLIP USAGE REVISED	RA/DY	1970	A-B-E	1-1	140
12-2-69	C	406726-CLIP ADDED	DR BY P.J. MCKESSY	REF. 35D55			
6-11-69	B	BACKGROUND REVISED	CHECKED JAMES				
4-17-69	A	REVISED & RECORDED	APP. R. B. B...				

PART NO. 404411-2-3

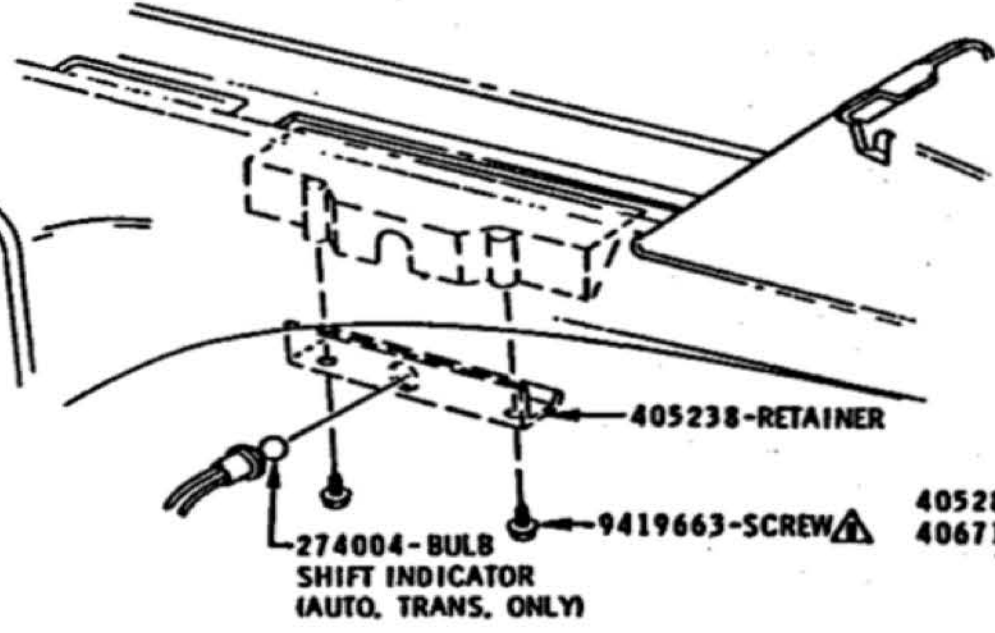


▲ FULLY DRY AND NOT S. JED

DATE	BY	REVISION	DR.	CR.	DATE	BY	REVISION	DR.	CR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL REC.	PAGE
3-18-69	K	TABS REMOVED								CONSOLE BODY TRIM				
4-16-69	J	WAS 'S REQUIRED												
12-16-69	H	WAS 'II REQUIRED												
7-16-69	G	NOTE ADDED												
7-28-69	F	WAS 'S REQUIRED			3-12-70	L	T			ONE REVISED	1970	1-1	142	
											35055	A-B-E	04411-2-3	



**INNER PANEL TO DOOR**



**SHIFT INDICATOR LAMP**

EXC. 35W26

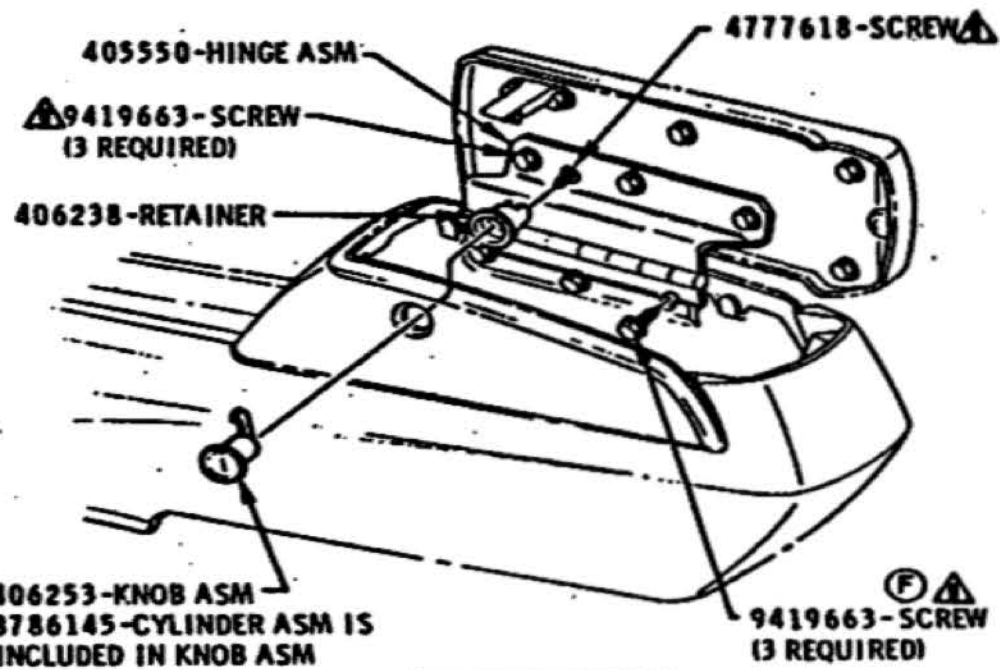
9421777-BULB # 97  
COURTESY LAMP  
(AUTO. TRANS. ONLY)

806573-SCREW

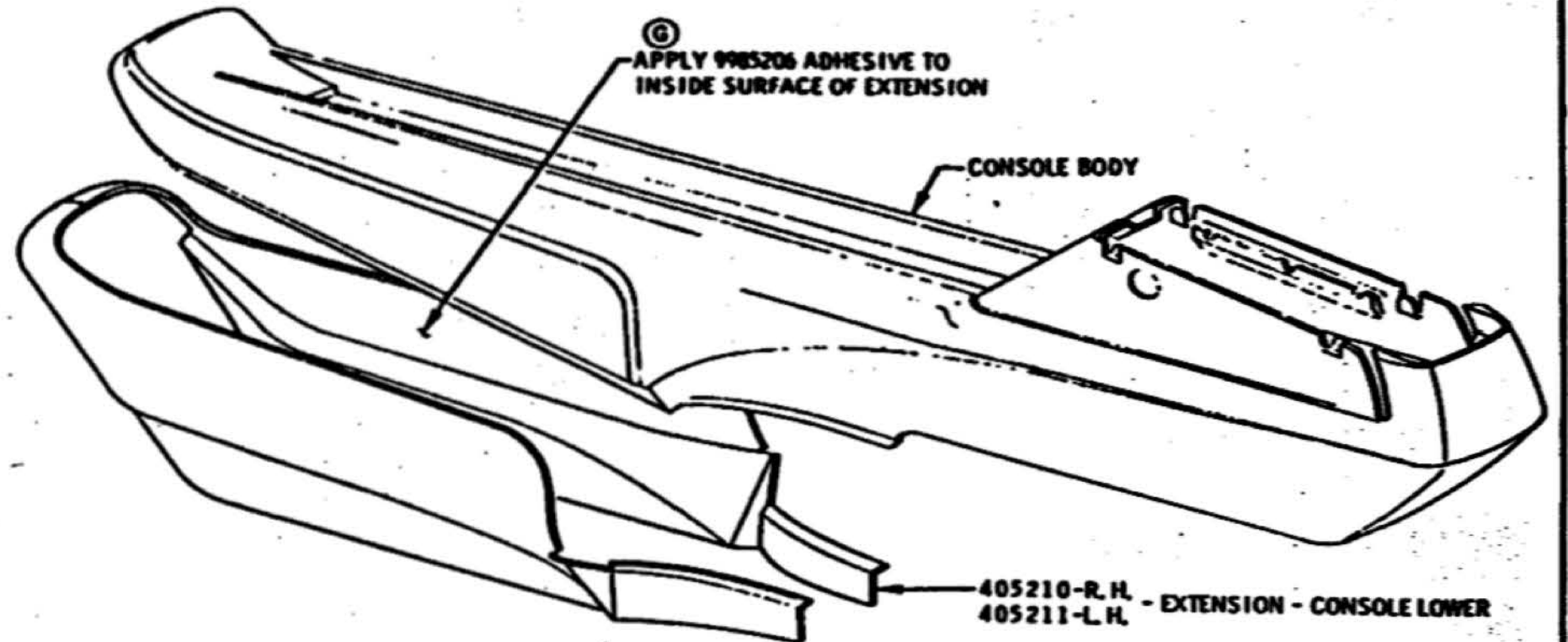
405283-LENS-COURTESY LAMP (AMT)  
406710-COVER (SMT)

9417863-BULB # 1895  
CONSOLE COMPARTMENT LAMP  
(AUTO. TRANS. ONLY)

**COURTESY LAMP**



**DOOR TO CONSOLE**

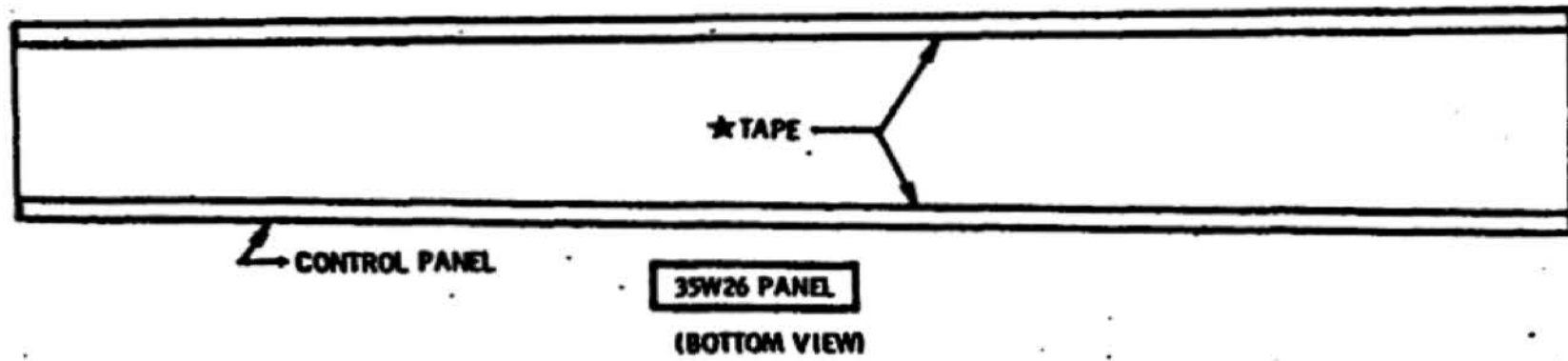
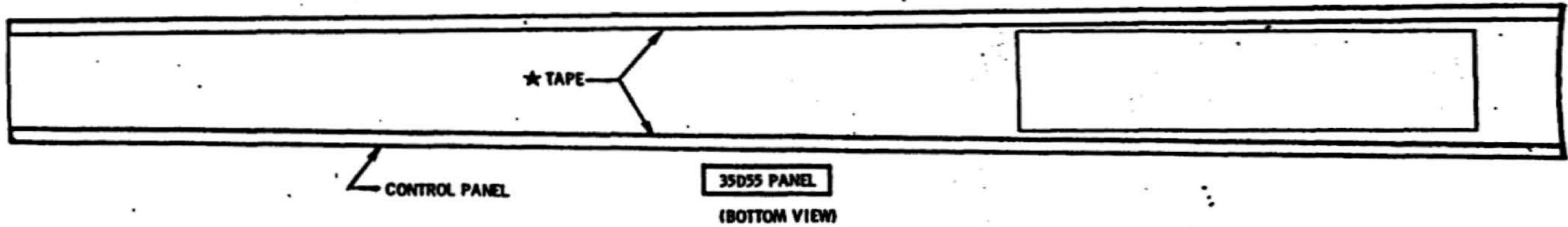


**EXTENSION TO CONSOLE**

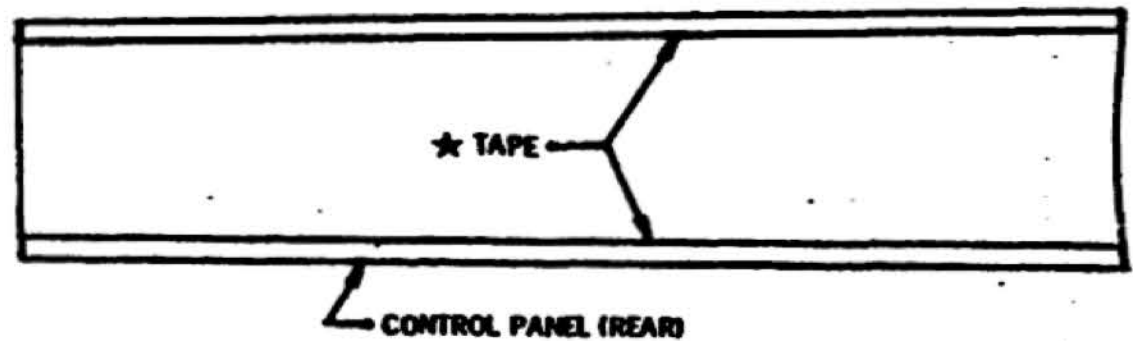
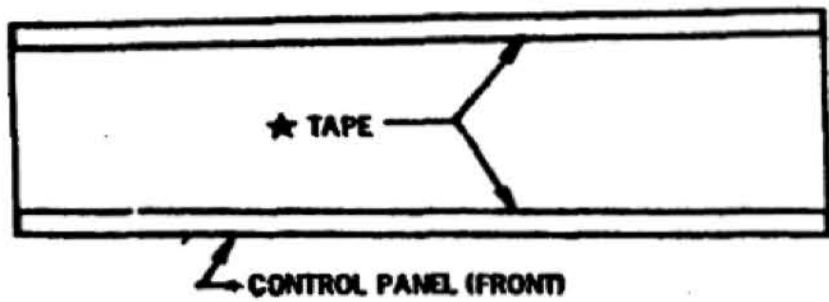
"E" CAR ONLY

▲ FULLY AND SEATED  
▲ AND B. PPED

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPRO	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
					8-4-69	E	REVISED TO DETAIL				CONSOLE BODY COMPONENTS				
					6-6-69	D	406710-COVER ADDED				DATE FEB. 26, 1969	1970	1-1	144	
					6-6-69	C	PART NUMBER REVISED				DR BY P.J. McKESSY				
9-15-69	G	ADHESIVE ADDED			8-17-69	B	"N" 106158 STRIPPER				CHECKED JCB	REV. 35055			
8-6-69	F	WAS 942040B SCREW			8-17-69	A	ADDED FROM P. 140				APPR. [Signature]	35055-140			
													A-B-E	04411-2-3	



← FRONT OF CAR



**SYNCROMESH PANEL**  
(BOTTOM VIEW)

★ 985223-TAPE-  
APPLY AS INDICATED

DATE	SYM	REVISION	DR.	CL.	APP.	TITLE	REV. J. USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	REV.
						CONSOLE TRIM PANEL TAPE APPLICATION	1970		1-1	145
						DATE <i>JUNE 16 1968</i>				
						DR. BY <i>L. SPITZLEY</i>				
						CHECKED <i>[Signature]</i>				
						APP. <i>[Signature]</i>				
							REV. <i>380 05 35W26</i>			
								<b>A-B-E</b>		<b>404411-2-3</b>



FIGURE 1

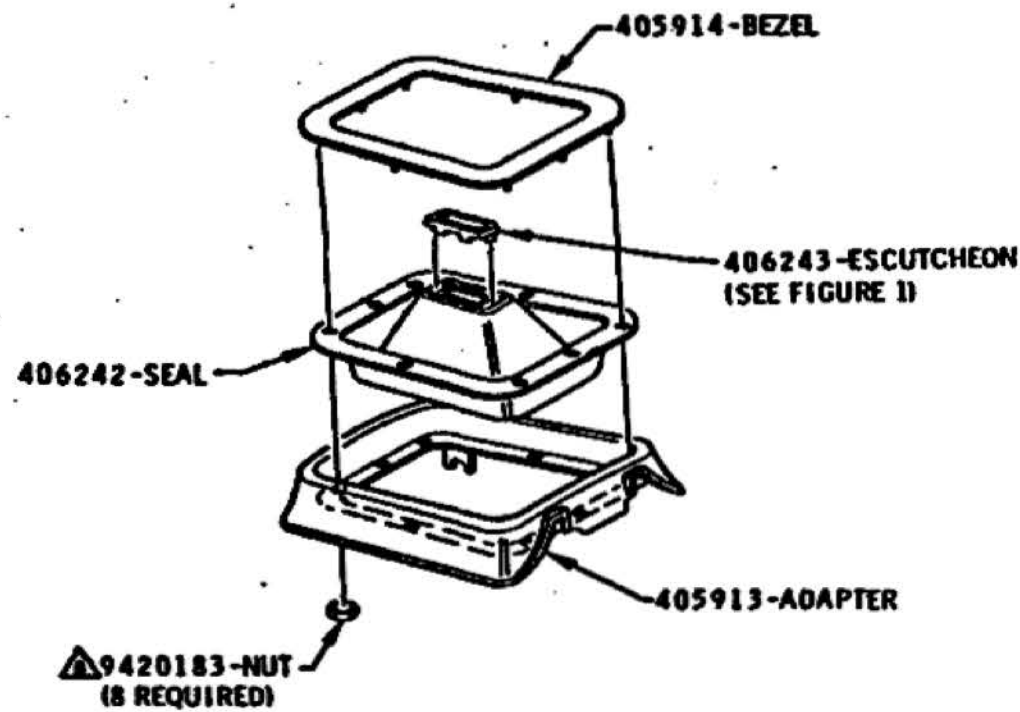
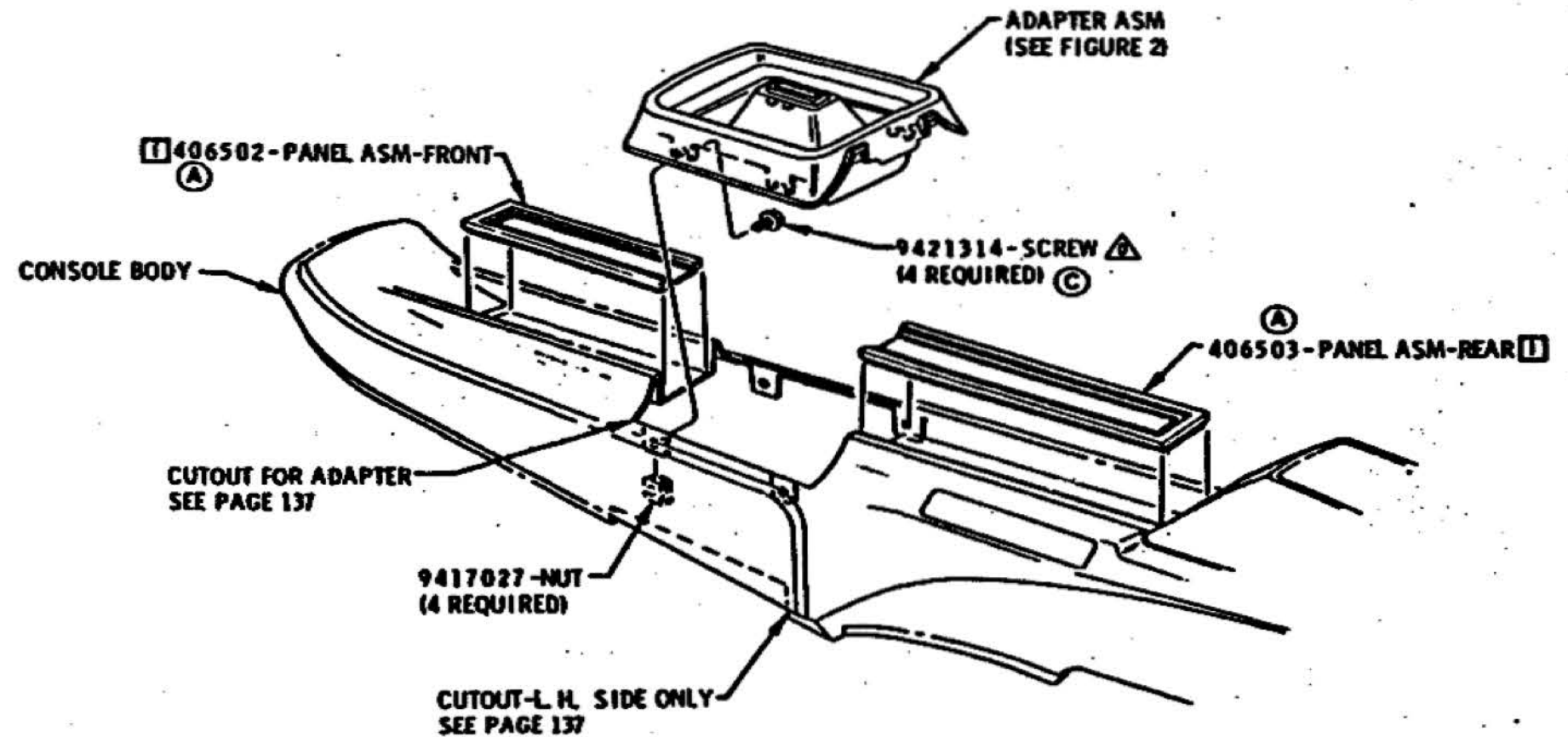


FIGURE 2



(B) INSTALLATION OF TAPE TO BOTTOM OF PANEL ASM SHOWN ON PAGE 145.



FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
1-12-70			C WAS 9419663 SCREW				CONSOLE BODY COMPONENTS (SMT ONLY)	1970		1-1	146
4-18-69			B NOTE ADDED								
4-11-69			A2 PART NOS ADDED								
								NOV. 35055	SERIES	A	PART NO. 404411

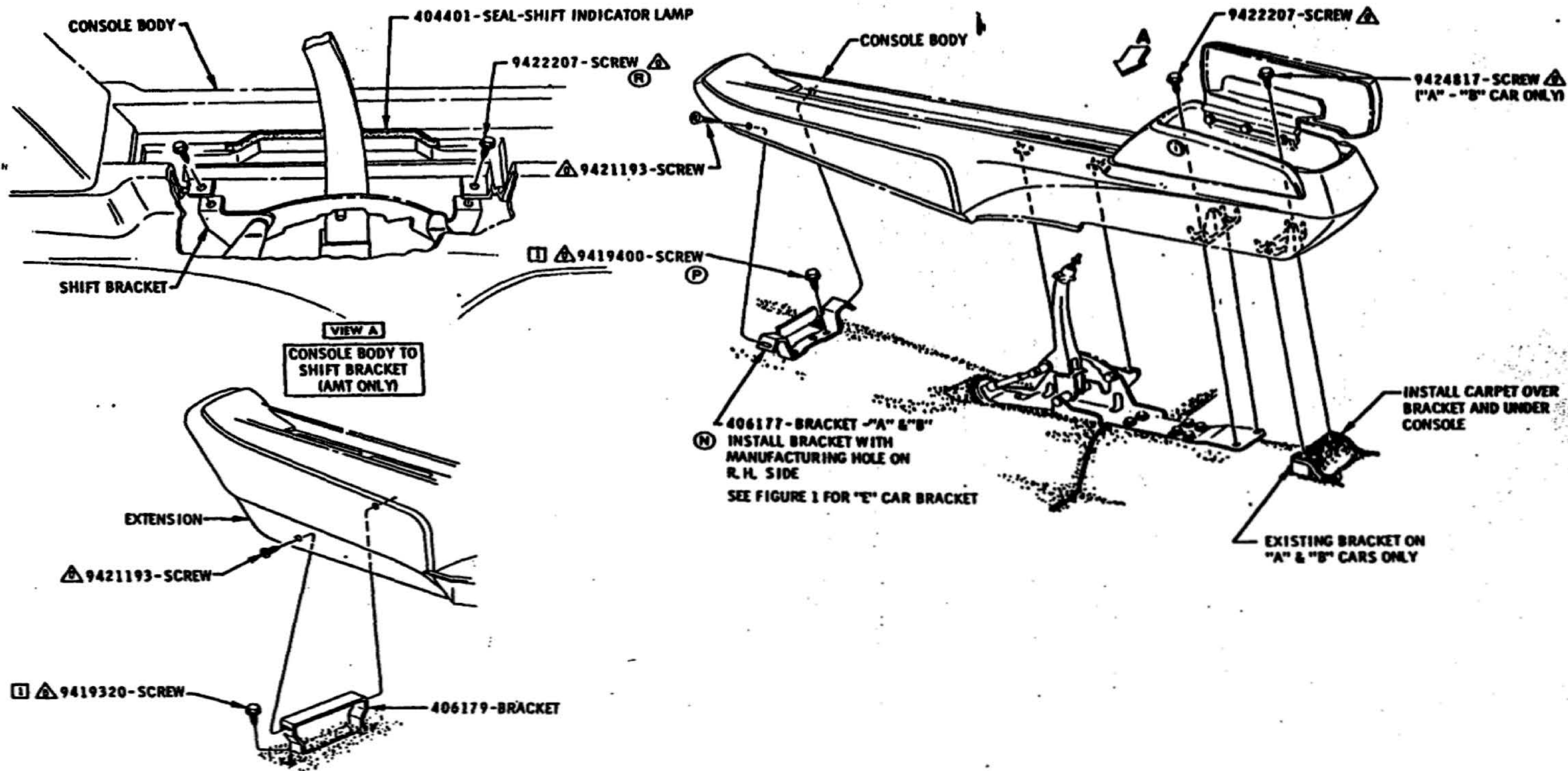


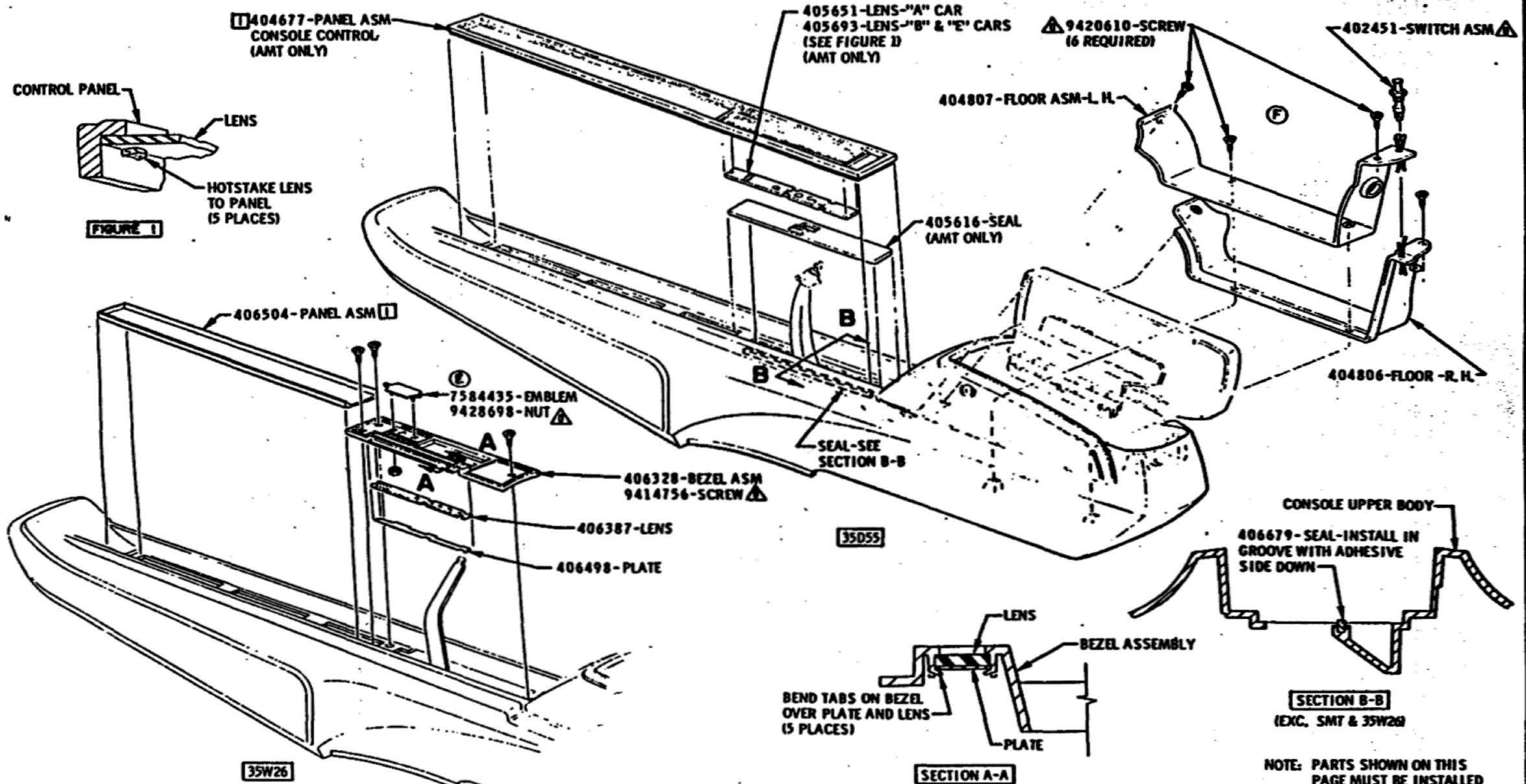
FIGURE 1  
"E" CAR ONLY

DRILL (2) .147  $\pm$  .004 DIA. HOLES  
IN FLOOR PAN AT EXISTING DIMPLES.

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	TITLE	PART NO.	MANUAL SEC.	YEAR	
5-19-69	K	NOTE ADDED			2-10-70	R	WAS 9419613 SCREW														CONSOLE BODY TO FLOOR BRACKETS			
8-4-69	J2	WAS 9419320 SCREW			1-2-70	P	WAS 9419320 SCREW																	
8-11-69	H	404401-SEAL ADDED			12-10-69	N	NOTE ADDED																	
7-25-69	G	VIEW REVISED TO DETAIL			9-1-69	M	WAS 9419727 SCREW																	
7-26-69	F	VIEWS REMOVED			11-17-69	L	WAS 9419380 SCREW																	

1970  
35055  
A-B-E  
404411-2-3



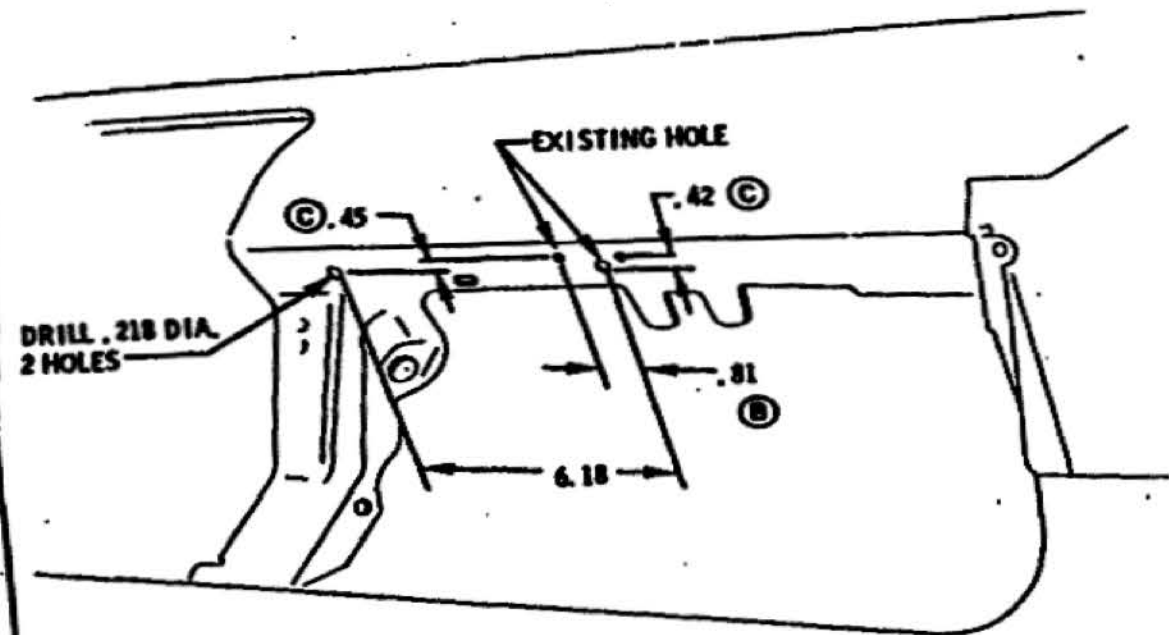
(D) [ ] INSTALLATION OF TAPE TO BOTTOM OF PANEL ASM SHOWN ON PAGE 145.



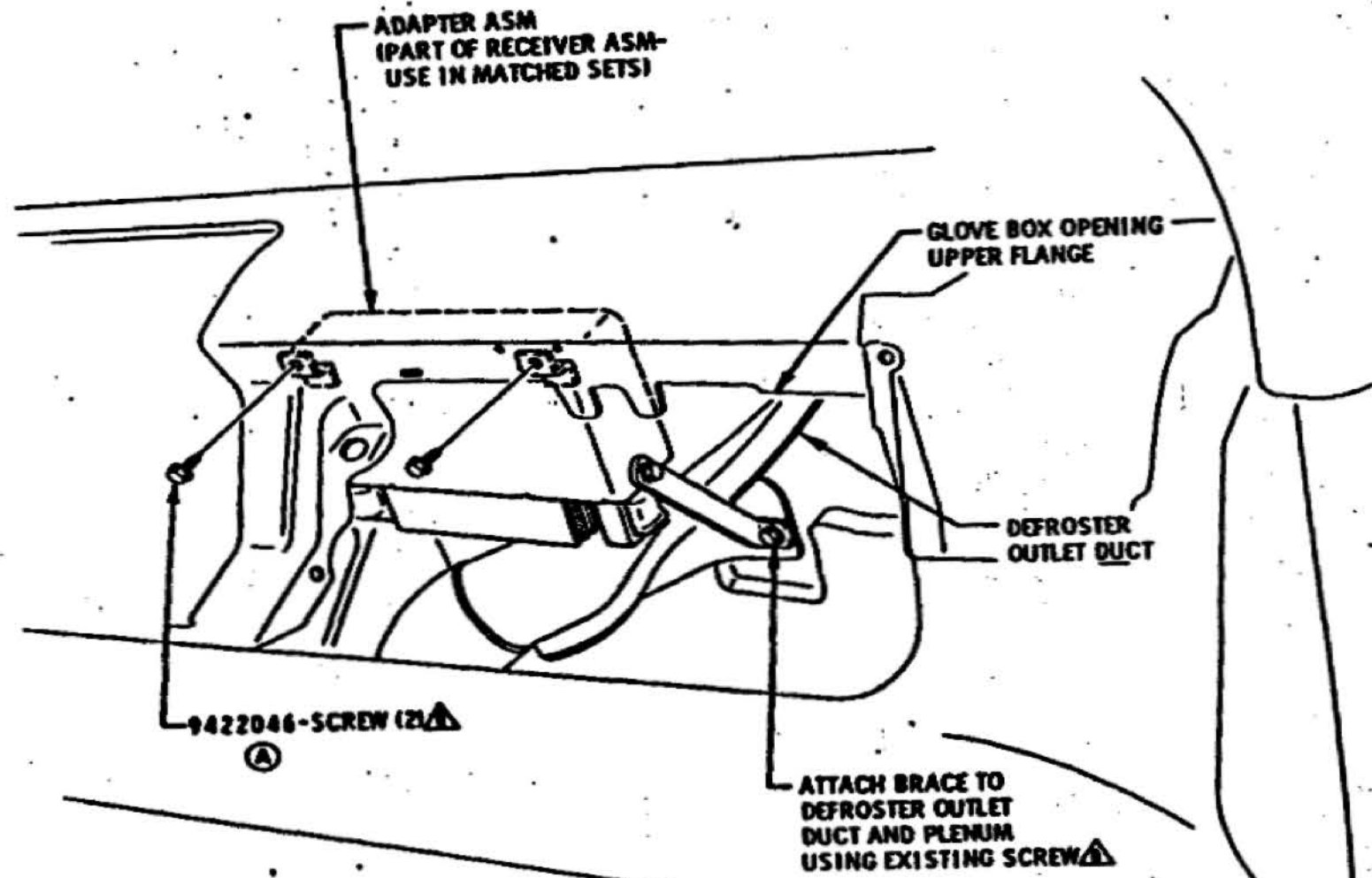
FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
					7-29-69	E	EMBLEM ADDED				TITLE CONSOLE TRIM COMPONENTS DATE FEB. 26, 1969 DR. BY R.J. MCKESSY CHECKED [Signature] APPR. [Signature]	1970 REF. 35D55	1-1	150	
				6-20-69	D	NOTE ADDED									
				6-11-68	C	SEAL ADDED									
				4-18-68	B	PLATE ADDED									
				4-18-69	A	35W26 VIEWS ADDED									
9-4-68	F	NOTE REMOVED													

**A-B-E** PART NO. **404411-2-3**



HOLE LOCATIONS FOR STEREO RADIO ADAPTER



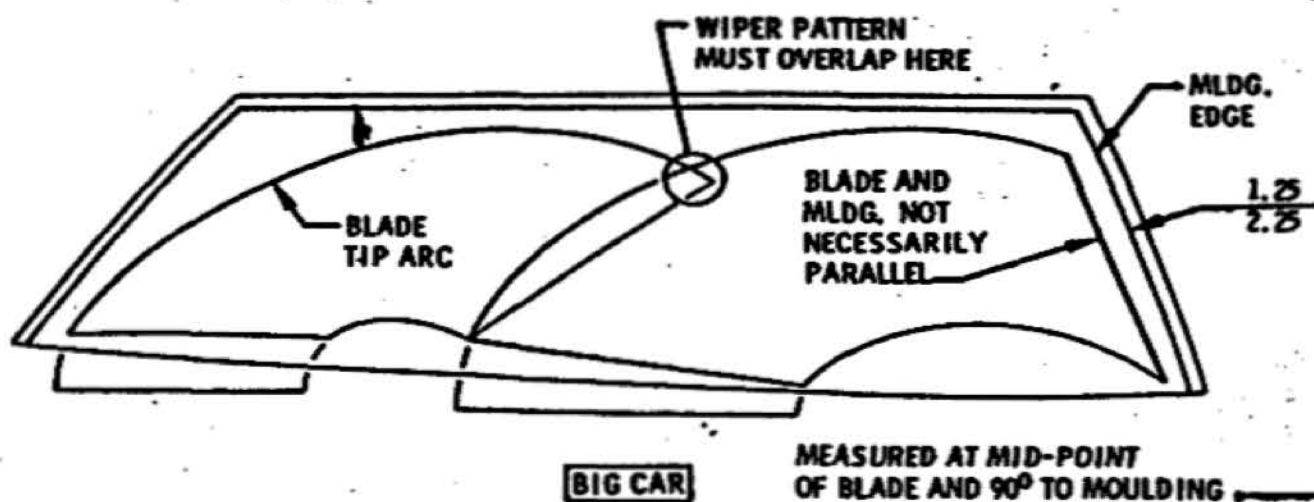
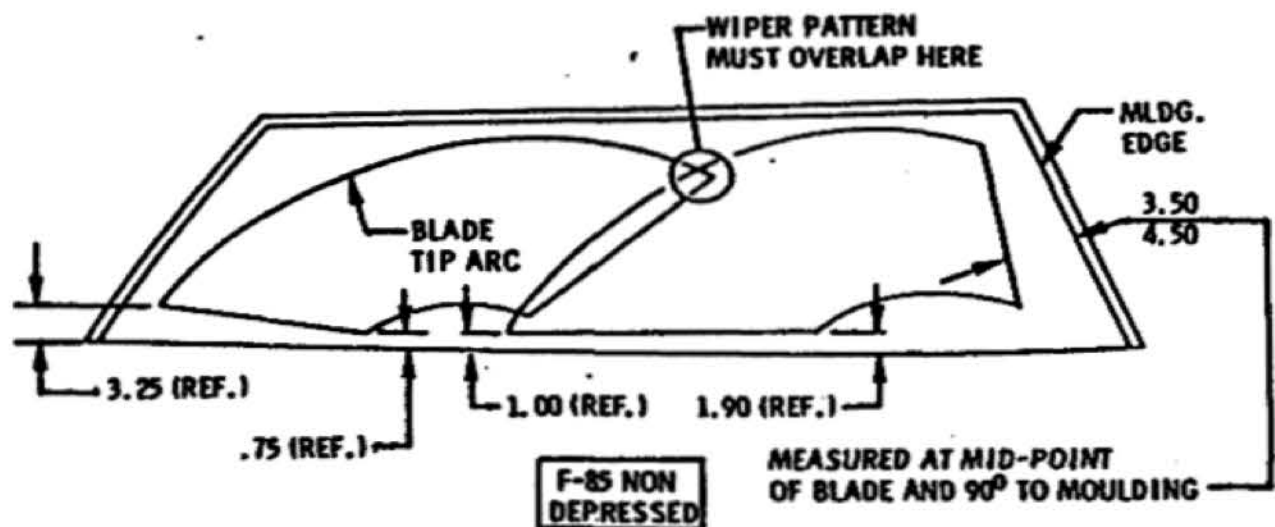
FOR OTHER INFORMATION REQUIRED FOR THIS INSTALLATION, SEE THE FOLLOWING DRAWINGS:

- FRONT SPEAKER - SECTION 1-1
- RADIO INSTALLATION - SECTION 1-3
- RADIO TO ADAPTER AND SPEAKER WIRE ROUTING - SECTION 12

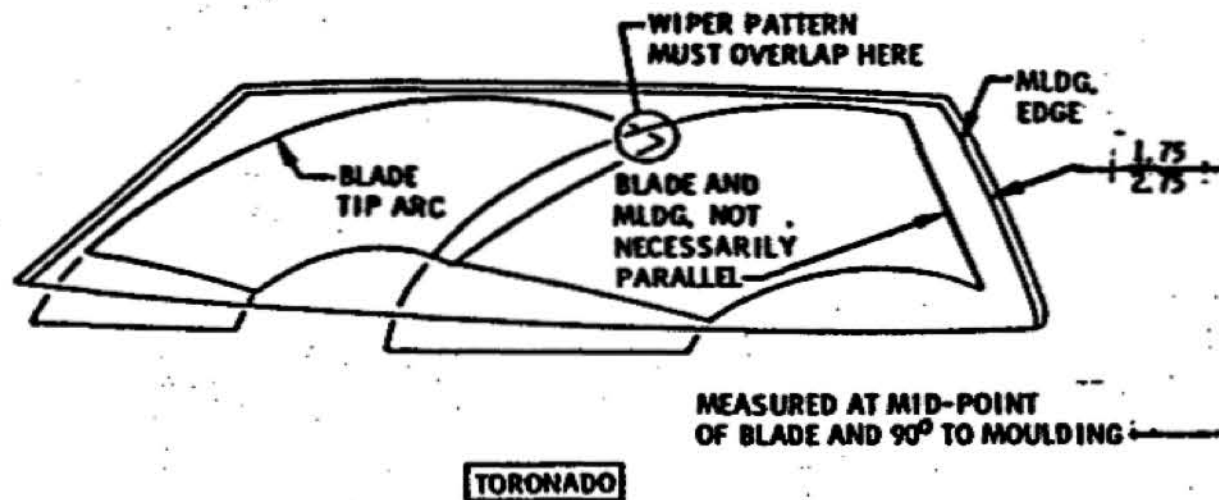
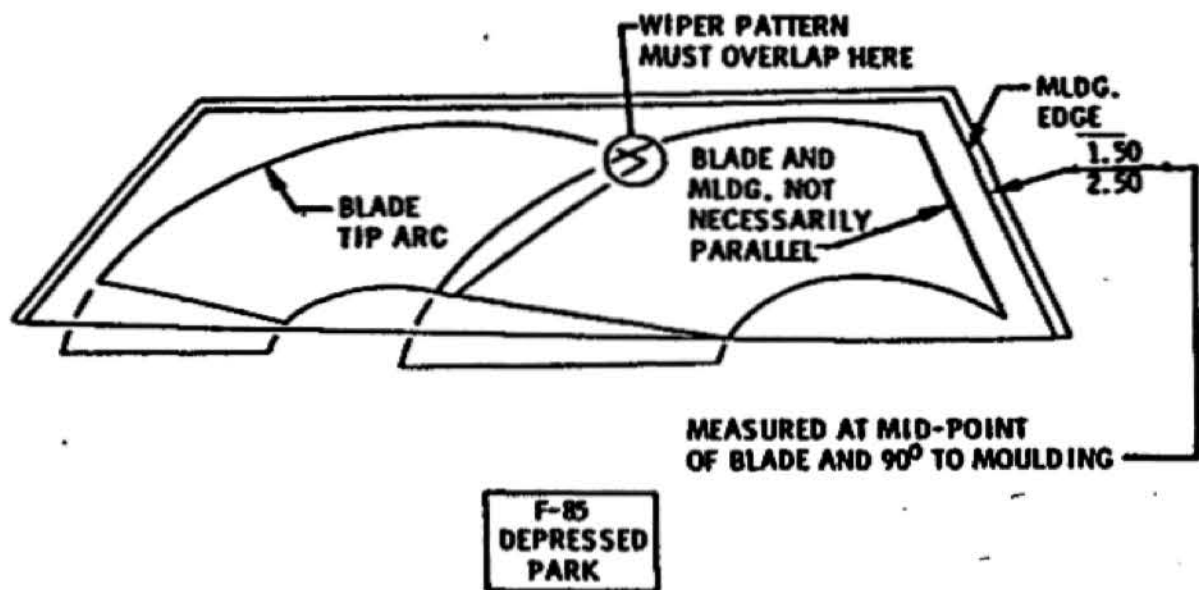
▲  
▲  
▲  
FULLY DRIVEN, SEATED AND NOT STRIPPED

STEREOPHONIC RADIO ADAPTER MOUNTING										
DATE	SYM	REVISION	DR	CL	APPR	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
10-13-68	C	DRILLING DIMS REV.	B	DT		DATE DEC. 3, 1968	1970		1-1	152
5-12-68	B	DIMENSION REVISED				DR BY ED ROE				
2-28-68	A	PARTS RELEASED				CHECKED <i>[Signature]</i>				
						APPR. <i>[Signature]</i>	REP. 35058	SERIES A		PART NO. 404411
							PC-43646			





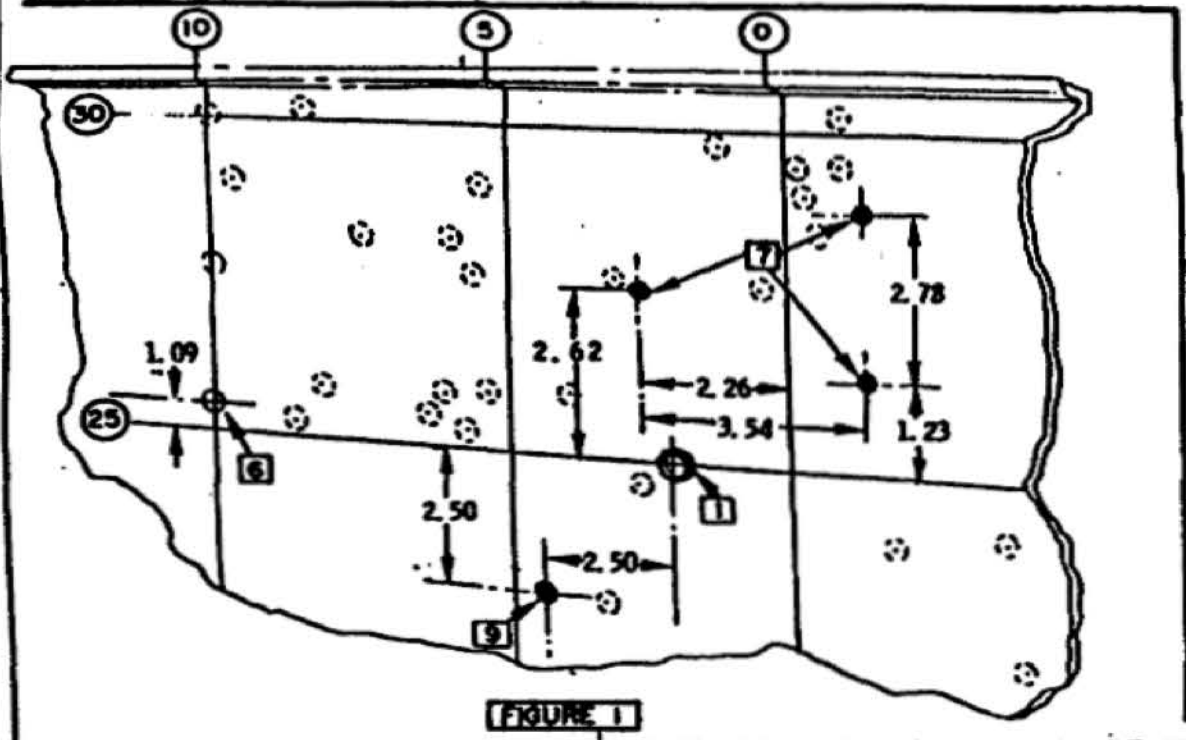
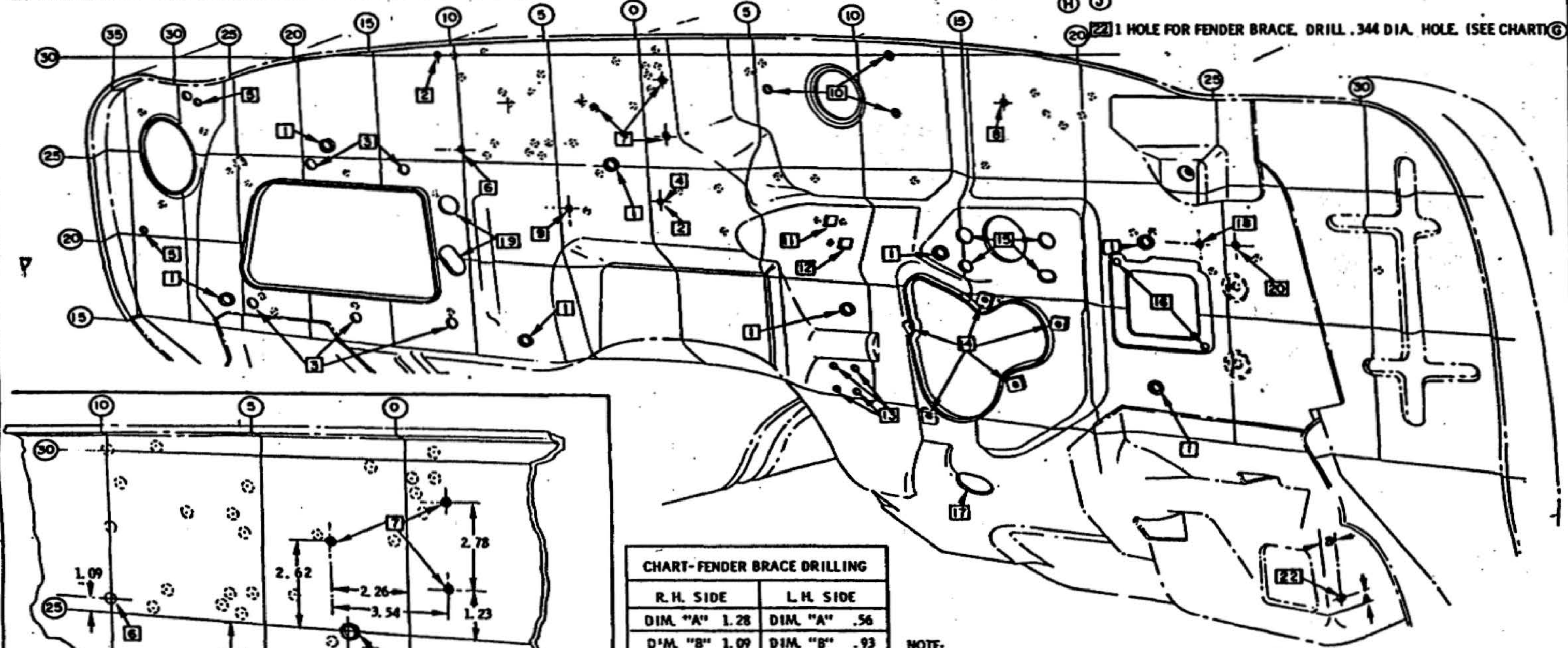
DIMENSIONS AND OTHER INFORMATION SHOWN CAN BE USED TO VERIFY THE PROPER INSTALLATION OF THE W/S WIPER SYSTEMS. THESE DIMENSIONS SHOULD PREVAIL IF PARTS ARE TO PRINT, AND IF THE SYSTEMS HAVE BEEN INITIALLY ADJUSTED CORRECTLY. THEY APPLY TO WET GLASS CONDITIONS AND THE HIGH SPEED SETTING.



ALL VIEWS FROM FRONT OF CAR

DATE	SYM	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	CATALOG NO.	FIG.
						CHART - WIPER BLADE PATTERNS	1970		1-2	100
						DATE NOV. 9, 1968				
						DR. BY BEAUDOIN				
						CHECKED JTB				
						APPR. JTB				
							REV. 1A2D			
								A-B-C-E		404411-2-3

- 1 8 HOLES FOR DASH INSULATOR FASTENINGS.
- 2 2 DIMPLES FOR W/S WASHER HOSE CLIPS. DRILL .128 DIA. 2 HOLES (455 CU. IN ENGINE ONLY)
- 3 5 HOLES FOR HEATER STUJS.
- 4 1 DIMPLE FOR T. C. S. RELAY (L-6 ENGINE ONLY) SELF DRILLING SCREW
- 5 2 HOLES FOR HEATER BLOWER ASM SCREWS.
- 6 1 DIMPLE FOR HEATER GROMMET - DRILL 1.18 DIA. HOLE (SEE FIG. 1)
- 7 3 DIMPLES FOR VOLTAGE REG. DRILL .194 DIA. 3 HOLES (SEE FIG. 1)
- 8 1 DIMPLE FOR HARNESS CLIP-SELF DRILLING SCREW.
- 9 1 DIMPLE FOR ENGINE GROUND STRAP-DRILL .185-.187 DIA HOLE (SEE FIG. 1)
- 10 3 HOLES FOR W/S WASHER AND WIPER MOTOR MOUNTING.
- 11 1 HOLE FOR ACCELERATOR CABLE.
- 12 1 HOLE FOR DOWNSHIFT CABLE (HMT)
- 13 4 HOLES FOR THROTTLE CONTROL BEARING.
- 14 5 HOLES FOR STEERING COLUMN.
- 15 4 HOLES FOR BRAKE CYLINDER OR POWER BRAKE HEAD.
- 16 2 HOLES FOR FUSE BLOCK.
- 17 1 HOLE FOR SPEEDO CABLE.
- 18 1 DIMPLE FOR ACCESSORY GROMMET- DRILL 1.25 DIA. HOLE.
- 19 2 HOLES FOR HEATER CORE PIPES
- 20 1 DIMPLE FOR CRUISE CONTROL CABLE GROMMET. DRILL .875 DIA. HOLE.
- 21 1 HOLE FOR FENDER BRACE. DRILL .344 DIA. HOLE. (SEE CHART G)

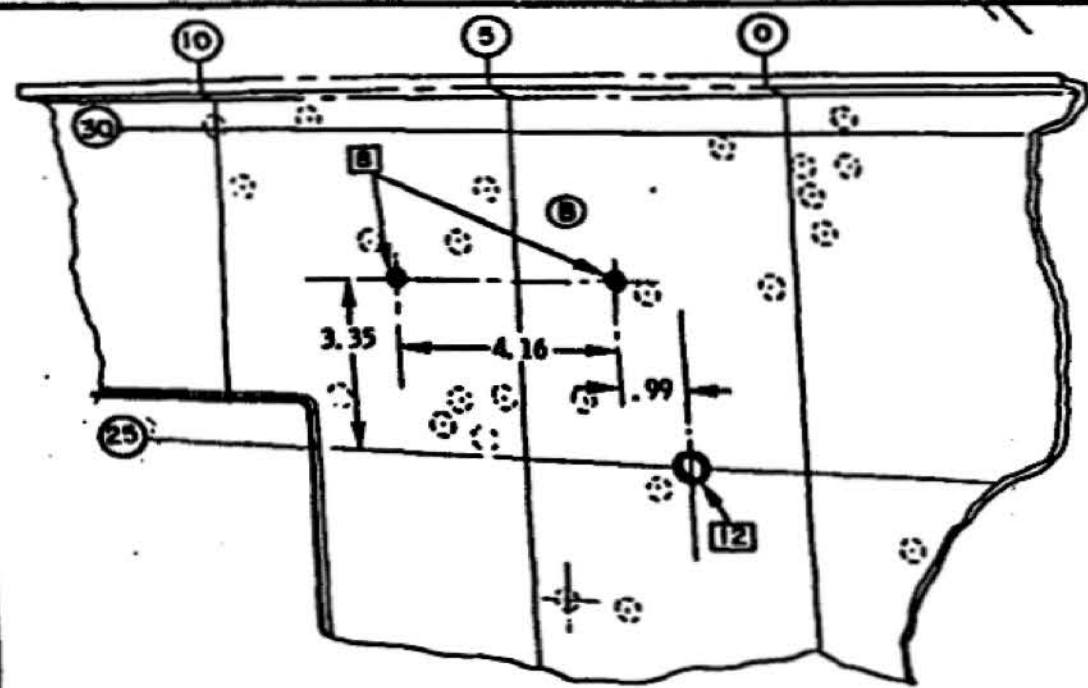
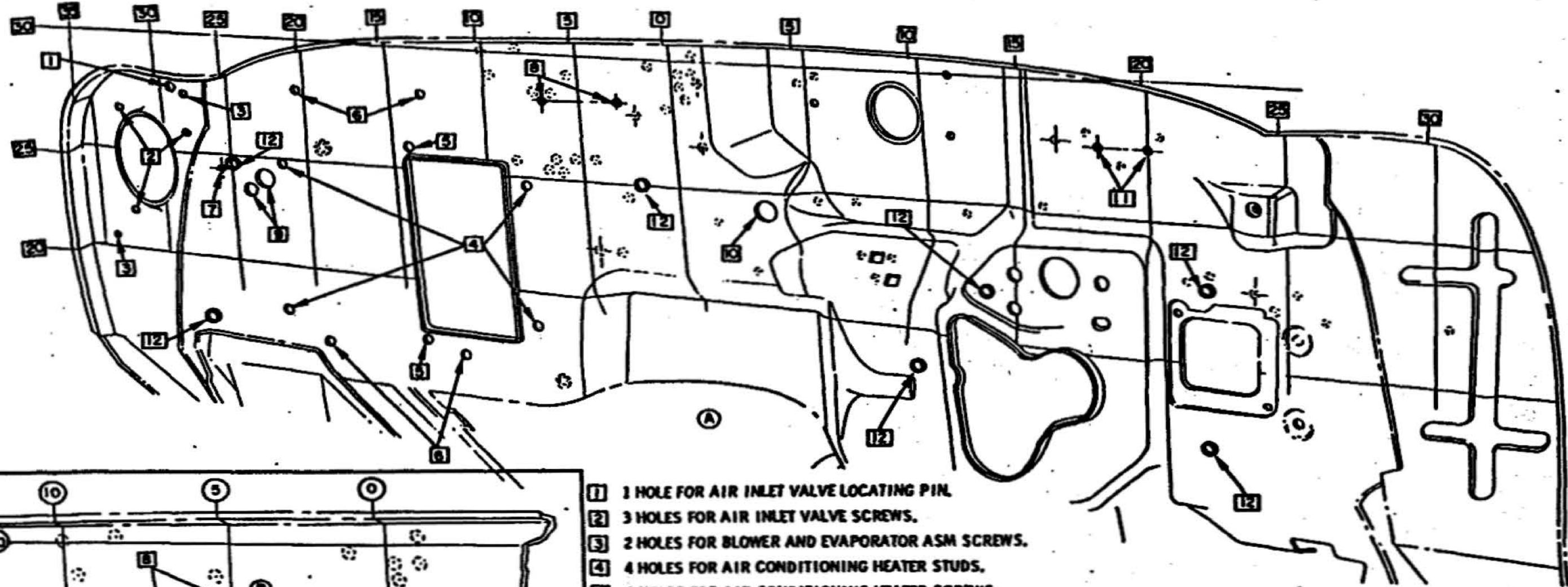


**CHART-FENDER BRACE DRILLING**

	R. H. SIDE	L. H. SIDE
DIM. "A"	1.28	.56
DIM. "B"	1.09	.93

NOTE: HOLES AND DIMPLES SHOWN IN BROKEN LINES NOT USED BY OLDSMOBILE ON STANDARD CAR.

DATE		TITLE		FIRST USED		MANUAL DOC.		PAGE	
12-19-69	J	ITEM REMOVED	DASH PANEL DRILLING-STANDARD CAR	1970	1-2	105			
DATE	SYM	REVISION	DR. CK.	APPR.	REV.	FORM	A	PART NO.	404411



- 1 HOLE FOR AIR INLET VALVE LOCATING PIN.
- 2 3 HOLES FOR AIR INLET VALVE SCREWS.
- 3 2 HOLES FOR BLOWER AND EVAPORATOR ASM SCREWS.
- 4 4 HOLES FOR AIR CONDITIONING HEATER STUDS.
- 5 2 HOLES FOR AIR CONDITIONING HEATER SCREWS.
- 6 4 HOLES FOR BLOWER AND EVAPORATOR ASM SCREWS.
- 7 1 DIMPLE FOR BLOWER AND EVAPORATOR GROUND WIRE-SELF DRILLING SCREW.
- 8 2 DIMPLES FOR AIR CONDITIONING VACUUM TANK-SELF DRILLING SCREWS. SEE FIG. 1.
- 9 2 HOLES FOR HEATER CORE PIPES.
- 10 1 HOLE FOR AIR CONDITIONING GROMMET.
- 11 2 DIMPLES FOR AIR CONDITIONING RELAY-SELF DRILLING SCREWS.
- 12 7 HOLES FOR DASH INSULATOR FASTENINGS.

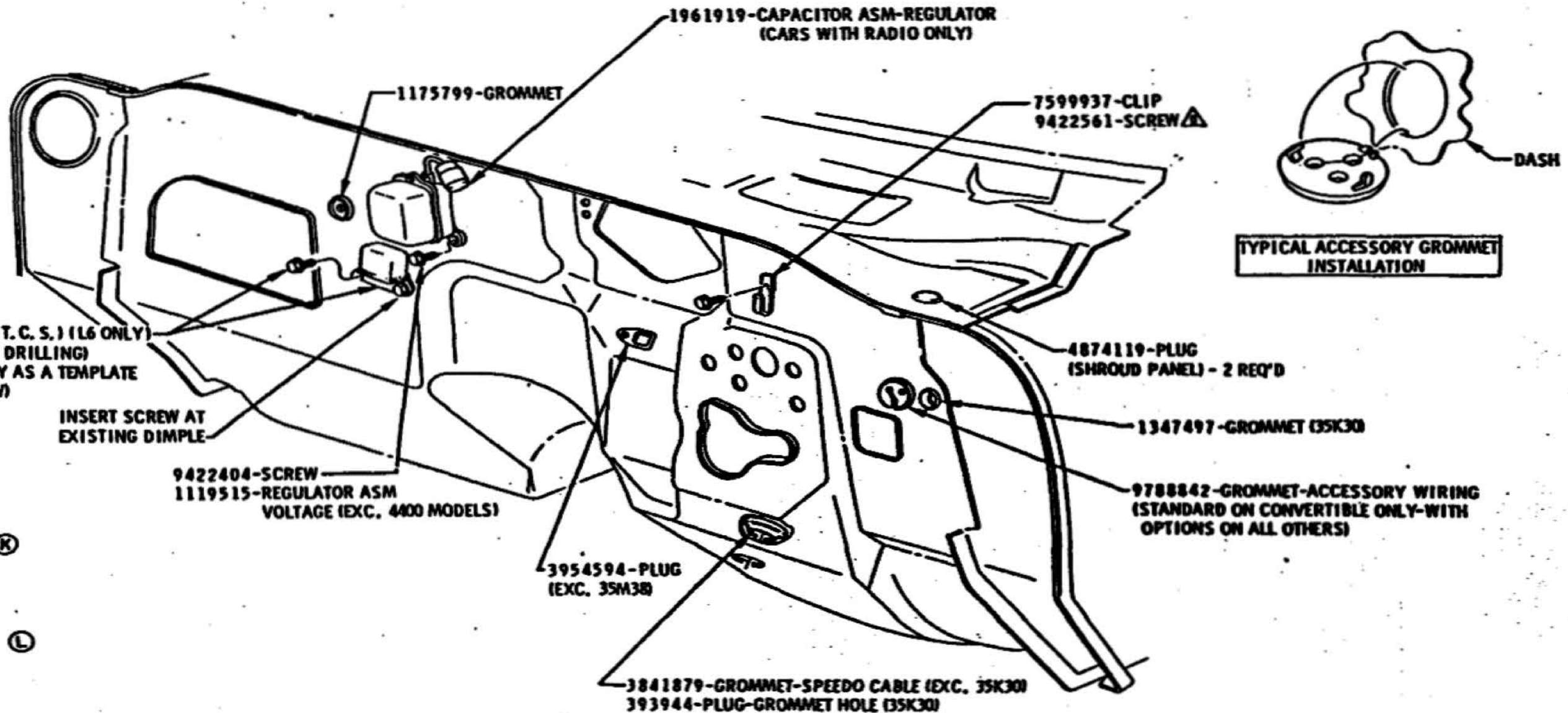
⊗ - INDICATES DIMPLES NOT USED BY OLDSMOBILE.  
 - ⊕ - INDICATES DIMPLES USED ON ALL CARS BY OLDSMOBILE. SEE PAGE 105 FOR USAGE

FIGURE 1

				TITLE				DASH DRILLING- AIR CONDITIONING	
				DATE	MAR. 24 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
				DR. BY	H. PARKER			1-2	106
				CHECKED	J. J. JONES				
				APPR.					
DATE	SYM	REVISION	DR. CK. APPR.			REF.	SERIES	PART NO.	
							A	404411	

FOR LOCATION & DRILLING  
INFORMATION SEE PAGE 105

FOR SEALING INFORMATION  
SEE PAGE 112



(J)  
3961573-RELAY ASM (T. C. S.) (L6 ONLY)  
9428036-SCREW (SELF DRILLING)  
(USE BRACKET ON RELAY AS A TEMPLATE  
TO LOCATE THIS SCREW)

INSERT SCREW AT  
EXISTING DIMPLE

9422404-SCREW  
1119515-REGULATOR ASM  
VOLTAGE (EXC. 400 MODELS)

3954594-PLUG  
(EXC. 35M30)

3841879-GROMMET-SPEEDO CABLE (EXC. 35K30)  
393944-PLUG-GROMMET HOLE (35K30)

7599937-CLIP  
9422561-SCREW

4874119-PLUG  
(SHROUD PANEL) - 2 REQ'D

1347497-GROMMET (35K30)

9788842-GROMMET-ACCESSORY WIRING  
(STANDARD ON CONVERTIBLE ONLY-WITH  
OPTIONS ON ALL OTHERS)

TYPICAL ACCESSORY GROMMET  
INSTALLATION

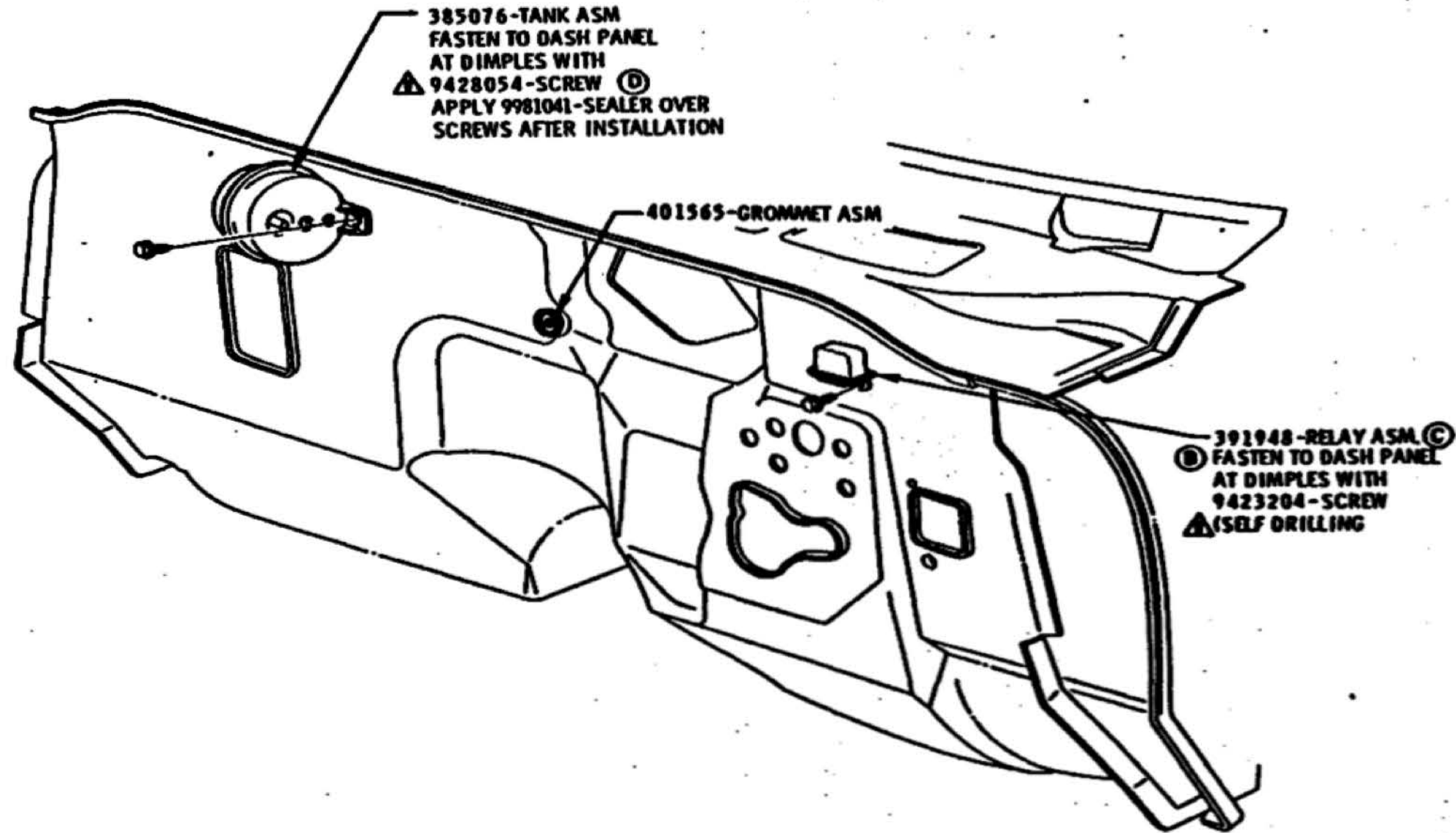
DASH

▲  
▲  
▲  
▲  
▲  
FULLY DRIVER SEATED  
AND NOT STRIPPED

				10-9-69	K	WAS 487183-SCREW	DP	DT	TITLE			DASH PANEL COMPONENTS - STANDARD CAR					
				8-12-69	J	3961573-RELAY ASM ADDED	BY	DT	DATE	FEB 7 1969	FIRST USED	1970	OLDSMOBILE PRODUCT	MANUAL NO.	1-2	PAGE	108
				8-5-69	H	VIEW ADDED		DT	DR BY	130YER			INFORMATION MANUAL				
				7-15-69	G	97-98C48 OPT. REMOVED	J13	DT	CHECKED	TJL							
				6-25-69	F	9792054-CLIP ADDED	BA	DT	APPR.								
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.							
12-10-69	L	FIGURE 1 REMOVED															
											REV.	A	PART NO.	404411			

FOR LOCATION &  
DRILLING INFORMATION  
SEE PAGE 106

FOR SEALING  
INFORMATION  
SEE PAGE 112



385076-TANK ASM  
FASTEN TO DASH PANEL  
AT DIMPLES WITH  
▲ 9428054-SCREW (D)  
APPLY 9981041-SEALER OVER  
SCREWS AFTER INSTALLATION

401565-GROMMET ASM

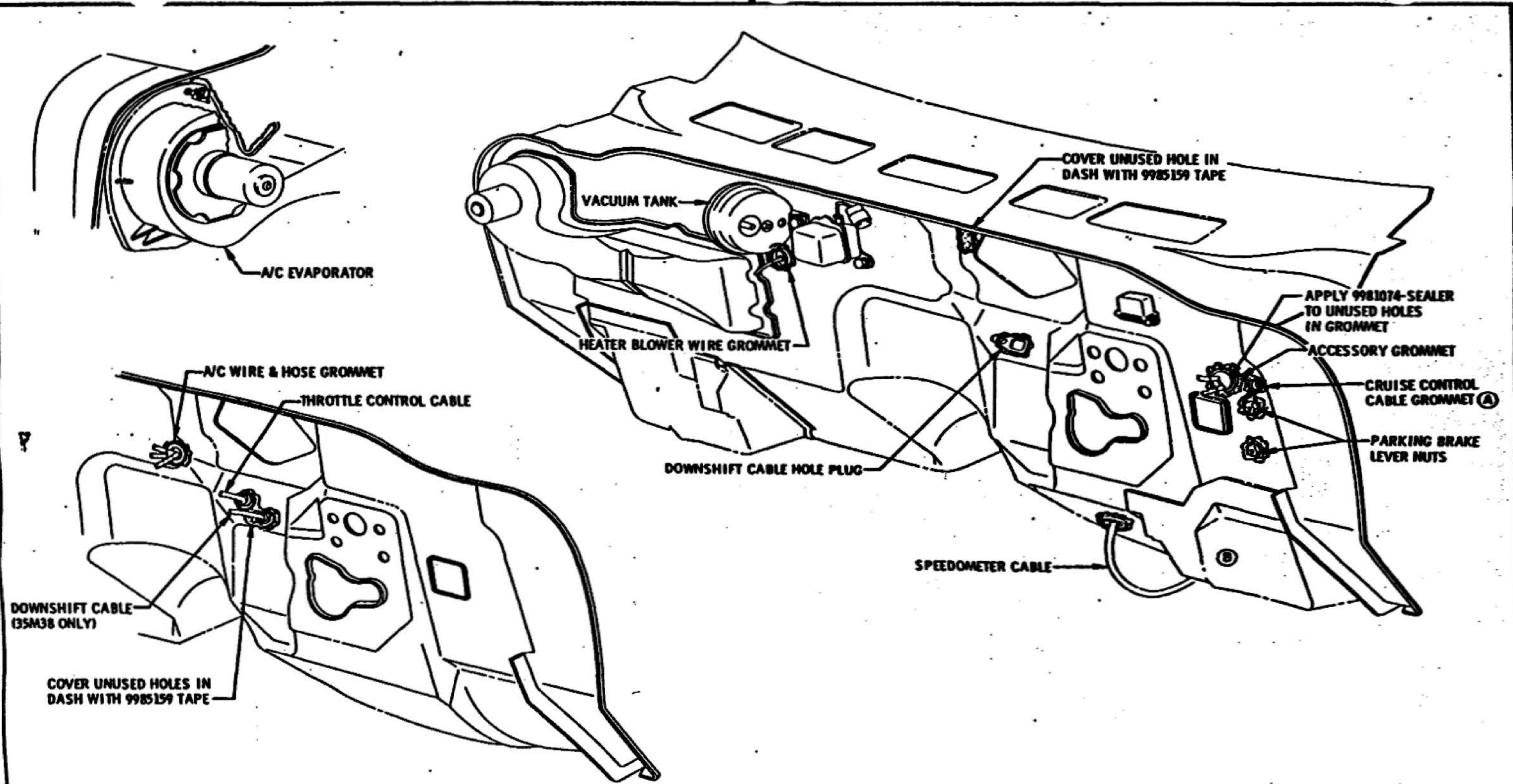
391948-RELAY ASM (C)  
(B) FASTEN TO DASH PANEL  
AT DIMPLES WITH  
9423204-SCREW  
▲ (SELF DRILLING)

(SAME AS PAGE 108 EXC. AS NOTED)



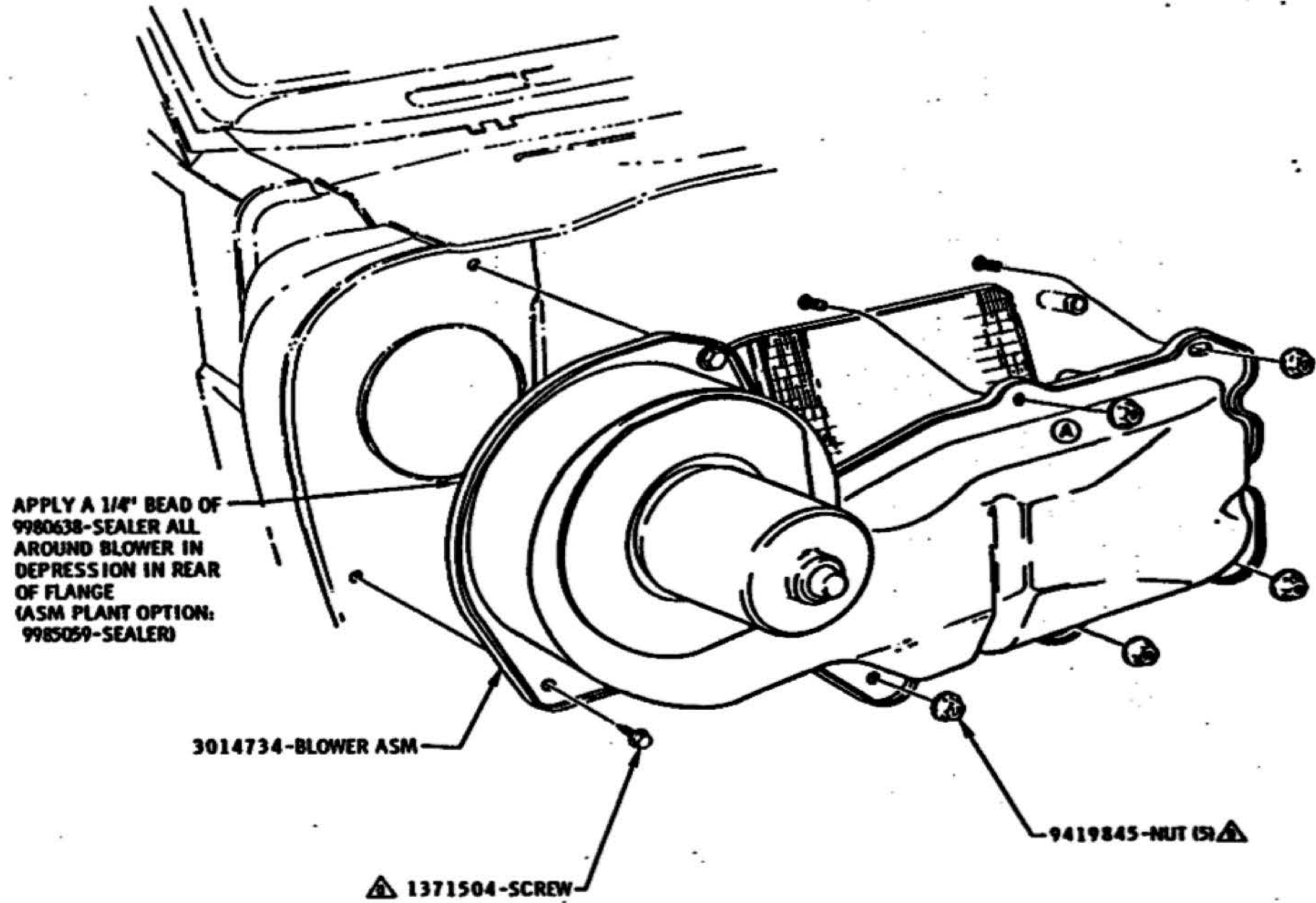
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

2-17-70	D	WAS 9428054-SCREW	DT	TITLE	DASH PANEL COMPONENTS - A/C CAR			
2-17-70	C	WAS 391948-RELAY	DT	DATE JAN. 27, 1969	FIRST USED	OLDSMOBILE PRODUCT	MANUAL NO.	PAGE
6-17-70	B	WAS 9981041-SEALER	DT	DR. BY 130YER	1970	INFORMATION MANUAL	1-2	110
		TITLE REVISED	DT	CHECKED				
8-6-69	A2	NOTES ADDED &	DT	APPR.		A		404411
DATE	BY	REVISION	DR.	CL.	APP.			



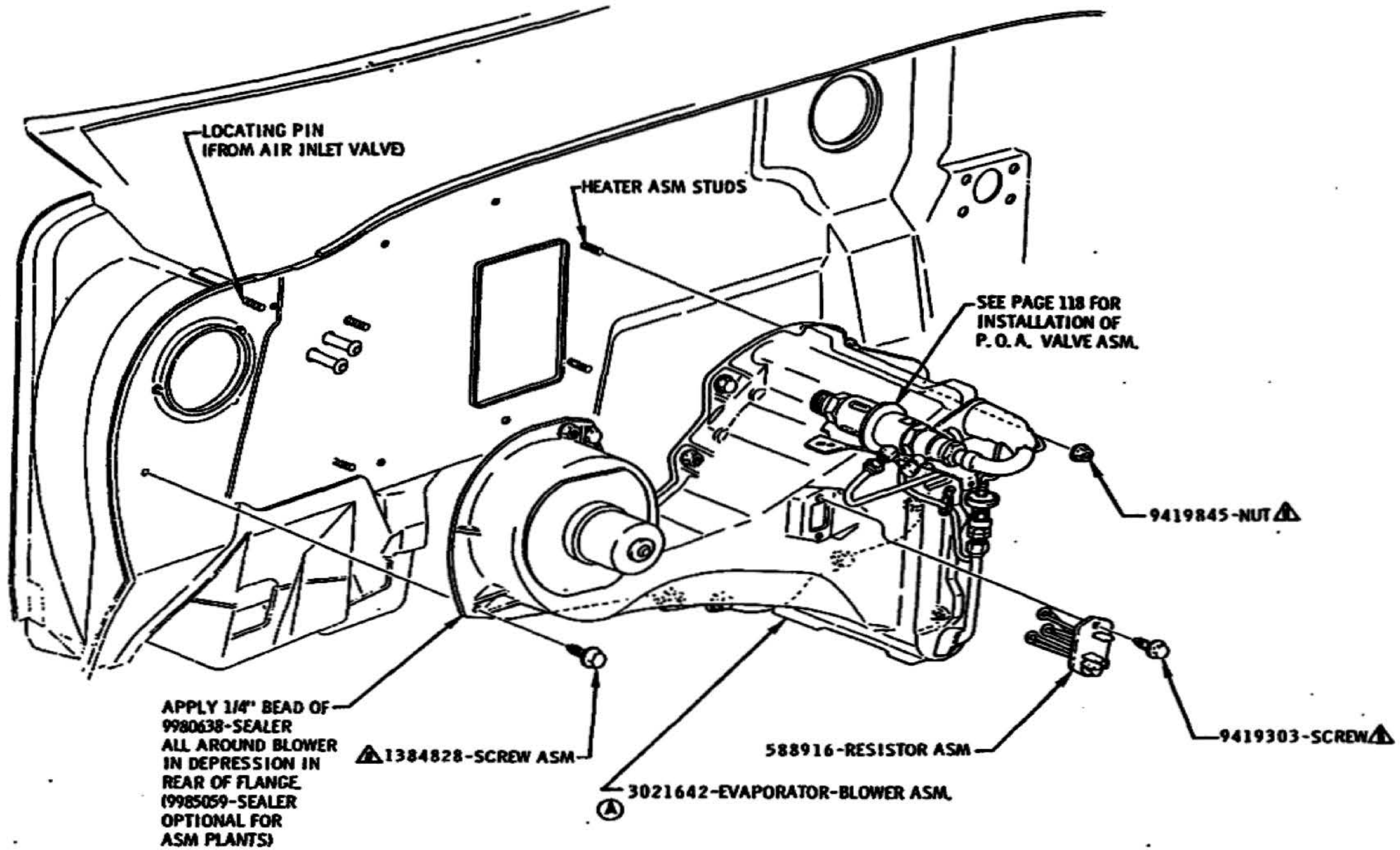
APPLY 9981041 SEALER TO INDICATED AREAS

DATE		SYM		REVISION		DR		CL		APPR		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC.		PAGE	
8-17-70		B		SPEEDO CABLE CLIP BEAV		PP		DT		ENGR		T.M.		1970		A		1-2		112	
6-8-69		A		CRUISE CONTROL CABLE ADD		PP		DT		APPR.											
																				404411	



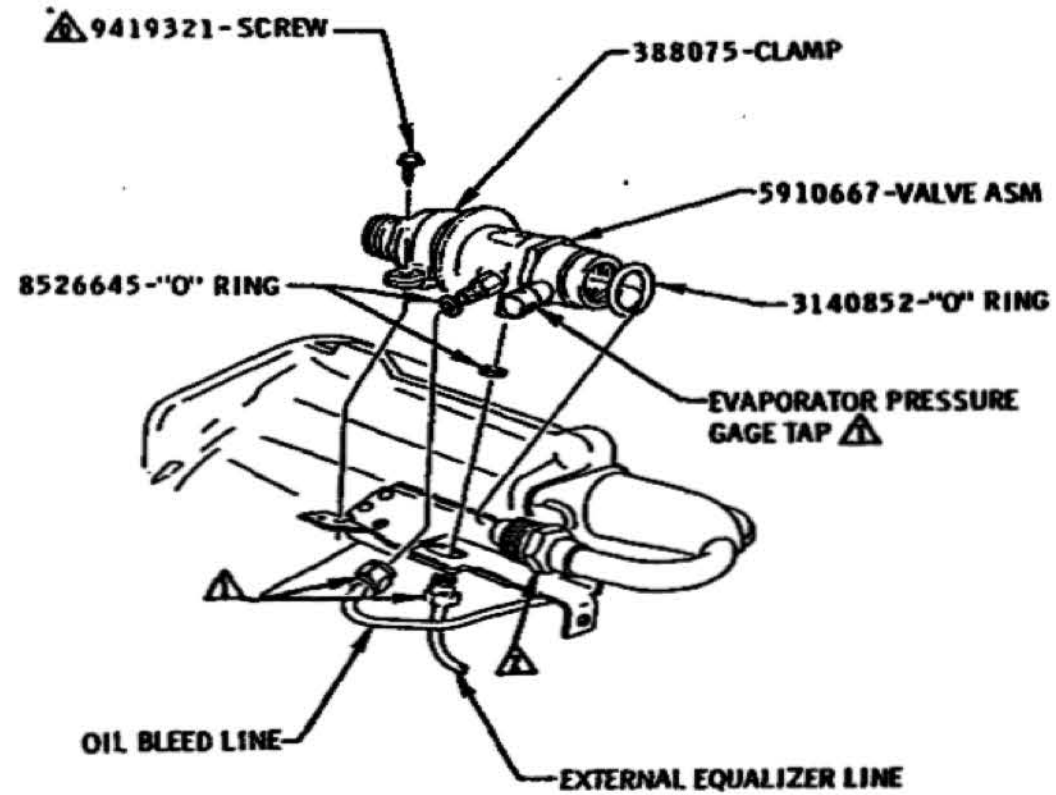
  
 FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

DATE		SYM	REVISION	DATE	BY	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	HANDL. SEC.	PAGE
						HEATER BLOWER	1970		1-2	114
11-20-69		A	1366271-CLIP REMOVED		DT	DATE DEC. 5 1969 DR. BY B. PARKER CHECKER J. J. [Signature] APP. H. SCHEIDT	1A2.C	SERIES A-B-C	PART NO. 404411-2	



				TITLE AIR CONDITIONING EVAPORATOR & RESISTOR			
DATE DEC. 9 1968				YEAR USED 1970		MANUAL NO. PAGE 1-2 116	
DR. BY B. PARKER						OLDSMOBILE PRODUCT INFORMATION MANUAL	
CHECKED [Signature]				REV. 35C60		SERIES A	
APPR. K.E. [Signature]						PART NO. 4L 411	
DATE	SYM	REASON	DR.	CK.	APPR.		
3-28-68	WAS 301	T-EVAP.	SP	ED			





POA VALVE  
INSTALLATION

Ⓐ REFER TO AIR CONDITIONING  
PROCEDURE CHART SECTION O  
PAGE 46 FOR ADDITIONAL DATA

▲ 28-33 LB. FT.  
▲ 5-7 LB. FT.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

		TITLE		AIR CONDITIONING P. O. A. VALVE ASSEMBLY			
		DATE	DEC. 9, 1968	PART USED	1970	OLDSMOBILE PRODUCT	MANUAL SEC. PAGE
		DR BY	B. PARKER			INFORMATION MANUAL	1-2 118
		CHECKED	TAM	REV.	35060	REV.	A
		DATE	1-30-69	BY	APR. K. S. M. L. L.	PART NO.	404411
SYN	A	NOTE ADDED	DR. CL.	APR. T. J. Y. G.			
		REVISION					

NOTE:

1. THE ELEMENT REMOVAL CLIP OR BUTTON ON WIPER BLADE MUST BE TOWARD BOTTOM OF WINDSHIELD WHEN BLADE IS INSTALLED TO ARM.
2. INITIAL INSTALLED POSITION OF ARM AND BLADE ASSEMBLY AND RESULTING WIPE PATTERN TO BE AS SHOWN ON PAGE 100.

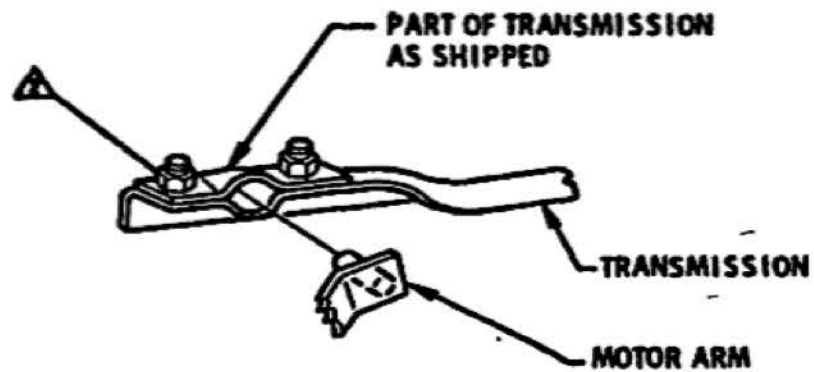
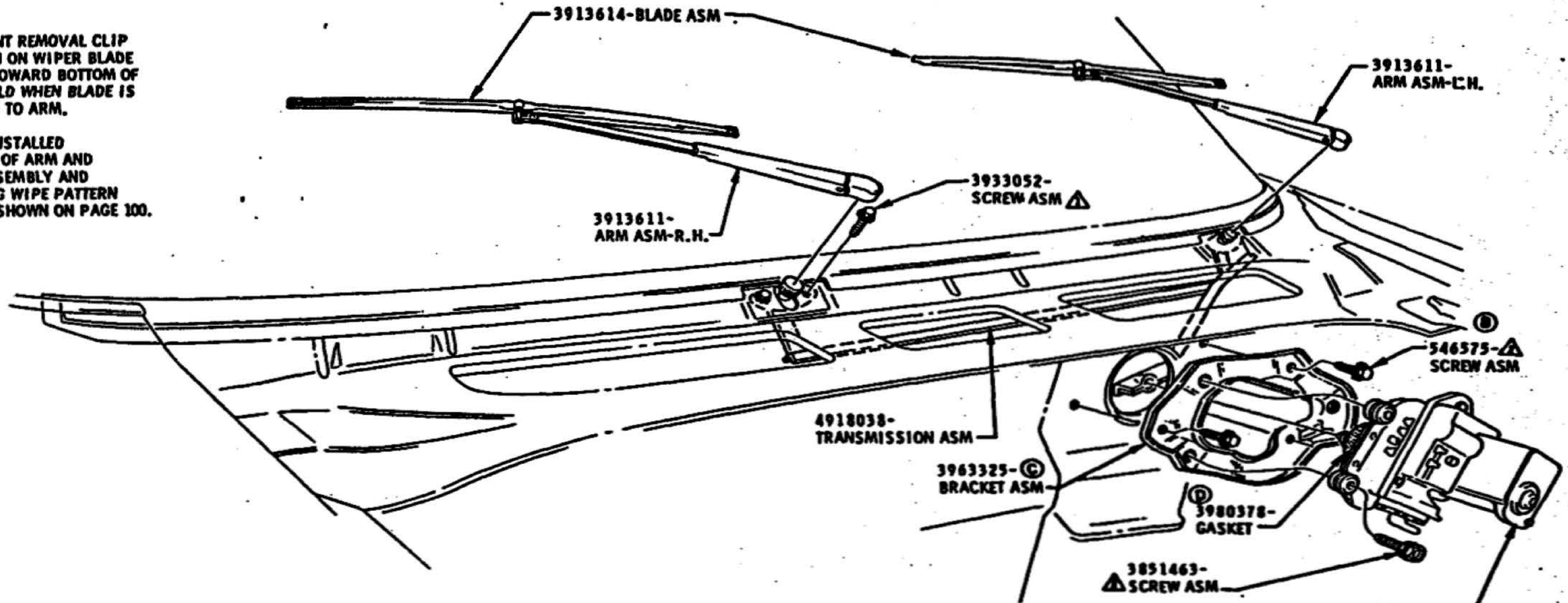


FIGURE 1

TRANSMISSION FASTENING TO WIPER MOTOR

5045619-MOTOR ASM  
SEE FIGURE 1 FOR FASTENING TO TRANSMISSION

SEE SECT. 12 FOR MOTOR WIRING

- ▲ 25-45LB. IN.
- ▲ 45-60LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

REVISION				TITLE				FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE	
31-69	D	WAS 3814877 GASKET	B	DT	DATE	FEB. 12 1969	1970			1-2	120		
7-68	C	REDRAWN & DESIGNED	B	DT	DR. BY	BEAUDOIN							
5-64	B	WAS 423595 SCREW	B	DT	CHECKED	JHM							
5-64	A	TORQUE REVISED	B	DT	APPR.	TJ							
					DATE								
					SYM								
					REVISION								
					DR.								
					CL.								
					APPR.								

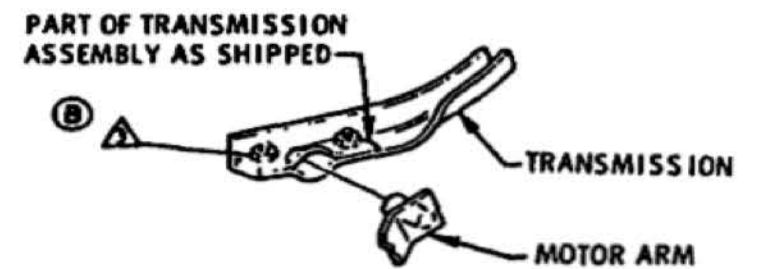
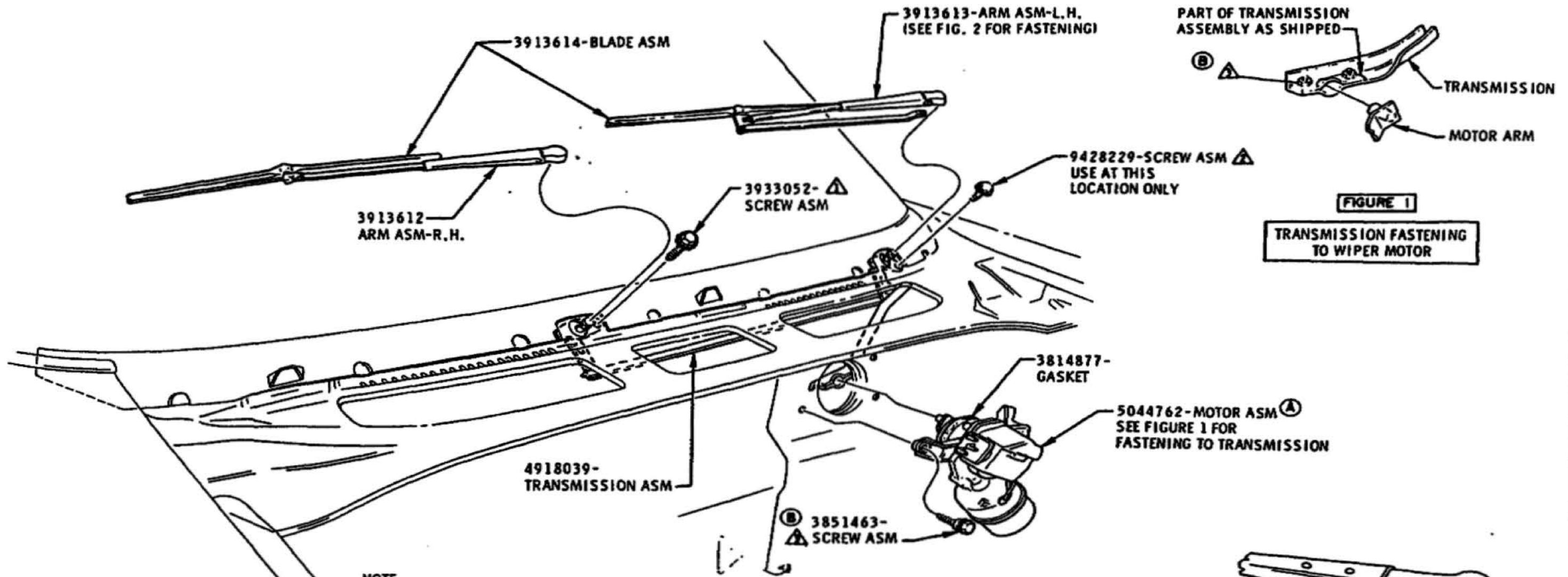


FIGURE 1  
TRANSMISSION FASTENING TO WIPER MOTOR

NOTE:

1. FOR INITIAL INSTALLATION, CORRECT PARK POSITION OF L.H. ARM AND BLADE ASSEMBLY WILL BE OBTAINED BY FASTENING TRANSMISSION TO MOTOR ARM WITH BLADE RESTING AGAINST UNDERSIDE OF STOP ON MOULDING (WIPER MOTOR ASSEMBLY IS SHIPPED IN PARK POSITION), THEN LIFTING BLADE UP TO REST AGAINST TOP SIDE OF STOP.
2. FOR INITIAL INSTALLATION OF R.H. ARM AND BLADE ASSEMBLY, USE FIRST AVAILABLE SERRATION ON TRANSMISSION ABOVE THE MOULDING STOP THAT WILL COMPLETE OVERLAP OF WIPER PATTERN.
3. SEE CHART ON PAGE 100 FOR WIPE PATTERN.
3. THE ELEMENT REMOVAL CLIP OR BUTTON ON BLADE ASSEMBLY MUST BE TOWARD BASE OF ARM.

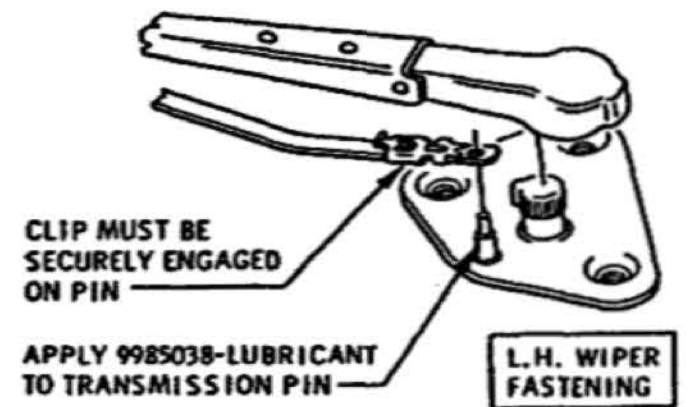


FIGURE 2

SEE SECT. 12  
FOR MOTOR WIRING

- ▲ 25-45 LB. IN. ①
- ▲ 35-45 LB. IN.
- ▲ 45-60 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE WINDSHIELD WIPERS - DEPRESSED PARK (EXC. 3100 - 3200)					
				DATE FEB. 19 1969	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. 1-2	PAGE 122
				DR. BY BEAUDOIN	CHECKED J. J. J.				
				5-28-69 B3 TORQUE REVISED	5-27-69				
				5-12-69 A WAS 5049756 MOTOR	5-27-69				
DATE	BY	REVISION	DR.	CK.	APP.	REV. 1A2D	SERIES A	PART NO. 404411	

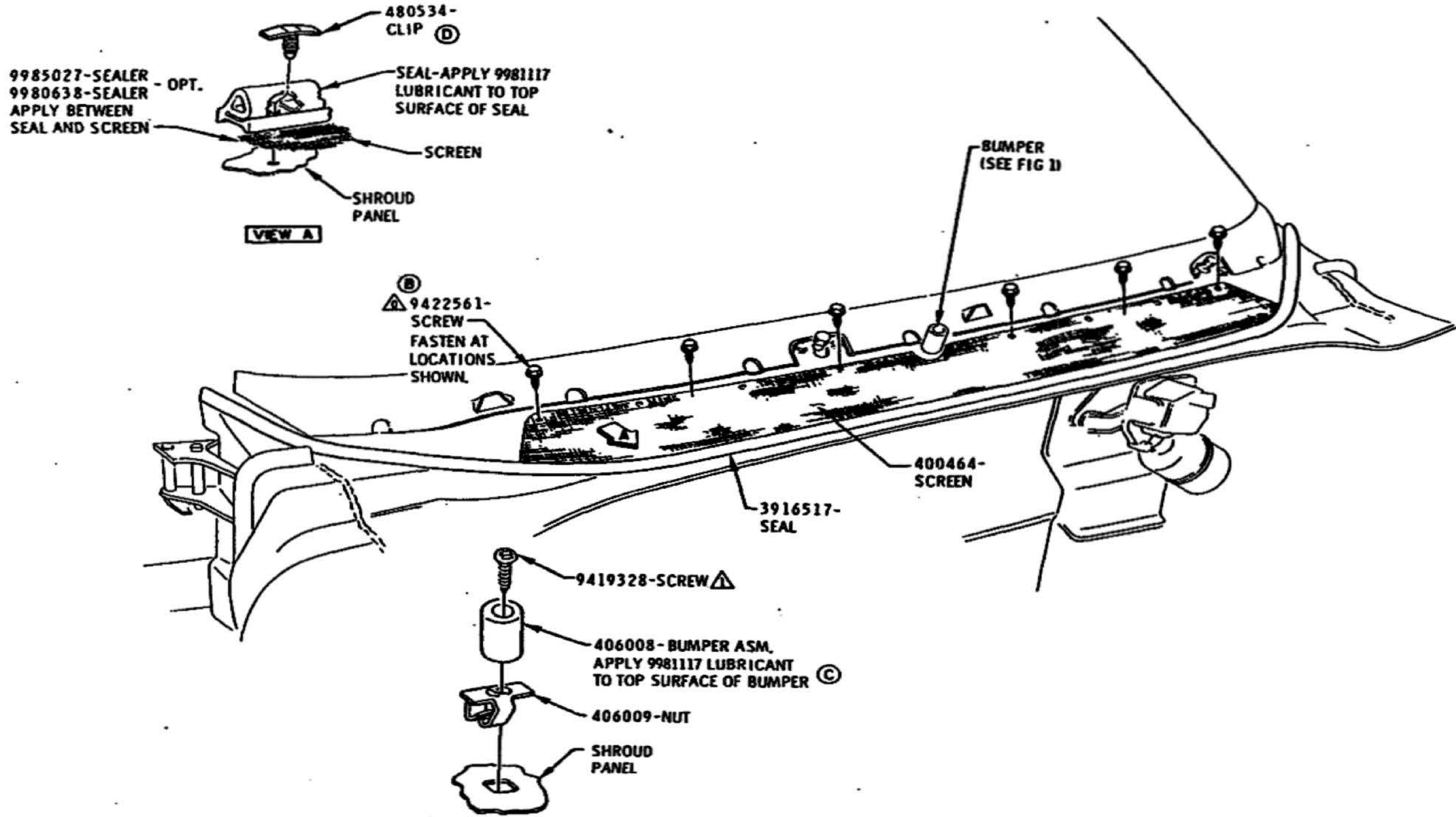


FIGURE 1  
BUMPER INSTALLATION TO SHROUD PANEL

▲ 20-30 LB FULLY DRIVEN AND NOT STRIPPED

DATE	SYM	REVISION	DR	CL	APPV	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	PAGE
1-18-68	D	WAS 376777-CLIP	6	DR		SHROUD VENT SCREEN, SEAL AND HOOD REAR BUMPER	1970		124
6-11-68	C	NOTE A	7	DR					
8-18-68	B	SCREW QUANT LOC. REVISED	8	DR					
2-18-69	A	BUMPER REVISED	9	DR					
							REP 1A2C 1A2D	SERIES A	PART NO. 404411

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

M O D E L S	EXPORT (KILOS)						DOMESTIC (MILES)						S T D.
	CKD	CKD	CKD	SUP	SUP	SUP	U15 WITH M38, M40 EXCEPT D55 W26	U15 WITH M38, M40 WITH D55 W26	U15 EXCEPT M38, M40	M38, M40 EXCEPT D55 W26	M38, M40 WITH D55 W26		
3177	RF	--	RE	--	--	--	RD	--	RC	RB	--	RA	
3277	RF	--	RE	--	--	--	RD	--	RC	RB	--	RA	
35 35	RF	--	RE	--	--	--	RD	--	RC	RB	--	RA	
35 39	RF	--	RE	RF	--	RE	RD	--	RC	RB	--	RA	
35 69	RF	--	RE	RF	--	--	RD	--	RC	RB	--	RA	
35 77	RF	RE	RE	--	--	--	RD	RC	RC	RB	RA	RA	
35 87	RF	RE	RE	RF	RE	RE	RD	RC	RC	RB	RA	RA	
36 35	RF	--	RE	--	--	--	RD	--	RC	RB	--	RA	
36 39	RF	--	RE	RF	--	RE	RD	--	RC	RB	--	RA	
36 69	RF	--	RE	RF	--	RE	RD	--	RC	RB	--	RA	
36 77	RF	RE	RE	--	--	--	RD	RC	RC	RB	RA	RA	
36 87	RF	RE	RE	RF	--	--	RD	RC	RC	RB	RA	RA	
42 39	RF	--	RE	RF	--	RE	RD	--	RC	RB	--	RA	
42 57	RF	RE	RE	RF	RE	RE	RD	RC	RC	RB	RA	RA	
42 67	RF	RE	RE	--	--	--	RD	RC	RC	RB	RA	RA	
44 67	RF	RE	RE	--	--	--	RD	RC	RC	RB	RA	RA	
44 77	RF	RE	RE	--	--	--	RD	RC	RC	RB	RA	RA	
44 87	RF	RE	RE	--	--	--	RD	RC	RC	RB	RA	RA	
48 55	RF	--	RE	--	--	--	RD	--	RC	RB	--	RA	
48 65	RF	--	RE	--	--	--	RD	--	RC	RB	--	RA	

IDENT. CODE	PART NUMBER	CALIB.
RA	6492930	MILES
RB	6492932	MILES
RC	6492933	MILES
RD	6492935	MILES
RE	6492936	KILOS ★
RF	6492938	KILOS ★

★ KILOS CLUSTERS ARE ALL SAFETY SENTINEL

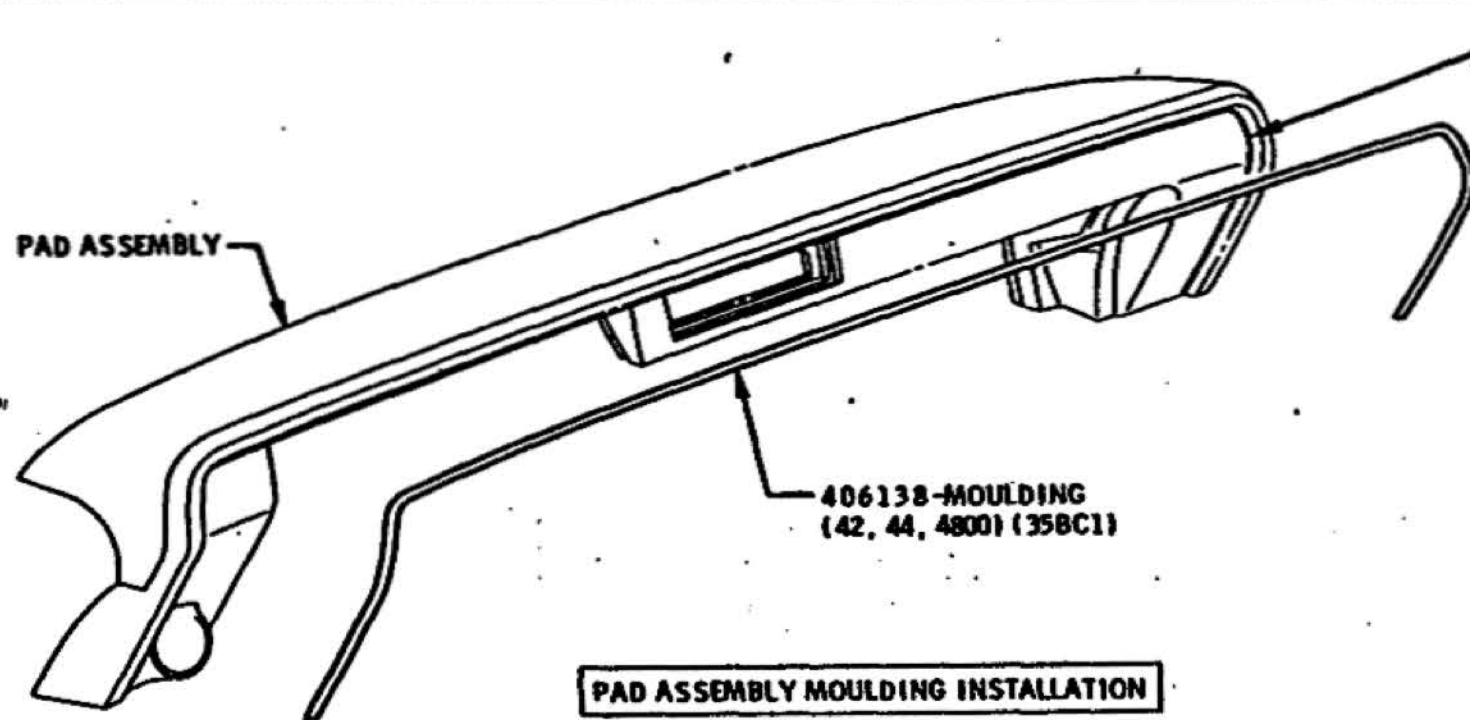
**TO READ CHART:**

READING CHART FROM LEFT TO RIGHT, THE FIRST OPTION REACHED THAT IS SATISFIED WILL INDICATE THE CLUSTER TO BE USED ON THE MODEL CONSIDERED. IF NONE OF THE CONDITIONS ABOVE ARE SATISFIED, THE LAST COLUMN IS STANDARD EQUIPMENT AND THAT COLUMN WILL INDICATE THE CLUSTER TO BE USED ON THAT MODEL.

**OPTION CODE DESIGNATION**

D55 IS FRONT COMPARTMENT CONSOLE  
M38 IS AUTOMATIC TRANSMISSION (3 SPEED) FOR 350 CUBIC INCH ENGINES  
M40 IS AUTOMATIC TRANSMISSION (3 SPEED) FOR 455 CUBIC INCH ENGINES  
U15 IS SAFETY SENTINEL  
W26 IS FRONT COMPARTMENT CONSOLE - DUAL GATE SHIFTER  
97 & 98U18 ARE EXPORT KILOS CLUSTER

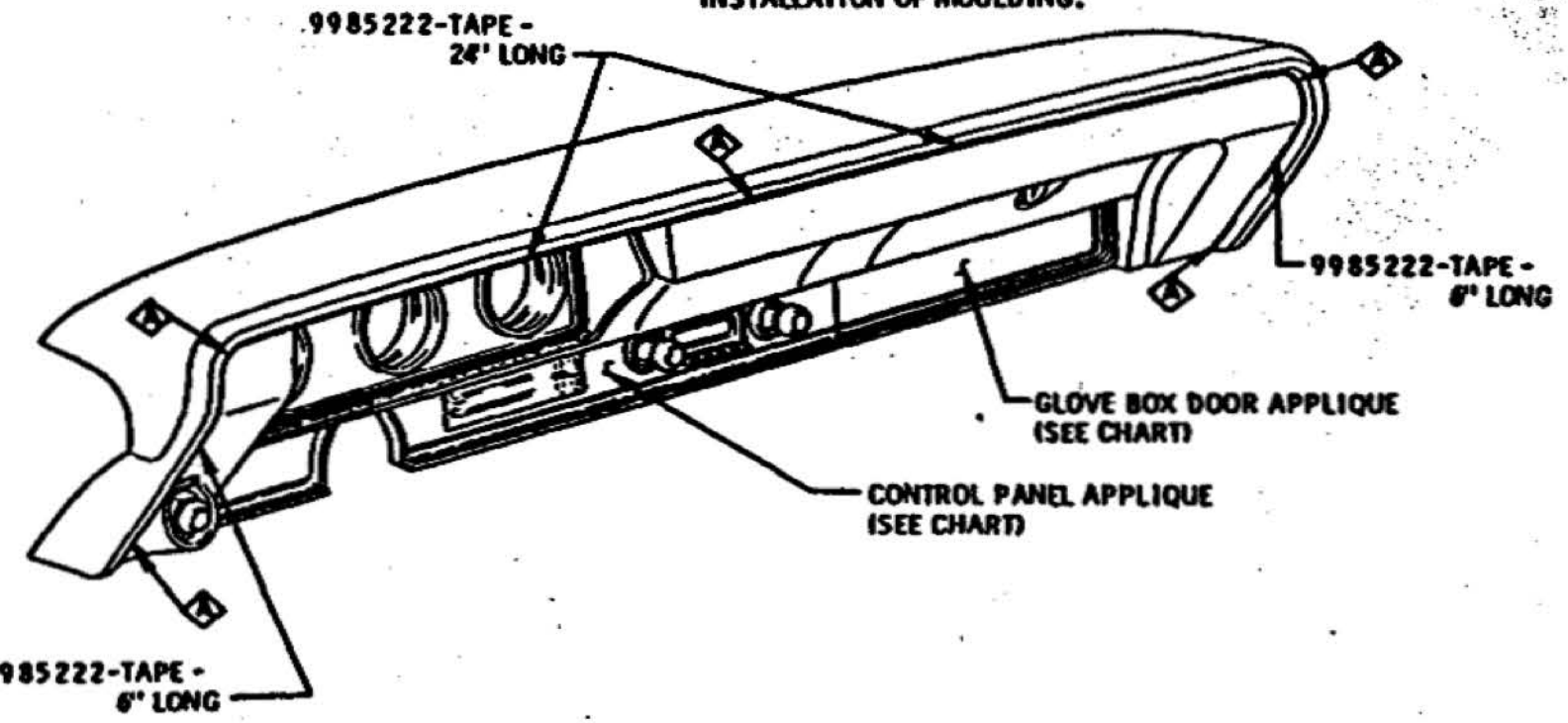
TITLE CHART - INSTRUMENT CLUSTER USAGE											
DATE APRIL 17, 1969						FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE 3 90	
DR. BY RON SIMS						CHECKED <i>[Signature]</i>		SERIES A		PART NO. 357	
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	VISION	DR.	CK.	APPR.	APPR.



PAD ASSEMBLY MOULDING INSTALLATION

9981355-CEMENT (F)  
 APPLY IN CONTINUOUS BEAD TO MOULDING GROOVE IN PAD FOR ENTIRE LENGTH OF MOULDING.  
 NOTE: MOULDING MUST BE APPLIED IMMEDIATELY AFTER APPLICATION OF CEMENT.  
 CAUTION: CEMENT MUST NOT CONTACT APPEARANCE SURFACES OF PAD ASSEMBLY OR MOULDING.

(F) MANUFACTURING OPTION:  
 9985222 TAPE MAY BE USED IN CONJUNCTION WITH 5 DAUBS OF 9981355 CEMENT. DO NOT APPLY CEMENT OVER TAPE. TAPE MUST NOT BE VISIBLE AFTER INSTALLATION OF MOULDING.

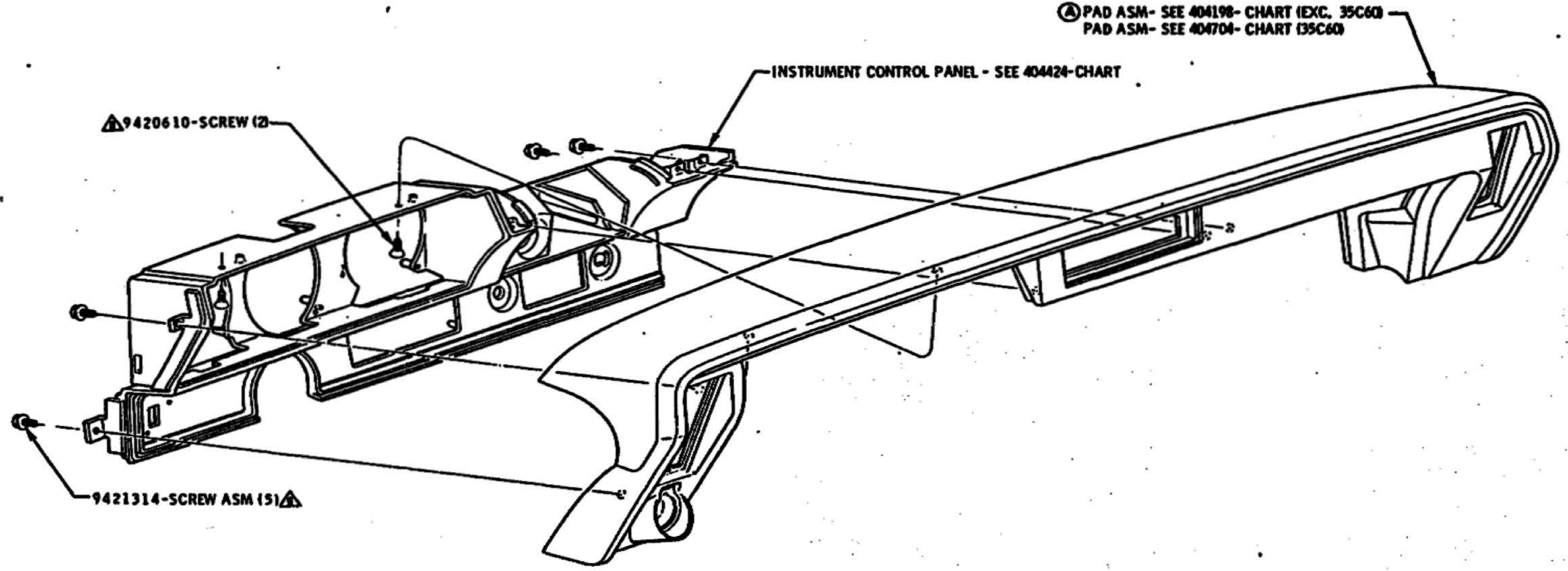


INSTRUMENT PANEL APPLIQUES

APPLIQUE	PART NO.	MODEL USAGE
CONTROL PANEL (EXC. 35U58, 35U63)	404946	
CONTROL PANEL (35U58, 35U63)	404948	(42, 44, 4800) (35BC1)
GLOVE BOX DOOR	404947	

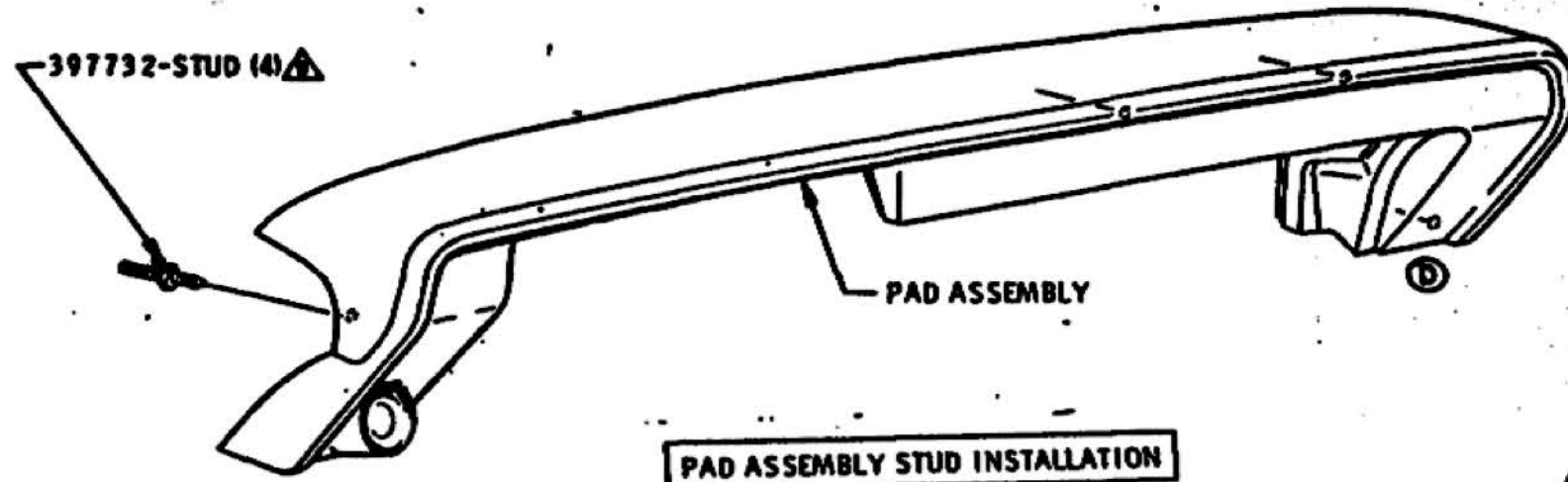
NOTE: APPLIQUES MUST BE APPLIED WITH A UNIFORM PRESSURE OF FIVE POUNDS PER SQUARE INCH MINIMUM FOR AT LEAST TWO SECONDS DURATION TO INSURE ADEQUATE BONDING.

DATE		SYM		REVISION		DR.		CR.		APPR.		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL INC.		PAGE	
8-5-69		F2		MOULDING INSTAL. REV.		EJG		PYS		Taylor		APPLIQUES AND PAD ASSEMBLY MOULDING		1970		REF. 1A28 35BC1		SERIES		PART NO.	
														A		404411		1-3		100	

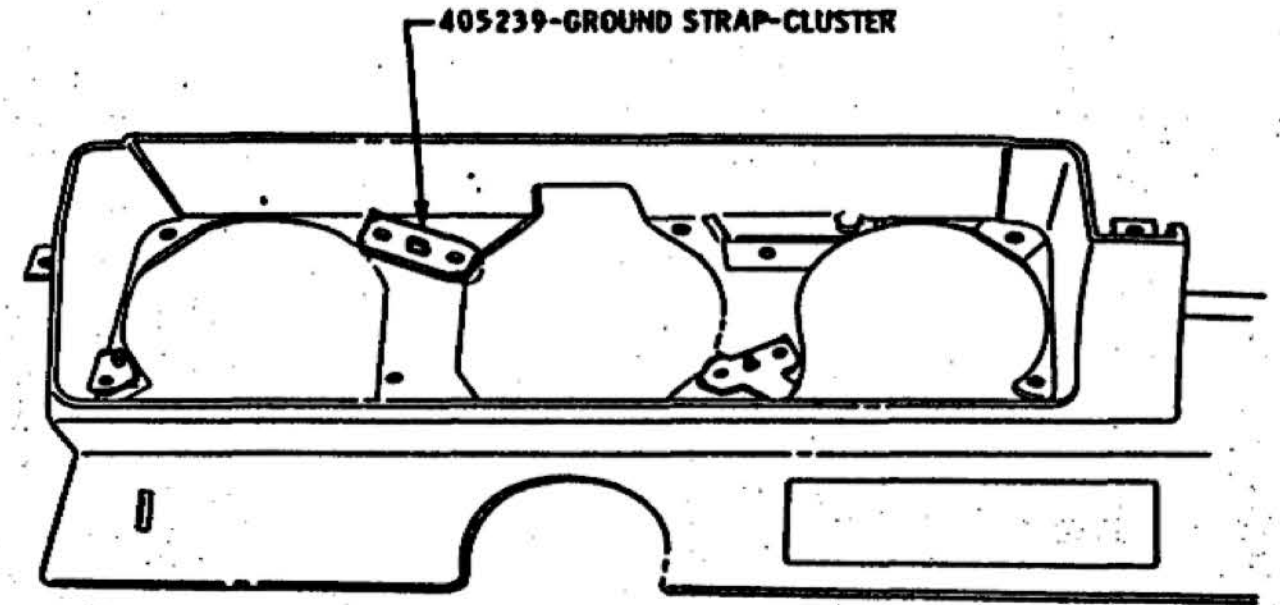


  
 FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

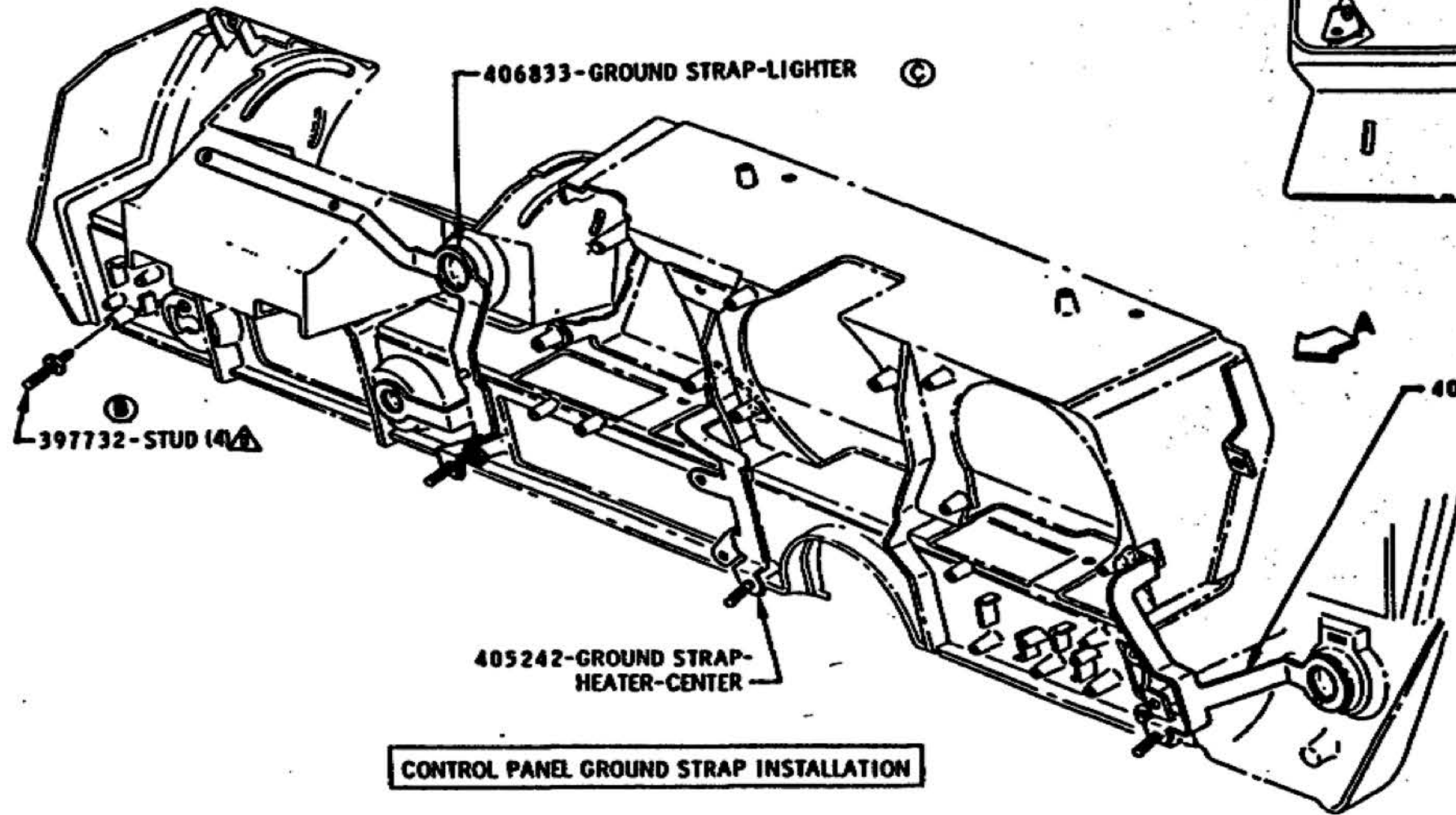
TITLE		CONTROL PANEL TO PAD ASSEMBLY			
DATE	MARCH 17, 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
BY	ROE	REV.	1A2B	SERIES	A
CHECKED	H. A. Lambert	APPR.	15C 57, 160	PART NO.	404411
5-13-69	A	USAGE REVISED			
DATE	BY	REVISION	DR.	CK.	APPR.



PAD ASSEMBLY STUD INSTALLATION



VIEW A



CONTROL PANEL GROUND STRAP INSTALLATION



FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE		SYM	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
6-11-69		D	STUD RELOCATED				GROUND STRAPS AND MOUNTING STUDS	1970		1-3	104
5-21-69		C	WAS 405240-STRAP				DATE MARCH 17, 1969 DR BY ROE				
5-15-69		B	QUANTITY 4 WAS 5				CHECKED <i>[Signature]</i>				
8-15-68		A	REVISED TO DETAIL				APPR. <i>[Signature]</i>	REF. 1A20 12	SERIES A	PART NO.	404411



CHART - INSTRUMENT	
PART NO.	INSTRUMENT
404527 404529 (OPT.)	CLOCK (EXCEPT 35U21)
6492943	TACHOMETER AND CLOCK ASM (35U21)
SEE CHART PAGE 90	INSTRUMENT CLUSTER ASM
6492942	FUEL GAGE AND TELL TALE ASM (EXCEPT 35U21)
6492944	FUEL GAGE AND TELL TALE ASM (35U21)

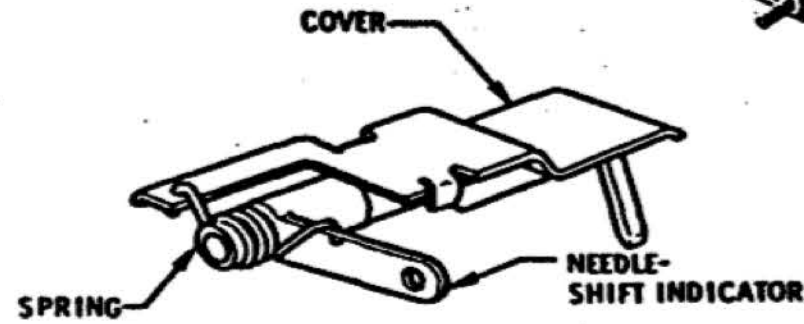
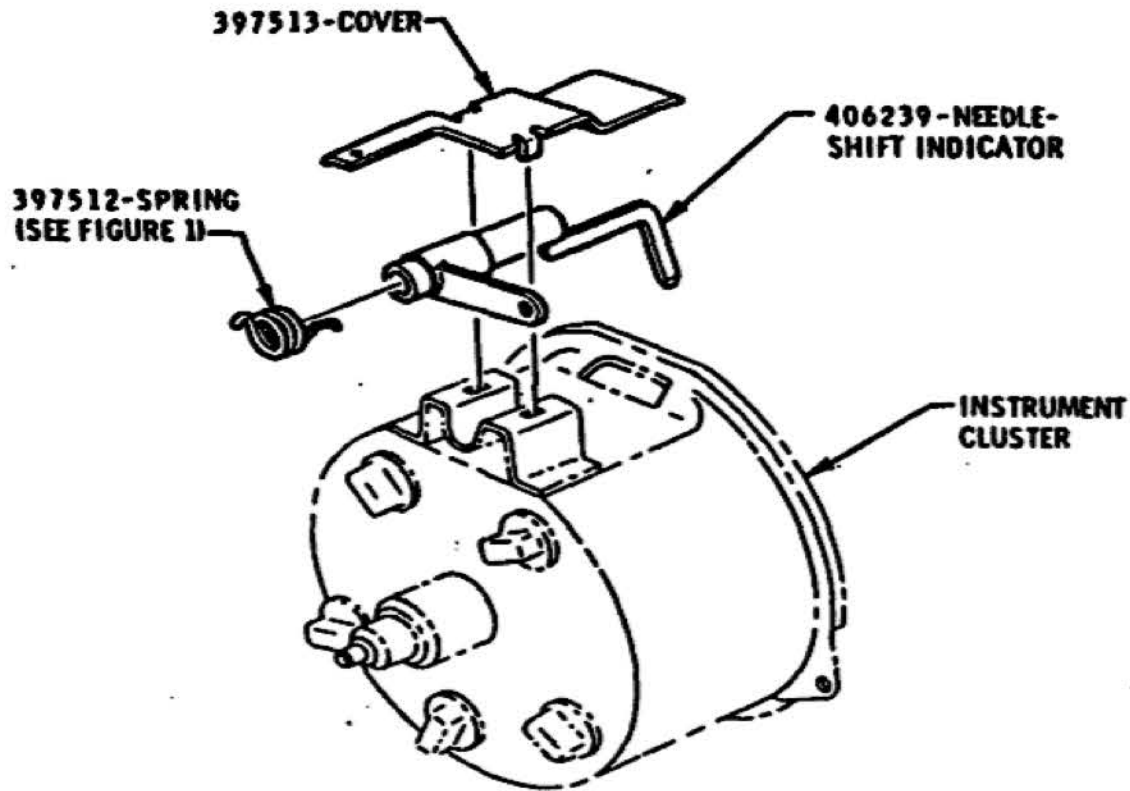
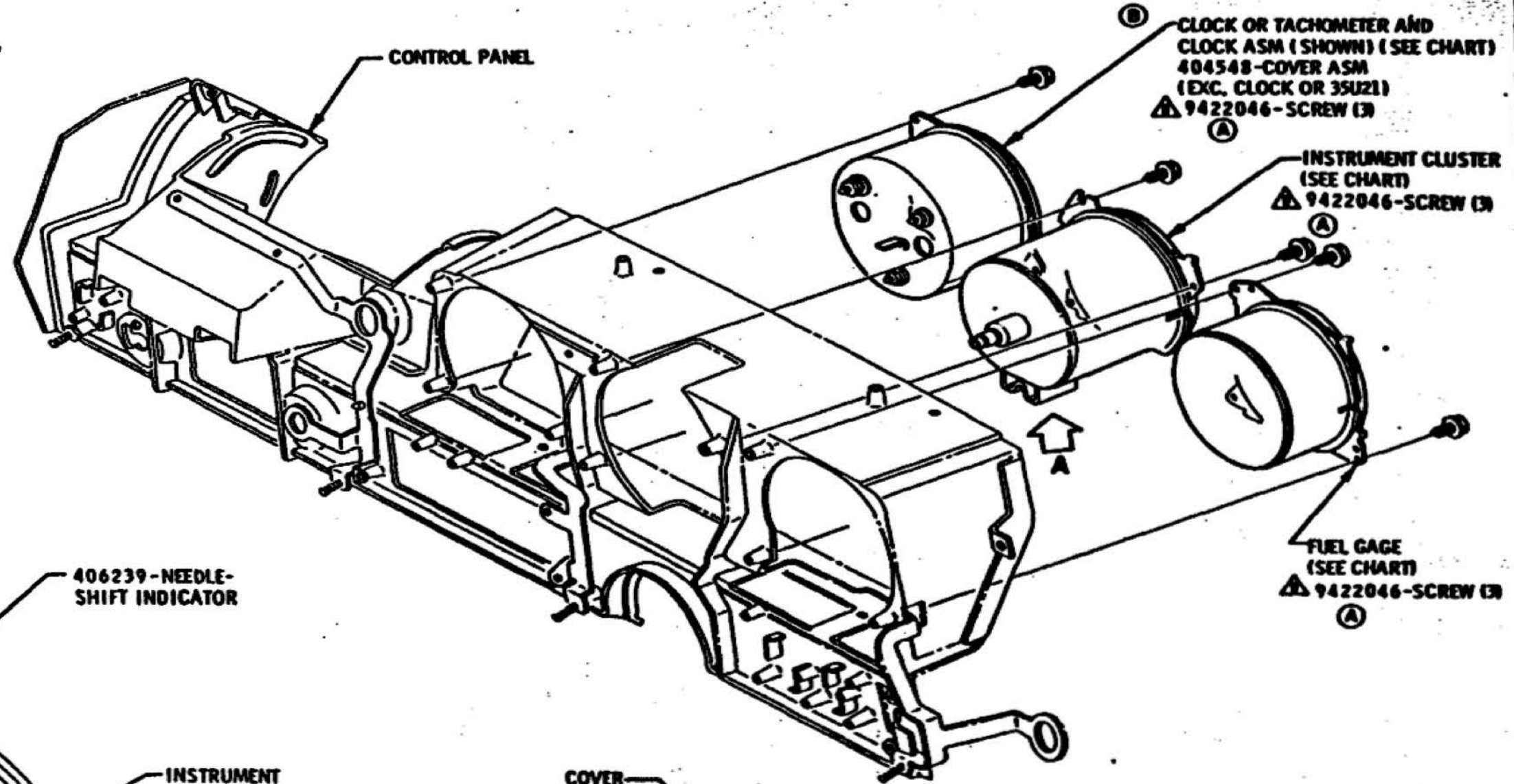


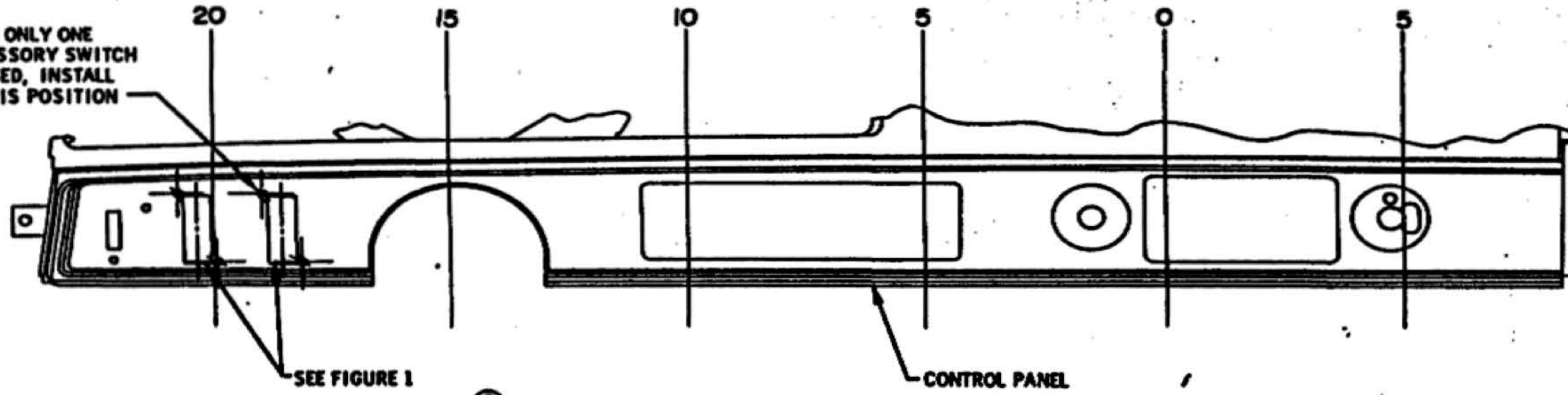
FIGURE 1  
SPRING INSTALLATION

VIEW A  
AUTOMATIC TRANSMISSION SHIFT  
INDICATOR INSTALLATION

▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE				INSTRUMENT CLUSTERS		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL REC. PAGE	
4-14-70	C	404529-OPT. ADDED	EMPT	DATE	MARCH 17, 1969	1970			1-3	106	
7-25-69	B	GROUND WIRE REMOVED	ED	BY	ED J. ROE						
5-20-69	A3	WAS 9419668-SCREW	CP	CHECKED	J. Barnhart						
DATE	SYM	REVISION	DR.	CK.	APPR.	REV. ILL. DATE	REVISED		PART NO.		
					Taylor	JUL 15 1970	A		404411		

Ⓔ WHEN ONLY ONE ACCESSORY SWITCH IS USED, INSTALL IN THIS POSITION



INSTRUMENT PANEL FRONT VIEW

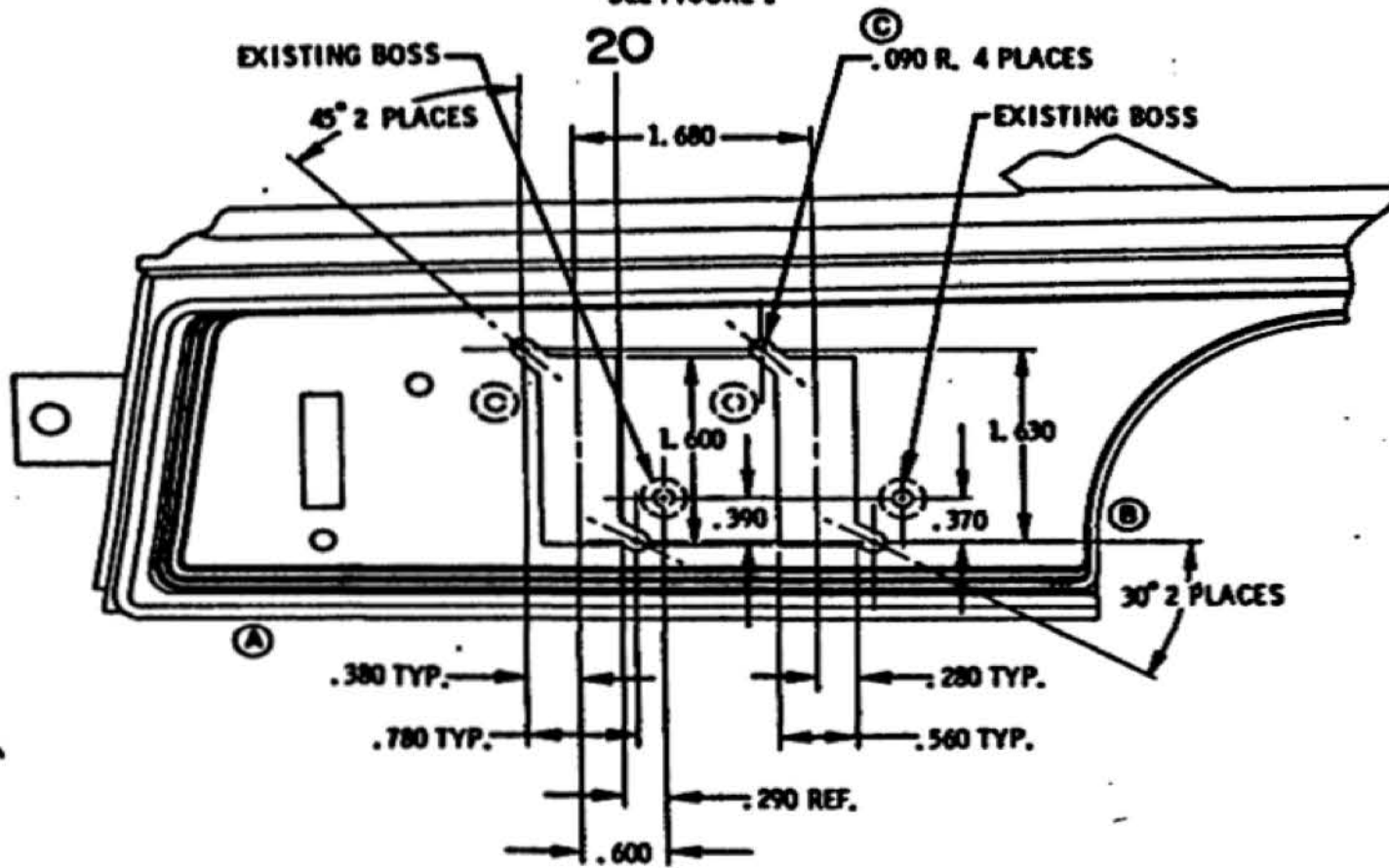


FIGURE 1

ACCESSORY SWITCH LOCATIONS FOR CRUISE CONTROL, POWER TOP, OR POWER REAR WINDOW

DATE	SYM	REVISION	DR.	CHK.	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
7-29-68	E	SWITCH LOCATION REV	1/2	BA		INSTRUMENT PANEL PIERCING				
7-29-68	D	VIEW REMOVED	1/2	BA		DATE MARCH 13, 1969	1970		1-3	108
4-22-69	C	WAS .180 DIA. HOLE	1/2	BA		DR. BY D. J. SCOTT				
4-22-69	B	OPENING REVISED	1/2	BA		CHECKED P. Barnhart				
4-22-69	A	HOLE RELOCATED	1/2	BA		APPR. Taylor	BC-43429		A	404411

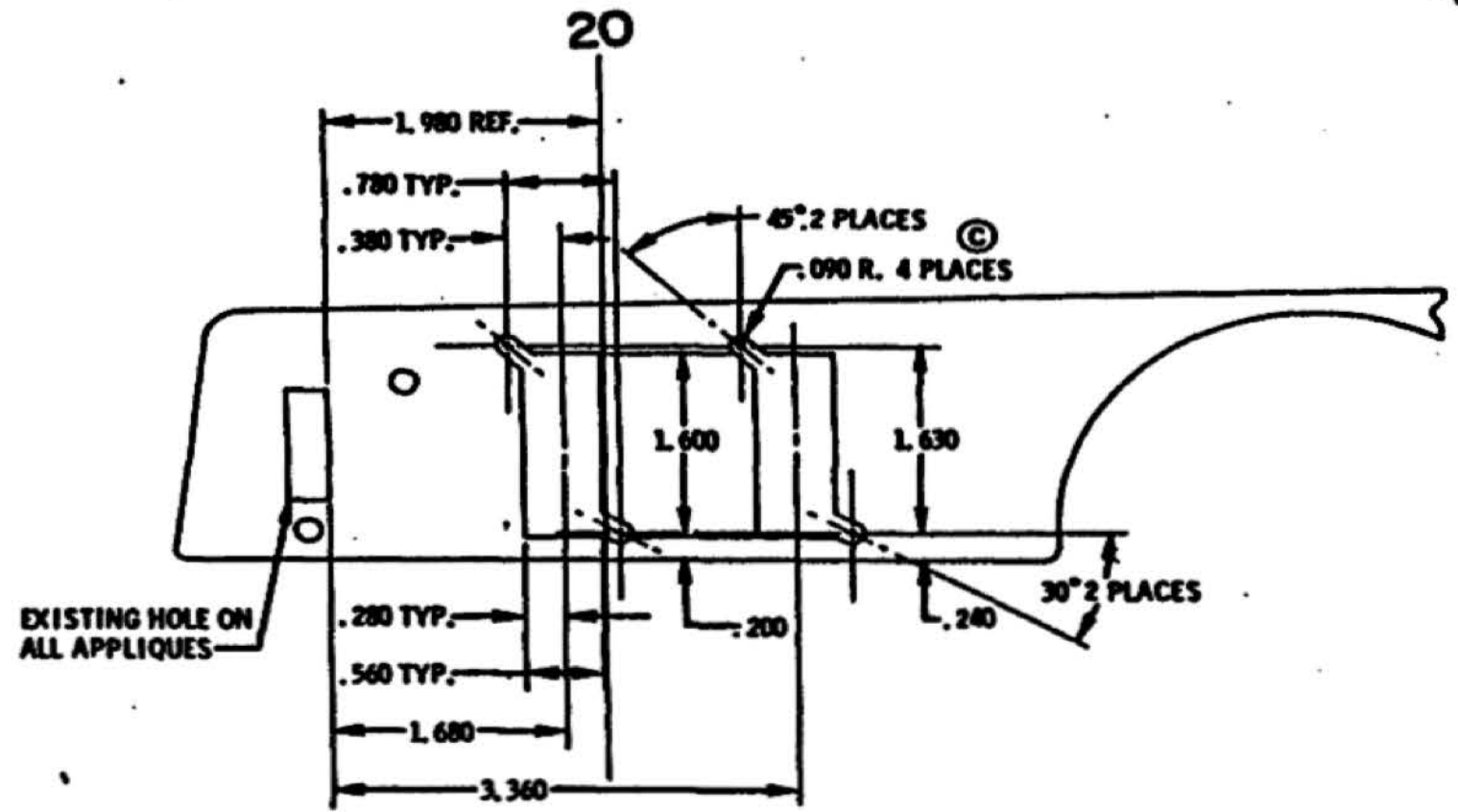
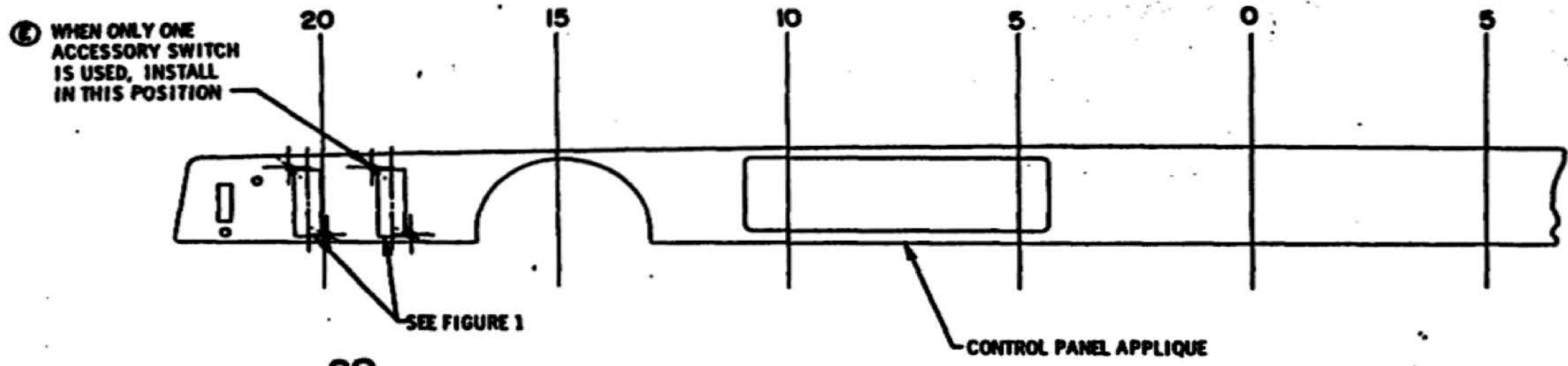
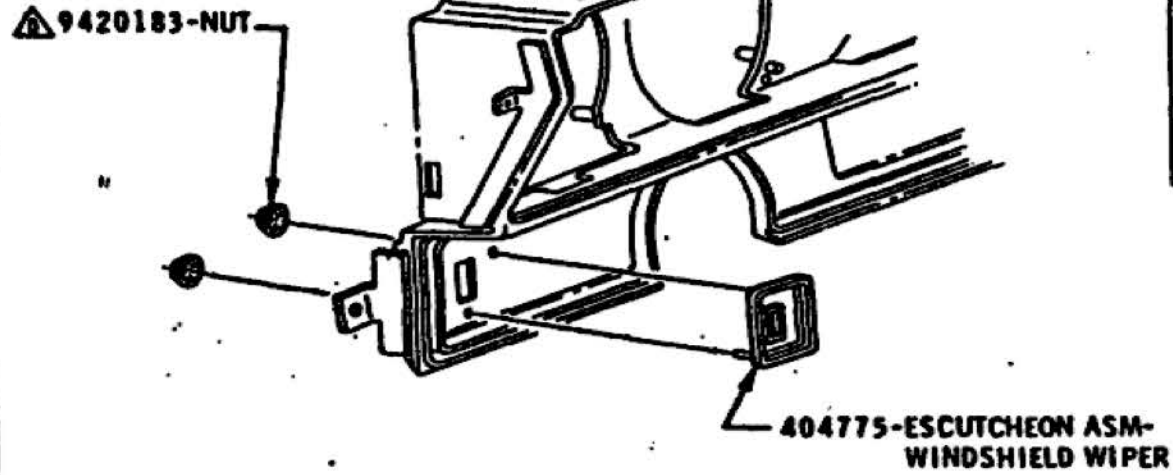


FIGURE 1

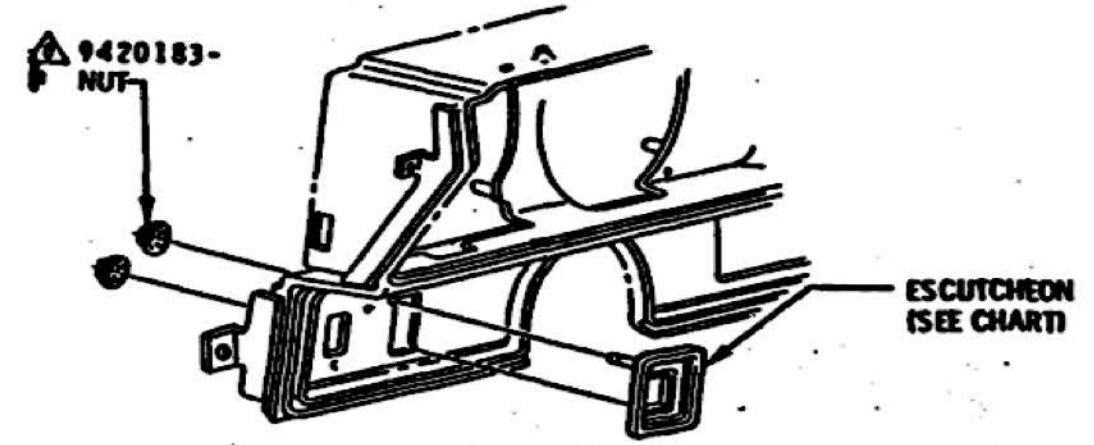
ACCESSORY SWITCH LOCATIONS  
FOR CRUISE CONTROL, POWER TOP, OR  
POWER REAR WINDOW

DATE	SYM	REVISION	DR.	CL.	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
7-29-69	E	SWITCH LOCATION REV	UR	11		APPLIQUE PIERCING	1970		1-3	109
5-22-69	D	VIEW REMOVED	SP							
4-22-69	C	NR3 .180 DIA HOLES	SP							
4-22-69	B	OPENING REVISED	SP							
4-22-69	A	HOLE RELOCATED	SP							
							BC-43428	A		404411

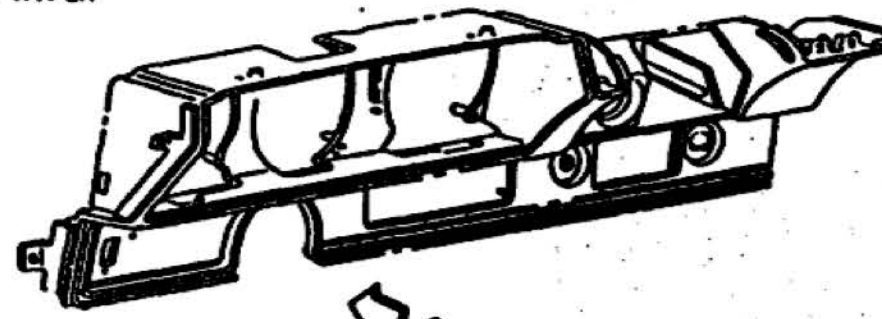
SWITCH	ESCUTCHEON ASM	USAGE
405385	405535	POWER TOP (12L)
	405536	REAR WINDOW (35A33)
405386	405537	CRUISE CONTROL (35K30)



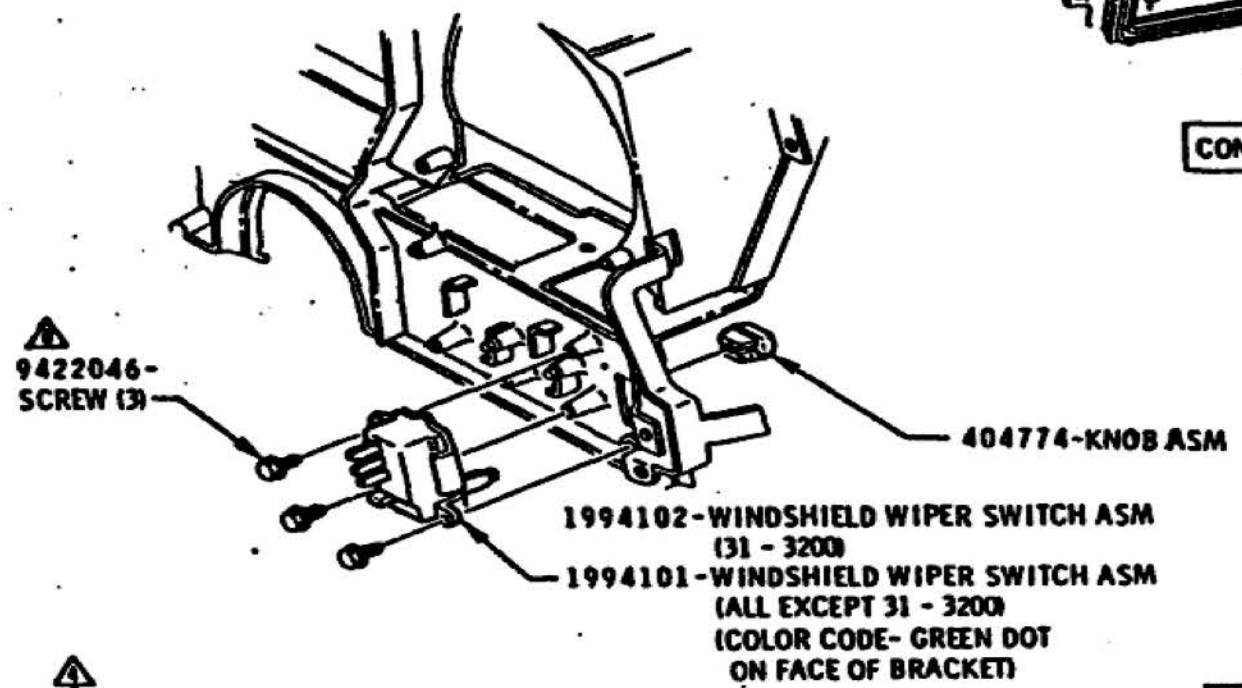
VIEW A  
WINDSHIELD WIPER SWITCH ESCUTCHEON



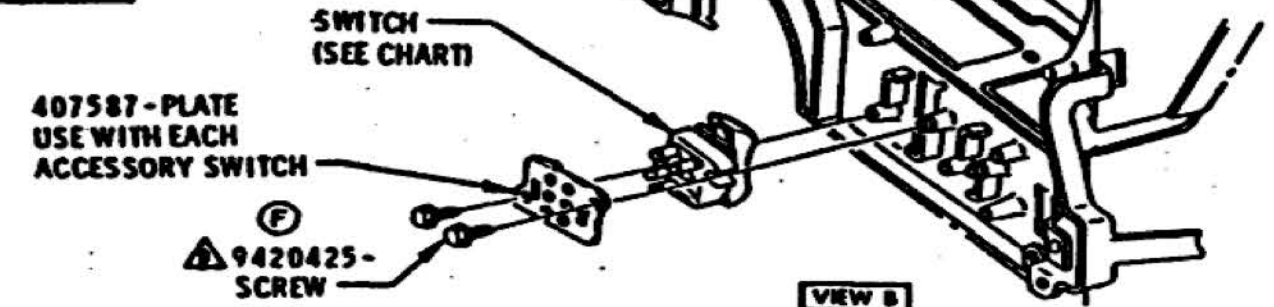
VIEW A  
ACCESSORY SWITCH ESCUTCHEON TYPICAL INSTALLATION



CONTROL PANEL ASSEMBLY



VIEW B  
WINDSHIELD WIPER SWITCH INSTALLATION

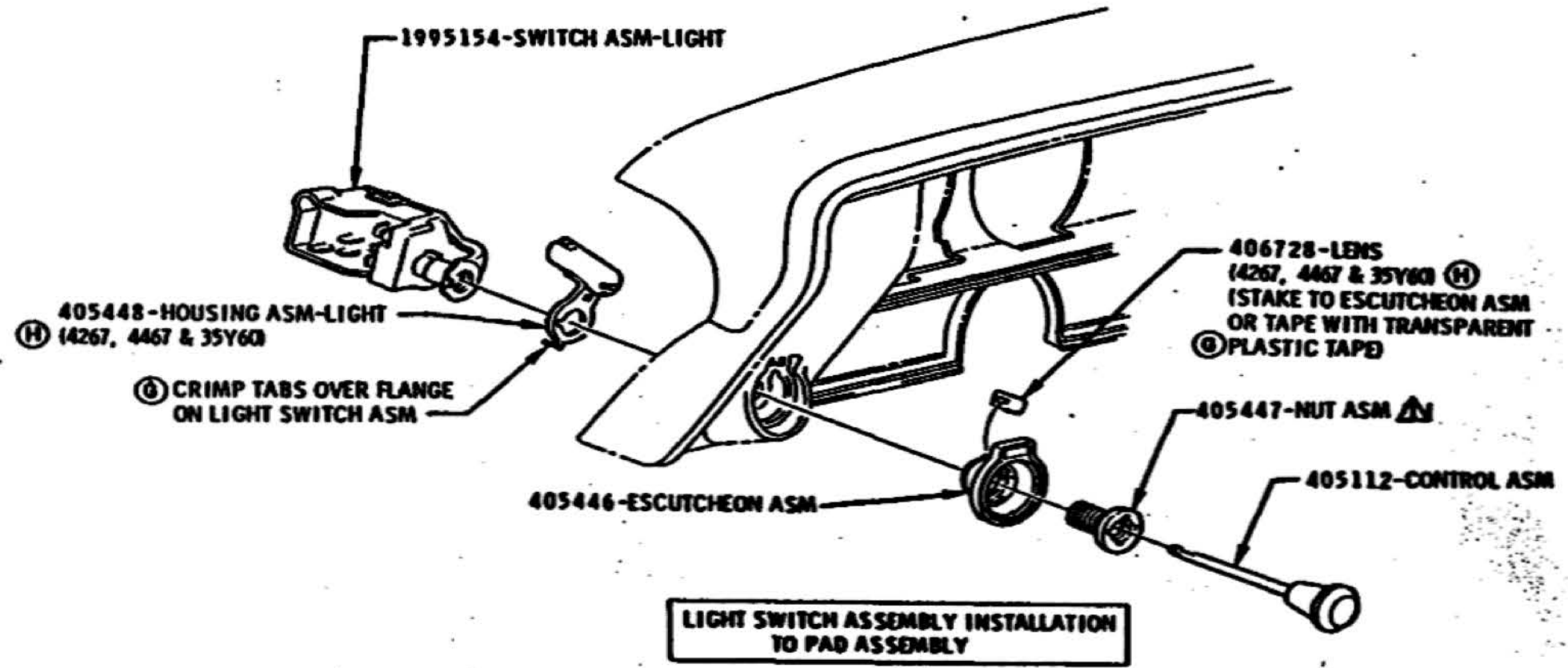
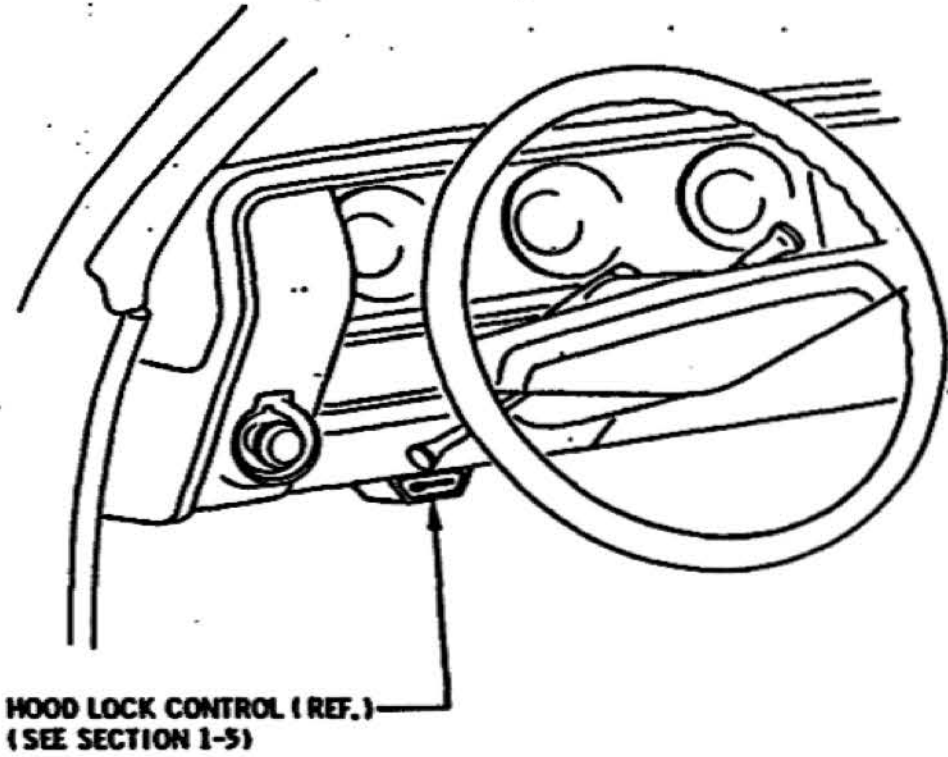


VIEW B  
ACCESSORY SWITCH TYPICAL INSTALLATION

NOTE: FOR CONTROL PANEL AND APPLIQUE PIERCING AND SWITCH LOCATIONS, SEE PAGES 108 & 109.

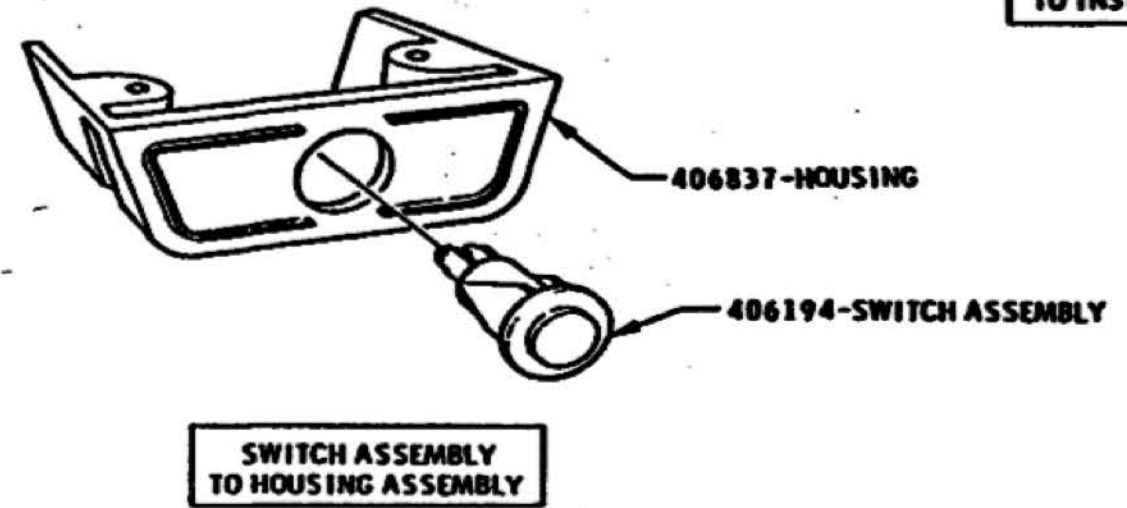
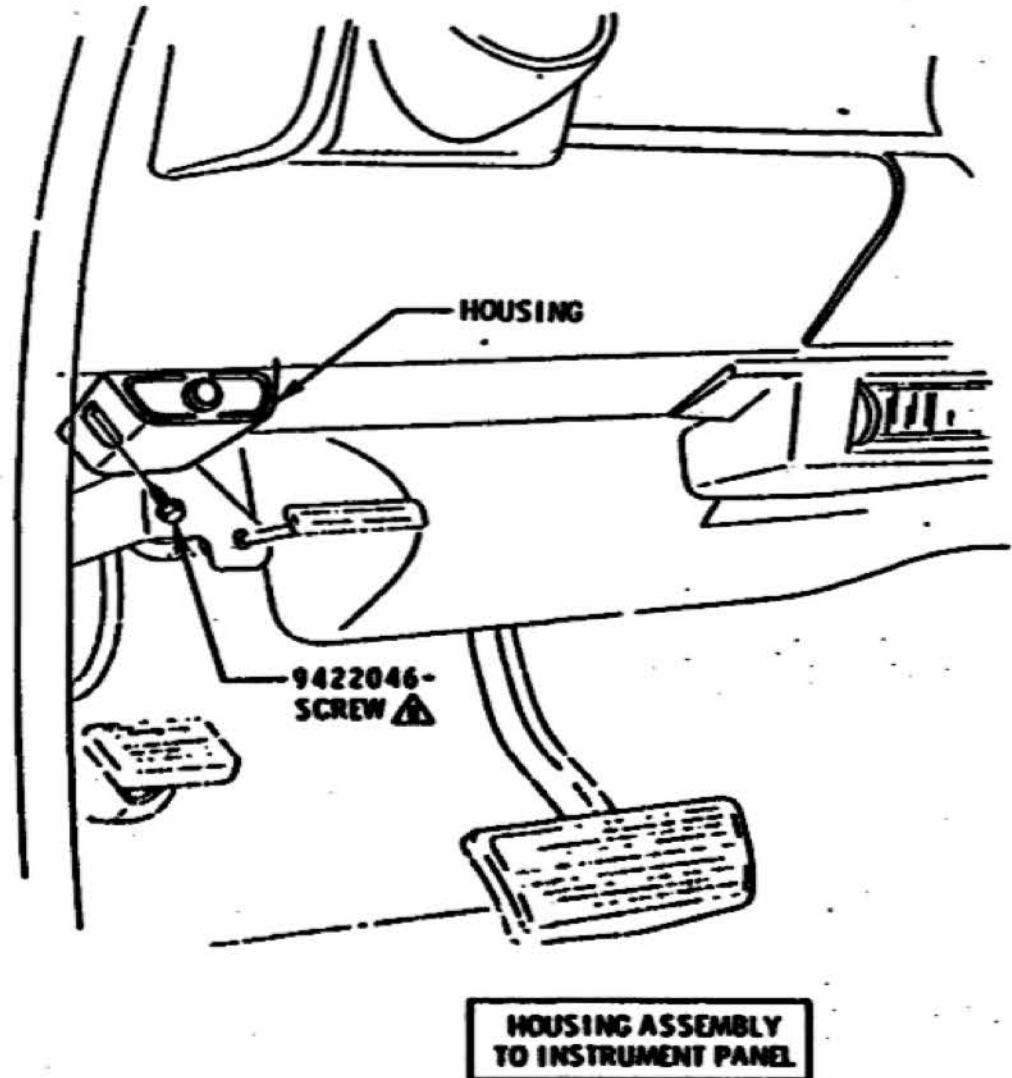
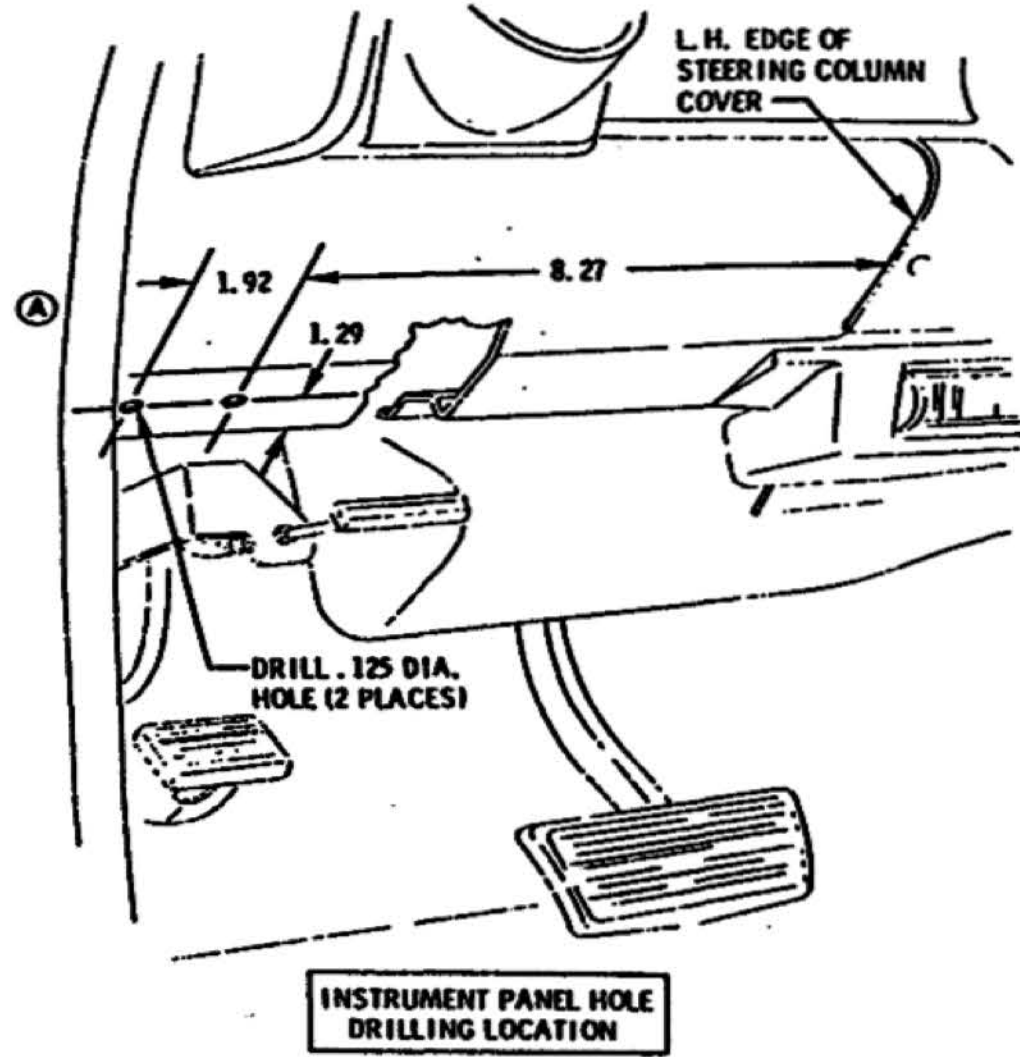
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		BY		TITLE		FIRST USED		MANUAL SEC.		PAGE	
1-10-70	F	WAS	9422207	REVISION	CONTROL PANEL SWITCHES	1970	1970	1-3	110		
										PART NO. 404411	



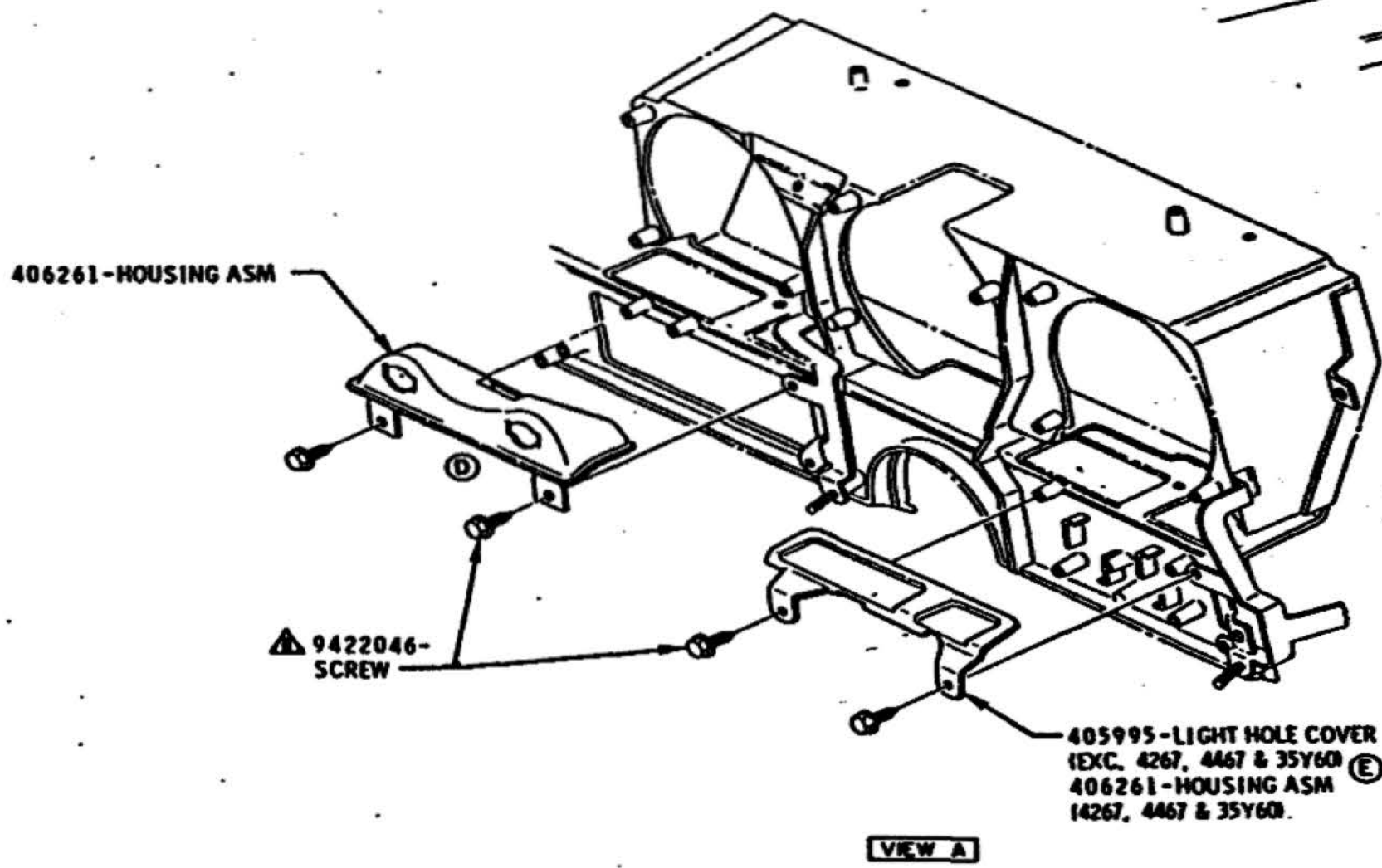
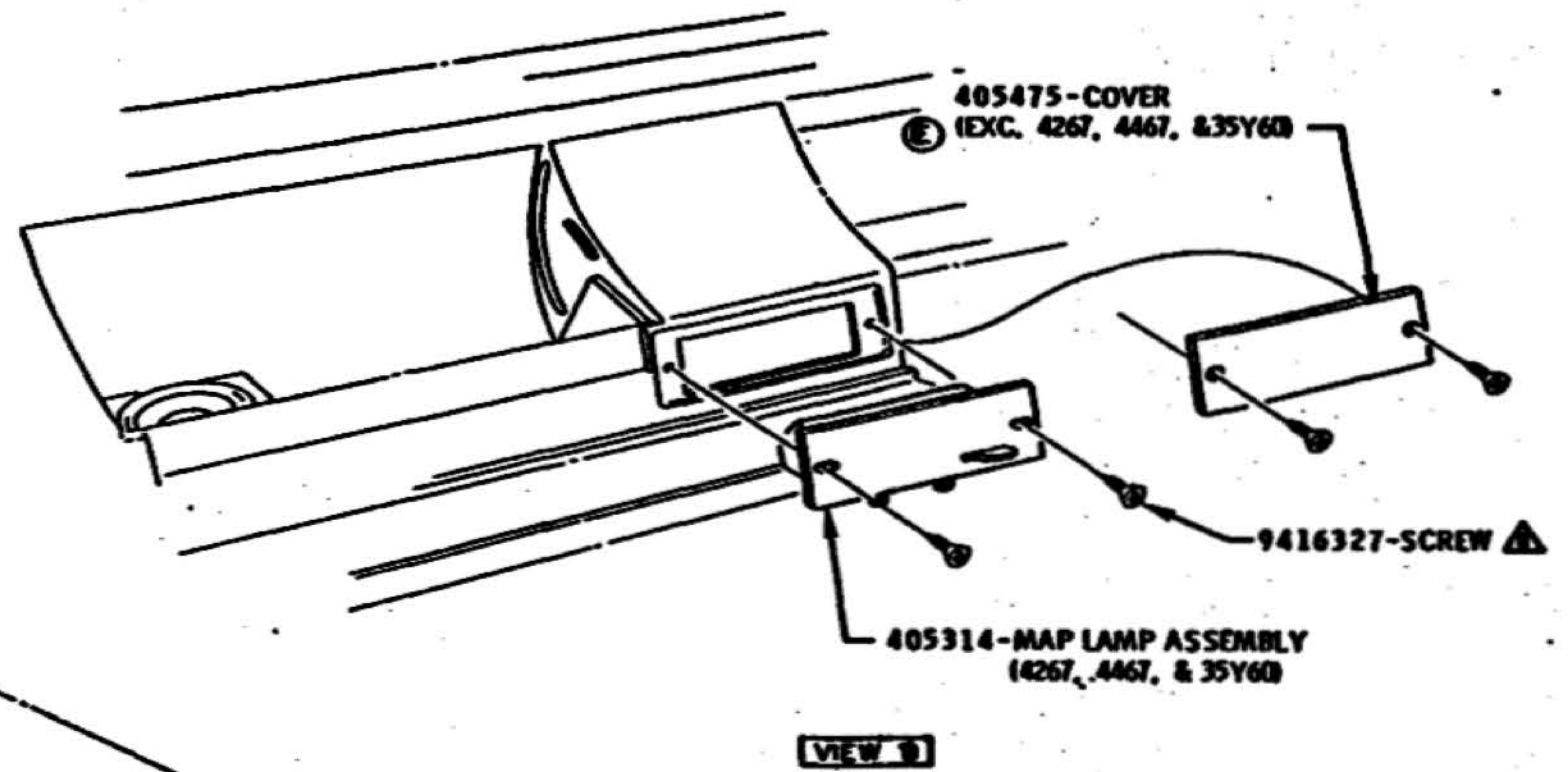
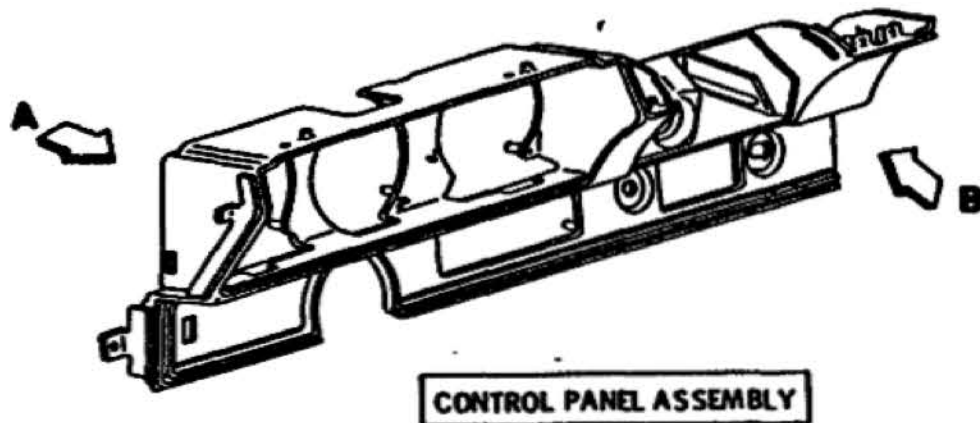
▲  
▲  
▲  
48 - 72 LB. IN.  
FULLY DRIVER, SEATED  
AND NOT STRIPPED

REVISION				TITLE				CONTROL PANEL SWITCHES	
0-20-69	H	USAGE REVISED		DATE	MARCH 20, 1969	FIRST USED	1970	OLDSMOBILE PRODUCT	MANUAL SEC.
10-13-69	G	NOTE ADDED		DR BY	ED J. ROE			INFORMATION MANUAL	1-3
9-17-69	F	REVISED TO DETAIL		ENGINEER	M. J. Lambert				112
DATE	SYM	REVISION		DR. CL.	APPR.				
						35Y60		A	404411



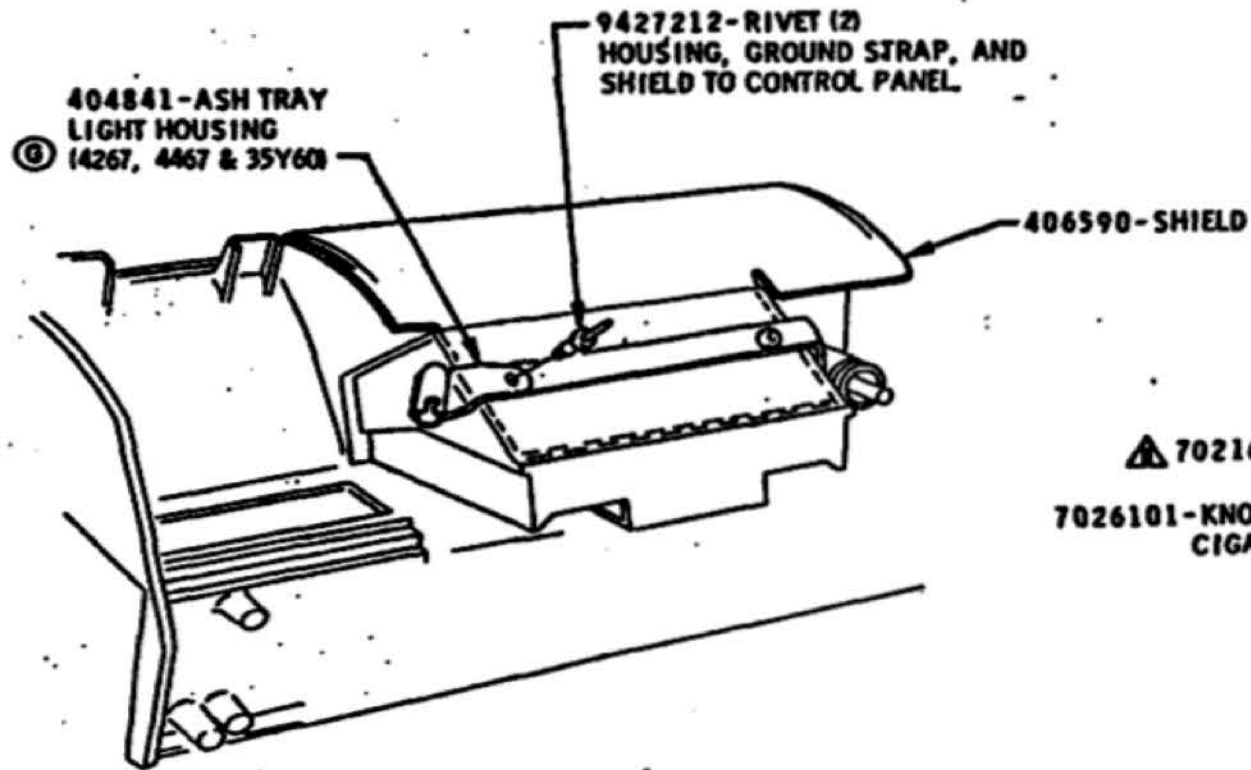
▲  
▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE		NIGHT WATCH SWITCH		
DATE	JUNE 27, 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL
DR BY	ED J ROE	MANUAL SEC.	1-3	PAGE 113
CHECKED	MP	REV.	35781	REVISED
9/18/69	A	WORKING LOCATED	APP.	REVISED

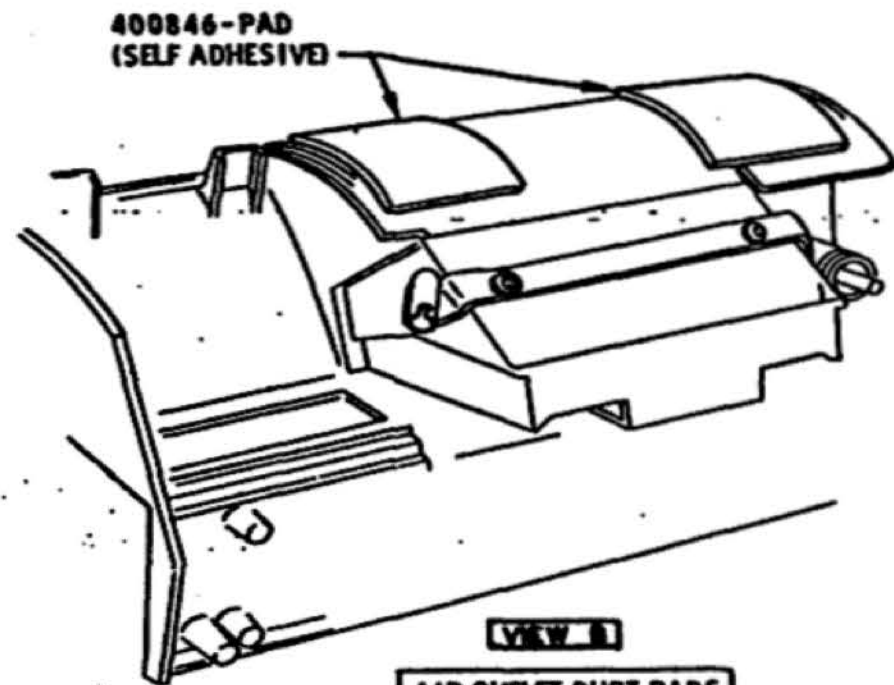


▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

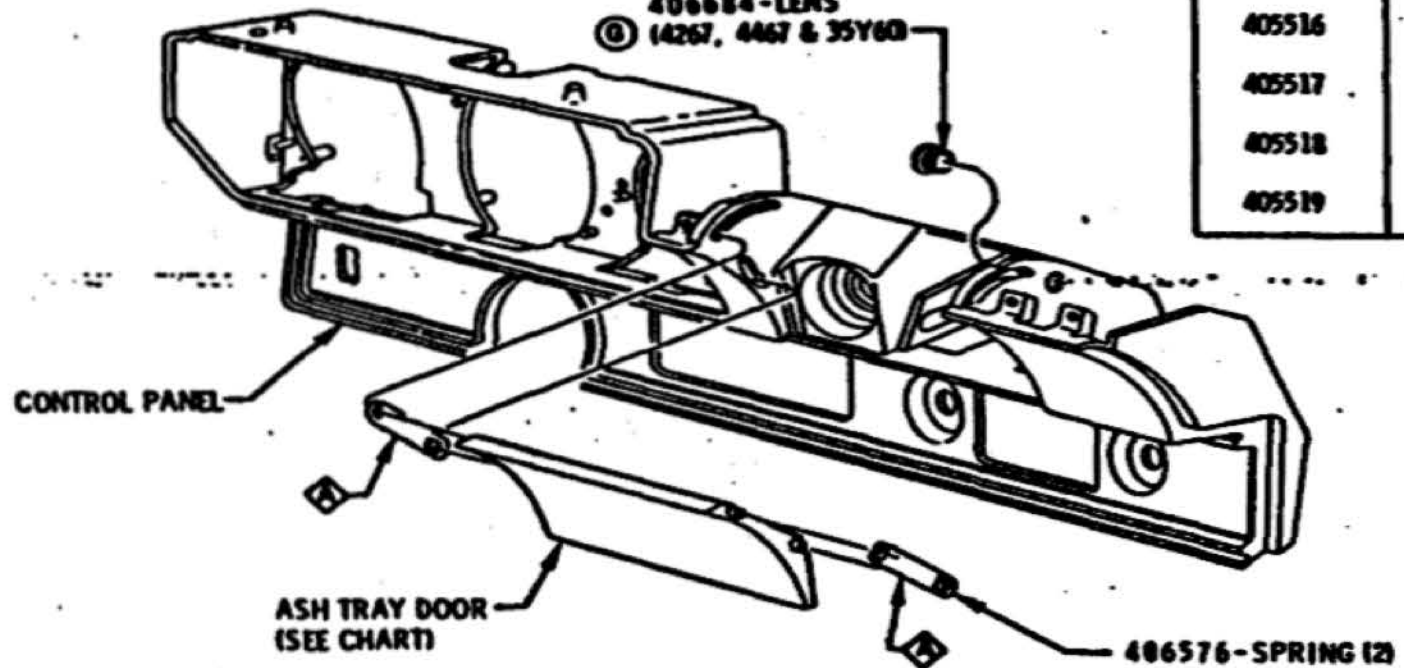
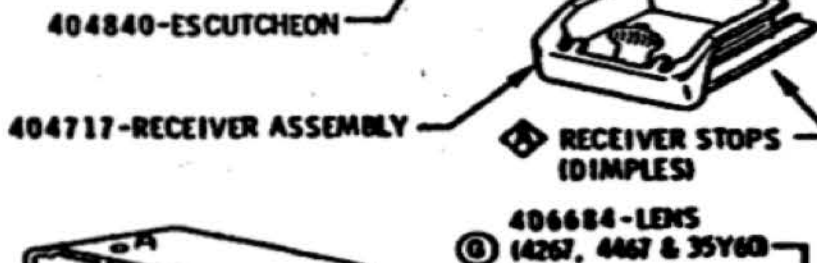
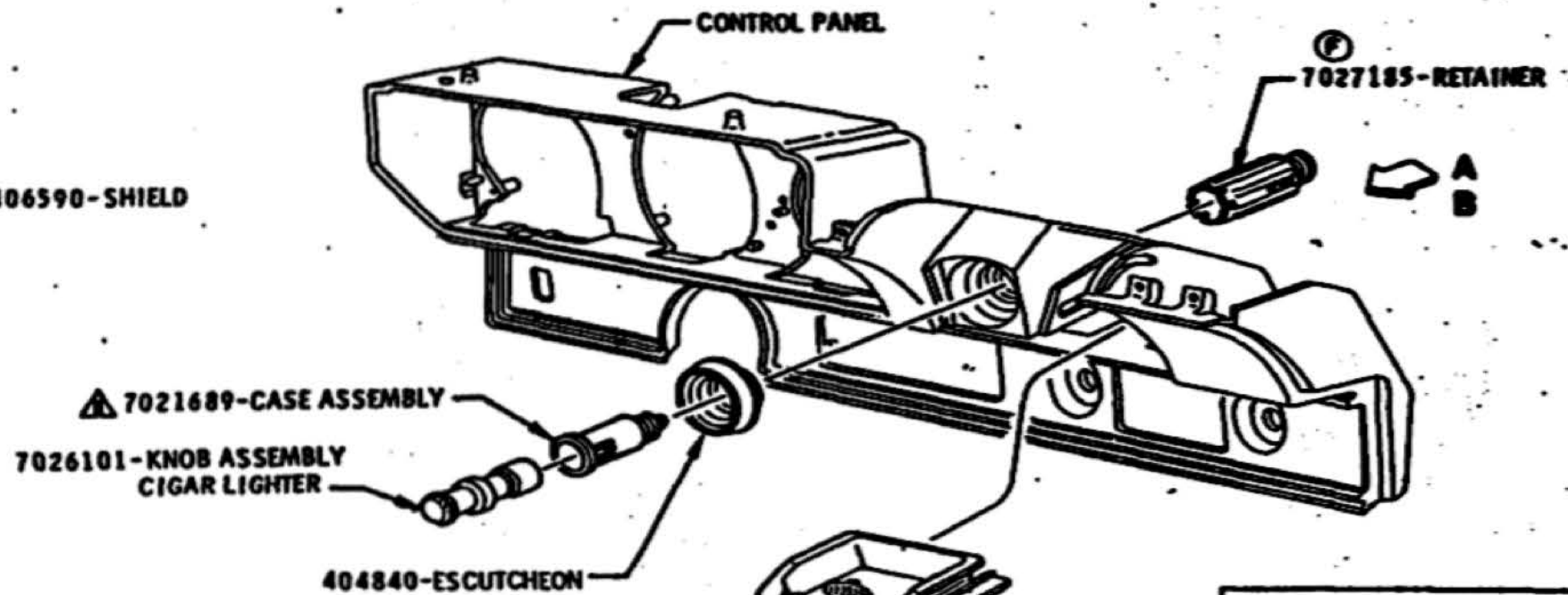
DATE	SYM	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	MANUAL NO.	PAGE
10-28-69	E <sub>1</sub>	USAGE REVISED	DR.	CL.		INSTRUMENT PANEL LIGHTING	1970	1-3	114
10-28-69	D	9985025-TAPE REMOVED	DR.	CL.	DATE MARCH 18, 1969				
6-18-69	C <sub>1</sub>	USAGE REVISED	DR.	CL.	DR BY ED ROE				
5-21-69	B <sub>1</sub>	REVISED TO DETAIL	DR.	CL.	CHECKED <i>M. B. Bant</i>				
5-21-69	A	USAGE REVISED	DR.	CL.	APPR. <i>L. S. S.</i>				
						REF. 12L	REVISION		
						35 Y60	<b>A</b>		<b>404411</b>



VIEW A



VIEW B



ASH TRAY DOOR	
PART NO.	COLOR
405515	BLACK
405516	DARK GREEN
405517	DARK BLUE
405518	DARK GOLD
405519	DARK BROWN

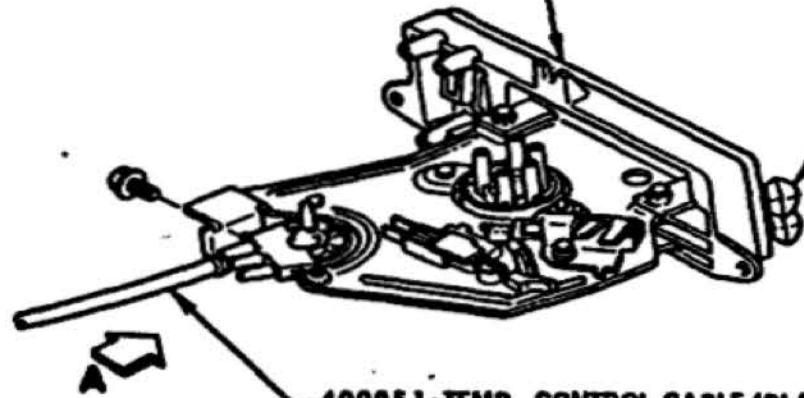
LUBRICATE WITH 9985007 LUBRICANT AS REQUIRED

▲▲▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE				ASH TRAY			
DATE		MARCH 30, 1969		FIRST USED		1970	
OR BY		ROE		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
CHECKED		M. J. Barnhart		REV. 1A2E		SERIES	
APPR.		Tom Low		35Y60		PART NO.	
DATE	BY	REVISION	DR.	CR.	APPR.	A	
						PAGE	
						1-3 116	
						404411	



7311883-CONTROL ASSEMBLY-A/C

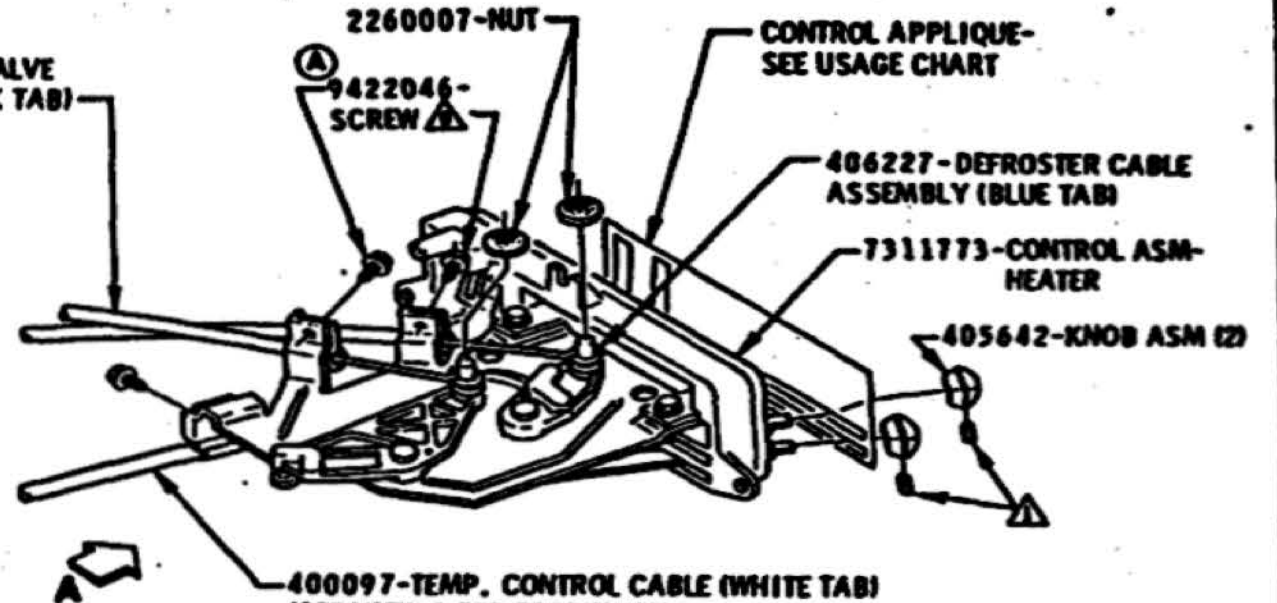


KNOB ASSEMBLY (2)  
SEE HEATER CONTROL  
FOR TYPICAL INSTALLATION

400951-TEMP. CONTROL CABLE (BLACK TAB)  
(SEE VIEW A FOR FASTENING)

**AIR CONDITIONING CONTROL**

400096-HEATER AIR VALVE  
CABLE ASSEMBLY (PINK TAB)



2260007-NUT

9422046-SCREW

CONTROL APPLIQUE-  
SEE USAGE CHART

406227-DEFROSTER CABLE  
ASSEMBLY (BLUE TAB)

7311773-CONTROL ASM-  
HEATER

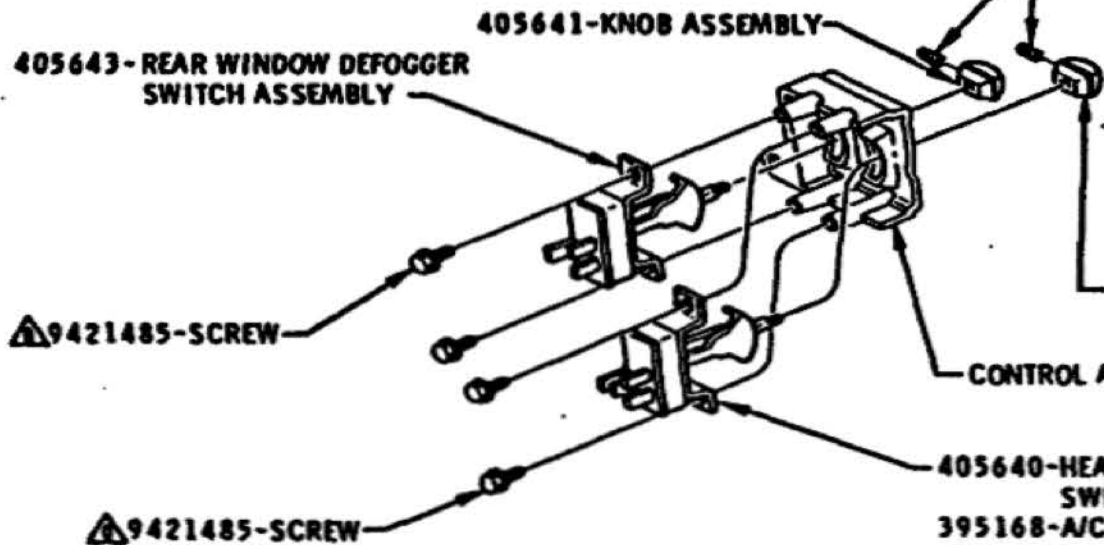
405642-KNOB ASM (2)

400097-TEMP. CONTROL CABLE (WHITE TAB)  
(SEE VIEW A FOR FASTENING)

**HEATER CONTROL**

CHART - HEATER OR A/C CONTROL APPLIQUE

PART NO.	USAGE
405636	HEATER ONLY
405635	HEATER & REAR WINDOW DEFOGGER
405638	A/C & REAR WINDOW DEFOGGER
405639	A/C ONLY



405643-REAR WINDOW DEFOGGER  
SWITCH ASSEMBLY

405641-KNOB ASSEMBLY

9421485-SCREW

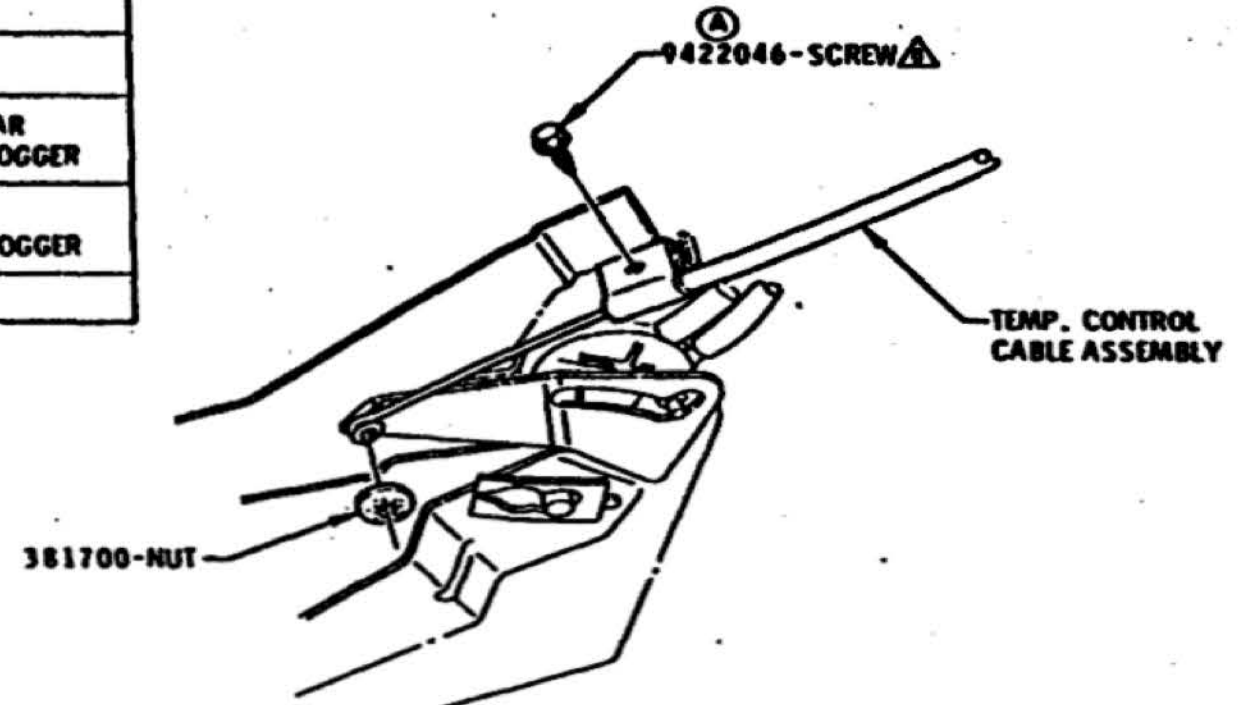
405641-KNOB ASSEMBLY

CONTROL ASSEMBLY

405640-HEATER FAN CONTROL  
SWITCH ASSEMBLY  
395168-A/C SWITCH ASSEMBLY

9421485-SCREW

**SWITCH TO CONTROL INSTALLATION**



9422046-SCREW

TEMP. CONTROL  
CABLE ASSEMBLY

381700-NUT

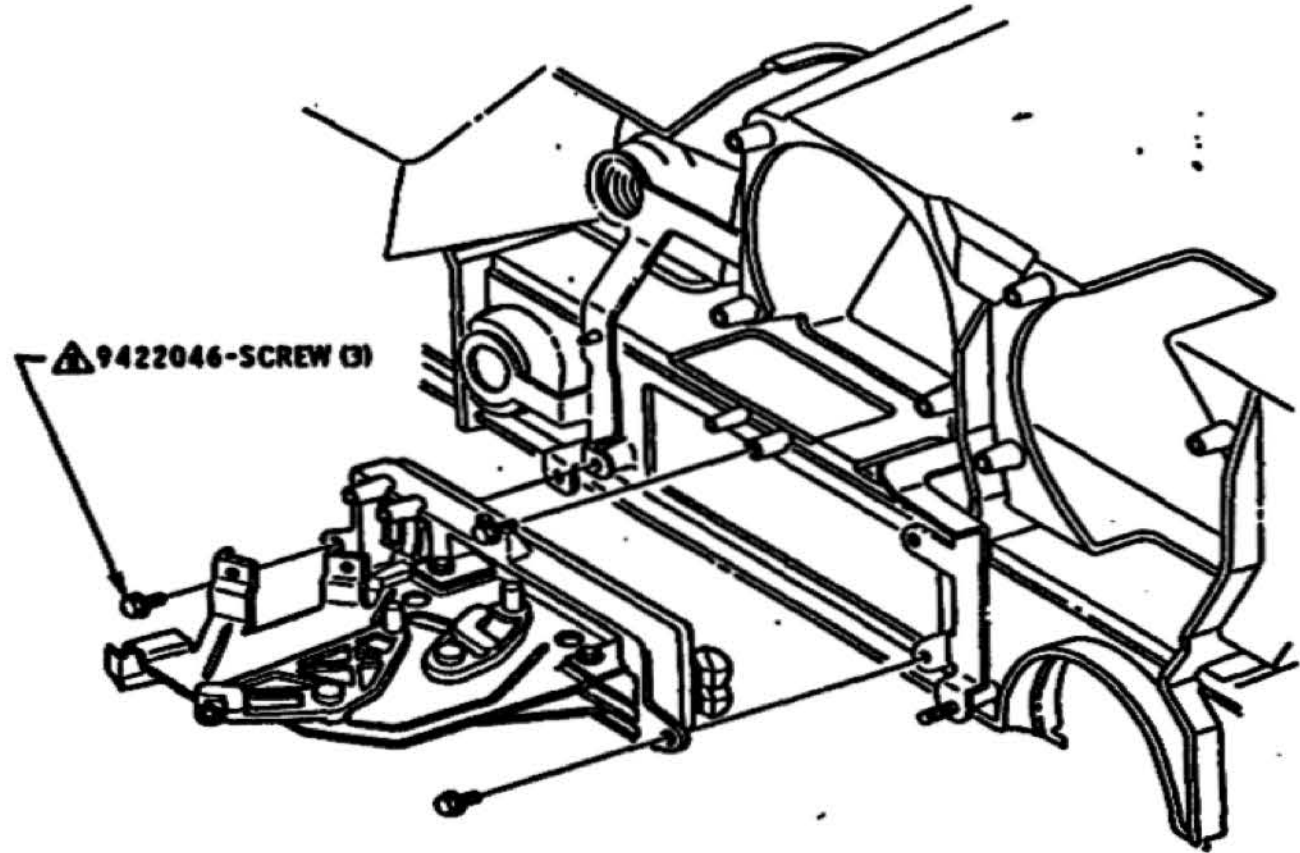
**VIEW A**

(A/C CONTROL SHOWN -  
HEATER CONTROL SIMILAR)

▲  
▲  
▲  
6 - 8 LB. IN. (B)  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE				HEATER, A/C CONTROLS			
DATE	BY	CHKD	APPD	DATE	BY	CHKD	APPD
2-25-70	B	WAS	V-10 LB. IN	MARCH 19, 1969	CVET	MAN	
9-17-69	A2	WAS	9421485 - SCREW				
DATE	SYM	REVISION	DR. CK.	DATE	BY	CHKD	APPD.

FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	1-3	PAGE	118
NO. 1A2C	35C50	35C60	SERIES	A	PART NO.	404411

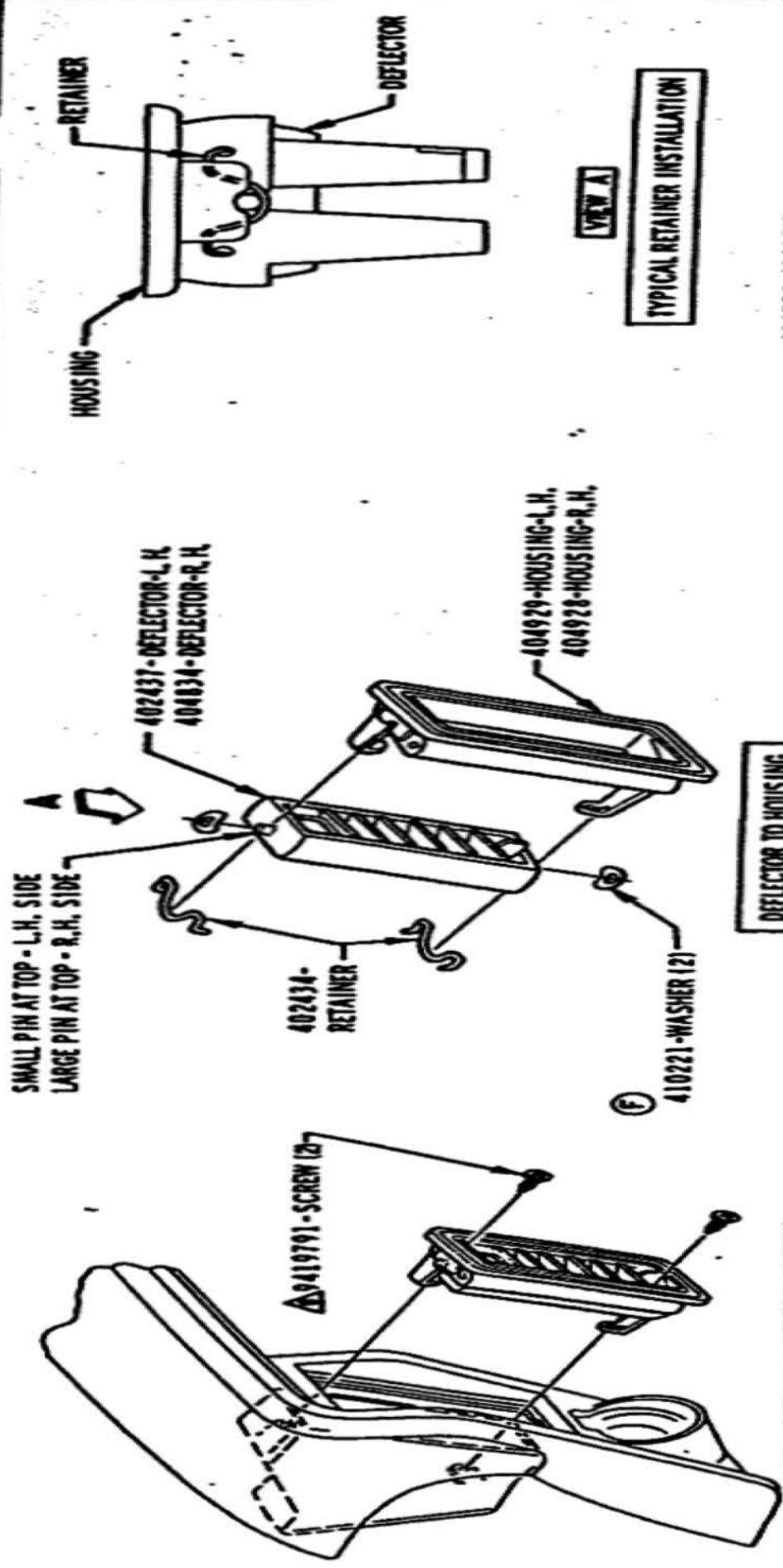


TYPICAL CONTROL  
 INSTALLATION

(A)

▲  
 ▲  
 ▲  
 ▲  
 ▲  
 FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

				TITLE		HEATER, A/C CONTROL			
				DATE		MARCH 20, 1969			
				DR. BY		CUST. MEX. 410		YEAR USED	
						1970		OLDSMOBILE PRODUCT	
				CHECKED BY		T. Barnhart		INFORMATION MANUAL	
				APPV.		T. Barnhart		MANUAL SEC. FILE	
				DR. CK.				1-3 120	
725 19	A	VIEW REMOVED							
DATE	SYM	REVISION	DR.	CK.	APPV.	REV. 1A2C 35C60 97C60 98C60	DESIGN	A	PART NO.
									404411

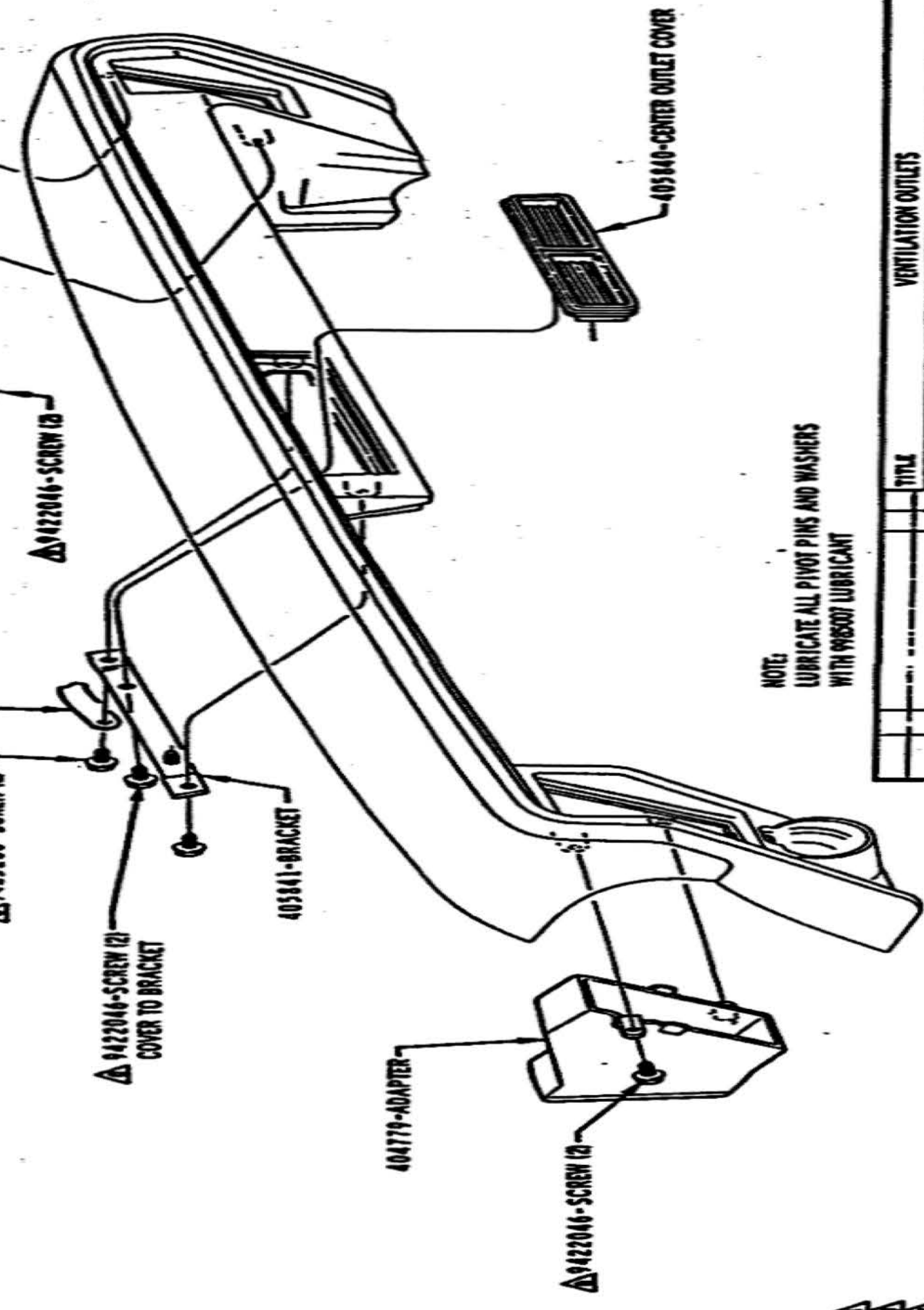


DEFLECTOR TO HOUSING  
 TYPICAL INSTALLATION  
 (L.H. SHOWN, R.H. SIMILAR)

OUTLET ASSEMBLY TO ADAPTER  
 TYPICAL INSTALLATION  
 (L.H. SHOWN, R.H. SIMILAR)

TYPICAL RETAINER INSTALLATION  
 VIEW A

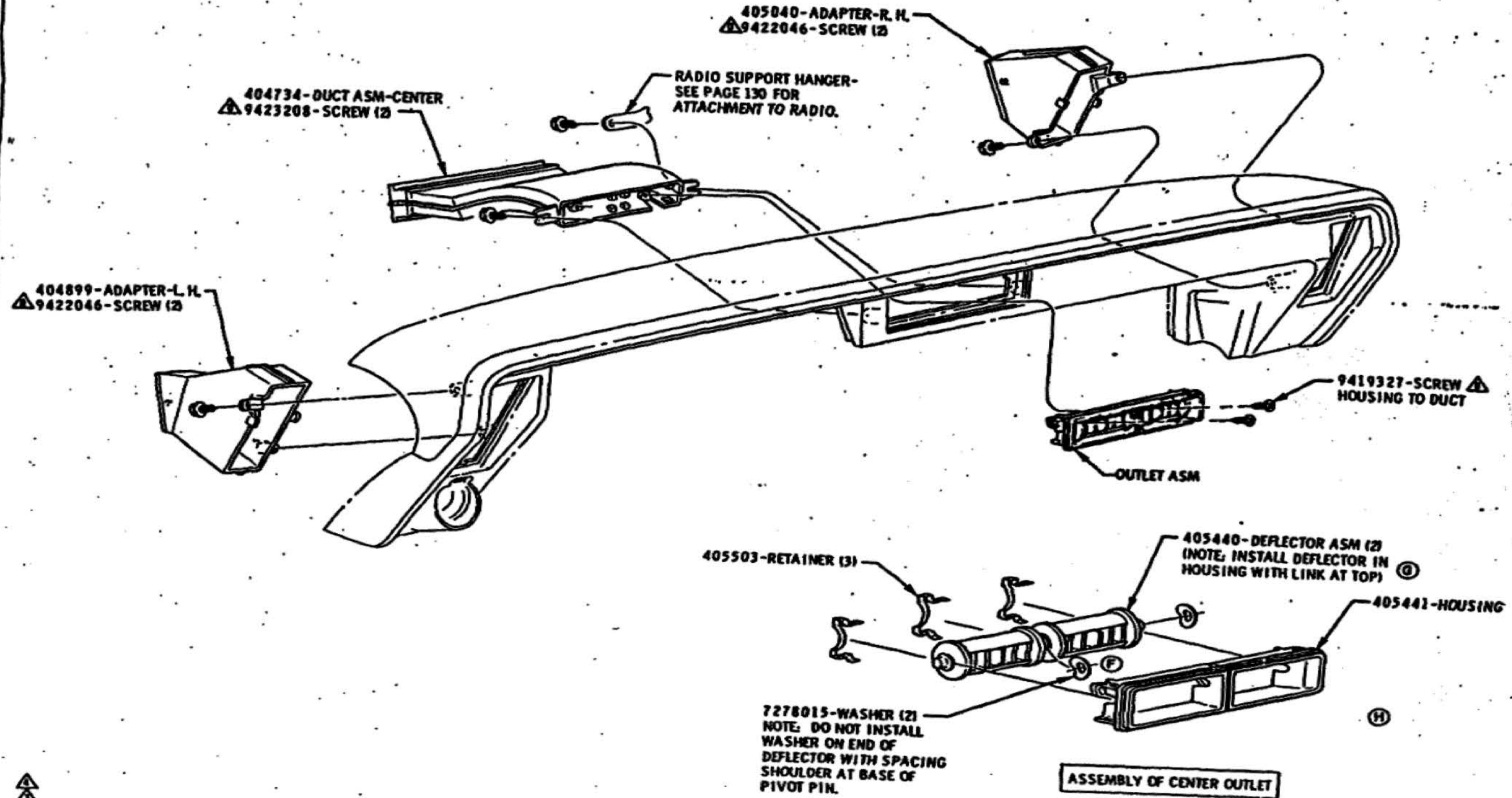
RADIO SUPPORT HANGER -  
 SEE PAGE 130 FOR  
 ATTACHMENT TO RADIO.



NOTE:  
 LUBRICATE ALL PIVOT PINS AND WASHERS  
 WITH PRESCOT LUBRICANT

▲▲▲▲▲  
 FULLY MAINT. SALES  
 AND NOT STRIPPED

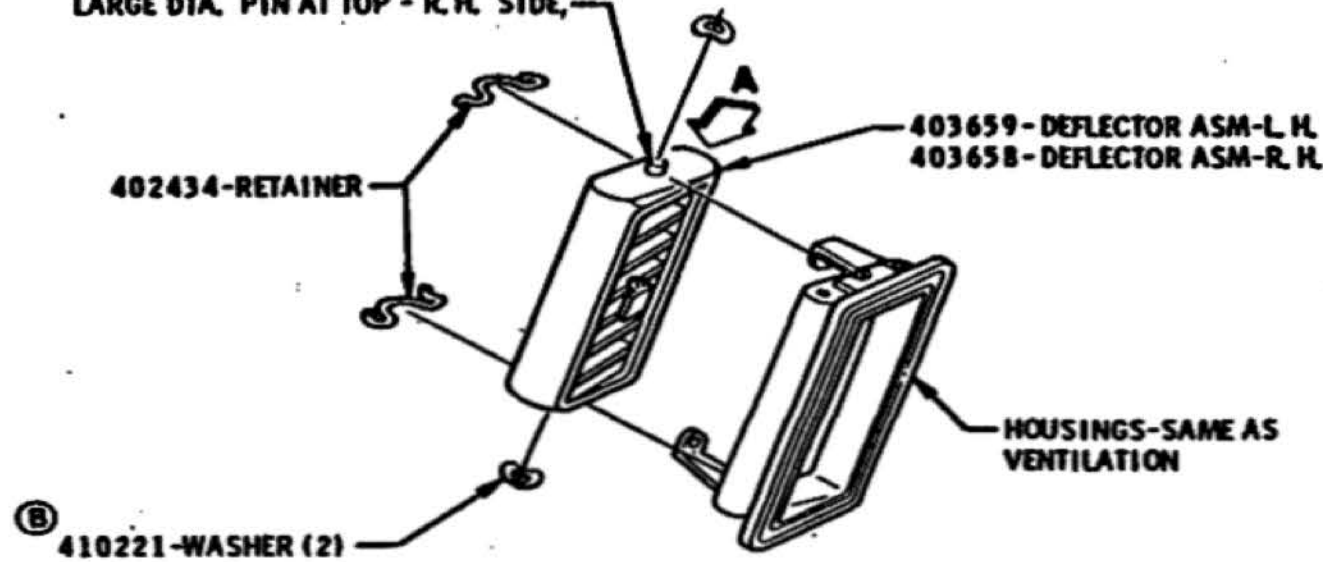
TITLE		VENTILATION OUTLETS		
DATE	BY	REV. NO.	REV. NO.	REV. NO.
MARCH 20, 1969	J. ROE	1970		
DRAWN BY: J. ROE		OLDSMOBILE PRODUCT INFORMATION MANUAL		
CHECKED BY: J. ROE		MANUAL NO. 1-3   22		
DATE: 4/21/70		PART NO. 404411		
REVISION		REV. NO. A		
DRAWN BY: J. ROE		PART NO. 404411		



NOTE: LUBRICATE ALL PIVOT PINS AND  
WASHERS WITH 9985007 LUBRICANT.

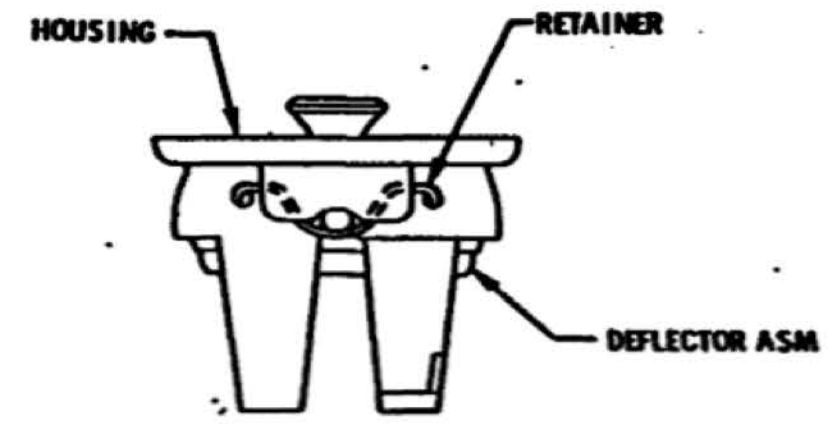
		TITLE		A/C DUCTS AND CENTER OUTLET	
11-13-69	N	406308-SEAL REMOVED	ED ROE	FIRST USED	1970
7-19-69	G	NOTE ADDED	ED ROE	OLDSMOBILE PRODUCT	1-3
1-29-69	F	WASHER REPOSITIONED	ED ROE	INFORMATION MANUAL	124
			APPR. <i>[Signature]</i>	REF.	FIG. NO. A
				MANUAL SEC.	PAGE
				1-3	124
				PART NO.	404411

SMALL DIA. PIN AT TOP - L.H. SIDE  
LARGE DIA. PIN AT TOP - R.H. SIDE,

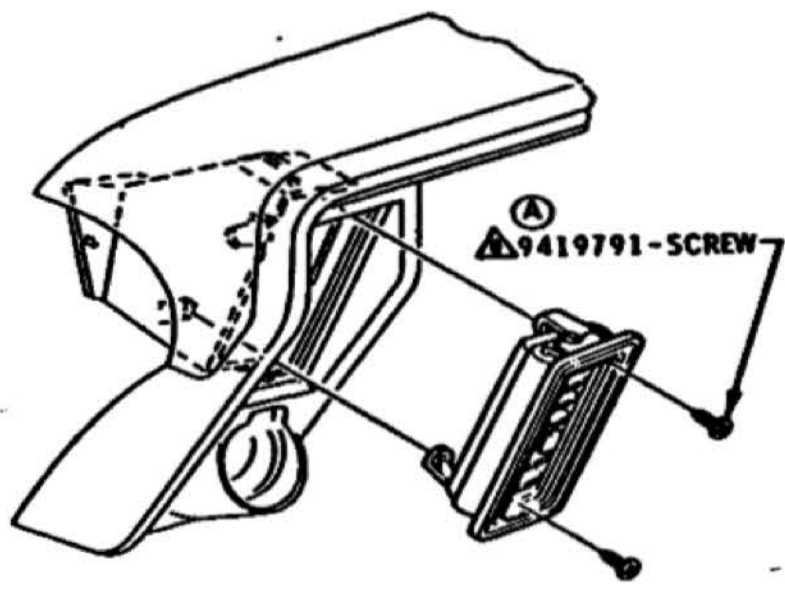


DEFLECTOR TO HOUSING  
TYPICAL INSTALLATION

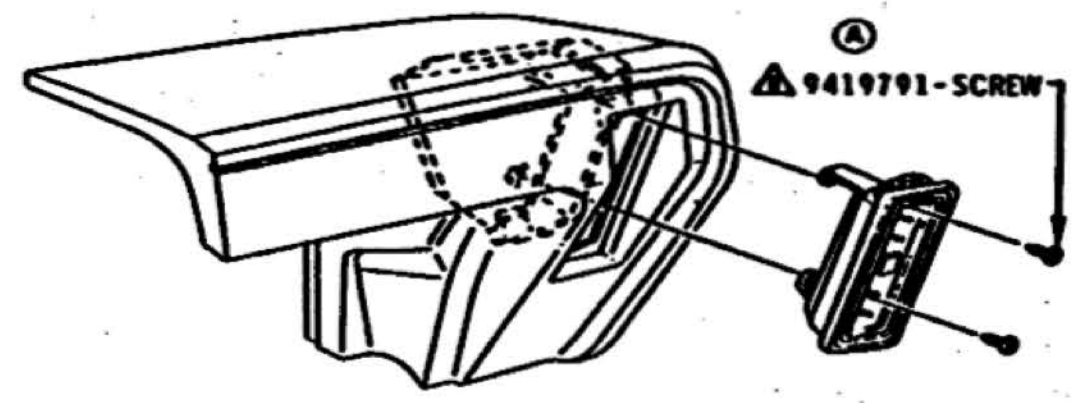
(L.H. SHOWN, R.H. SIMILAR)



VIEW A  
TYPICAL RETAINER INSTALLATION



L.H. OUTLET TO ADAPTER

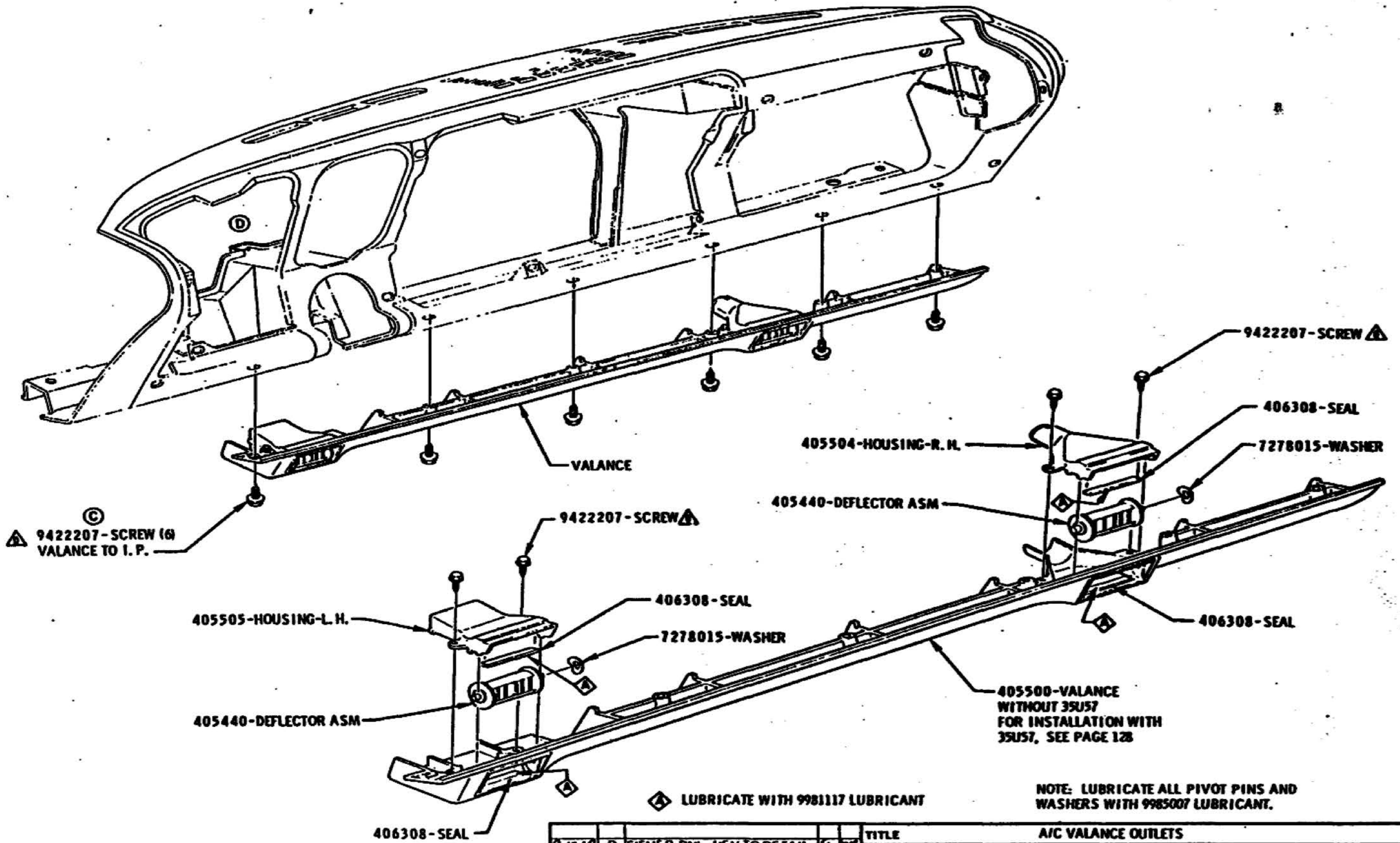


R.H. OUTLET TO ADAPTER



NOTE: LUBRICATE ALL PIVOT PINS  
AND WASHERS WITH 9985007 LUBRICANT.

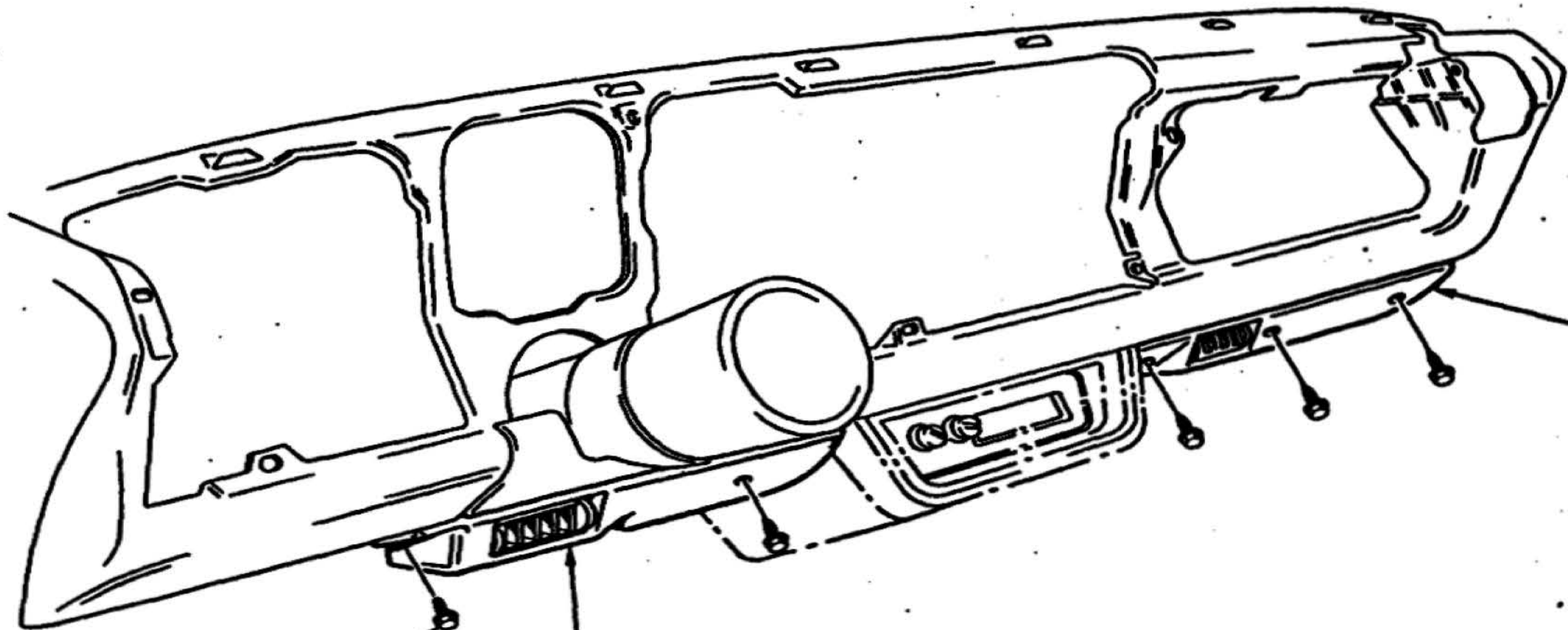
				TITLE				A/C END OUTLETS			
				DATE	MARCH 20, 1969	FIRST USED	1970	MANUAL NO.	1-3	PAGE	125
				DR BY	ED J ROE			OLDSMOBILE PRODUCT		INFORMATION MANUAL	
42870 B	WAS	588744	WASHER	CHECKED	MP arhart						
1-10-70	AC	WAS	9419327	SCREW	APPR.	35660		A		PART NO. 404411	
DATE	SYM	REVISION	DR	CK	APPR.						



NOTE: LUBRICATE ALL PIVOT PINS AND WASHERS WITH 9985007 LUBRICANT.

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

REVISIONS		TITLE		A/C VALANCE OUTLETS	
9-17-69	D FISHER PNL HEV TO DETAIL	ED	DATE MARCH 19, 1969	FIRST USED	1970
6-11-69	C REVISED TO DETAIL	ED	OR BY ED ROE	OLDSMOBILE PRODUCT	INFORMATION MANUAL
5-22-69	B PART NO. REVISED	ED	CHECKED <i>W.A. Lambert</i>	MANUAL SEC.	1-3
5-22-69	A 406308 SEAL ADDED	ED	APPR. <i>T. J. ...</i>	PAGE	126
				REF. 35CCO	SERIES A
					PART NO. 404411



406644- VALANCE - R. H.

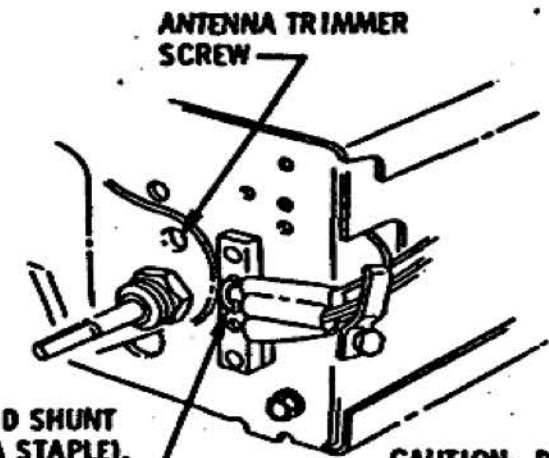
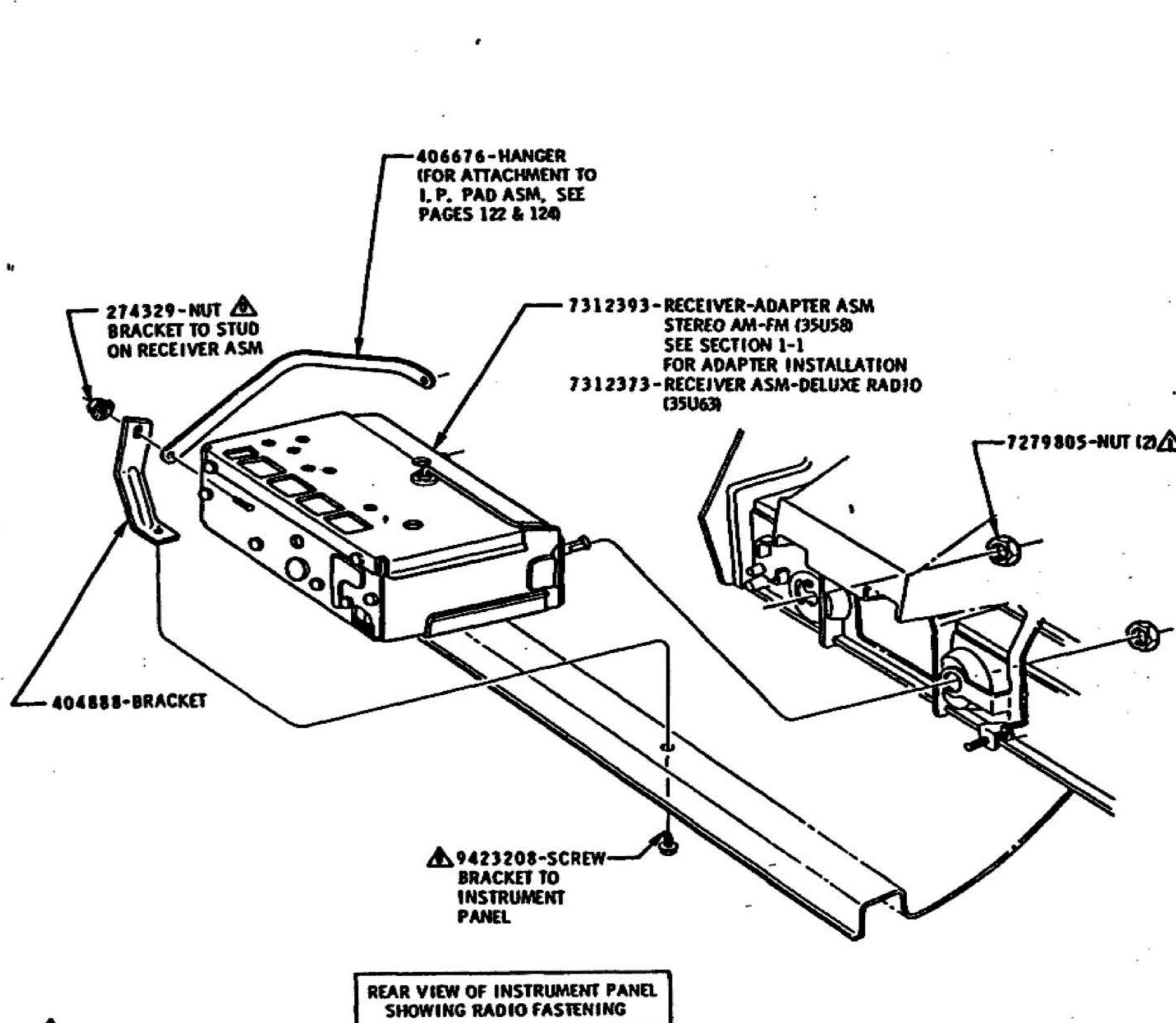
406645-VALANCE-L. H.

▲9422207-SCREW (5)  
VALANCE TO I. P.

BALANCE OF PARTS  
SAME AS PAGE 126

▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

		TITLE		A/C VALANCE OUTLETS (WITH TAPE PLAYER)					
		DATE		MAY 5, 1969		PART USED		1970	
		DR. BY		BEAUDOIN		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
		CHECKED		P. J. B. Hart		REVISION		A	
7-23-69		A		9422207-SCREW REVISED		35-C-60		1-3 128	
DATE	SYN	REVISION	DR.	CL.	APPL.	35-U-57	PART NO.		404411



REMOVE AND DISCARD SHUNT WIRE (SHAPED LIKE A STAPLE). TRIM RADIO BEFORE REMOVING SHUNT WIRE.

CAUTION: DO NOT TURN ON RADIO UNLESS SHUNT WIRE OR SPEAKER FADER CONTROL IS INSTALLED.

**WINDSHIELD ANTENNA TRIMMING INSTRUCTIONS**

TRIMMING TO BE DONE AFTER ALL SHEET METAL HAS BEEN INSTALLED.

PROCEDURE (WITH HOOD FULLY CLOSED AND LATCHED):

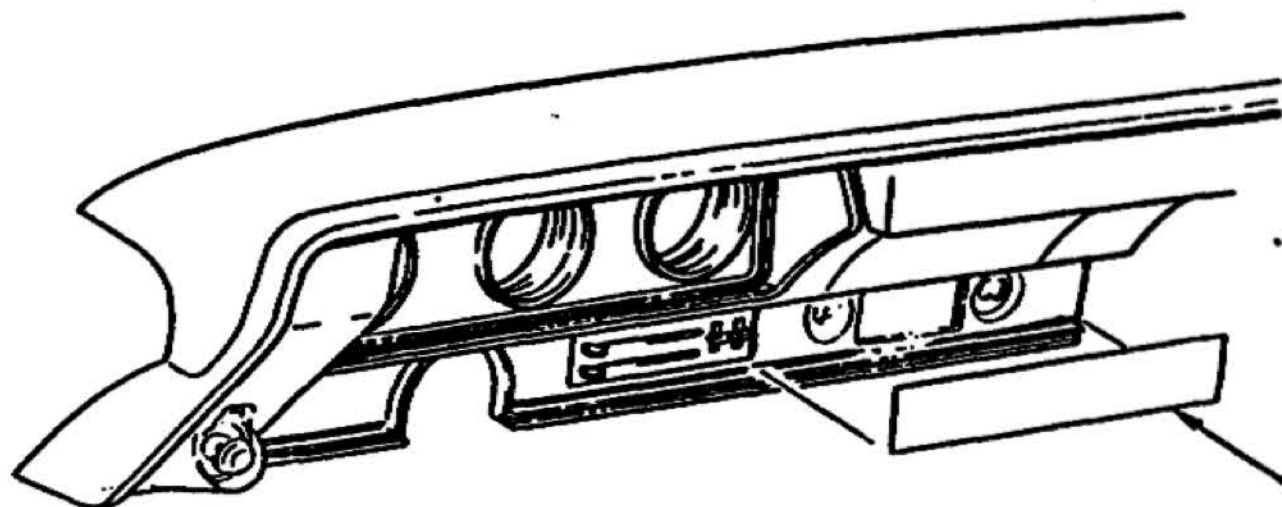
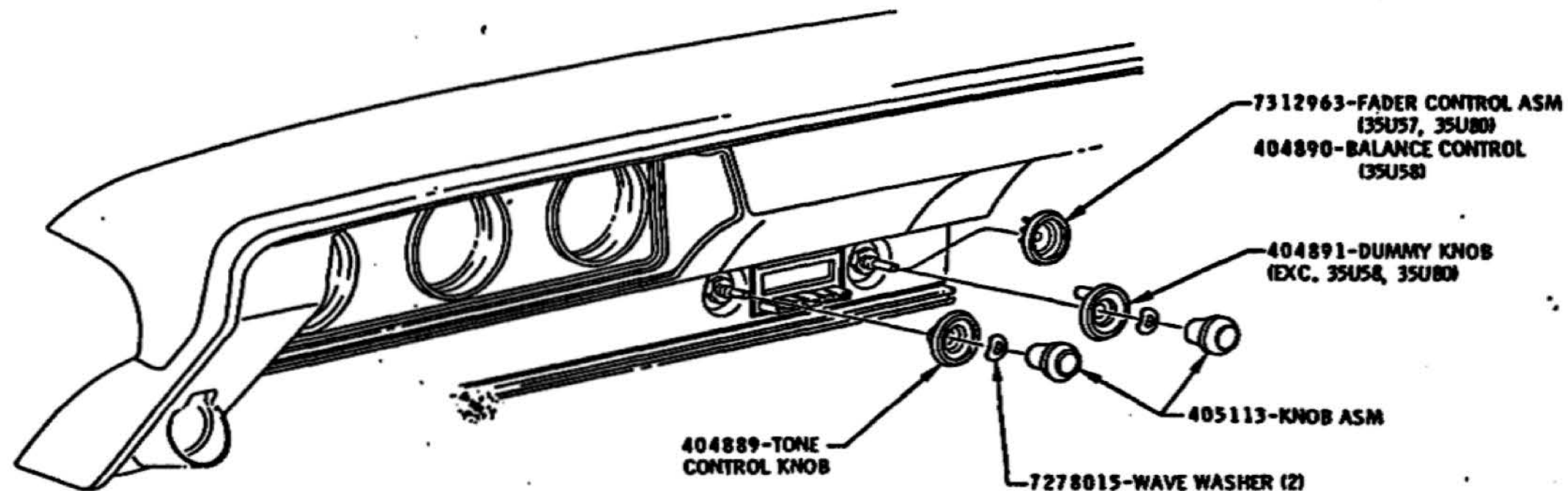
1. TURN RADIO ON AND DEPRESS FOURTH PUSH BUTTON. THIS TUNES RADIO FOR 1400 KC PICK-UP.
2. PLACE R.F. GENERATOR ON DASH OVER RADIO.
3. ADVANCE VOLUME CONTROL UNTIL READING REGISTERS ON METER.
4. CAREFULLY TURN ANTENNA TRIMMING SCREW BACK AND FORTH UNTIL MAXIMUM DEFLECTION OF NEEDLE IS OBSERVED. SET TRIMMER AT PEAK DEFLECTION.

NOTE: IF METER NEEDLE PINS (FULL DEFLECTION) PRIOR TO TRIMMING OR WHILE TRIMMING, DECREASE VOLUME CONTROL TO KEEP NEEDLE ON SCALE.

▲  
▲  
▲  
36-72 LB. IN.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE		RADIO			
8-27-69	C	TRIMMING INSTR. REV.	2/18/70	DATE	MARCH 20, 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
6-24-69	B	TRIMMING INSTR. REV.	4/1/69	DR BY	Chet May				1-3 130
6-24-69	A	406676-HANGER ADDED	4/1/69	CHECKED	PTB/ambant				
				APPR.	10/1/69	REV.	35U58, U63	SEWER	A
				DATE	SYN	REVISION	DR.	CL.	APPR.
								PART NO.	404411





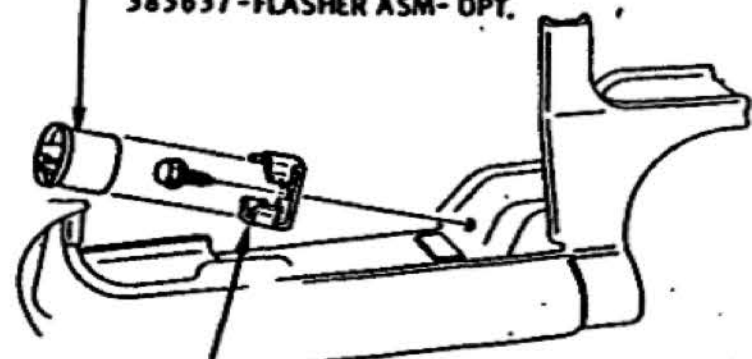
**404887-RADIO HOLE COVER**  
(SELF ADHESIVE)  
(EXC. 35U58, 35U63, 42-44-4800, 358C1)  
PAINT TO MATCH CONTROL PANEL  
PER PAINT AND TRIM SPECIFICATIONS  
SHOWN IN SECTION 'D'

				TITLE		RADIO			
				DATE <i>MARCH 19, 1969</i>		FIRST USED		MANUAL NO.	
				BY <i>ROE</i>		1970		1-3	
				CHECKED <i>W. J. ...</i>		NO. 122		PAGE	
				APPROVED <i>[Signature]</i>		35C57, CSR		131	
				DATE		SERIES		PART NO.	
				BYM		A		404411	
				REVISION		C60			
				DR. CLK.					
				APPR.					

OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING 21, MICHIGAN

383636-FLASHER ASM  
383637-FLASHER ASM-OPT.



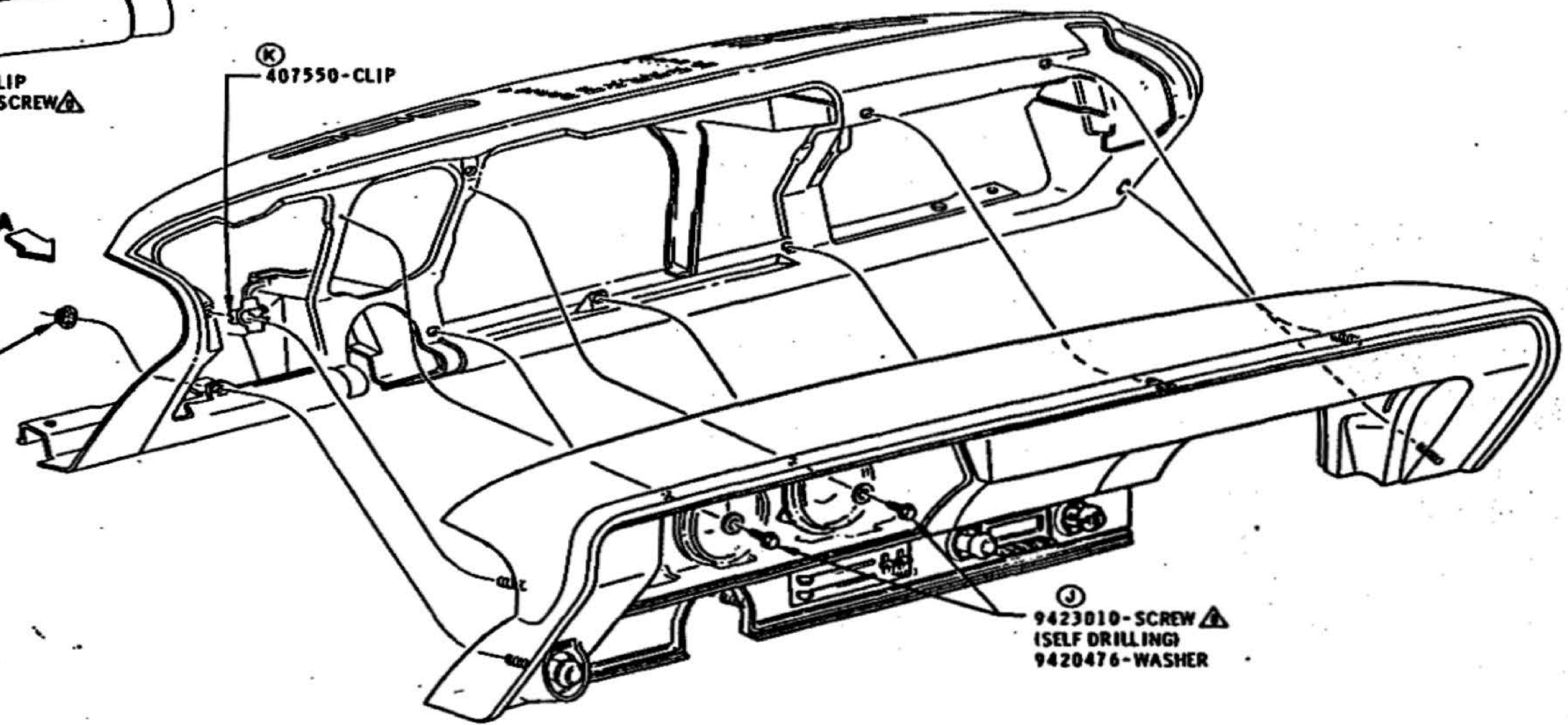
388048-CLIP  
9422046-SCREW

VIEW A

407550-CLIP

9420205-NUT (7)  
274329-NUT (7)(OPT.)

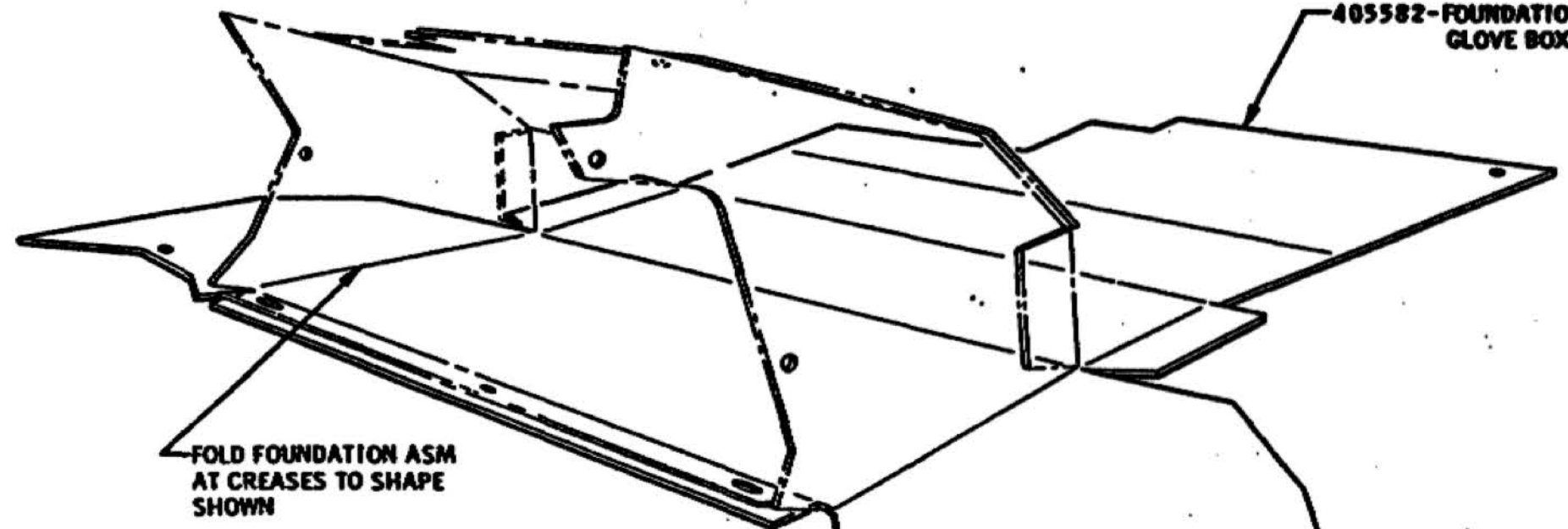
L



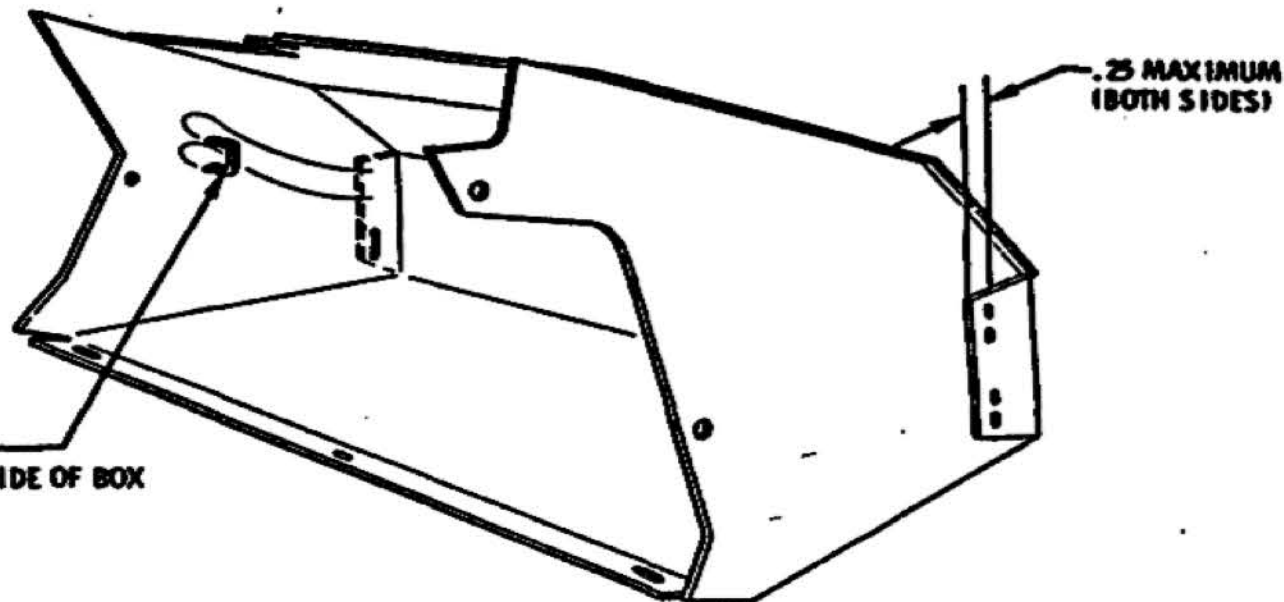
9423010-SCREW (SELF DRILLING)  
9420476-WASHER

FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
10-13-63	K	WAS 393082-CLIP								INSTRUMENT PANEL				
10-5-69	J	WAS 9423204-SCREW								DATE MARCH 19, 1969	1970		1-3	132
9-17-69	H	FISHER PANEL REV TO DET.								DR BY MAY - ROE				
7-25-64	G	9420476-WASHER ADDED								CHECKED <i>[Signature]</i>	REF. 1A28			
6-28-67	F	USAGE REVISED								APPR. <i>[Signature]</i>	12C		A	
											35UB9			404411

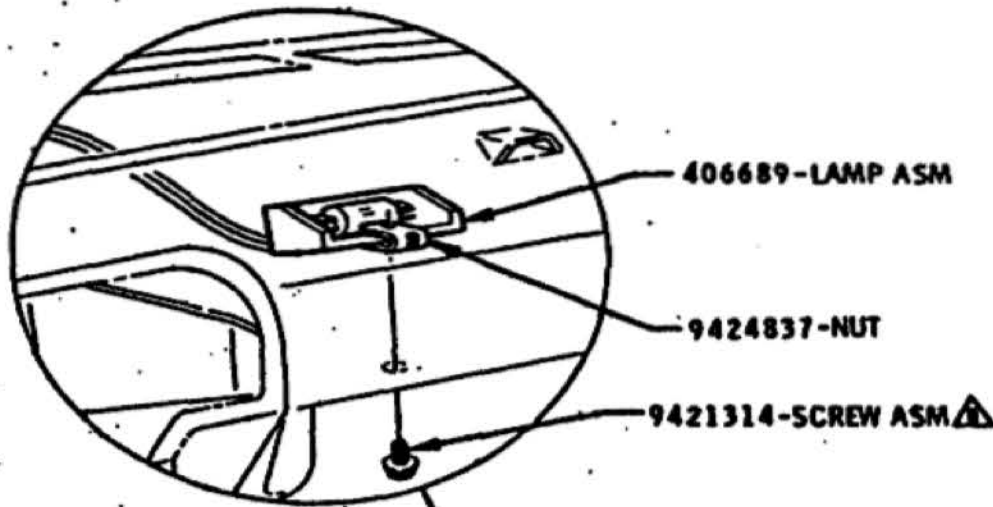
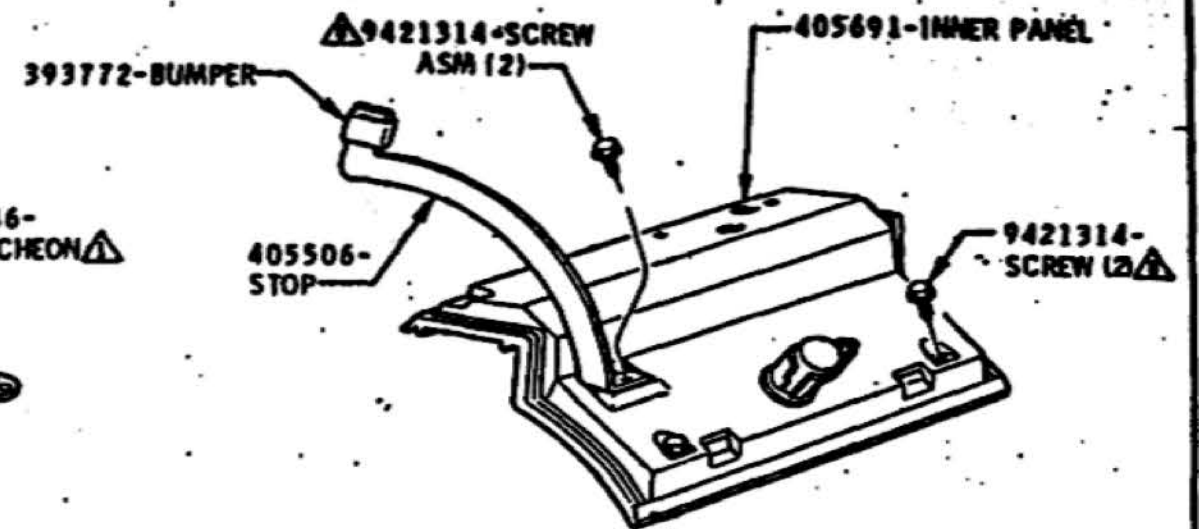
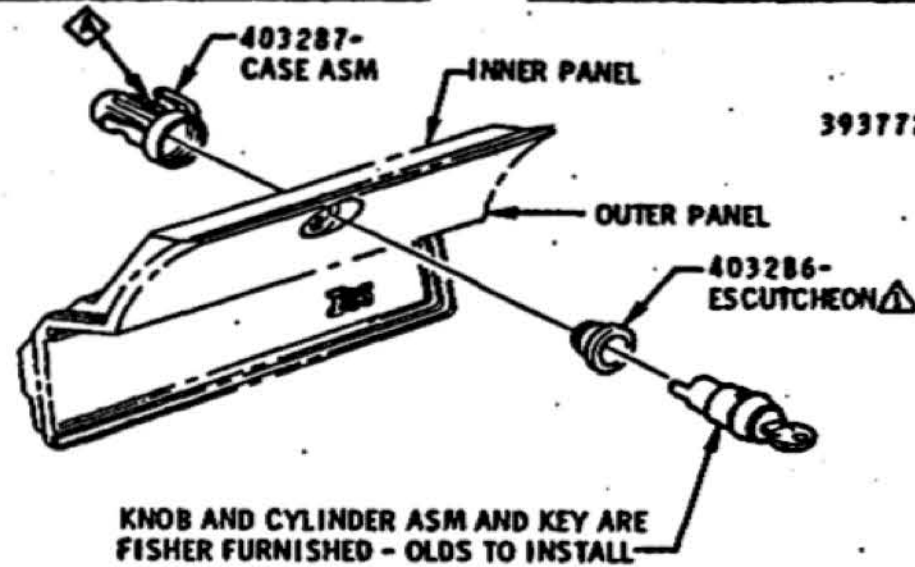
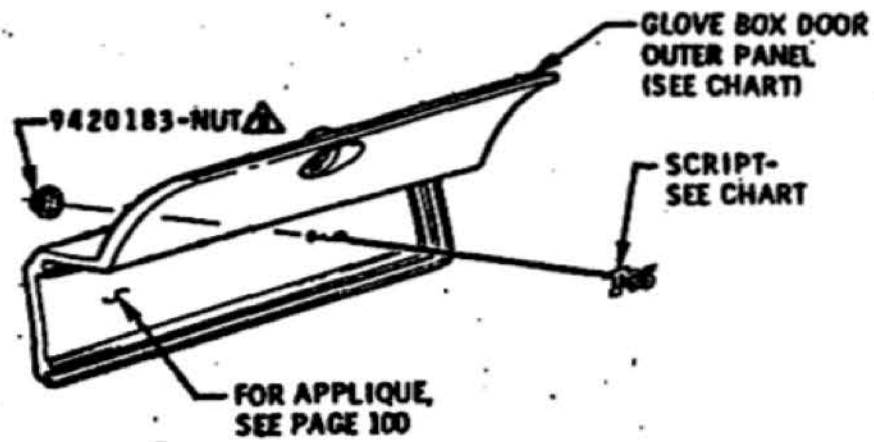


**FOUNDATION ASM FOLDING**

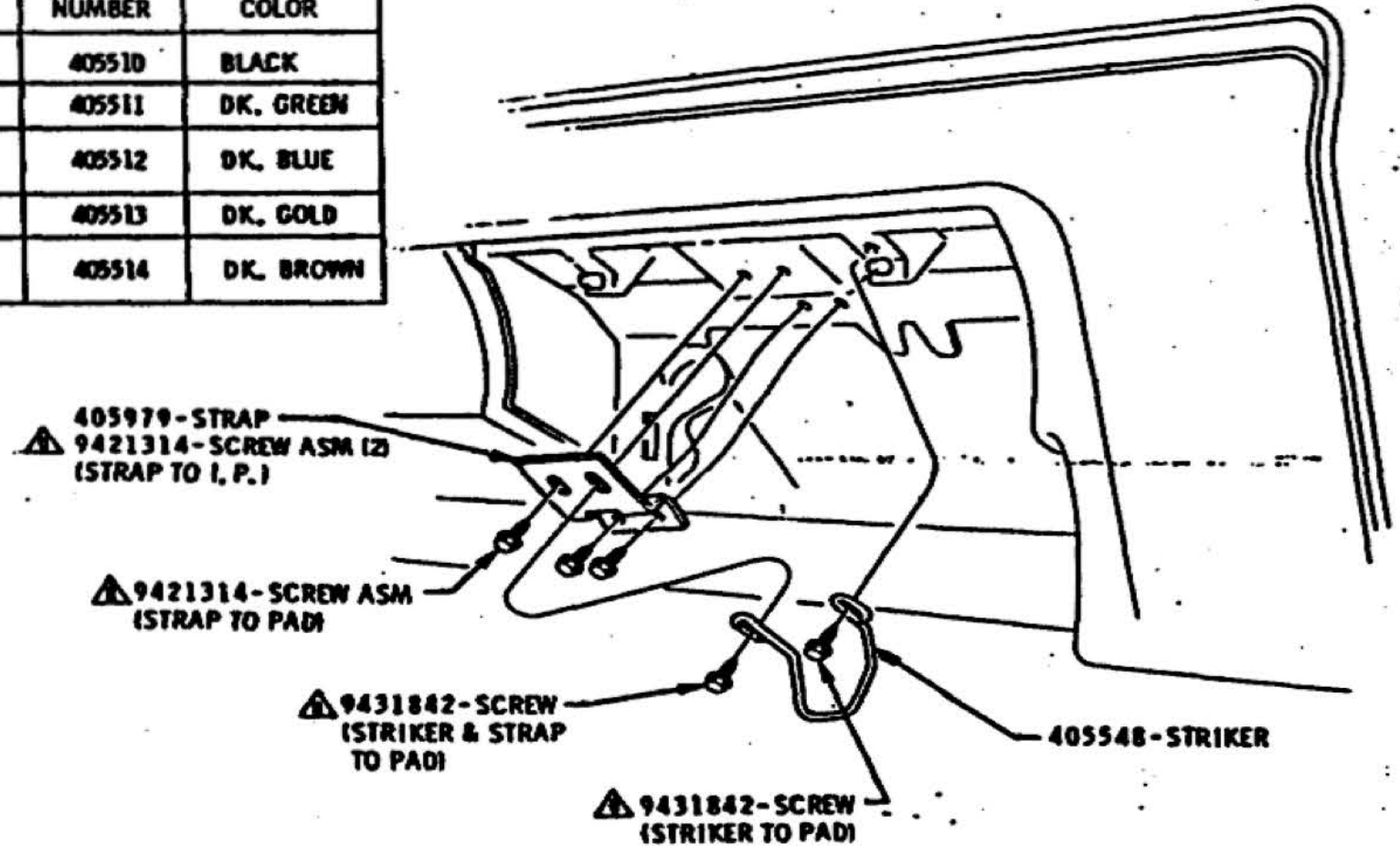
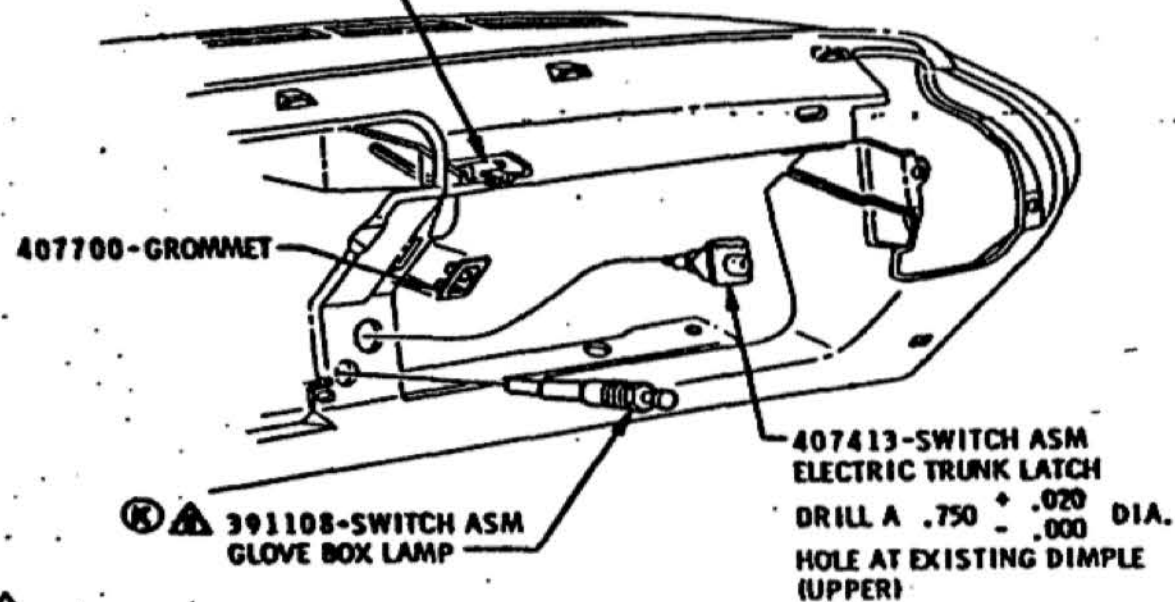


**GLOVE BOX ASSEMBLY**

				TITLE <b>GLOVE BOX ASSEMBLY</b>					
				DATE <b>MARCH 20, 1969</b>		FIRST USED <b>1970</b>		OLDSMOBILE PRODUCT INFORMATION MANUAL	
				DR BY <b>ED ROE</b>		REV. <b>1A2B</b>		MANUAL SEC. <b>1-3</b> PAGE <b>134</b>	
				CHECKED <b>M. Bamhart</b>		SERIES <b>A</b>		PART NO. <b>404411</b>	
				APPR. <b>Taylor</b>					
DATE	SYM	REVISION	DR.	CK.	APPR.				



SCRIPT		GLOVE BOX DOOR	
NUMBER	SERIES	NUMBER	COLOR
405432	F85	405510	BLACK
405433	CUTLASS	405511	DK. GREEN
405434	CUTLASS SUPREME	405512	DK. BLUE
405435	4-4-2	405513	DK. GOLD
405436	VISTA CRUISER	405514	DK. BROWN

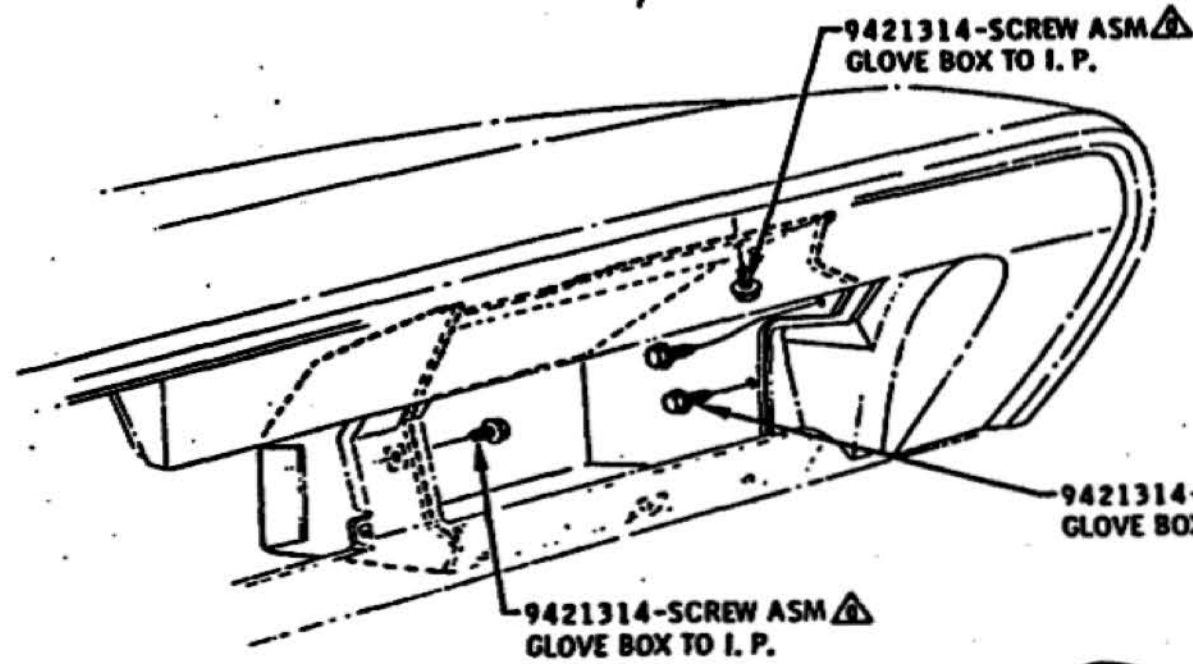


LUBRICATE WITH 9985202 LUBRICANT

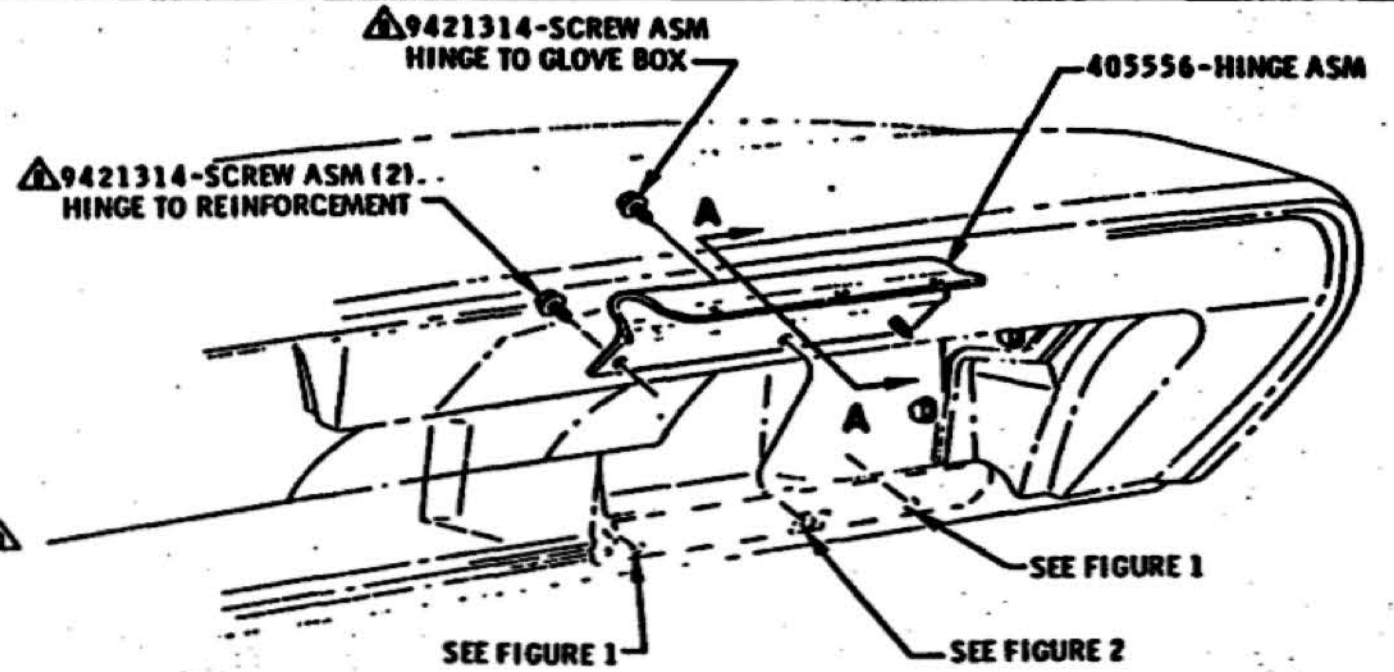
▲▲▲ 48 - 72 LB. IN. FULLY DRIVEN, SEATED AND NOT STRIPPED

NOTE: GLOVE BOX DOOR AND STRIKER MUST BE ADJUSTED SO THAT LATCH RETURN SPRING FULLY RETURNS KNOB (KEY SLOT VERTICAL) WHEN DOOR IS CLOSED.

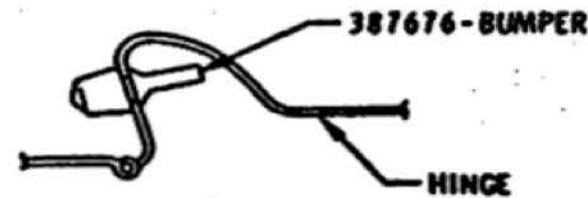
TITLE				GLOVE BOX		PART USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO. PAGE	
10-2869	K	Torque Added	DATE	MARCH 29, 1969	1970	1-3	136	A		404411	
DATE	SYM	REVISION	DR.	CL.	APPL.	REV. 1A18 11764 35490	SERIAL				



GLOVE BOX INSTALLATION



HINGE INSTALLATION



SECTION A-A

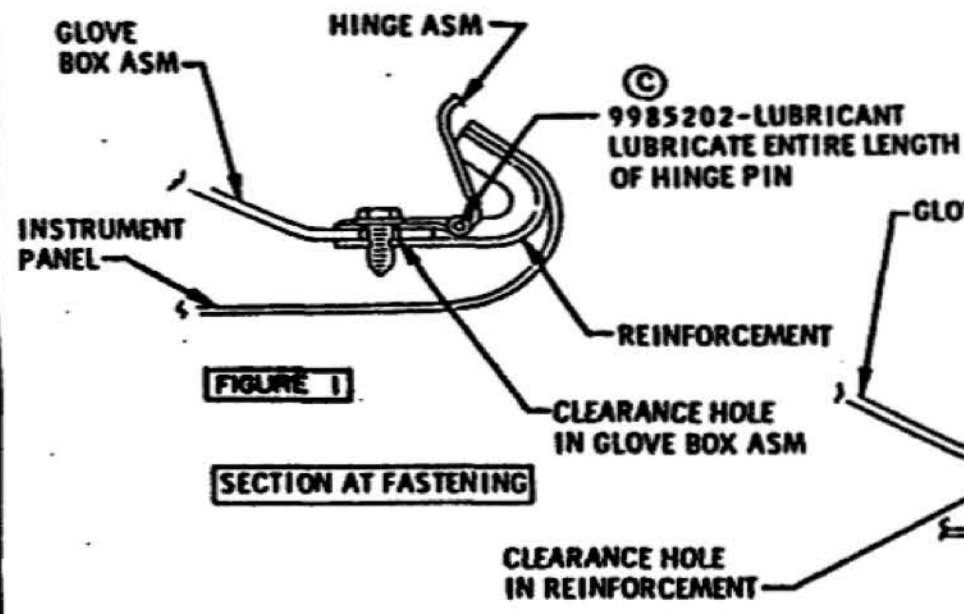


FIGURE 1

SECTION AT FASTENING

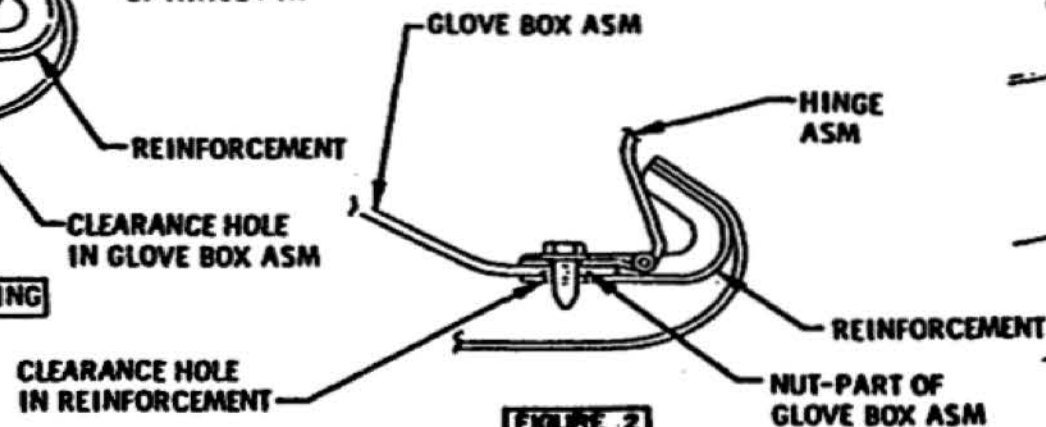
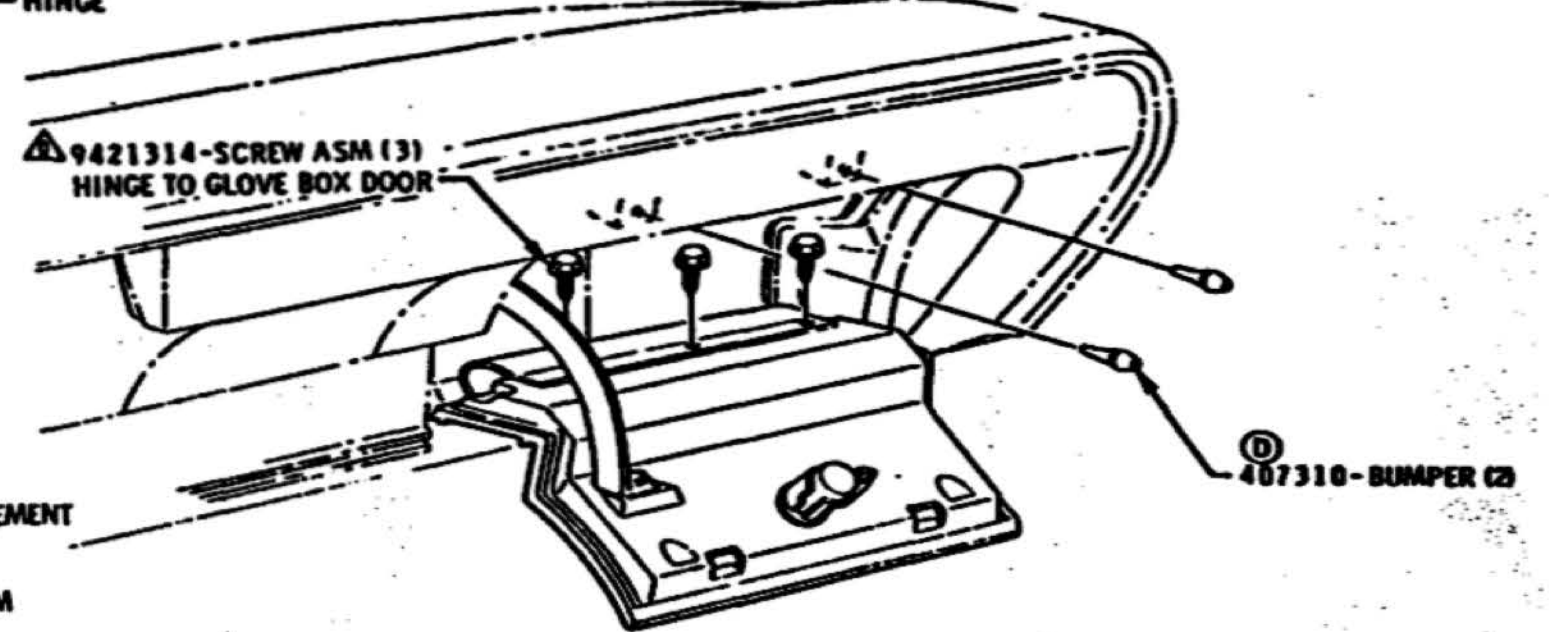


FIGURE 2

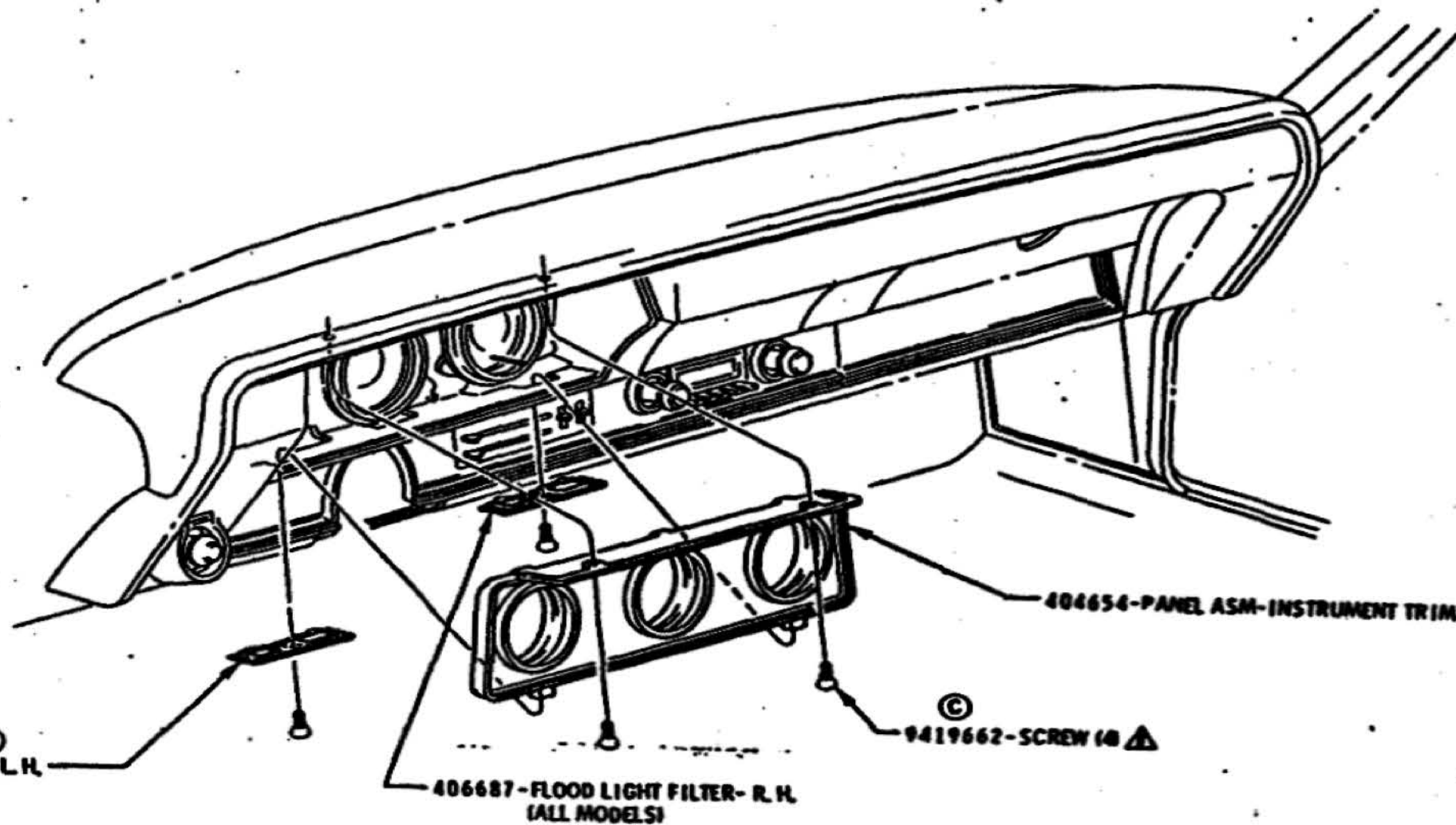
SECTION AT FASTENING



DOOR INSTALLATION



REVISION		TITLE		GLOVE BOX		MANUAL SEC. PAGE	
9-16-69	D	WAS 387676	DATE MARCH 20, 1969	FIRST USED	1970	1-3	138
8-25-69	C	LUBR NOTE ADDED	OR BY ROE	CHECKED			
5-22-69	B	SECTION A-A ADDED	CHECKED				
3-29-69	A	WAS 9419327-SCREW	APPR. T...	REF. 1A2B	SERIES A	PART NO.	404411



406687-FLOOD LIGHT FILTER - L.H.  
 (14267, 4467, & 35Y60)

406687-FLOOD LIGHT FILTER- R.H.  
 (ALL MODELS)

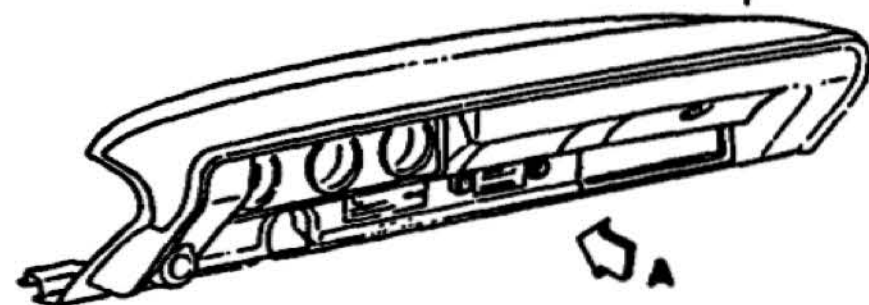
404654-PANEL ASM-INSTRUMENT TRIM

9419662-SCREW (A)

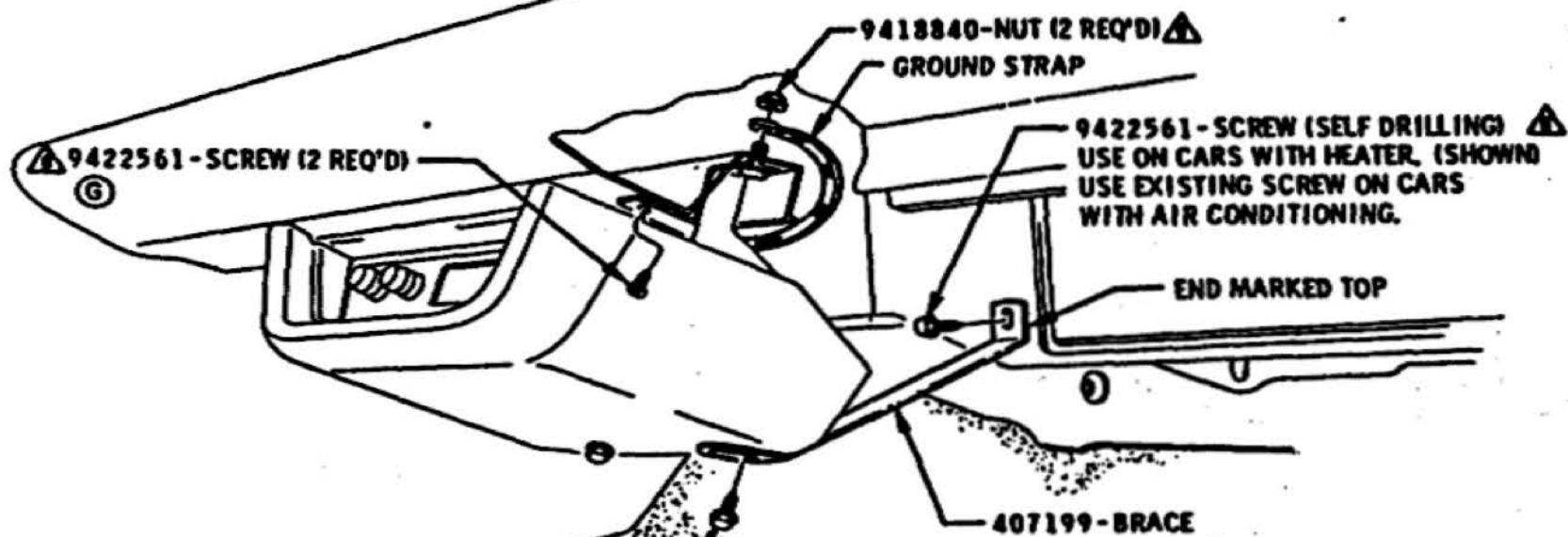


FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE	SYN	REVISION	DR.	CK.	APPR.	TITLE	YEAR USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
10-28-69	D	USAGE REVISED				TRIM PANEL	1970		1-3	140
9-15-69	C	WAS 9410610				DATE MARCH 19, 1969				
8-16-69	B	USAGE REVISED				DR BY MAY - ROE				
5-28-69	A	406687- FILTER ADDED				CHECKED BY [Signature]				
						APP. [Signature]				
							12L, 35Y60		A	404411



INSTRUMENT PANEL



VIEW A

PLAYER TO INSTRUMENT PANEL

6291659-GROUND STRAP ASM.  
9423208-SCREW ASSEMBLY  
(PLAYER TO CASE)  
F

7313283-PLAYER ASM

405692-LENS

9423208-SCREW ASM (2 REQ'D)  
(CASE TO PLAYER ASSEMBLY)

H

403218-PAD ASM

406926-APPLIQUE

400539-KNOB (DUMMY)

400537-KNOB ASM  
(BALANCE & VOLUME CONTROL)

7278015-WASHER (2)

400538-KNOB (TONE CONTROL)

SCREW ASM-CASE  
TO PLAYER ASM

403214-CASE ASM

PLAYER TO CASE

9422046-SCREW (4 REQ'D)  
PAD ASSEMBLY TO CASE

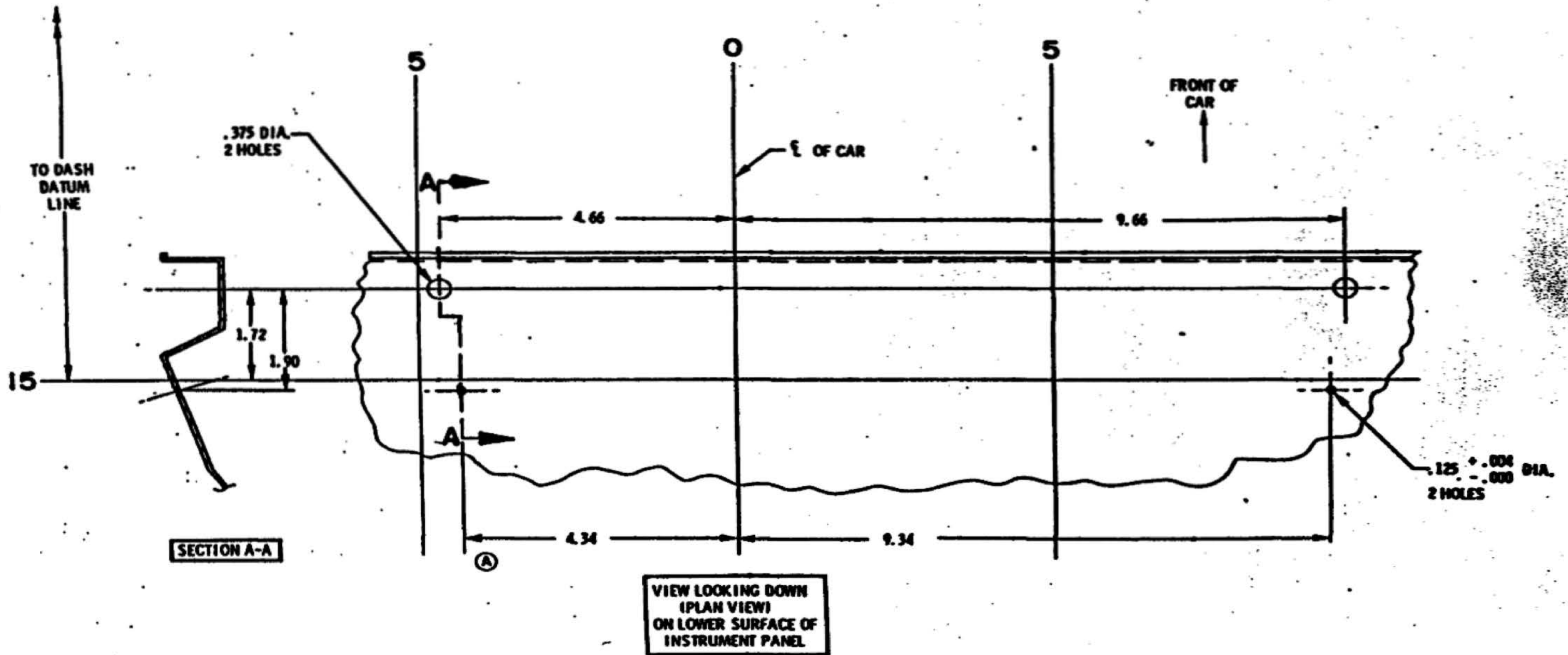
STEREO TAPE PLAYER IS TO BE INSTALLED IN CONJUNCTION WITH REAR SEAT SPEAKER (SEE SECTION 1-4) AND FADER CONTROL ON RADIO (SEE PAGE 131)

FOR ALBUM, SEE SECTION 0  
FOR DRILLING LAYOUT, SEE P. 143

FOR INSTALLATION WITH A/C SEE PAGE 128

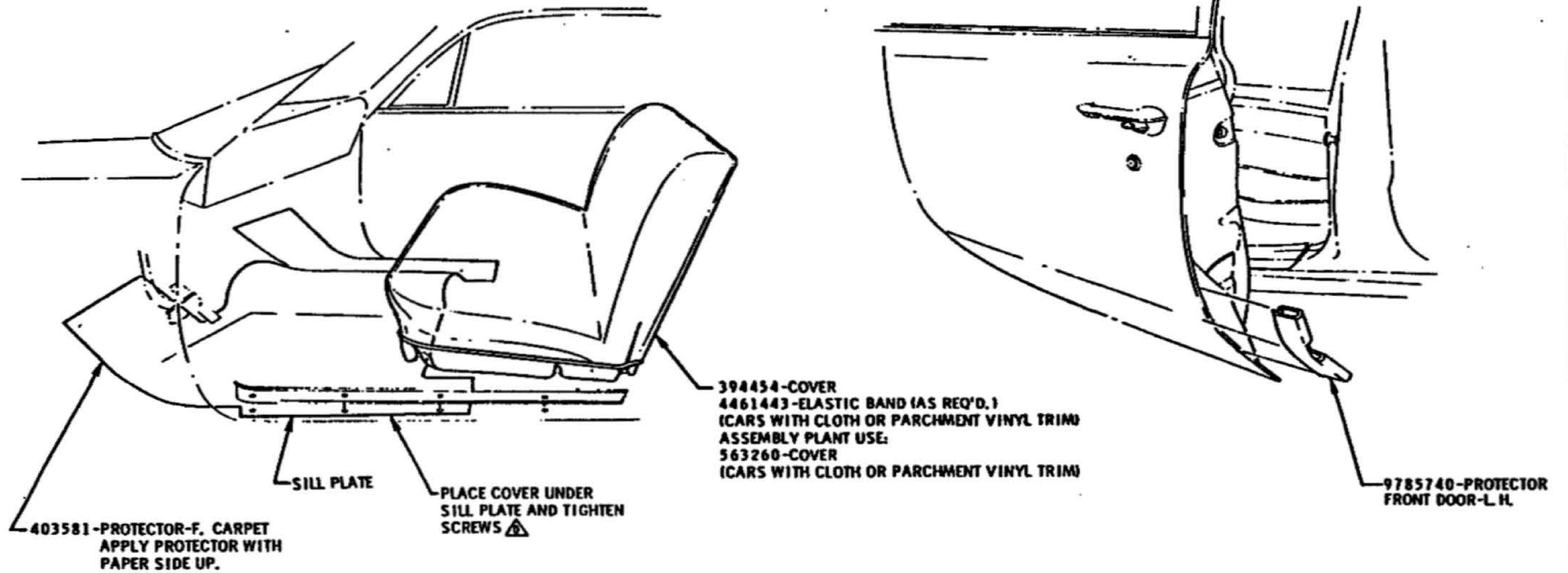
▲▲▲ 36 - 72 LB. IN.  
▲▲▲ FULLY DRIVEN, SEATED  
▲▲▲ AND NOT STRIPPED

REVISION				TITLE				STEREO TAPE PLAYER			
2-12-70	H	WAS 401939-LENS	DR	DATE	MARCH 20, 1969	FIRST USED	1970	MANUAL SEC.	1-3	PAGE	142
12-23-69	G	WAS 9419327-SCREW	DR	CHKD BY	ED J. ROE	REF.	35057	SERIES	A	PART NO.	404411
12-23-69	F	WAS 9420508-SCREW ASM	DR	CHKD BY	J.P. Barnhart						
DATE	SYM	REVISION	DR	CHK	APPR.						



				TITLE HOLE DRILLING FOR STEREO TAPE PLAYER				MANUAL DOC. PAGE	
				DATE MAY 29, 1969		FIRST USED 1970		1-3 143	
				DR BY L. SPITZLEY		OLDSMOBILE PRODUCT INFORMATION MANUAL			
				CHECKED BY [Signature]		REV. 02-39998		SERIES A	
142-70 A		ARROW RELOCATED		RPT		PAGE NO.		404411	
DATE	SYM	REVISION	DR.	CK.	APPR.				

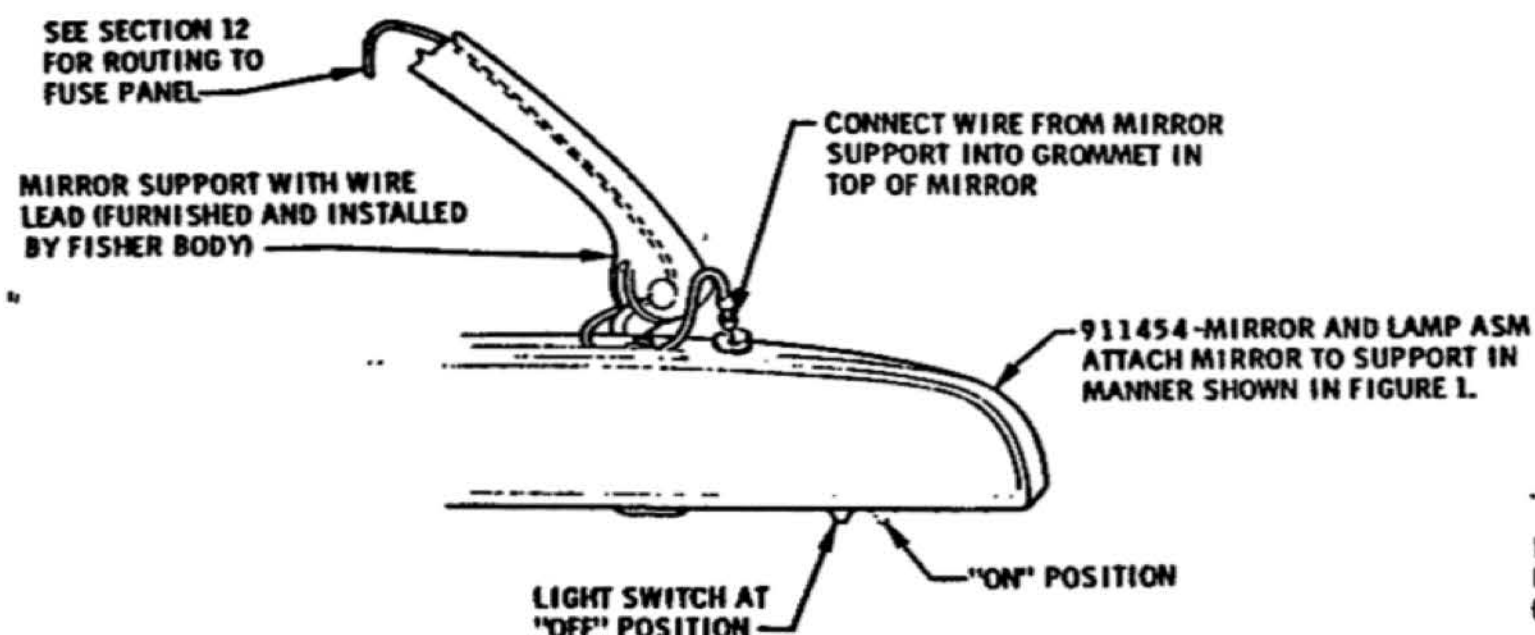




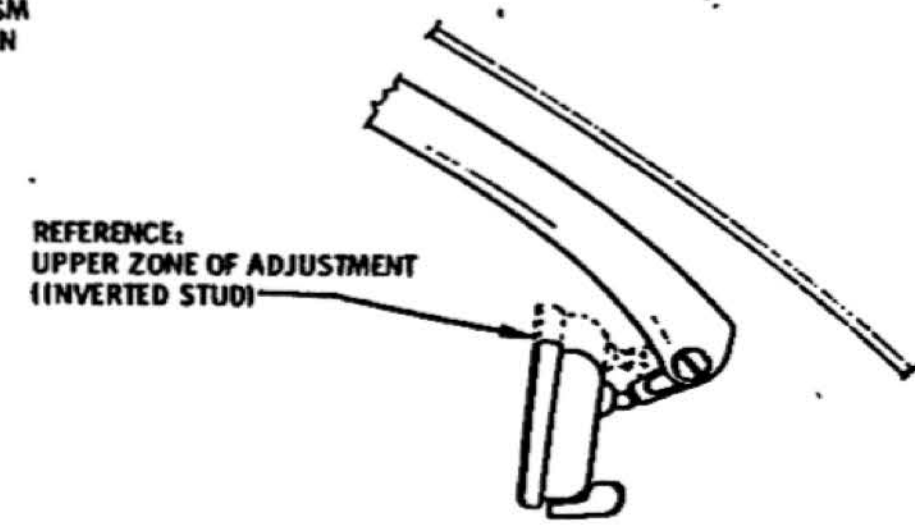
NOTE:  
ON CARS WITH CONSOLE PLACE  
PROTECTOR OVER CONSOLE.  
ON MANUAL SHIFT CONSOLE CUT  
PROTECTOR AS NECESSARY TO ALLOW  
FREE MOVEMENT OF SHIFTING LEVER.

▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
						FRONT FLOOR, SEAT AND DOOR EDGE PROTECTOR	1970		1-4	100
						DATE NOV. 23 1968 DR BY B. PARKER CHECKED APPR. C. J. [Signature]	REF. 146	SERIES A-B-C	PART NO. 404411-2	



MIRROR AND LIGHT ASSEMBLY



MIRROR INSTALLED (SIDE VIEW)

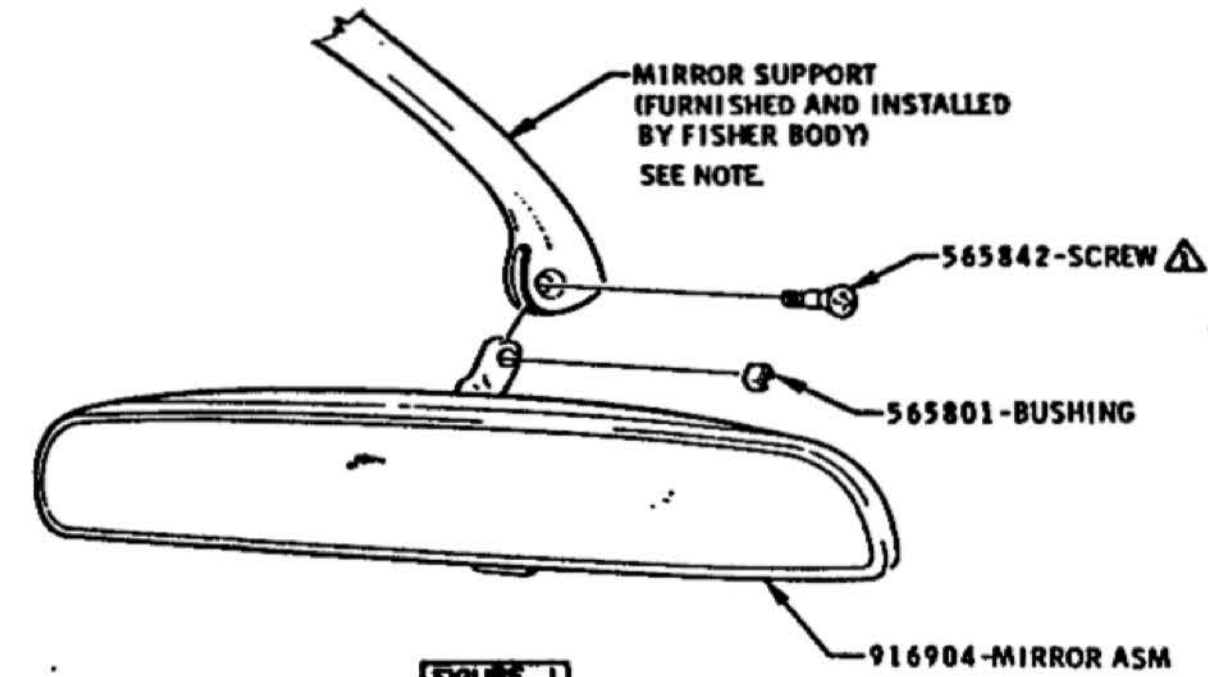
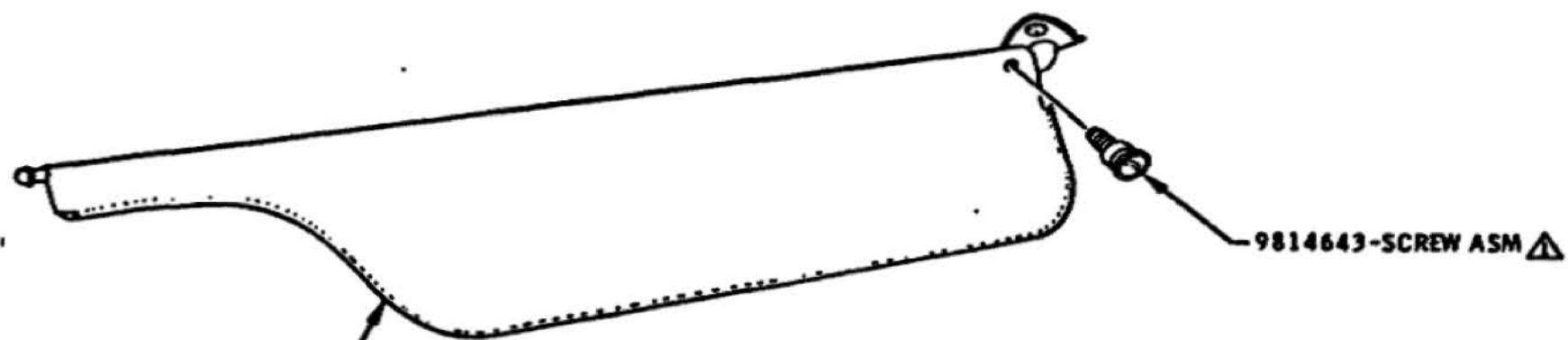


FIGURE 1

NOTE: CENTER MIRROR IN CAR BY ADJUSTING MIRROR SUPPORT SO THAT MIRROR CLEARS SUN VISORS WHEN THEY ARE LOWERED.

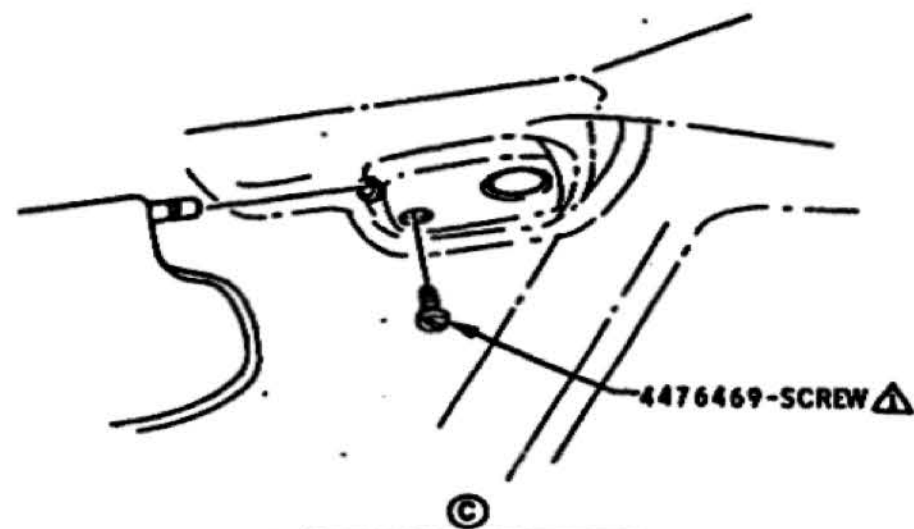
<sup>⚠</sup>  
<sup>⚠</sup>  
<sup>⚠</sup>  
40-50 LB. IN.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE INSIDE REAR VIEW MIRROR AND MIRROR AND LIGHT ASSEMBLY			
DATE DEC 3 1968		FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE 1-4 112	
DR BY B. PARKER		CHECKED J. J. J.		SERIES A-B-C		PART NO. 404411-2	
DATE	SYM	REVISION	DR.	CK.	APPR.		
11-8-68	B	NOTE ADDED					
5-26-68	A	"E" INFO. REARRANGED					

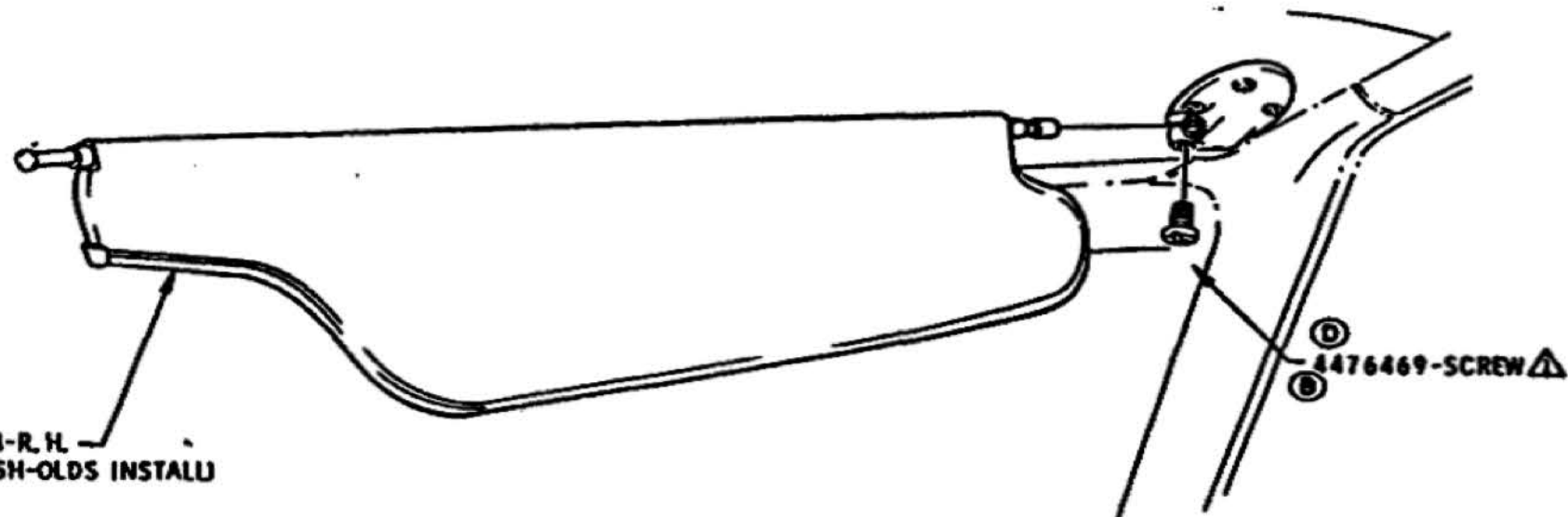


SUNSHADE ASM-R. H.  
(FISHER FURNISH-OLDS INSTALL)

"B-C" SERIES  
(EXCEPT CONVERTIBLES)



"B-C" CONVERTIBLES

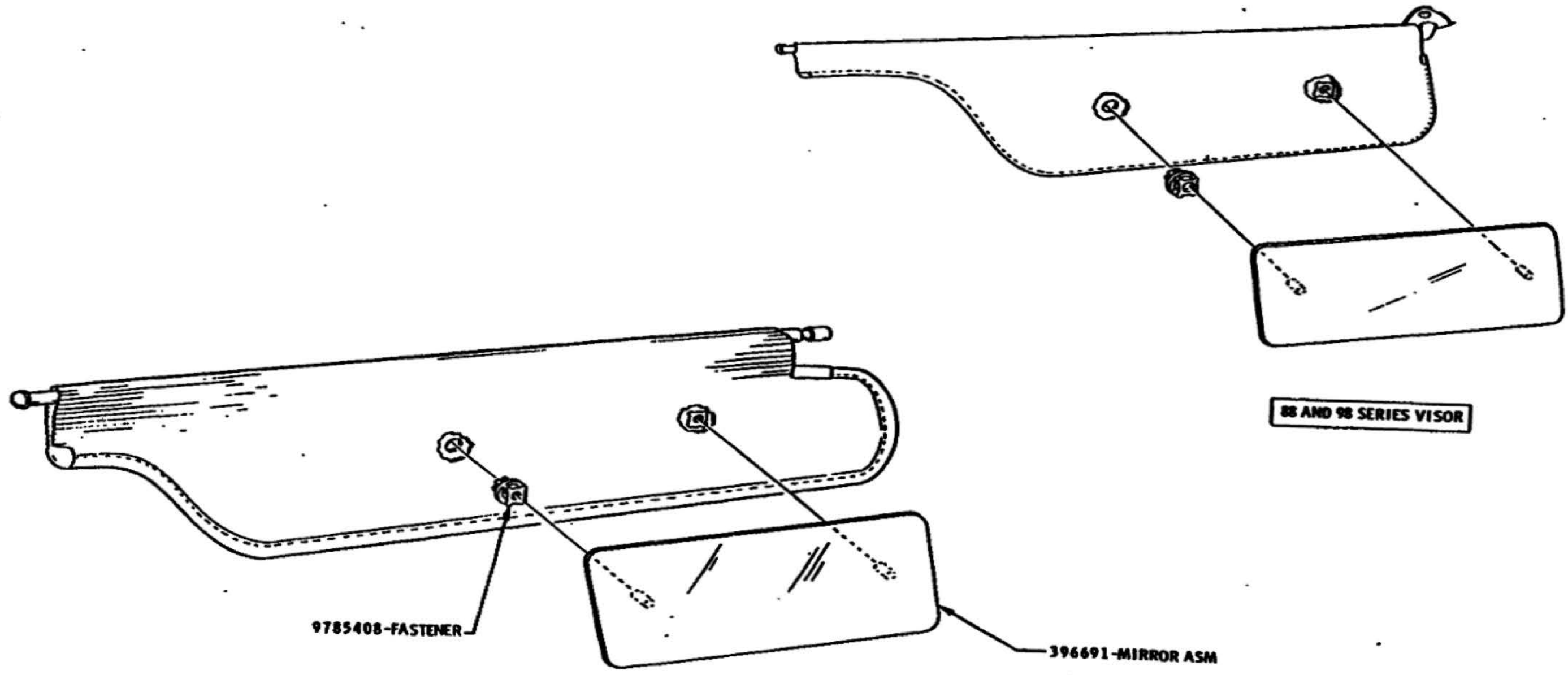


SUNSHADE ASM-R. H.  
(FISHER FURNISH-OLDS INSTALL)

"A" AND "E" SERIES

▲  
▲  
▲  
15-20 LB. IN.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

REVISION				TITLE		FIRST USED		MANUAL SEC.		PAGE	
01-65	D	WAS 9814643-SCREW ASM	BD	DATE	NOV. 23, 1968	1970	OLDSMOBILE PRODUCT	1-4	114		
1-65	C	VIEW ADDED-TITLE REV.	BD	DR BY	B. PARKER		INFORMATION MANUAL				
4-65	B	WAS 4476469-SCREW	BL	CHECKED	J. J. J.						
6-65	A	WAS 8778621-SCREW	BD	APPR.	J. J. J.	1A2E	SERIES	A-B-C-E	PART NO.	404411-2-3	
DATE	SYM	REVISION	DR. CH.	APPR.	J. J. J.						



88 AND 98 SERIES VISOR

9785408-FASTENER

396691-MIRROR ASM

F-85 AND TORONADO SERIES VISOR

					TITLE VISOR VANITY MIRROR				
					DATE NOV. 29 1968	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. 1-4	PAGE 116
					DR BY A. PARKER				
					CHECKED <i>[Signature]</i>				
					APPV. <i>[Signature]</i>	NO. 35Y10	SERIES A-B-C-E	PART NO.	404411-2-3
DATE	SYM	REVISION	DR.	CL.	APPV. <i>[Signature]</i>				

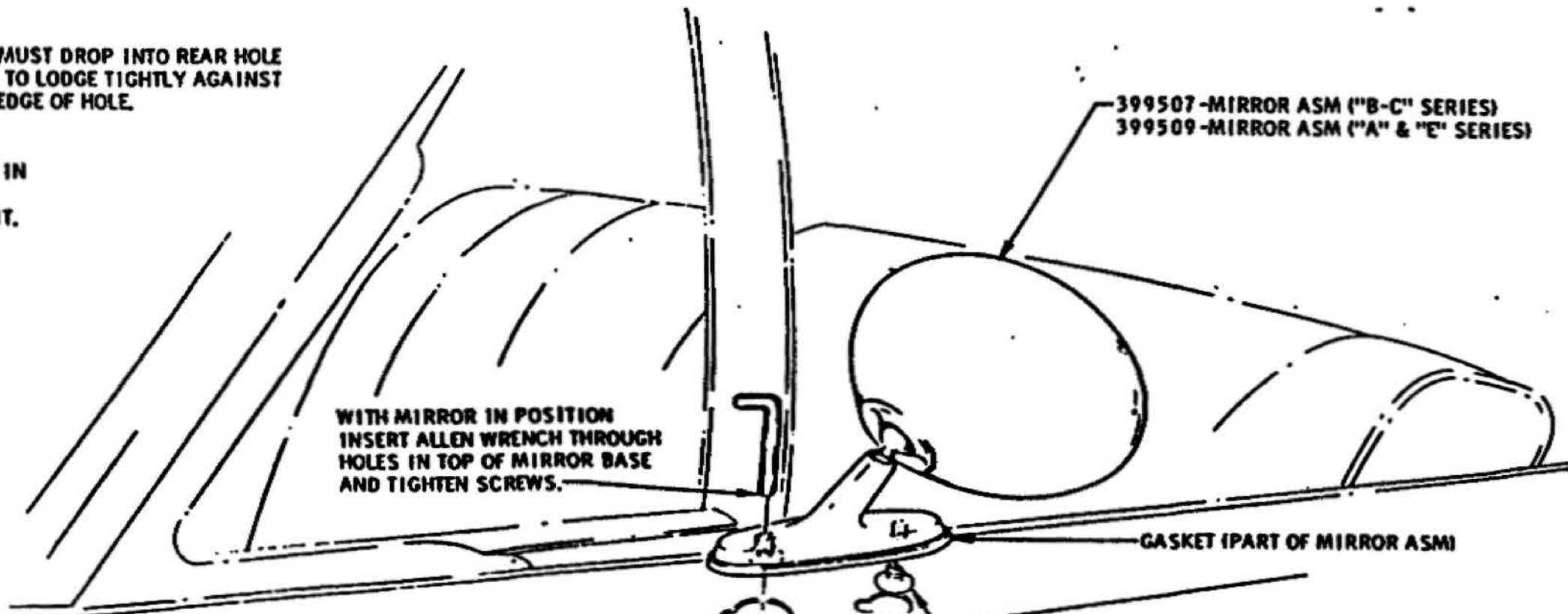
← FORWARD ON CAR



BOSS MUST DROP INTO REAR HOLE  
SO AS TO LODGE TIGHTLY AGAINST  
REAR EDGE OF HOLE.

INSERT SCREW HEADS INTO HOLES IN  
DOOR PANEL AND SLIDE MIRROR  
FORWARD AS FAR AS SLOTS PERMIT.

VIEW A



399507-MIRROR ASM ("B-C" SERIES)  
399509-MIRROR ASM ("A" & "E" SERIES)

WITH MIRROR IN POSITION  
INSERT ALLEN WRENCH THROUGH  
HOLES IN TOP OF MIRROR BASE  
AND TIGHTEN SCREWS.

GASKET (PART OF MIRROR ASM)

HOLES TO BE PROVIDED  
BY FISHER BODY

399513-SCREW  
INSERT INTO HOLES IN MIRROR  
BASE LEAVING SUFFICIENT CLEARANCE  
TO PERMIT SCREWS TO SLIDE INTO  
SLOTS WHEN MIRROR IS MOVED FORWARD.

TYPICAL INSTALLATION  
"A" SERIES SHOWN-"B-C" SERIES  
& "E" SERIES SIMILAR

▲  
▲  
▲  
25-40 LB. INL.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE				OUTSIDE REAR VIEW MIRROR			
				DATE	DEC 10 1968	FIRST USED	1970	OLDSMOBILE PRODUCT		MANUAL SEC.	PAGE
				DR. BY	B. PARKER			INFORMATION MANUAL		1-4	120
				CHECKED		REF.	1A25	SERIES		PART NO.	
				APPR.				A-B-C-E		404411-2-3	
DATE	SYM	REVISION	DR. CK.	APPR.							

MAJOR AXIS OF MAST OVAL MUST BE PARALLEL TO CENTER LINE OF CAR (AS CONTROLLED BY RIB ON MAST AND NOTCH IN LEAD-IN ASM) WHEN TIGHTENING NUT.



TYPICAL SECTION THROUGH MAST IN CAR POSITION

NOTE: ADJUST ANTENNA TRIMMER SCREW PER RADIO INSTRUCTIONS

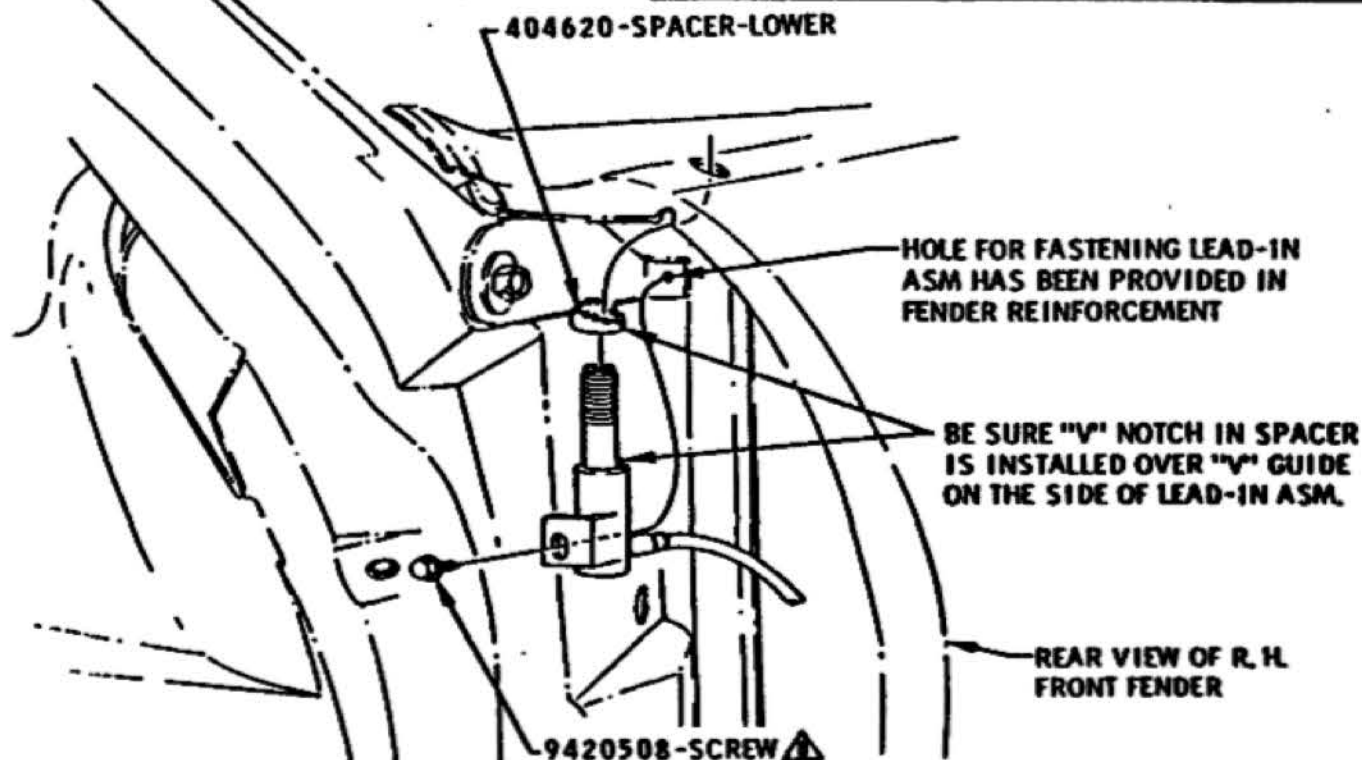
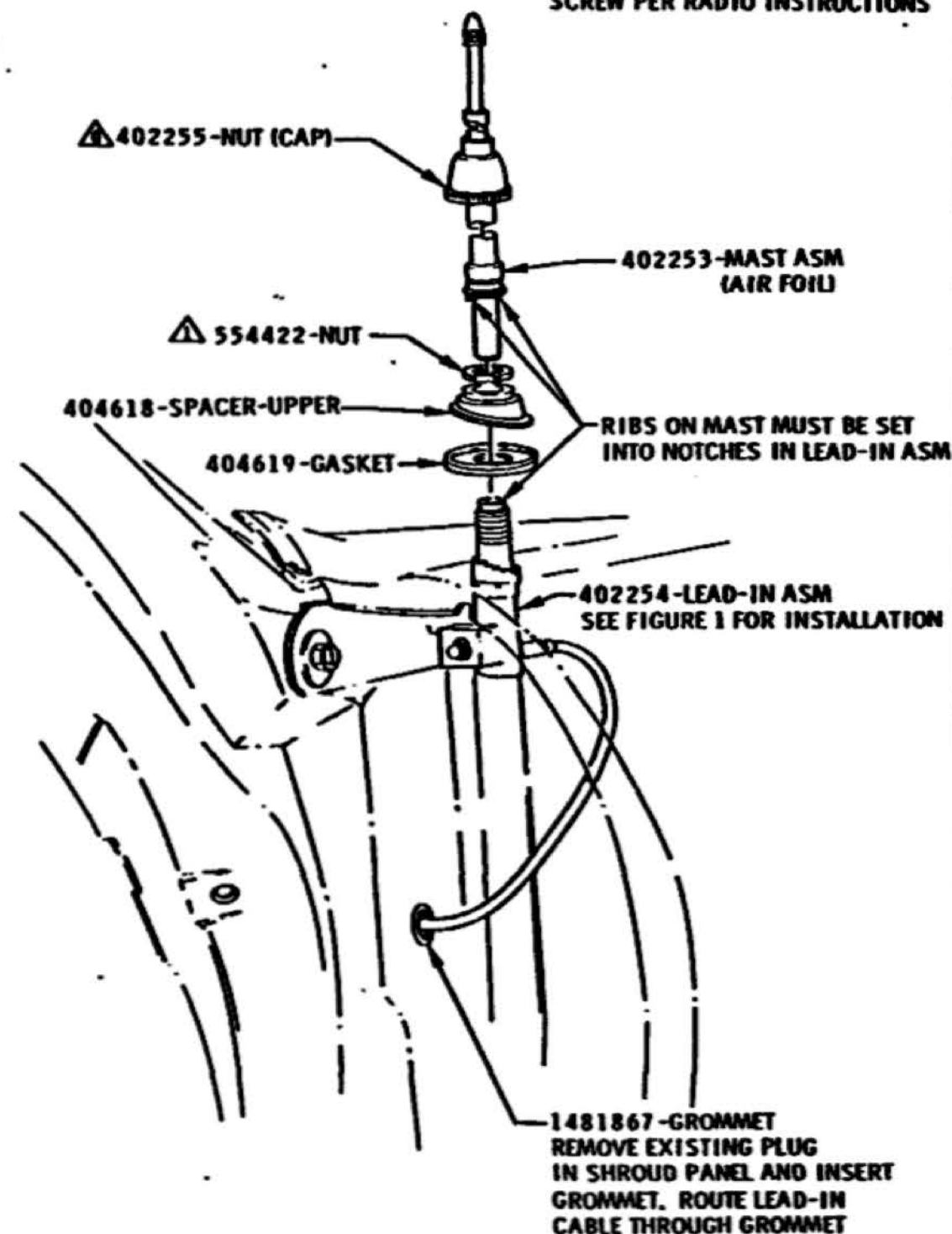


FIGURE 1



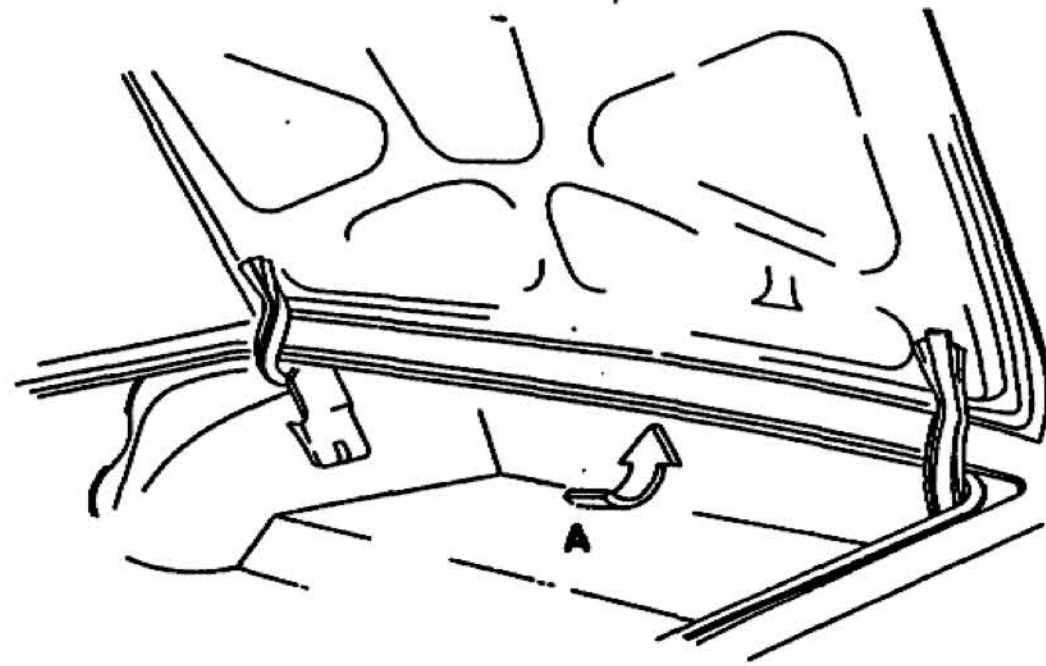
PLACE 389467-CAP OVER ANTENNA LEAD-IN ON CARS WITHOUT ANTENNA MAST. (FOR BODY WATER TESTING AND SHIPPING PURPOSES)

CAP INSTALLATION



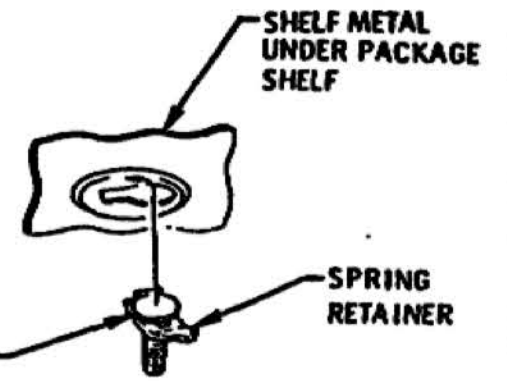
▲ 72 - 96 LB. IN. FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE		MANUAL ANTENNA	
DATE	1970	FIRST USED	1970
DR BY	B. PARKER	OLDSMOBILE PRODUCT INFORMATION MANUAL	1-4 126
CHECKED		REF. 35059-83-69	SERIES A
APPR.			PART NO. 404411
DATE	SYM	REVISION	DR. CR.



**SPEAKER LOCATION**

PUSH "T" BOLT UP THROUGH EXISTING HOLE IN BOTTOM OF THE PACKAGE SHELF, AGAINST THE SPRING RETAINER, AND SLIDE BOLT INTO THE SQUARE PORTION OF THE HOLE WHERE IT WILL RETAIN ITSELF.

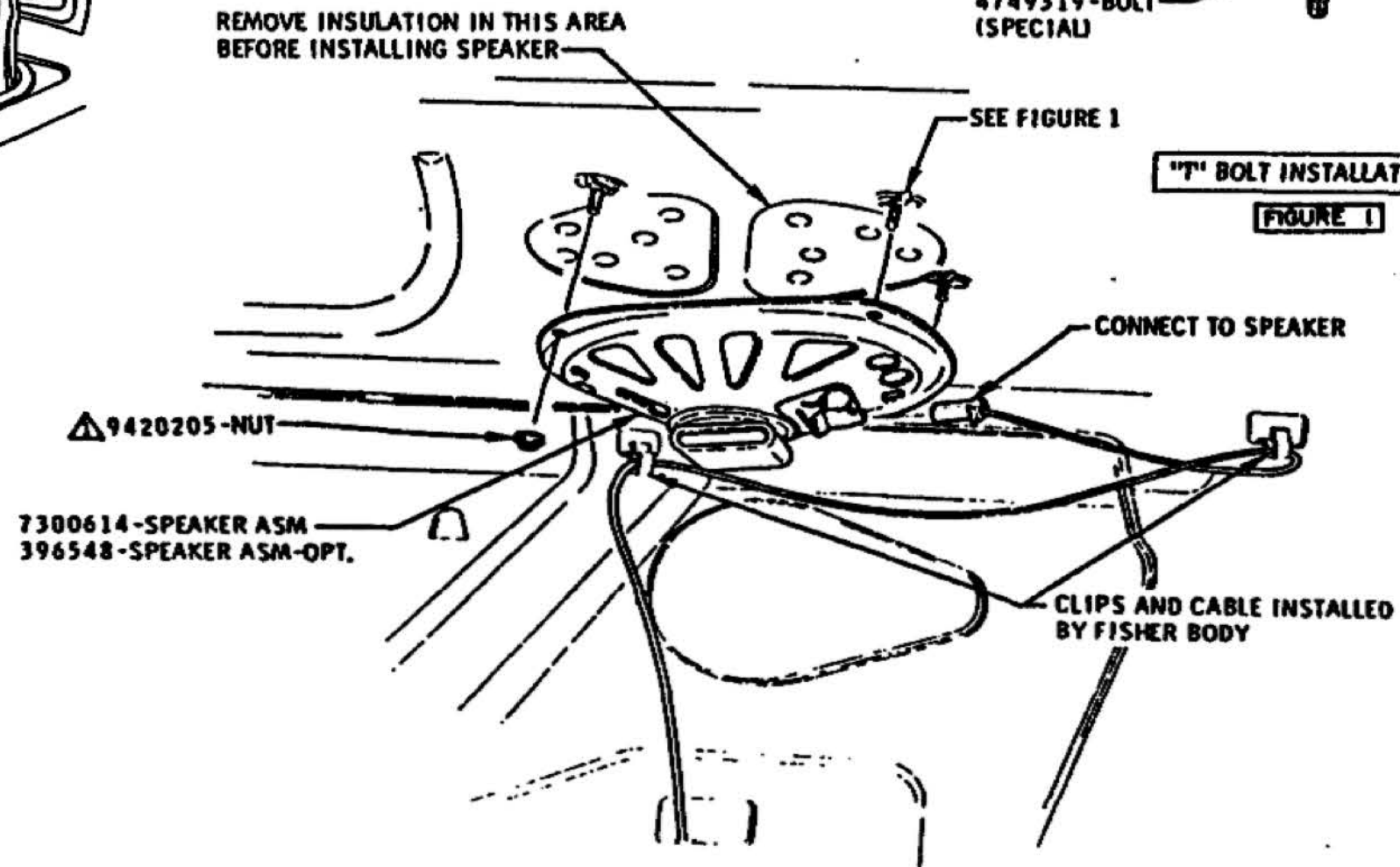


4749319-BOLT (SPECIAL)

REMOVE INSULATION IN THIS AREA BEFORE INSTALLING SPEAKER

SEE FIGURE 1

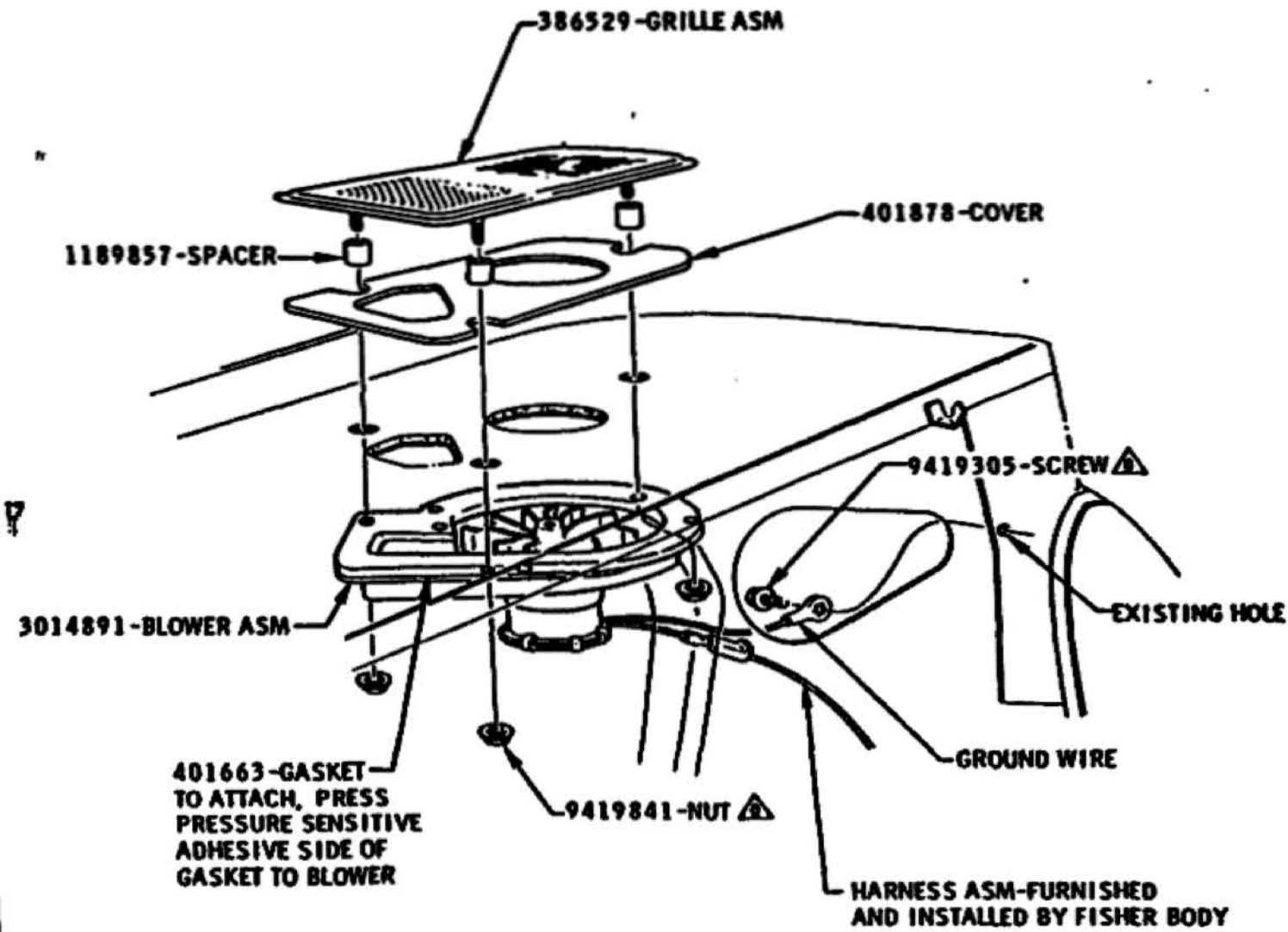
**"T" BOLT INSTALLATION**  
**FIGURE 1**



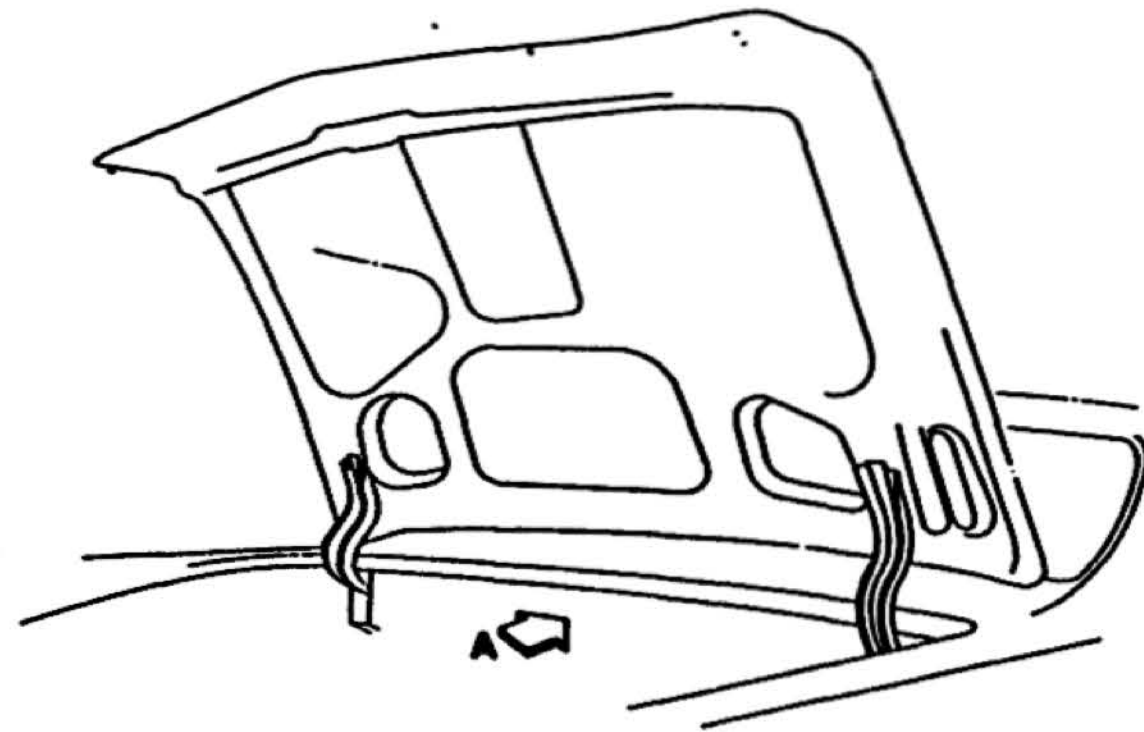
**SPEAKER INSTALLATION**  
**VIEW A**

▲ 7-11 LB. IN.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CK.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC	PAGE
					REAR SEAT SPEAKER (EXCEPT STATION WAGON)	1970		1-4	132
					DATE NOV. 23, 1968				
					DR BY B. PARKER				
					CHECKED				
					APPR. [Signature]	35U80	SERIES A		PART NO. 404411
					APPR. [Signature]				



**VIEW A**  
BLOWER ASSEMBLY  
INSTALLATION

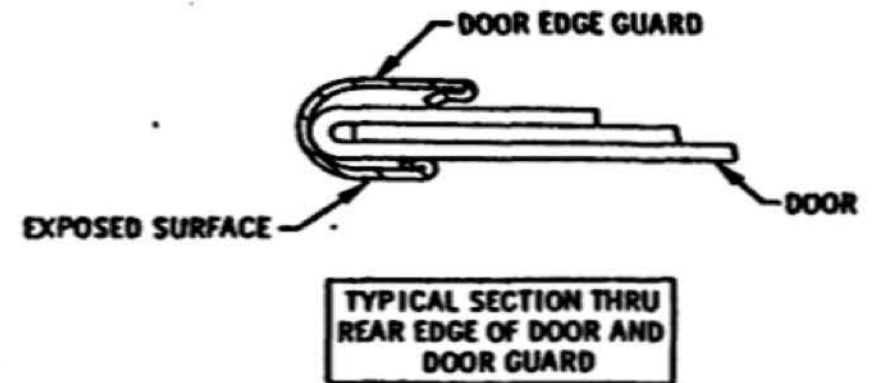
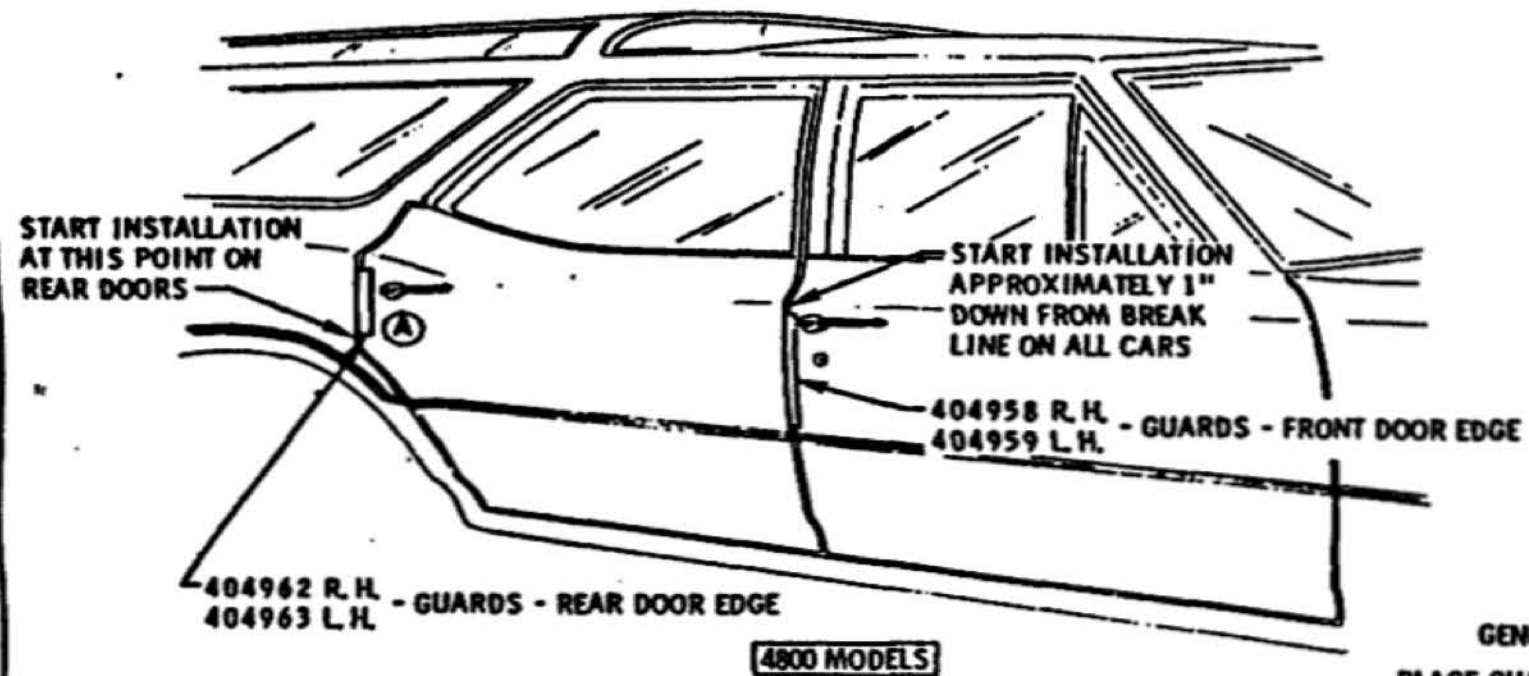


DEFOGGER LOCATION

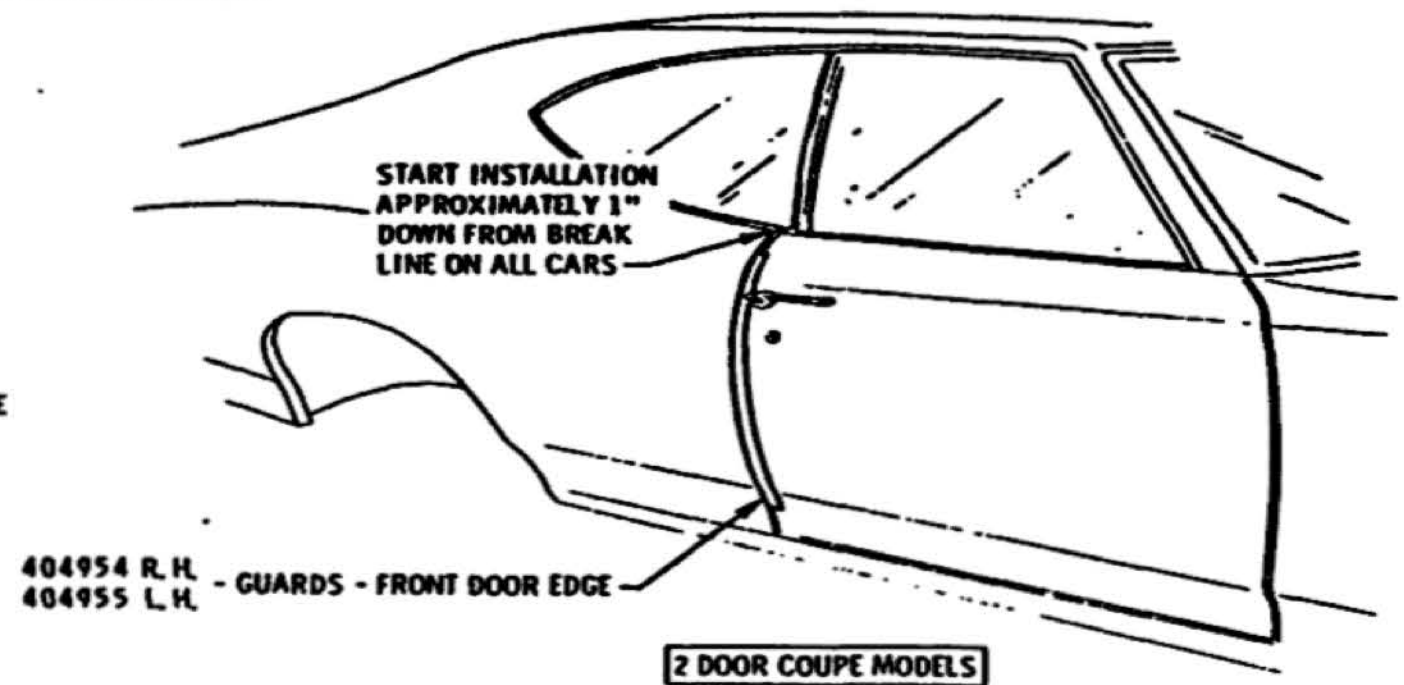
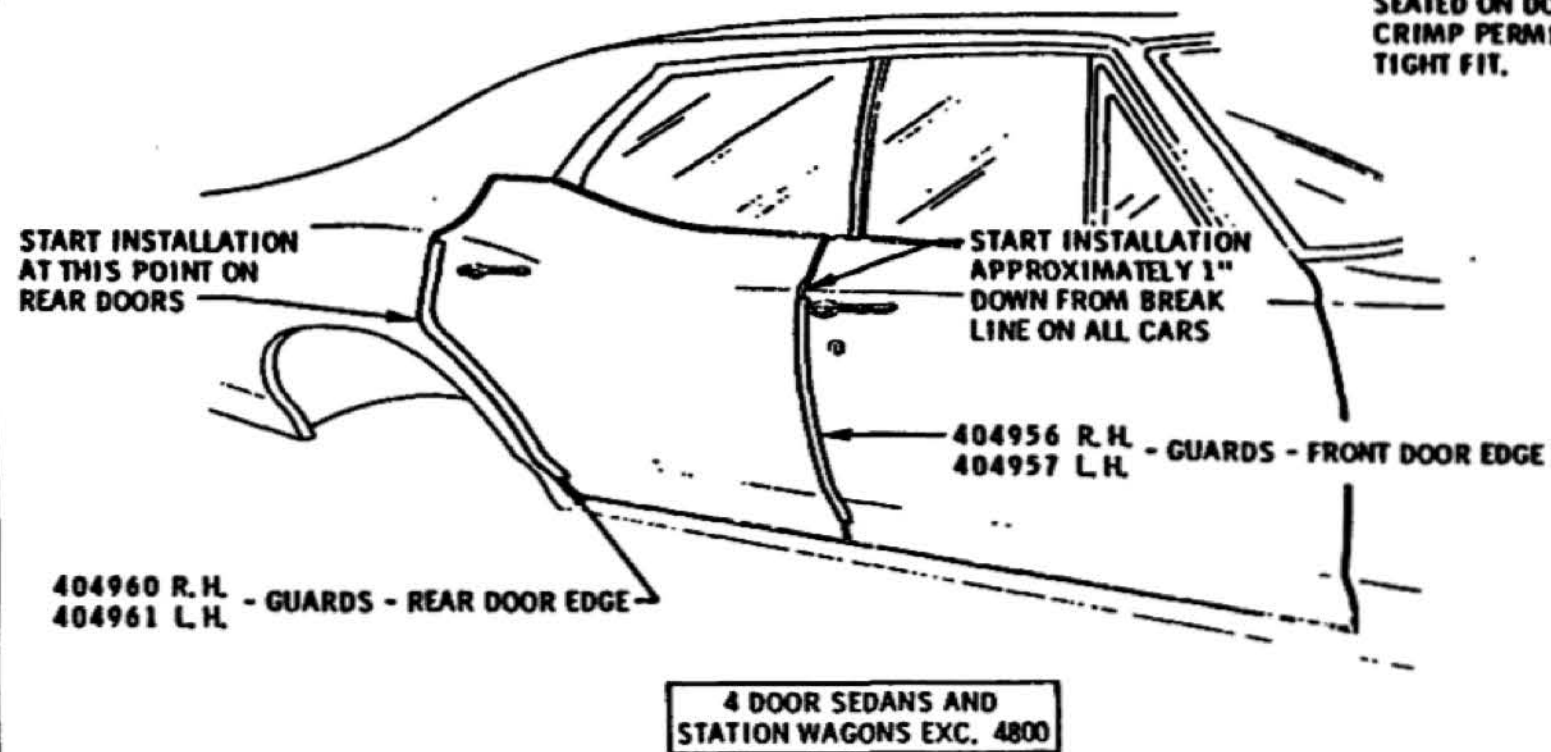
▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE REAR WINDOW DEFOGGER			
DATE JAN 18 1969				FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	
DR BY B. PARKER						MANUAL SEC. PAGE 1-4 134	
CHECKED [Signature]				REV. 35050		SERIES A	
APPR. H. SCHUTTENBERG				REV. 35050		PART NO. 404411	
DATE	SYN	REVISION	DR.	CL.	APPR.		

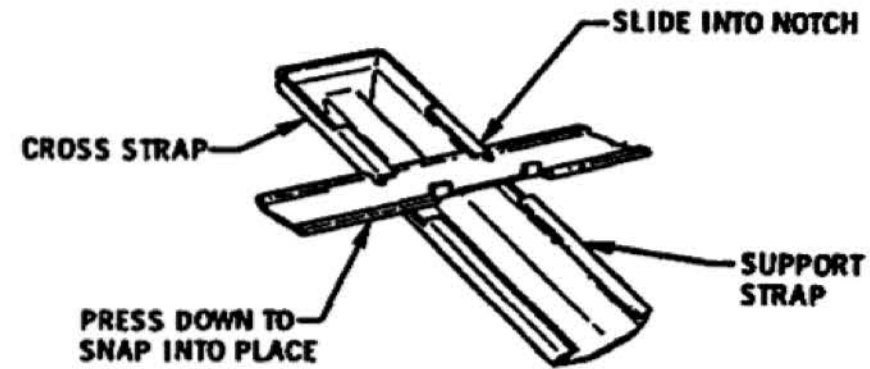
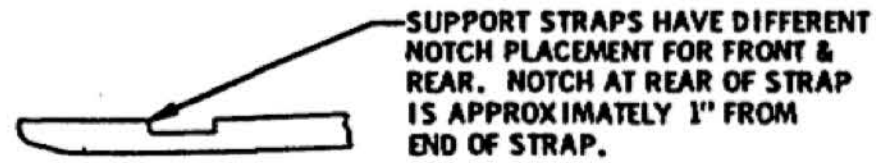




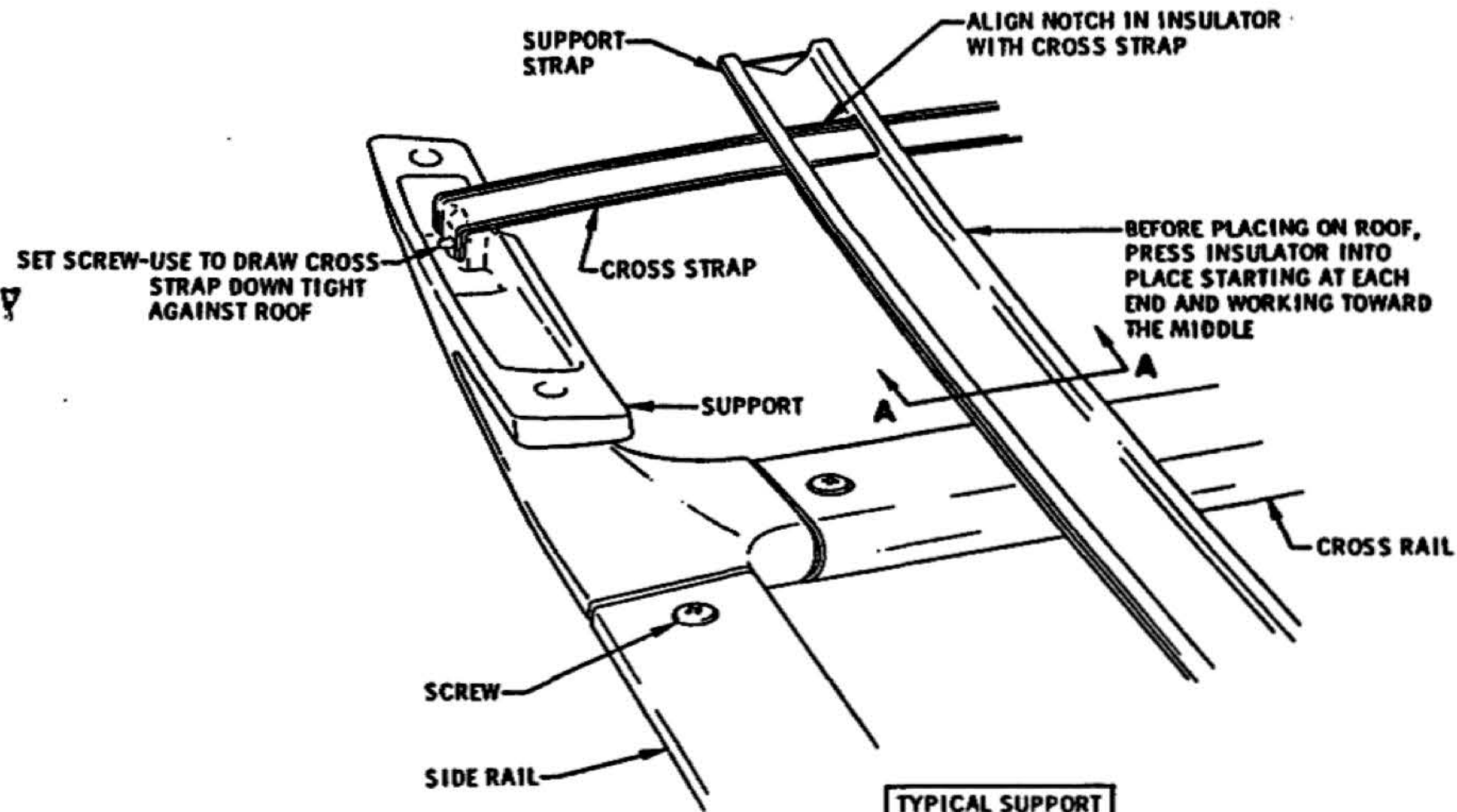
**GENERAL INSTRUCTIONS**  
 PLACE GUARD IN POSITION ON REAR EDGE OF DOOR AS SHOWN AND TAP OVER EDGE USING RUBBER Mallet OR BLOCK OF WOOD, UNTIL GUARD IS FIRMLY SEATED ON DOOR EDGE. LOCAL CRIMP PERMISSIBLE TO SECURE TIGHT FIT.



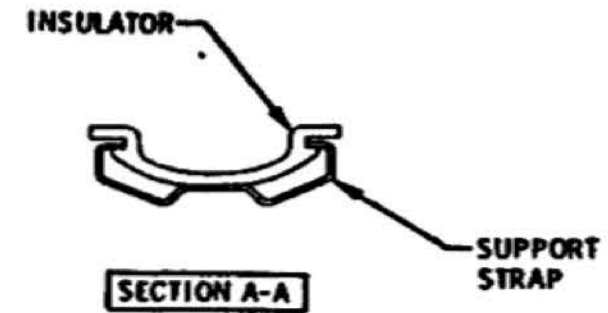
				TITLE		DOOR EDGE GUARDS			
				DATE	FEB. 3, 1969		FIRST USED	1970	
				OR BY	P.J. McKESSY		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE
				CHECKED	J. J. [Signature]		REF. 35393		1-4 136
				APPR.	R. [Signature]		SERIES	A	
DATE	BY	REVISION	DR. CK.	APPR.			PART NO.	404411	
11-19-69	A	R. DR. EDGE GUARD REV	BP/D						



TYPICAL CROSS STRAP TO SUPPORT STRAP INSTALLATION

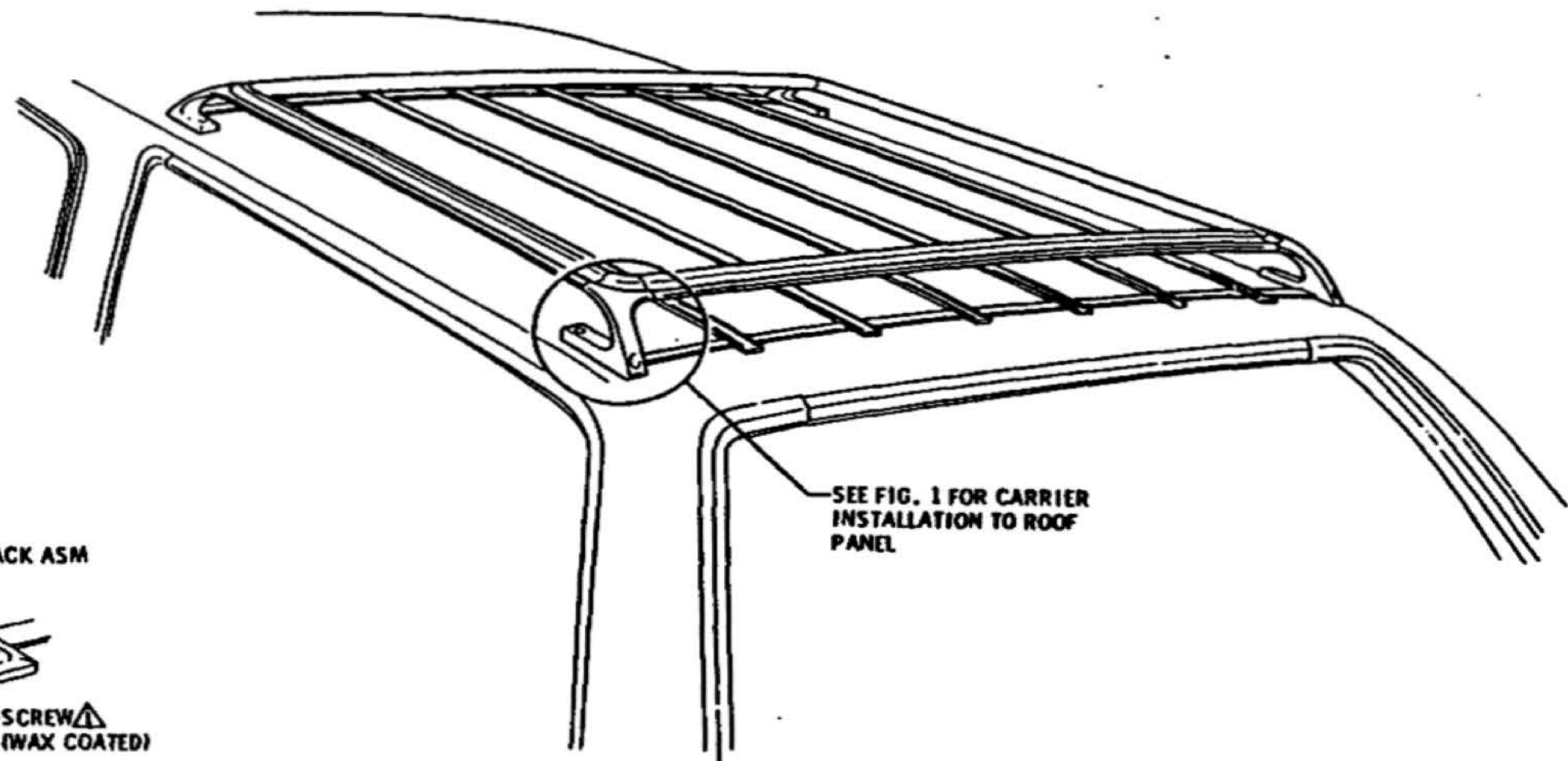


TYPICAL SUPPORT INSTALLATION  
(L.H. REAR SHOWN)

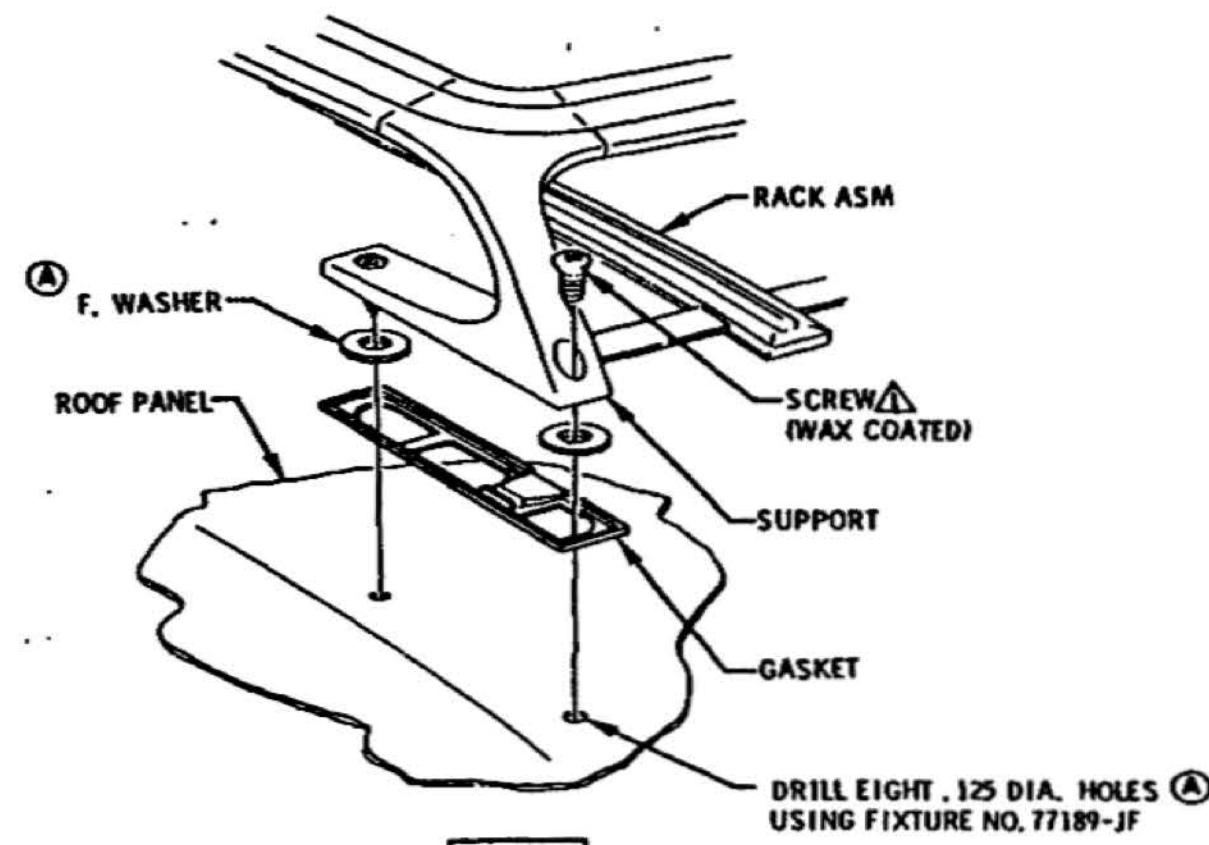


ALL PARTS ARE PART OF 983105 CARRIER PACKAGE

				TITLE LUGGAGE CARRIER - STATION WAGON (EXC. 4800)			
DATE MAR. 10, 1969		FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE 1-4 140	
DR BY D. C. LIMEDAUH		APP. C. J. [Signature]		SERIES A		PART NO. 404411	
DATE	SYM	REVISION	DR.	CK.	APP.		



SEE FIG. 1 FOR CARRIER  
 INSTALLATION TO ROOF  
 PANEL



SUPPORT  
 TO ROOF  
 FIGURE 1

ALL PARTS ARE PART OF  
 983105 CARRIER PACKAGE

▲ 20 - 30 LB. IN.  
 ▲ FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

		TITLE		LUGGAGE CARRIER - STATION WAGON (EXC. 4800)	
		DATE	MAR. 10, 1969	FIRST USED	1970
		DR BY	C. J. [unclear]	OLDSMOBILE PRODUCT INFORMATION MANUAL	1-4 142
		CHECKED	[unclear]	REV.	3TV55
		APPR.	C. J. [unclear]	SERIES	A
1-8810	A	WASHER ADDED - DIM. REV 50	B	DT	PART NO. 404411
DATE	SYM	REVISION	DR. CK.	APPR.	

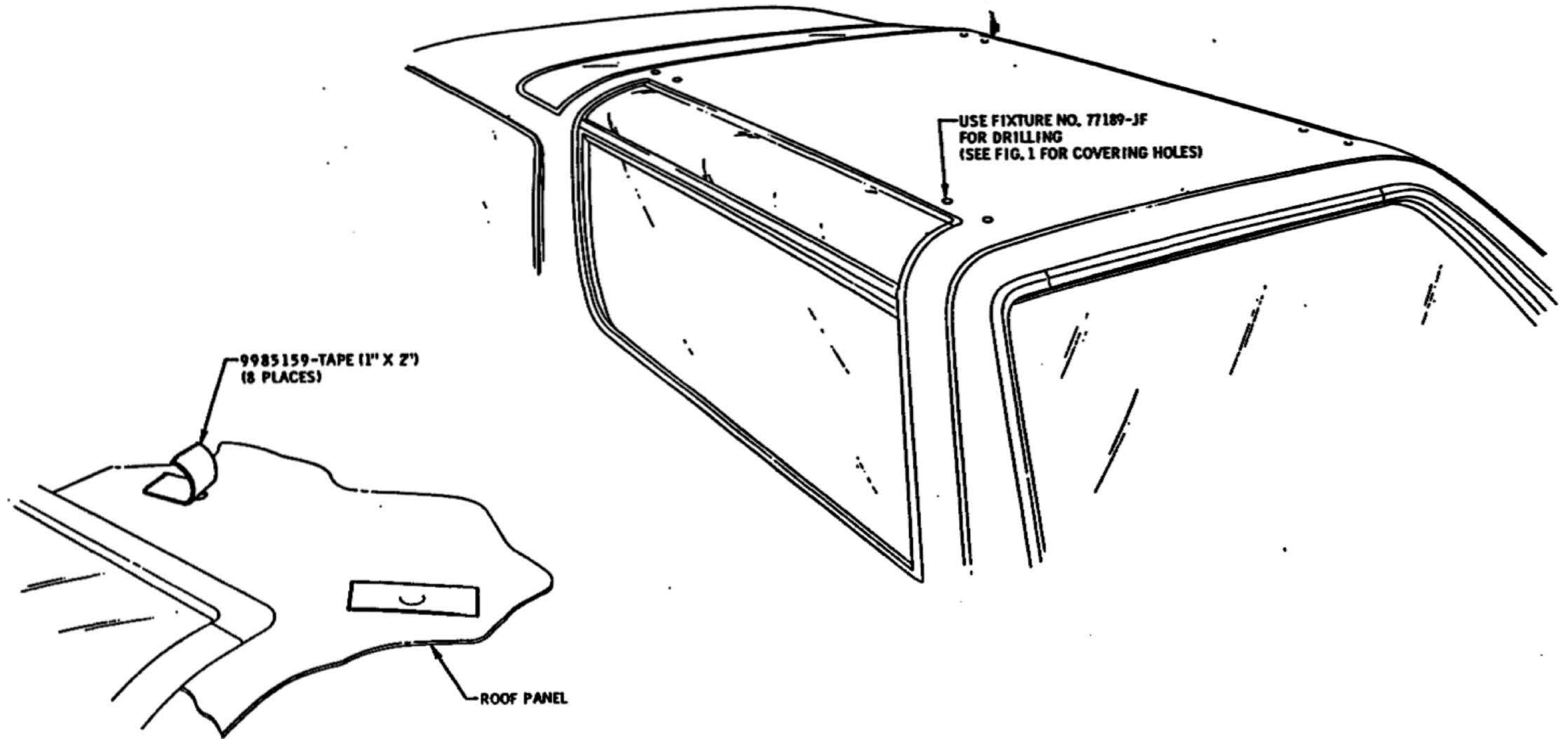


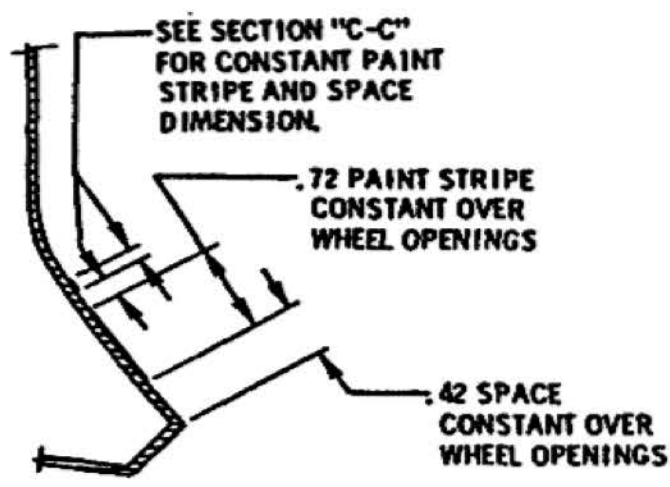
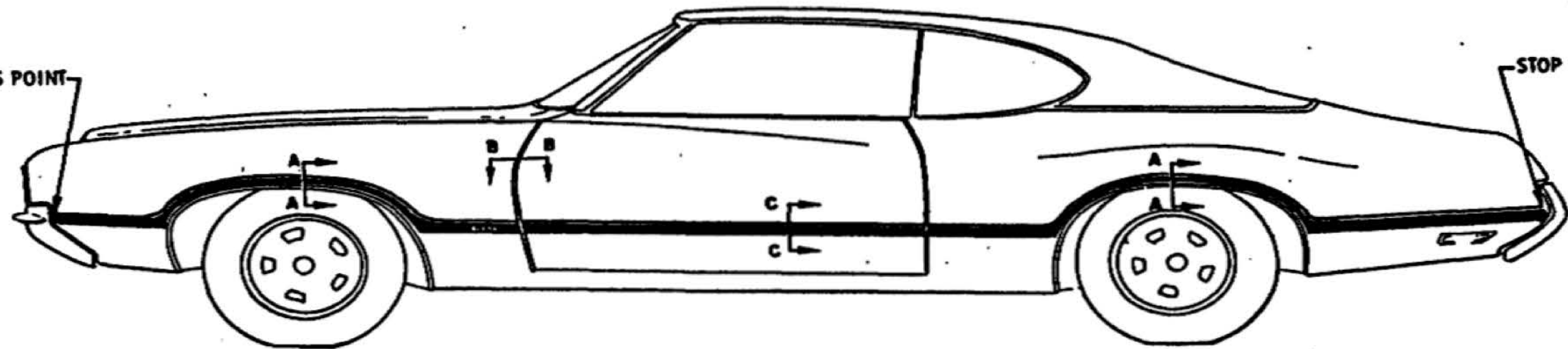
FIGURE 1

(DRILL & TAPE ONLY)

					TITLE LUGGAGE CARRIER (4800 MODELS ONLY)					
					DATE	FIRST USED	OLDSMOBILE PRODUCT		MANUAL SEC.	PAGE
					MAR. 10. 1969	1970	INFORMATION MANUAL		1-4	144
					DR. BY					
					C. J. ...					
					CHECKED					
					APPR.					
DATE	SYM.	REVISION	DR.	CK.	APPR.	RD. 53V35	SERIES	A	PART NO.	404411

STOP STRIPES AT THIS POINT

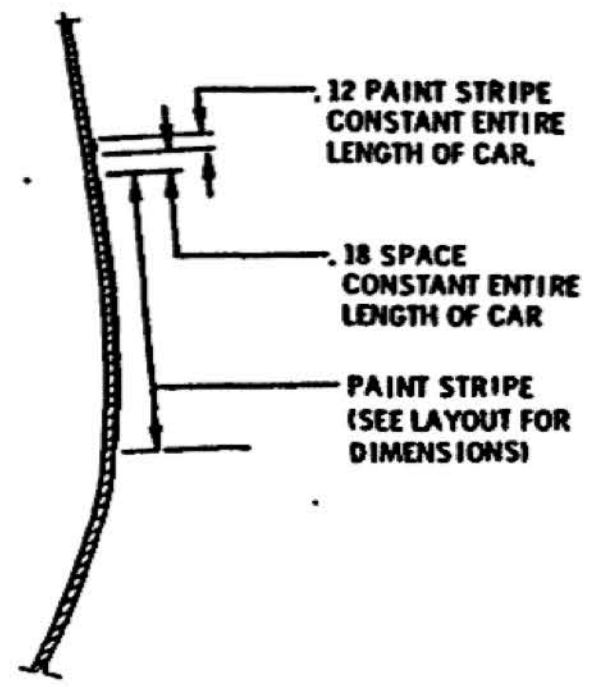
STOP STRIPES AT THIS POINT



**SECTION "A-A"**  
(TYPICAL AT WHEEL OPENINGS)



**SECTION "B-B"**  
(TYPICAL AT EDGES OF DOOR, FRONT FENDERS AND REAR QUARTER PANEL)



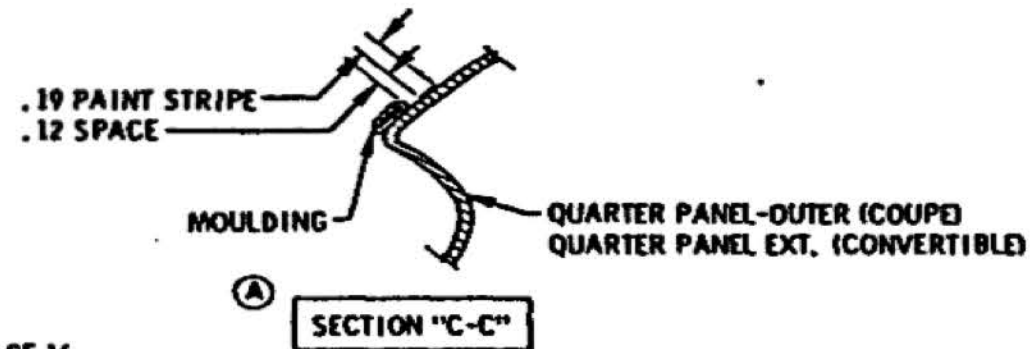
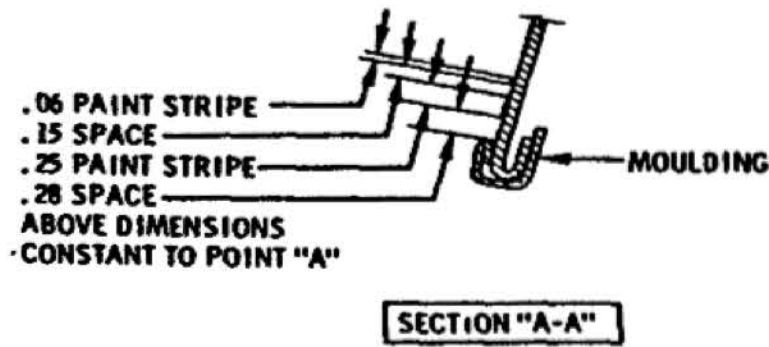
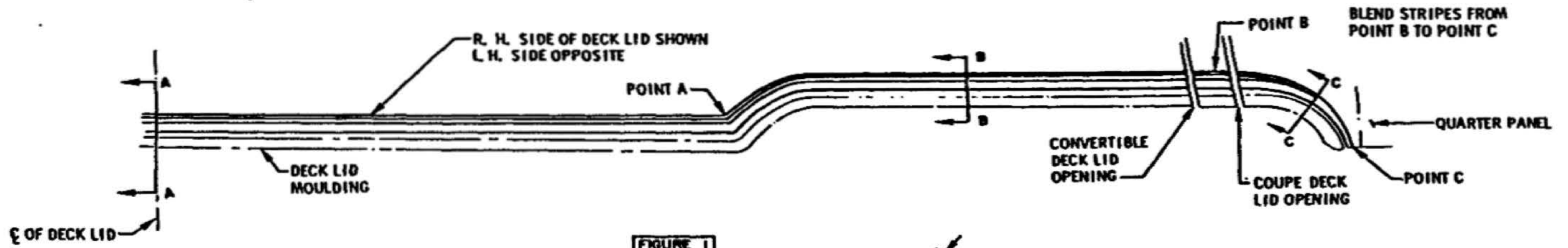
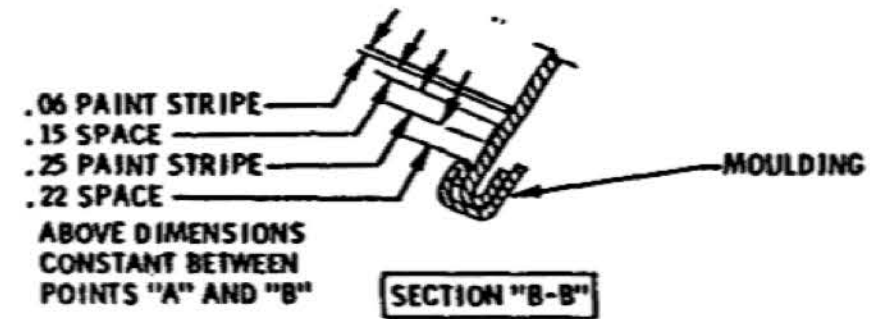
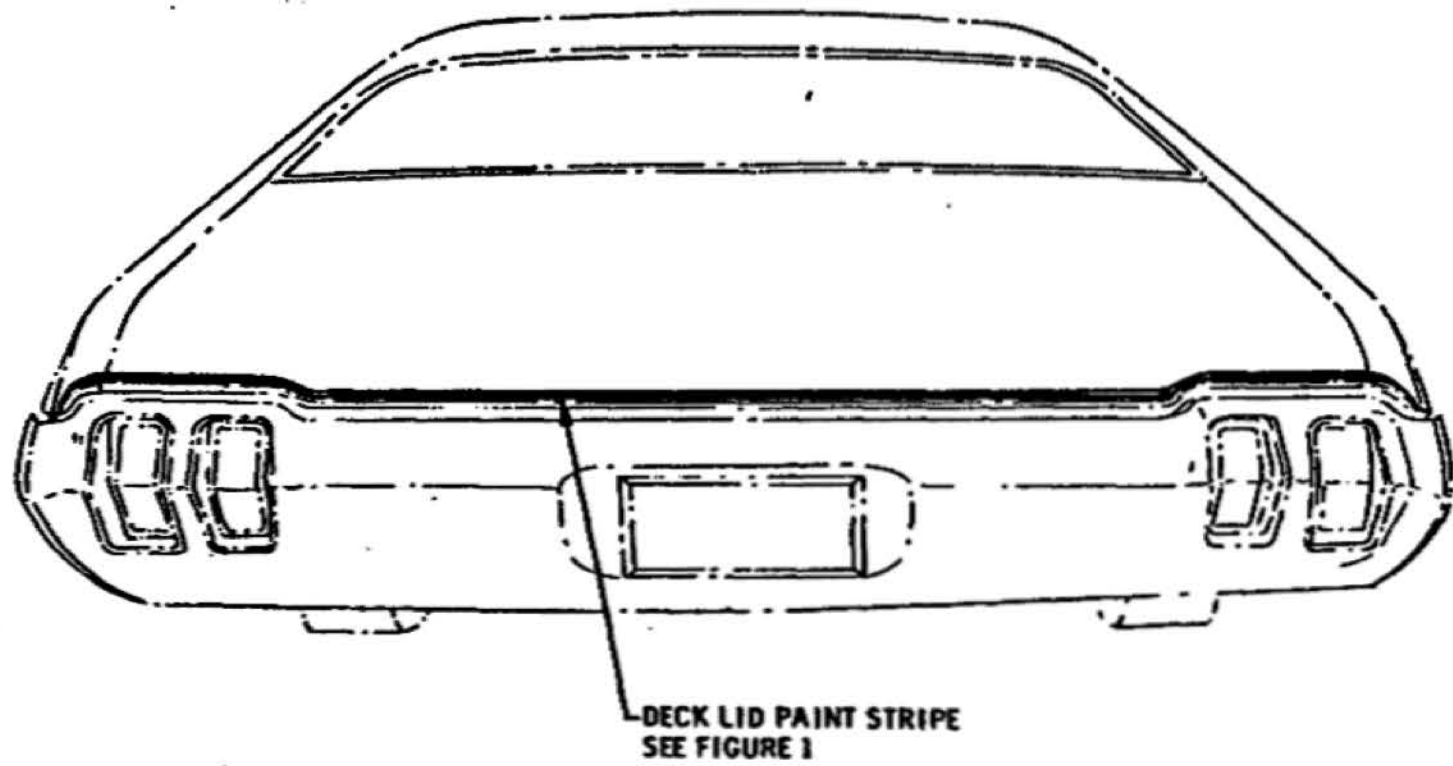
**SECTION "C-C"**

NOTE:  
SEE CHART IN SECTION O,  
PAGE 16 FOR PAINT STRIPE  
USAGE.

(REF) LAYOUT NO. 406787

(A)

				TITLE				BODY SIDE PAINT STRIPES (35W30 & 35W31)			
				DATE		FIRST USED		OLDSMOBILE PRODUCT		MANUAL SEC. PAGE	
				1-18-76		1970		INFORMATION MANUAL		1-4 152	
				DR. BY		CHKD.		SERIES		PART NO.	
				B. PARKER		J. W. [signature]		A		404411	
				APPR.		APPR.					
				A NOTE REMOVED							
DATE	SYM	REVISION	DR.	CK.	APPR.						

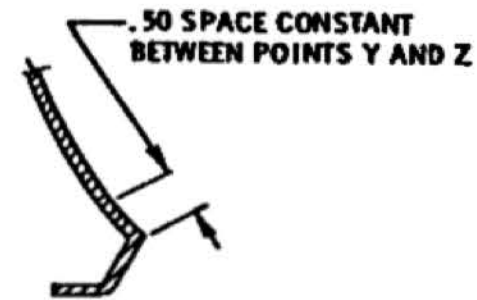
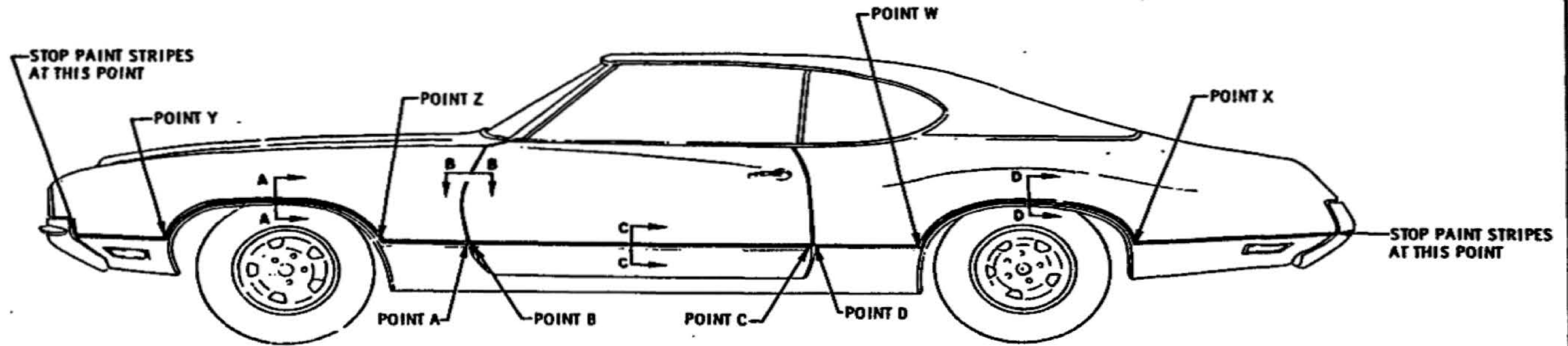


NOTE:  
SEE SECTION O-PAGE 16  
FOR PAINT STRIPE USAGE

(REF) LAYOUT 405623

(B)  
14400 SERIES EXC. 35Y74)

				TITLE		DECK LID PAINT STRIPES			
DATE	BY	REVISION	DR.	CK.	APPR.	FIRST USED	197C	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
3-3-70	B	USAGE REVISED							1-4 156
5-10-70	A	SECTION C-C ADDED	BA	DT	APPR. J. T. B...	REF.	SERIES	A	PART NO. 404411

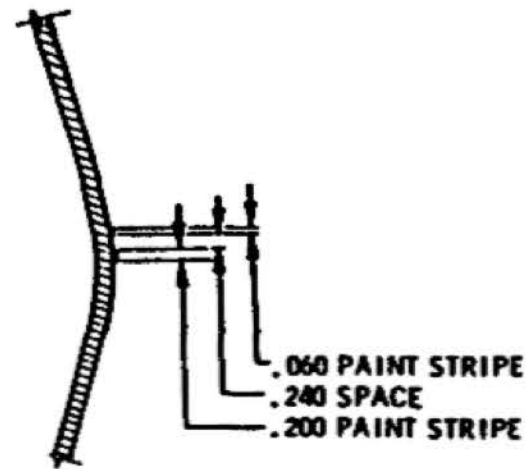


SECTION "A-A"



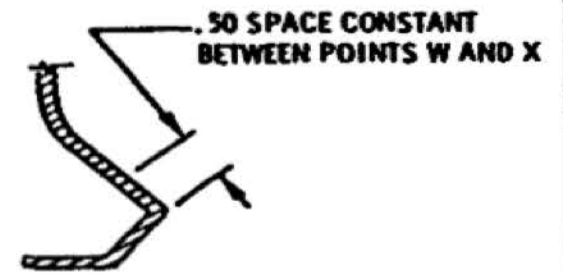
(TYPICAL AT EDGES OF DOORS, FRONT FENDERS AND REAR QUARTER PANELS)

SECTION "B-B"



ABOVE DIMENSIONS CONSTANT ENTIRE LENGTH OF CAR

SECTION "C-C"



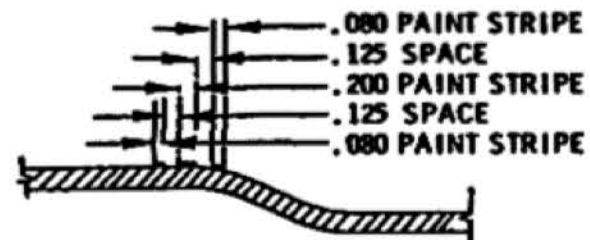
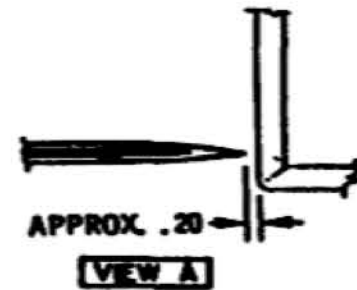
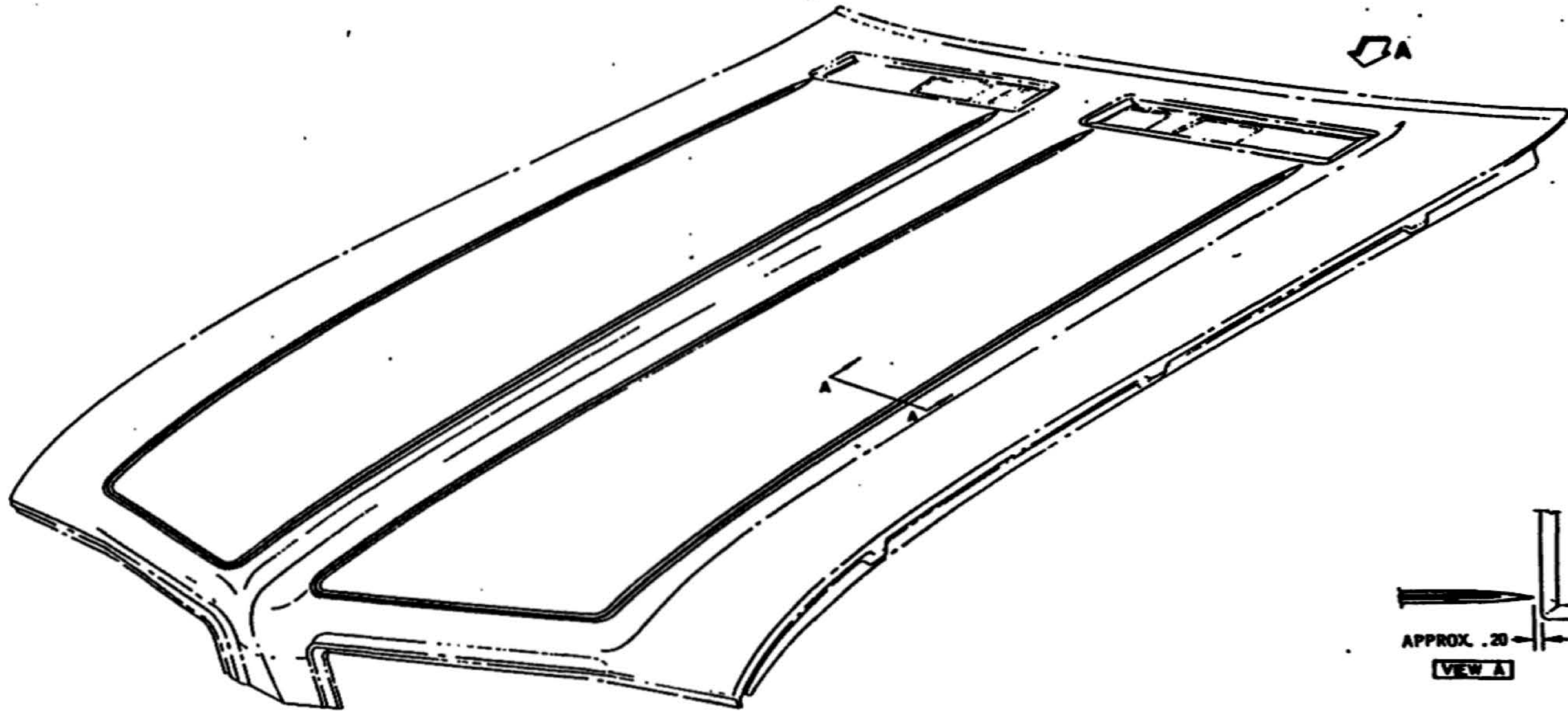
SECTION "D-D"

NOTE:  
SEE CHART IN SECTION O-  
PAGE 16 FOR PAINT STRIPE USAGE

(REF) LAYOUT NO. 406101

(A)

DATE		TITLE		FIRST USED		MANUAL SEC.		PAGE	
3-3-70		A USAGE REVISED		1970		1-4		150	
DATE	BY	REVISION	DR.	CK.	APPR.	REF.	SERIES	PART NO.	
					J. Wiegman		A	404411	



ABOVE DIMENSIONS AND SPACING  
CONSTANT EXCEPT AS SHOWN.

SECTION "A"-A"

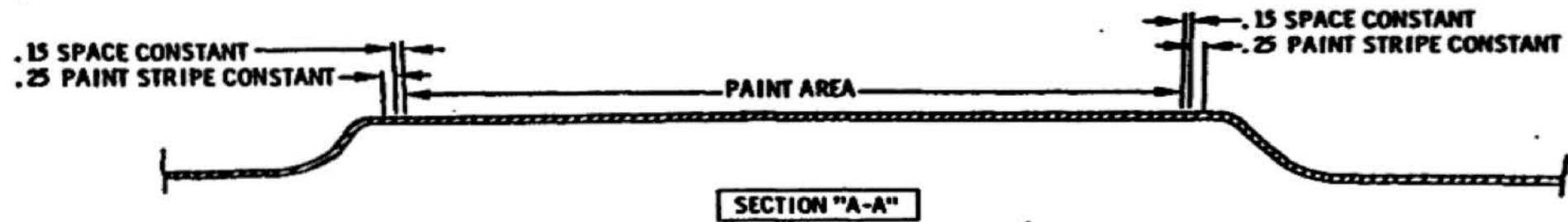
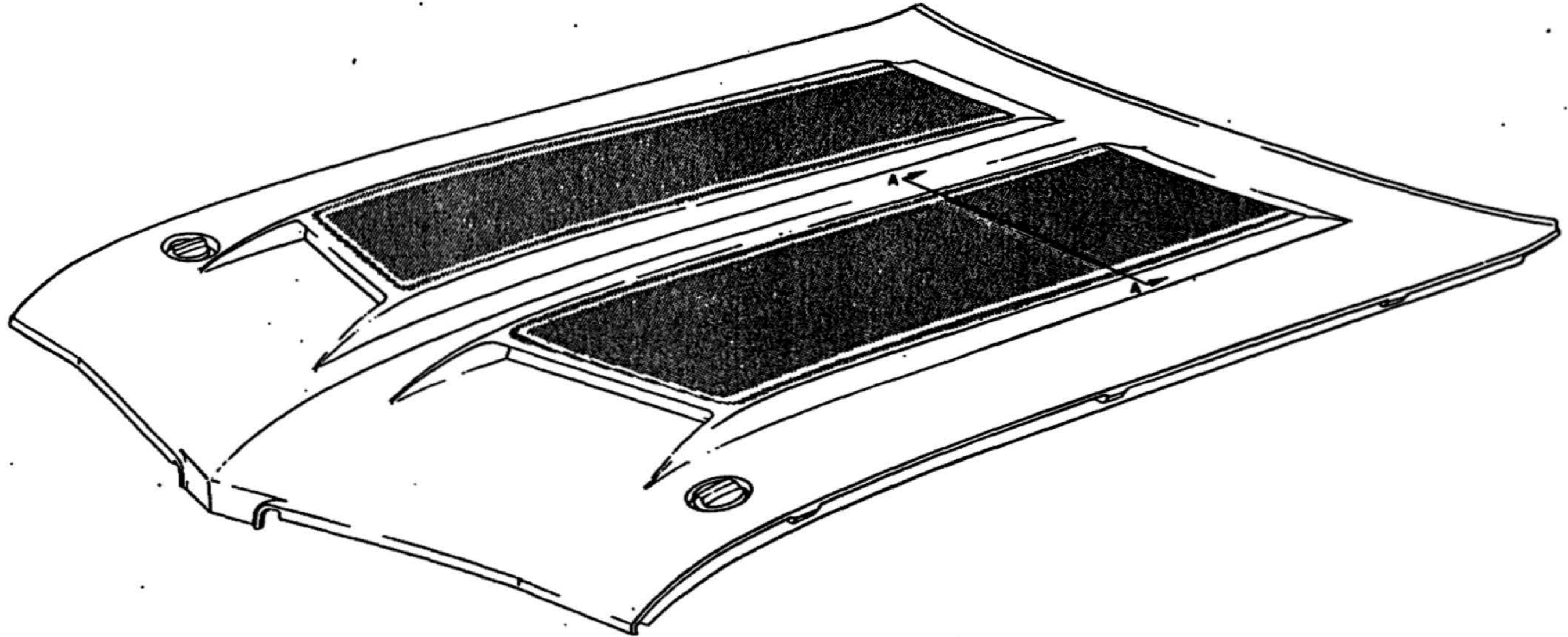
NOTE:  
SEE CHART IN SECTION O-  
PAGE 16 FOR PAINT STRIPE  
USAGE.

(REF) LAYOUT NO. 406102

(35Y73)

DATE	BY	REVISION	DR. CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
					HOOD PAINT STRIPES	1970		1-4	160
					DATE <i>MAR 31 1969</i>				
					DR BY <i>G. PARKER</i>				
					CHECKED <i>J. G.</i>				
					APPR. <i>T. Wegner</i>				
							SERIES <b>A</b>		PART NO. <b>404411</b>

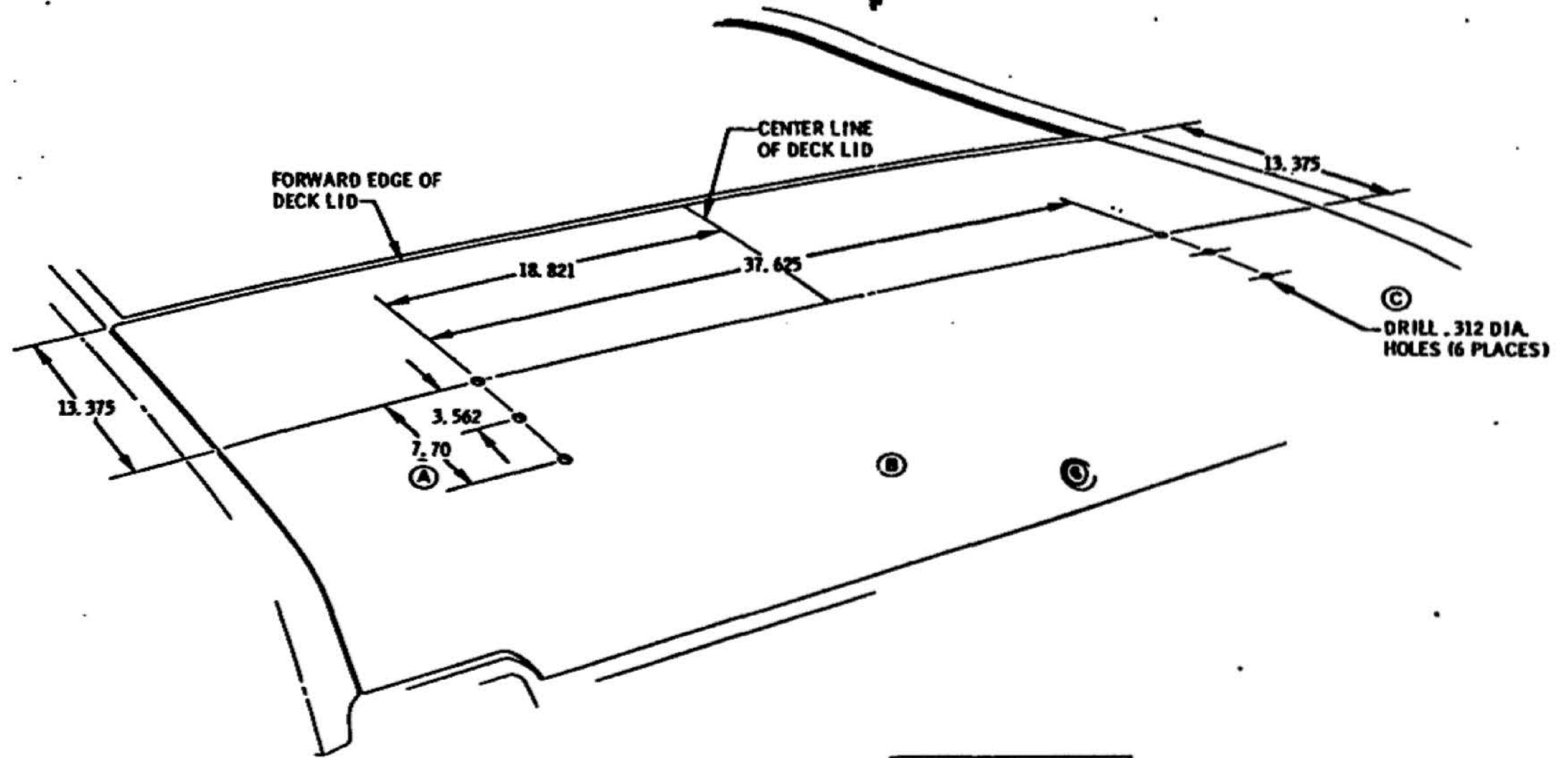




SEE CHART IN SEC. Q,  
PAGE 16 FOR HOOD  
PAINTING USAGE.

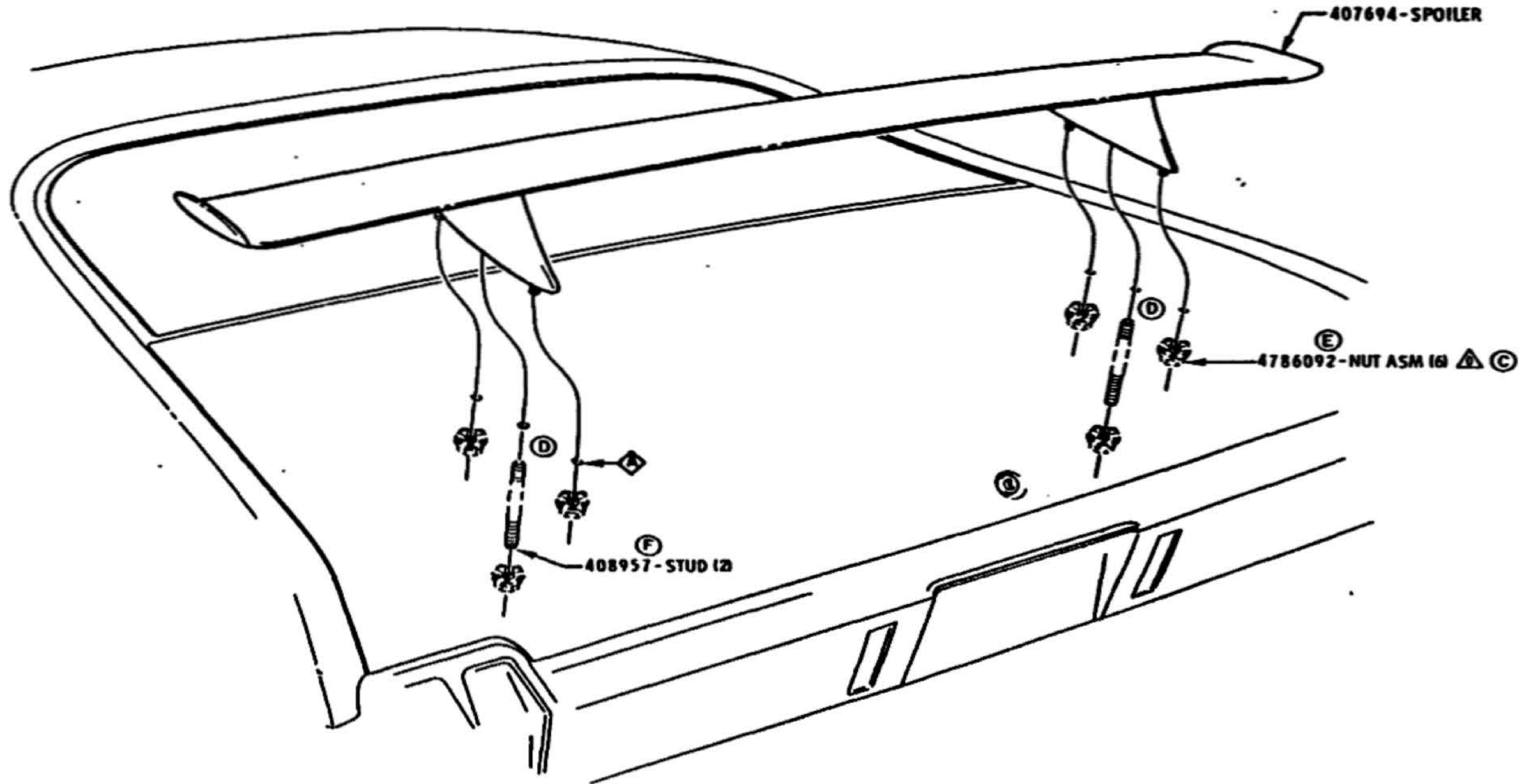
REF. LAYOUT 406736 (A)

				TITLE		HOOD PAINTING (35W25, 35W30 & 35W31)			
				DATE		MAY 12 1969		FIRST USED	
				DR. BY		B. PARKER		1970	
				CHECKED		J. WILSON		OLDMOBILE PRODUCT	
				DATE		7-25-69		INFORMATION MANUAL	
				SYM		A		MANUAL SEC.	
				REVISION		TITLE REVISED		1-4	
				DR. CL.		B. PARKER		PAGE	
				APPR.		J. WILSON		162	
						REV. SYMBL. 11		SERIES	
								A	
								PART NO.	
								404411	



HOLE DRILLING LAYOUT  
(DECK LID)

TITLE				35W35 SPOILER INSTALLATION								
1-25-70	C	WAS DRILL .281 DIA. HOLES	DR	DATE	OCT. 10, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	1-4	PAGE	180
10-12-68	B	INSTALLATION NOTES REAM	DR	DR. BY	P. Locatelli	CHECKED						
10-12-68	A	DIMENSION 7.70 ADDED	DR	APPR.	K. Howell							
DATE	SYM	REVISION	DR.	CL.	APPR.							

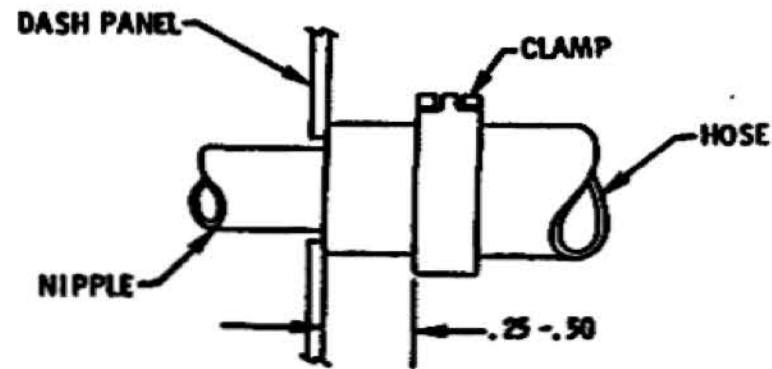


**A** APPLY A WAD OF 9981145-SEALER **G** OVER HOLES ON TOP OF DECK LID, AND OVER FASTENINGS ON INSIDE OF DECK LID.

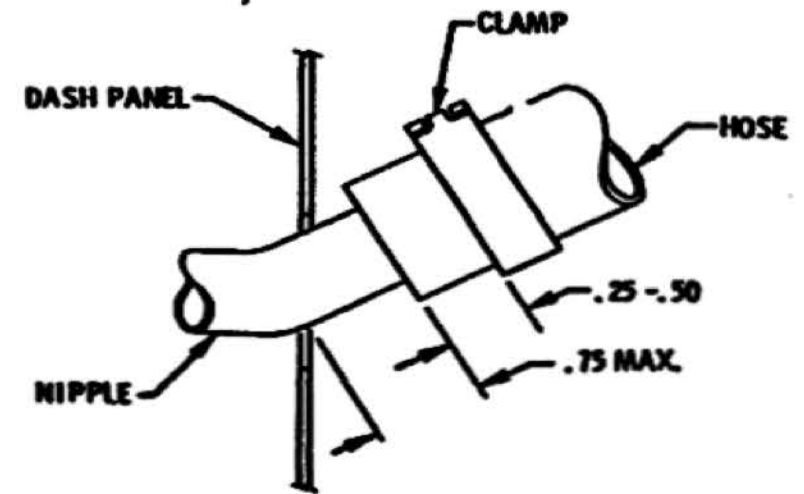


FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL DOC.	PAGE
					2-12-70	E	WAS 271179-NUT				35W35 SPOILER INSTALLATION	1970		1-4	182
					2-12-70	D	121753-WASHER REMOVED				DATE <i>07-12-1969</i>				
					1-22-70	C	TORQUE ADDED				DR. BY <i>P. Localelli</i>				
8-12-70	G	WAS 9981074-SEALER			12-1-69	B	WAS 9421281-WASHER				CHECKED <i>[Signature]</i>				
8-12-70	F	WAS 9419022-BOLT			11-1-69	A	WAS 9409022-BOLT				APP. <i>R. [Signature]</i>				
													<b>A</b>		<b>404411</b>

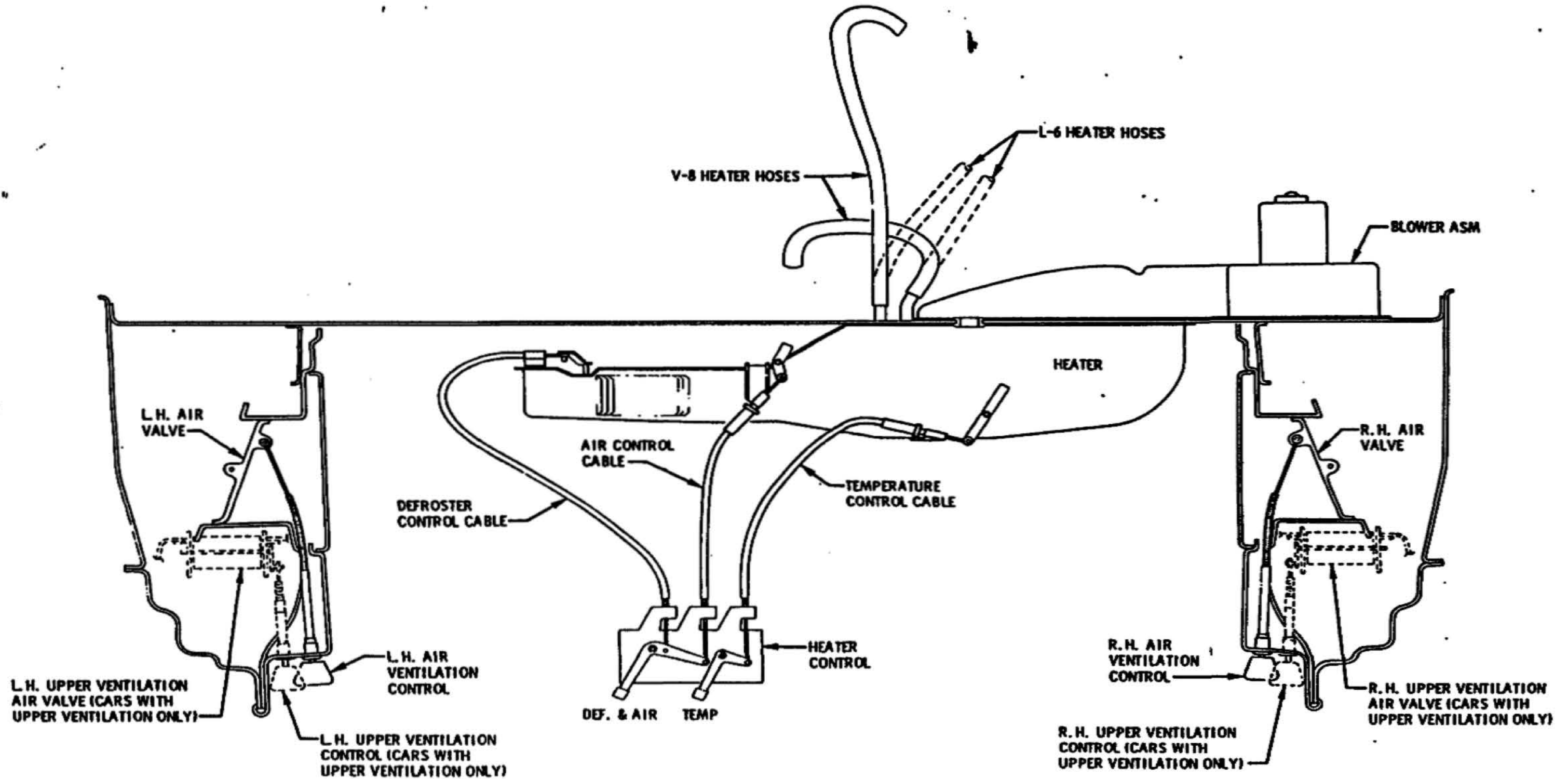


**FIGURE 1**  
TYPICAL SECTION THRU  
DASH PANEL AT CORE  
NIPPLE (STRAIGHT)

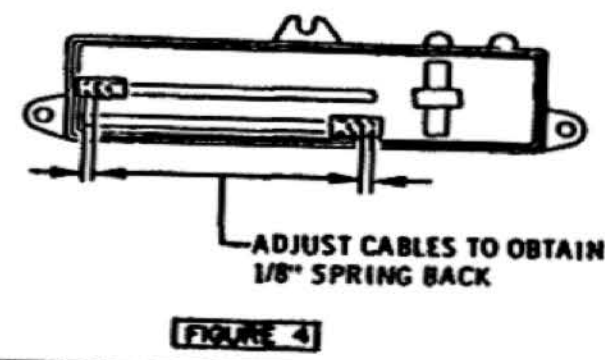
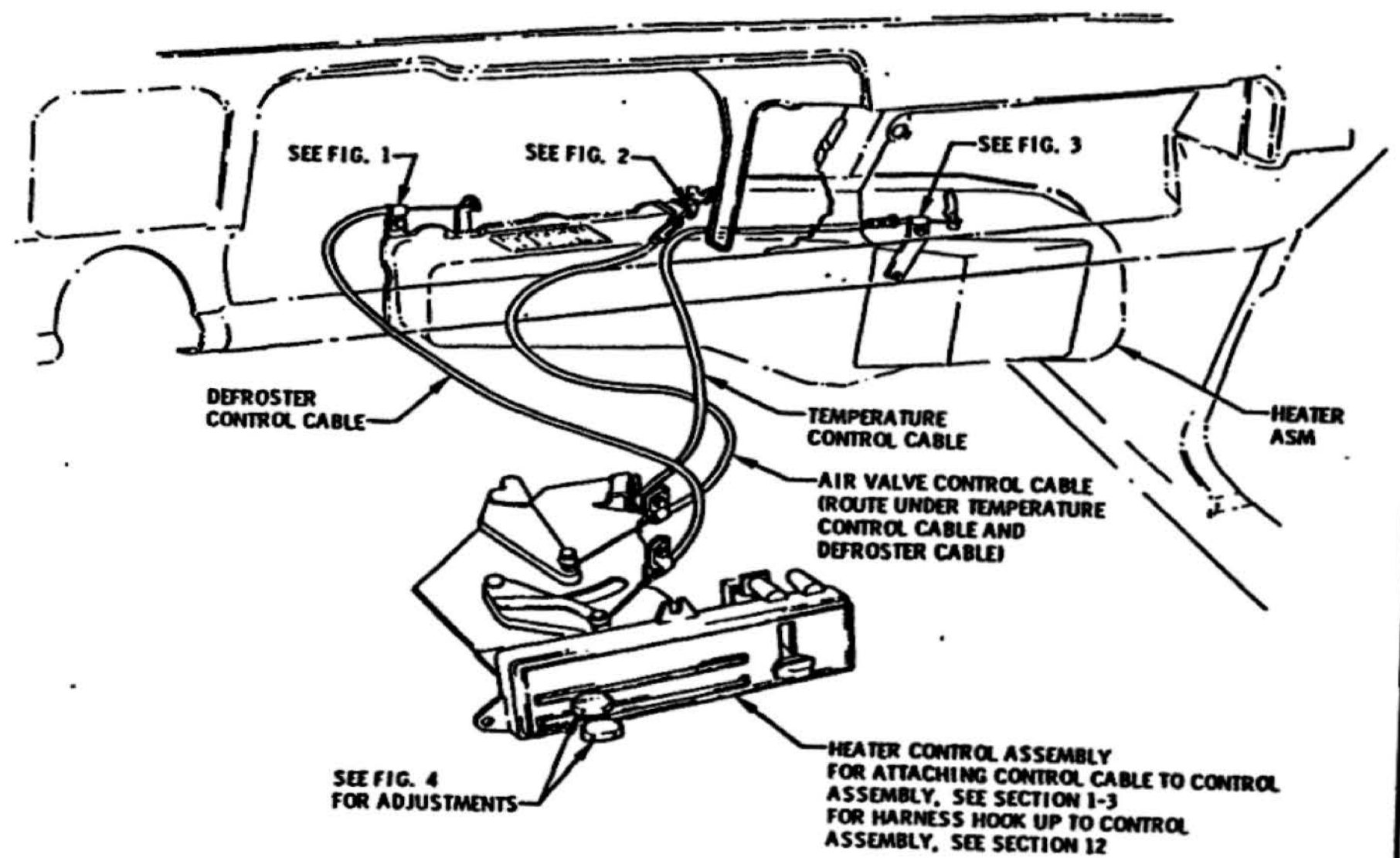
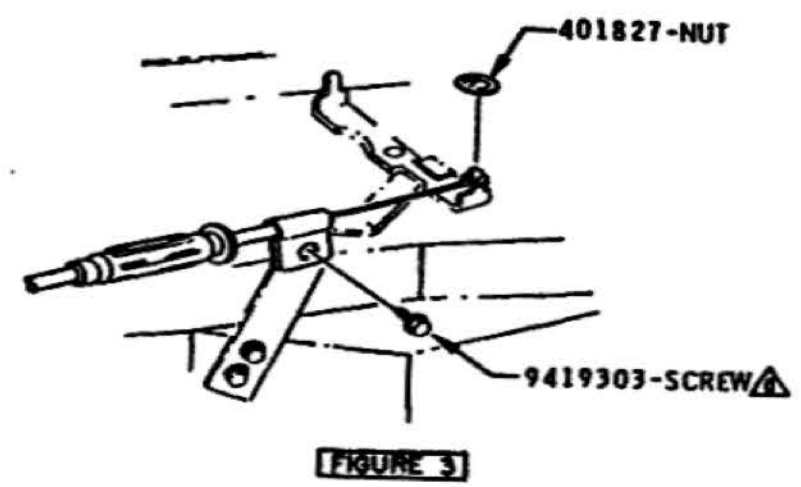
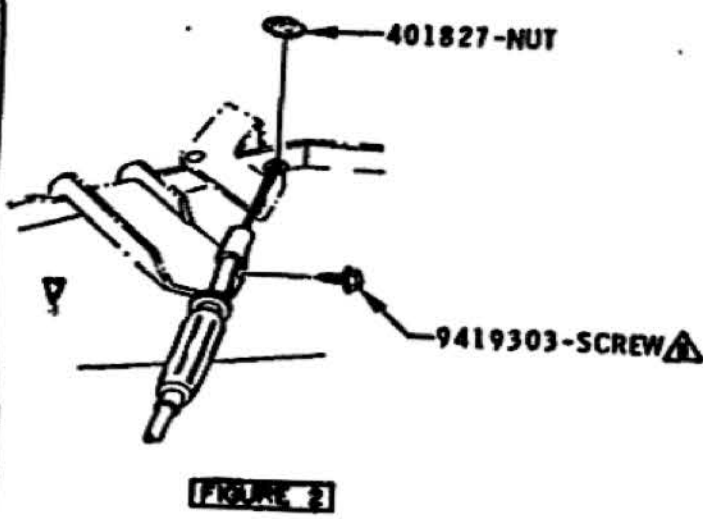
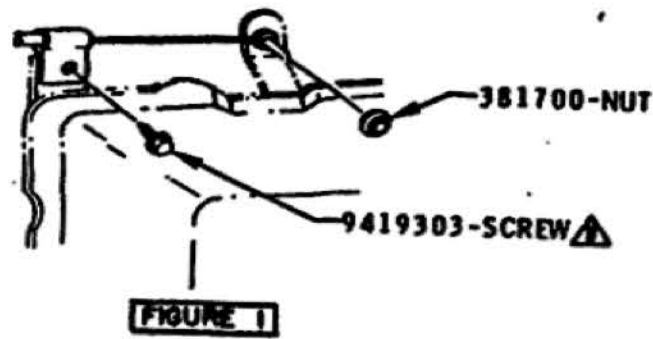


**FIGURE 2**  
SECTION THRU DASH PANEL  
AT CORE NIPPLE (ANGULAR)  
("A" CAR ONLY)

TITLE				CHART - HEATER HOSE CONNECTION			
DATE	BY	CHKD	APPD	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	SIGNAL NO.	PAGE
DEC. 2, 1968	P.J. McKESSY			197G		1-5	100
DATE	SYM	REVISION	DR. CK.	APPR.	NO.	REVISED	PAGE NO.
				A. SCARTISBURG		A-B-C-E	404411-2-3



				TITLE		HEATER CABLE AND HOSE DIAGRAM	
				DATE	APRIL 8, 1969	FIRST USED	1970
				DR BY	JOSEPH V. GALL	OLDSMOBILE PRODUCT INFORMATION MANUAL	
				CHECKED	<i>[Signature]</i>	MANUAL SEC.	1-5
				APPL.	<i>[Signature]</i>	PAGE	102
DATE	SYM	REVISION	DR.	CL.	APP.	REF.	1A2C
						SERIES	A
						PART NO.	404411



▲▲▲▲  
FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE		1A2C CONTROL CABLES	
				DATE	APR 10 1969	FIRST USED	1970
				DR BY	JOSEPH V. GALL	OLDSMOBILE PRODUCT INFORMATION MANUAL	
				CHECKED	JTG	MANUAL NO.	1-5 104
				APPR.	SCHROEDER	NO.	1A2C
DATE	SYM	REVISION	DR	CK	APPR.	SERIES	A
						PART NO.	404411

SEE PAGE 100 FOR  
HEATER HOSE  
CONNECTIONS  
TO HEATER

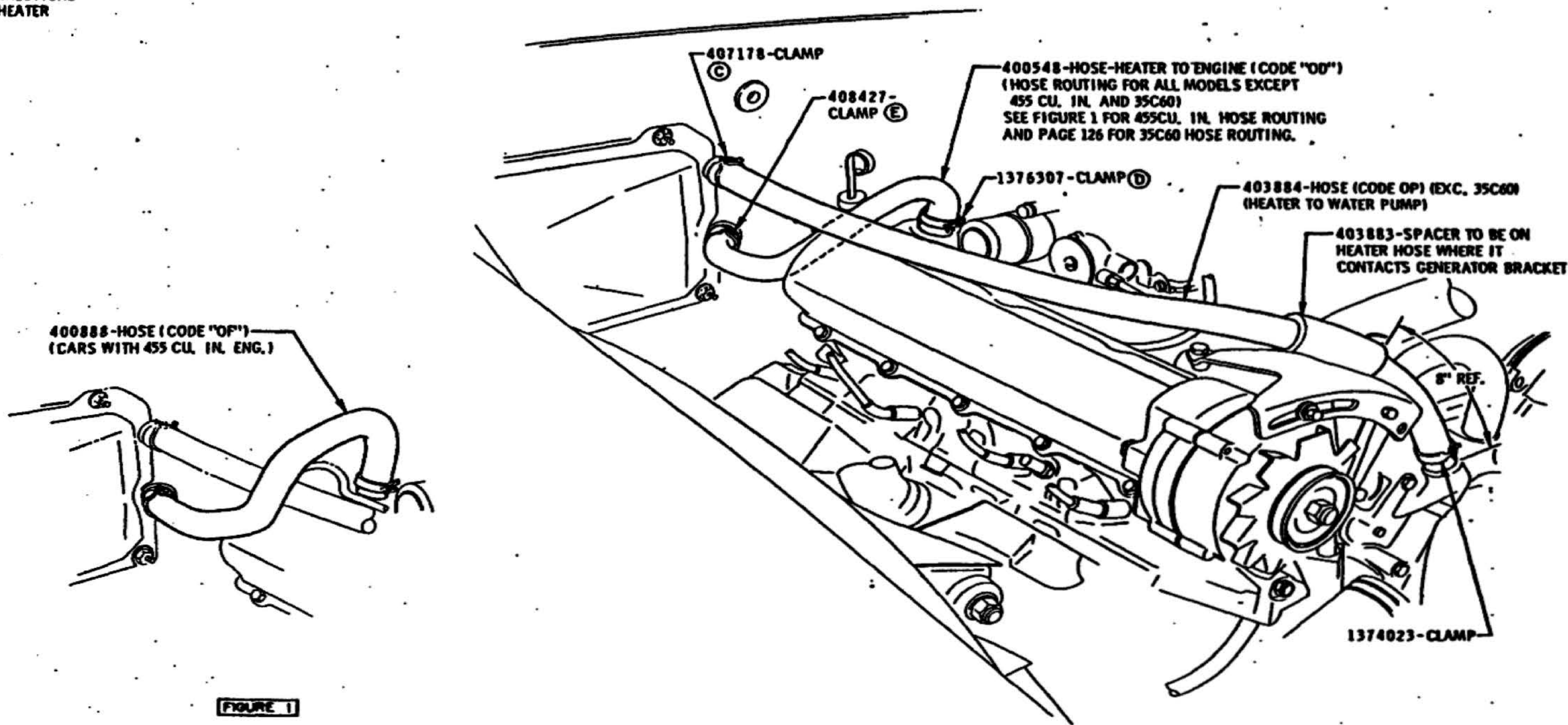


FIGURE 1

DATE	SYM	REVISION	DR.	CHK.	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
1-7-70	E	408427-CLAMP ADDED	J.B.	J.T.		HEATER WATER HOSES - V8	1970		1-5	108
1-7-70	D	WAS BOTH ENDS	J.B.	J.T.						
8-25-68	C	WAS 1374023-CLAMP	J.B.	J.T.						
6-17-69	B	NOTE REVISED-WAS 4000	J.C.	J.T.						
1-26-66	A	REF DIMENSION ADDED	J.S.	J.T.						
							IAZC	SERIES A		404411

SEE PAGE 110 FOR  
HEATER HOSE  
CONNECTIONS  
TO HEATER

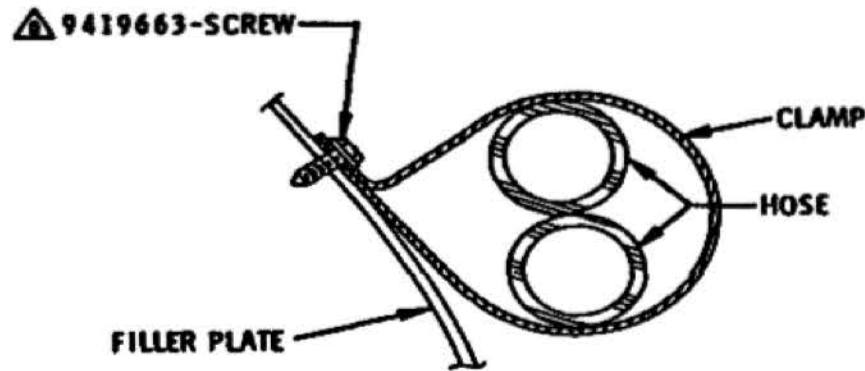
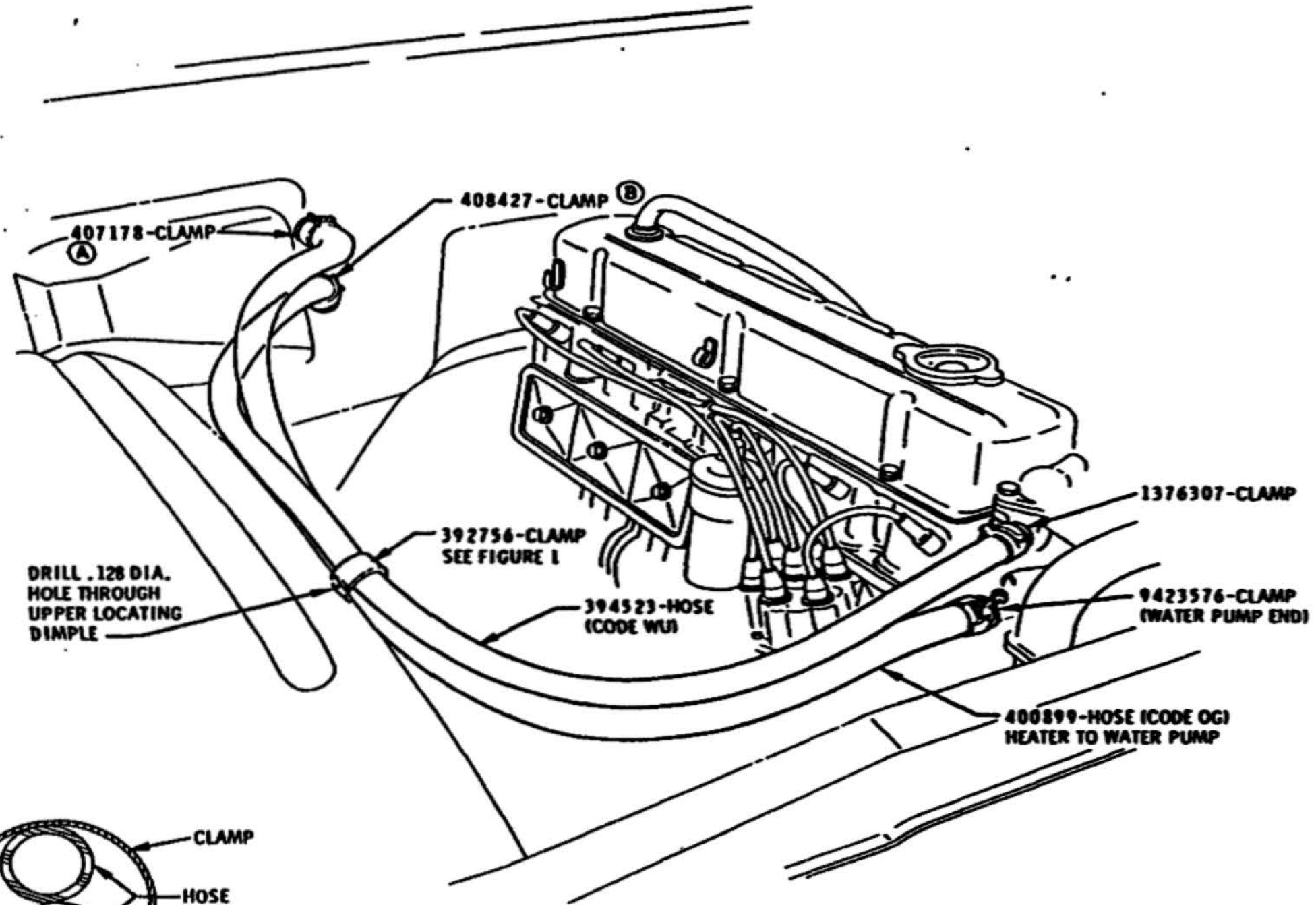


FIGURE 1

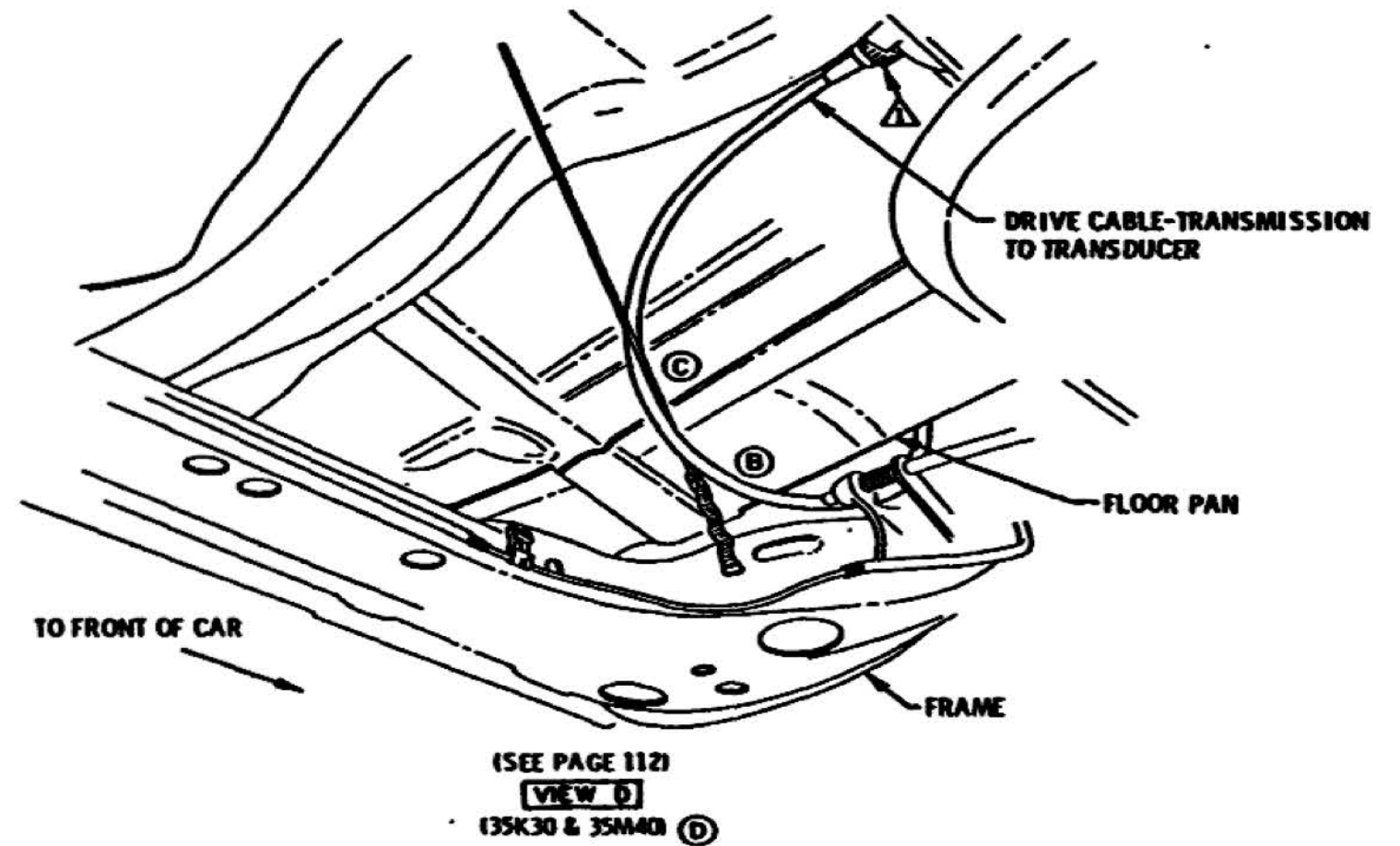
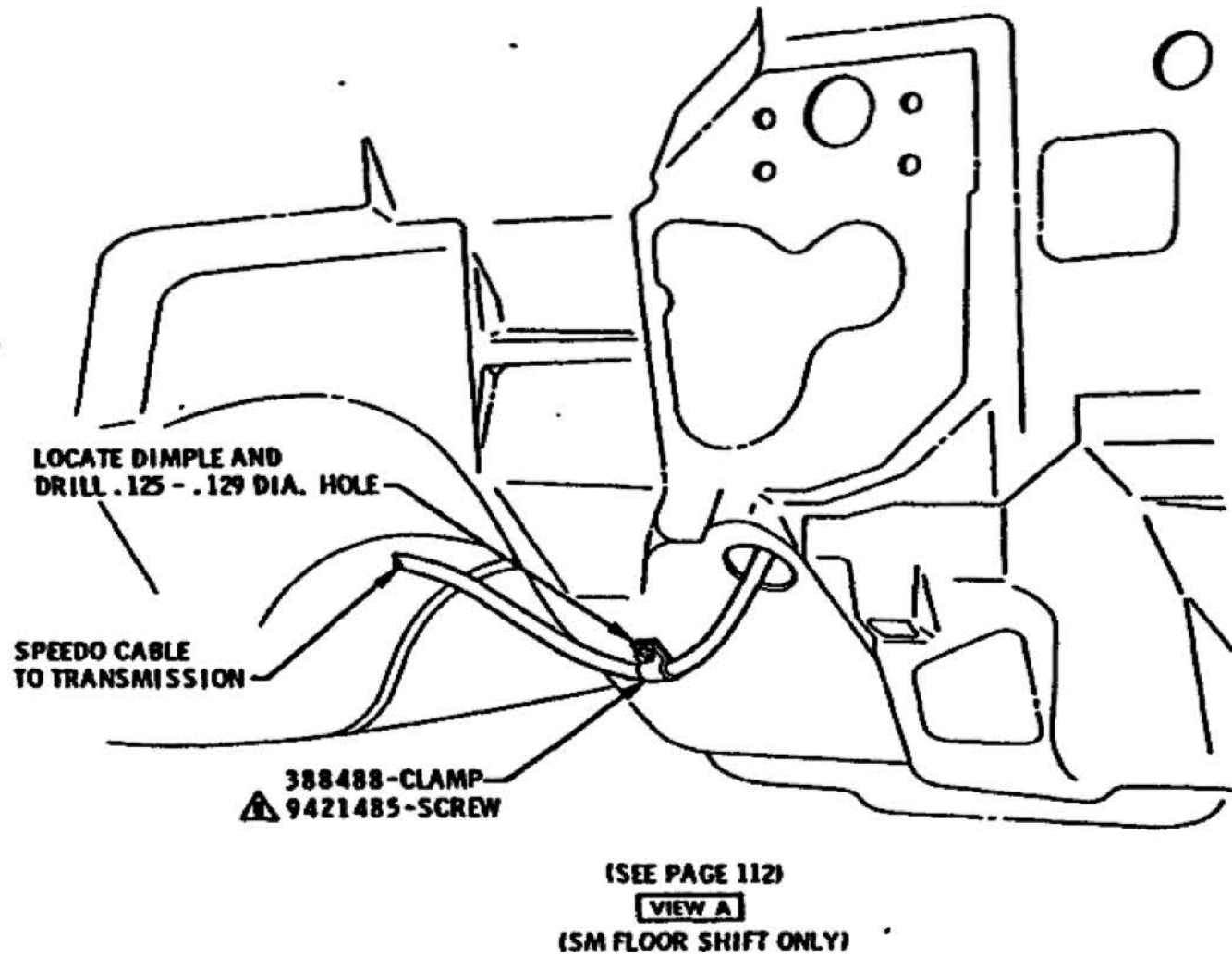


FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE					HEATER WATER HOSES - L6 (EXC. A/C)							
DATE	1-7-70	BY	B	WAS 1376307-CLAMP	DATE	MAR 9 1969	FIRST USED	1970	MANUAL SEC.	1-5	PAGE	110
DATE	8-26-63	BY	A	WAS 1374023-CLAMP	DR. BY	GALL-McD	CHECKED	J.P.M.	OLDSMOBILE PRODUCT INFORMATION MANUAL			
DATE		SYM		REVISION	DR.	CIL	APPR.	SCHOTTENBERG	NO.	1A2C	REVISED	A
									PART NO.			404411

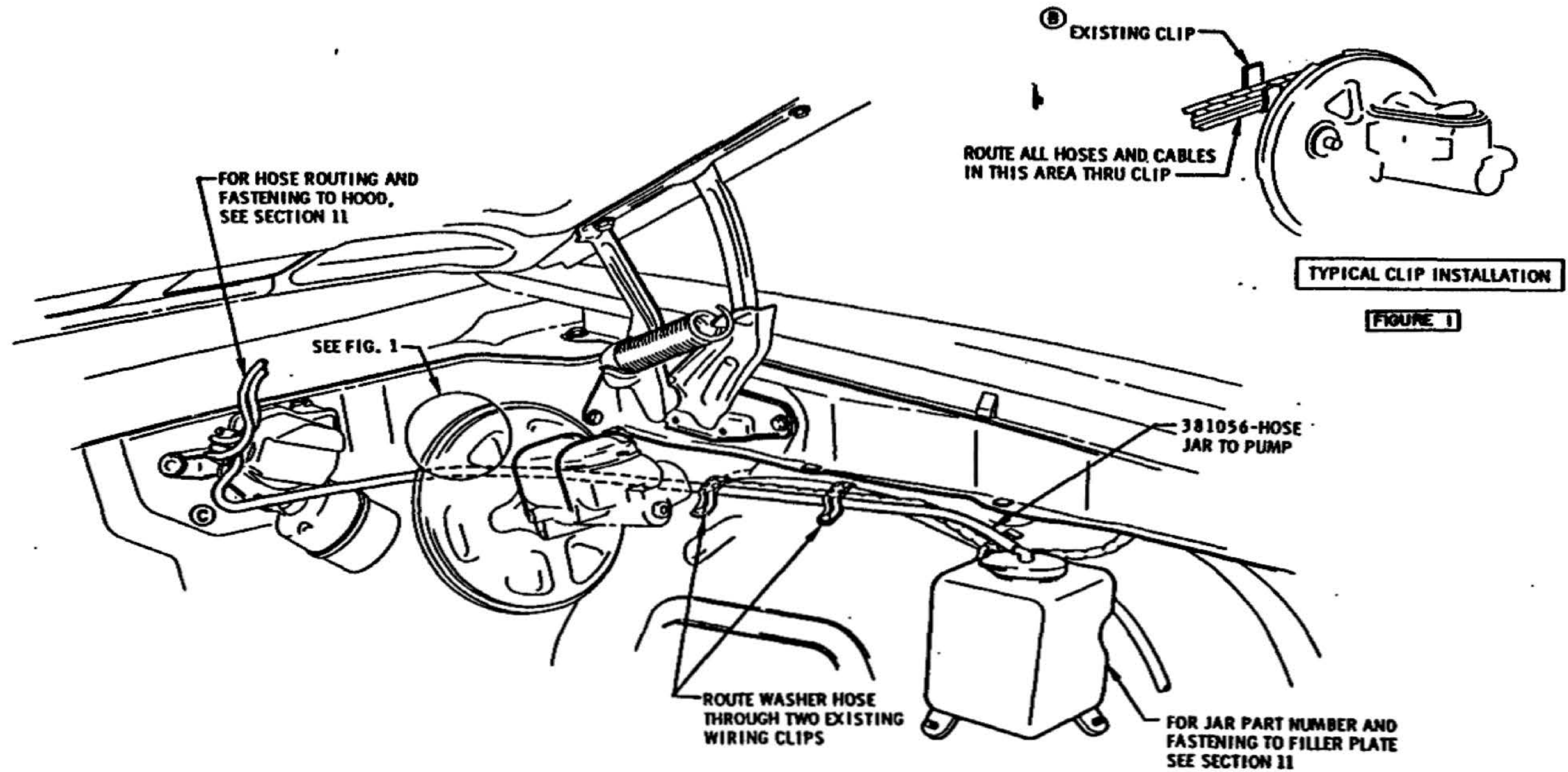






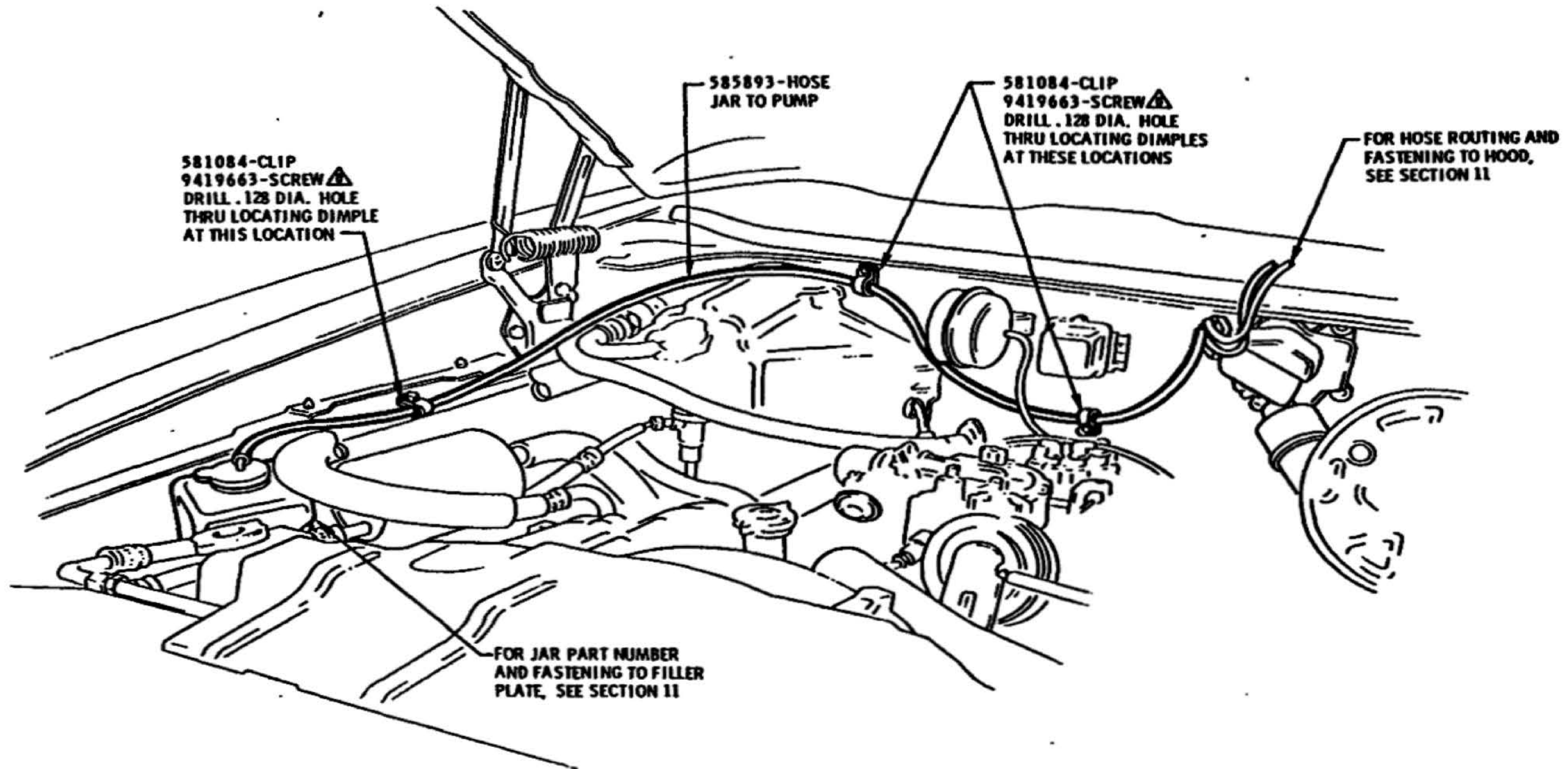
▲▲▲  
▲▲▲ 20 - 80 LB. IN.  
▲▲▲ FULLY DRIVEN, SEATED  
AND NUT STRIPPED

REV	DATE	BY	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
2-12-70	D	MA/DY	TITLE REVISED	APR. 11 1969	1970	1-5	114
2-12-70	C	MA/DY	CABLE ROUTING REV	DR BY P.J. MCKESSY			
2-12-70	B	MA/DY	380782-CLIP REMOVED	CHECKED <i>J. J.</i>			
1-29-70	A	MA/DY	VIEW REMOVED	APPR. <i>C. J.</i>	NO. 181 35N20-21	A	404411



ⓓ (EXC. CARS WITH 455 CU. IN. ENGINE)

REVISION				TITLE				FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE	
07-69	D	NOTE ADDED	6	DT	DATE	NOV. 18 1968	1970			1-5	116		
7-5-69	C	HOSE ROUTING REVISED	6	DT	DR. BY	BEAUDOIN							
5-20-69	B	WAS EXISTING STAND	6	DT	CHECKED	T. J. [Signature]							
2-20-69	A2	35W30-31 INFO. REMOVED	6	DT	APPR.	T. J. [Signature]	REP. 1A2D	SERIES A	PART NO. 404411				
					DR. CK.	APPR. [Signature]							



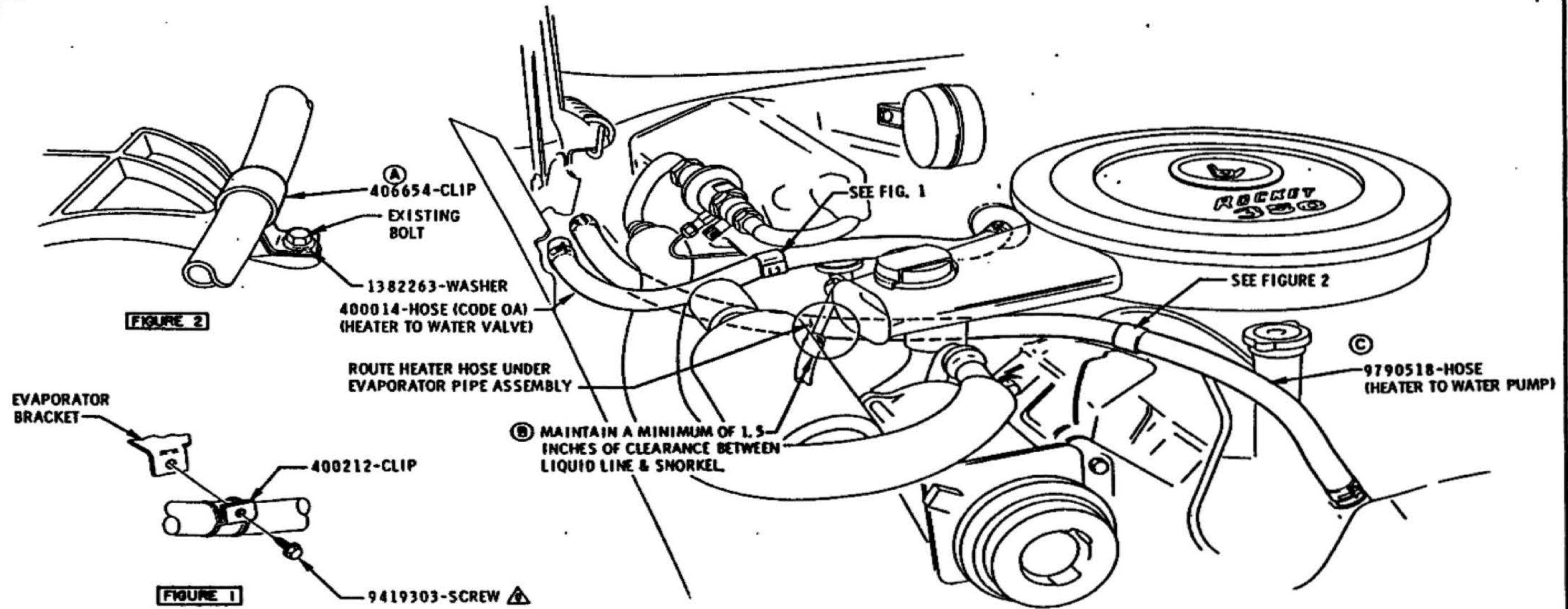
(CARS WITH 455 CU. IN. ENGINE ONLY)



FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE WINDSHIELD WASHER HOSE ROUTING (ENGINE COMPARTMENT)									
DATE	BY	REVISION	DR.	CL.	APPR.	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL VOL.	PAGE
						1970		1-5	118
						REF. 1A2D	SERIES A	PART NO.	404411
DATE	BY	REVISION	DR.	CL.	APPR.				

SEE PAGE 100 FOR  
HEATER HOSE  
CONNECTIONS  
TO HEATER

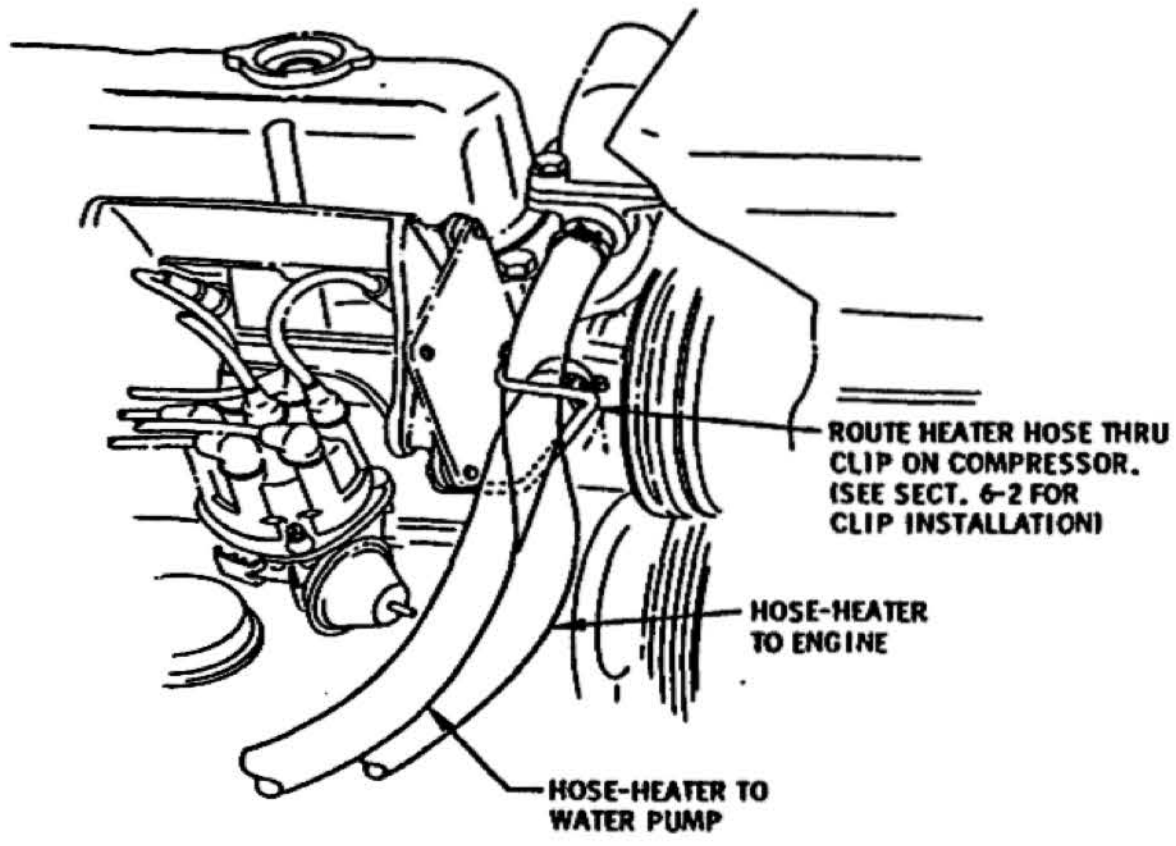
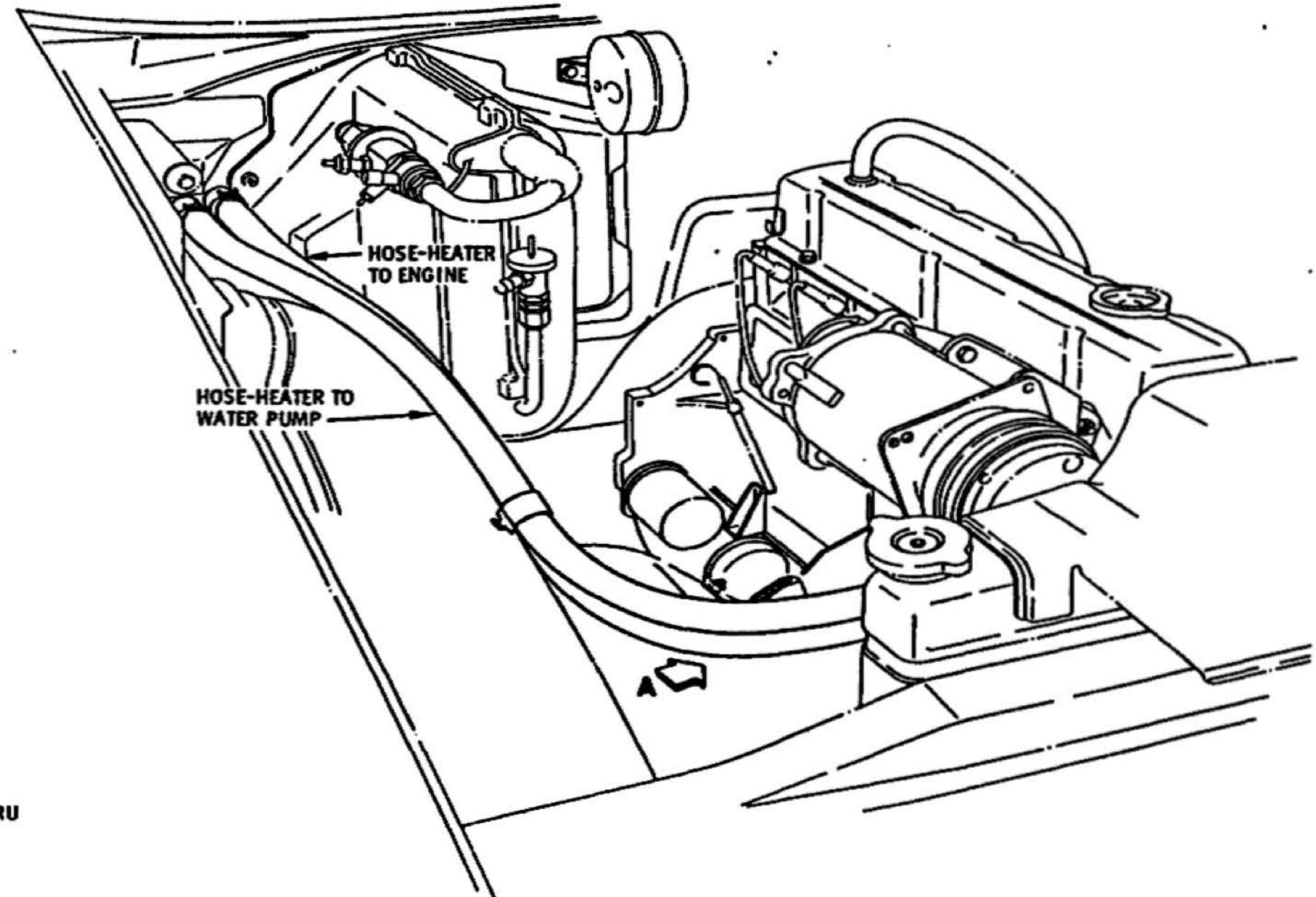


NOTE:  
FOR HOSE CLAMP PART NUMBERS,  
SEE PAGE 108.

  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

REVISION					TITLE				FIRST USED		MANUAL SEC.		PAGE	
512-70	C	WAS 400209 HOSE		16	DATE	MAR. 14, 1969	1970		OLDSMOBILE PRODUCT		1-5		126	
528-69	B	NOTE ADDED		11	DR BY	S. W. Smith	35C60		SERIES		A		PART NO.	
52-69	A	WAS 387504-CLIP		26	CHECKED	T. J. [unclear]	35C60		APPR.		R. E. Malitzka		404411	
DATE	SYM	REVISION		DR.	CK.	APP.								

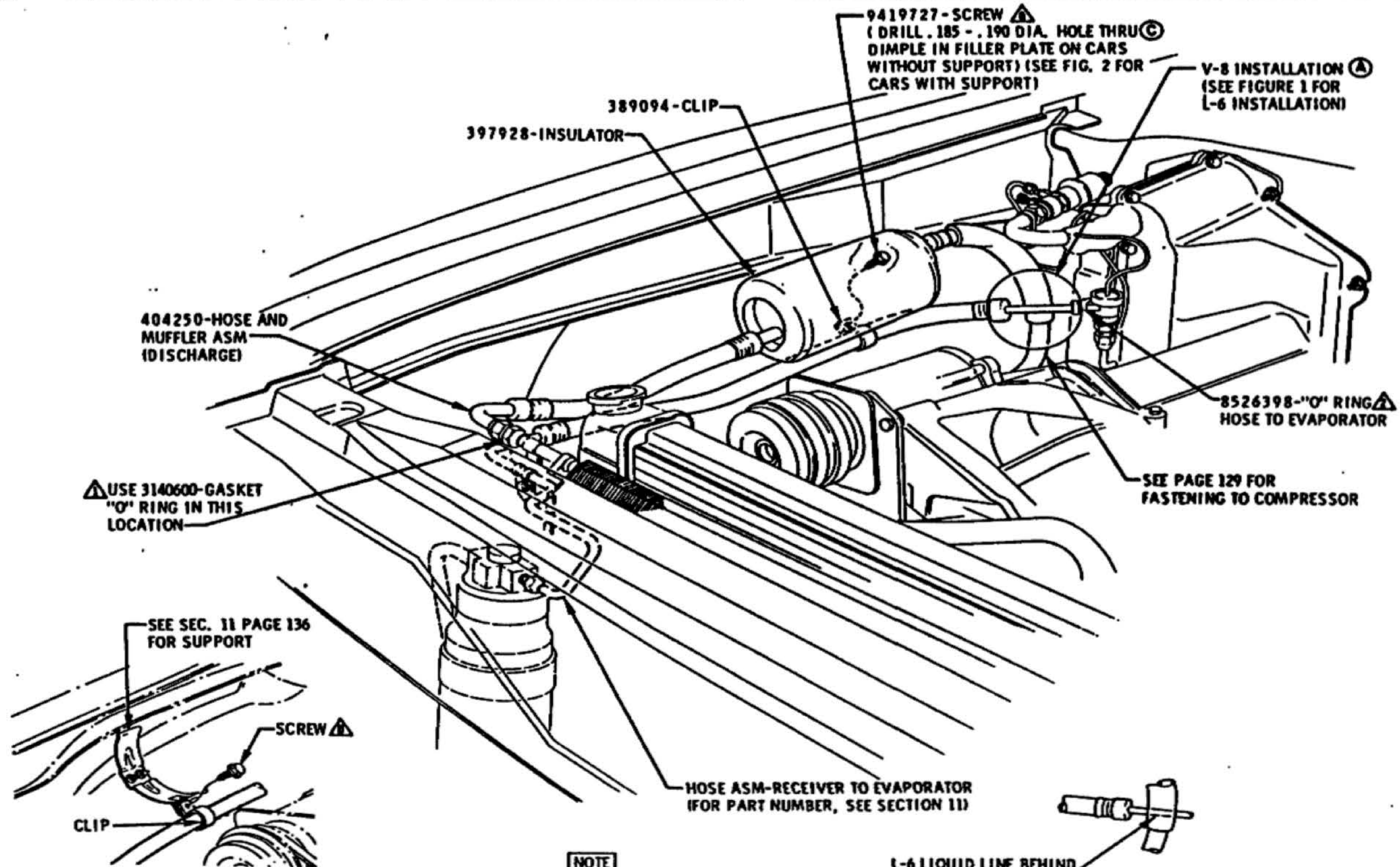
SEE PAGE 100 FOR  
HEATER HOSE  
CONNECTIONS  
TO HEATER



VIEW A

HOSES AND CLAMPS ARE  
SAME AS USED ON STANDARD  
L6 CAR. SEE PAGE 110 FOR  
PART NUMBERS.

				TITLE		HEATER WATER HOSES WITH 35C60 - L6			
				DATE	MAR. 10. 1969	FIRST USED	1970	OLDSMOBILE PRODUCT	MANUAL NO.
				DR BY	J.V. GALL/1969			INFORMATION MANUAL	PAGE
				CHECKED	TJM	REF.	35C60	SERIES	1-5 127
				APPR.	SCHATTENBERG			PART NO.	404411
DATE	BY	REVISION	DR.	CK.	APPR.				



9419727 - SCREW  
( DRILL .185 - .190 DIA. HOLE THRU  
DIMPLE IN FILLER PLATE ON CARS  
WITHOUT SUPPORT) (SEE FIG. 2 FOR  
CARS WITH SUPPORT)

V-8 INSTALLATION  
(SEE FIGURE 1 FOR  
L-6 INSTALLATION)

389094 - CLIP

397928 - INSULATOR

404250 - HOSE AND  
MUFFLER ASM  
(DISCHARGE)

8526398 - "O" RING  
HOSE TO EVAPORATOR

USE 3140600 - GASKET  
"O" RING IN THIS  
LOCATION

SEE PAGE 129 FOR  
FASTENING TO COMPRESSOR

SEE SEC. 11 PAGE 136  
FOR SUPPORT

HOSE ASM - RECEIVER TO EVAPORATOR  
(FOR PART NUMBER, SEE SECTION 11)

L-6 LIQUID LINE BEHIND  
DISCHARGE LINE

NOTE  
V-8 SHOWN, L-6 INSTALLATION  
SIMILAR EXCEPT AS NOTED

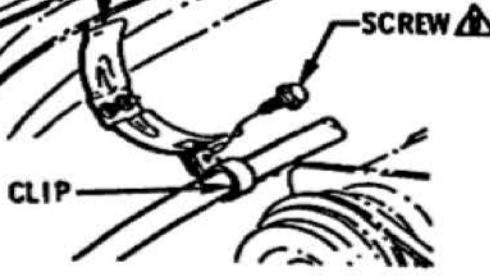


FIGURE 2  
CARS WITH DISCHARGE  
MUFFLER SUPPORT

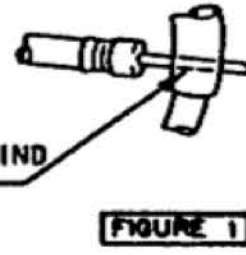
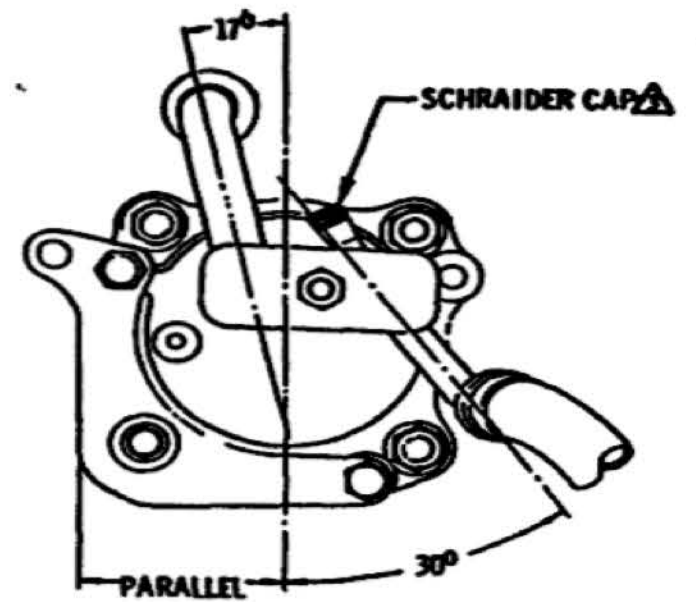
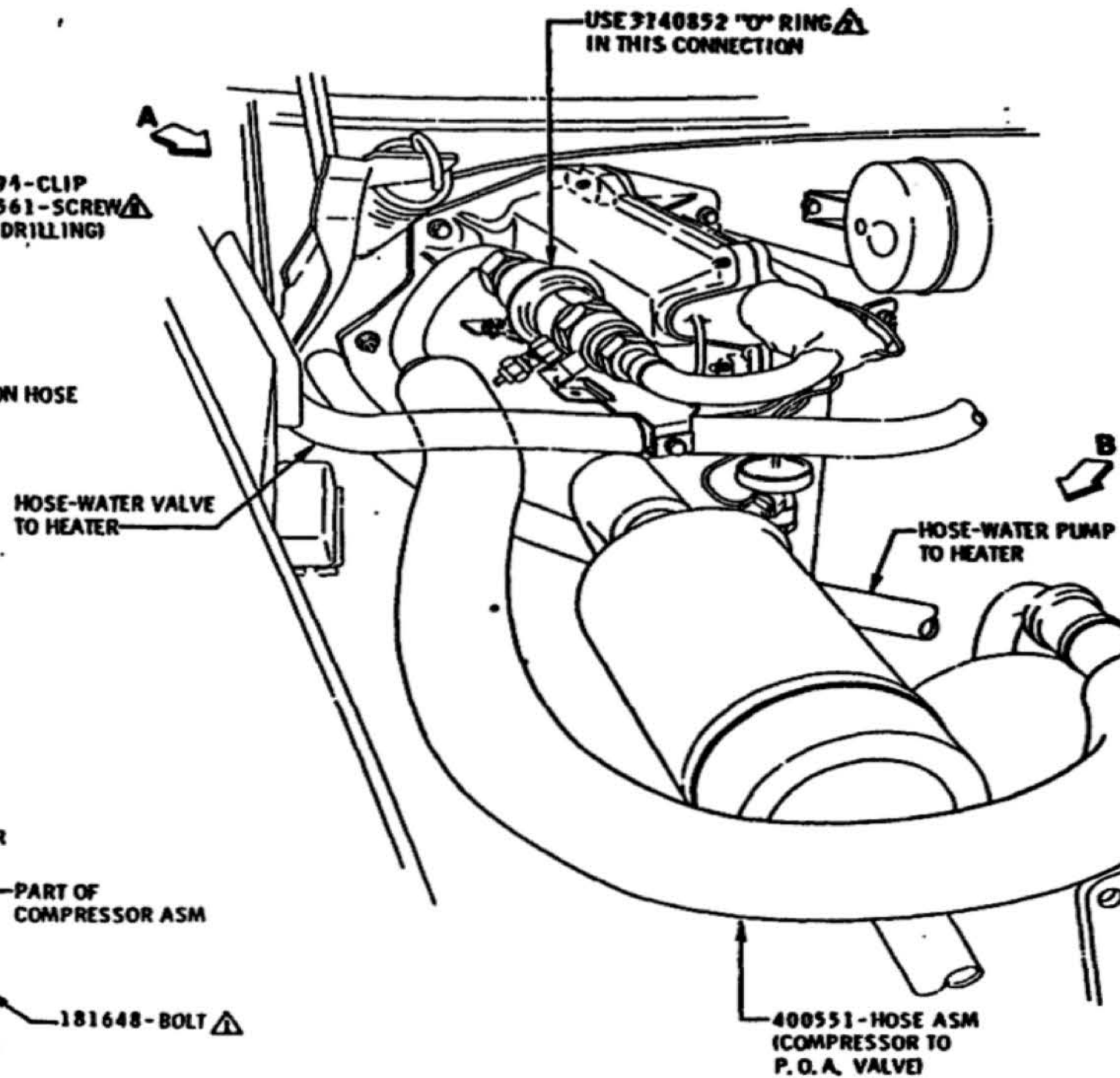
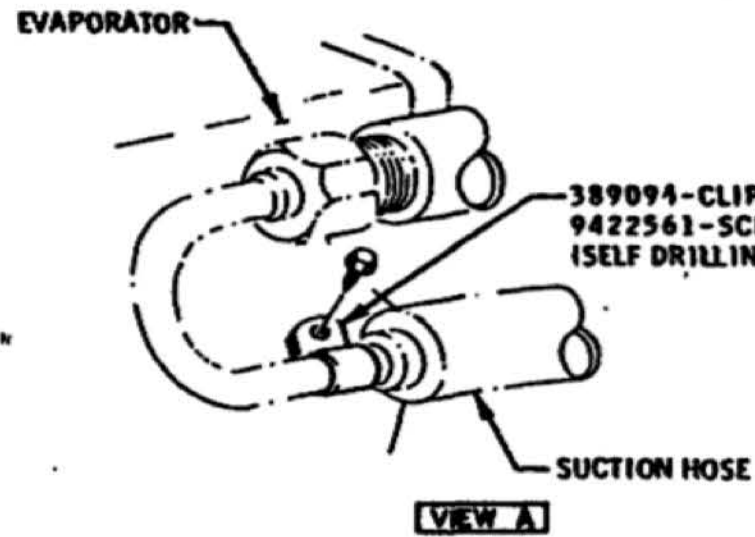


FIGURE 1

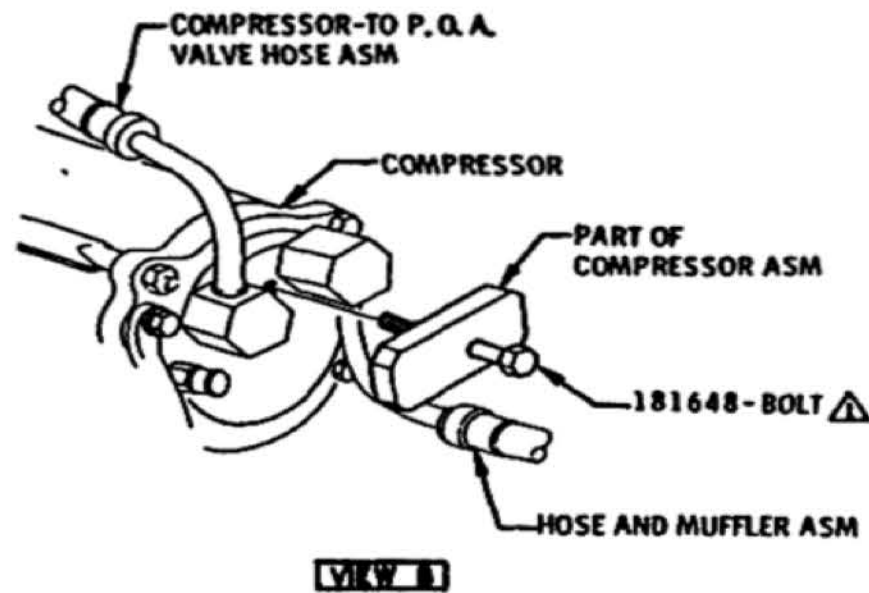
REFER TO AIR CONDITIONING  
PROCEDURE CHART SECTION O  
PAGE 46 FOR ADDITIONAL DATA

- ▲ 11 - 15 LB. FT.
- ▲ 15 - 20 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
10-27-60	C	NOTE REVISED	DR	DT		AIR CONDITIONING MUFFLER AND HOSES	1970		1-5	128
10-27-60	B	VIEW ADDED	DR	DT						
5-6-68	A	REVISED TO DETAIL	PL	DT						
									A	404411



COMPRESSOR END VIEW  
OF HOSE POSITIONING

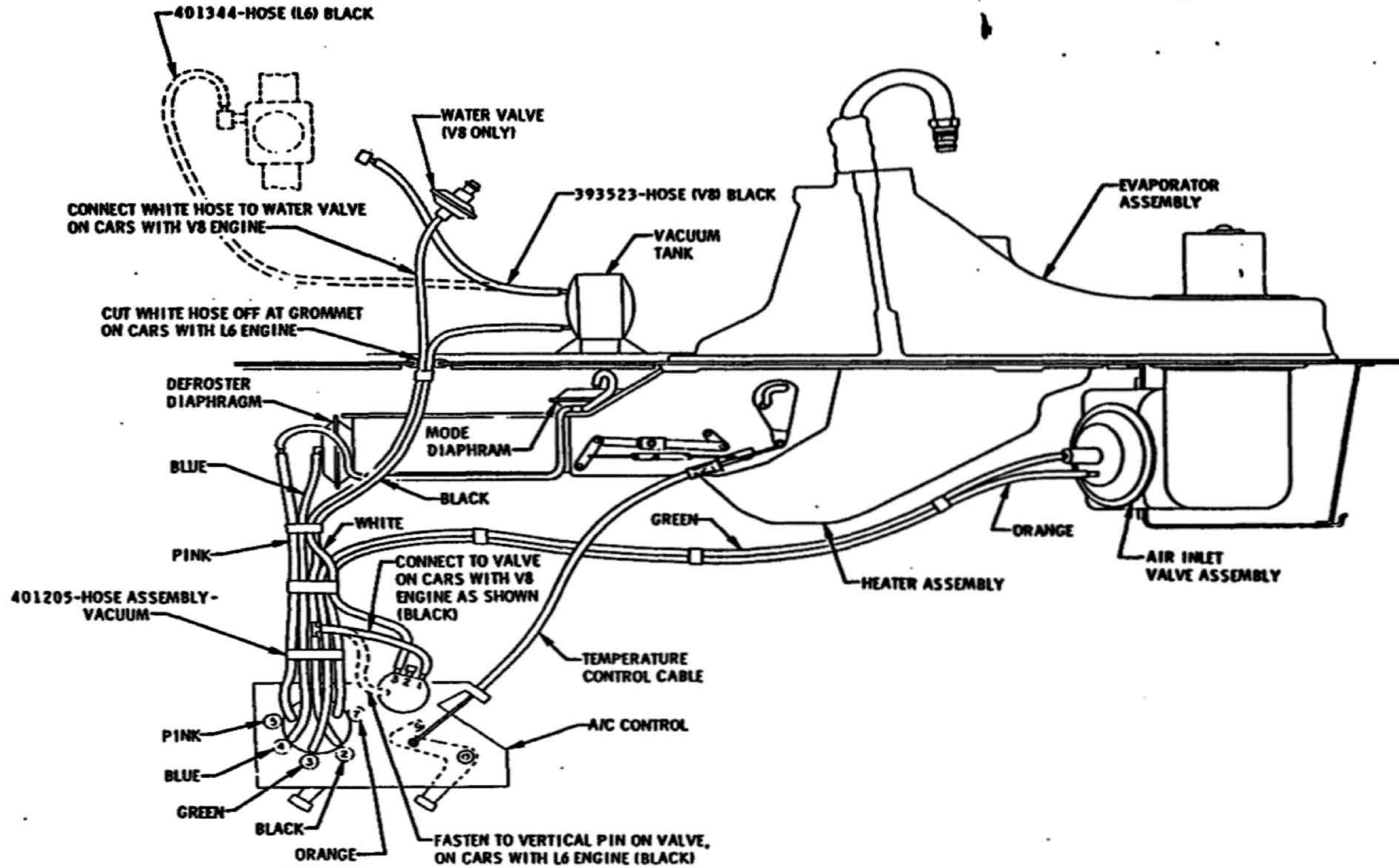


- ▲ 5 - 7 LB. FT.
- ▲ 28 - 33 LB. FT.
- ▲ 20 - 25 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

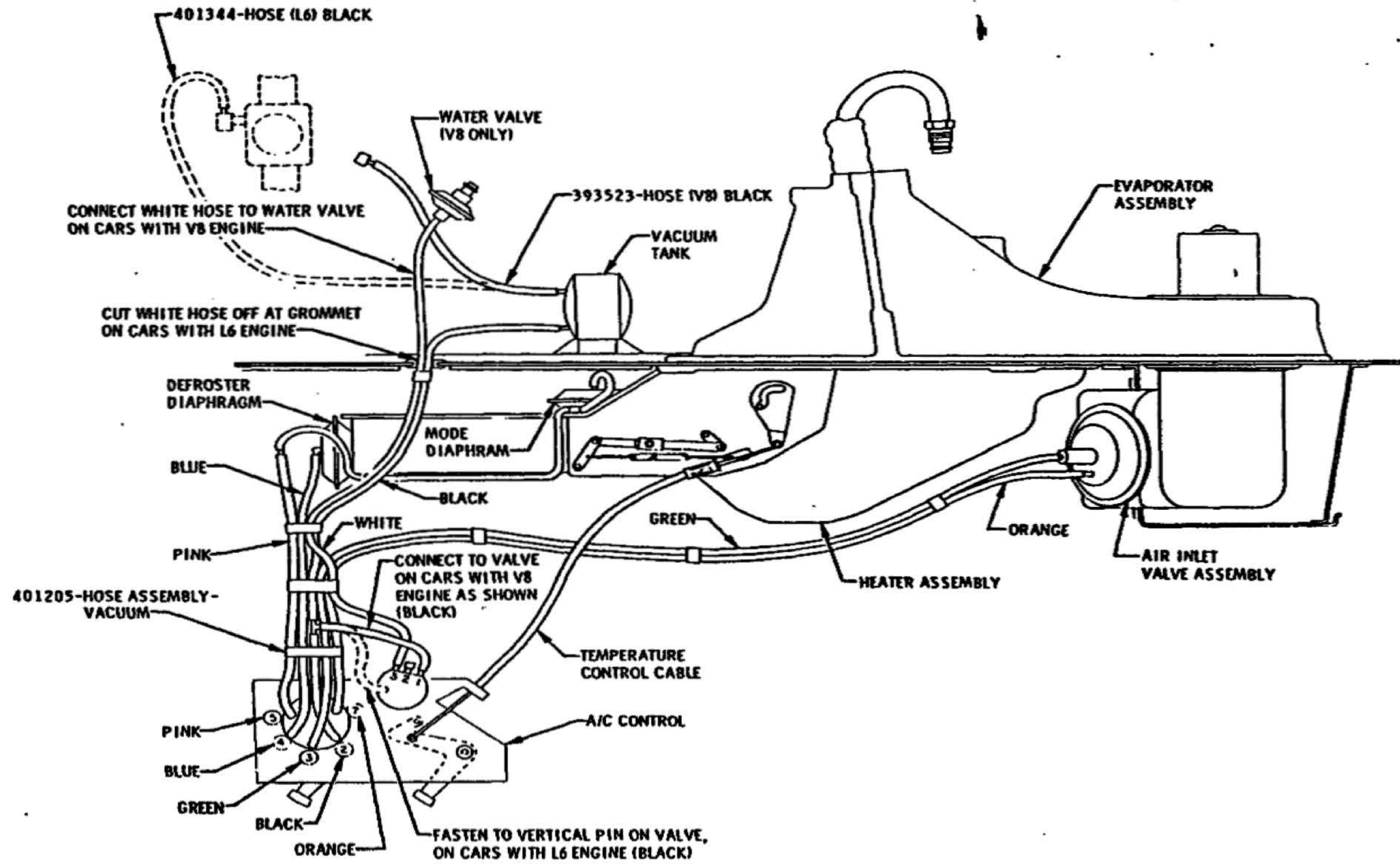
REFER TO AIR CONDITIONING  
PROCEDURE CHART SECTION O  
PAGE 46 FOR ADDITIONAL DATA

DATE	SYM	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
						P.O.A. VALVE HOSE & HOSES TO COMPRESSOR	1970		1-5	129
						DATE <i>MAR 15 1969</i> DR. BY <i>P. LOCATELLI</i> CHECKED <i>[Signature]</i> APPR. <i>K.E. [Signature]</i>			A	404411

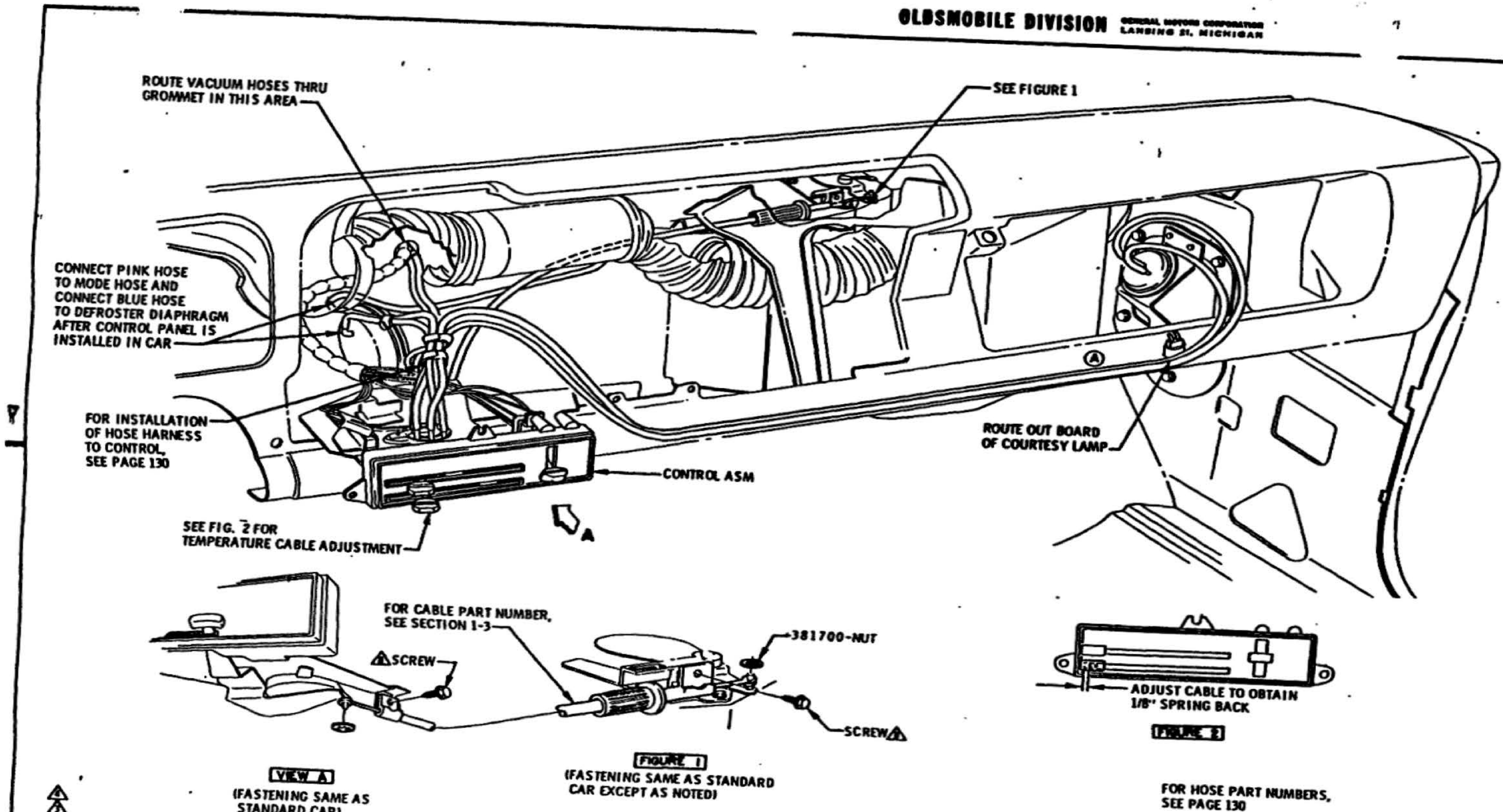




DATE		SYM		REVISION		DR. CL.		APPR.		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC.		PAGE	
										A/C VACUUM HOSE DIAGRAM		1970				1-5		130	
										DATE		MAR 20 1969							
										DR. BY		S.M.D.-J.GALL							
										CHECKED		J.G.							
										APPR.		K.E. Maloney		REV.		35C60		SERIES	
														A		PART NO.		404411	

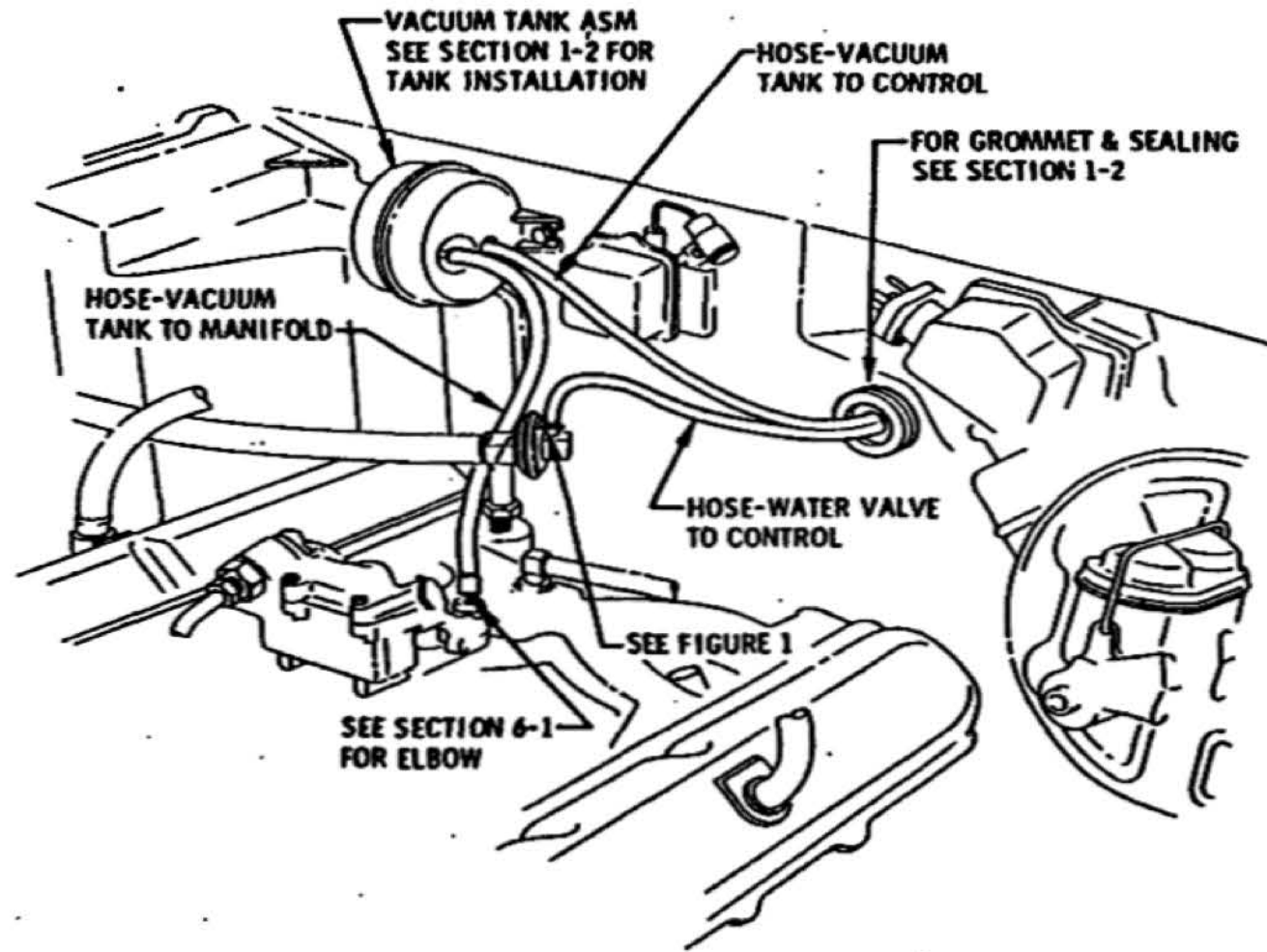


				TITLE A/C VACUUM HOSE DIAGRAM							
				DATE MAR 20 1969	FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. 1-5	PAGE 130	
				DR. BY S.M.D.:J.V.GALL	REV. 35C60		SERIES A		PART NO. 404411		
DATE	SYM	REVISION	DR.	CK.	APPR.						

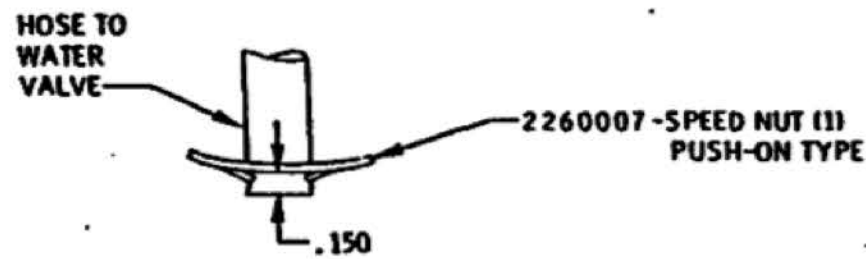


▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

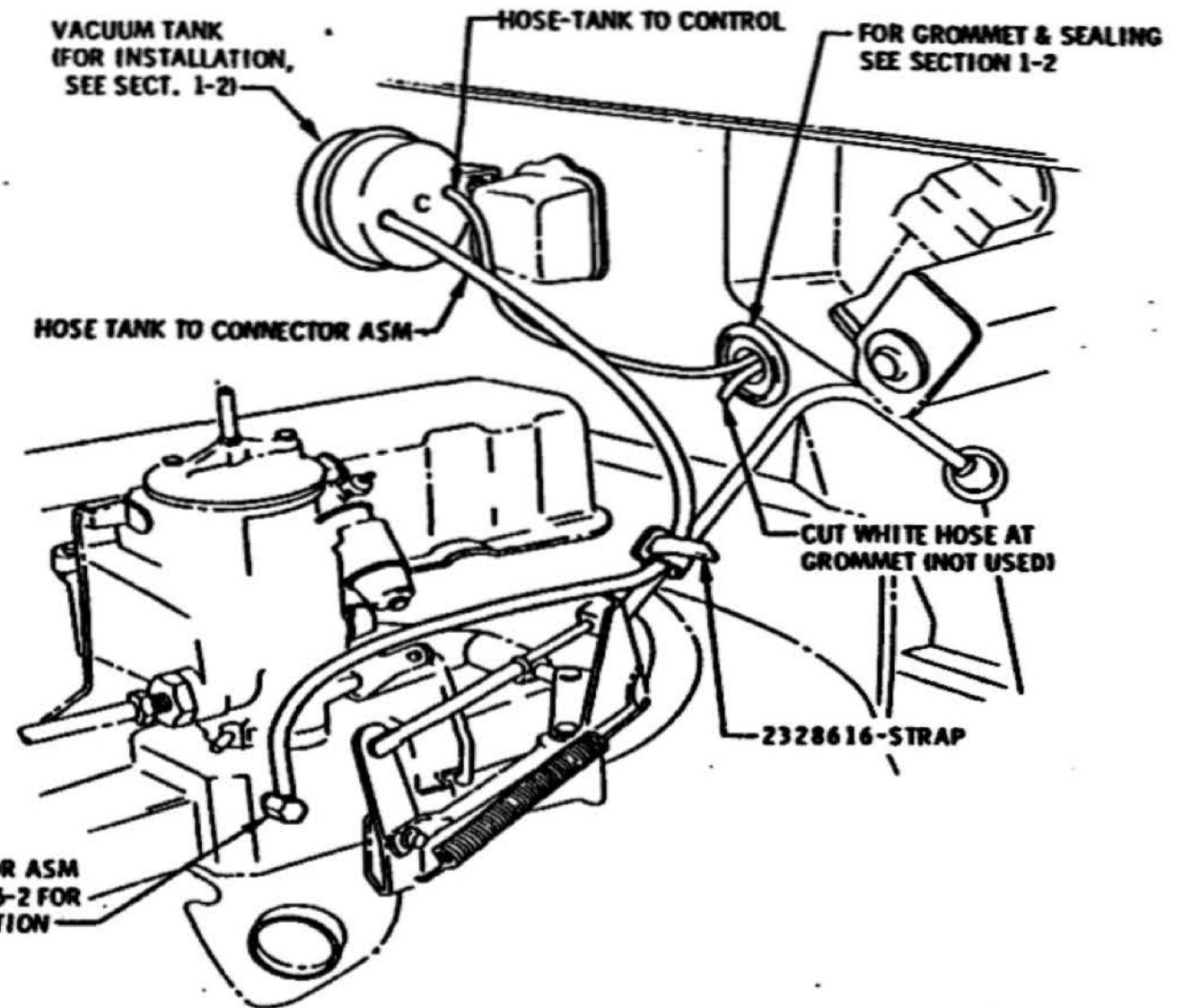
TITLE		35C60 VACUUM HOSE AND CABLE ROUTING (INSIDE CAR)		
DATE	APR 17 1969	FIRST USED	1970	
DR BY	JOSEPH V. GALL	OLDSMOBILE PRODUCT	MANUAL SEC.	PAGE
CHECKED	<i>[Signature]</i>	INFORMATION MANUAL	1-5	138
APPR.	R.E. Malin	NO.	35C60	REVISED
DATE	7-28-69	SYN	A	PART NO.
REVISION	A	HOSE ROUTING REVISED		404411
DR.		CK.		
APPR.				



V-8 ENGINE ROUTING



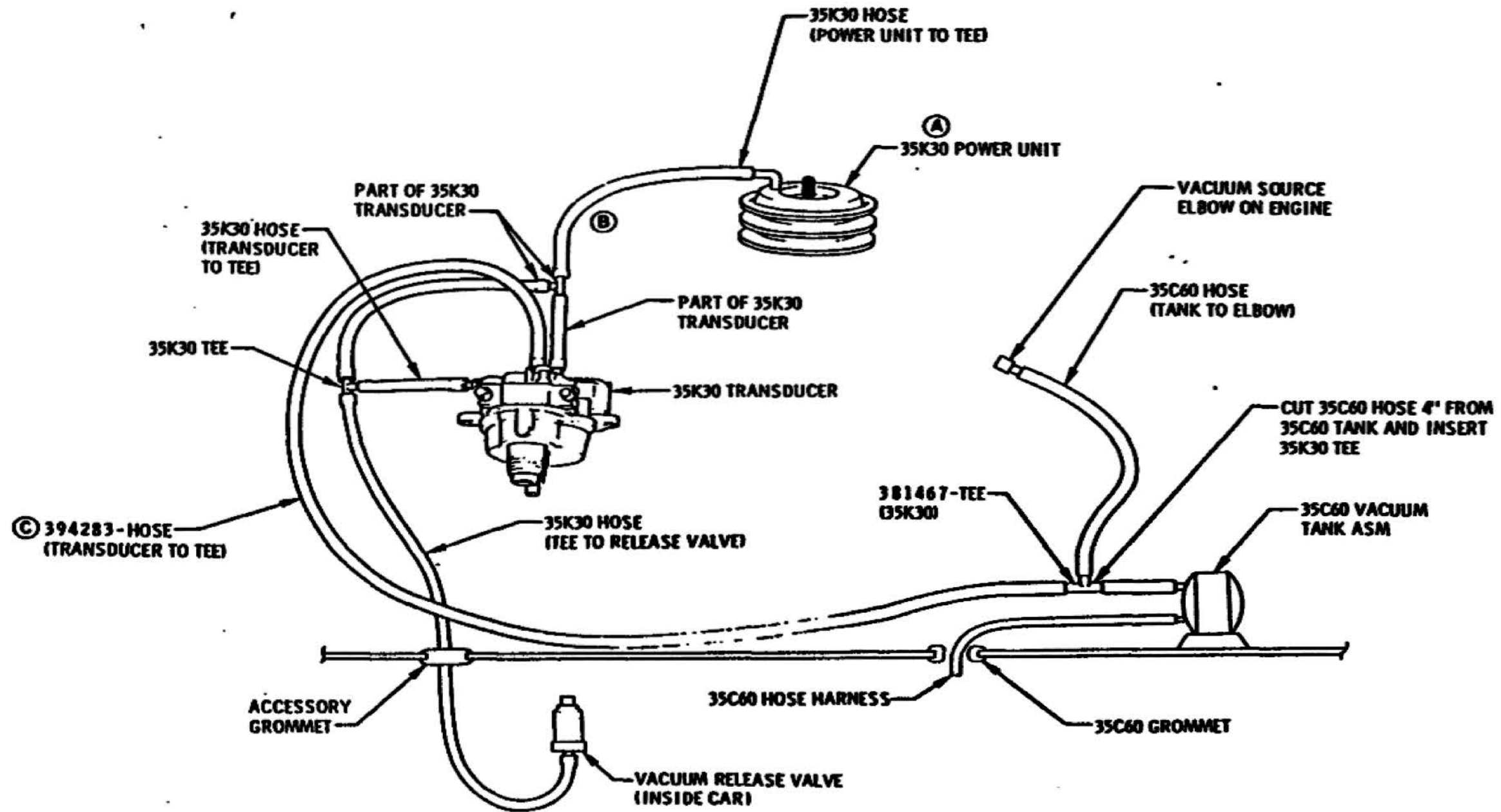
(A) FIGURE 1



L-6 ENGINE ROUTING

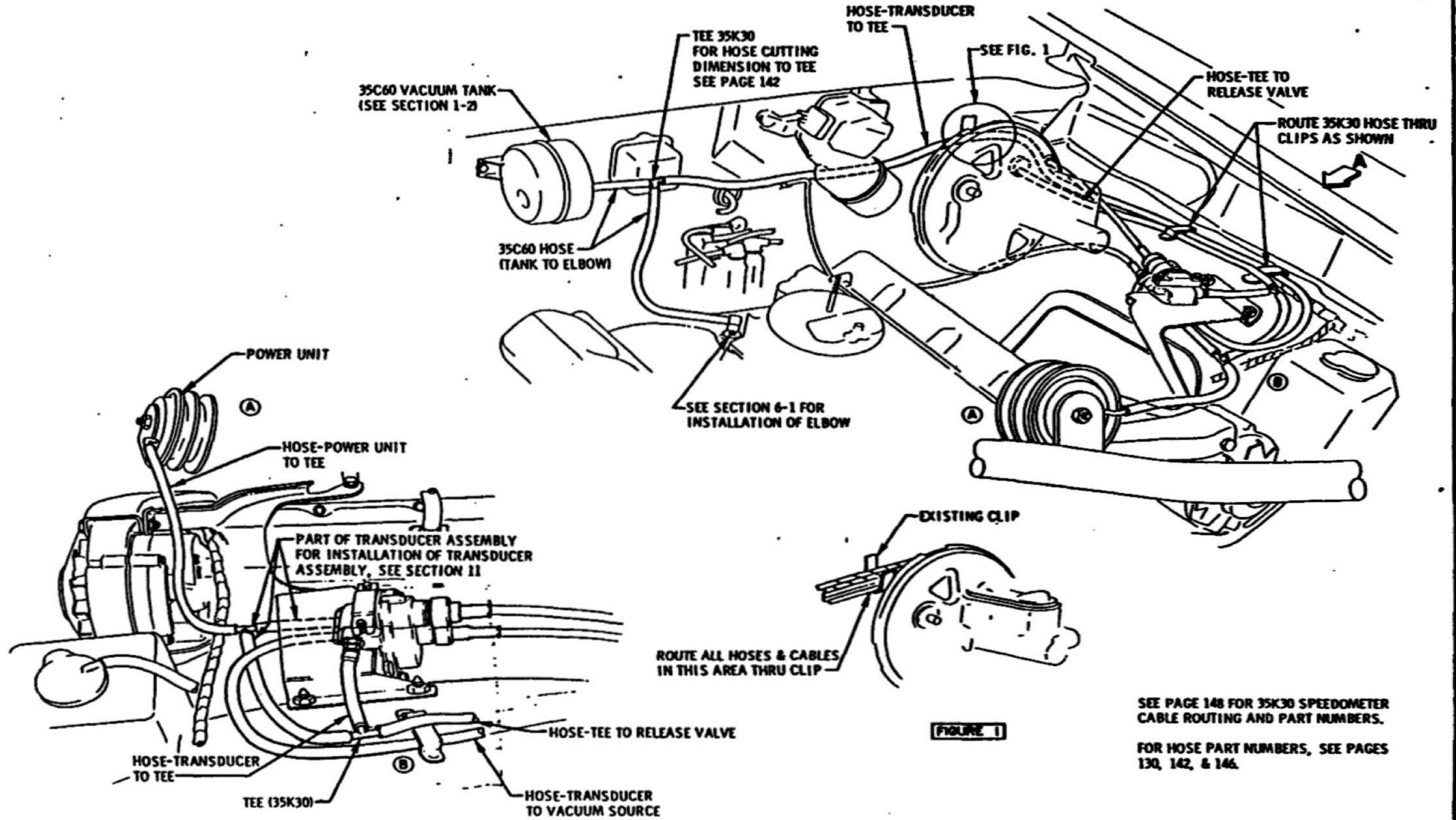
FOR PART NUMBERS, SEE PAGE 130

DATE		SYN	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	HANDL. NO.	PAGE
							N/C VACUUM HOSES - ENGINE COMPARTMENT	1970		1-5	140
DATE		SYN	REVISION	DR.	CL.	APPR.					
1/18/68			FIG 1 ADDED	BP/DT		APPR. Z E McIntyre				A	404411



FOR REMAINDER OF 35K30 PART NUMBERS,  
 SEE PAGE 146  
 FOR 35C60 PART NUMBERS SEE PAGE 130

DATE		SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
8-25-69	C		WAS-397152-HOSE				SCHEMATIC VACUUM HOSE DIAGRAM - 35C60 WITH 35K30	1970	35C60 35K30	1-5	142
1-29-70	B		HOSE ROUTING REVISED								
6-2-69	A		REVISED TO DETAIL								
										A	40441

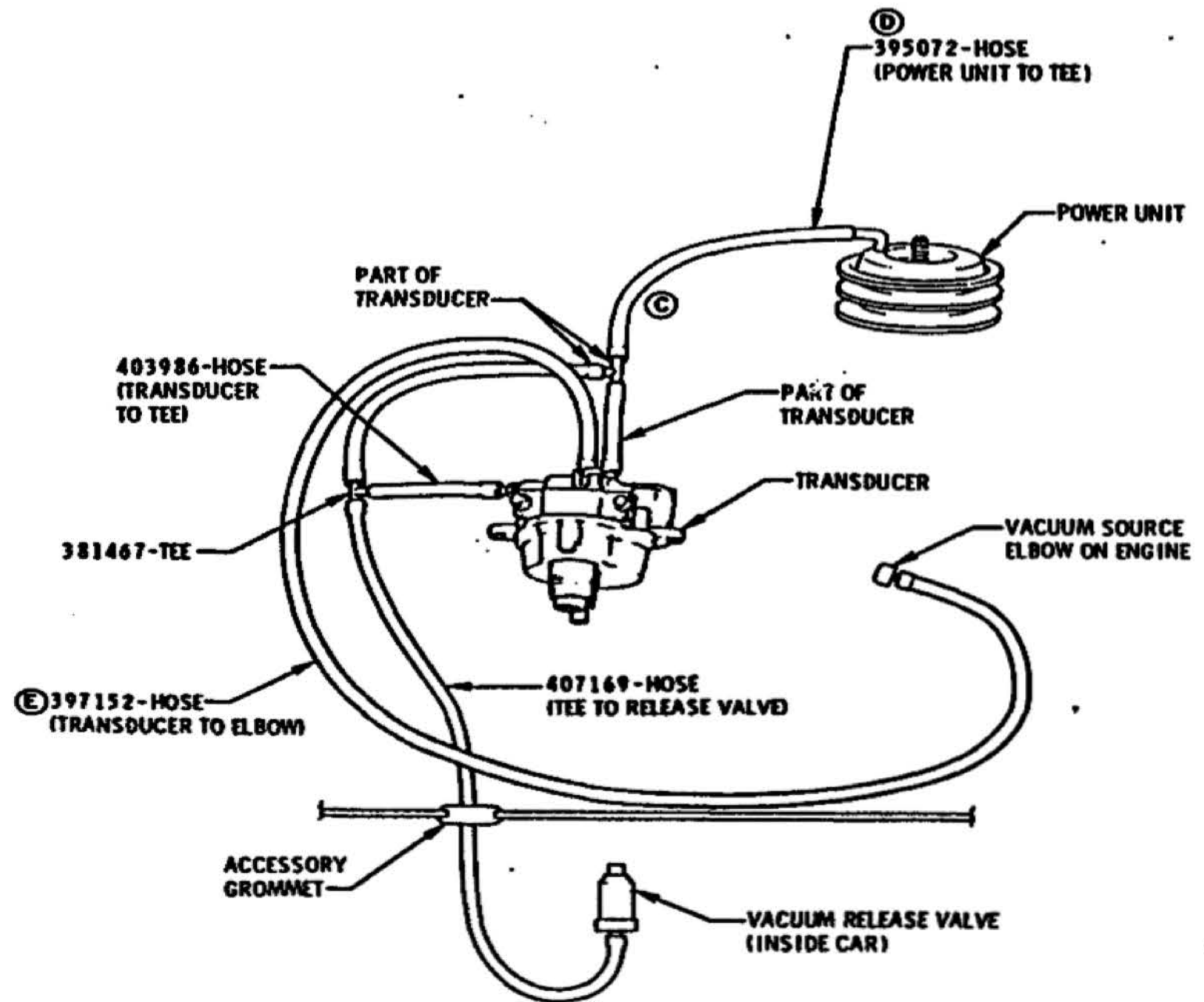


SEE PAGE 148 FOR 35K30 SPEEDOMETER CABLE ROUTING AND PART NUMBERS.

FOR HOSE PART NUMBERS, SEE PAGES 130, 142, & 146.

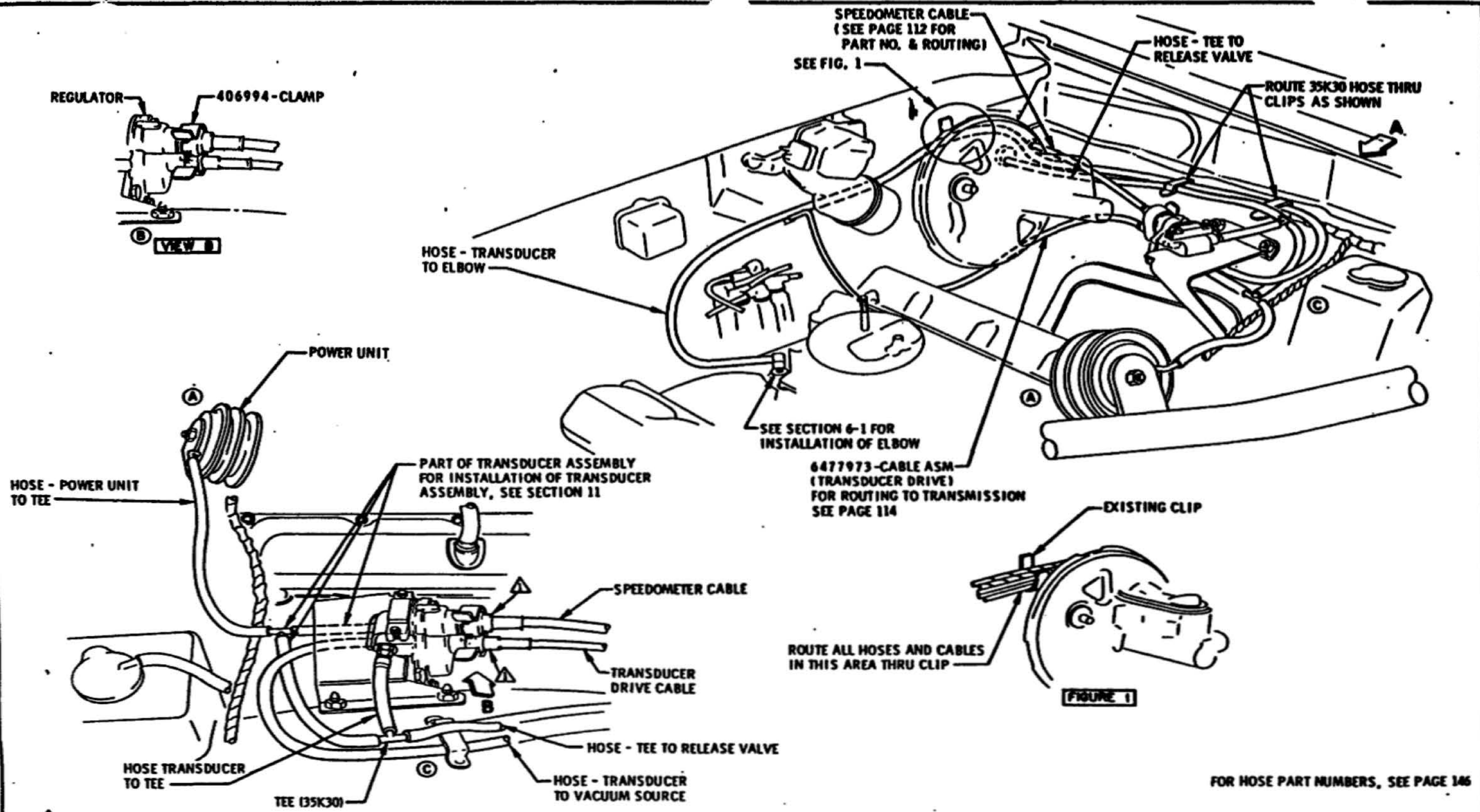
**VIEW A**  
(HOSE ROUTING TRANSDUCER TO POWER UNIT)

				TITLE 35C60 HOSE ROUTING (ENGINE COMPARTMENT) WITH 35K30			
DATE APR. 12, 1969				FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	
DR BY S.W.D.-J.Y.GALL				REV. 35C60		SERIES A	
CHECKED J.Y.G.				SERIES 35K30		PART NO. 404411	
DATE 6-8-69				REVISED TO DETAIL		MANUAL SEC. 1-5	
DATE 7-29-69				NOSE ROUTING REVISED		PAGE 144	
DATE	SYM	REVISION	DL	CL	APP.		



FOR 35K30 WITH 35C60, SEE PAGE 142

DATE	SYM	REVISION	DR.	CL.	APPR.	TITLE	DEF.	SERIES	PART NO.	MANUAL SEC.	PAGE
8-23-69	E	WAS 406341-HOSE	WLD	DT		SCHEMATIC VACUUM HOSE DIAGRAM - 35K30	1970	A	404411	1-5	146
7-27-69	D	WAS 403988-HOSE	P	NJ	DATE						
7-29-69	C	HOSE ROUTING REVISED	P	NJ	DR BY JOSEPH V. GALL						
7-29-69	B	WAS 405974-HOSE	P	NJ	CHECKED						
6-2-69	A	WAS 406340-HOSE	P	DT	APPR. L. J. GALL 8/21/69						
						35K30					



FOR HOSE PART NUMBERS, SEE PAGE 146

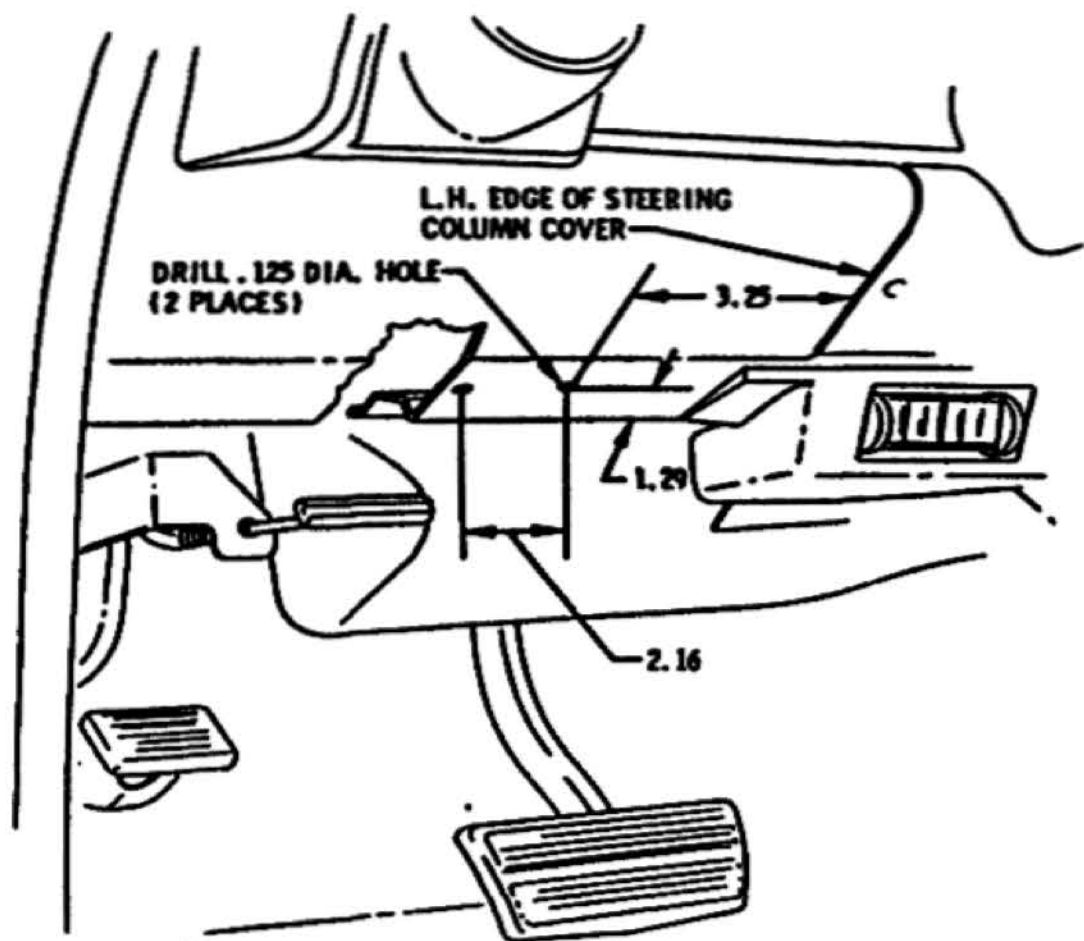
▲ 20-80 LB. IN.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED

DATE		SYN		REVISION		DR. CL.		APPR.		TITLE		FIRST USED		MANUAL SEC.		PAGE	
1-28-69	C	NOSE ROUTING REVISED								35K30 HOSE ROUTING (ENGINE COMPARTMENT)	1970		1-5	148			
6-22-69	B	VIEW B ADDED															
6-2-69	A	REVISED TO DETAIL															

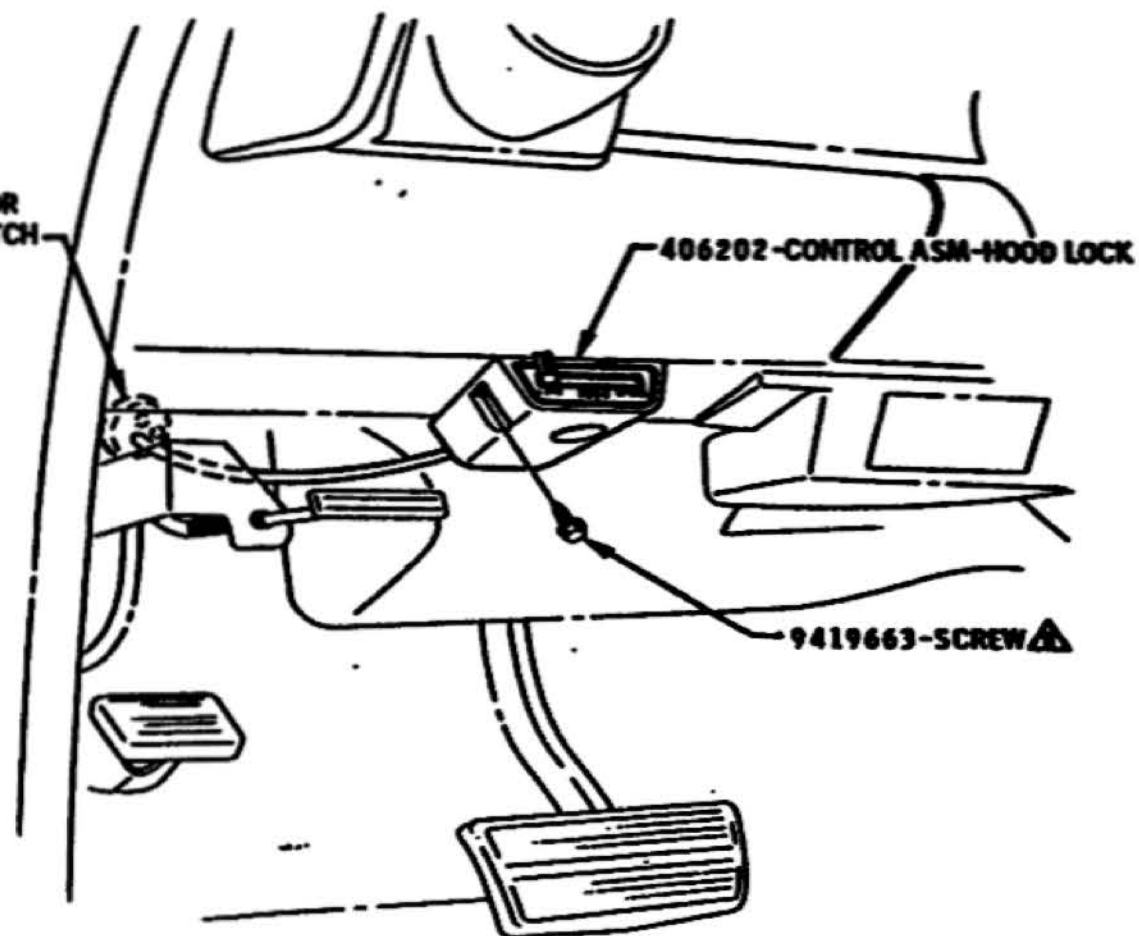
REF.	SERIES	PART NO.
35K30	A	404411





HOLE DRILLING FOR CONTROL ASSEMBLY

SEE PAGE 152 FOR ROUTING TO LATCH



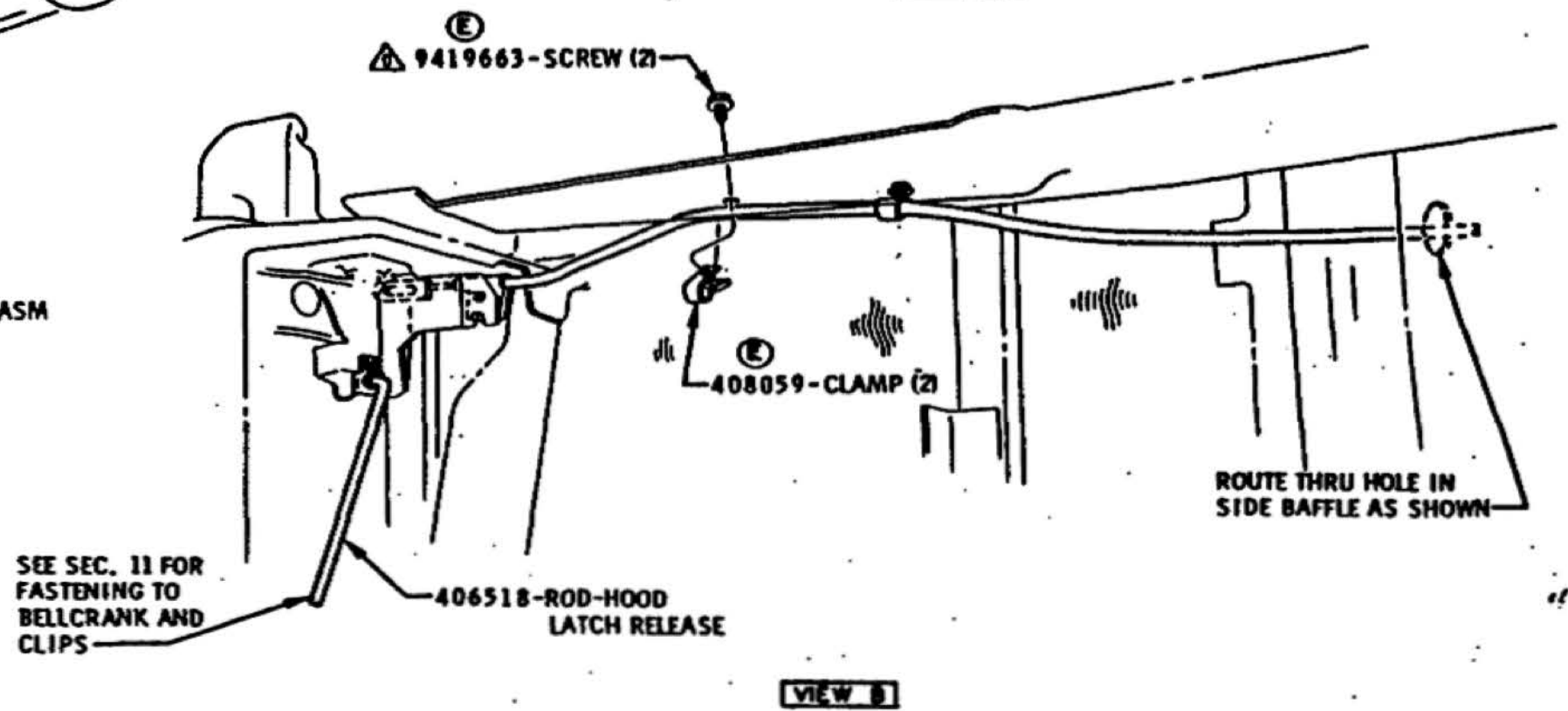
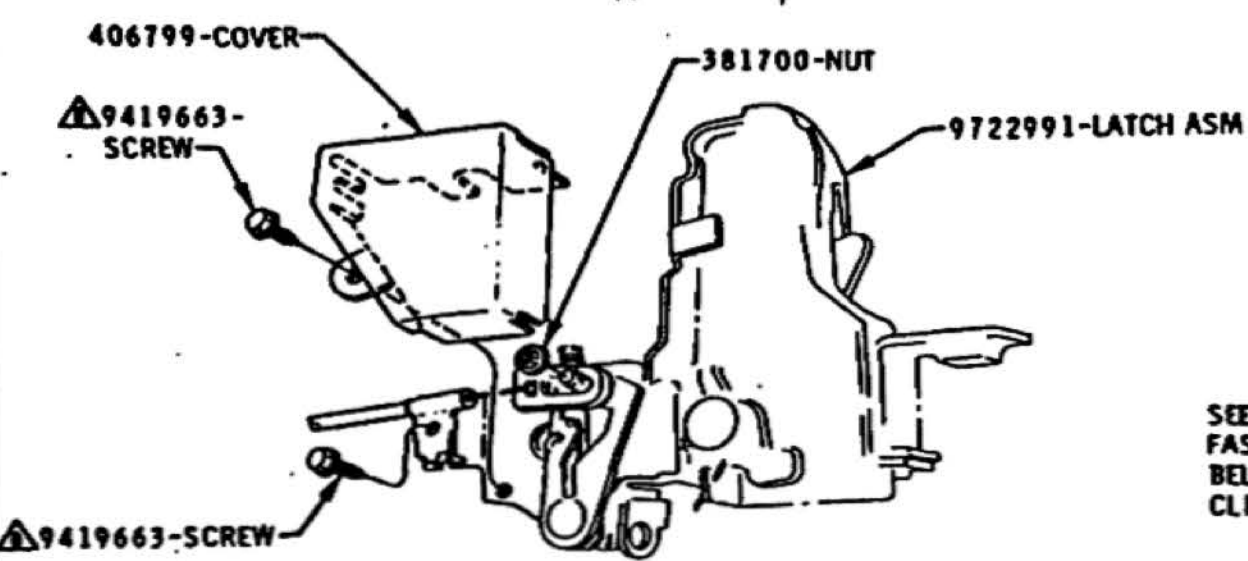
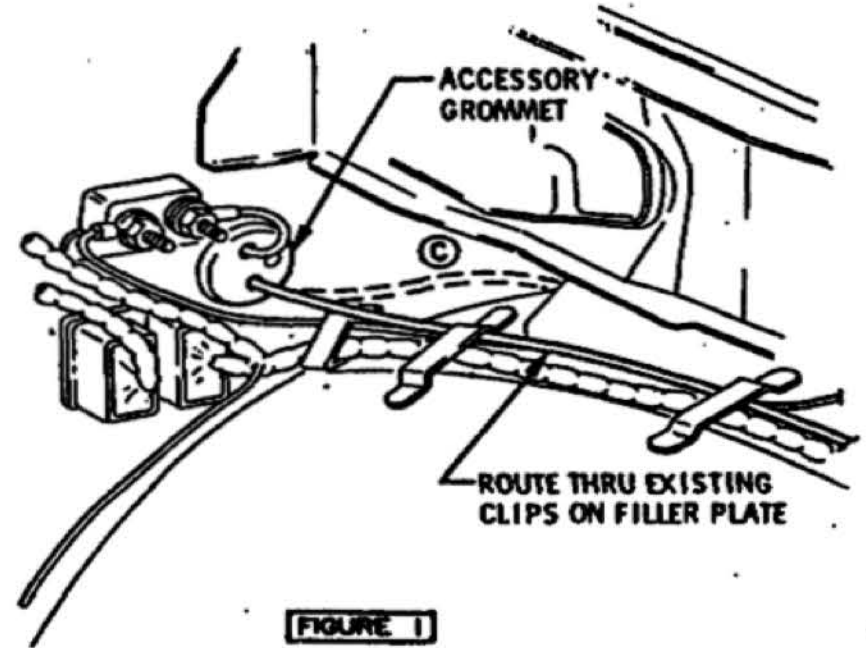
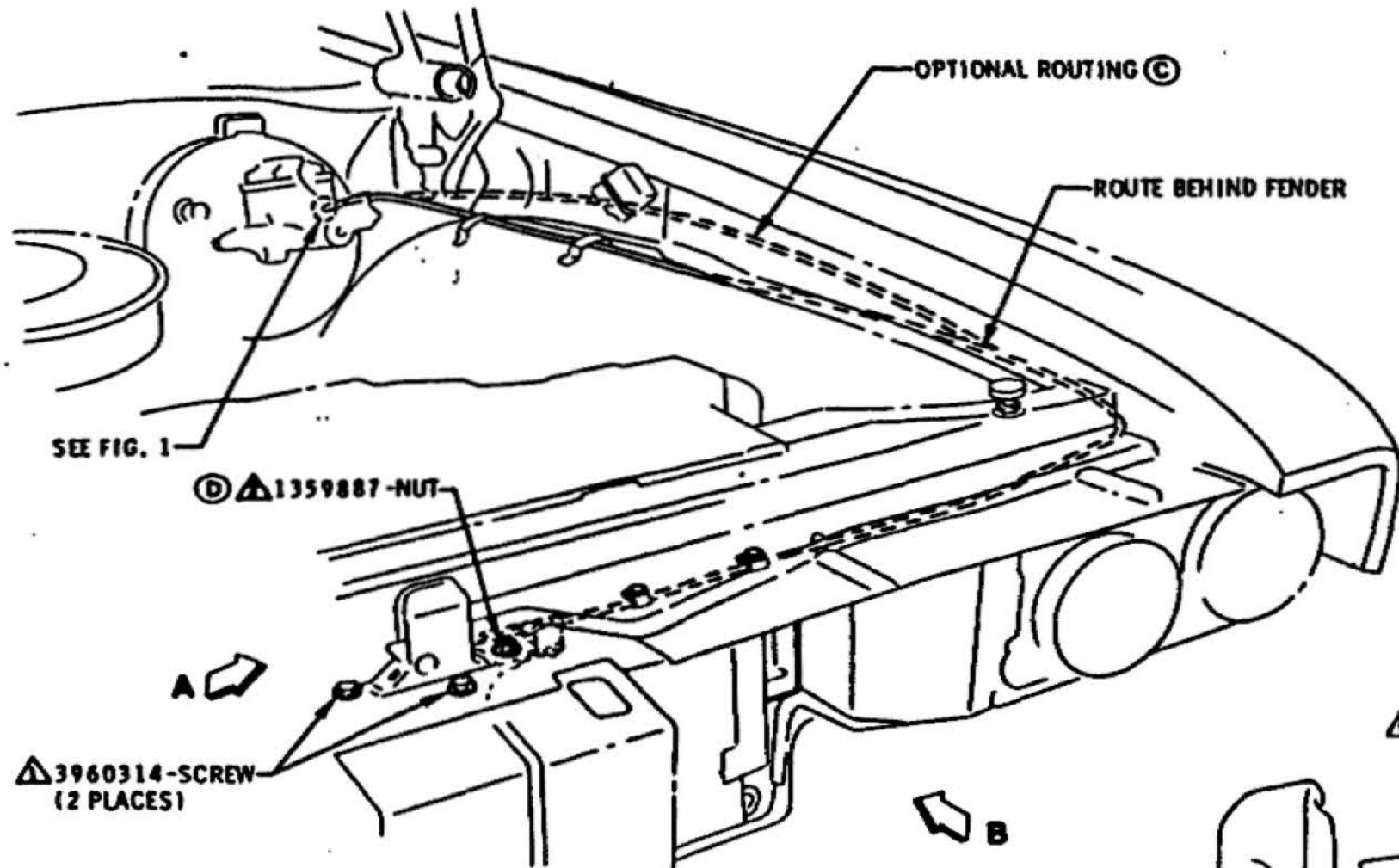
CONTROL FASTENING

(A)



DRIVER SEATED AND NOT STRIPPED

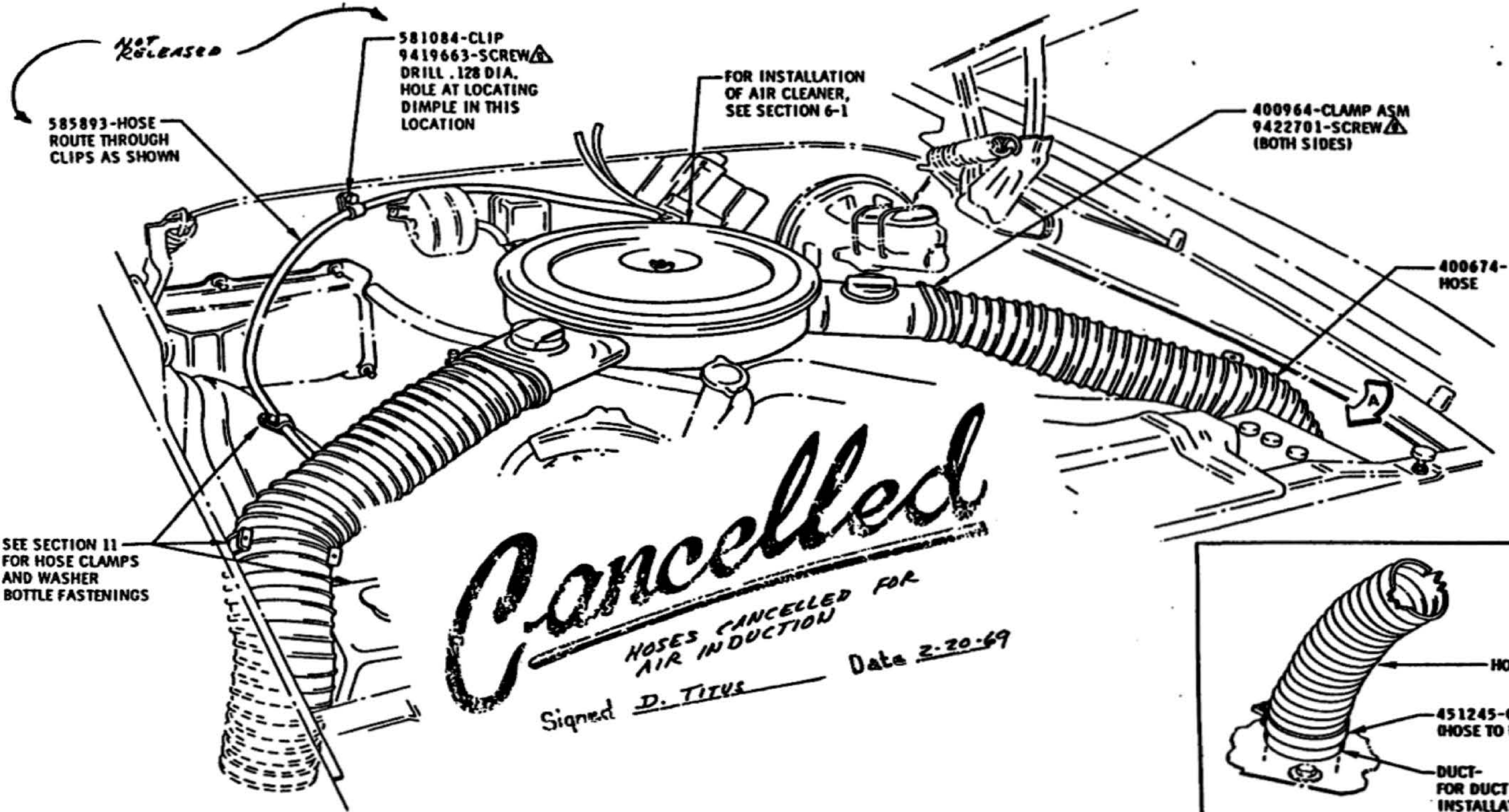
TITLE		HOOD LATCH CONTROL ASSEMBLY AND ROUTING (INSIDE CAR) (35744)		FIRST USED		1970		OLDSMOBILE PRODUCT INFORMATION F		MANUAL NO.		PAGE	
DATE		APR 25 1968		1970		1-5		150					
DR. BY		MOD. J.V. GALL											
CHECKED		APR 25 1968											
APPR.		L. H. GARDNER											



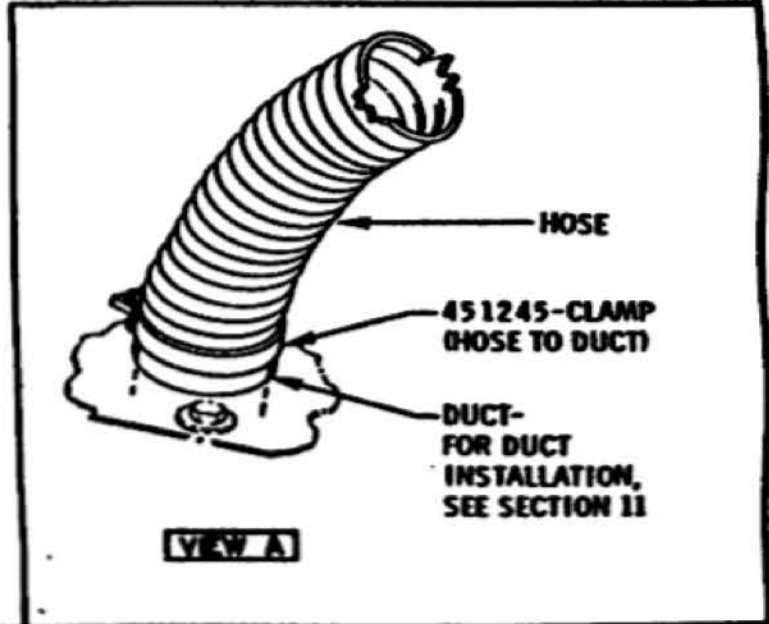
SEE SEC. 11 FOR FASTENING TO BELLCRANK AND CLIPS

- ▲ 10 - 15 LB. FT.
- ▲ 15 - 22 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	HANDAL SEC.	PAGE
12-69	E	SCREW+CLAMP ADDED	PL	DT		HOOD LOCK LATCH AND ROUTING (35T44)	1970			
5-1-69	D	TORQUE REVISED	PL	DT						
8-27-69	C	OPT. ROUTING ADDED	PL	DT						
6-11-69	B	FASTENING ADDED	PL	DT						
6-11-69	A	COVER ADDED	PL	DT						

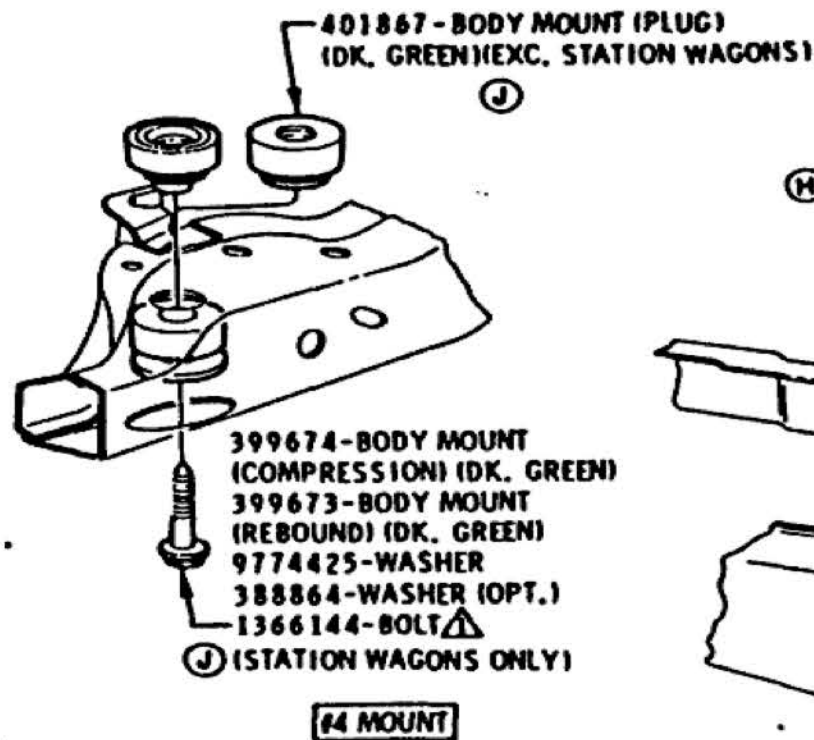
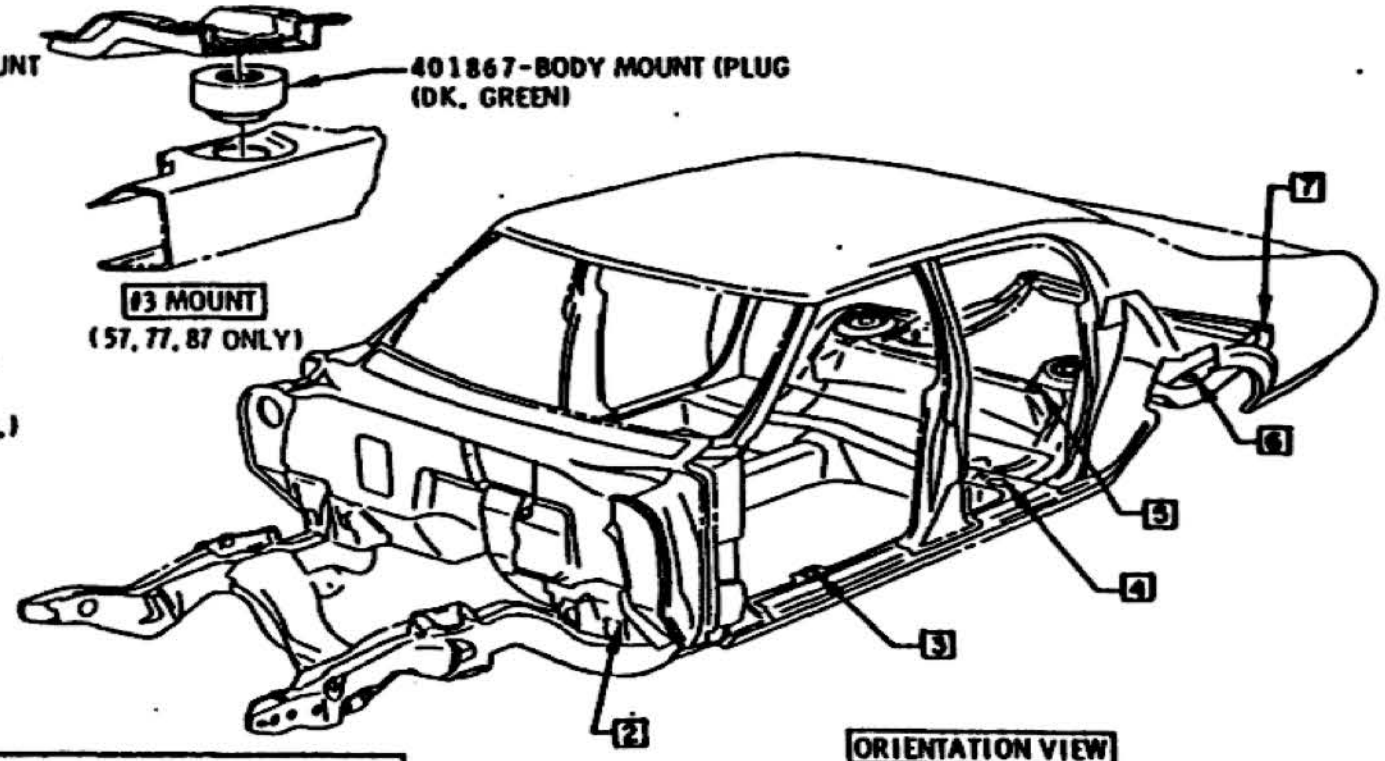
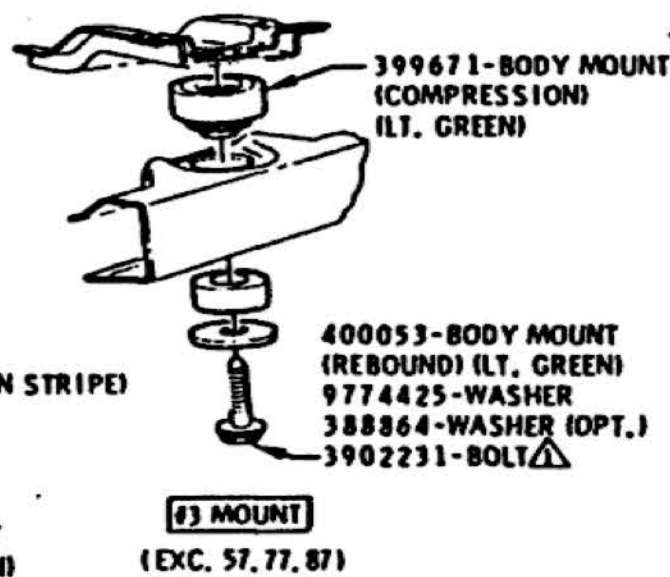
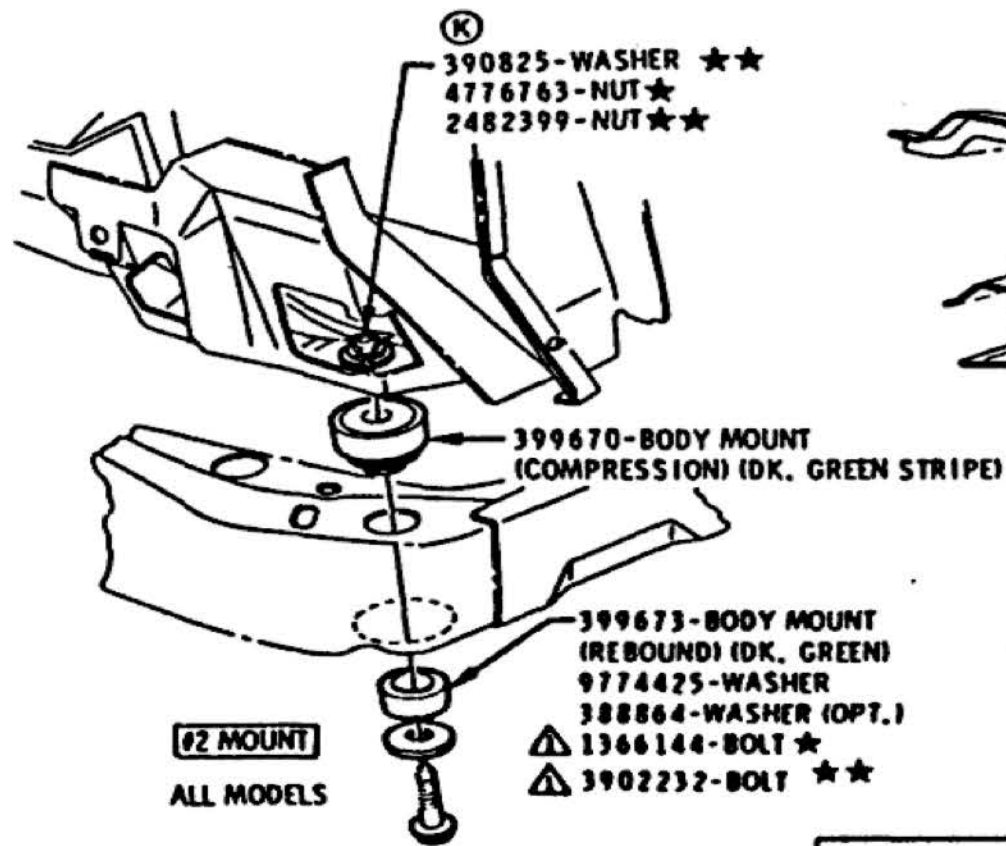


**Cancelled**  
 HOSES CANCELLED FOR  
 AIR INDUCTION  
 Signed D. TITUS Date 2-20-69

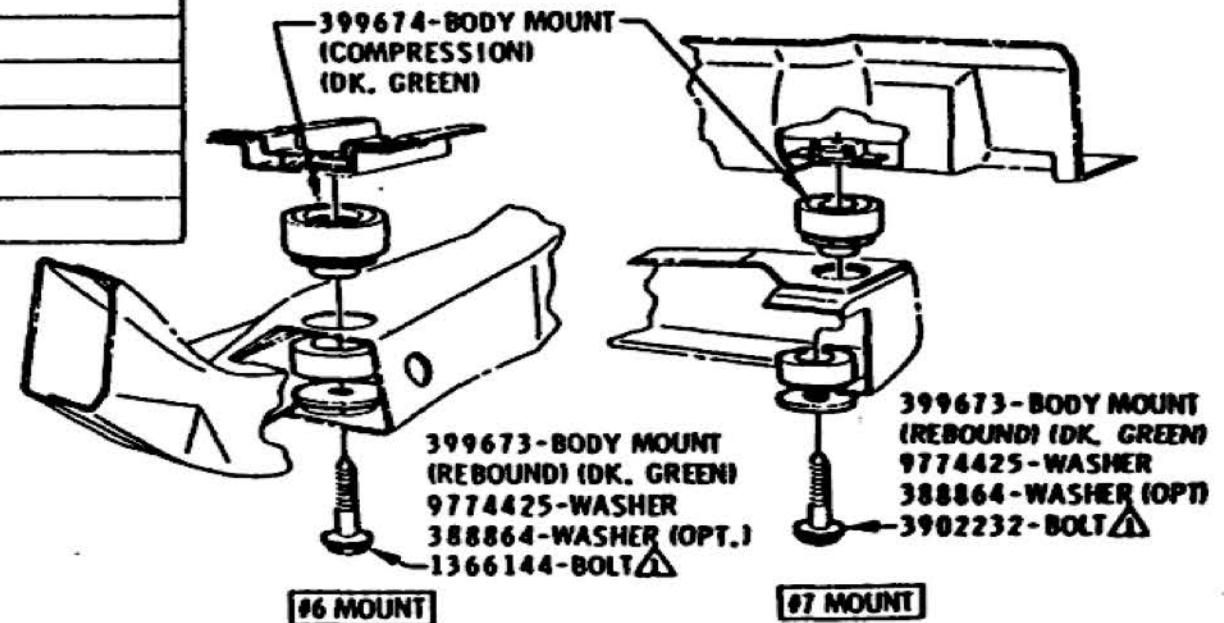
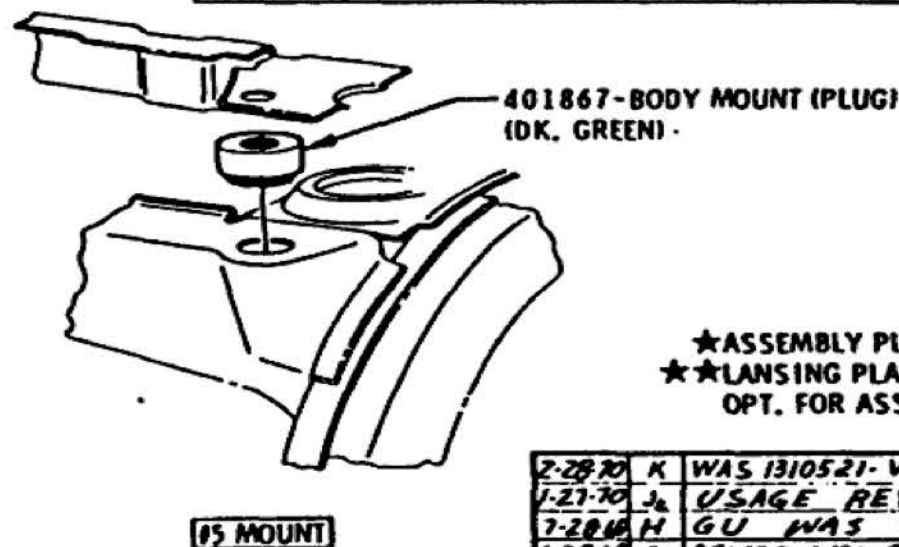


▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

PRELIMINARY INFORMATION <small>THIS DRAWING INCOMPLETE</small>		TITLE AIR INDUCTION SYSTEM HOSE ROUTING		MANUAL NO. <b>1-5</b>	PAGE <b>172</b>
DATE <u>APR 18, 1968</u>	DR. BY <u>BEAUDOIN</u>	FIRST USED <b>1970</b>	OLDSMOBILE PRODUCT INFORMATION MANUAL		
CHECKED <u>Titus</u>	APPR.	REP. <u>35W30</u>	SERIES <b>A</b>	PART NO. <b>404411</b>	
DATE	SYM	REVISION	DR. CK.		



FRAME USAGE CHART			
NUMBER	CODE	GROUP	USAGE
3960735	XV	2B	4267, 4467
3960737	XW	2B	3535, 3635
406258	GU	2B	4800
3960731	XT	2B	116" WHEELBASE (EXC. S.W.)
3960733	XU	2B	112" WB (EXC. CONV.)



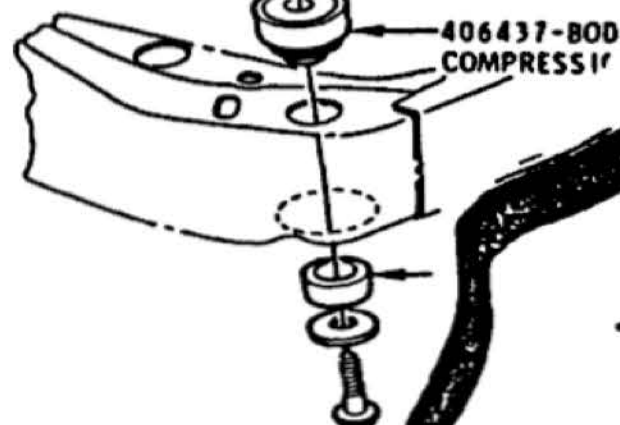
★ ASSEMBLY PLANTS ONLY  
 ★★ LANSING PLANT ONLY  
 OPT. FOR ASSEMBLY PLANTS

▲▲▲ 30 - 45 LB. FT.  
 FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	HANDL. NO.	PAGE
2-28-70	K	WAS 1310521-WASHER	J	PS		BODY MOUNTING AND FRAME	1970		2	100
1-27-70	J	USAGE REVISED	J	PS						
7-28-68	H	GU WAS GV	J	PS						
6-28-69	G	35H30-W31 REMOVED	J	PS						
4-19-69	F	WAS 396785 BOLT	J	PS						
							18 28	A		404411



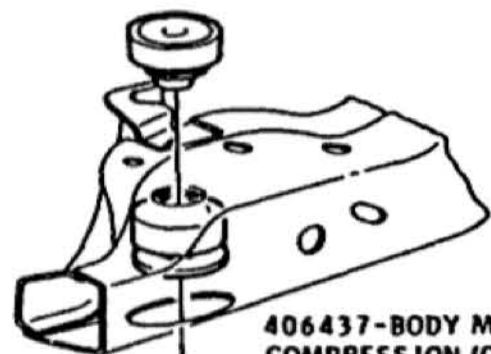
406439-BODY MOUNT  
COMPRESSION (ORANGE STRIPE)



406437-BOD  
COMPRESSI

#2 BODY

Please remove  
this sheet from  
your 1970 A CAR  
Product Information  
manual as this mounting  
manual has been cancelled  
THANK YOU  
myBarndart  
6/28/69

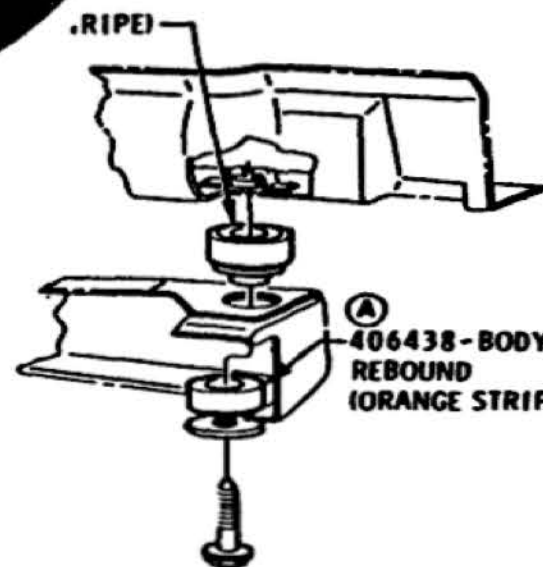


406437-BODY MOUNT  
COMPRESSION (ORANGE STRIPE)  
406438-BODY MOUNT  
REBOUND (ORANGE STRIPE)  
9774425-WASHER  
388864-WASHER-OPT.  
1366144-BOLT

#4 BODY MOUNT



#5 BODY MOUNT



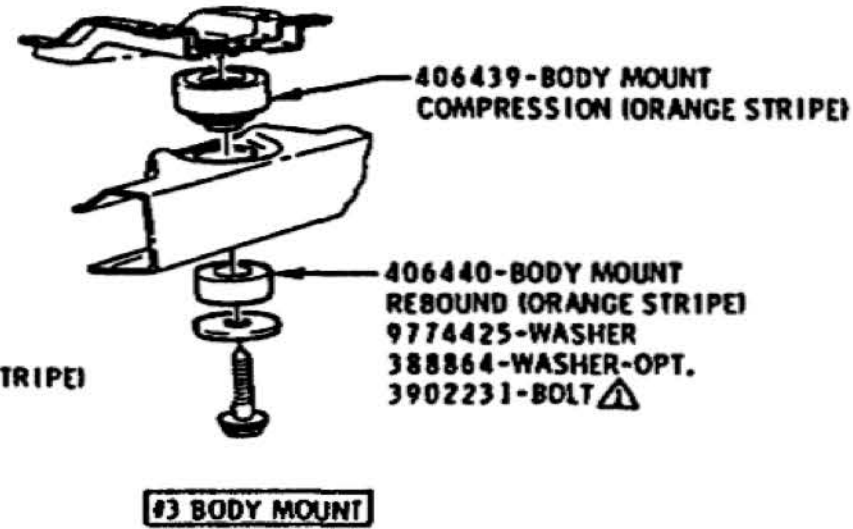
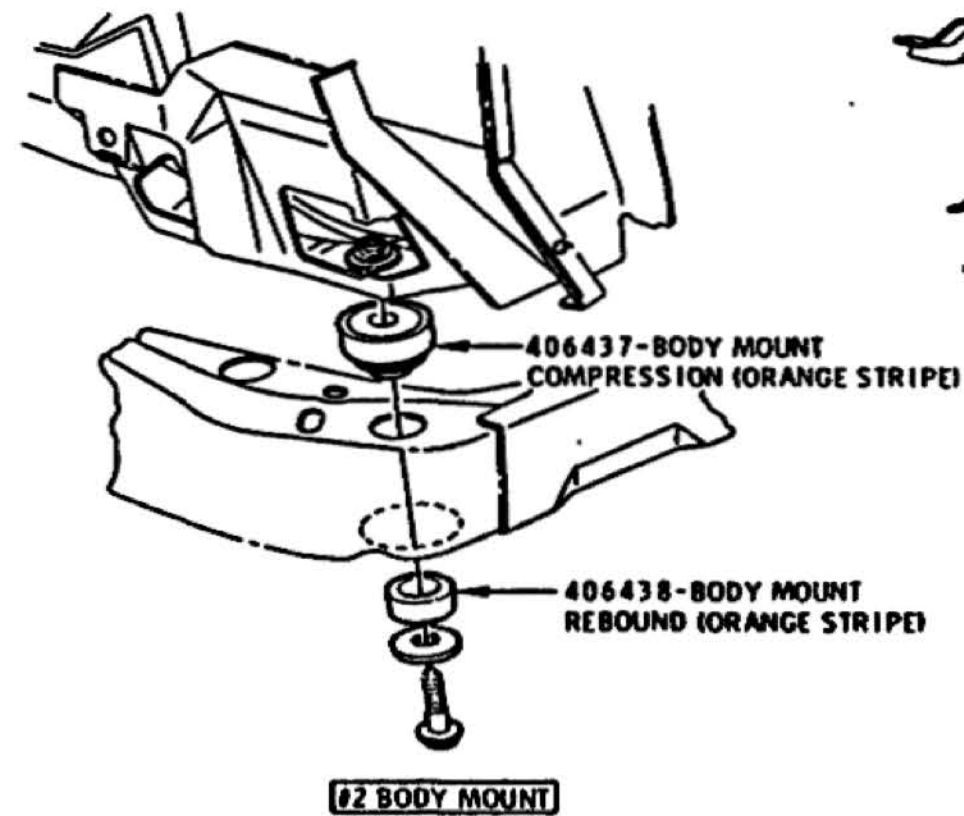
406438-BODY MOUN  
REBOUND  
(ORANGE STRIPE)

#7 BODY MOUNT

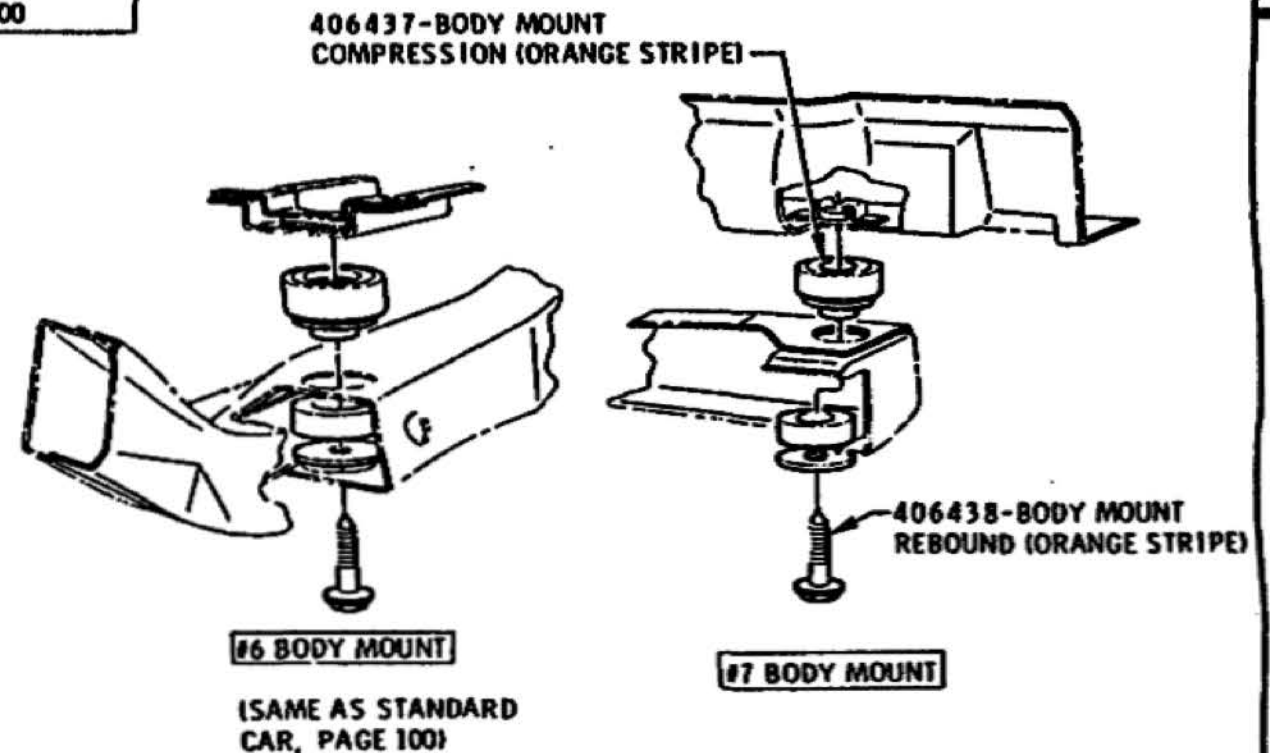
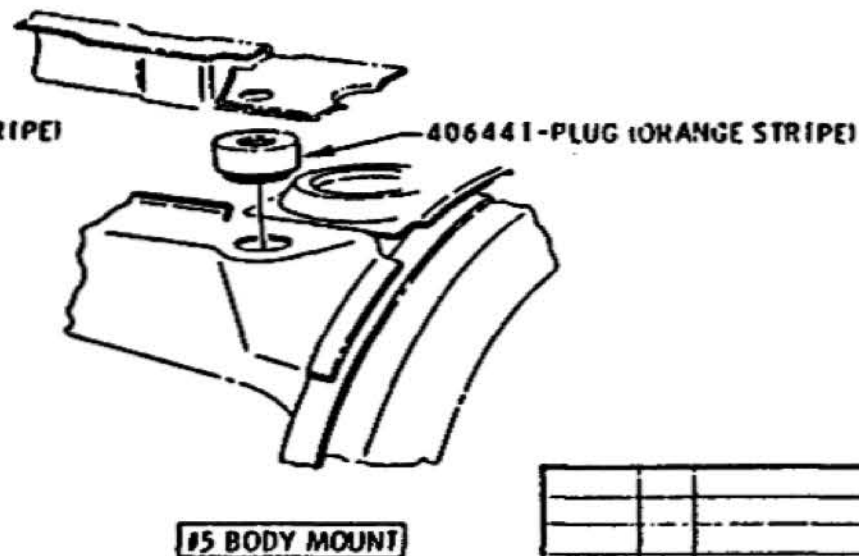
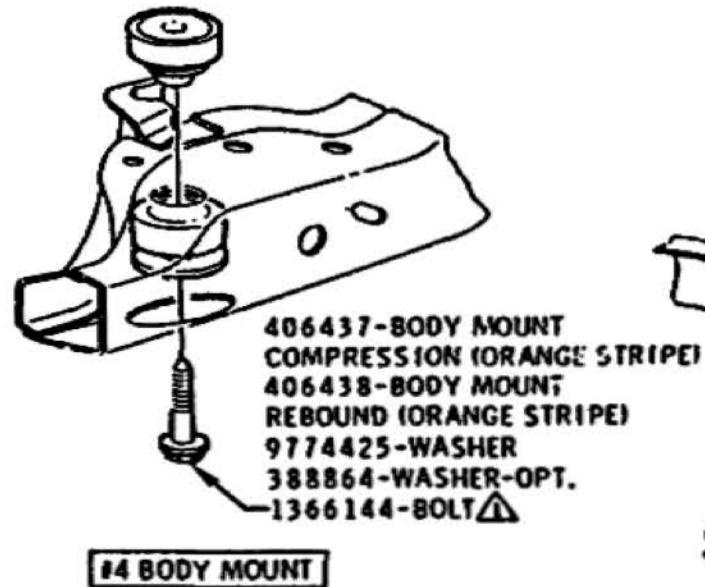
(SAME AS STANDARD  
CAR, PAGE 100)

▲  
▲  
▲  
30 - 45 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE				BODY MOUNT (35W30 AND 35W31)			
				DATE MAY 12, 1969				FIRST USED			
				DR. BY [Signature]				1970			
				CHECKED [Signature]				OLDSMOBILE PRODUCT			
				APPR. [Signature]				INFORMATION MANUAL			
				DATE 6-19-69				MANUAL SEC. 2			
				SYM A				PAGE 102			
				REVISION AIRC W RELOCATED				SERIES A			
				DR. CK. [Signature]				PART NO. 404411			



FOR BODY MOUNT ORIENTATION VIEW,  
CHART AND ADDITIONAL DUPLICATE  
PART NUMBERS, SEE PAGE 100



▲ 30 - 45 LB. FT.  
▲ FULLY DRIVEN, SEATED  
▲ AND 100 PERCENT

TITLE		BODY MOUNT (35W30 AND 35W31)			
DATE	MAY 12, 1969	FIRST USED	1970	MANUAL SEC.	PAGE
DR. BY	LLOYD R	OLDSMOBILE PRODUCT	INFORMATION MANUAL	2	102
CHECKED	MJ	REF.	SERIES	PART NO.	
APPR.	T...		A	40411	

**FRONT SUSPENSION SPRING USAGE - 1970 F-85**

SERIES	MODEL	35FEZ (442 SUSPENSION)		Ⓓ F41 (HEAVY DUTY)		Ⓜ L31 OR W32 (455 ENG.)		Ⓕ C60 (A/C)	3C (STANDARD)
		EXC. C60 (EXC. A/C)	C60 (A/C)	EXC. C60 (EXC. A/C)	C60 (A/C)	EXC. C60 (EXC. A/C)	C60 (A/C)		
33100 (L6)	77	NA	NA	402060 R4	402061 R5	NA	NA	401187 LP	401184 LD
33200 (VB)	77	401420 RX	400333 RD	400975 SC	400980 SF	NA	NA	400882 SB	400872 LT
33500 (L6)	35	NA	NA	R.H. - 402060 R4	R.H. - 405929 S9	NA	NA	R.H. - 401187 LP	R.H. - 401184 LD
		NA	NA	L.H. - 400975 SC	L.H. - 400975 SC	NA	NA	L.H. - 400873 LV	L.H. - 400865 LG
	39	NA	NA	402060 R4	402061 R5	NA	NA	400872 LT	400864 LE
	69	NA	NA	402060 R4	402061 R5	NA	NA	400871 LS	400864 LE
	77	NA	NA	402060 R4	402061 R5	NA	NA	401187 LP	401184 LD
	87	NA	NA	402060 R4	402061 R5	NA	NA	400871 LS	401184 LD
33600 (VB)	35	NA	NA	R.H. - 402061 R5	R.H. - 401173 SD	ⓐ NA	ⓐ NA	R.H. - 400881 LY	R.H. - 400871 LS
		NA	NA	L.H. - 400980 SF	L.H. - 401174 SK	ⓐ NA	ⓐ NA	L.H. - 400884 SG	L.H. - 400874 LX
	39	NA	NA	401173 SD	400981 SN	ⓐ NA	ⓐⓑ NA	400883 SE	400874 LX
	69	NA	NA	400975 SC	400981 SN	ⓐ NA	ⓐⓑ NA	400882 SB	400873 LV
	77	401420 RX	400333 RD	400975 SC	400980 SF	ⓐ NA	ⓐ NA	400882 SB	400872 LT
	87	401420 RX	400333 RD	400975 SC	400980 SF	ⓐ NA	ⓐ NA	400882 SB	400873 LV
34200 (VB)	39	NA	NA	401173 SD	400981 SN	ⓐ NA	ⓐ NA	400883 SE	400874 LX
	57	403592 S6	400335 RK	400975 SC	400981 SN	400974 SA	400980 SF	400882 SB	400873 LV
	67	403592 S6	400335 RK	401173 SD	400981 SN	400975 SC	400980 SF	400883 SE	400873 LV
34400 (VB)	67	NA	NA	NA	NA	NA	NA	400335 RK	400333 RD
	77	NA	NA	NA	NA	NA	NA	400334 RI	403592 S6
	87	NA	NA	NA	NA	NA	NA	400335 RK	403592 S6
34800 (VB)	55	NA	NA	R.H. - 400980 SF	R.H. - 401174 SK	R.H. - 401173 SD	R.H. - 401174 SK	R.H. - 400981 SN	R.H. - 400975 SC
		NA	NA	L.H. - 404857 S7	L.H. - 406361 EA	L.H. - 404856 R7	L.H. - 404857 S7	L.H. - 404857 S7	L.H. - 401174 SK
	65	NA	NA	R.H. - 401173 SD	R.H. - 401174 SK	R.H. - 400975 SC	R.H. - 400981 SN	R.H. - 400980 SF	R.H. - 400974 SA
		NA	NA	L.H. - 404856 R7	L.H. - 406361 EA	L.H. - 401174 SK	L.H. - 404857 S7	L.H. - 404856 R7	L.H. - 400981 SN

**TO READ CHART:**

READING CHART FROM LEFT TO RIGHT, THE FIRST OPTION REACHED THAT IS COMPLETELY SATISFIED WILL INDICATE THE SPRINGS TO BE USED ON THAT MODEL. IF NONE OF THE CONDITIONS ABOVE ARE SATISFIED, THE LAST COLUMN IS STANDARD CAR (LESS ALL OPTIONS SHOWN TO THE LEFT OF IT) AND WILL INDICATE THE SPRINGS TO BE USED.

STANDARD USAGE EXCEPT 35, 55 & 65 MODELS:  
USE HIGH RANGE SPRING ON L.H. SIDE OF CAR AND LOW RANGE ON R.H. SIDE.

TEMPORARY USAGE EXCEPT 35, 55 & 65 MODELS:  
WHEN BOTH SPRING RANGES ARE NOT AVAILABLE USE SAME RANGE SPRING ON BOTH SIDES OF CAR.

STANDARD USAGE FOR 35, 55 & 65 MODELS:  
USE SAME RANGE SPRINGS ON BOTH SIDES OF CAR.

TEMPORARY USAGE FOR 35, 55 & 65 MODELS:  
WHEN SAME RANGE SPRINGS FOR BOTH SIDES OF CAR ARE NOT AVAILABLE.

(PREFERRED) USE HIGH RANGE ON LEFT SIDE OF CAR AND LOW RANGE ON RIGHT SIDE OF CAR.

(OPTIONAL) USE LOW RANGE ON LEFT SIDE OF CAR AND HIGH RANGE ON RIGHT SIDE OF CAR.

TAPE IDENTIFICATION:  
HIGH LOAD RANGE - PLAIN IDENTIFICATION, LOW LOAD RANGE - BLACK CIRCLE AROUND CODE LETTER.

FOR SPRING DETAIL SEE DRAWING 400860.

31170	VM	SPRING REMOVED	RA F47969 D	WAS F40 OR F41	TITLE	CHART - FRONT SPRING USAGE			
31170	H	L33 REMOVED	RAFT	HEAVY DUTY "10R"2	DATE MARCH 13 1969	FIRST USED			
9263	G	HEADLINE REVISED	RA F47969 C	NOTE REVISED	DR. BY DON MACKIN	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. 3	PAGE 90
9265	F	W32 ADDED	RA F47969 B	L33 ADDED	CHECKED J. B. FITZGERALD				
9265	E2	WAS 400981 CODE SN	RA F47969 A	33600 SPRINGS ADDED	APPR. J. A. FITZGERALD				

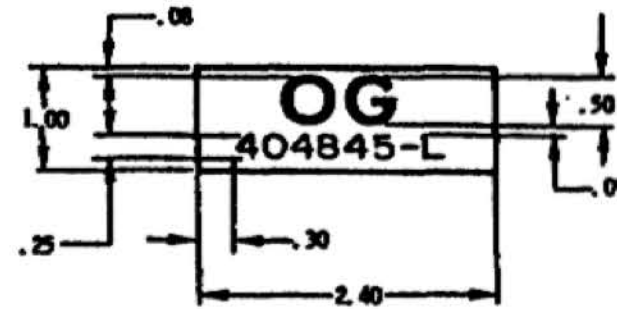
SERIES **A** PART NO. **405835**



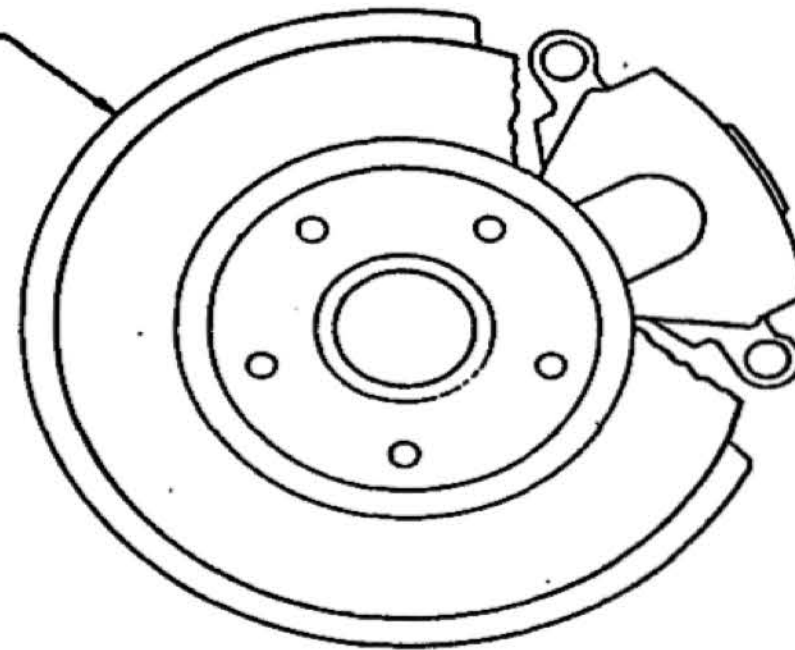




STEERING KNUCKLE ASSEMBLY USAGE			
CODE	STEERING	MODEL	PART NO.
OR	MANUAL	54, 64, 66 WITH JL2	408144-R. 408145-L. (C)
OE	POWER	54, 64, 66 WITH JL2 84 & 86	405898-R. 405899-L.
OH	MANUAL	54, 64, 66 WITH J55	404842-R. 404843-L.
OG	POWER	54, 64, 66, 84, 86 WITH J55	404844-R. 404845-L.
OM	POWER	ALL F-85 WITH JL2	405138-R. 405139-L.
OP	MANUAL	32, 36, 4400 WITH W30 OR W31	406376-R. 406377-L. (A)



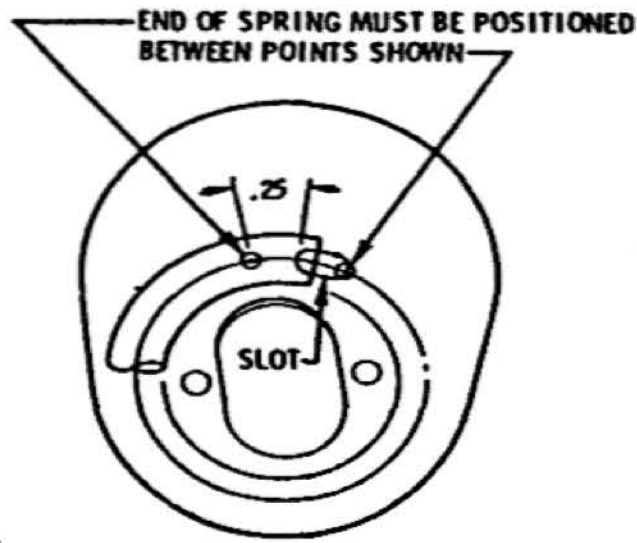
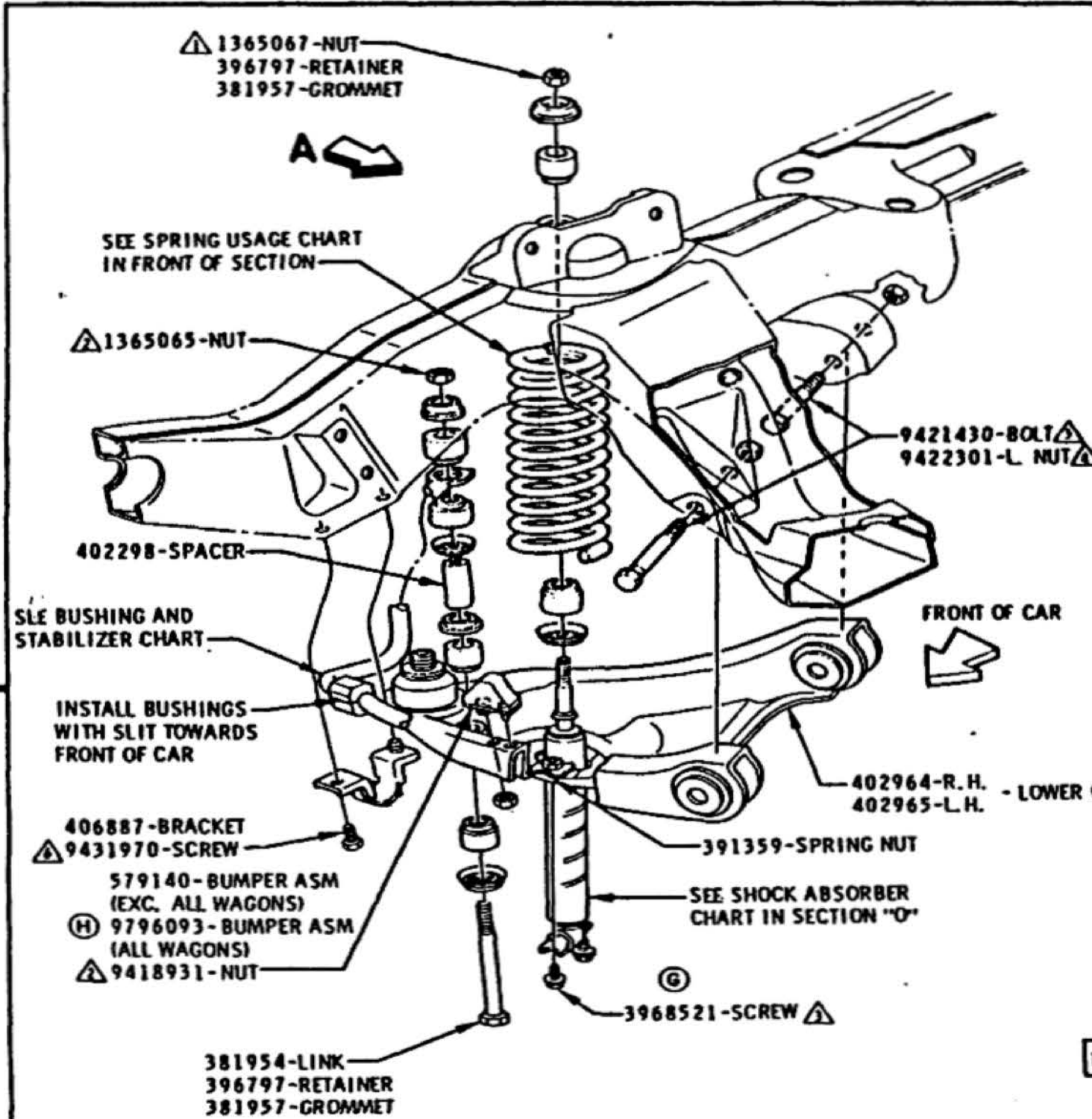
(B) STICKER TO BE INSTALLED ON THIS SURFACE OF SPLASH SHIELD WHEN SHOP ASM IS COMPLETED.



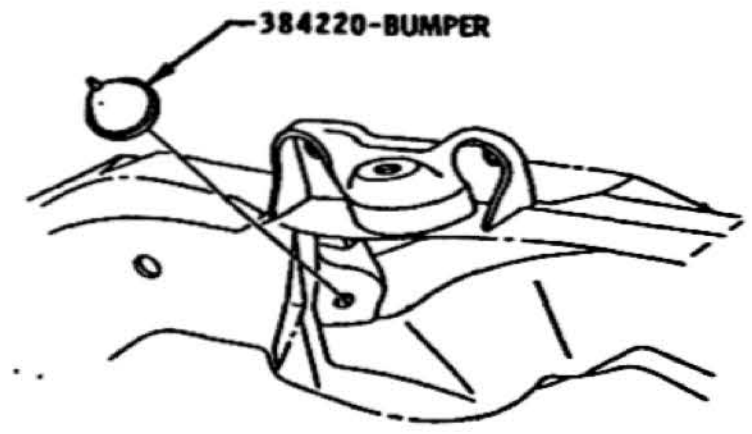
DISC

SHEET 2

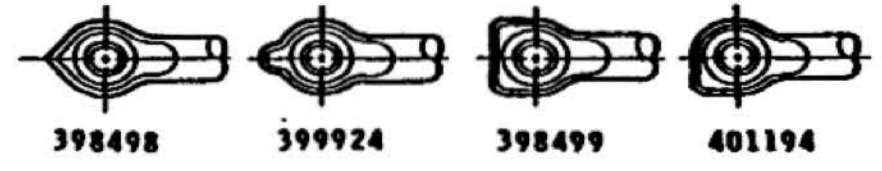
REV.	SYM.	DESCRIPTION	DR.	CHK.	DATE	SYM.	REVISION	DR.	CHK.	DATE	SYM.	REVISION	DR.	CHK.	DATE	SYM.	REVISION	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	SERIES	PART NO.
																		CHART - KNUCKLE SHOP ASSEMBLY CODE	1970		3	95	A-B-C	406342
		1206 C 408144-5 ADDED	RJH		MARCH 13, 1969													DR. BY DON MALKIN		OLDSMOBILE PRODUCT INFORMATION MANUAL				
		11-74 B NOTE RELOCATED	NCF															CHECKED JOHN AMMA						
		5268 A 406376-7 ADDED	LSJ															APPR. BY [Signature]						



SPRING TAIL POSITIONING  
IN LOWER CONTROL ARM

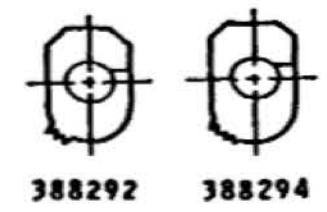


VIEW A



FRONT STABILIZER SHAFT  
IDENTIFICATION CHART

NOTE  
STABILIZER BAR MUST BE INSTALLED  
WITH IDENTIFICATION FORMING ON  
RIGHT SIDE OF CAR.



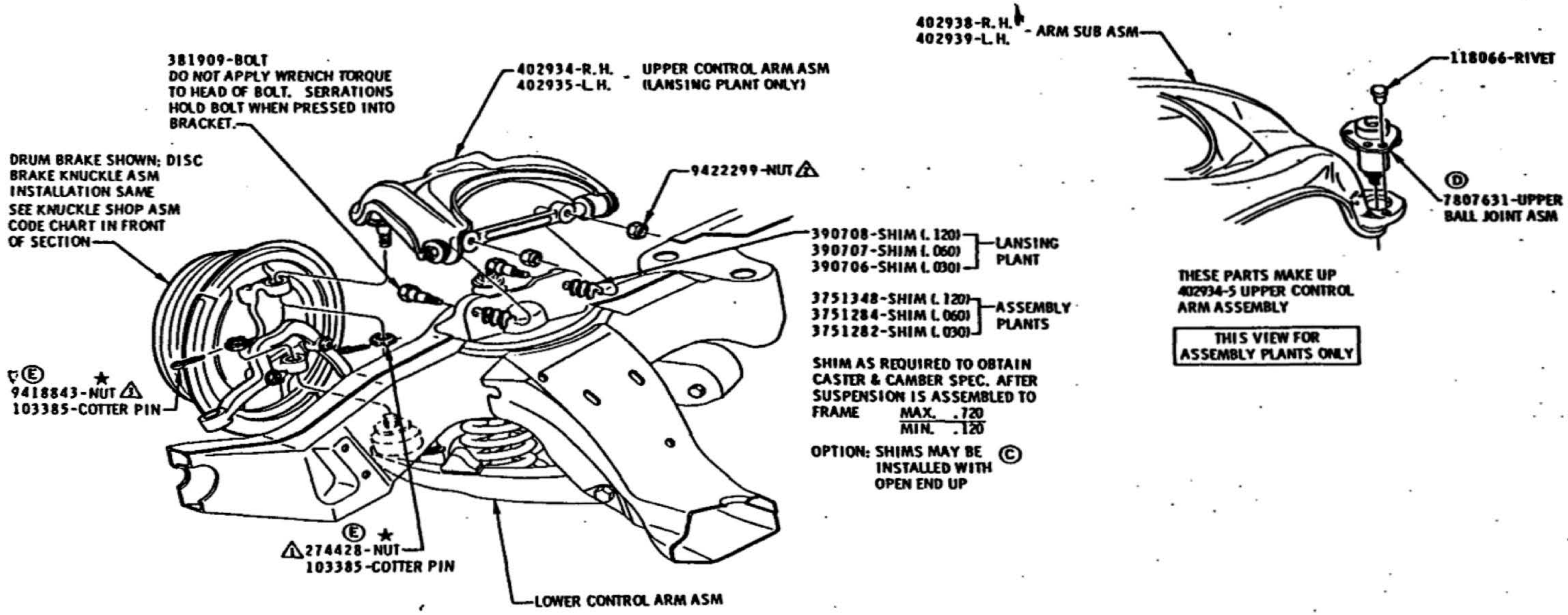
BUSHING IDENTIFICATION CHART

STABILIZER SHAFT AND BUSHING USAGE CHART				
STABILIZER PART NO.	STAB. DIA.	BUSHING PART NO.	GROUP	MODELS
398498	.875	388292	3G	31, 3500
398499	.937	388294	3G	32, 36, 4200 EXC. 4267
			35F41	31, 3500
399924	.970	388294	3G	4267, 4400
			35FE2	3277, 3677, 87 4257
			35F41	32, 36, 4200 EXC. 4267
401194	1.000	388294	3G	4800

★ TORQUE NUTS OR BOLT HEADS AT ASSEMBLY WHILE CAR IS AT CURB LOAD HEIGHT. ANY RETORQUE SUBSEQUENT TO THE INITIAL APPLICATION MUST BE APPLIED TO THE SAME END AS TORQUED INITIALLY.

- △ 25-35 LB. FT.
- △ 90-120 LB. FT. ★
- △ 70-90 LB. FT. ★
- △ 15-25 LB. FT.
- △ 120-180 LB. IN.
- △ 60-120 LB. IN.
- △ ONLY DRIVEN SEATER

2-12-70	H	PART NUMBER ADDED	6-11-69	E	PART NOS. REVISED	DATE	FRONT SUSPENSION		MANUAL SEC.	PAGE
11-14-69	G	WAS 9420555-2L DRAW	5-23-69	D	WAS 384043-20TUNE	DECEMBER 5, 1968	FIRST USED	1970	3	100
8-2-69	F	WAS 388294-2L DRAW	4-9-69	C	CHART REVISED	DR BY C. J. WILKINS	OLDMOBILE PRODUCT INFORMATION MANUAL			
8-2-69	F	WAS 388294-2L DRAW	2-7-69	B	35FE2 ADDED	CHECKED BY J. J. HANLEY	REV. 3A			
8-2-69	F	WAS 388294-2L DRAW	1-17-69	A	CHART REVISED					



★ AFTER REACHING MINIMUM TORQUE REQUIRED, NUT MUST ALWAYS BE TIGHTENED FURTHER, NEVER BACKED OFF, TO INSERT COTTER PIN. MAXIMUM AUDIT TORQUE NOT TO BE EXCEEDED FOR RE-INSTALLATION OF COTTER PIN AFTER AUDIT.

- ▲ 70 - 95 LB. FT.
- ▲ 45 - 55 LB. FT.
- ▲ 40 - 60 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR	CL	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
1-22-70	E	PART NUMBERS REVISED				FRONT SUSPENSION				
1-5-70	D	WAS 780860				DATE DECEMBER 14, 1968	1970		3	102
9-24-69	C	NOTE ADDED				DR. BY: C. HINCHER				
6-11-65	B	VIEW REMOVED				CHECKED: P. J. Santant				
3-5-65	A	WAS 780567B				APPR. J. A. Sullivan				
							97-3	A		404411

★ AFTER REACHING MINIMUM TORQUE REQUIRED, NUT MUST ALWAYS BE TIGHTENED FURTHER, NEVER BACKED OFF, TO INSERT COTTER PIN. MAXIMUM AUDIT TORQUE NOT TO BE EXCEEDED FOR RE-INSTALLATION OF COTTER PIN AFTER AUDIT.



FIGURE 1



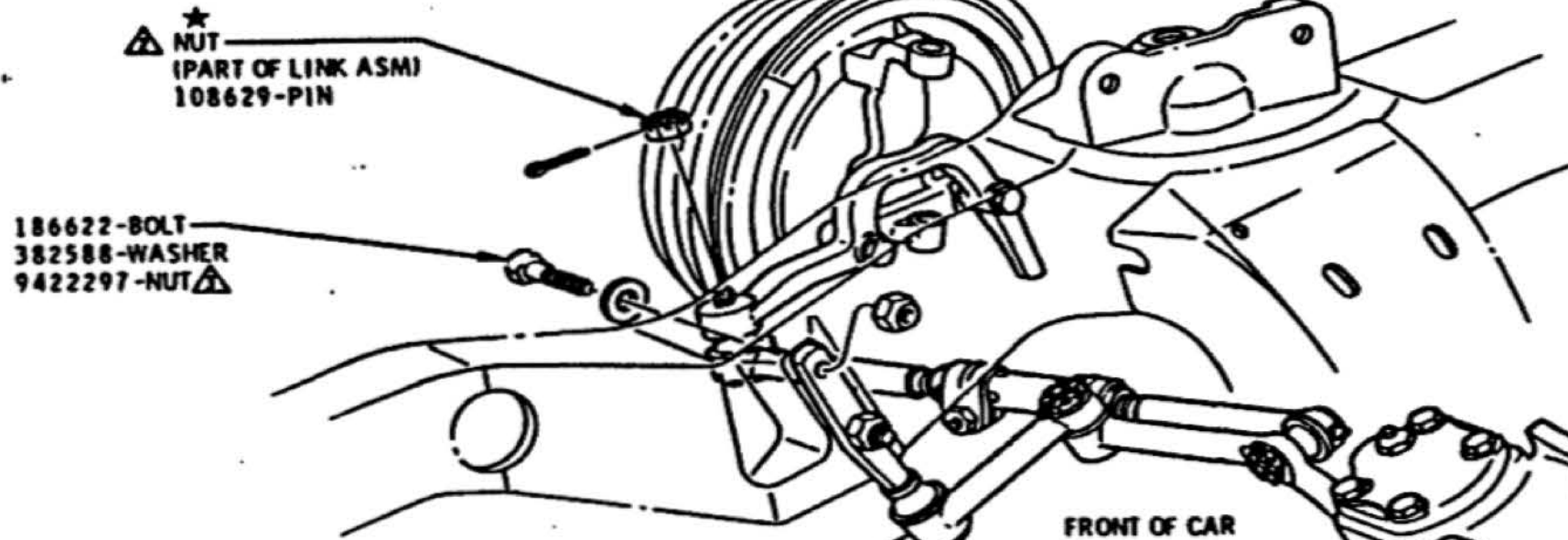
FIGURE 2



FIGURE 3

SLOT IN TIE ROD ADJUSTER SLEEVE MAY BE IN ANY POSITION EXCEPT AT EDGES OF CLAMP JAWS OR BETWEEN CLAMP JAWS.

FIGURE 1 SHOWS A CORRECT POSITION. FIGURES 2 AND 3 ARE INCORRECT POSITIONS.

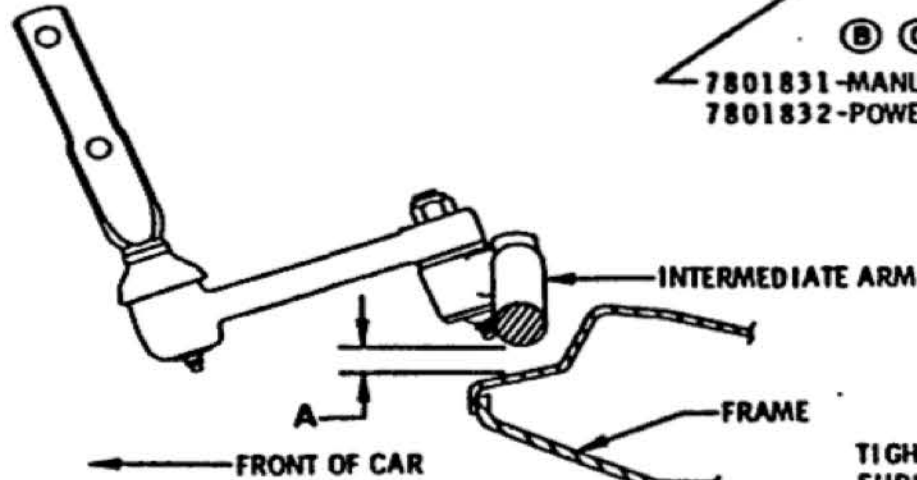


★ NUT (PART OF LINK ASM) 108629-PIN

186622-BOLT  
382588-WASHER  
9422297-NUT

FRONT OF CAR

7801831-MANUAL STEERING LINKAGE ASM  
7801832-POWER STEERING LINKAGE ASM



INTERMEDIATE ARM

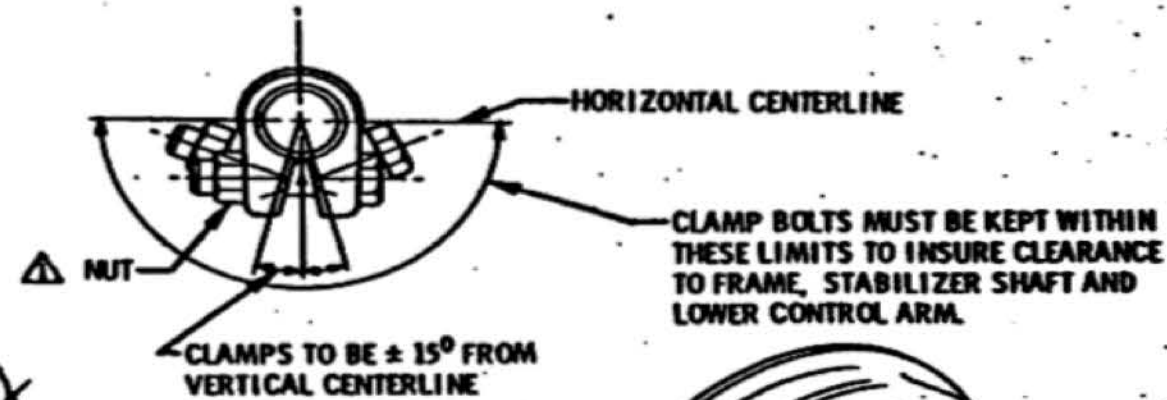
FRAME

FRONT OF CAR

CLEARANCE-INTERMEDIATE ARM TO FRAME CROSS MEMBER

TIGHTEN STEERING GEAR AND IDLER ARM SUPPORT TO FRAME BOLTS AFTER SETTING INTERMEDIATE ROD TO FRAME DIMENSION ("A") TO THE MINIMUM POSSIBLE ON EACH CHASSIS ASSEMBLY.

L. WASHER  
NUT (PART OF STEERING GEAR ASM)



TYPICAL SECTION A-A

HORIZONTAL CENTERLINE

NUT

CLAMPS TO BE ± 15° FROM VERTICAL CENTERLINE

CLAMP BOLTS MUST BE KEPT WITHIN THESE LIMITS TO INSURE CLEARANCE TO FRAME, STABILIZER SHAFT AND LOWER CONTROL ARM.

NUMBER OF THREADS PROJECTING FROM EACH END OF TIE ROD SLEEVE MUST BE EQUAL WHEN TIE ROD IS ASSEMBLED TO PLANE ARM.

★ NUT (PART OF LINK ASM) 108629-PIN

① AFTER SETTING FRONT ALIGNMENT, ROTATE BOTH TIE ROD END HOUSINGS IN SAME DIRECTION TO END OF TRAVEL AND THEN TIGHTEN ADJUSTMENT TUBE CLAMPS.

- ▲ 120 - 160 LB. FT.
- ▲ 35 - 45 LB. FT.
- ▲ 30 - 40 LB. FT.★
- ▲ 15 - 25 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

REVISION		TITLE		STEERING LINKAGE		MANUAL SEC.	PAGE
11-20-69	D	NOTE REVISED	DATE DECEMBER 16, 1968	FIRST USED	1970	3	104
10-19-69	C	2ND TYPE REMOVED	DR. B.D. C. W. MEDALL				
9-23-69	B	2ND TYPE ADDED	CHECKED P. J. BENTLEY				
8-6-69	A	PART NUMBERS REMOVED	APPR. J. J. BENTLEY	REV. 2 D	347	A	404411

## REAR SUSPENSION SPRING USAGE - 1970 F-85

SERIES	MODEL	35FE2 (442 SUSPENSION)		G51 (HEAVY DUTY)	(D) F41 (HEAVY DUTY)	(C)	M40 (3-SPEED A.M.T.)	4B (STANDARD CAR)
		EXC. M38, M40	(B) M38, M40	M40 ONLY				
33100 (L6)	77	N.A.	N.A.	N.A.	9793819 HF		↑ SAME AS STANDARD CAR ↓	9777794 NN
	33200 (V8)	77	546167 HY	9788448 NK	N.A.	9793819 HF		9777794 NN
33500 (L6)	35	N.A.	N.A.	N.A.	9797509 HQ			9787052 PO (A)
	39	N.A.	N.A.	N.A.	9793156 N5			9787043 NB
	69	N.A.	N.A.	N.A.	9793156 N5			9788444 NO
	77	N.A.	N.A.	N.A.	9793819 HF			9777794 NN
	87	N.A.	N.A.	N.A.	9793819 HF			9777794 NN
33600 (V8)	35	N.A.	N.A.	N.A.	9797509 HQ			9787052 PO (A)
	39	N.A.	N.A.	N.A.	9793156 N5			9787043 NB
	69	N.A.	N.A.	N.A.	9793156 N5			9788444 NO
	77	546167 HY	9788448 NK	N.A.	9793819 HF		9777794 NN	
	87	546167 HY	9788448 NK	N.A.	9793819 HF		9777794 NN	
34200 (V8)	39	N.A.	N.A.	N.A.	9793156 N5		9787043 NB	
	57	546167 HY	9788448 NK	N.A.	9793819 HF		9787260 PC	
	67	546167 HY	9788448 NK	N.A.	9793819 HF		9787260 PC	
34400 (V8)	67	N.A.	N.A.	546167 HY	N.A.		9788448 NK	546167 HY
	77	N.A.	N.A.	546167 HY	N.A.		9788448 NK	546167 HY
	87	N.A.	N.A.	546167 HY	N.A.		9788448 NK	546167 HY
34800 (V8)	55	N.A.	N.A.	N.A.	9797509 HQ		SAME AS STANDARD CAR	9787052 PO (E)
	65	N.A.	N.A.	N.A.	479873 H5			9792945 P2 (E)

**TAPE IDENTIFICATION:** HIGH LOAD RANGE - PLAIN IDENTIFICATION.  
LOW LOAD RANGE - BLACK CIRCLE AROUND CODE LETTER.

FOR SPRING DETAIL, SEE DRAWING 9787042.

USE HIGH RANGE SPRING ON L.H. SIDE  
OF CAR AND LOW RANGE ON R.H. SIDE.

**TEMPORARY USAGE:**  
WHEN BOTH SPRING RANGES ARE NOT  
AVAILABLE, USE SAME RANGE SPRING  
ON BOTH SIDES OF CAR.

**TO READ CHART:**

READING CHART FROM LEFT TO RIGHT, THE FIRST  
OPTION REACHED THAT IS COMPLETELY SATISFIED  
WILL INDICATE THE SPRINGS TO BE USED ON THAT  
MODEL. IF NONE OF THE CONDITIONS ABOVE ARE  
SATISFIED, THE LAST COLUMN IS STANDARD CAR  
(LESS ALL OPTIONS SHOWN TO THE LEFT OF IT)  
AND WILL INDICATE THE SPRINGS TO BE USED.

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	
7/19/65 C. PART NO.'S REVISED										TITLE		CHART - REAR SPRING USAGE							
7/26/65 D COLUMN REVISED										DATE		MARCH 15, 1967		FIRST USED		1970		OLDSMOBILE PRODUCT	
7/26/65 C TAG REMOVED										DR. BY		L SPITZLEY		REF.				INFORMATION MANUAL	
6/1/65 B M 90 ADDED										CHECKED		C. J. JONES		SERIES		A		PART NO.	
2/21/65 A2 WAS 9797052										APPR.		THE ZOFFE		MANUAL SEC.		4		PAGE	
										APP. JPL				REF.				405836	

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

SERIES	ENGINE	TRANSMISSION	ECONOMY  PERFORMANCE							DEALER INSTALLED		
			AXLE RATIOS							4.33 (90-4)	4.66 (90-4)	5.00 (90-4)
			2.56 (G96)	2.78 (G95)	3.08 (G90)	3.23 (G91)	3.42 (G92)	3.91 (G88)				
33100 F-65 33900 CUTLASS	250 LG 1 BBL (S1) LOW AND L90 EXPORT	SM	S	S	A	A	A	A	A	A		
		M38	S	S	A	A	A	A	A	A		
33200 F-65	350 2 BBL (LOW (S1) AND L90 EXPORT	SM, M38 WITH C60	A	A	S	A	A	A	A	A		
		SM, M14	A	A	S	A	A	A	A	A		
		M20	A	A	S	A	A	A	A	A		
		M21	A	A	S	A	A	A	A	A		
		M38	S	S	A	A	A	A	A	A		
		SM, M14	A	A	S	A	A	A	A	A		
		M20	A	A	S	A	A	A	A	A		
		M21	A	A	S	A	A	A	A	A		
	350 4 BBL (HIGH (L74))	M38	A	S	A	A	A	A	A	A		
		M21	A	S	A	A	A	A	A	A		
	350 4 BBL (W31 OPTION)	M14, M20, M21, M38	A	A	S	A	A	A	S	A		
		SM, M14, M20, M38	A	A	S	A	A	A	A	A		
33600 CUTLASS	350 2 BBL (LOW (S1) AND L90 EXPORT	SM, M14	A	S	A	A	A	A	A	A		
		M38	S	S	A	A	A	A	A	A		
		M21	A	S	A	A	A	A	A	A		
33600 CUTLASS	350 4 BBL (HIGH (L74))	SM, M14	A	S	A	A	A	A	A	A		
		M20	A	S	A	A	A	A	A	A		
		M21	A	S	A	A	A	A	A	A		
33600 CUTLASS	350 4 BBL (W31 OPTION) <i>(M)</i>	M14, M20, M21, M38	A	A	S	A	A	A	S	A		
		SM, M14, M20, M38	A	A	S	A	A	A	A	A		
		M21	A	S	A	A	A	A	A	A		
34000 CUTLASS SUPREME	350 4 BBL (HIGH (S1) AND 350 2 BBL (LOW (L65) AND L90 EXPORT	SM, M14	A	S	A	A	A	A	A	A		
		M20	A	S	A	A	A	A	A	A		
		M21	A	S	A	A	S	A	A	A		
		M38	S	S	A	A	A	A	A	A		
		M40	S	S	A	A	A	A	A	A		
		M14 (STD)	A	A	S	A	A	A	A	A	A	
34000 4-4-2	455 4 BBL (HIGH (S1) AND 350 2 BBL (LOW (S1) AND L90 EXPORT	M21 WITH C60	A	A	S	A	A	A	A	A		
		M40	A	A	S	A	A	A	A	A		
		M21	A	A	S	A	S	A	A	A		
		M40	A	A	S	A	S	A	A	A		
34000 VISTA- CRUISER	350 4 BBL (HIGH (L74)) AND 455 4 BBL (HIGH (L31))	M40	A	A	S	A	A	A	A	A		
		M38	S	S	A	A	A	A	A	A		
		SM	A	S	A	A	A	A	A	A		
		M40	A	A	S	A	A	A	A	A		

- SM - 3-SPEED MANUAL TRANSMISSION
- M14 - 3-SPEED MANUAL TRANSMISSION (FLOOR SHIFT (HEAVY DUTY))
- M20 - 4-SPEED MANUAL TRANSMISSION (FLOOR SHIFT) (WIDE RATIO)
- M21 - 4-SPEED MANUAL TRANSMISSION (FLOOR SHIFT) (CLOSE RATIO)
- M38 - 3-SPEED TURBO-HYDRA-MATIC "350" TRANSMISSION
- M40 - 3-SPEED TURBO-HYDRA-MATIC "400" TRANSMISSION
- C60 - AIR CONDITIONING
- Y72 - HEAVY DUTY COOLING

3.42 (G92), 3.91 (G88) NOT AVAILABLE WITH C60/Y72

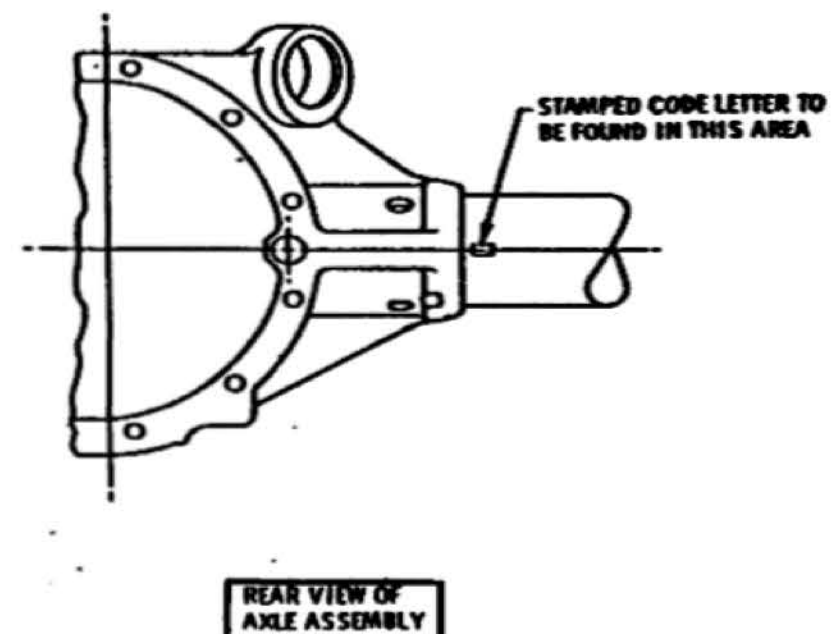
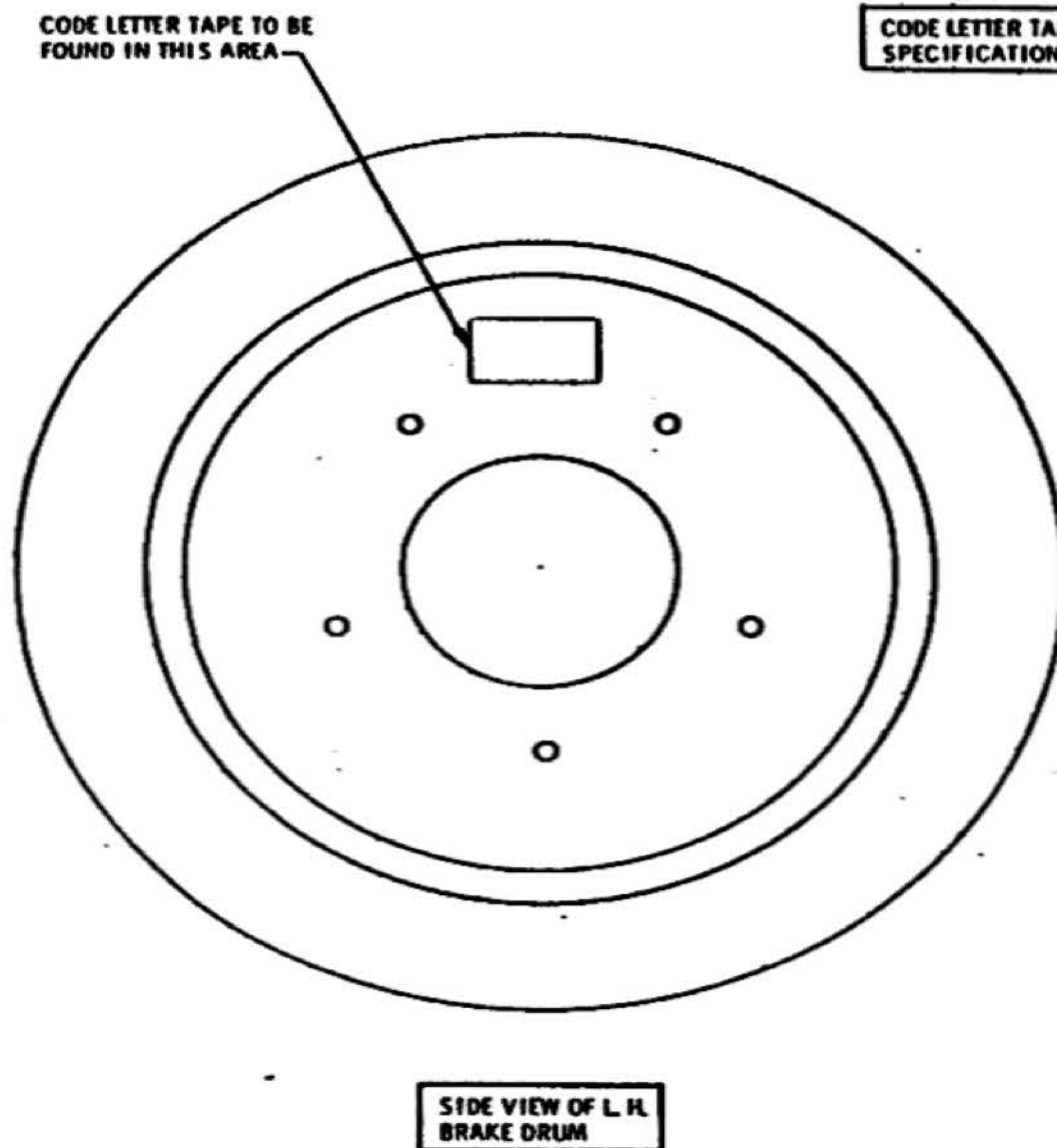
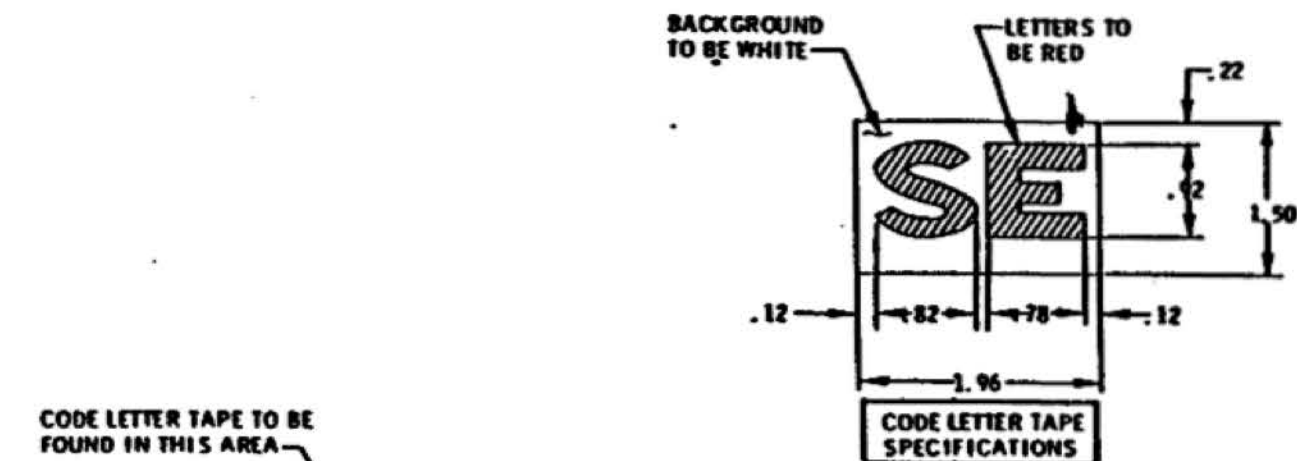
DEALER MUST NOT INSTALL 3.42, 3.91, 4.33, 4.66  
OR 5.00 RATIO IN CARS WITH AIR CONDITIONING  
OR HEAVY DUTY ENGINE COOLING OPTIONS.

C60 (LIMITED SLIP OPTION) AVAILABLE ON 2.56, 2.78, 2.93, 3.08, 3.23  
★ C60 (LIMITED SLIP OPTION) MANDATORY ON 3.42, 3.91

3-23-68		4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68	4-11-68										
DR.	CK.	DATE	SYM.	REVISION	DR.	CK.	DATE	SYM.	REVISION	DR.	CK.	DATE	SYM.	REVISION	DR.	CK.	DATE	SYM.	REVISION	DR.	CK.	DATE	SYM.	REVISION	DR.	CK.	DATE	SYM.	REVISION
				LINE ADDED					LINE ADDED																				
				TITLE REVISED					AXLE RATIO AVAILABILITY																				
				WAS SHEET 1 OF 2					REVISED																				
				LINES ADDED					2.93 RATIO REMOVED																				
				455 4 BBL. L. REMOVED					RETYPE & REVISED																				

TITLE		CHART - AXLE USAGE AND IDENTIFICATION					SHEET 1 OF 3		
DATE	MARCH 25, 1968		FIRST USED	1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. 4	PAGE 92
CHECKED BY	DR. BYL. SPITZLEY		REF.			SERIES A		PART NO. 404524	
APPROVED BY	[Signature]		DR.	[Signature]					

SERIES	AXLE ASM	CODE	GEAR RATIO	
	SEE MANUAL 405237			
STANDARD TYPE DIFFERENTIALS (EXC. 4800) (M)				
31, 35, 32, 36, 42, 4400	405052	R2	2.56	
	405053	SA	2.78	
	405054	SC	3.08	
	405055	SE	3.23	
LIMITED SLIP DIFFERENTIAL (EXC. 4800) (M)				
31, 35, 32, 36, 42, 4400 EXC. "W27"	405056	R3	2.56	
	405057	SB	2.78	
	405058	SD	3.08	
	405059	SF	3.23	
	EXC. W30, W31	407442	SH	3.42
	WITH W30, W31	405060	TM	3.42
	405061	TO	3.91	
ALUMINUM LIMITED SLIP DIFFERENTIAL				
31, 35, 32, 36, 42, 4400 WITH "W27"	406970	SV	3.23	
	406971	SX	3.42	
	406972	SZ	3.91	



SIDE VIEW OF L.H. BRAKE DRUM

REAR VIEW OF AXLE ASSEMBLY

SHEET 2

DATE	SYM	REVISION	DR	SY	DATE	SYM	REVISION	DR	CL	DATE	SYM	REVISION	DR	CL	APPR.
		5/13/65 J					EC DRAWN / REVISED								
		6/10/65 N					"W27" ADDED								
3/27/66	M	3535, 3635 REMOVED			5/13/65	G	AXLE SUB-ASSEMBLY			5/13/65	E	2.93 RATIO REMOVED			
10/16/69	L	405059 ADDED			5/13/65	F	NUMBERS REVISED			5/13/65	B	2.56 RATIO ADDED			
9/18/69	K	LINE ADDED			5/13/65	F	403304 ADDED			5/13/65	A	5470750-1 ADDED			

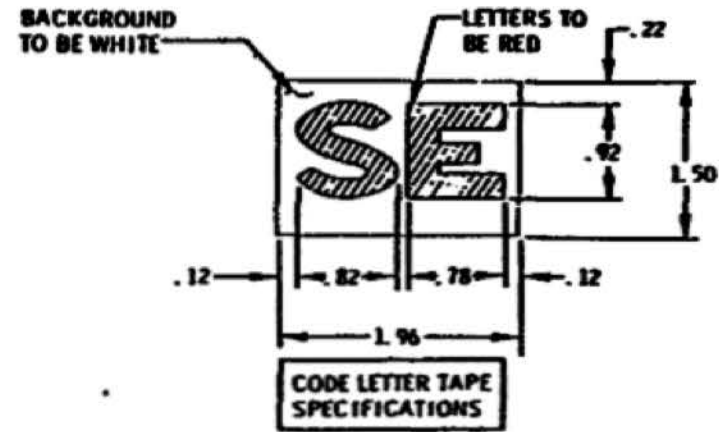
  

TITLE		CHART - AXLE USAGE AND IDENTIFICATION	
DATE	DEC. 12 1968	FIRST USED	1970
DR. BY	DON MALKIN	OLDSMOBILE PRODUCT INFORMATION MANUAL	HANDL. SEC. PAGE
CHECKED	[Signature]	4	93
APPR.	[Signature]	SERIES	A
		PART NO.	404524

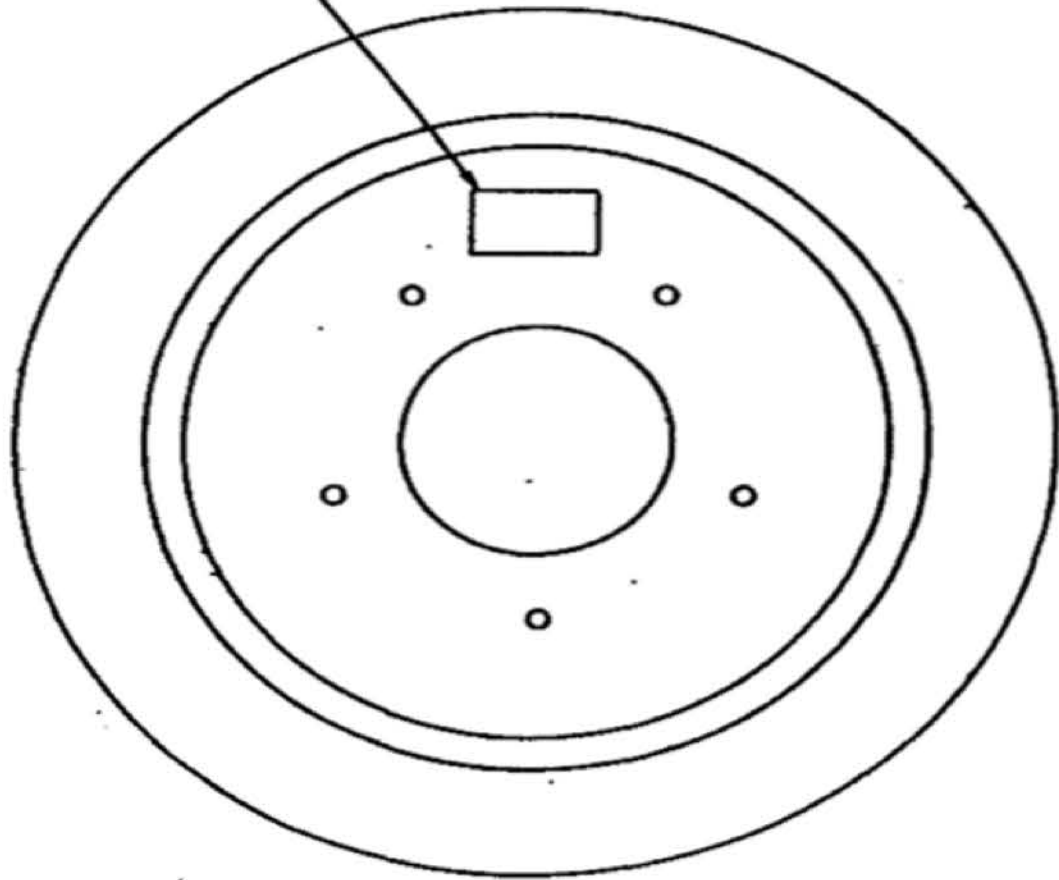


**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

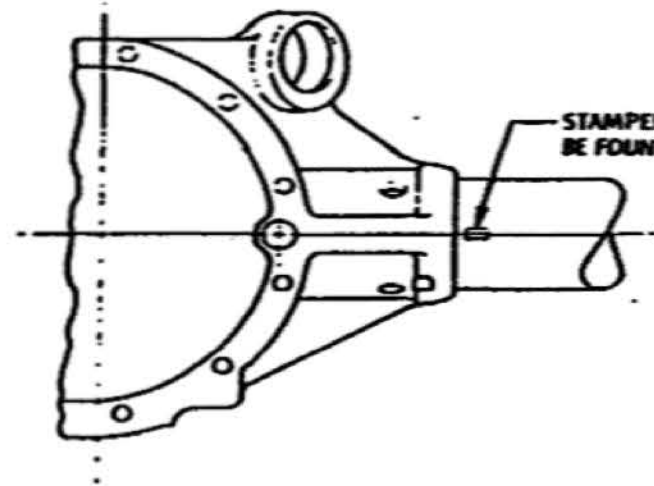
SERIES	AXLE ASM	CODE	GEAR RATIO
	SEE MANUAL #05237		
<b>STANDARD TYPE DIFFERENTIAL (4800 SERIES)</b>			
4800	406586	S1	2.56
	405063	TA	2.78
	405064	SM	3.08
	405065	SO	3.23
<b>LIMITED SLIP DIFFERENTIAL (4800 SERIES)</b>			
4800	406587	ST	2.56
	405066	TB	2.78
	405067	SN	3.08
	405068	SP	3.23



CODE LETTER TAPE TO BE FOUND IN THIS AREA



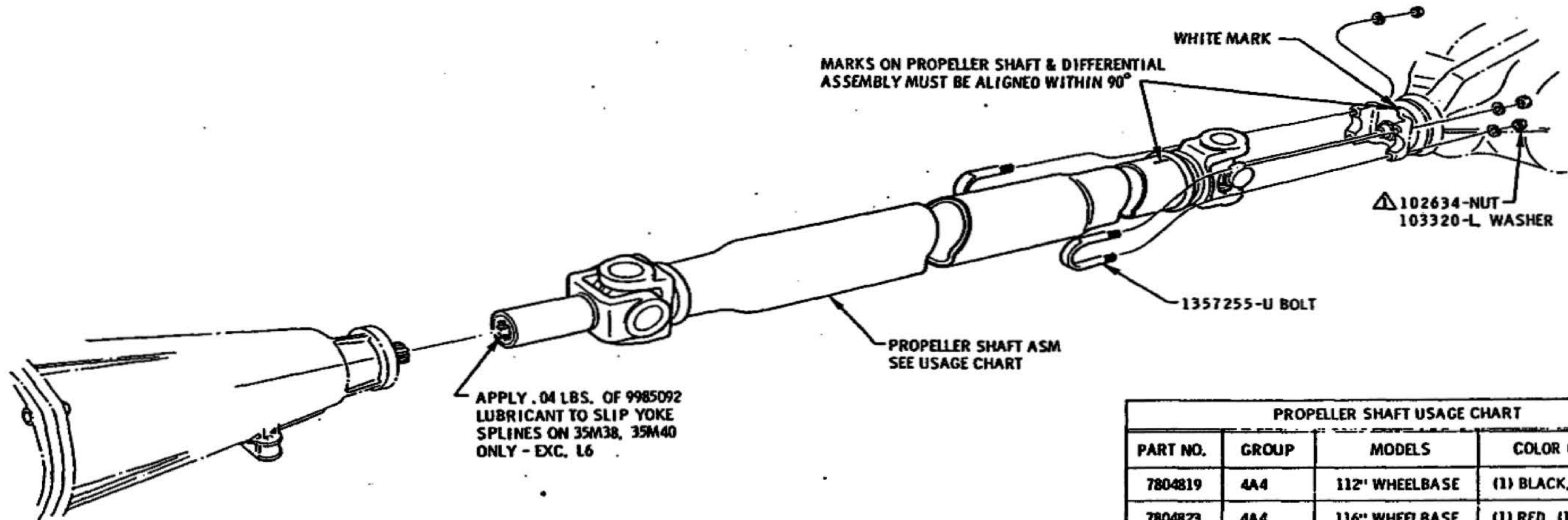
SIDE VIEW OF L. H. BRAKE DRUM



STAMPED CODE LETTER TO BE FOUND IN THIS AREA

REAR VIEW OF AXLE ASSEMBLY

TITLE										CHART - AXLE USAGE AND IDENTIFICATION										
DATE <i>AUG. 12, 1969</i>										FIRST USED		OLDSMOBILE PRODUCT		MANUAL SEC.		PAGE				
DR BY <i>DON MALKIN</i>										1970		INFORMATION MANUAL		4		94				
CHECKED <i>J. J. [unclear]</i>										REF.		SERIES		PART NO.		4524				
APPR <i>J. J. [unclear]</i>												A								
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR



PROPELLER SHAFT USAGE CHART			
PART NO.	GROUP	MODELS	COLOR CODE BAND
7804819	4A4	112" WHEELBASE	(1) BLACK, (1) PURPLE
7804823	4A4	116" WHEELBASE	(1) RED, (1) WHITE
7804850	4A4	4800	(1) RED, (1) BLACK
7806237	35M38 (EXC. L6)	112" WHEELBASE	(1) BLACK, (1) PINK
7806236		116" WHEELBASE	(1) BLACK, (1) BROWN
7804856		4800	(1) BLACK
7807106	35M40	112" WHEELBASE	(1) BROWN, (1) BLUE
5699785 396376 OPT.		4800	(1) RED, (1) PURPLE
7801163		116" WHEELBASE	(1) BROWN, (2) GREEN

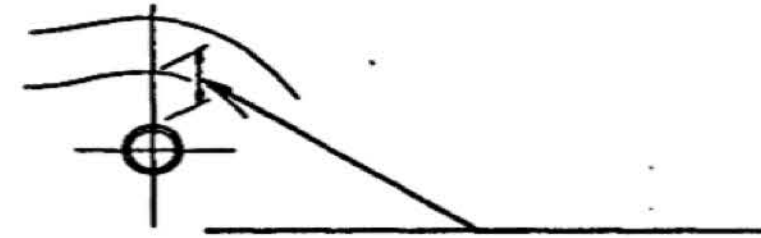
⚠ 12 - 16 LB. FT. Ⓞ  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

9-20-69	E	WAS 7803983 SHAFT	J13/72	TITLE	PROPELLER SHAFT	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC	4	PAGE	100
6-18-69	D	NOTE REMOVED	J13/72	DATE	DECEMBER 16, 1968	DR. BY	P. J. McKESSY	REF. 4A4	SERIES	A	PART NO.	404411
5-20-69	C	PART NO. ADDED	J13/72	CHECKED	MFB	APPR.	L. J. ...	35M38-M40				
5-20-69	B	USAGE REVISED	J13/72	DATE		SYM						
2-25-69	A	USAGE REVISED	J13/72	DR.		CK.						

9798214-UPPER ARM ASM-R.H. & L.H. - "NK"  
(31, 32, 35, 36, 4200)  
9798211-UPPER ARM ASM-R.H. & L.H. - "NJ"  
(44 - 4800)

9427318-BOLT (E. .00 & 35W31) ▲  
(INSTALL DIR. OPT. EXC. 4800)  
9421430-BOLT (GMAD PLANT OPT.) ▲  
(4400 & 35W31)  
(INSTALLATION DIRECTION OPT. EXC.  
AS SHOWN IN VIEW B PAGE 104)  
9422301-NUT ▲

102634-NUT  
9423701-SCREW ▲



PRODUCTION SETTING

TIGHTEN UPPER AND LOWER CONTROL ARM BUSHING BOLTS  
WITH SPRING COMPRESSED TO TOP OF AXLE TO FRAME IS:

4.68 ± .25 EXC. S.W.  
5.67 ± .25 REGULAR STATION WAGON  
4.61 ± .25 EXTENDED STATION WAGON

▲ 402568-BOLT  
▲ 9422301-L NUT  
(INSTALLATION  
DIRECTION OPT.  
EXC. AS SHOWN  
IN VIEW B PAGE  
104)

1366500-INSULATOR

FOR SPRING  
USAGE, SEE  
PAGE 100

SEE SHOCK ABSORBER USAGE  
CHART IN SECTION "O"

FOR AXLE BUMPER AND SPACER  
INSTALLATION, SEE PAGE 104

▽ 9791811-LOWER ARM ASM - "NY"  
(31 - 32 - 35 - 36 - 4200) (EXC. 3535 & 3635)  
9790780 - LOWER ARM ASM - "NW"  
(3535, 3635 & 4800) (D)  
9791102-LOWER ARM ASM - "NZ"  
(4400 & 35FE2) (INSTALL WITH SLOT  
TOWARD FRONT OF CAR)

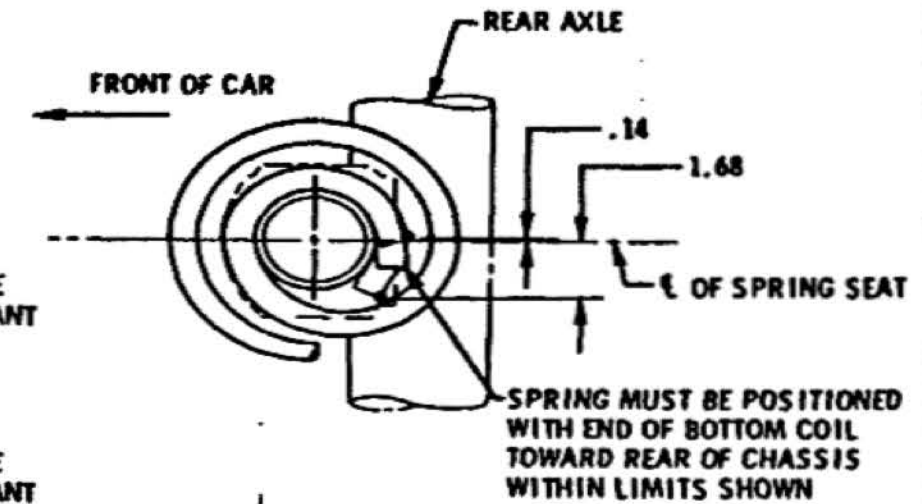
▲ 9427318-BOLT  
▲ 9422301-L NUT  
(INSTALLATION  
DIRECTION OPT.)

FOR REAR AXLE ASM  
USAGE, SEE FRONT OF  
SECTION 4

9421430-BOLT ▲  
9422301-L NUT ▲  
(E) (INSTALLATION DIRECTION  
OPTIONAL EXCEPT 4800)

9421085-NUT ▲  
103329-WASHER  
BACK-UP WRENCH REQUIRED  
ON LOWER SHOCK ABSORBER  
STUD WHEN INSTALLING NUT

TYPICAL INSTALLATION  
(SEE PAGE 104 FOR EXTENDED  
WAGON & 35G66 DIFFERENCES)



STANDARD DIFFERENTIAL

FILL TO BOTTOM OF FILLER PLUG HOLE  
WITH 3.69 PINTS OF 9985035 LUBRICANT

LIMITED SLIP DIFFERENTIAL

FILL TO BOTTOM OF FILLER PLUG HOLE  
WITH 3.69 PINTS OF 9985169 LUBRICANT

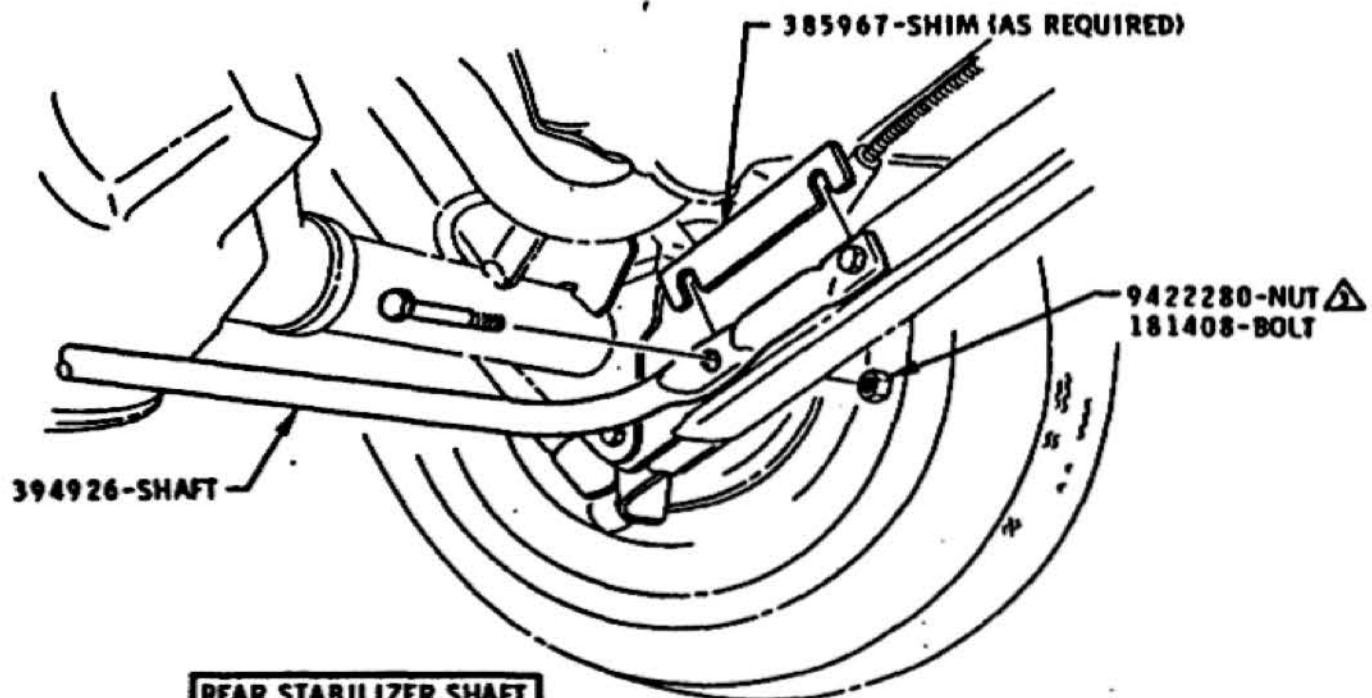
REINSTALL DIFFERENTIAL FILLER PLUG  
TO 25 - 35 LB. FT.

VIEW A  
BOTH SIDES

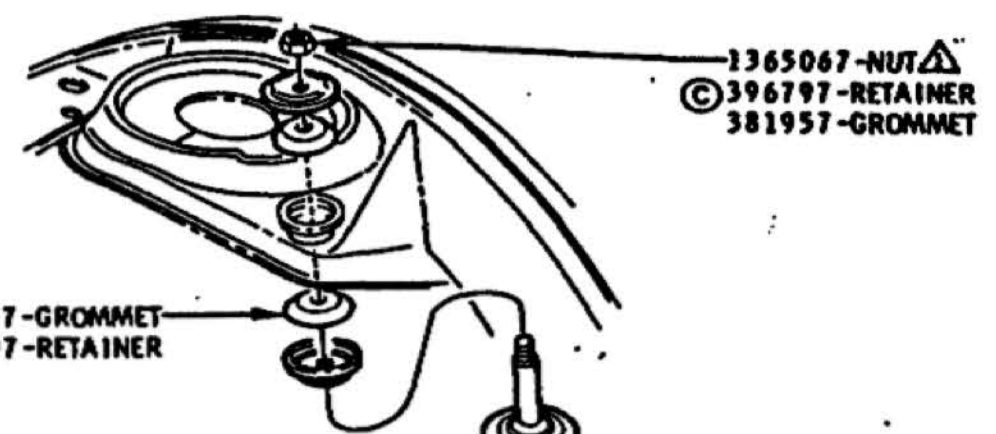
▲ 90-120 LB. FT.  
▲ 70-90 LB. FT.  
▲ 55-75 LB. FT.  
▲ 15-25 LB. FT.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TORQUE NUTS OR HEAD OF BOLTS AT ASSEMBLY.  
ANY RETORQUE SUBSEQUENT TO THE INITIAL  
APPLICATION MUST BE APPLIED TO THE SAME END  
AS TORQUED INITIALLY.

8-27-69	E	USAGE REVISED	MLP/PS	TITLE	REAR SUSPENSION			
4-23-69	D	USAGE REVISED	PLP/PS	DATE	DECEMBER 2, 1968	FIRST USED		
4-10-69	C	VIEW B ADDED	SM/PS	OR BY	P. J. McKESSY	1970		
4-10-69	B2	NOTES REVISED	SM/PS	CHECKED	[Signature]	NO. 4D, 4E	SERIES	
3-3-69	A	ASM. PLANT INFO. REL.	SR/PS	APPR.	[Signature]	97-4	A	
		REVISION	DR. CK.	APPR.				
						MANUAL SEC.	4	PAGE
						OLDSMOBILE PRODUCT INFORMATION MANUAL		102
						PART NO.	404411	

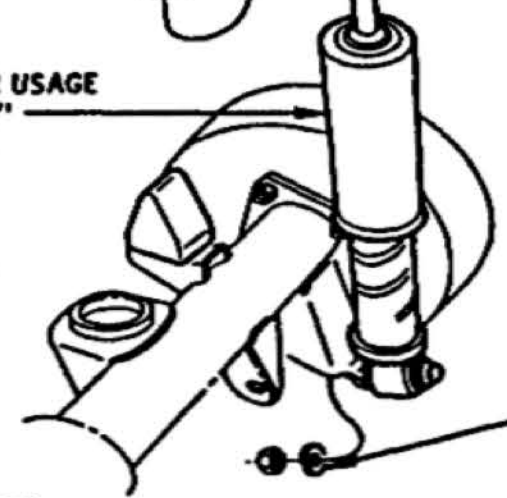


REAR STABILIZER SHAFT  
4400 & 35FE2

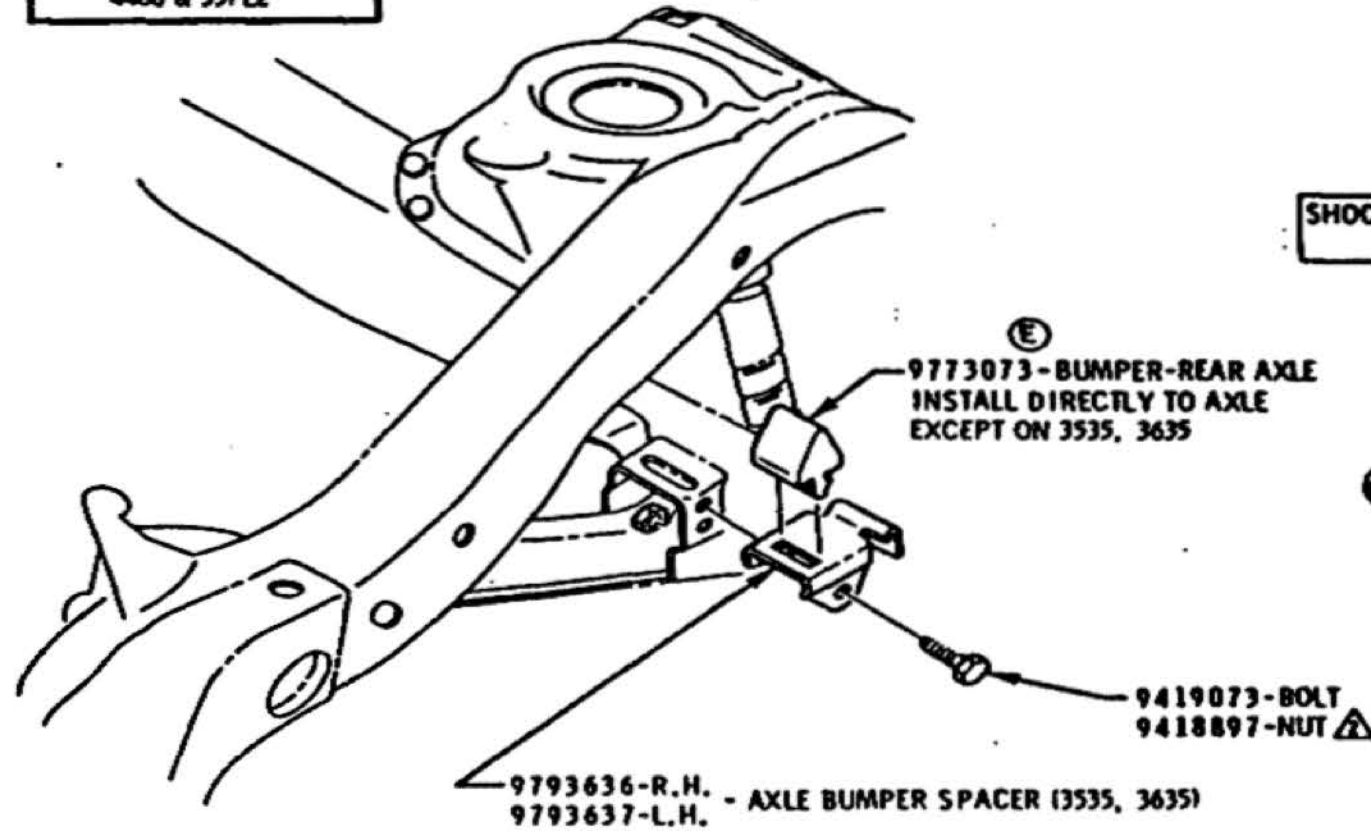


381957-GROMMET  
396797-RETAINER

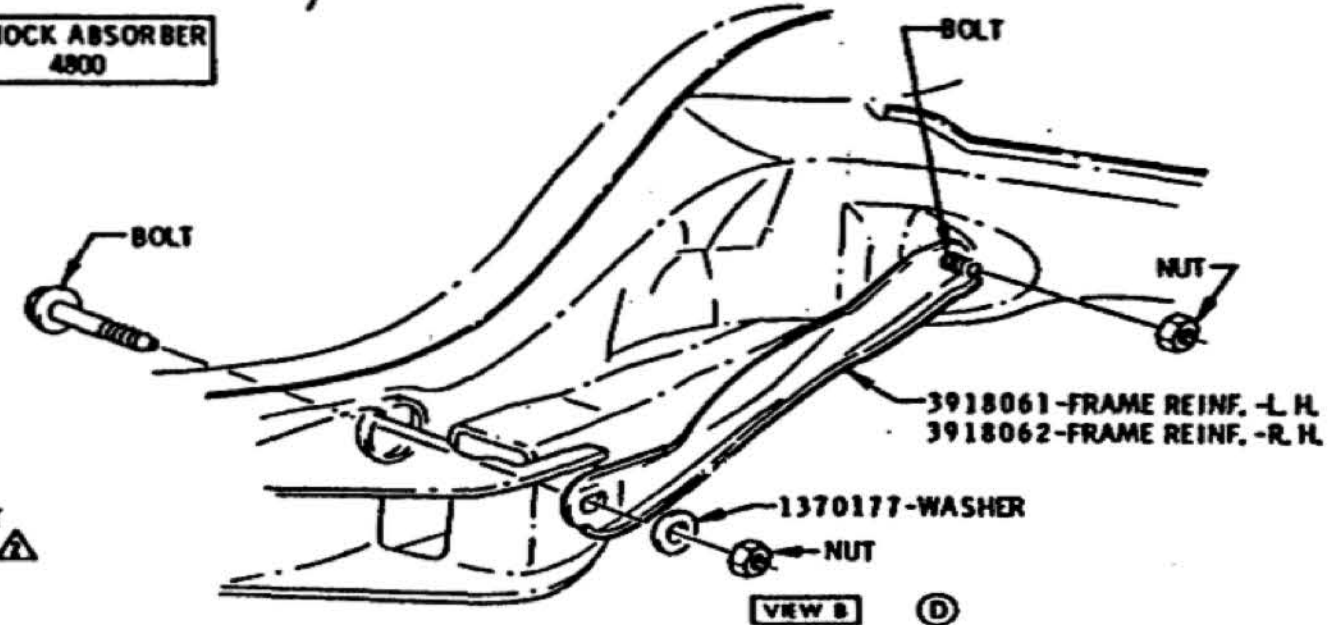
SEE SHOCK ABSORBER USAGE  
CHART IN SECTION "O"



FASTENING SAME AS  
STANDARD MODELS



AXLE BUMPER & SPACER



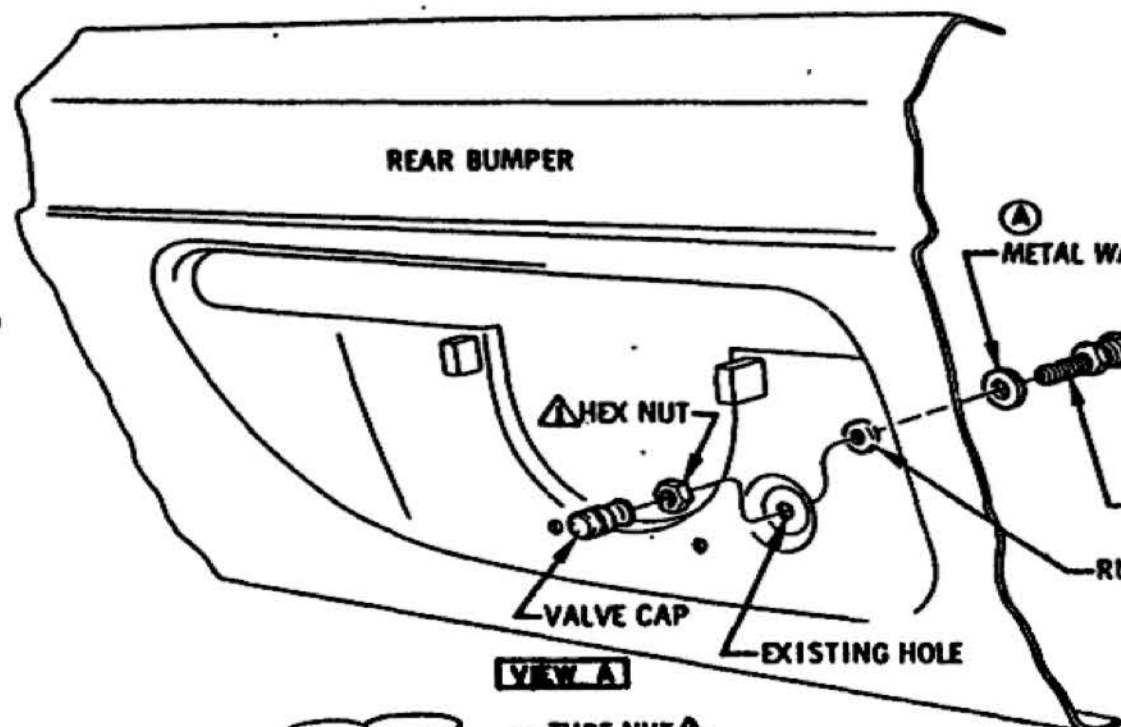
FRAME REINFORCEMENT-455 CU. INL. ENG. EXC. 4800

- $\Delta$  45-55 LB. FT.
- $\Delta$  35-55 LB. FT.
- $\Delta$  60-120 LB. INL.
- $\Delta$  FULLY DRIVEN, SEATED AND NOT STRIPPED

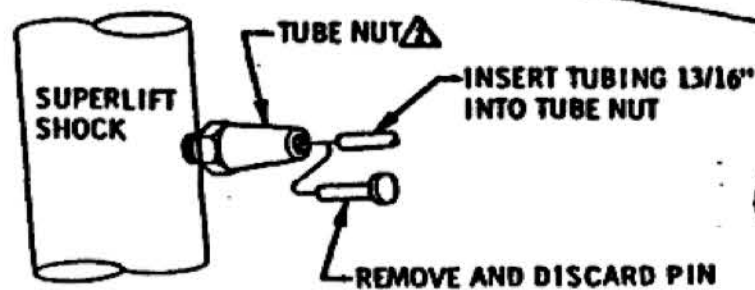
REVISION		REVISION		REVISION		REVISION		REVISION		REVISION		REVISION		REVISION	
DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY
1-30-70	C	38806	PUMP CANCELLED												
1-30-70	D		USAGE REVISED												
5-23-69	C		WAS BEARING												
4-10-69	B		VIEW ADDED												
3-3-69	A		ASM. PLANT INFO. REL.												

TITLE		REAR SUSPENSION		FIRST USED		1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO.		PAGE	
DATE		DECEMBER 2, 1968		BY		P. J. McKESSY		SERIES		A		4 104	
CHECKED		P. J. McKESSY		APP. NO.		4E, 4F 4D, 97-4		PART NO.		404411			



VIEW A



(TYPICAL TUBING INSTALLATION)

FIGURE 3

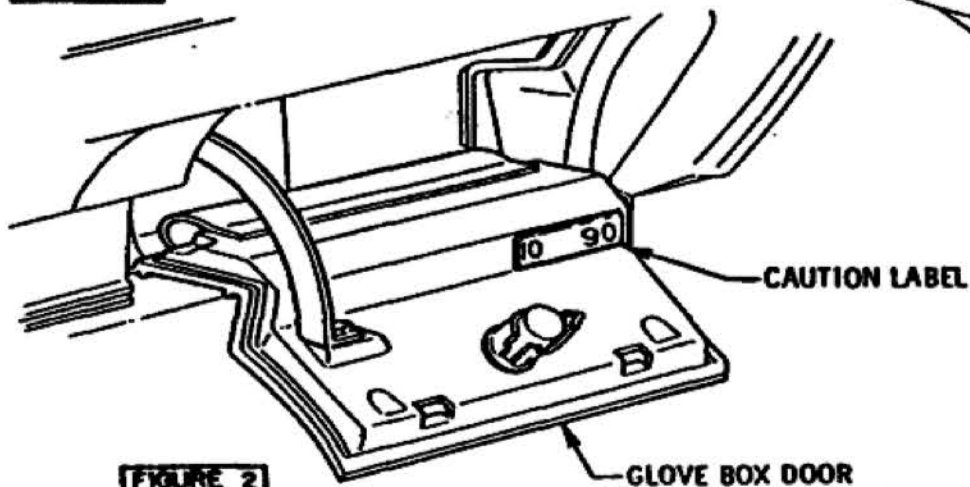


FIGURE 2

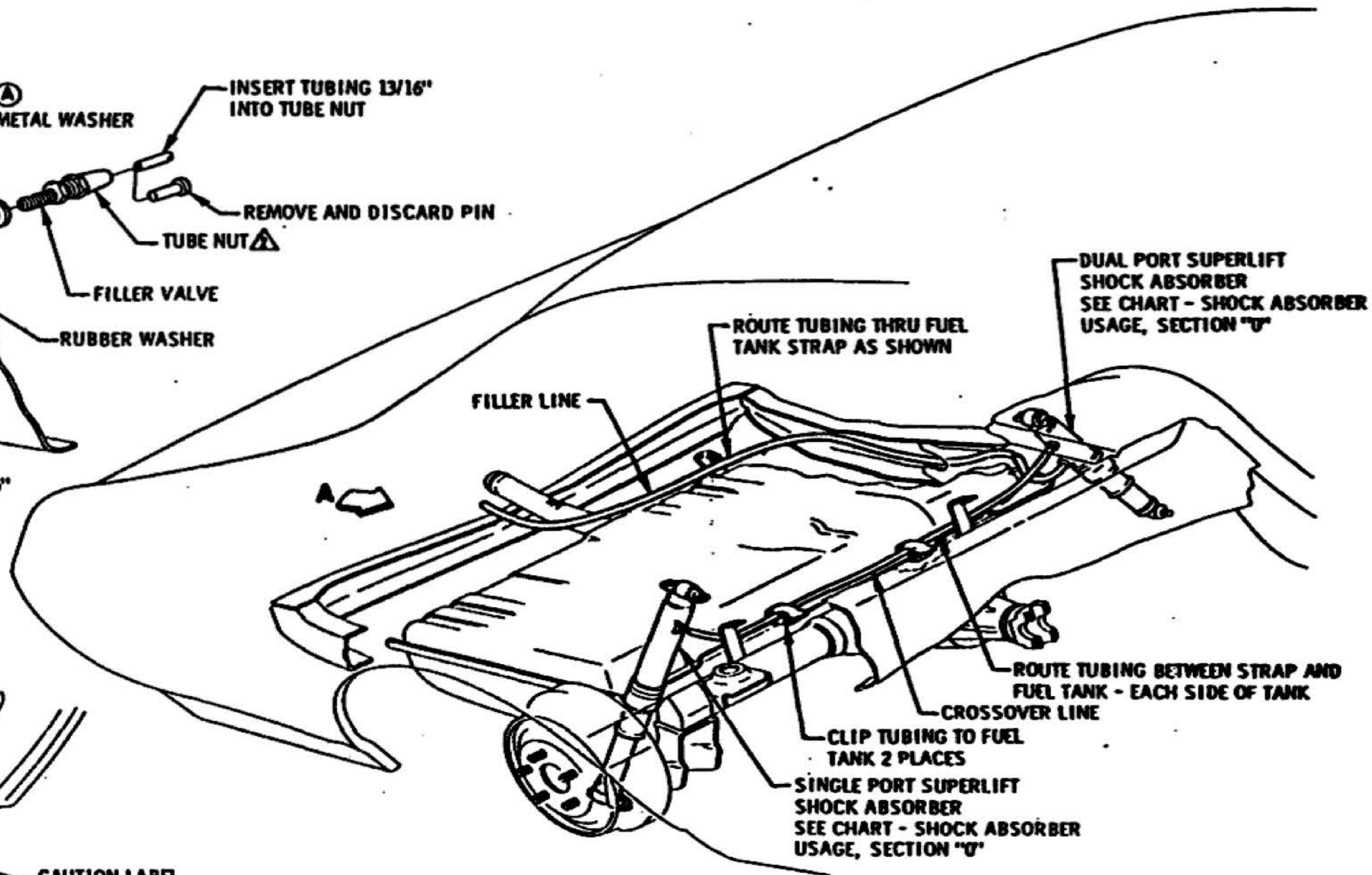


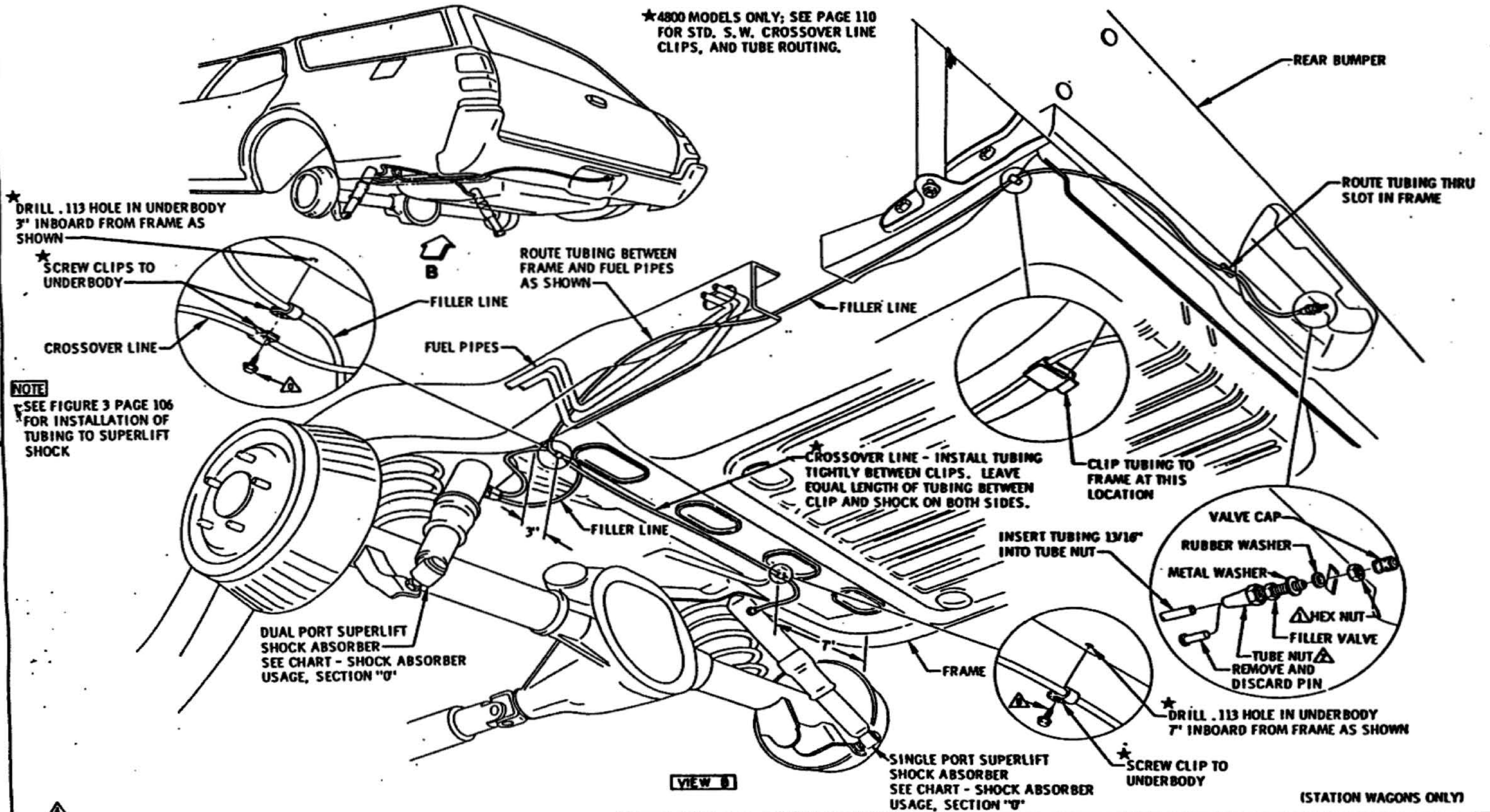
FIGURE 1

(EXC. ALL STATION WAGONS)

- ▲ 65 - 75 LB. IN.
- ▲ 55 - 65 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE		SUPERLIFT SHOCK ABSORBER			
DATE	MARCH 25, 1969	FIRST USED	1970		
DR.	BY D. C. HINDS	CHECKED	BY J. P. HANCOCK		
DATE	4-21-69	REVISOR	A. WASHBEE REMOVED		
SYN		DR.	CL.	APPR.	
MANUAL SEC.		PAGE		PART NO.	
4		106		404411	
SERIES		A			

★4800 MODELS ONLY; SEE PAGE 110 FOR STD. S.W. CROSSOVER LINE CLIPS, AND TUBE ROUTING.



★ DRILL .113 HOLE IN UNDERBODY 3' INBOARD FROM FRAME AS SHOWN

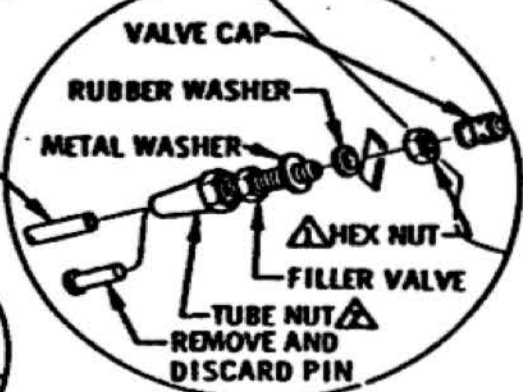
★ SCREW CLIPS TO UNDERBODY

NOTE  
SEE FIGURE 3 PAGE 106 FOR INSTALLATION OF TUBING TO SUPERLIFT SHOCK

DUAL PORT SUPERLIFT SHOCK ABSORBER  
SEE CHART - SHOCK ABSORBER USAGE, SECTION 'D'

CROSSOVER LINE - INSTALL TUBING TIGHTLY BETWEEN CLIPS. LEAVE EQUAL LENGTH OF TUBING BETWEEN CLIP AND SHOCK ON BOTH SIDES.

CLIP TUBING TO FRAME AT THIS LOCATION



★ DRILL .113 HOLE IN UNDERBODY 7' INBOARD FROM FRAME AS SHOWN

★ SCREW CLIP TO UNDERBODY

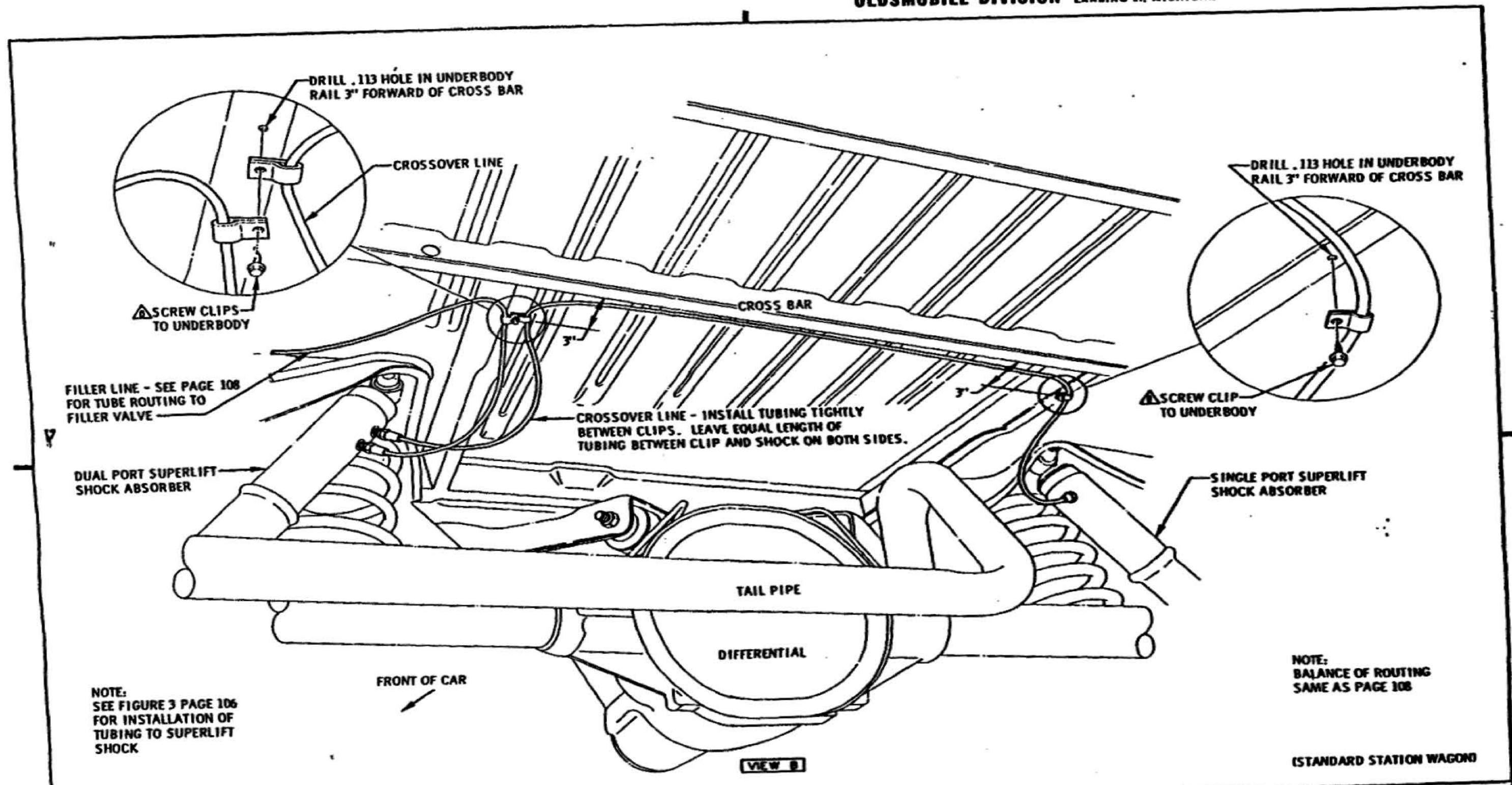
SINGLE PORT SUPERLIFT SHOCK ABSORBER  
SEE CHART - SHOCK ABSORBER USAGE, SECTION 'D'

(STATION WAGONS ONLY)

VIEW B

- ▲ 65 - 76 LB. IN.
- ▲ 55 - 65 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE				SUPERLIFT SHOCK ABSORBER			
DATE				MARCH 25, 1969		FIRST USED	
OR BY				G. H. BROWN		1970	
CHECKED				M. J. HART		OLDSMOBILE PRODUCT INFORMATION MANUAL	
APPR.				L. S. STANLEY		HANDL. SEC. 4	
DATE				SYN		PAGE 108	
REVISION				DR. CL.		SERIES A	
				APP.		PART NO. 404411	



NOTE: SEE FIGURE 3 PAGE 106 FOR INSTALLATION OF TUBING TO SUPERLIFT SHOCK

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYM		REVISION		DR. CK.		APPR.		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO.		PAGE	
										SUPERLIFT SHOCK ABSORBER		1970		A		4		110	
										DATE MARCH 25, 1969		BY D.C. 161		CHECKED M. J. [unclear]		PART NO.		404411	
										APPR. [unclear]		REV. 35 ccc							

**GENERAL INSTRUCTIONS**

1. GUARD AGAINST KINKING NYLON TUBING, KINKED LINES WILL RESULT IN TUBING FAILURE.
2. AT EVERY PLUMBING CONNECTION, USE THE FOLLOWING PROCEDURE TO ASSEMBLE THE 1/8" DIAMETER BLACK TUBING PER FIGURE 3:
  - A. MARK TUBING WITH PENCIL 13/16" FROM END (SAME LENGTH AS TUBE NUT).
  - B. PULL PLASTIC PIN FROM END OF TUBE NUT AND DISCARD.
  - C. WITHOUT LOOSENING TUBE NUT, PUSH TUBING INTO TUBE NUT TO PENCIL MARK.
  - D. TIGHTEN TUBE NUT WITH WRENCH.
3. ATTACH "CAUTION" LABEL TO INSIDE OF GLOVE BOX DOOR PER FIGURE 2.
4. PLACE OWNER'S GUIDE IN GLOVE BOX.

**SUPERLIFT INSTALLATION**

1. RAISE CAR ON A HOIST THAT WILL KEEP REAR WHEELS IN NORMAL RELATIONSHIP WITH CAR BODY. IF FRAME LIFTING TYPE HOIST IS USED, PLACE STANDS UNDER REAR AXLE TO MAINTAIN NORMAL WHEEL TO BODY RELATIONSHIP.
2. REMOVE REAR SHOCKS, RETAIN ATTACHING PARTS FOR INSTALLING SUPERLIFTS.
3. INSTALL DUAL PORT SUPERLIFT ON LEFT SIDE OF CAR AND SINGLE PORT UNIT ON RIGHT SIDE. PORTS WILL BE FACING INWARD TO CENTER OF CAR. TO AVOID TWISTING RUBBER SLEEVE, DO NOT ROTATE FREE END OF SUPERLIFT AFTER ONE END HAS BEEN ATTACHED.

**FILLER VALVE INSTALLATION**

1. ALL SEDANS AND COUPES
  - A. ATTACH FILLER VALVE TO FILLER LINE PER VIEW A.
  - B. INSERT FILLER VALVE THRU DEPRESSED HOLE IN BUMPER BEHIND LICENSE PLATE DOOR AND ATTACH TO BUMPER PER VIEW A.
2. ALL STATION WAGONS
  - A. REMOVE LICENSE PLATE. REMOVE R.H. PLASTIC NUT FROM BUMPER AND DISCARD.
  - B. ATTACH FILLER VALVE TO FILLER LINE PER VIEW B.
  - C. REPLACE LICENSE PLATE AND INSTALL FILLER VALVE THRU UPPER R.H. HOLE IN BUMPER AND LICENSE PLATE AND ATTACH HEX NUT PER VIEW B.

**CROSSOVER AND FILLER LINE INSTALLATION**

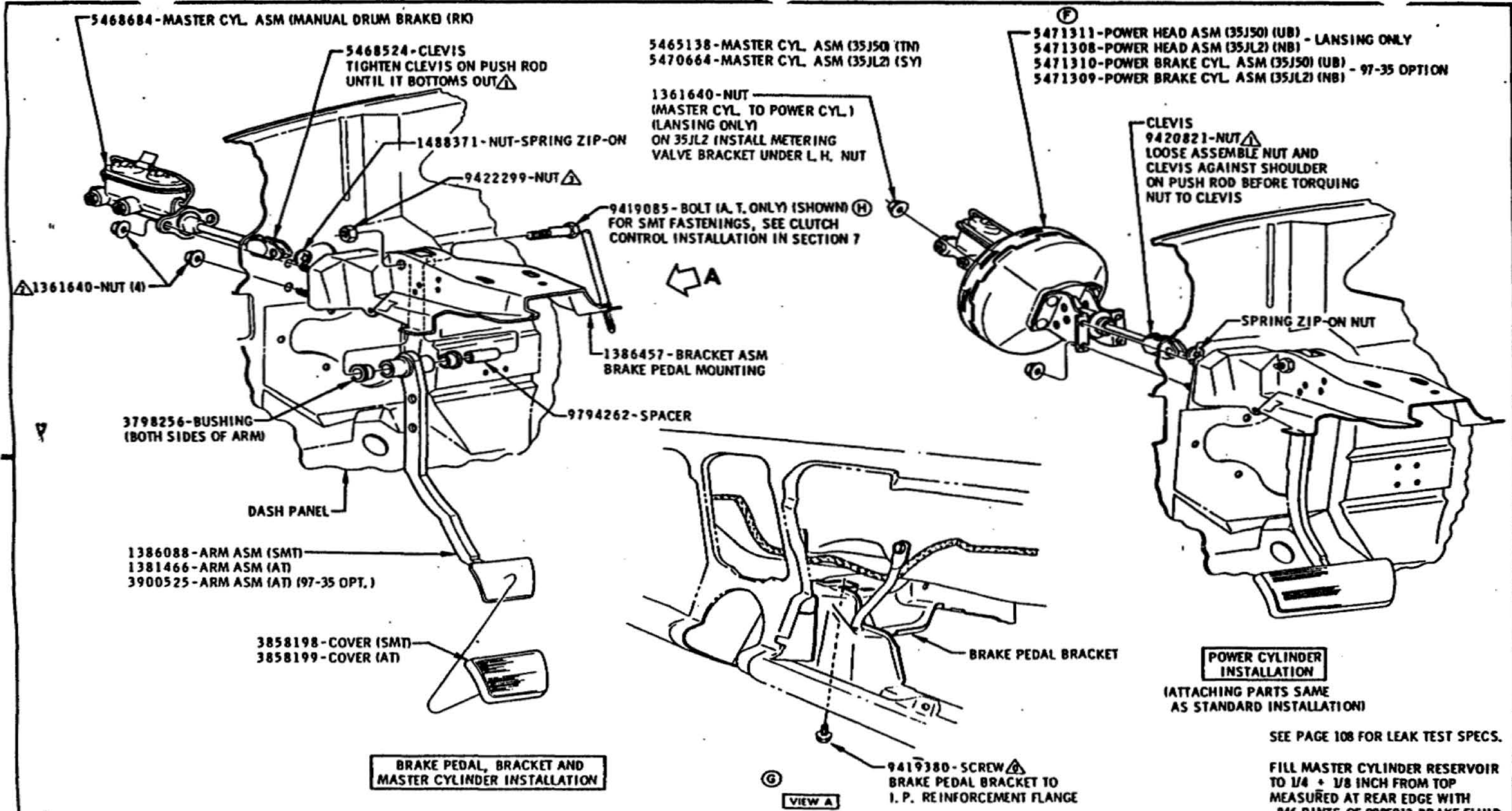
1. ALL SEDANS AND COUPES
  - A. FOR CROSSOVER LINE CUT A 37" LENGTH OF NYLON TUBING.
  - B. ROUTE CROSSOVER LINE BEHIND FUEL TANK SUPPORT STRAPS AND CLIP TO EDGE OF TANK WITH TWO METAL PUSH-ON CLIPS PER FIGURE 1. ATTACH ENDS OF CROSSOVER LINE TO SUPERLIFT AIR PORTS PER FIGURE 3. ON THE DUAL PORT SUPERLIFT, ATTACH CROSSOVER LINE TO TOP PORT PER FIGURE 3.
  - C. FOR FILLER LINE CUT A 65" LENGTH OF NYLON TUBING.
  - D. ROUTE FILLER LINE TUBING PER FIGURE 1 THRU FRAME INNER RAIL, BACK TO REAR OF FUEL TANK, PASSING BETWEEN FUEL TANK SUPPORT STRAP AND UNDERBODY AND OVER FUEL FILLER NECK TO FILLER VALVE.
  - E. ADJUST CROSSOVER AND FILLER LINES FOR MAXIMUM CLEARANCE FROM TAIL PIPE. LEAVE A GENEROUS LOOP AT SUPERLIFT PORTS TO ALLOW FOR SUPERLIFT MOVEMENT WITH AXLE JOUNCE.
2. ALL STATION WAGONS
  - A. FOR CROSSOVER LINE CUT A 47 1/2" LENGTH OF NYLON TUBING.
  - B. ROUTE AND CLIP CROSSOVER LINE TO UNDERBODY PER VIEW B. ATTACH ENDS OF CROSSOVER LINE TO SUPERLIFT AIR PORTS PER FIGURE 3. ON THE DUAL PORT SUPERLIFT ATTACH CROSSOVER LINE TO TOP PORT PER VIEW B.
  - C. FOR FILLER LINE CUT AN 80" LENGTH OF NYLON TUBING.
  - D. ROUTE FILLER LINE TUBING PER VIEW B THRU NYLON CLIP ON UNDERBODY AND ALONG FRAME SIDE RAIL TO REAR OF CAR. CLIP TUBING TO SIDE RAIL USING METAL PUSH-ON CLIP PER VIEW B. CONTINUE ROUTING TUBING ALONG REAR OF FRAME TO FILLER VALVE.
  - E. ADJUST CROSSOVER AND FILLER LINES FOR MAXIMUM CLEARANCE FROM TAIL PIPE. LEAVE A GENEROUS LOOP AT SUPERLIFT PORTS TO ALLOW FOR SUPERLIFT MOVEMENT WITH AXLE JOUNCE.

**LEAK CHECK**

1. FILL SUPERLIFT SYSTEM THROUGH FILLER VALVE WITH AIR TO 100 PSI PRESSURE.
2. CHECK ALL FITTINGS FOR LEAKS WITH GAS LEAK DETECTOR, LIQUID DETERGENT, OR A SOAP AND WATER SOLUTION. CORRECT ANY LEAKS FOUND.
3. EXHAUST AIR FROM SYSTEM BY DEPRESSING STEM IN FILLER VALVE NECK. RETAIN A MINIMUM PRESSURE OF 10 PSI.
4. PARTS NOT USED MAY BE DISCARDED AFTER INSTALLATION IS COMPLETE.

				TITLE SUPERLIFT SHOCK ABSORBER			
				DATE MARCH 25, 1969	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. 4 PAGE 112
				DR. BY C. H. HINGBAUGH	CHECKED P. J. GIBBART	REF. 356614	SERIES A PART NO. 404411
DATE	BY	REVISION	DR. CK.	APPR.			

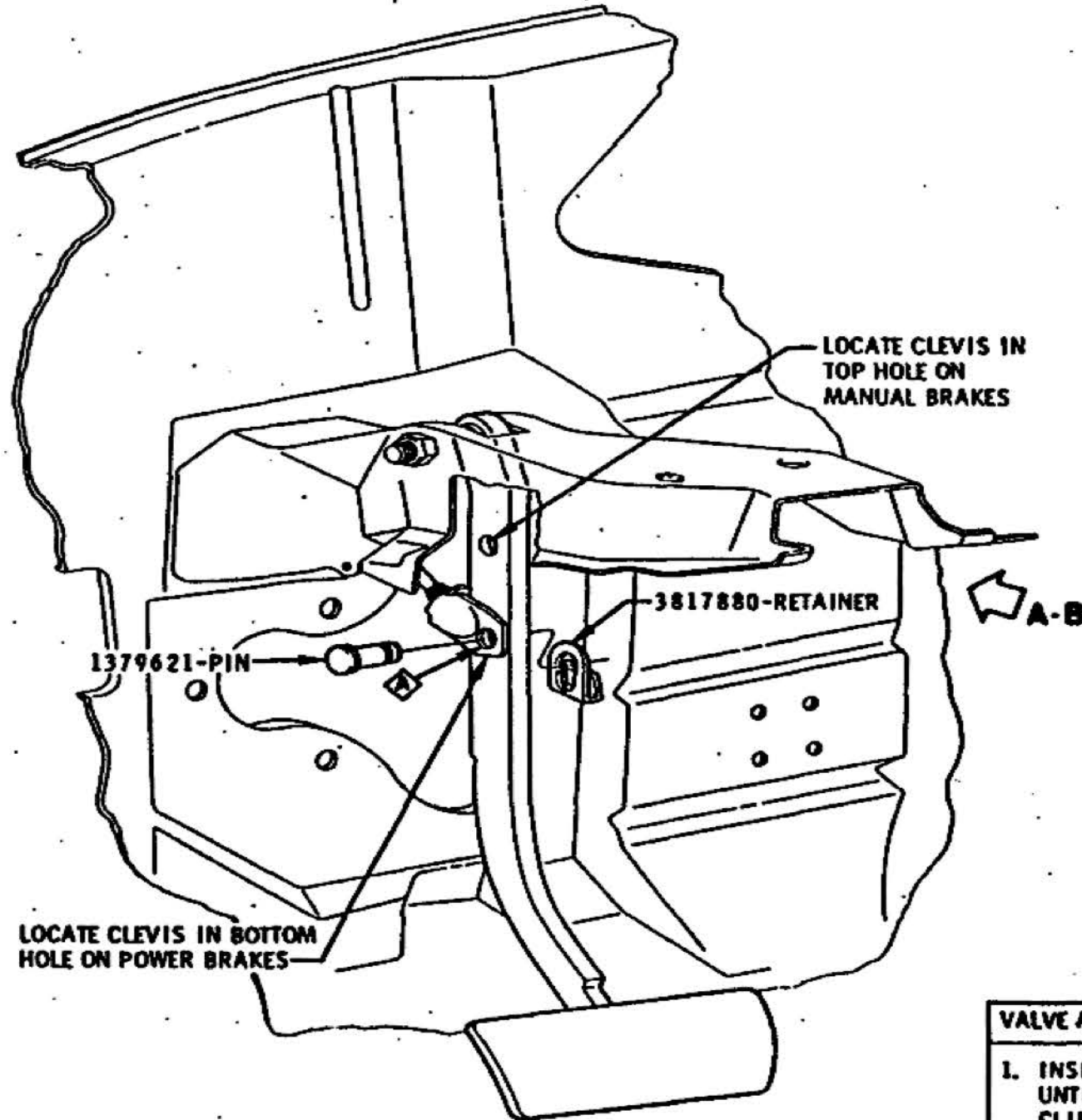




**BRAKE PEDAL, BRACKET AND MASTER CYLINDER INSTALLATION**

- ▲ 20 - 30 LB. FT.
- ▲ 20 - 28 LB. FT.
- ▲ 11 - 16 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR	CR.	DATE	SYM	REVISION	DR	CR.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL DEC.	PAGE
9-20-69	E1	CODES ADDED									CYLINDERS, BRACKET ASSEMBLY AND PEDAL MOUNTING	1970	SERIES <b>A</b>	PART NO. <b>404411</b>	
8-5-69	D	FASTENING REVISED								DATE MARCH 11, 1969					
6-16-69	C	WAS 5470206								DR BY H.E. MASOV					
5-29-69	B2	1488371-NUT ADDED								CHECKED <i>[Signature]</i>					
5-29-69	A2	PART NUMBERS REVISED								APPR. <i>[Signature]</i>					

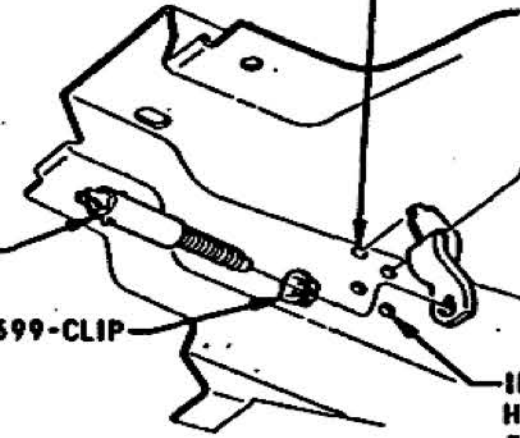


1362835-SWITCH ASM-STOP LIGHT  
1383050-SWITCH ASM-STOP LIGHT (OPT.)

1361699-CLIP

INSTALL BRACKET IN UPPER HOLES ON CARS WITH MANUAL BRAKES

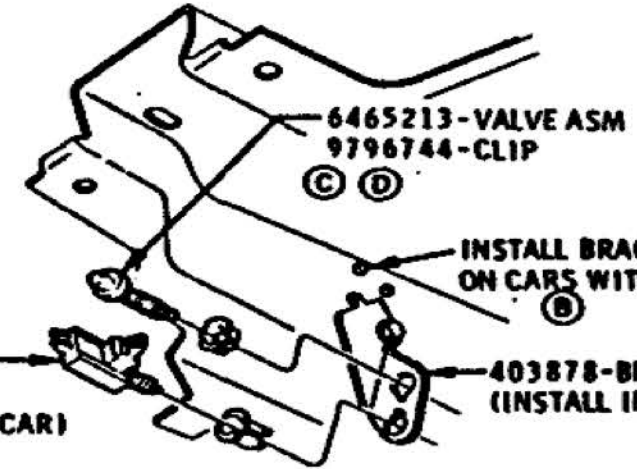
9419400-SCREW  
1385520-STOP LIGHT SWITCH BRACKET



INSTALL BRACKET IN LOWER HOLES ON CARS WITH POWER BRAKES

VIEW A  
(EXC. CRUISE CONTROL)

9794682-SWITCH ASM (BLACK PLUNGER) (CLIP IS SAME AS STANDARD CAR)



INSTALL BRACKET IN UPPER HOLES ON CARS WITH MANUAL BRAKES

403878-BRACKET (INSTALL IN LOWER HOLES)

VIEW B  
(CARS WITH CRUISE CONTROL)

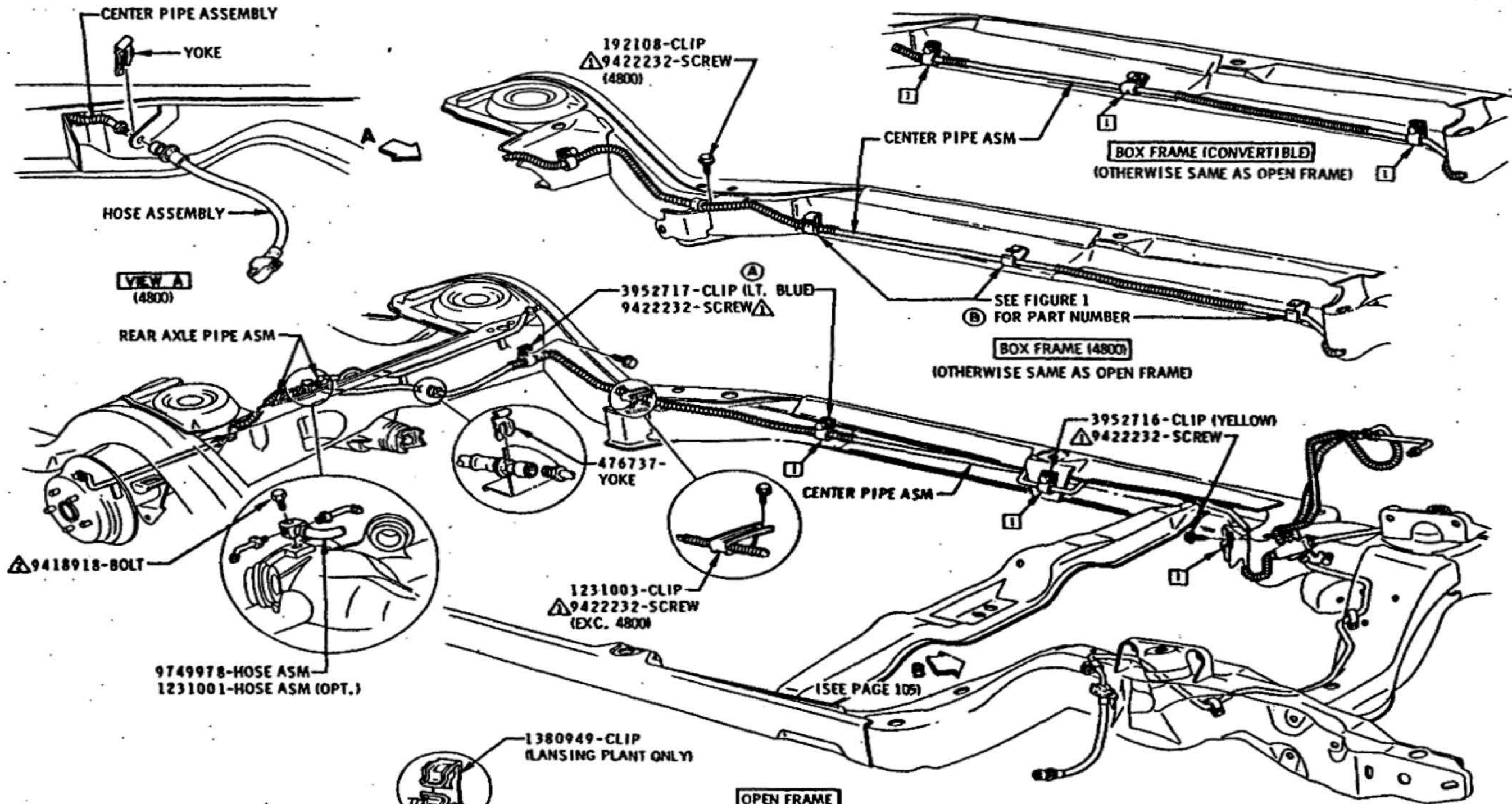
VALVE ASSEMBLY AND STOP LIGHT SWITCH

1. INSERT SWITCH INTO TUBULAR CLIP UNTIL SWITCH BODY SEATS ON TUBE CLIP.
2. PULL BRAKE PEDAL REARWARD AGAINST INTERNAL PEDAL STOP. SWITCH WILL BE MOVED IN TUBULAR CLIP PROVIDING PROPER ADJUSTMENT.

LUBRICATE AREAS INDICATED WITH 9985038 GREASE

DATE		SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL REC.	PAGE
1-28-70	D		OPTION REMOVED				SWITCH AND CLEVIS TO ARM ASSEMBLY	1970		5	102
10-27-69	C		OPT. VALVE ADDED				DATE MARCH 11, 1969				
9-20-69	B		NOTE ADDED				DR. BY H.B. MASON				
6-11-69	A		NAS 3902264				CHECKED / P.T. Lambert				
							APPR. J. H. Landon				

FULLY DRIVEN, SEATED AND NOT STRIPPED



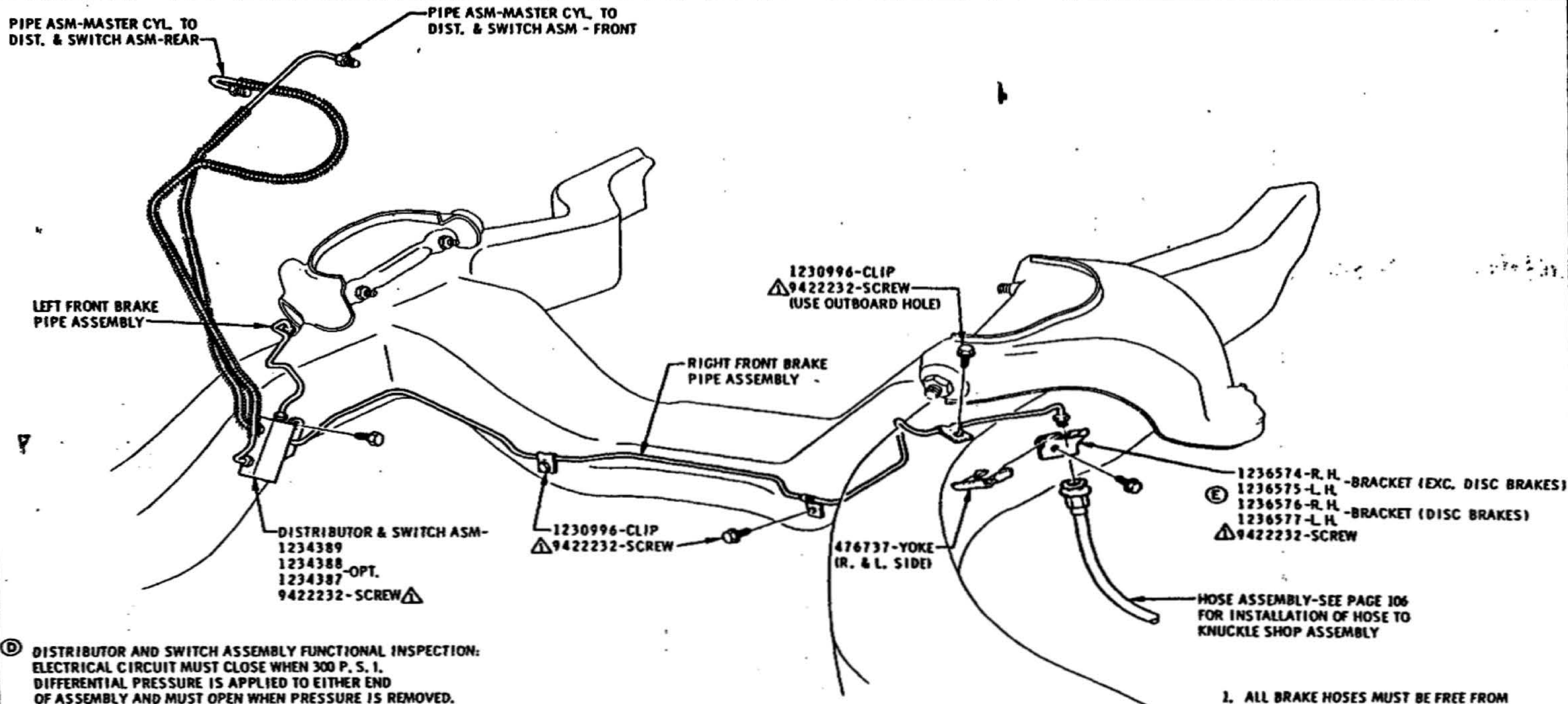
(C) **FIGURE 1**

(B) **THIS CLIP & SCREW FOR GMAD ONLY. AT LANSING PLANT INSTALL CLIP SHOWN IN FIGURE 1 AT THESE LOCATIONS.**

**NOTE:**  
FOR PIPE ASM NUMBERS, SEE CHART ON PAGE 108

▲ 120 - 180 LB. IN. FULLY DRIVEN, SEATED AND NOT STRIPPED - 72 LB. IN. MIN.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE				BRAKE LINES			
12-23-69	C	FIGURE ADDED	DATE MARCH 12, 1969	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
12-23-69	B <sub>2</sub>	NOTE ADDED	DR BY W.C. MASON	1970		5	104
7-28-68	A <sub>2</sub>	FASTENING REVISED	CHECKED P. Barnhart	REV. 5F	SERIES		PART NO.
		REVISION	APPR. J. J. Lambert	8L-17976	A		404411
DATE	SYM	REVISION	DR. CL. APPR.				



ⓓ DISTRIBUTOR AND SWITCH ASSEMBLY FUNCTIONAL INSPECTION: ELECTRICAL CIRCUIT MUST CLOSE WHEN 300 P. S. I. DIFFERENTIAL PRESSURE IS APPLIED TO EITHER END OF ASSEMBLY AND MUST OPEN WHEN PRESSURE IS REMOVED.

THE MAXIMUM TORQUE OF 18 LB. FT. IS NOT TO BE EXCEEDED ON THE FRONT L.H. BRAKE PIPE AND CENTER BRAKE PIPES TO DISTRIBUTOR AND SWITCH ASSEMBLY. IF TORQUE IN EXCESS OF 18 LB. FT. IS REQUIRED TO PASS LEAK TEST, THE DISTRIBUTOR AND SWITCH ASSEMBLY MUST BE REPLACED.

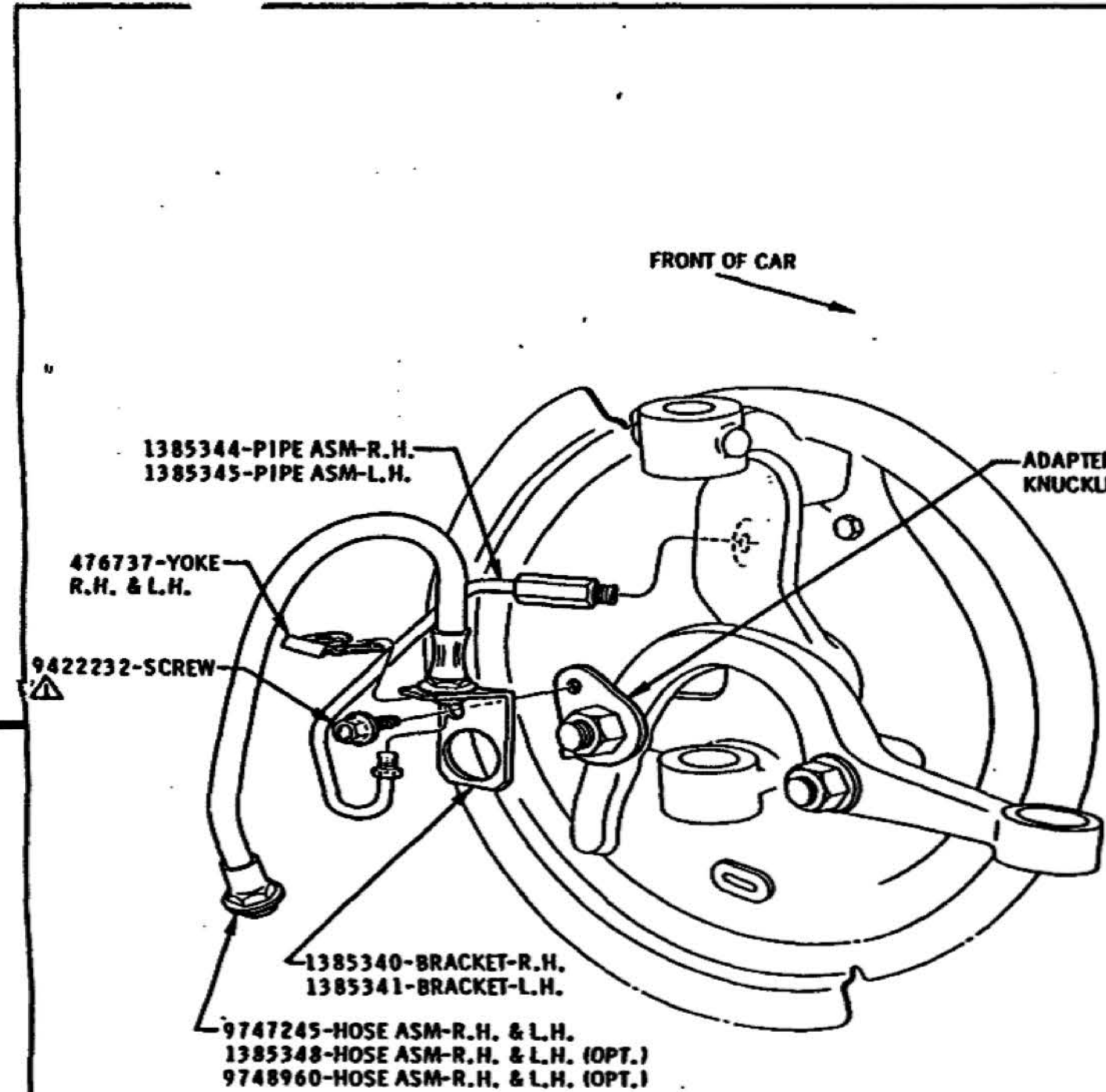
VIEW B  
IF FROM PAGE 100

NOTE:  
FOR PIPE ASM NUMBERS  
SEE CHART ON PAGE 108.

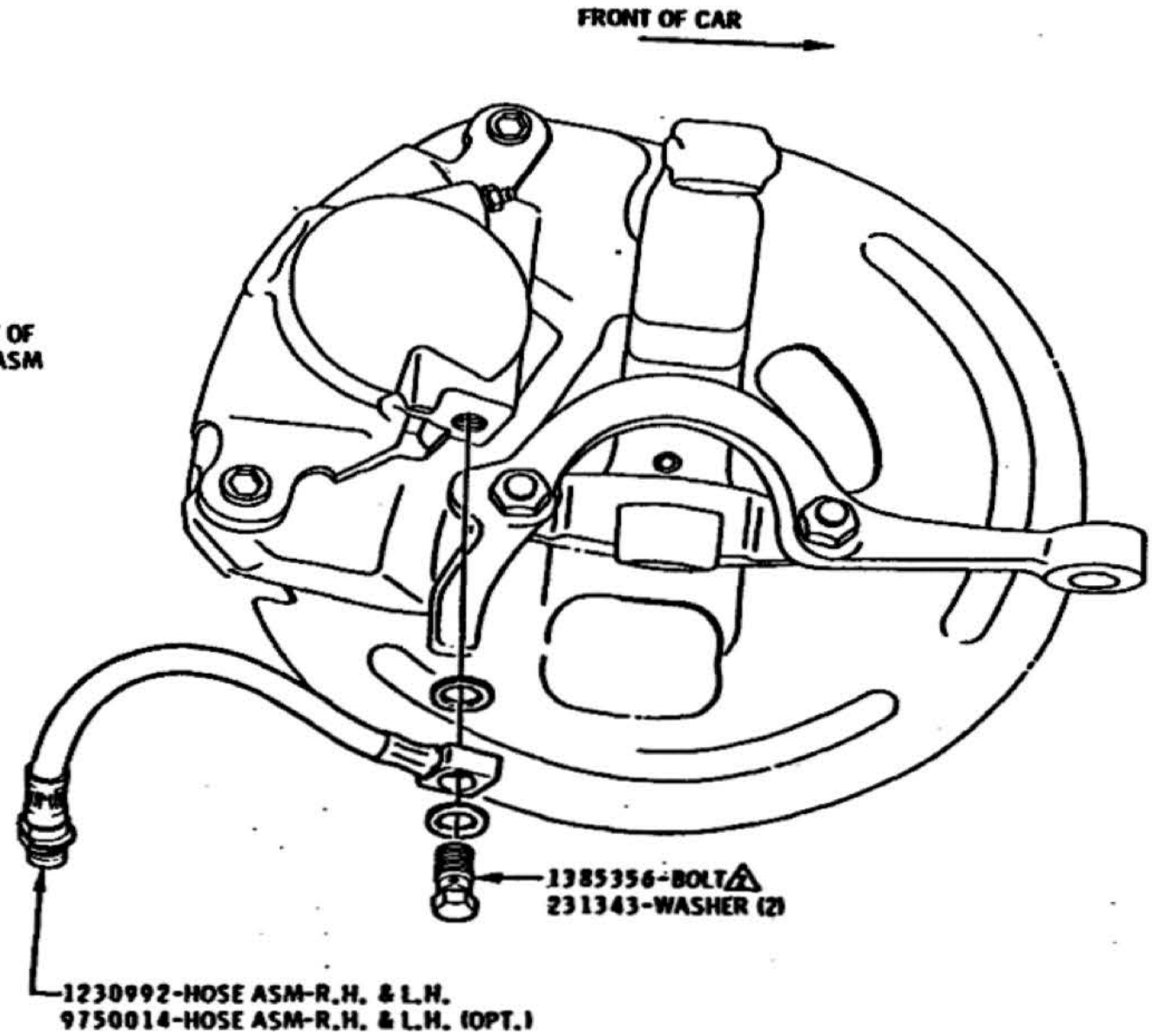
1. ALL BRAKE HOSES MUST BE FREE FROM TWIST WHEN INSTALLED IN FRAME BRACKETS AFTER OPPOSITE END HAS BEEN SECURELY TIGHTENED.
2. FRONT HOSES TO BE CHECKED WITH WHEELS IN STRAIGHT AHEAD POSITION. IF WHEEL END OF HOSE IS RETIGHTENED AFTER INSTALLATION, THEN THE FRAME END MUST BE REPOSITIONED TO ELIMINATE TWIST.

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED-72 LB. IN. MIN.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR	CK	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
3-9-70	C	PART NO REV				BRAKE LINES	1970		5	105
7-8-69	D	NOTE REVISED				DATE MARCH 12, 1969				
6-19-69	C	TORQUE REVISED				DR BY H.C. MASON				
6-19-69	B	PART NO'S REVISED				CHECKED J.P.S. Bunkart				
5-29-69	A	WAS 404430				APPR. J.P.S. Bunkart				



**DRUM BRAKES**



**DISC BRAKES**

(L.H. SHOWN, R.H. OPPOSITE)

- ▲ 18 - 25 LB. FT. FULLY DRIVEN, SEATED AND NOT STRIPPED - 72 LB. IN. MIN. (A)
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE KNUCKLE SHOP ASSEMBLY PIPING AND HOSE ROUTING			
		DATE MARCH 11, 1969		FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	
		DR BY W.E. MASON		NO. 51 35342		SERIES A	
		CHECKED M. J. Barnhart		APPR. S. W. Lander		PART NO. 404411	
7-28-69	A	TORQUE REVISED					
DATE	SYM	REVISION	DR.	CK.	APPR.		

BRAKE PIPE CHART	
PIPE ASSEMBLY	USAGE
1233366 - CENTER	35-36-42 SEDANS AND REG. S. WAG.
1233367 1236248-(OPT) - CENTER	31 & 3200 AND ALL COUPES
1233368 - CENTER	CONVERTIBLE
406642 - CENTER	4800
1230994 - R. FRONT BRAKE	ALL
1230995 - L. FRONT BRAKE	ALL
403656 - R. REAR AXLE	EXC. 4800
406522 - R. REAR AXLE	4800
403657 - L. REAR AXLE	EXC. 4800
406523 - L. REAR AXLE	4800
1383291 - MASTER CYL. TO DIST. - FRONT	EXC. 35J50, 35JL2
1386036 - MASTER CYL. TO DIST. - REAR	EXC. 35J50, 35JL2
1383292 - MASTER CYL. TO DIST. - REAR	35J50, 35JL2
1383290 - MASTER CYL. TO DIST. - FRONT	35J50
1234315 - METERING VALVE TO DIST. - FRONT	35JL2
1234316 - MASTER CYL. TO METERING VALVE	DISC BRAKES
406330 - METERING VALVE TO DIST. - FRONT	MANUAL DISC BRAKES

WHEN BLEEDER SCREWS ON WHEELS AND MASTER CYLINDER ARE LOOSENED TO BLEED BRAKE SYSTEM, TORQUE SCREWS TO 

LEAK TEST (DIFFERENTIAL PRESSURE TYPE EQUIPMENT) FOR STANDARD AND POWER BRAKE CYLINDERS.

TEST MUST BE MADE ON REAR CHAMBER ONLY WITH ALL HYDRAULIC COMPONENTS ASSEMBLED TO CAR AND CONNECTIONS COMPLETED, DIFFERENTIAL PRESSURE NEEDLE MUST ATTAIN A STATIC POSITION FOR A MINIMUM OF 5 SECONDS WHILE THE REAR SYSTEM IS SUBJECTED TO 1800 - 2000 P.S.I.

IF PEDAL JACK IS USED IN ADDITION TO THE DIFFERENTIAL PRESSURE TYPE EQUIPMENT, THE FORCE IMPOSED ON THE PEDAL MUST NOT CAUSE A HYDRAULIC PRESSURE IN THE BRAKE HYDRAULIC SYSTEM THAT EXCEEDS 2000 P.S.I.

WITH 2000 P.S.I. IN SYSTEM - DISTRIBUTOR AND SWITCH ASSEMBLY ELECTRICAL CIRCUIT TO BE CHECKED AND CIRCUIT MUST BE OPEN.

COMPLETED CAR MUST PASS 4 WHEEL BRAKE TEST AS FOLLOWS:

1. DRIVE CAR AT 4 MPH (10 MPH MAXIMUM).
2. APPLY BRAKES TO DECELERATE CAR AT 12 FT/SEC<sup>2</sup> (15 FT/SEC<sup>2</sup> MAXIMUM).
3. THERE MUST BE A MINIMUM OF 200 LBS. BRAKING FORCE AT EACH WHEEL.

**BRAKE LINES AND HOSES**

BRAKE LINES AND HOSES MUST NOT BE KINKED, FLATTENED, OR BENT OUT OF DESIGN POSITION. IN PARTICULAR, UNLESS COVERED BY DRAWING SPECIFICATIONS, LINES MUST HAVE AT LEAST 3/4" CLEARANCE TO ANY MOVING COMPONENT (I. e., STEERING SHAFT, SHIFT LEVERS, ETC.) AND 1/2" CLEARANCE TO ANY VIBRATING (I. e., UNDERBODY, POWER BRAKE BOOSTER, ETC.) UNLESS IT IS SPECIFICALLY CLIPPED TO THESE COMPONENTS. THERE MUST BE NO EVIDENCE OF HOSE TWIST.

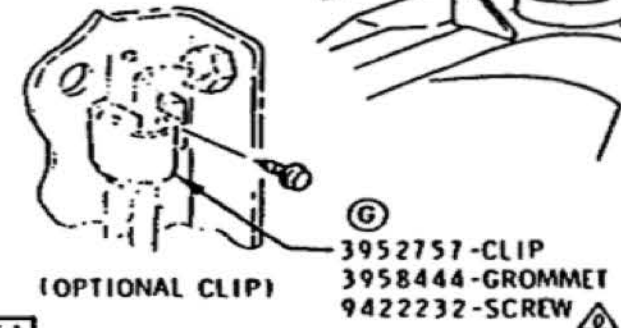
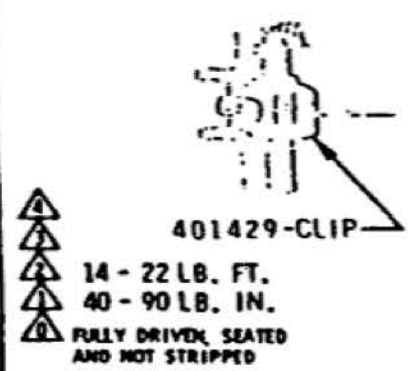
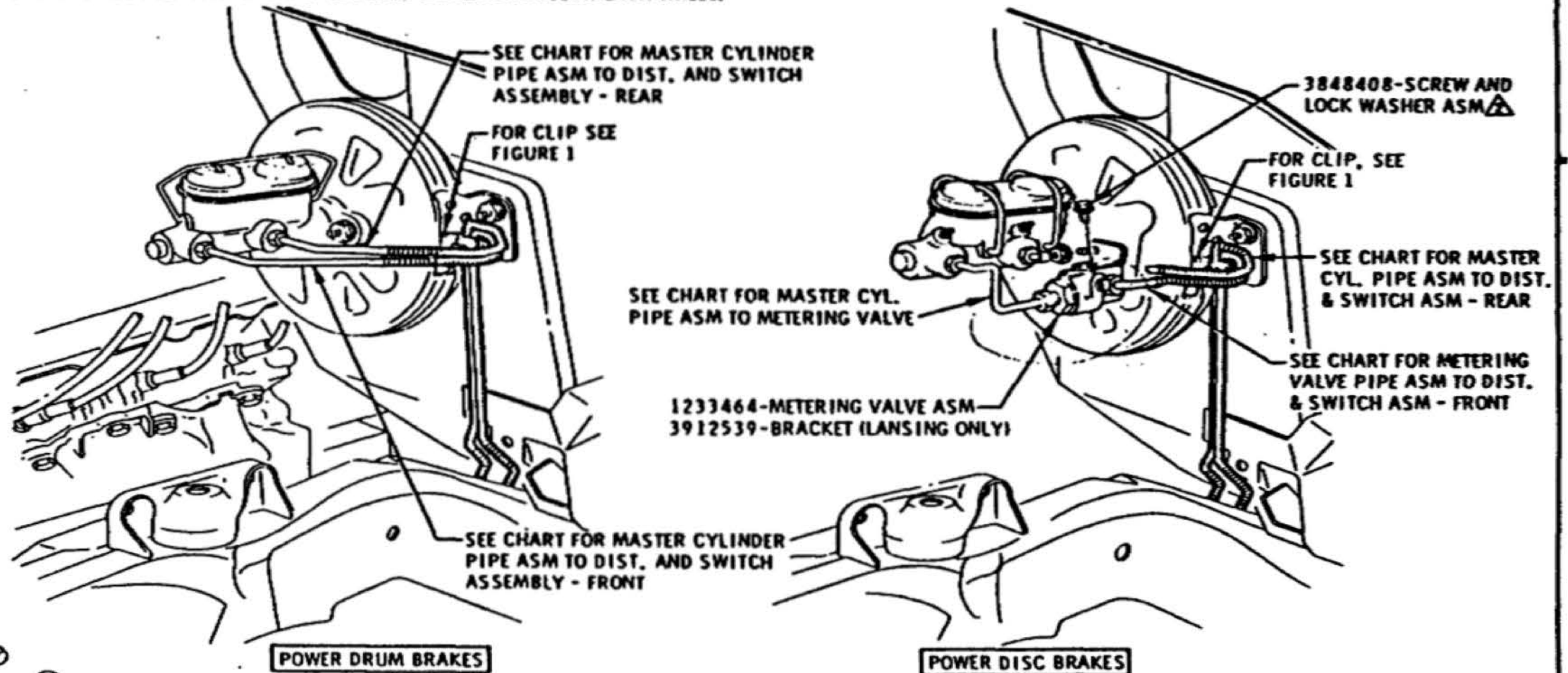
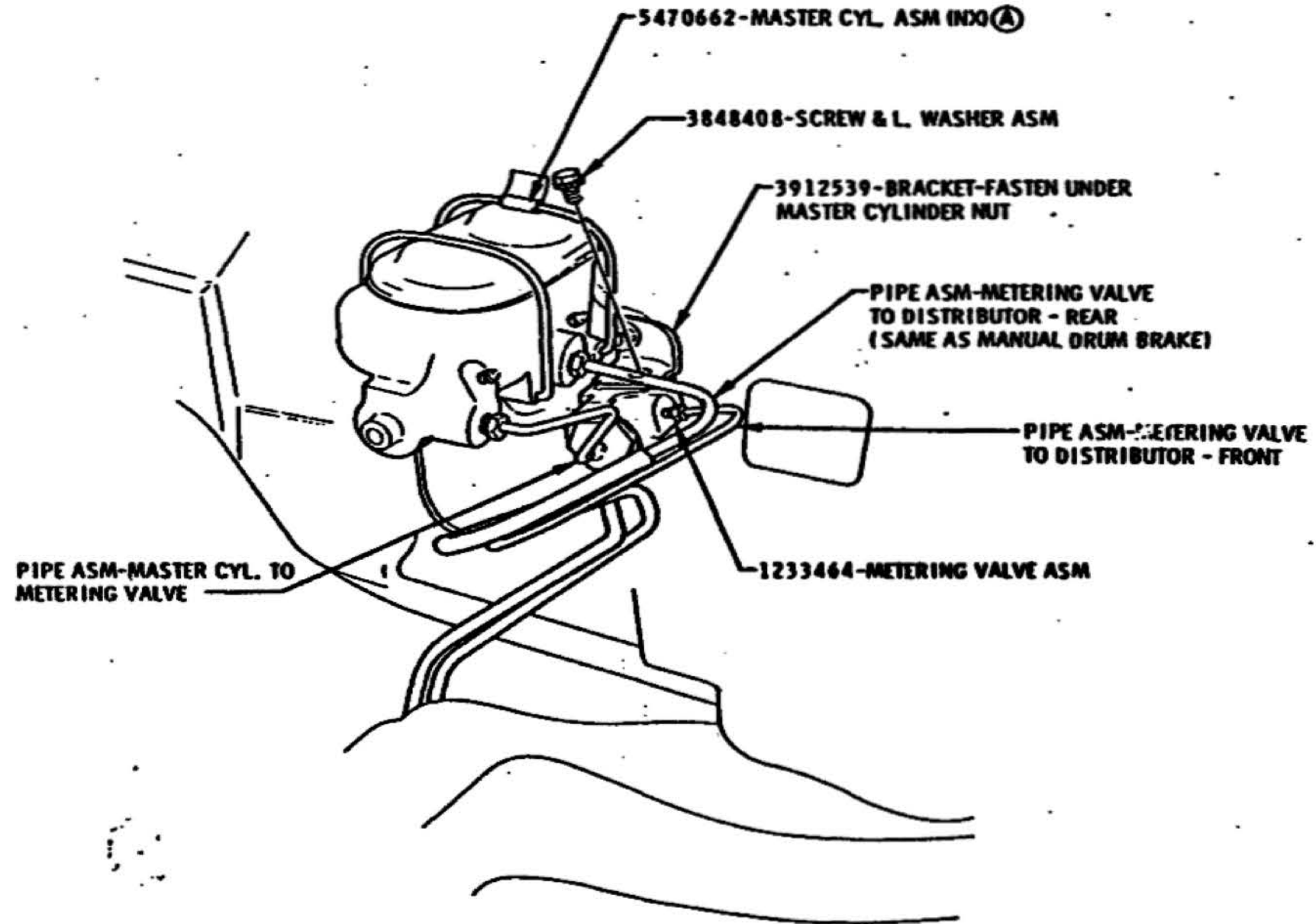


FIGURE 1

POWER DRUM BRAKES

POWER DISC BRAKES

REVISION		TITLE		PART USED		MANUAL SEC.		PAGE	
DATE	SYM	DR.	CHK.	POWER CYLINDER ASSEMBLY PIPING AND BRAKE PIPE CHART		1970		5 108	
4-25-70	G			DATE MARCH 12, 1969 DR BY W.E. MASON		OLDSMOBILE PRODUCT INFORMATION MANUAL			
3-9-70	F			CHECKED [Signature]		SERIES		PART NO.	
				APPR. [Signature]		A		404411	



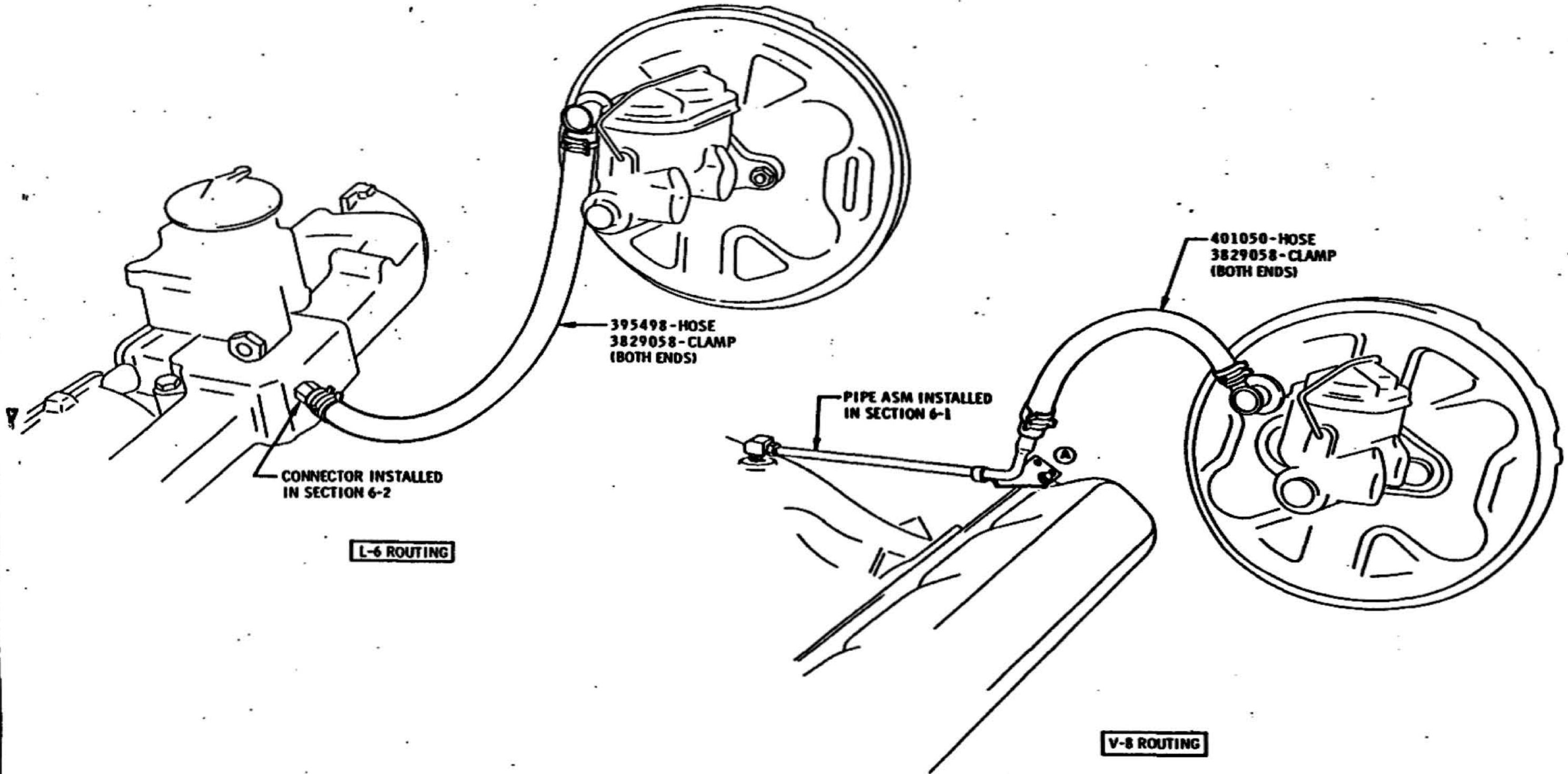
**NOTE**

PARTS AND INSTALLATION OTHERWISE  
SAME AS STANDARD CAR

**NOTE**

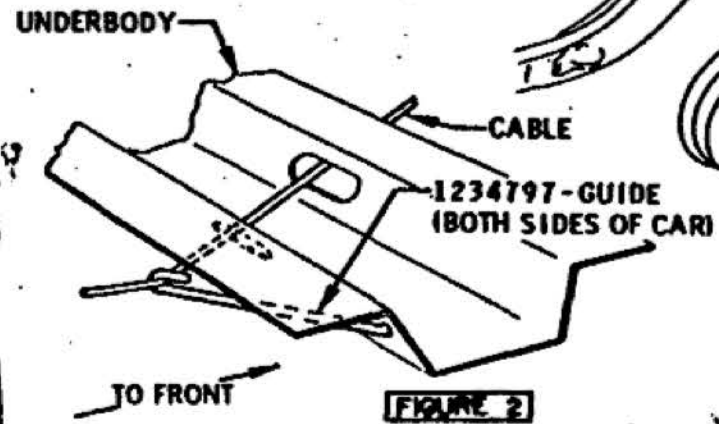
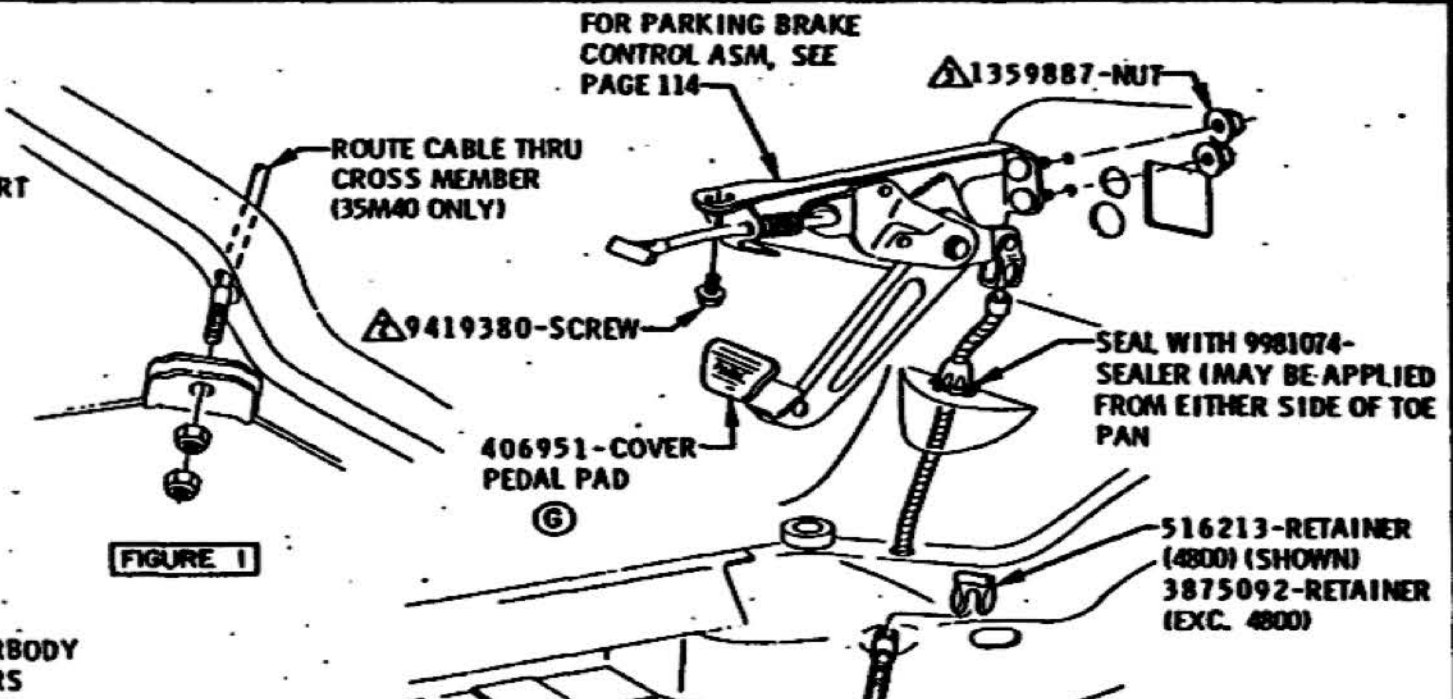
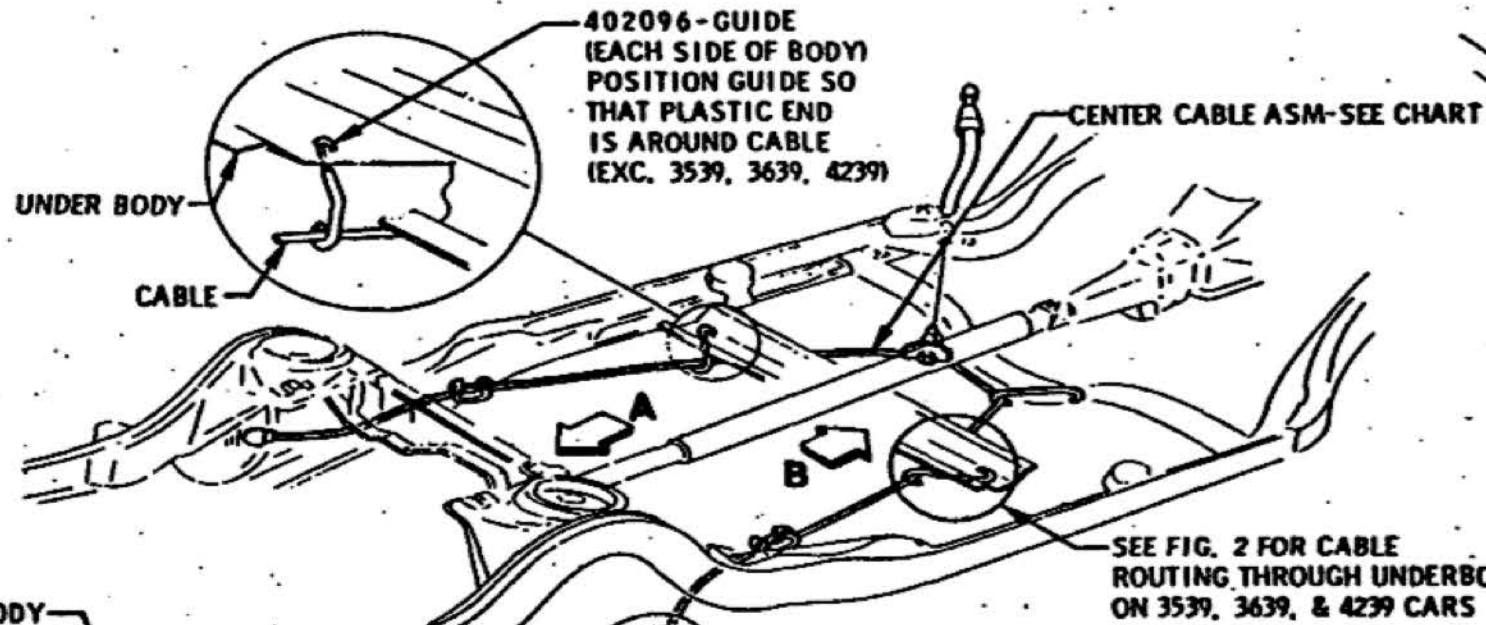
SEE CHART ON PAGE 108  
FOR PIPE PART NUMBERS

				TITLE		MANUAL DISC BRAKE MASTER CYLINDER AND PIPES (35W30, 35W31)			
				DATE		MAY 29, 1969			
				DR. BY		W. E. MASON			
				CHECKED		J. P. Lambert			
				APPR.		S. W. [Signature]			
DATE	BY	REVISION	DR.	CL.	APPR.	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
9-25-69	B	35JLT NOTE REMOVED							5 109
9-20-69	A	CODE ADDED							
						SERIES	A	PART NO.	404411

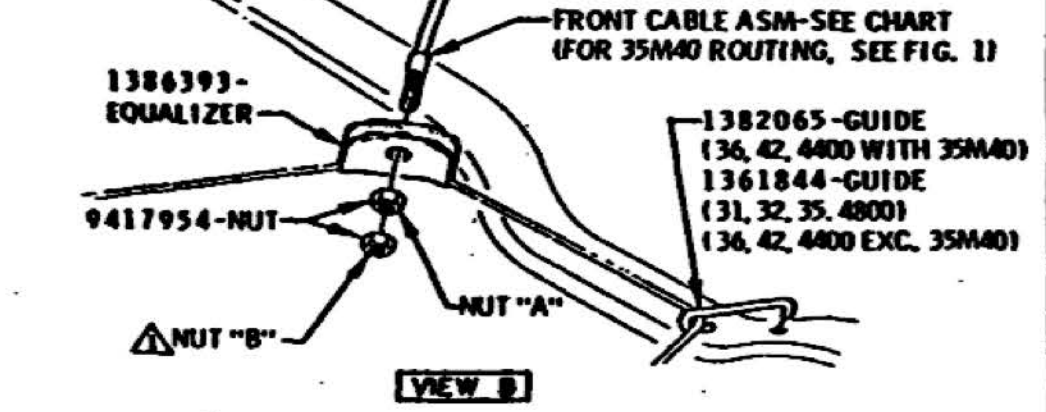
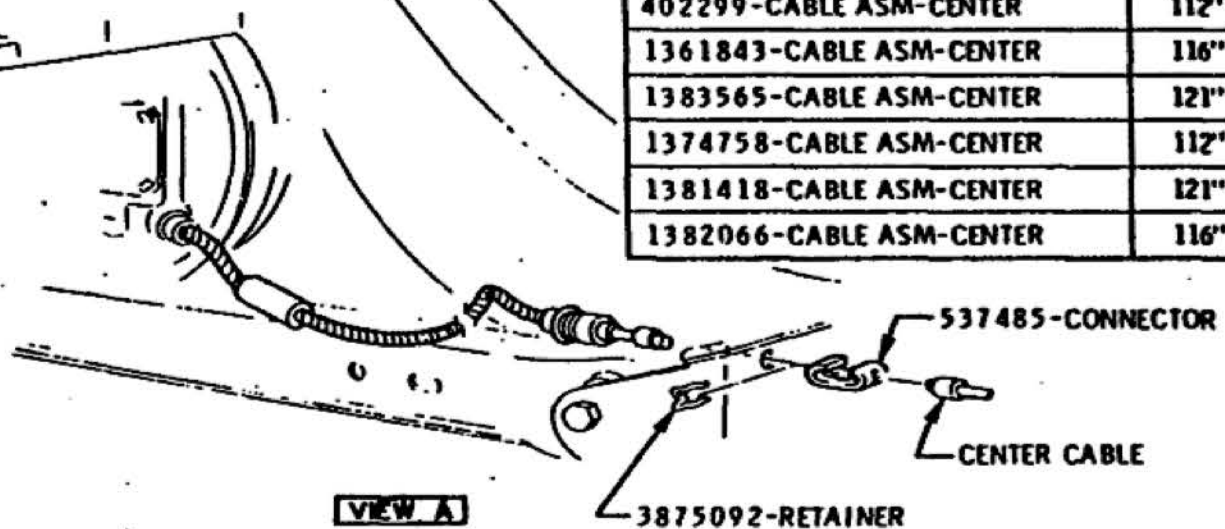


				TITLE POWER BRAKE VACUUM HOSE ROUTING				
				DATE MARCH 11, 1969	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL DOC. 5	PAGE 110
				DR BY H.C. MASON				
				CHECKED <i>[Signature]</i>	NO. 21170	SERIES A	PART NO. 404411	
1-2270	11	REV TO DETAIL	C.M.	APP. <i>[Signature]</i>	2112			
DATE	SYM	REVISION	DR.	CK.	APP.			





PARKING BRAKE CABLE CHART			
CABLE NUMBER	WHEELBASE	TRANS.	CODE
401991-CABLE ASM-FRONT			
403226-CABLE ASM-FRONT (OPT)	ALL	EXC. M40	AA
407869-CABLE ASM-FRONT (OPT)			
401990-CABLE ASM-FRONT	ALL	35M40	AB
403227-CABLE ASM-FRONT (OPT)			
402299-CABLE ASM-CENTER	112" W/B	EXC. M40	AP
1361843-CABLE ASM-CENTER	116" W/B	EXC. M40	SB
1383565-CABLE ASM-CENTER	121" W/B	EXC. M40	SD
1374758-CABLE ASM-CENTER	112" W/B	35M40	SG
1381418-CABLE ASM-CENTER	121" W/B	35M40	SH
1382066-CABLE ASM-CENTER	116" W/B	35M40	SF



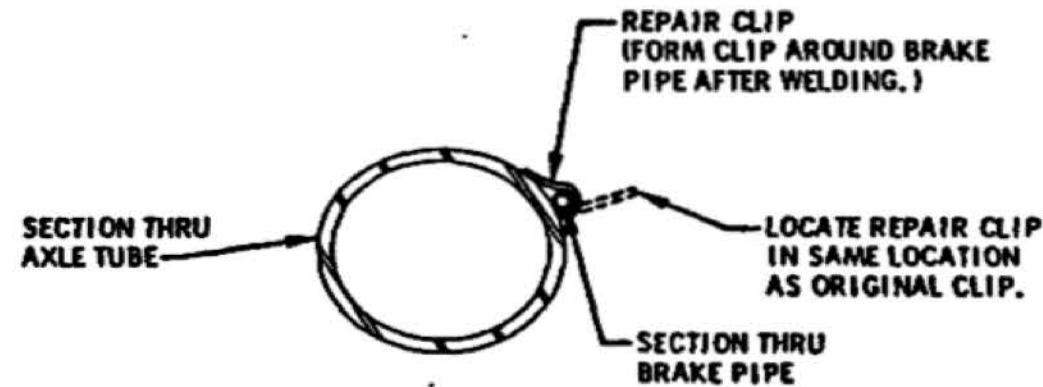
HOLD THREADED END OF CABLE AND ADJUST NUT "A" TO PRODUCE A PEDAL LOAD OF 65 TO 90 LBS. WHEN PEDAL IS DEPRESSED TO 5 CLICKS. IF OVER 90 LBS.

- RELEASE PARKING BRAKE.
- PULL ON FRONT END OF EITHER REAR CABLE.
  - MOVEMENT OF CABLE THROUGH THE CONDUIT WITH LESS THAN 10 LB. PULL INDICATES BRAKES ARE NOT DRAGGING AND ADJUSTMENT IS SATISFACTORY.
  - NO MOVEMENT INDICATES THE BRAKE IS NOT ADJUSTED PROPERLY -- READJUST BRAKE----

HOLD NUT "A" AND TIGHTEN NUT "B" TO SPECIFIED TORQUE.

- ▲ 84-120 LB. IN.
- ▲ 72-108 LB. IN.
- ▲ 36-72 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE		PARKING BRAKE CONTROL	
DATE	NOVEMBER 25, 1968	FIRST USED	1970
DR BY	130YER	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE 5 112
CHECKED	JFB/erhart	REV. 50	SERIES A PART NO. 404411
APP'D	JFB/erhart	35M40	
REVISION			

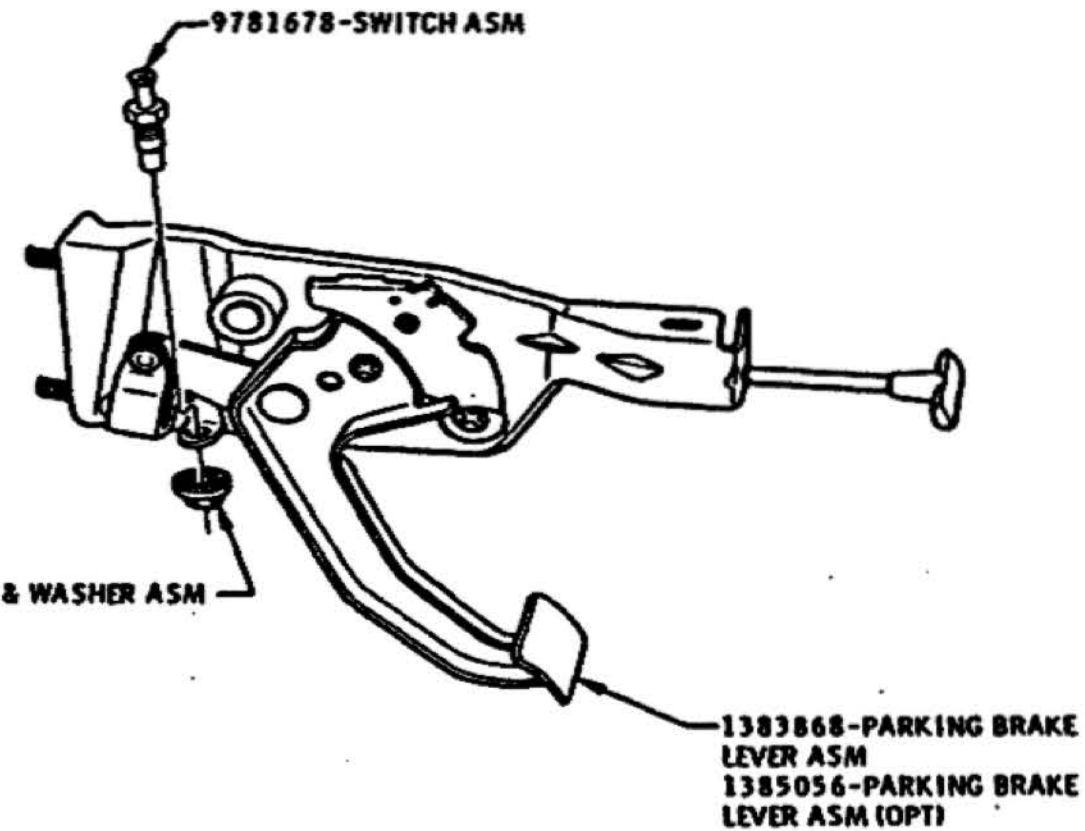


REPAIR SHALL BE MADE USING THE NELSON STUD-WELDING PROCESS OR EQUIVALENT.

GREGORY INDUSTRIES, INC. PART NUMBER A/4 101-501-332 STUD SHALL BE USED FOR REPAIRS.

Ⓐ

REAR AXLE BRAKE PIPE CLIP  
REPAIR PROCEDURE



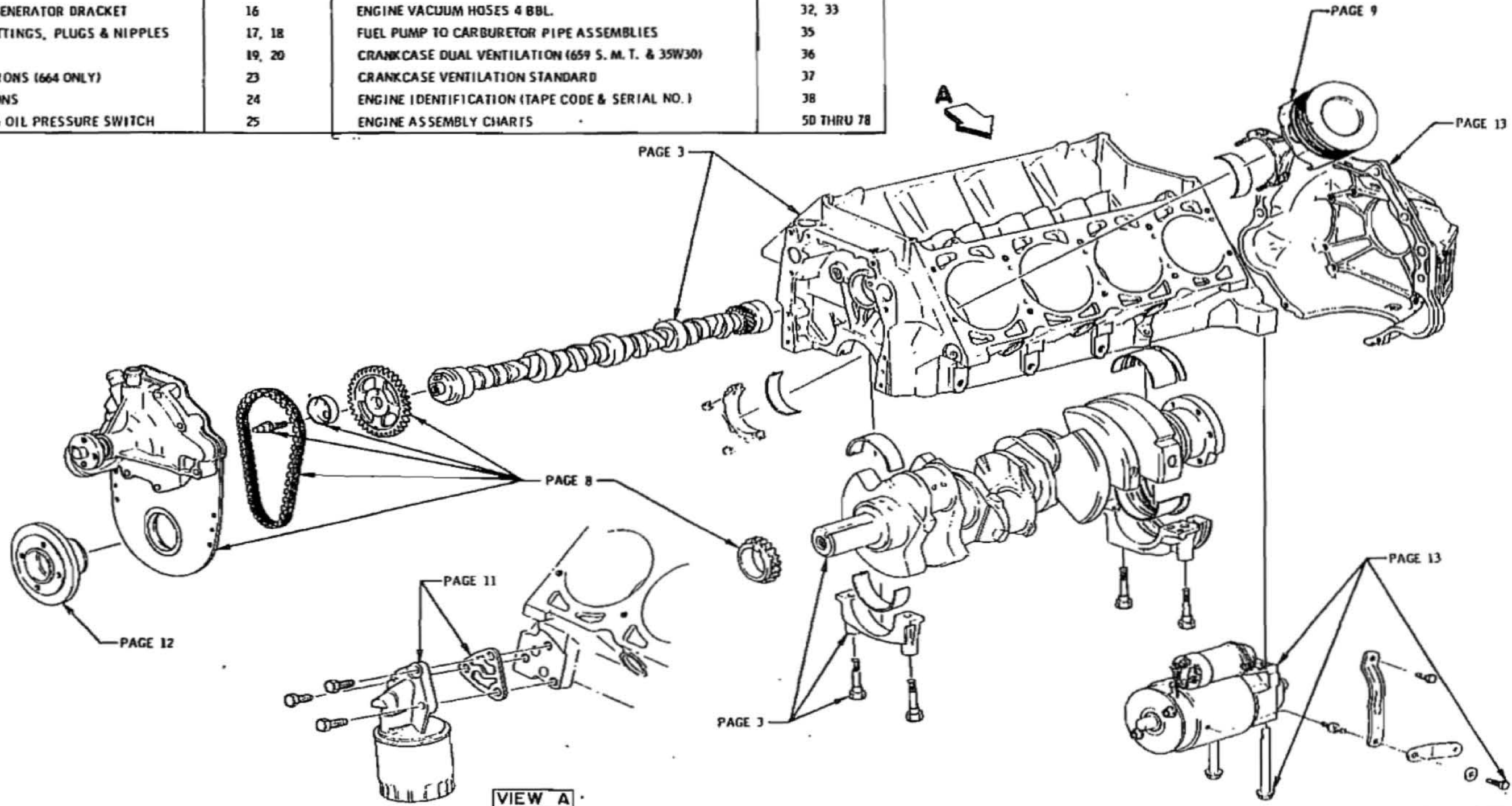
PARKING BRAKE SIGNAL LIGHT MUST COME ON AS LEVER IS DEPRESSED TO THE FIRST CLICK

▲  
▲  
▲  
▲ 72-96 LB. IN.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED

				TITLE		PARKING BRAKE LEVER AND SWITCH ASM			
		DATE		OCTOBER 28, 1969		FIRST USED		1970	
		DR BY		BOYER		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
		CHECKED		P. J. Arnhart		REV. 50		SERIES	
		APPR.		L. J. Stewart		12L		A	
7-69	A	NOTE REMOVED		DR. CK.				PART NO.	
DATE	SYM	REVISION		DR. CK.	APPR.			404411	
								MANUAL NO. PAGE	
								5 114	

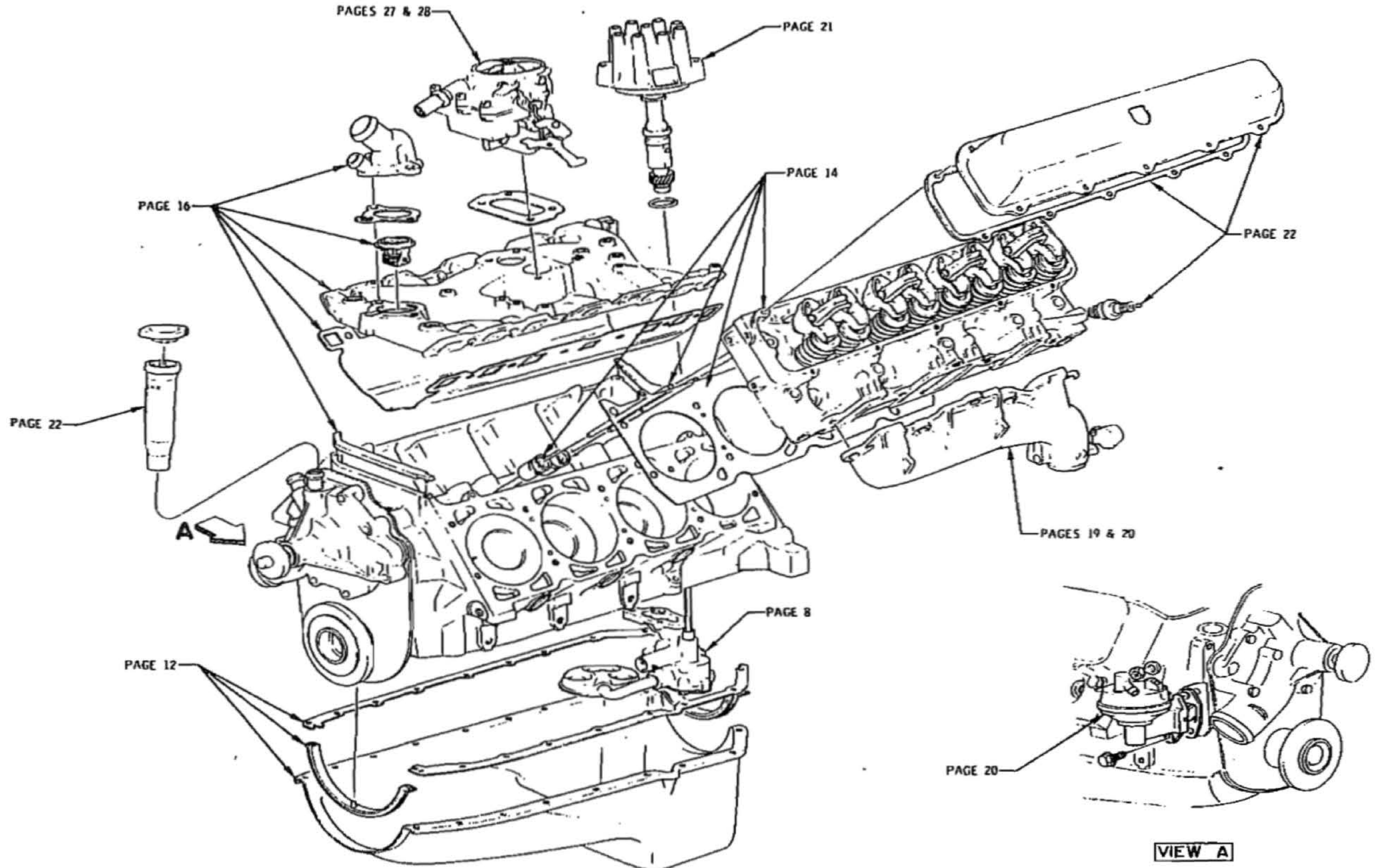


CONTENTS FOR ENGINE PARTS NOT SHOWN	PAGES	CONTENTS CONTINUED	PAGES
CRANKSHAFT BEARING FITS	4, 5 & 6	ENGINE TESTING INSTRUCTIONS	26
CAMSHAFT USAGE & IDENTIFICATION	7	2 BBL. CHOKE AIR PIPE & THROTTLE CABLE BRACKET	27
PISTON & CYLINDER BORE FITS	10	4 BBL. CHOKE AIR PIPE & THROTTLE CABLE BRACKET	28
OIL FILTER & ENGINE FACTORY FILL	11	THROTTLE CONTROL DASHPOT & T. C. S. SOLENOID	29
OIL LEVEL INDICATOR GUIDE	15	ENGINE VACUUM HOSES 2 BBL.	30, 31
THERMO. VACUUM SWITCH & GENERATOR BRACKET	16	ENGINE VACUUM HOSES 4 BBL.	32, 33
INTAKE MANIFOLD VACUUM FITTINGS, PLUGS & NIPPLES	17, 18	FUEL PUMP TO CARBURETOR PIPE ASSEMBLIES	35
HOT AIR SHROUDS	19, 20	CRANKCASE DUAL VENTILATION (659 S. M. T. & 35W30)	36
ENGINE BALANCING INSTRUCTIONS (664 ONLY)	23	CRANKCASE VENTILATION STANDARD	37
ENGINE PAINTING INSTRUCTIONS	24	ENGINE IDENTIFICATION (TAPE CODE & SERIAL NO.)	38
SPARK PLUG CABLES, COILS & OIL PRESSURE SWITCH	25	ENGINE ASSEMBLY CHARTS	50 THRU 78

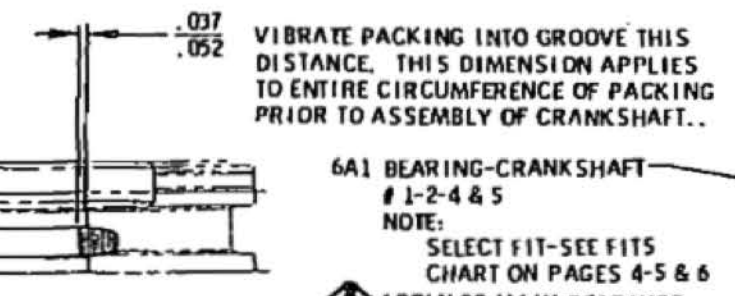
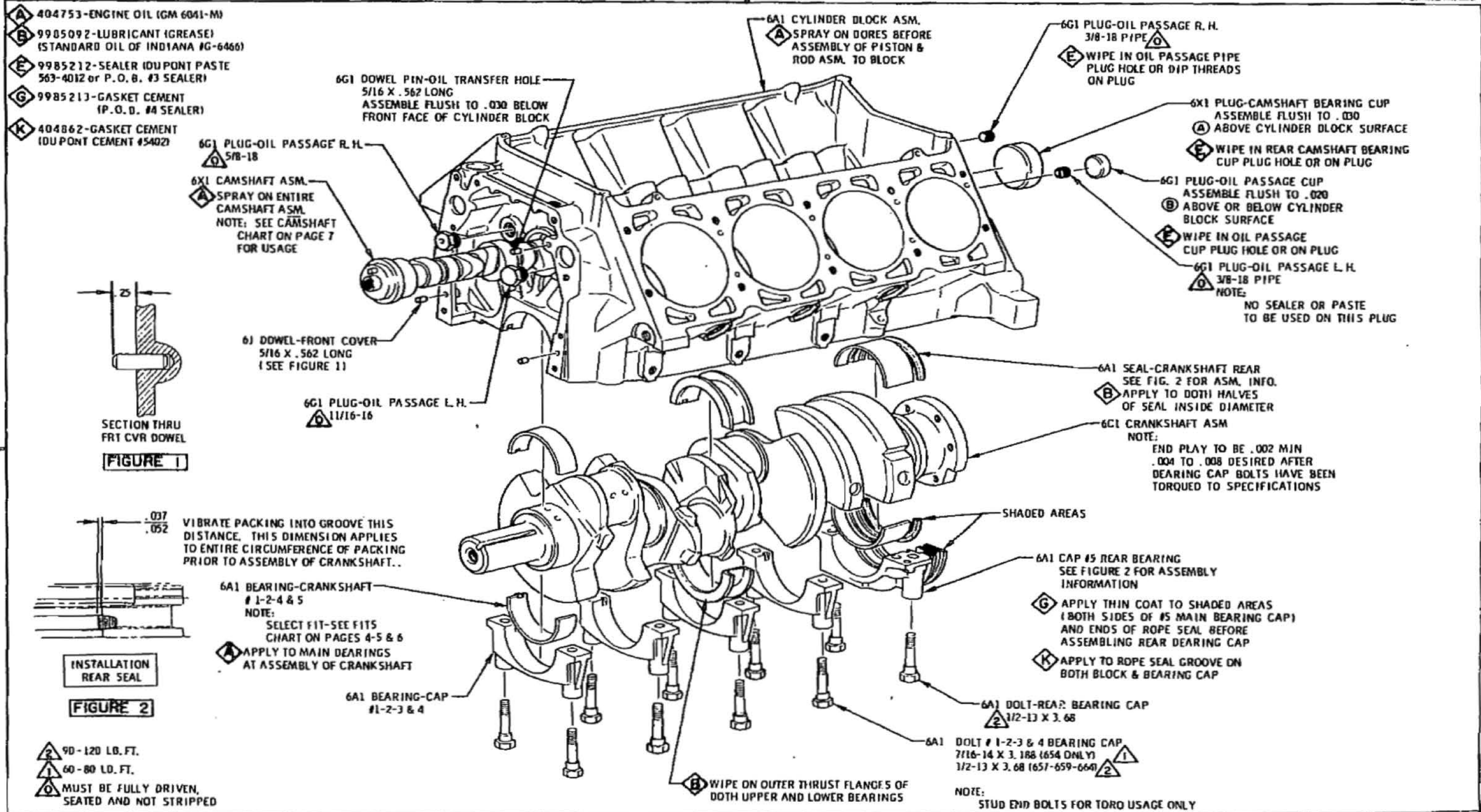


VIEW A

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	TITLE	INDEX - ENGINE ASSEMBLY	FIRST USED	OLDSMOBILE ENGINE ASSEMBLY MANUAL	MANUAL SEC.	PAGE	PART NO.	
																DATE <i>MAY 29, 1969</i>	1970			6	1		
																CHECKED <i>MB</i>							
																APPR. <i>D. E. Ford</i>							404414
																REF. <i>650-657</i>							
																APPR. <i>Solomon</i>							



										TITLE		INDEX - ENGINE ASSMPLY		MANUAL SEC. PAGE	
										DATE <i>MAY 29, 1969</i>		FIRST USED		OLDSMOBILE ENGINE	
										DR BY <i>CRIST MAY</i>		1970		ASSEMBLY MANUAL	
										CHECKED <i>PTB/...</i>		SERIES		6 2	
										APPR. <i>D. ...</i>		REF. 650-157		PART NO.	
										APPR. <i>Holmes</i>		650-660		404414	
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	



2 90-120 LB. FT.  
1 60-80 LB. FT.  
O MUST BE FULLY DRIVEN,  
SEATED AND NOT STRIPPED

										TITLE CAMSHAFT & CRANKSHAFT TO BLOCK ASSEMBLY				
						DATE MAY 26, 1969	FIRST USED	OLDSMOBILE ENGINE ASSEMBLY MANUAL		MANUAL SEC. PAGE				
						DR. BY CUET MAY	1970			6	3			
						CHECKED <i>[Signature]</i>	REF. 654-657	SERIES		PART NO.				
						APPR. <i>[Signature]</i>	659-664			404414				
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION		
					8-4-69	D	NOTE ADDED							
					8-4-69	A	NOTE REVISED							

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

CYLINDER BLOCK SELECTIONS NO. 1, 2, 3, 4, & 5 BEARING BORE		
CODE	GROUP	HOLE SIZE
YELLOW	1	2.6870 - 2.6875
RED	2	2.6875 - 2.6880

CRANKSHAFT SELECTIONS NO. 1, 2, 3, 4, & 5 JOURNAL DIAMETERS			
CODE	GROUP	NO. 1 JOUR. DIA.	NO. 2, 3, 4, & 5 JOUR. DIA.
GREEN	1	2.4988 - 2.4993	2.4985 - 2.4990
RED	2	2.4993 - 2.4998	2.4990 - 2.4995
BLUE	3 (SALVAGE)	2.4983 - 2.4988	2.4980 - 2.4985

### BEARING NUMBER 1

VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASSEMBLY COMBINATION		BEARINGS		
CYLINDER BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458918 UPPER 5466252 LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458919 UPPER 5466253 LOWER	A	BLACK
RED	GREEN	5458920 UPPER 5466254 LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5458920 UPPER 5466254 LOWER	B	GREEN
RED	BLUE (SALVAGE)	5458921 UPPER 5466255 LOWER	C	RED

### BEARING NUMBER 3

VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASSEMBLY COMBINATION		BEARINGS		
CYLINDER BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458922 UPPER LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458923 UPPER LOWER	A	BLACK
RED	GREEN	5458924 UPPER LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5458924 UPPER LOWER	B	GREEN
RED	BLUE (SALVAGE)	5458925 UPPER LOWER	C	RED

### BEARING NUMBERS 2 & 4

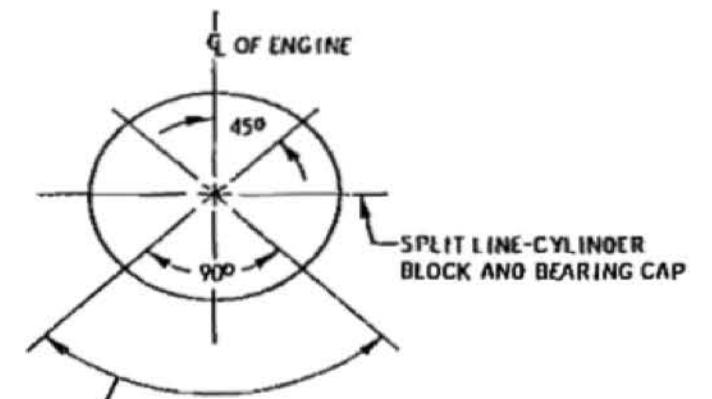
VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASSEMBLY COMBINATION		BEARINGS		
CYLINDER BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458918 UPPER LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458919 UPPER LOWER	A	BLACK
RED	GREEN	5458920 UPPER LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5458920 UPPER LOWER	B	GREEN
RED	BLUE (SALVAGE)	5458921 UPPER LOWER	C	RED

### BEARING NUMBER 5

VERTICAL DIAMETRAL CLEARANCE .0015 - .0031

ASSEMBLY COMBINATION		BEARINGS		
CYLINDER BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458926 UPPER 5458930 LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458927 UPPER 5458931 LOWER	A	BLACK
RED	GREEN	5458928 UPPER 5458932 LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5458928 UPPER 5458932 LOWER	B	GREEN
RED	BLUE (SALVAGE)	5458929 UPPER 5458933 LOWER	C	RED



MAIN BEARING BORE DIAMETERS SHOWN ON CYLINDER BLOCK ASSEMBLY ARE TO BE MEASURED WITHIN THIS AREA. DIAMETER MEASURED AT SPLIT LINE MAY BE .0005 LESS THAN MAXIMUM DIAMETER MEASURED WITHIN THIS AREA.

CRANKSHAFT JOURNAL DIAMETER FOR SELECTION PURPOSES IS TO BE INTERPRETED AS THE MINIMUM DIAMETER MEASURED. VARIATIONS IN DIAMETER IN THE LENGTH OF THE JOURNAL ARE NOT TO EXCEED .0005 AND MUST BE WITHIN THE DIAMETRAL TOLERANCE RANGE SHOWN ON CRANKSHAFT DRAWING.

CLEARANCES SHOWN ARE ACTUAL INSTALLED CLEARANCES WHICH INCLUDE ASSEMBLY DISTORTION. THESE CLEARANCES CANNOT BE CALCULATED FROM COMPONENT DIMENSIONS.

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	TITLE	FIRST USED	MANUAL SEC.	PAGE	PART NO.
																CHART-FIT-CRANKSHAFT BEARING	1970	6	4	404414
																DATE MAY 26, 1969				
																DR BY GRET MAY				
																CHECKED P. B. B. B.				
																APPR. J. B. B.				
																REF. 454 L.C.				

CYLINDER BLOCK SELECTIONS - NO. 1, 2, 3, 4, & 5 BEARING BORE		
CODE	GROUP	HOLE SIZE
YELLOW	1	2.6870 - 2.6875
RED	2	2.6875 - 2.6880

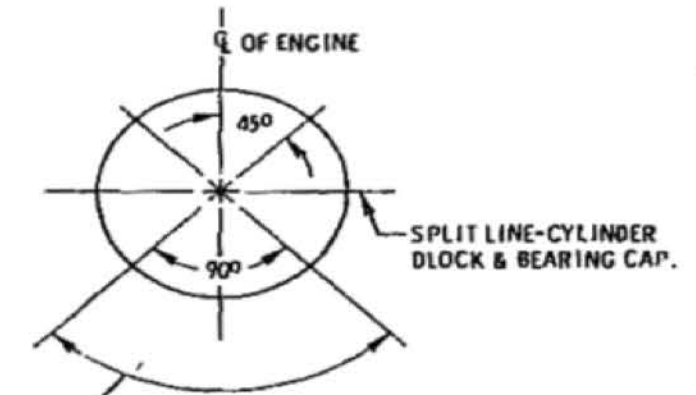
CRANKSHAFT SELECTIONS NO. 1, 2, 3, 4, & 5 JOURNAL DIAMETERS			
CODE	GROUP	NO. 1 JOUR. DIA.	NO. 2, 3, 4, & 5 JOUR. DIA.
GREEN	1	2.4988 - 2.4993	2.4985 - 2.4990
RED	2	2.4993 - 2.4998	2.4990 - 2.4995
BLUE	3 (SALVAGE)	2.4983 - 2.4988	2.4980 - 2.4985

BEARING NUMBER 1  
VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASM. COMBINATION		BEARINGS		
CYL. BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458918 UPPER 5466188 LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458919 UPPER 5466189 LOWER	A	BLACK
RED	GREEN	5458920 UPPER 5466190 LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5458920 UPPER 5466190 LOWER	B	GREEN
RED	BLUE (SALVAGE)	5458921 UPPER 5466191 LOWER	C	RED

BEARING NUMBER 3  
VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASM. COMBINATION		BEARINGS		
CYL. BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458922 UPPER 5458939 LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458923 UPPER 5458940 LOWER	A	BLACK
RED	GREEN	5458924 UPPER 5458941 LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5458924 UPPER 5458941 LOWER	B	GREEN
RED	BLUE (SALVAGE)	5458925 UPPER 5458942 LOWER	C	RED



MAIN BEARING BORE DIAMETERS SHOWN ON CYLINDER BLOCK ASSEMBLY ARE TO BE MEASURED WITHIN THIS AREA. DIAMETER MEASURED AT SPLIT LINE MAY BE .0005 LESS THAN MAXIMUM DIAMETER MEASURED WITHIN THIS AREA.

BEARING NUMBERS 2 & 4  
VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASM. COMBINATION		BEARINGS		
CYL. BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458918 UPPER 5458935 LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458919 UPPER 5458936 LOWER	A	BLACK
RED	GREEN	5458920 UPPER 5458937 LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5458920 UPPER 5458937 LOWER	B	GREEN
RED	BLUE (SALVAGE)	5458921 UPPER 5458938 LOWER	C	RED

BEARING NUMBER 5  
VERTICAL DIAMETRAL CLEARANCE .0015 - .0031

ASM. COMBINATION		BEARINGS		
CYL. BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458926 UPPER 5458930 LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458927 UPPER 5458931 LOWER	A	BLACK
RED	GREEN	5458928 UPPER 5458932 LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5458928 UPPER 5458932 LOWER	B	GREEN
RED	BLUE (SALVAGE)	5458929 UPPER 5458933 LOWER	C	RED

CRANKSHAFT JOURNAL DIAMETER FOR SELECTION PURPOSES IS TO BE INTERPRETED AS THE MINIMUM DIAMETER MEASURED. VARIATIONS IN DIAMETER IN THE LENGTH OF THE JOURNAL ARE NOT TO EXCEED .0005 AND MUST BE WITHIN THE DIAMETRAL TOLERANCE RANGE SHOWN ON CRANKSHAFT DRAWING.

CLEARANCES SHOWN ARE ACTUAL INSTALLED CLEARANCES WHICH INCLUDE ASSEMBLY DISTORTION. THESE CLEARANCES CANNOT BE CALCULATED FROM COMPONENT DIMENSIONS.

										TITLE		CIART-FIT-CRANKSHAFT BEARING			
										DATE <i>MAY 26, 1969</i>		FIRST USED			
										DR BY <i>QUET MAY</i>		1970			
										CHECKED <i>[Signature]</i>		OLDSMOBILE ENGINE			
										APPR <i>[Signature]</i>		ASSEMBLY MANUAL			
										REF <i>654 NC.</i>		MANUAL SEC. PAGE			
												6 5			
												SERIES PART NO.			
												404414			
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.



# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

CYLINDER BLOCK SELECTIONS NO. 1, 2, 3, 4, & 5 BEARING BORE		
CODE	GROUP	HOLE SIZE
YELLOW	1	3.1880 - 3.1885
RED	Z	3.1885 - 3.1890

CRANKSHAFT SELECTIONS NO. 1, 2, 3, 4, & 5 JOURNAL DIAMETERS		
CODE	GROUP	NO. 1, 2, 3, 4, & 5 JOURNAL DIA.
GREEN	1	2.9993 - 2.9998
RED	2	2.9998 - 3.0003
BLUE	3 (SALVAGE)	2.9988 - 2.9993

### BEARING NUMBER 1

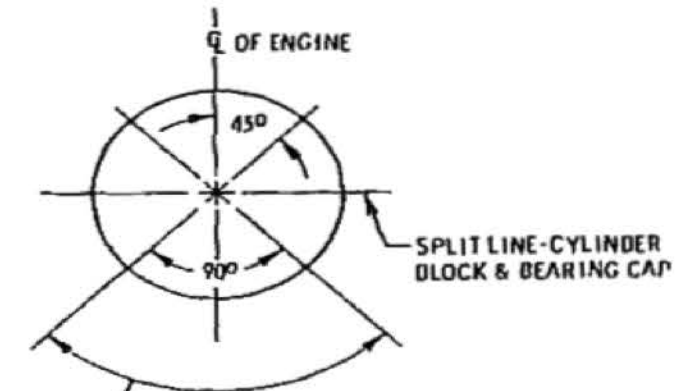
VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASSEMBLY COMBINATION		BEARINGS		
CYLINDER BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458618 UPPER 5466192 LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458619 UPPER 5466196 LOWER	D A	BLACK
RED	GREEN	5458620 UPPER 5466200 LOWER	C B	GREEN
YELLOW	BLUE (SALVAGE)	5458620 UPPER 5466200 LOWER	C B	GREEN
RED	BLUE (SALVAGE)	5458621 UPPER 5466204 LOWER	E C	RED

### BEARING NUMBER 3

VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASSEMBLY COMBINATION		BEARINGS		
CYLINDER BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5463660 UPPER LOWER	NONE	NONE
YELLOW RED	GREEN RED	5463661 UPPER LOWER	A	BLACK
RED	GREEN	5463662 UPPER LOWER	B	GREEN
YELLOW	BLUE (SALVAGE)	5463662 UPPER LOWER	B	GREEN
RED	BLUE (SALVAGE)	5463663 UPPER LOWER	C	RED



### BEARING NUMBERS 2 & 4

VERTICAL DIAMETRAL CLEARANCE .0005 - .0021

ASSEMBLY COMBINATION		BEARINGS		
CYLINDER BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5458618 UPPER LOWER	NONE	NONE
YELLOW RED	GREEN RED	5458619 UPPER LOWER	B	BLACK
RED	GREEN	5458620 UPPER LOWER	C	GREEN
YELLOW	BLUE (SALVAGE)	5458620 UPPER LOWER	C	GREEN
RED	BLUE (SALVAGE)	5458621 UPPER LOWER	E	RED

### BEARING NUMBER 5

VERTICAL DIAMETRAL CLEARANCE .0020 - .0034

ASSEMBLY COMBINATION		BEARINGS		
CYLINDER BLOCK	CRANKSHAFT	PART NO.	LETTER	COLOR
YELLOW	RED	5466194 UPPER 5466195 LOWER	NONE	NONE
YELLOW RED	GREEN RED	5466198 UPPER 5466199 LOWER	A	BLACK
RED	GREEN	5466202 UPPER 5466203 LOWER	D	GREEN
YELLOW	BLUE (SALVAGE)	5466202 UPPER 5466203 LOWER	B	GREEN
RED	BLUE (SALVAGE)	5466206 UPPER 5466207 LOWER	C	RED

MAIN BEARING BORE DIAMETERS SHOWN ON CYLINDER BLOCK ASSEMBLY ARE TO BE MEASURED WITHIN THIS AREA. DIAMETER MEASURED AT SPLIT LINE MAY BE .0005 LESS THAN MAXIMUM DIAMETER MEASURED WITHIN THIS AREA.

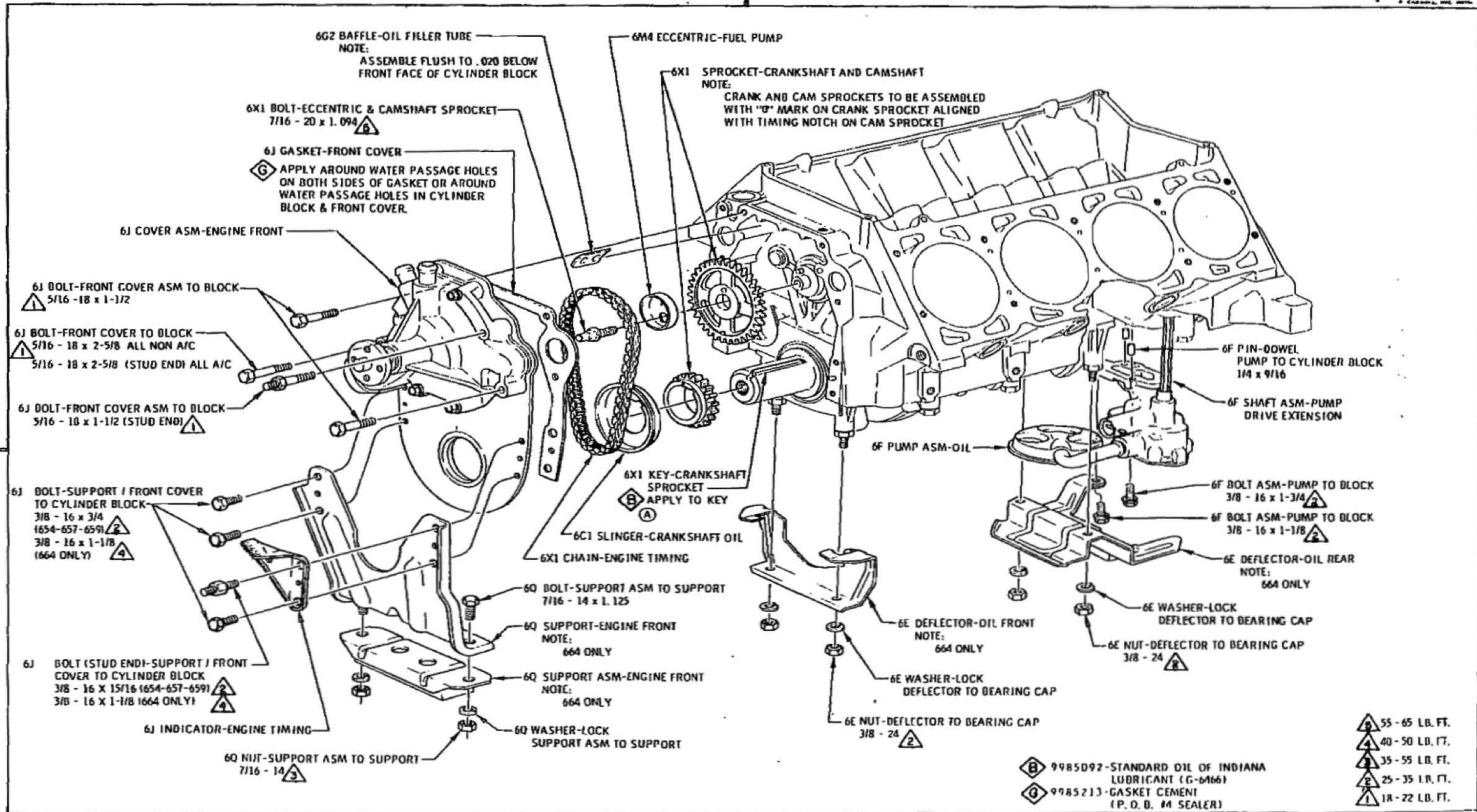
CRANKSHAFT JOURNAL DIAMETER FOR SELECTION PURPOSES IS TO BE INTERPRETED AS THE MINIMUM DIAMETER MEASURED. VARIATIONS IN DIAMETER IN THE LENGTH OF THE JOURNAL ARE NOT TO EXCEED .0005 AND MUST BE WITHIN THE DIAMETRAL TOLERANCE RANGE SHOWN ON CRANKSHAFT DRAWING.

CLEARANCES SHOWN ARE ACTUAL INSTALLED CLEARANCES WHICH INCLUDE ASSEMBLY DISTORTION. THESE CLEARANCES CANNOT BE CALCULATED FROM COMPONENT DIMENSIONS.

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.

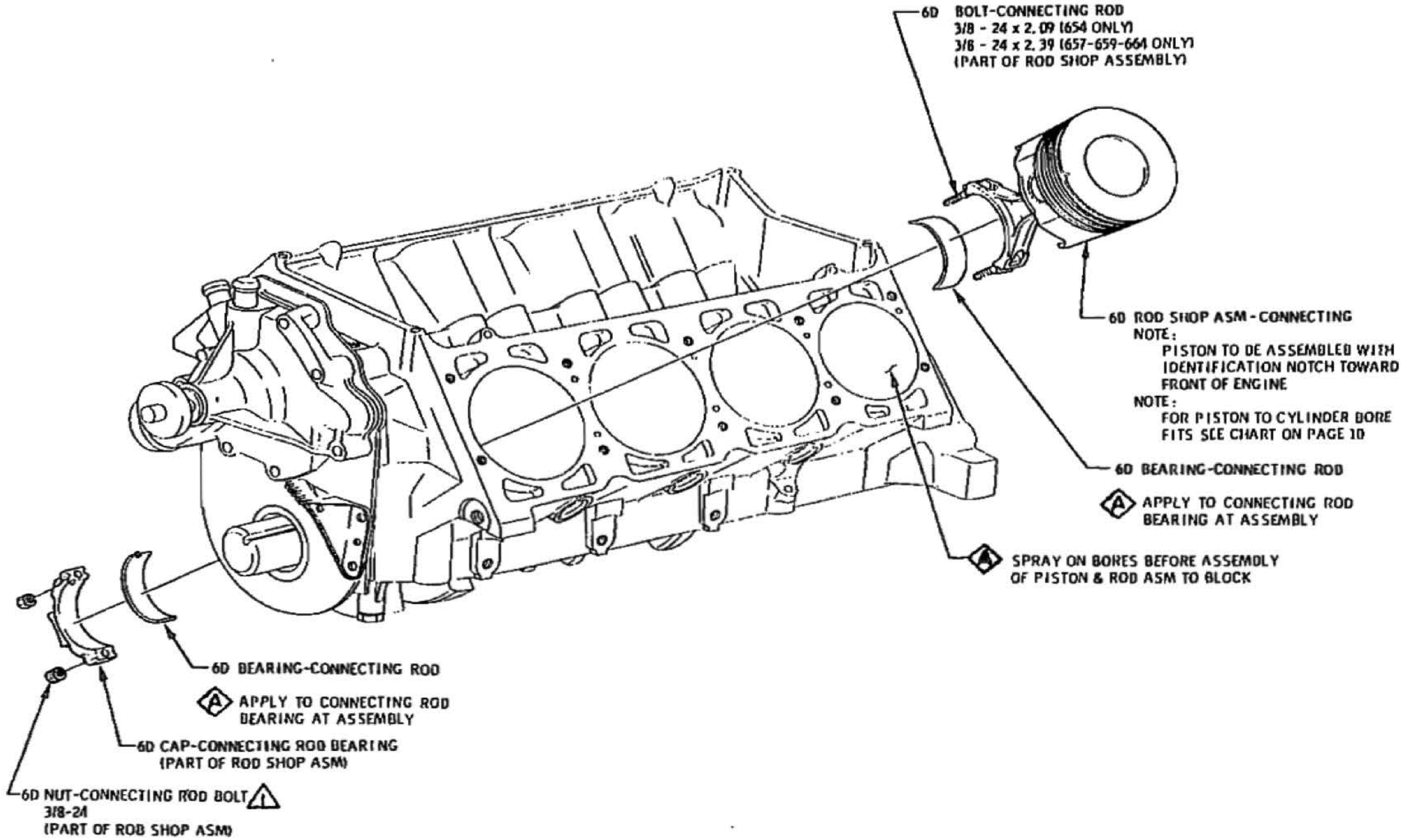
TITLE										CHART-FIT-CRANKSHAFT BEARING									
DATE MAY 26, 1969										FIRST USED 1970									
DR BY CUET MARY										OLDSMOBILE ENGINE ASSEMBLY MANUAL									
CHECKED BY Barnhart										MANUAL SEC. PAGE 6 6									
APPR. [Signature]										PART NO. 40411A									
RET. 657-439										SERIES									
664																			





TITLE												FRONT COVER, TIMING CHAIN AND OIL PUMP TO BLOCK ASSEMBLY											
DATE				DR BY				FIRST USED				MANUAL SEC. PAGE											
MAY 26, 1969				CUEY MAY				1970				6 8											
CHECKED												REF. 654-657 659-666											
APPR												SERIES											
DATE												PART NO.											
4-28-70												404414											
LUB NOTE ADDED																							
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	

**A** 404753-ENGINE OIL IGM 6041-M1



**A** 32 -42 LB. FT.

										TITLE ROD AND PISTON ASSEMBLY TO BLOCK ASSEMBLY									
										DATE <i>MAY 26, 1969</i>	FIRST USED	OLDSMOBILE ENGINE		MANUAL SEC.	PAGE				
										DR. BY <i>CVT MAY</i>	1970	ASSEMBLY MANUAL		6	9				
										CHECKED <i>MB Barnhart</i>	REL. <i>650-657</i>	SERIES	PART NO. <i>101111A</i>						
										APPR. <i>MB Barnhart</i>									
DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.

ENGINE C.I.D.	BORE DIA.	CYL. BORE SELECTION	BORE SIZES	PISTON SELECTION	PISTON SIZE	PISTON DIA.	PISTON TO CYL. BORE CLEARANCE				
350	4.056 - 4.058 STD.	A	4.0560 - 4.0565	A	4.05525 - 4.05475	4.05675 - 4.05475 STD.	.00075 TO .00175				
		B	4.0565 - 4.0570	B	4.05575 - 4.05525						
		C	4.0570 - 4.0575	C	4.05625 - 4.05575						
		D	4.0575 - 4.0580	D	4.05675 - 4.05625						
		J	4.0660 - 4.0665	J	4.06525 - 4.06475						
		K	4.0665 - 4.0670	K	4.06575 - 4.06525						
		L	4.0670 - 4.0675	L	4.06625 - 4.06575						
		M	4.0675 - 4.0680	M	4.06675 - 4.06625						
		455	4.1250 - 4.1270 STD.	A	4.1250 - 4.1255			A	4.1240 - 4.1235	4.1255 - 4.1235 STD.	.001 TO .002
				B	4.1255 - 4.1260			B	4.1245 - 4.1240		
				C	4.1260 - 4.1265			C	4.1250 - 4.1245		
				D	4.1265 - 4.1270			D	4.1255 - 4.1250		
J	4.1350 - 4.1355			J	4.1340 - 4.1335						
K	4.1355 - 4.1360			K	4.1345 - 4.1340						
L	4.1360 - 4.1365			L	4.1350 - 4.1345						
M	4.1365 - 4.1370			M	4.1355 - 4.1350						

**CYLINDER BORE SELECTION INFORMATION**

1. CYLINDER BORES TO BE SELECTED ACCORDING TO THE INDICATED DIA. 90° FROM C OF CRANKSHAFT AND 2 TO 3 IN. FROM TOP OF BLOCK.
2. MAXIMUM OUT OF ROUNDNESS OF BORE .001.
3. MAXIMUM PERMISSIBLE TAPER OF BORE +.0003 AT TOP, +.0007 AT BOTTOM, -.0007 AT TOP, -.0003 AT BOTTOM.
4. MAXIMUM LENGTH OF BELLMOUTH AT TOP END OF BORE .25.

**PISTON SELECTION INFORMATION**

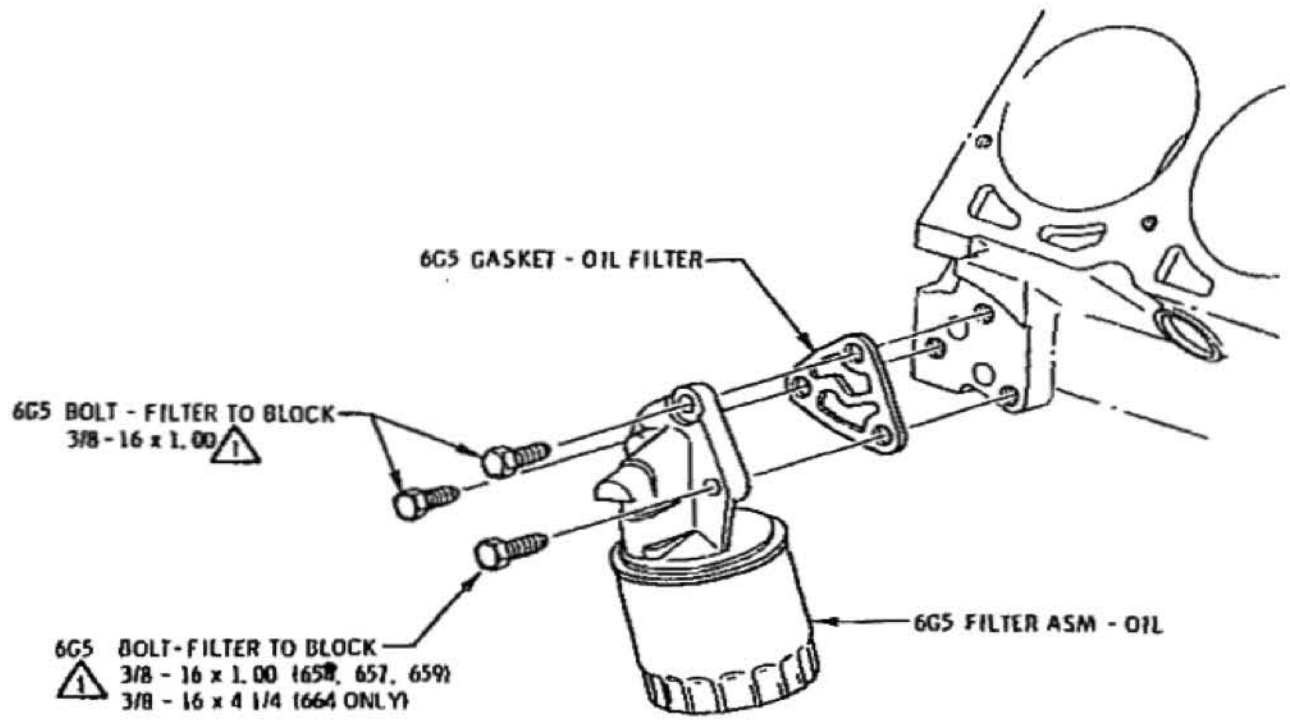
1. PISTON TO BE SELECTED ACCORDING TO THE INDICATED DIAMETER 90° FROM C OF PISTON PIN HOLE AND  
(A) .750 BELOW C OF PISTON PIN HOLE FOR 350 CU. IN. ENGINES  
(B) .500 BELOW C OF PISTON PIN HOLE FOR 455 CU. IN. ENGINES
2. POSITIVELY NO PISTON SIZE SUBSTITUTION ALLOWED WITH THESE SIZING SPECIFICATIONS

**EXAMPLE:**

- MIN. "A" CYLINDER BORE - 4.0560
- MAX. "A" PISTON DIA. - 4.05525
- MIN. CLEARANCE .00075 AT ASSEMBLY.
- MAX. "A" CYLINDER BORE - 4.0565
- MIN. "A" PISTON DIA. - 4.05475
- MAX. CLEARANCE .00175 AT ASSEMBLY.

TITLE										CHART - PISTON & CYLINDER BORE FIT		MANUAL SEC. PAGE		PART NO.	
DATE <i>MAY 26, 1969</i>										FIRST USED		OLDSMOBILE ENGINE		404414	
DR. BY <i>QUET MAY</i>										1970		ASSEMBLY MANUAL			
CHECKED <i>MT Barnhart</i>										REF.		SERIES			
APPR. <i>[Signature]</i>										654-657					
APPR. <i>[Signature]</i>										659-660					
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	

*Handwritten notes:*  
L-01  
10025  
17



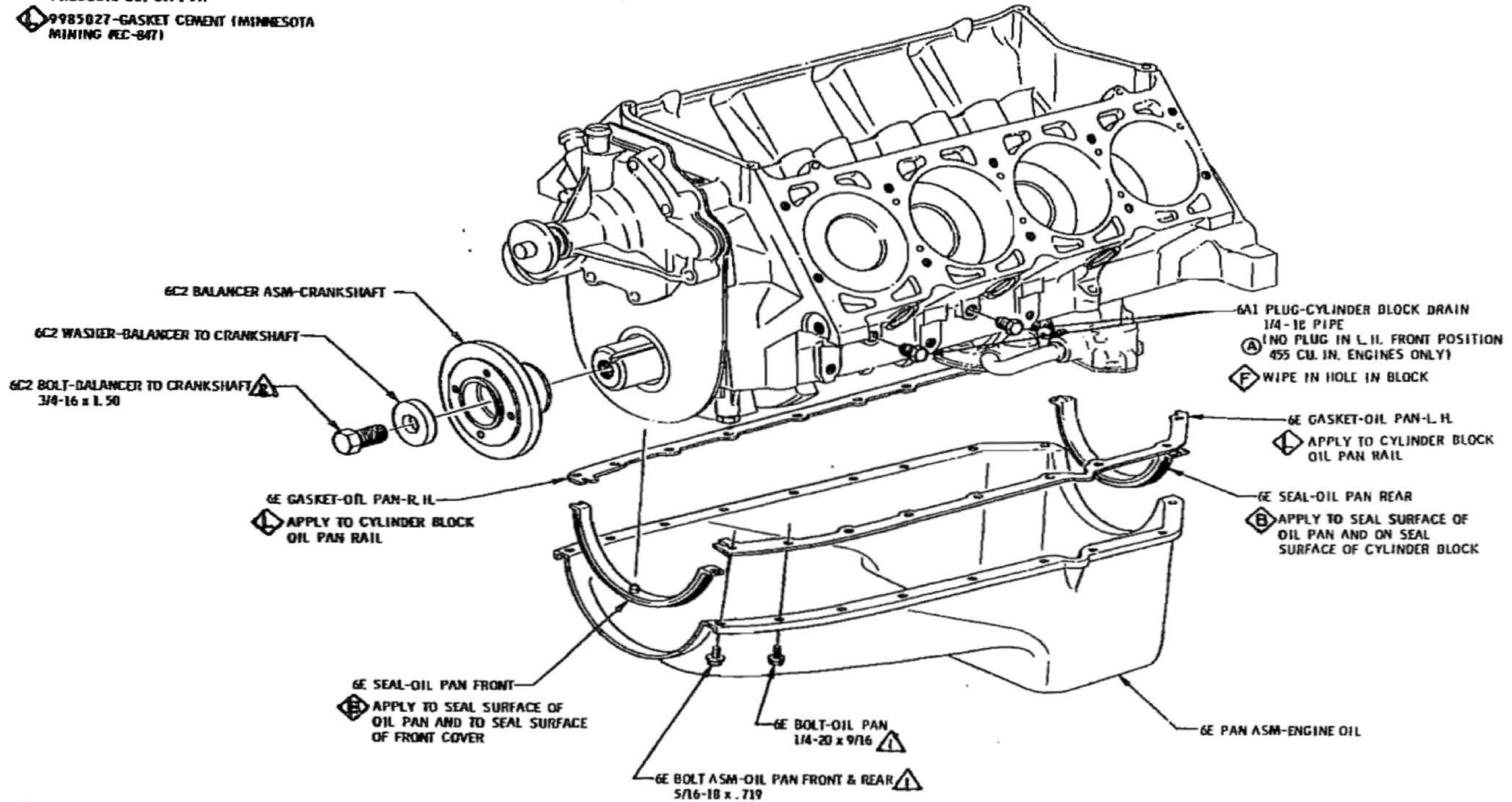
ENGINE CRANKCASE OIL CHART			
		ENGINE OIL USAGE	
ENGINE	QUANTITY	START OF MODEL YEAR TO MARCH 1	MARCH 1 TO END OF MODEL YEAR
654 657 659	5 1/2 QTS.	404754-ENGINE OIL (S.A.E. 10W-30)	404753-ENGINE OIL (S.A.E. 20W)
664	7 QTS.		

IF NECESSARY TO CHANGE EITHER THE OIL FILTER OR ELEMENT, ADD ONE (1) PINT OF OIL. ENGINES AS SHIPPED FROM LANSING PLANT ARE TO HAVE AN OIL LEVEL RANGING FROM FULL MARK TO .80' ABOVE FULL MARK ON OIL LEVEL INDICATOR. RECHECK ON CAR ASSEMBLY LINE.

⚠ 25 - 35 LB. FT.

														TITLE		OIL FILTER TO ENGINL AND ENGINE OIL CHART		
														DATE <i>MAY 26, 1969</i>		FIRST USED		
														DR BY <i>CLM</i>		1970		
														CHECKED <i>M. J. ...</i>		SERIES		
														APPR. <i>...</i>		PART NO.		
														REF. <i>654-657</i>		MANUAL SEC.		
														REF. <i>659-664</i>		PAGE		
																6 11		
																404414		
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK				

- ⓑ 9985092-LUBRICANT (GREASE)  
(STANDARD OIL OF INDIANA 66-6466)
- ⓕ 9985000-SEALER (NATIONAL MACHINE PRODUCTS CO. C.P. #9)
- ⓓ 9985027-GASKET CEMENT (MINNESOTA MINING REC-847)



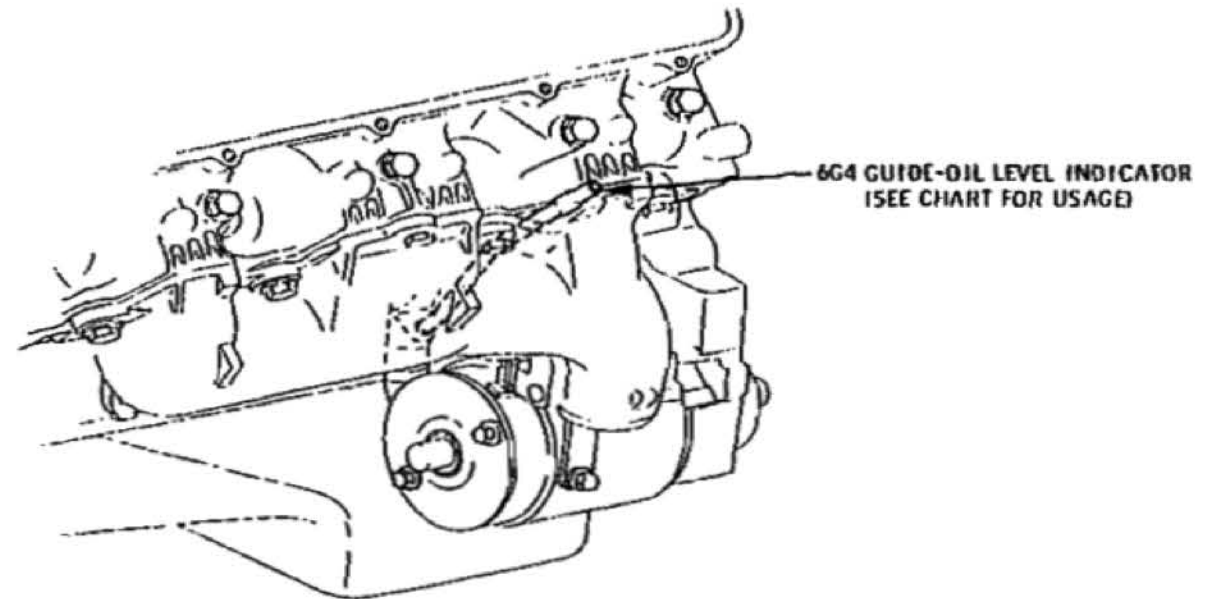
ⓐ 160 LB. FT. MIN.  
ⓑ 70 - 120 LB. IN.

TITLE										OIL PAN ASSEMBLY AND CRANKSHAFT BALANCER TO ENGINE	
				DATE <i>MAY 26, 1969</i>		FIRST USED		MANUAL SEC.		PAGE	
				DR. BY <i>CUET - MAY</i>		1970		6		12	
				CHECKED <i>PT Barnhart</i>		OLDSMOBILE ENGINE ASSEMBLY MANUAL		SERIES		PART NO.	
				APPR. <i>J. P. Ford</i>		REF. <i>654-657</i>				404414	
				APPR. <i>Johnson</i>		REF. <i>659-668</i>					
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM
					8-4-69	A	NOTE ADDED				







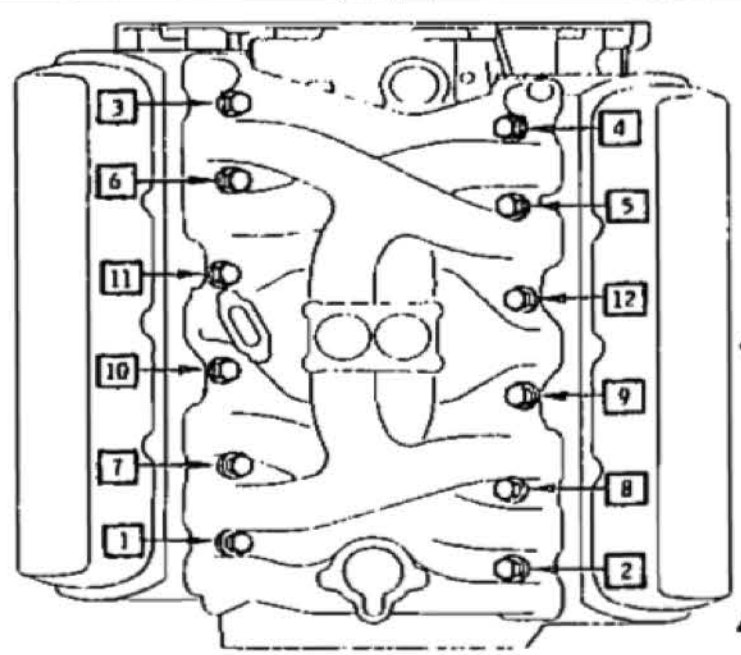


OIL LEVEL GUIDE IDENTIFICATION	
ENGINE USAGE	IDENTIFICATION
654	<p>GREEN PAINT</p>
659 657	<p>ORANGE PAINT</p>
664	<p>BLUE PAINT</p>

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	TITLE	FIRST USED	OLDSMOBILE ENGINE ASSEMBLY MANUAL	MANUAL SEC.	PAGE
															DATE <i>MAY 26, 1969</i>	1970		6	15
															DR BY <i>CUET MAY</i>	REF. <i>654-657</i>	SERIES		
															CHECKED <i>[Signature]</i>	650-668			
															APP. <i>[Signature]</i>		PART NO.		
															APPR. <i>[Signature]</i>				<b>404414</b>

THERMOSTATIC VACUUM SWITCH USAGE CHART	
654	ALL C60 OR Y72
657 B-C	
657 "A"	
659 EXC. W30	ALL
664	

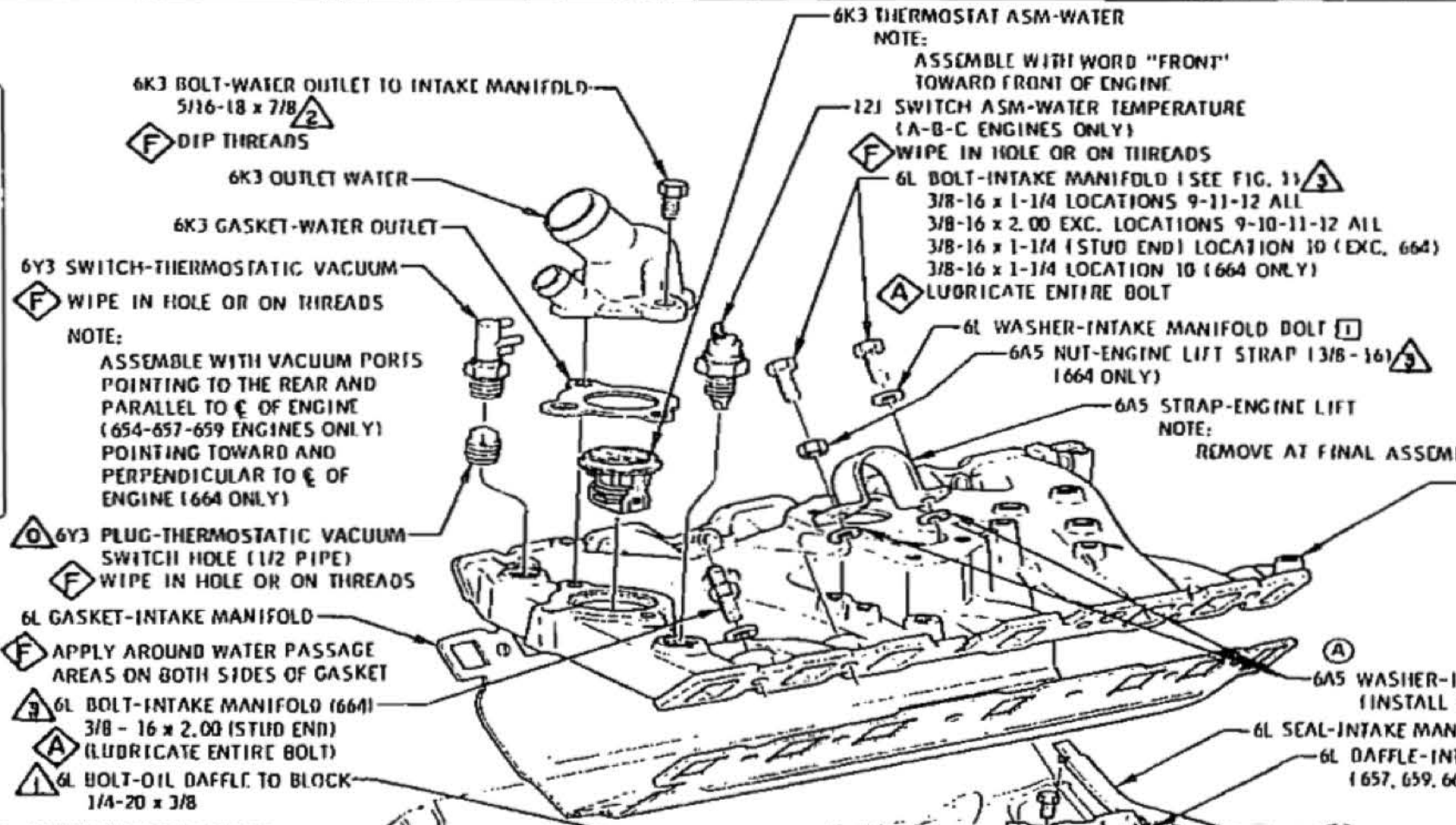
NOTE:  
USE PLUG ON ALL ENGINES WITHOUT THERMOSTAT VACUUM SWITCH



**FIGURE 1**

**BOLT TIGHTENING SEQUENCE**

- TORQUE ALL BOLTS IN SEQUENCE SHOWN TO 10 TO 15 LB. FT.
- RE-TORQUE IN SEQUENCE SHOWN TO SPECIFIED TORQUE.
- OPTIONAL - ALL BOLTS MAY BE TIGHTENED SIMULTANEOUSLY WITH A MULTIPLE SPINDLE WRENCH.



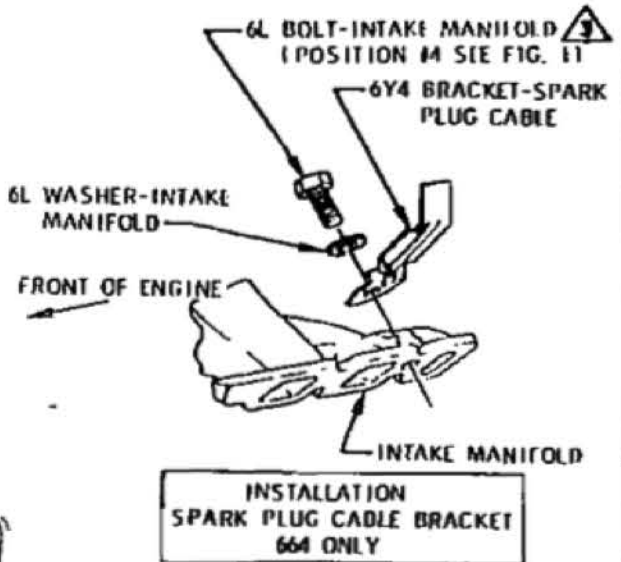
6L SEAL-INTAKE MANIFOLD FRONT

6Y1 BRACKET-GENERATOR (EXC. AIR CONDITIONED ENGINES)

<sup>1</sup> <sup>G</sup> <sup>B</sup> APPLY BETWEEN ALL INTAKE MANIFOLD BOLT WASHERS AND ALUMINUM INTAKE MANIFOLD 35W30 & 35W31 ENGINES ONLY

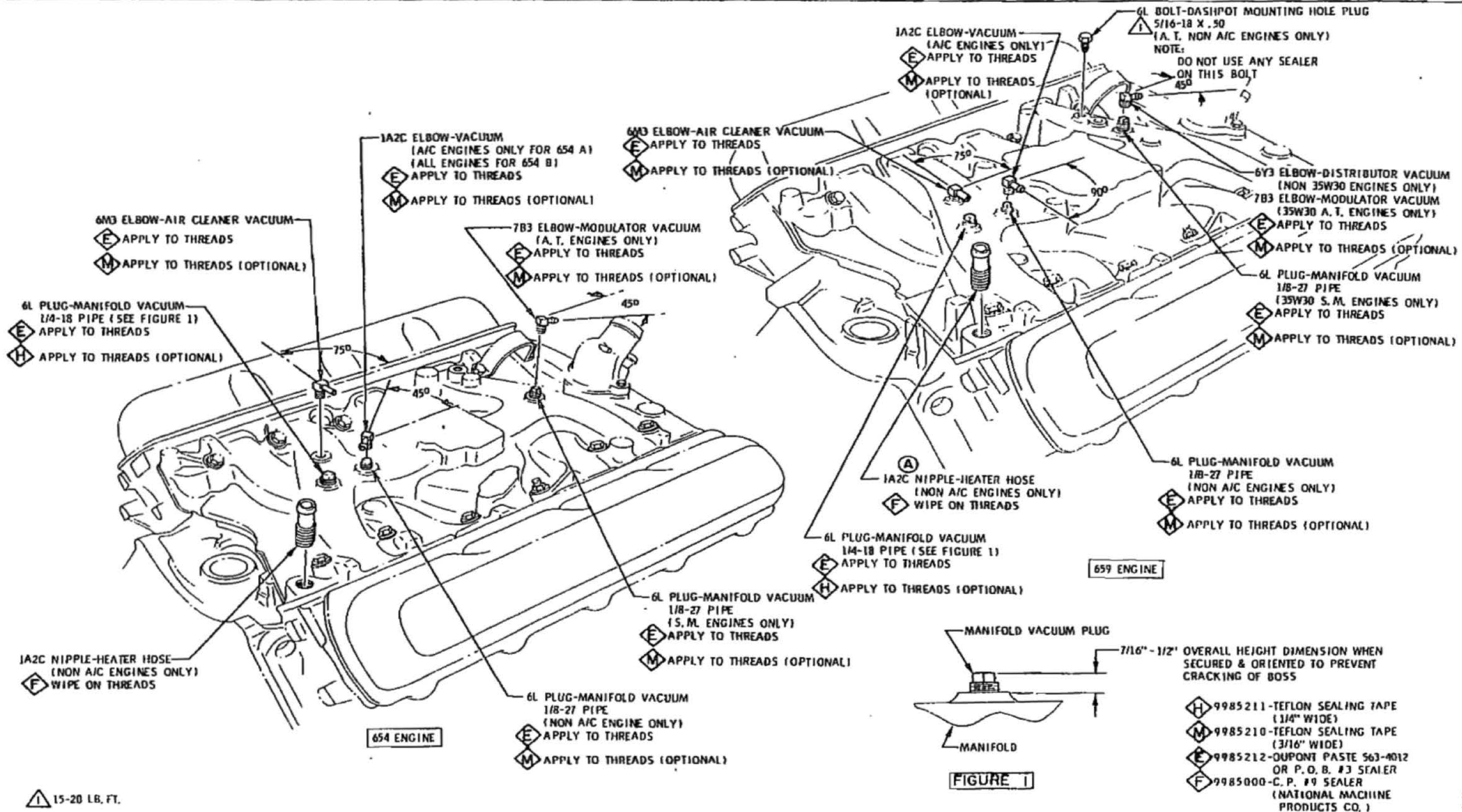
6Y1 BOLT-GENERATOR BRACKET TO CYLINDER HEAD  
<sup>3</sup> 3/8 - 16 x 1.00 (EXC. AIR CONDITIONED ENGINES)

- <sup>A</sup> 404751-ENGINE OIL (G.M. 6041M)
- <sup>F</sup> 99R5000-SEALER (NATIONAL MACHINE PRODUCTS CO. C.P. #9)
- <sup>G</sup> 99R5213 GASKET CEMENT (P.D.B. #4 SEALER)



- <sup>3</sup> 25-35 LB. FT.
- <sup>2</sup> 15-20 LB. FT.
- <sup>1</sup> 5-8 LB. FT.
- <sup>1</sup> FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE: INTAKE MANIFOLD TO ENGINE									
DATE MAY 27 1969					FIRST USED		MANUAL SEC.		PAGE
DR BY CURT MAY					1970		6		16
CHECKED BY [Signature]					REV 654-657		SERIES		PART NO.
APP BY [Signature]					659-664		404414		
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK
					5-11-70	B	NOTE ADDED		
					5-11-70	A	WASHERS ADDED		

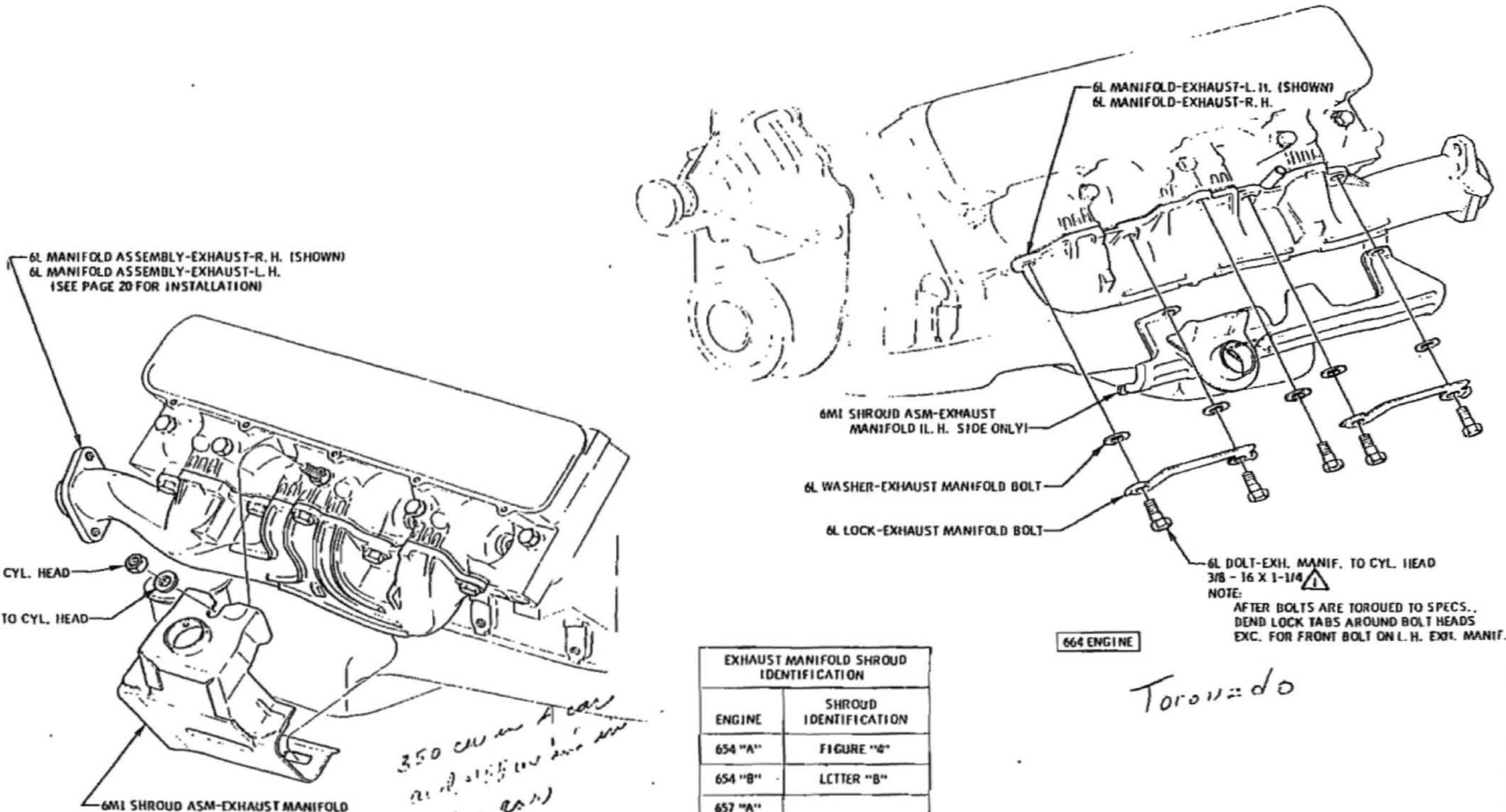


1 15-20 LB. FT.

- H 9985211-TEFLON SEALING TAPE (1/4" WIDE)
- M 9985210-TEFLON SEALING TAPE (3/16" WIDE)
- E 9985212-DUPONT PASTE 563-4012 OR P. O. B. #3 SEALER
- F 9985000-C. P. #9 SEALER (NATIONAL MACHINE PRODUCTS CO.)

REVISION										TITLE								
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR	FIRST USED	MANUAL SEC	PAGE
																1970	6	17
					12-22-69	A	WAS VALVE									650 650		





664 ENGINE

*Torqued*

*350 cu in A car  
at 1500 rpm  
11.2*

657 "A" AND 659 ENGINES

EXHAUST MANIFOLD SHROUD IDENTIFICATION	
ENGINE	SHROUD IDENTIFICATION
654 "A"	FIGURE "6"
654 "B"	LETTER "B"
657 "A"	
659	
657	LETTER "I"
664	LETTER "H"

2 40-50 LB. FT.  
1 20-25 LB. FT.

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DIV	CK	APPR.	TITLE	FIRST USED	OLDSMOBILE ENGINE ASSEMBLY MANUAL	MANUAL SEC.	PAGE	PART NO.
																EXHAUST MANIFOLDS AND HOT AIR SHROUDS	1970	6	19	404414	

6L MANIFOLD-EXHAUST-R. H. SHOWN (EXC. 657 "A", 659, 664 SEE PAGE 19)  
6L MANIFOLD-EXHAUST-L. H. (EXC. 657 "A", 659, 664 SEE PAGE 19)

*This should  
be all correct  
350 cc was used  
2/2/69  
H. J. ...*

6M1 SHROUD ASM-EXHAUST MANIFOLD  
(654, 657 ONLY SEE IDENTIFICATION  
CHART ON PAGE 19)

6L BOLT - EXH. MANIF. TO CYL. HEAD  
3/8 - 16 x 1 1/4

6M4 NUT - FUEL PUMP TO BLOCK  
5/16 - 24

6M4 WASHER - FLAT - FUEL PUMP TO BLOCK

6M4 STUD - FUEL PUMP TO BLOCK  
5/16 - 1.25

6M4 GASKET - FUEL PUMP

6M4 PUMP ASSEMBLY-FUEL  
(SEE CHART FOR USAGE)  
B SPREAD ON OPERATING LEVER PAD

6M4 BOLT - FUEL PUMP TO BLOCK  
5/16 - 18 x 1.00

6L WASHER - EXH. MANIF. BOLT

6L LOCK - EXH. MANIF. BOLT

NOTE:  
AFTER BOLTS ARE TORQUED TO SPECS,  
BEND LOCK TABS AROUND BOLT HEADS  
EXC. FOR FRONT BOLT ON L. H. EXH. MANIF.

TYPICAL INSTALLATION  
EXHAUST MANIFOLD, HOT AIR SHROUD  
& FUEL PUMP

9985092-LUBRICANT (GREASE)  
STANDARD OIL OF INDIANA #G-6466

70 - 25 LB. FT.

CHART - FUEL PUMP USAGE

ENGINE USAGE	PUMP PRESSURE	REMARKS	IDENTIFICATION
654 (EXC. 2 BBL. A.M.T. A/C, W31, 4 BBL. A/C 4800)	5.50 - 6.50 P. S. I.	SURGE DOME (SMALL) NO FUEL BY-PASS	
654 (7 BBL. A.M.T. A/C, W31, 4 BBL. A/C 4800)	5.50 - 6.50 P. S. I.	SURGE DOME (SMALL) AND FUEL BY-PASS	
657 (EXC. A/C, W31) 659 (A.M.T. NON A/C 4200)	5.50 - 6.50 P. S. I.	SURGE DOME (LARGE) NO FUEL BY-PASS	
659 (EXC. A.M.T. NON A/C 4200) 657 (A/C, W31) 664 ALL	5.50 - 6.50 P. S. I.	SURGE DOME (LARGE) AND FUEL BY-PASS	COMPLETE PART NUMBER OR LAST FIVE DIGITS OF PART NUMBER STAMPED ON MOUNTING FLANGE

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION

TITLE: EXHAUST MANIFOLDS, HOT AIR SHROUD AND FUEL PUMP ASSEMBLY

DATE: MAY 20, 1969  
DR BY: CUBT MAY  
CHECKED: P. J. ...  
APPR.:

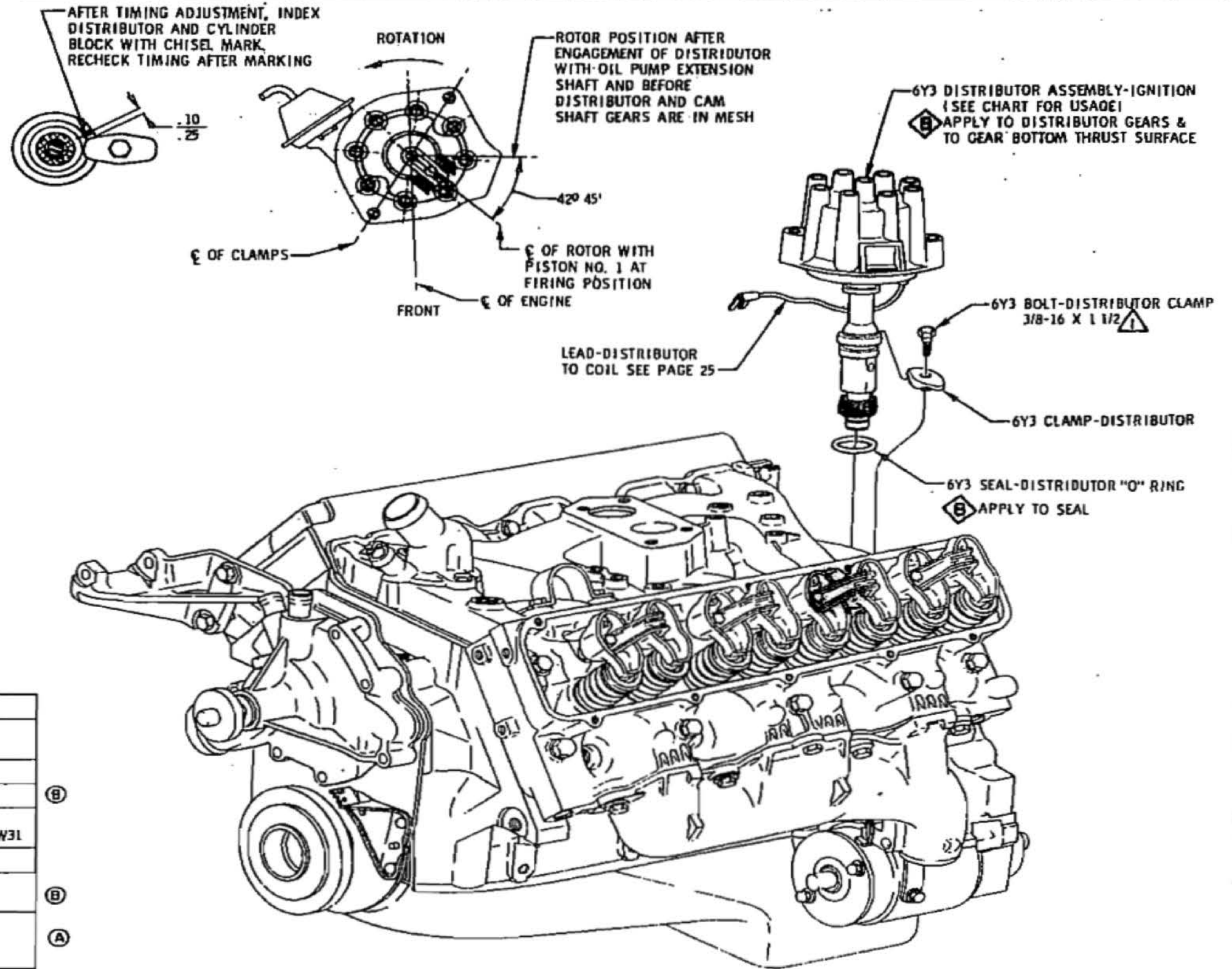
FIRST USED: 1970  
REF: 654-657  
659-664

OLDSMOBILE ENGINE ASSEMBLY MANUAL

MANUAL SEC: 6 PAGE: 20

PART NO.: 404414

**B** 9905092-LUBRICANT (GREASE)  
(STANDARD OIL OF INDIANA 0G-6466)



**NOTE:**  
INITIAL IGNITION TIMING SETTING TO BE WITHIN  $\pm 1/2^\circ$  OF SPECIFIED TIMING. RECHECKS WITH KNOWN GOOD TACHOMETER AND TIMING LIGHT SHOULD BE WITHIN  $\pm 1^\circ$  OF SPECIFICATION OR ELSE THE TIMING SHOULD BE RESET. (FOR REFERENCE, THE BALANCER SLOT WIDTH IS 1.1 $^\circ$ )

**CHART-DISTRIBUTOR**

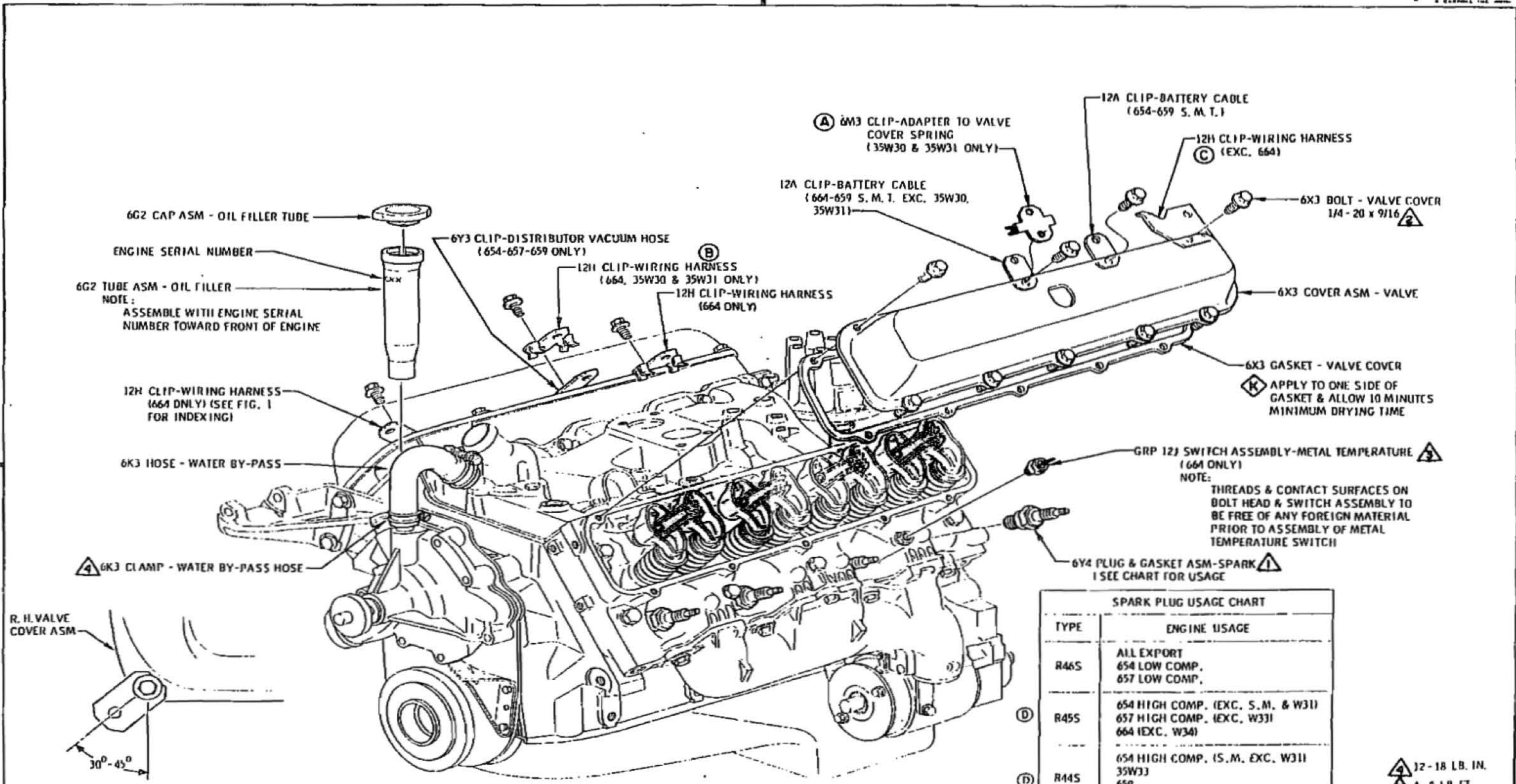
INITIAL IGNITION TIMING SETTING WITH VACUUM ADVANCE LINE DISCONNECTED

ENGINE USAGE	IDENTIFICATION	TIMING BTDC
654 2BBL	GREEN PAINT STRIPE	10 $^\circ$ AT 1100 RPM <b>B</b>
654 4BBL	BLACK PAINT STRIPE	10 $^\circ$ AT 1100 RPM 14 $^\circ$ AT 1100 RPM 35W31
657 2BBL. LOW COMP.	BLUE PAINT STRIPE	8 $^\circ$ AT 1100 RPM
657 HIGH COMP. EXC. 35W33 664 EXC. 35W34	PINK PAINT STRIPE	10 $^\circ$ AT 1100 RPM <b>B</b>
659 EXC. 35W30 35W33 35W34	GRAY PAINT STRIPE	12 $^\circ$ AT 1100 RPM <b>A</b>
35W30 A. M. T.	PURPLE PAINT STRIPE	10 $^\circ$ AT 850 RPM
35W30 S. M. T.	RED PAINT STRIPE	12 $^\circ$ AT 850 RPM

**A** 17-20 LB. FT.

REVISION HISTORY										TITLE		FIRST USED		MANUAL SEC. PAGE	
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DISTRIBUTOR ASSEMBLY TO ENGINE		1970		6 21	
										DATE MAY 28, 1969		REF. 659-657		PART NO. 404414	
										DR BY CUST MAY		SERIES		659-664	
										CHECKED M. J. ...		PART NO.			
										APP. J. ...		SERIES			





△ 6K3 CLAMP - WATER BY-PASS HOSE

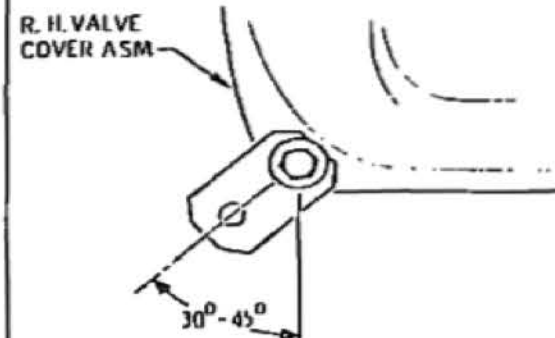


FIGURE 1

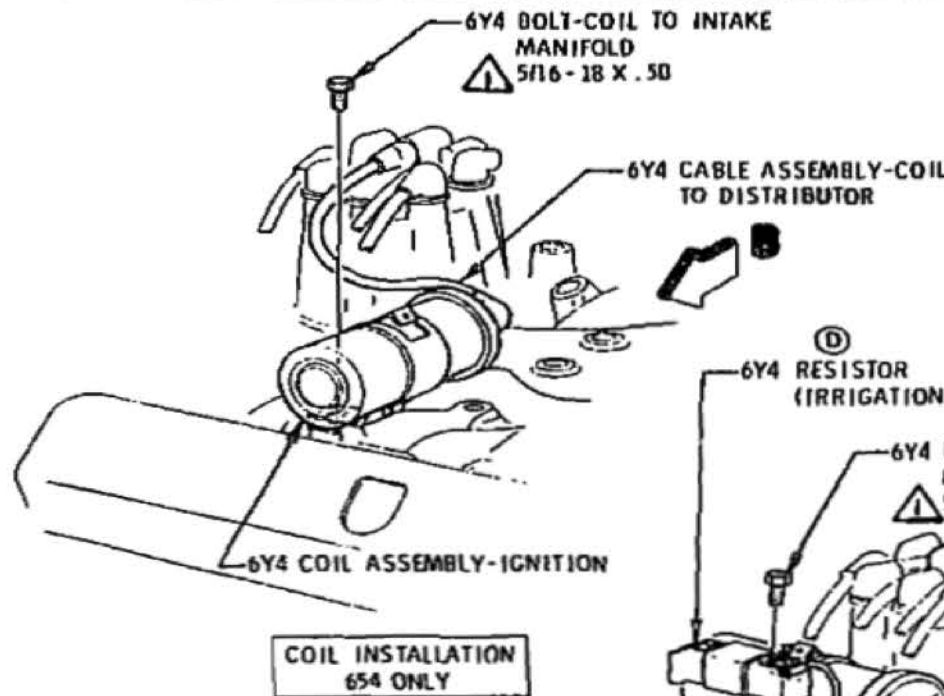
SPARK PLUG USAGE CHART	
TYPE	ENGINE USAGE
R46S	ALL EXPORT 654 LOW COMP. 657 LOW COMP.
R45S	654 HIGH COMP. (EXC. S.M. & W31) 657 HIGH COMP. (EXC. W31) 664 (EXC. W34)
R44S	654 HIGH COMP. (S.M. EXC. W31) 35W33 659 35W34
R43S	35W31

- △ 12-18 LB. IN.
- △ 4-8 LB. FT.
- △ 60-90 LB. IN.
- △ 25-35 LB. FT.

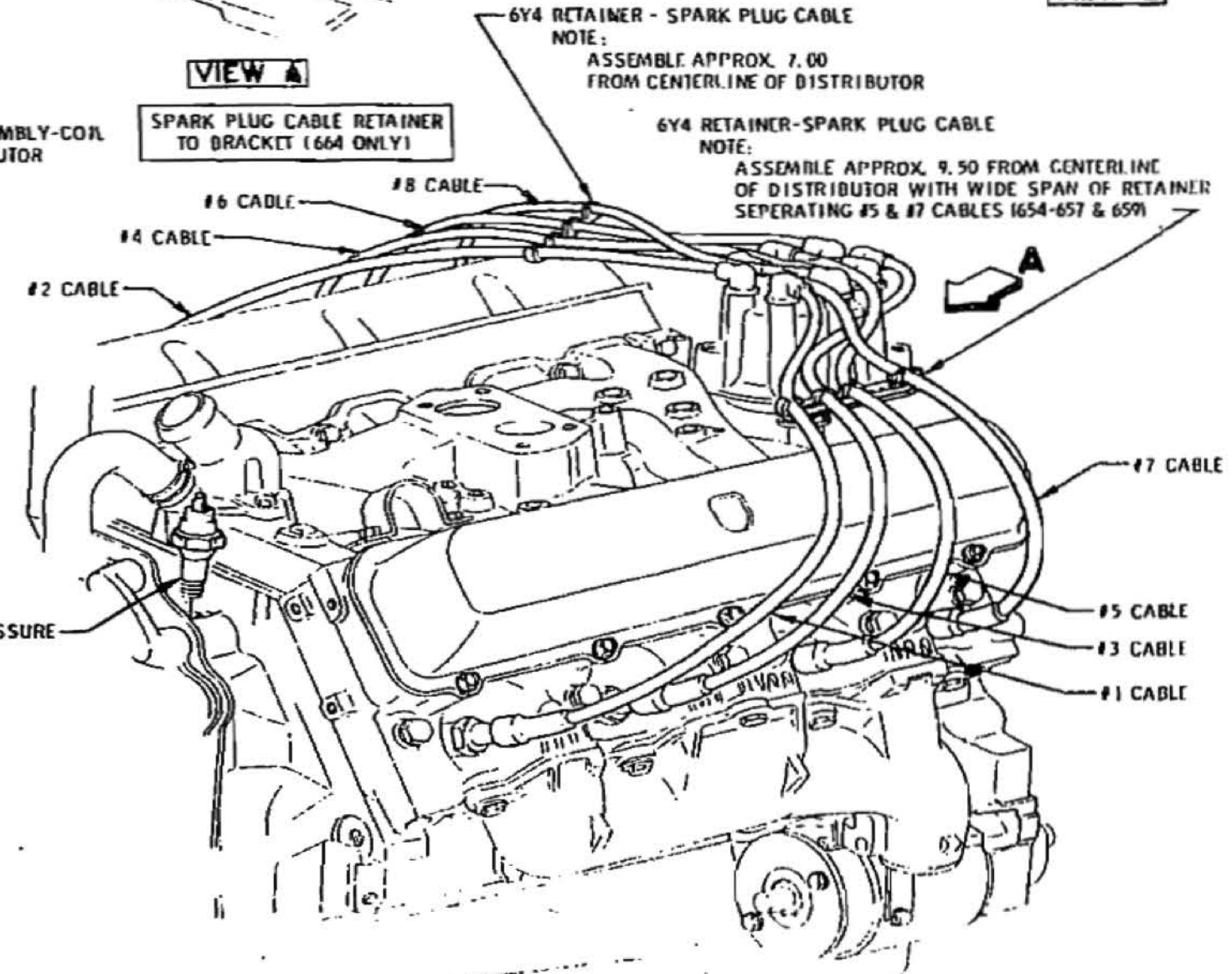
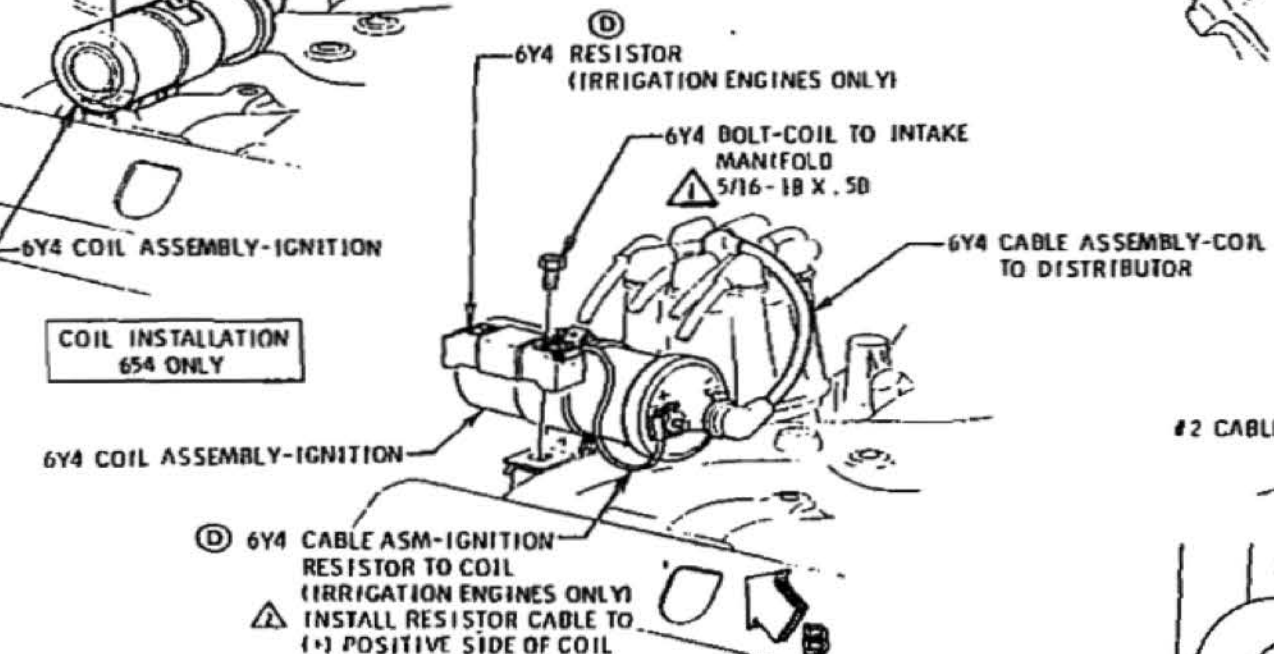
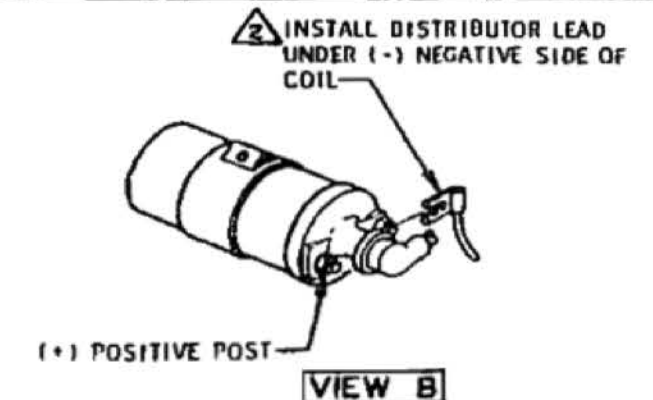
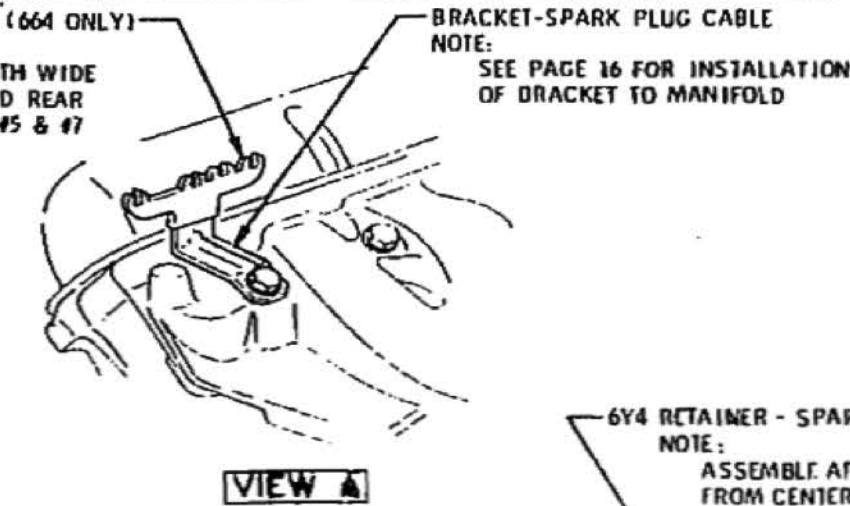
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	TITLE	FIRST USED	MANUAL SEC.	PAGE	
					5-8-70	LB	REVISION REVISED											SPARK PLUGS, OIL FILLER TUBE, VALVE COVER & WATER BY-PASS HOSE	1970	6	22	
					12-22-69	LB	REVISION REVISED															
					10-6-69	LB	CLIP USAGE REVISED															
					10-6-69	A	CLIP ADDED															







6Y4 RETAINER-SPARK PLUG CABLE (664 ONLY)  
NOTE:  
ASSEMBLE TO BRACKET WITH WIDE SPAN OF RETAINER TOWARD REAR OF ENGINE & SEPERATING #5 & #7 SPARK PLUG CABLES



(B)(C)  
NOTE:  
SPARK PLUG CABLES & DIST. TO COIL CABLE MUST BE COMPLETELY SEATED AT BOTH SPARK PLUG & DIST. ENDS

CHART-SPARK PLUG CABLE USAGE									
GROUP	CABLE LENGTH	POSITION OF CABLE AND ENGINE USAGE							
		#1	#2	#3	#4	#5	#6	#7	#8
6Y4	26.5	664 ONLY							
	25.5	654 657 659	ALL		ALL				
	24.0			ALL					
	22.5					ALL			ALL
	21.5						ALL	ALL	

15-20 LB. IN.  
10-15 LB. FT.

DATE	SYM	REVISION	DR	CR	DATE	SYM	REVISION	DR	CP	DATE	SYM	REVISION	TITLE	FIRST USED	MANUAL SEC.	PAGE
					1-31-10	D	RESISTOR ADDED						SPARK PLUG CABLES, COILS & OIL PRESSURE SWITCH	1970	6	25
					12-22-69	C	NOTE ADDED									
					11-5-69	H	NOTE REMOVED									
					10-14-69	A	NOTE ADDED									

404414

ENGINE TEST - OPTION #1 - MOTOR PLANT -

ALL ENGINES ARE TO BE TESTED WITHOUT LOAD, RUNNING ON THEIR OWN POWER AND USING NATURAL GAS AS FUEL.

ITEM	TESTING TIME	ENGINE SPEEDS	OPERATION
(1)	3 MINUTES MIN.	850 RPM	ENGINE WARM-UP
(2)	6 MINUTES MIN.	1500 RPM	ENGINE RUN IN
(3)	2 MINUTES ALLOWANCE	500 TO 3000 RPM MAX.	ENGINE INSPECTION AND INITIAL IGNITION TIMING PER CHART ON PAGE 21

TOTAL: 10 MINUTES MIN.

NOTE: ENGINE TEST STAND TACHOMETER ACCURACY MUST BE MAINTAINED SO THAT ACTUAL ENGINE RPM IS WITHIN  $\pm 25$  RPM OF THE RPM INDICATED ON THE TEST STAND TACHOMETER WHEN SETTING TIMING.

ENGINE TEST - OPTION #2 - MOTOR PLANT -

ALL ENGINES ARE TO BE TESTED WITHOUT LOAD, USING COMPRESSED AIR-MOTORSING METHOD.

ITEM	TESTING TIME	ENGINE SPEEDS	OPERATION
(1)	2 MINUTES MIN.	850 RPM	ENGINE INSPECTION, SET INITIAL IGNITION TIMING PER CHART ON PAGE 21 AND ASSEMBLY BALANCE ENGINE PER ENGINE BALANCING INSTRUCTION CHART ON PAGE 23
(2)	1 MINUTE ALLOWANCE	200 RPM	ENGINE INSPECTION

THE FOLLOWING WATER LEAK TESTS ARE USED ONLY WITH ENGINES BALANCED AND RUN USING THE AIR-MOTORSING METHOD.

1. TEST FOR INTERNAL WATER LEAKS. (ENGINE NOT RUNNING)
  - A. ENGINE ASSEMBLED, ALL WATER OPENINGS CLOSED EXCEPT: WATER SOURCE CONNECTED TO WATER PUMP INLET - WATER OUTLET OPEN.
  - B. FILL ENGINE WITH 120° F.  $\pm$  20° F. WATER AT 10 PSI TO THE LEVEL OF WATER OUTLET.
  - C. WITH CRANKCASE OPENINGS CLOSED, PRESSURIZE WITH AIR TO 10  $\pm$  2 PSI.
  - D. INTERNAL WATER LEAKS ARE PRESENT IF AIR BUBBLES ARE PRESENT IN THE WATER OUTLET (STREAM OF BUBBLES OR RISE IN WATER LEVEL CAUSING SPLASH.)
2. TEST FOR EXTERNAL WATER LEAKS. (ENGINE NOT RUNNING)
  - A. ENGINE ASSEMBLED, ALL WATER OPENINGS CLOSED EXCEPT: WATER SOURCE CONNECTED TO WATER PUMP INLET - WATER SOURCE CONNECTED TO WATER OUTLET.
  - B. FILL ENGINE WITH 120° F.  $\pm$  20° F. WATER. PRESSURIZE 15 TO 25 PSI.
  - C. EXTERNAL LEAKS ARE PRESENT IF WATER OR BUBBLES ARE OBSERVED ESCAPING FROM ENGINE.

NOTE: EITHER LEAK TEST MAY BE CONDUCTED FIRST.

(A) OIL PRESSURE TOLERANCE FOR MOTOR PLANT  
20 LBS. MIN AT 850 RPM WITH TANK TEMP 150° TO 160° F

										TITLE		CHART-ENGINE TESTING		MANUAL SEC.	PAGE		
										DATE MAY 27, 1969		FIRST USED		6	26		
										DR. BY NET MAY		1970					
										CHECKED BY [Signature]		REF. 654-657		SERIES		PART NO. 404414	
										APPR. [Signature]		659-664					
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.		







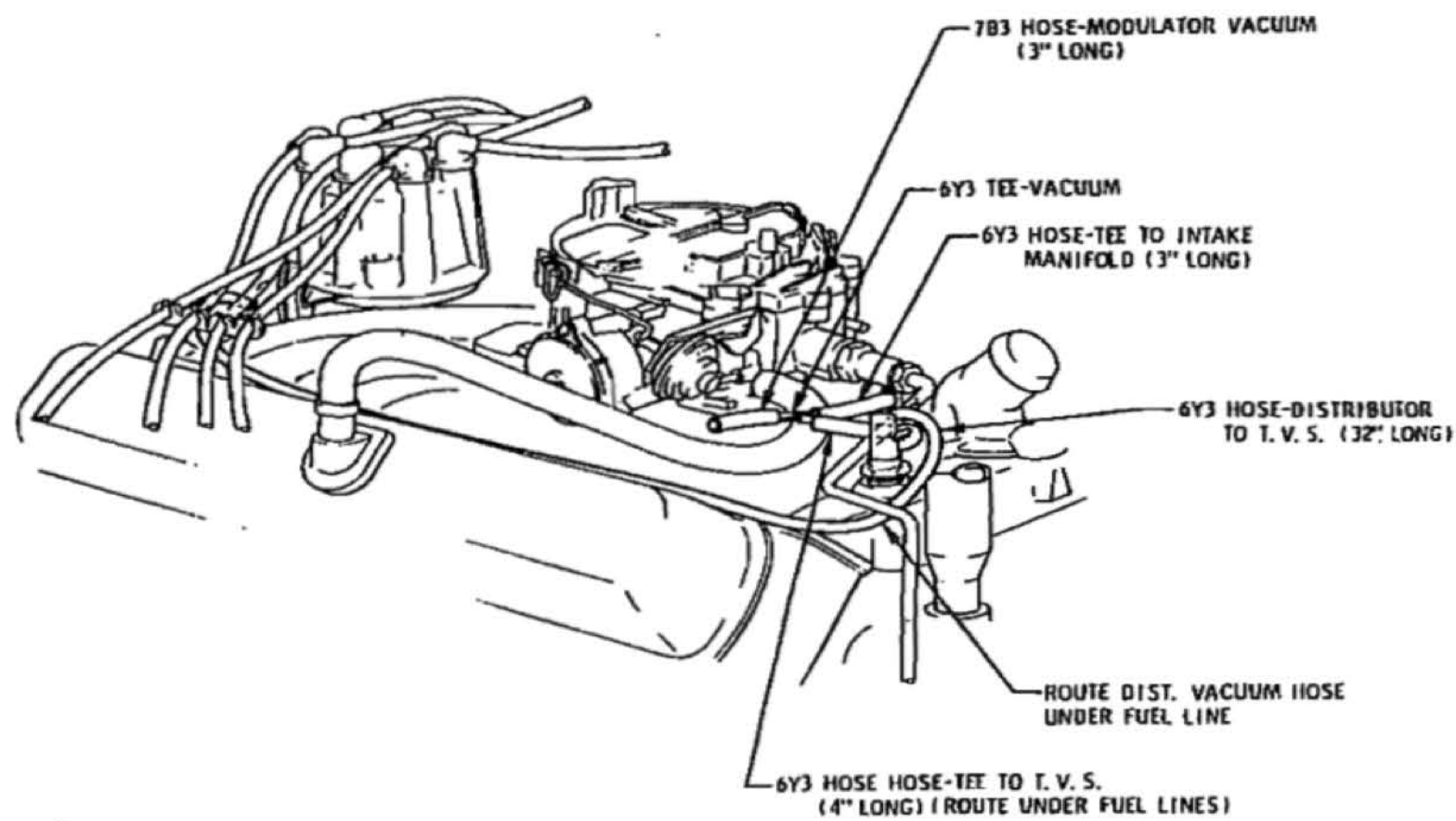










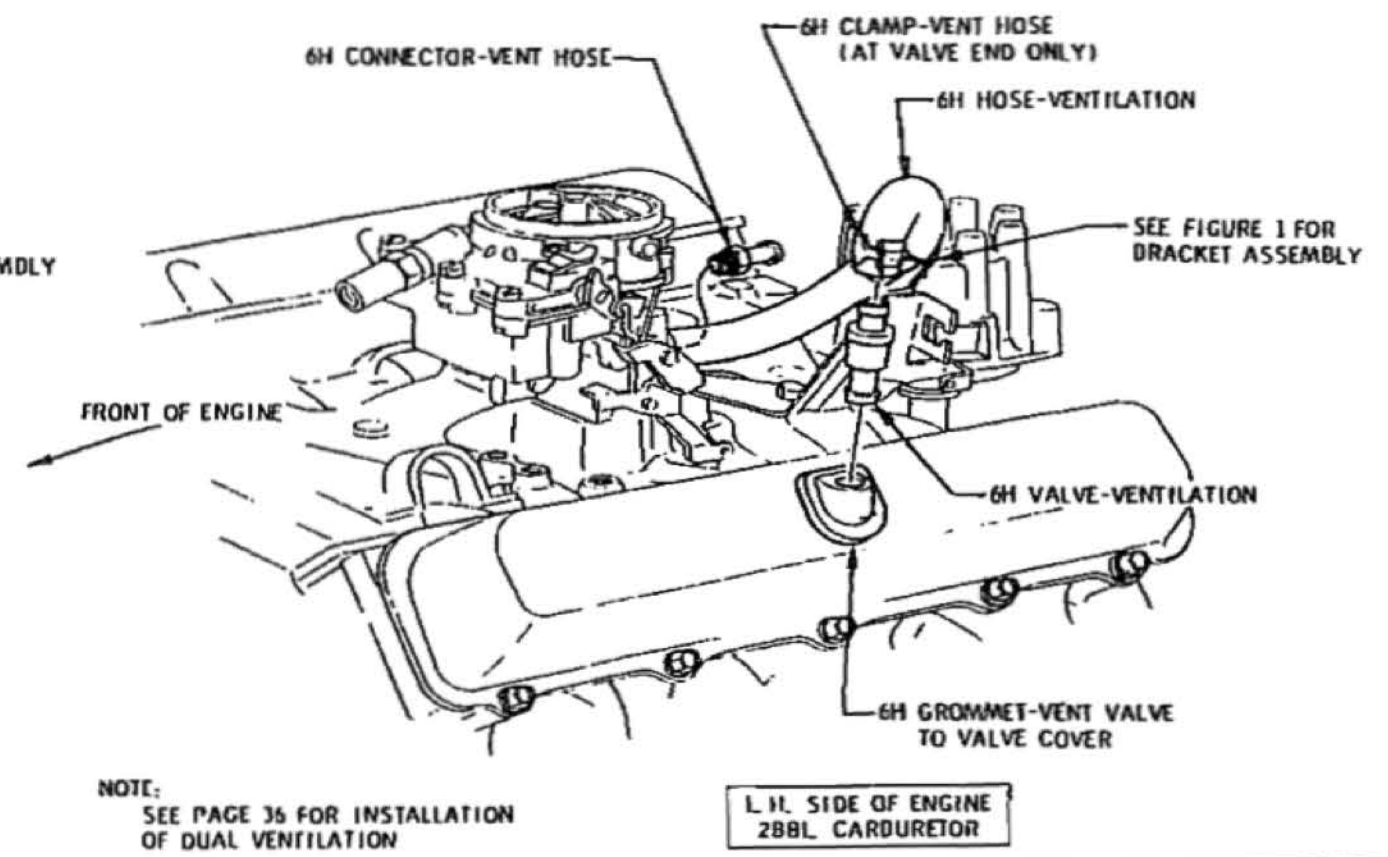
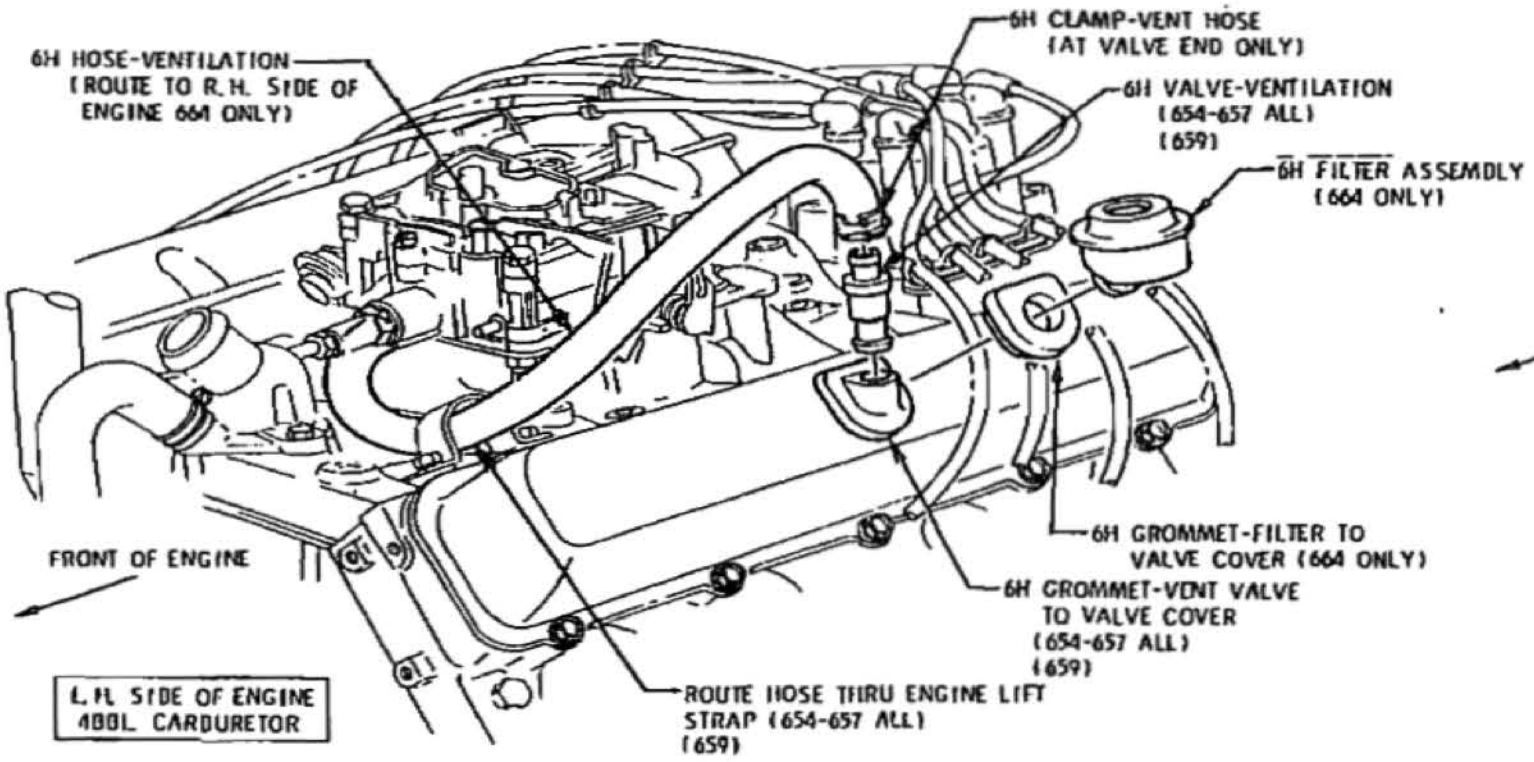
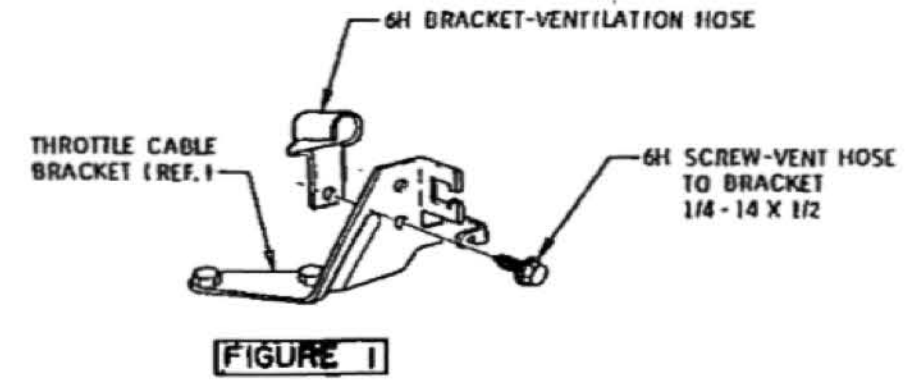
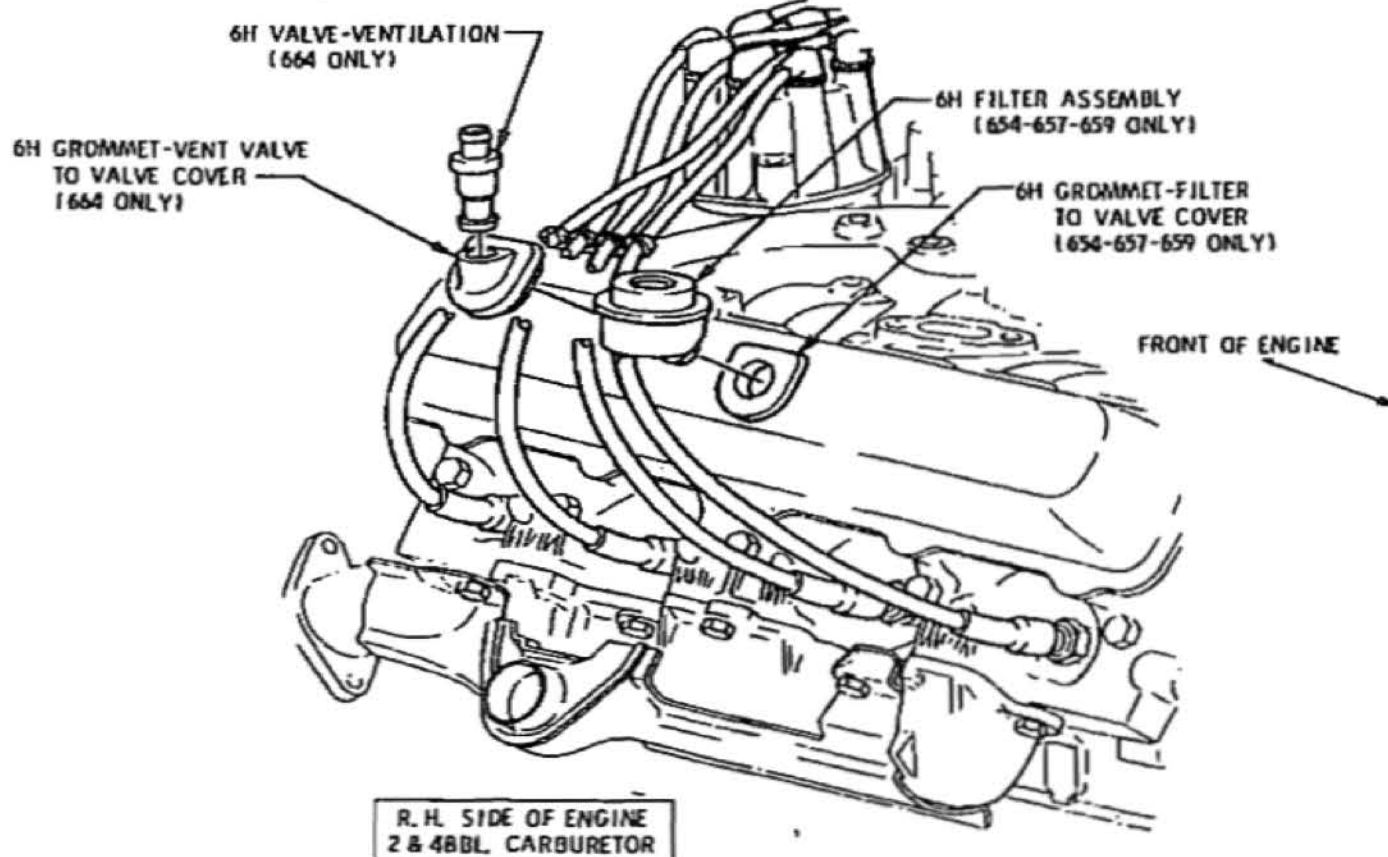


664 ONLY

REVISIONS										TITLE		ENGINE VACUUM HOSES		MANUAL SEC. PAGE					
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	FIRST USED	OLDSMOBILE ENGINE ASSEMBLY MANUAL	6	34
																1970			
																669	SERIES	PART NO.	404414



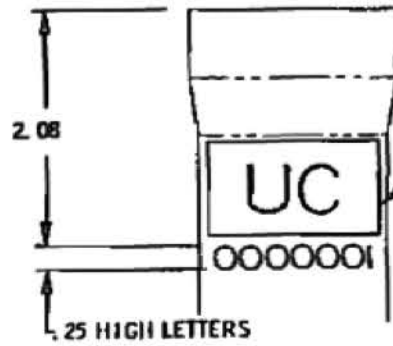




NOTE:  
SEE PAGE 36 FOR INSTALLATION OF DUAL VENTILATION

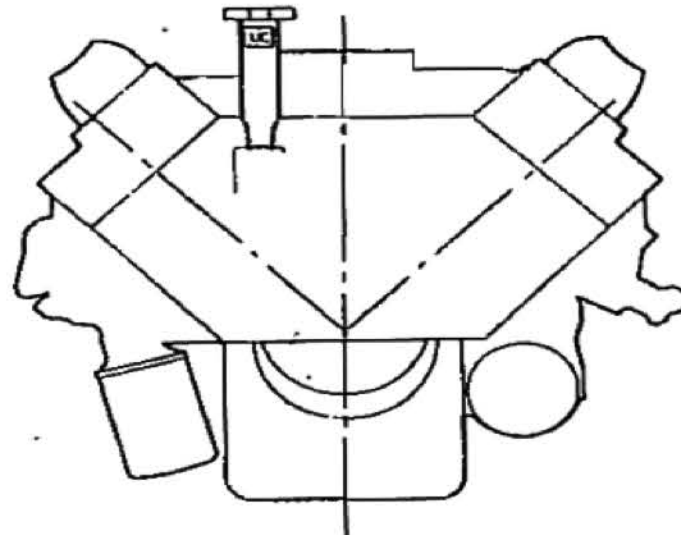
DATE					SYM					REVISION					DR. CK.					DATE					SYM					REVISION					DR. CK.					DATE					SYM					REVISION					DR. CK.					DATE					SYM					REVISION					DR. CK.					DATE					SYM					REVISION					DR. CK.					DATE					SYM					REVISION				
TITLE																																																																																																																		
DATE																				MAY 20, 1969										FIRST USED										1970										OLDSMOBILE ENGINE										MANUAL SEC										PAGE																																												
DR BY																				CYET MAY																														6										37																																																						
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APPR.																				[Signature]										SERIES										PART NO.										404414																																																																
APP.																				262-1-1										REF. 654-659										655-664																																																																										





INSTALL TAPE ON OIL FILLER TUBE ABOVE ENGINE NUMBER AS SHOWN

ENGINE NUMBER TO BE STAMPED ON OIL FILL TUBE AS SHOWN AND TUBE TO BE ASSEMBLED TO ENGINE SO NUMBER MAY BE READ FROM FRONT.



ALL ENGINES WILL BE NUMBERED CONSECUTIVELY STARTING WITH 0000001  
FOR COMPLETE ENGINE IDENTIFICATION, THE ENGINE NUMBER AND ENGINE TAPE CODE SHOULD BE USED TOGETHER.

EXAMPLE: UC - 0000001  
 UC — UNIT  
 0 — YEAR  
 0000001 — TAPE CODE

NOTE: THIS NUMBER IS USED FOR MANUFACTURING AND SERVICE ONLY. IT IS NOT INTENDED FOR ANY LEGAL USE.

										TITLE		ENGINE IDENTIFICATION		MANUAL SEC. PAGE					
										DATE	MAY 28, 1969	FIRST USED	1970	6	38				
										DR BY	CURT MAY								
										CHECKED	PTB								
										APPR.	A. J. Ford	REF.	630-657						
										APPROV.		SERIES		PART NO.	404414				
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

REF - KEY  
A.R. - AS REQUIRED  
★ - OPTIONAL

			350 CU. IN. - A CAR																350 CU. IN. - B CAR					
			ⓑ												Ⓐ									
			COMP. RATIO				AIR COND		TRANS.		CARB.		UPC CODE		PRD CODE		EXP		REG FUEL		PREM FUEL			
			S.M.		A.T.		2 BBL/4 BBL		S.M.		A.T.		6		QI		QK							
GRP	PART NO.	PART NAME	ENG ASIM	ALL	405777	405778	405780	405779	405781	405782	405783	405784	405785	403188	405787	405786	405788	21009	21010	21011	405803	405805	405804	
1A2C	399467	NIPPLE-HEATER HOSE			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	382890	ELBOW-VACUUM																						
5	141343	ELBOW-POWER BRAKE VACUUM																						
6A1	400427	BLOCK ASSEMBLY-CYLINDER (TYPE A)			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	400428	BLOCK ASSEMBLY-CYLINDER (TYPE B)			★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	
	402205	BLOCK ASSEMBLY-CYLINDER														1	1		1					

TITLE												CART - ENGINE ASSEMBLY				SHEET 1 OF 14								
DATE <i>FEB. 20, 1969</i>												FIRST USED		OLDSMOBILE ENGINE		MANUAL SEC.		PAGE						
												1970		ASSEMBLY MANUAL		6		50						
CHECKED <i>C.G. Gordon</i>												SERIES		PART NO.										
APPR. <i>J. Ford</i>												A-B		405925										
DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.

**OLDSMOBILE DIVISION**

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP	PART NO.	PART NAME	ENGINE		350 CU. IN. - A CAR																		350 CU. IN. - B CAR		
			ENG CODE	PROD CODE	A2	AZE	AZN	S2	SZE	A4	A4N	A4E	S4	S4	S4E	S4W	A4W	L.C.	H.C.	W31	A2	AZN	S2		
			ASMS	ALL	QA	QC	QJ	QI	QK	QK	QP	QO	QV	Q8	QY	QX	QO	SR	SR	SR	TD	TC	TL		
6A1																									
	5458918	BEARING-CRANKSHAFT #1 UPPER (STD.)				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	5458919	BEARING-CRANKSHAFT #1 UPPER (.0005 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.		
	5458920	BEARING-CRANKSHAFT #1 UPPER (.0010 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.		
	5458921	BEARING-CRANKSHAFT #1 UPPER (.0015 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.		
	5466252	BEARING-CRANKSHAFT #1 LOWER (STD.)				1	1	1	1	1							1			1	1	1			
	5466253	BEARING-CRANKSHAFT #1 LOWER (.0005 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.							A.R.			A.R.	A.R.	A.R.			
	5466254	BEARING-CRANKSHAFT #1 LOWER (.0010 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.							A.R.			A.R.	A.R.	A.R.			
	5466255	BEARING-CRANKSHAFT #1 LOWER (.0015 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.							A.R.			A.R.	A.R.	A.R.			
	5466188	BEARING-CRANKSHAFT #1 LOWER (STD.)									1	1	1	1	1	1	1	1	1	1	1	1			
(C)	5466189	BEARING-CRANKSHAFT #1 LOWER (.0005 U.S.)									A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			
(C)	5466190	BEARING-CRANKSHAFT #1 LOWER (.0010 U.S.)									A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			
(C)	5466191	BEARING-CRANKSHAFT #1 LOWER (.0015 U.S.)									A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			
	5458918	BEARING-CRANKSHAFT #2 & 4 UPPER (STD.)				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
	5458919	BEARING-CRANKSHAFT #2 & 4 UPPER (.0005 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			
	5458920	BEARING-CRANKSHAFT #2 & 4 UPPER (.0010 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			
	5458921	BEARING-CRANKSHAFT #2 & 4 UPPER (.0015 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			
	5458935	BEARING-CRANKSHAFT #1 UPPER (STD.)															1	1		1					
(B)	5458936	BEARING-CRANKSHAFT #1 UPPER (.0005 U.S.)															A.R.	A.R.		A.R.					
(B)	5458937	BEARING-CRANKSHAFT #1 UPPER (.0010 U.S.)															A.R.	A.R.		A.R.					
(B)	5458938	BEARING-CRANKSHAFT #1 UPPER (.0015 U.S.)															A.R.	A.R.		A.R.					
	5458918	BEARING-CRANKSHAFT #2 & 4 LOWER (STD.)				2	2	2	2	2									2		2	2			
	5458919	BEARING-CRANKSHAFT #2 & 4 LOWER (.0005 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.									A.R.		A.R.	A.R.			
	5458920	BEARING-CRANKSHAFT #2 & 4 LOWER (.0010 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.									A.R.		A.R.	A.R.			
	5458921	BEARING-CRANKSHAFT #2 & 4 LOWER (.0015 U.S.)				A.R.	A.R.	A.R.	A.R.	A.R.									A.R.		A.R.	A.R.			
	5458935	BEARING-CRANKSHAFT #2 & 4 UPPER (STD.)														2	2			2					
(B)	5458936	BEARING-CRANKSHAFT #2 & 4 UPPER (.0005 U.S.)														A.R.	A.R.			A.R.					
(B)	5458937	BEARING-CRANKSHAFT #2 & 4 UPPER (.0010 U.S.)														A.R.	A.R.			A.R.					
(B)	5458938	BEARING-CRANKSHAFT #2 & 4 UPPER (.0015 U.S.)														A.R.	A.R.			A.R.					

1/24/69 D 408188 ADDED 10/28/69 QUANTITIES ADDED 10/28/69 PART NOS ADDED 1/24/69 A SERVICE ENGINES ADDED										TITLE CHART - ENGINE ASSEMBLY DATE MARCH 6, 1969 DR. BY DON MALKIN CHECKED BY J. P. ...		FIRST USED 1970 REF.		OLD SMOBILE ENGINE ASSEMBLY MANUAL SERIES A-B PART NO. 405925		MANUAL SEC. 6 PAGE 51		SHEET 2	
DATE	SYM	REVISION	DR. CK.	DATE	SYM	REVISION	DR. CK.	DATE	SYM	REVISION	DR. CK.	DATE	SYM	REVISION	DR. CK.	DATE	SYM	REVISION	DR. CK.

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

				350 CU. IN. - A CAR																		350 CU. IN. - B CAR											
				ENGINE			D																		C			A			C		
				ENG CODE	AZ	AZE	AZN	SZ	SE	Ad	AdN	AE	S4	S4	S4E	S4W	AW	L.C.	H.C.	W31	AZ	AZN	SZ										
				PROD CODE	QA	QC	QJ	QI	QK	QN	QP	QO	QB	QV	QY	QX	QD	SER	SER	SER	TO	TC	TL										
GRP	PART NO.	PART NAME	ENG ASMS	ALL	405777	405778	405780	405779	405781	405782	405783	405784	408188	405785	405787	405786	405788	21009	21010	21011	405803	405805	405804										
CONTINUED	5458935	BEARING-CRANKSHAFT #2 & 4 LOWER (STD.)								2	2	2	2	2	2	2				2	2												
	5458936	BEARING-C-SHAFT #2 & 4 LOWER (.0005 U.S.)								A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			A.R.	A.R.												
	5458937	BEARING-C-SHAFT #2 & 4 LOWER (.0010 U.S.)								A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			A.R.	A.R.												
	5458938	BEARING-C-SHAFT #2 & 4 LOWER (.0015 U.S.)								A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			A.R.	A.R.												
	5458922	BEARING-CRANKSHAFT #3 UPPER (STD.)			1	1	1	1	1	1	1	1	1	1	1	1				1	1		1	1									
	5458923	BEARING-CRANKSHAFT #3 UPPER (.0005 U.S.)			A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.				A.R.	A.R.		A.R.	A.R.									
	5458924	BEARING-CRANKSHAFT #3 UPPER (.0010 U.S.)			A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.				A.R.	A.R.		A.R.	A.R.									
	5458925	BEARING-CRANKSHAFT #3 UPPER (.0015 U.S.)			A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.				A.R.	A.R.		A.R.	A.R.									
	5458939	BEARING-CRANKSHAFT #3 UPPER (STD.)																															
	5458922	BEARING-CRANKSHAFT #3 LOWER (STD.)			1	1	1	1	1	1										1			1	1									
	5458923	BEARING-CRANKSHAFT #3 LOWER (.0005 U.S.)			A.R.	A.R.	A.R.	A.R.	A.R.	A.R.										A.R.			A.R.	A.R.									
	5458924	BEARING-CRANKSHAFT #3 LOWER (.0010 U.S.)			A.R.	A.R.	A.R.	A.R.	A.R.	A.R.										A.R.			A.R.	A.R.									
	5458925	BEARING-CRANKSHAFT #3 LOWER (.0015 U.S.)			A.R.	A.R.	A.R.	A.R.	A.R.	A.R.										A.R.			A.R.	A.R.									
	5458939	BEARING-CRANKSHAFT #3 LOWER (STD.)									1	1	1	1	1	1	1			1	1												
	5458940	BEARING-CRANKSHAFT #3 LOWER (.0005 U.S.)									A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			A.R.	A.R.												
	5458941	BEARING-CRANKSHAFT #3 LOWER (.0010 U.S.)									A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			A.R.	A.R.												
	5458942	BEARING-CRANKSHAFT #3 LOWER (.0015 U.S.)									A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.			A.R.	A.R.												
	5458939	BEARING-CRANKSHAFT #3 UPPER (STD.)																		1	1		1										
	5458940	BEARING-CRANKSHAFT #3 UPPER (.0005 U.S.)																		A.R.	A.R.		A.R.										
	5458941	BEARING-CRANKSHAFT #3 UPPER (.0010 U.S.)																		A.R.	A.R.		A.R.										
5458942	BEARING-CRANKSHAFT #3 UPPER (.0015 U.S.)																		A.R.	A.R.		A.R.											
5458926	BEARING-CRANKSHAFT #5 UPPER (STD.)		1																														
5458927	BEARING-CRANKSHAFT #5 UPPER (.0005 U.S.)		A.R.																														
5458928	BEARING-CRANKSHAFT #5 UPPER (.0010 U.S.)		A.R.																														
5458929	BEARING-CRANKSHAFT #5 UPPER (.0015 U.S.)		A.R.																														
5458930	BEARING-CRANKSHAFT #5 LOWER (STD.)		1																														
5458931	BEARING-CRANKSHAFT #5 LOWER (.0005 U.S.)		A.R.																														
5458932	BEARING-CRANKSHAFT #5 LOWER (.0010 U.S.)		A.R.																														
5458933	BEARING-CRANKSHAFT #5 LOWER (.0015 U.S.)		A.R.																														

11/17/68 D-108188 ADDED 10/26/68 C1 QUANTITIES ADDED 10/26/68 B1 PART NO. ADDED 6-16-69 A SERVICE ENGINES ADDED										TITLE CHART - ENGINE ASSEMBLY DATE MARCH 8, 1969 DR BY DON MALKIN CHECKED [Signature] APPR [Signature]										FIRST USED 1970 REF.		OLDSDMOBILE ENGINE ASSEMBLY MANUAL SERIES A-B		MANUAL SEC. PAGE 6 52 PART NO 405925		SHEET 3	
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK			

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP	PART NO.	PART NAME	ENGINE		350 CU. IN. - A CAR												350 CU. IN. - B CAR						
			ENG ASMS	ALL	AZ	AZE	A2K	SZ	SZE	A4	A4N	A4E	S4	S4	S4E	S4W	A4W	L.C.	H.C.	W31	AZ	A2N	SZ
					QA	QC	QJ	QI	OK	QN	OP	OO	QV	QB	QY	QX	QD	SER	SER	SER	TD	TC	TL
6A1	380178	SEAL-CRANKSHAFT REAR BEARING		2																			
CONTINUED	444619	PLUG-CYLINDER BLOCK DRAIN		4																			
6A2	405584	HEAD ASSEMBLY-CYLINDER			2	2	2		2	2		2	2	2							2	2	2
	405585	HEAD ASSEMBLY-CYLINDER													2	2							
(C)	408187	HEAD ASSEMBLY-CYLINDER											2										
	404896	GASKET-CYLINDER HEAD			2	2	2		2	2	2	2	2	2	2	2					2	2	2
	585927	PIN-DOWEL		4																			
	380252	BOLT-CYLINDER HEAD (4.17 LONG)			16	14	14		14	14		16	14	14		16	16				16	14	14
	380253	BOLT-CYLINDER HEAD (3.00 LONG)			4	4	4		4	4		4	4	4		4	4				4	4	4
	383738	BOLT-CYLINDER HEAD (STUD END)				2	2		2	2		2	2	2							2		2
6A5	387445	STRAP-ENGINE LIFTING			1	1	1		1	1		1	1	1		1	1				1	1	1
6C1	405346	CRANKSHAFT SHOP ASSEMBLY-ENGINE							1	1					1	1	1						1
	405351	CRANKSHAFT SHOP ASSEMBLY-ENGINE													1								
	405349	CRANKSHAFT ASSEMBLY-ENGINE			1	1	1					1	1	1			1				1	1	
	230905	CRANKSHAFT - ENGINE																1	1	1			
	382572	SLINGER-CRANKSHAFT OIL		1																			
6C2	402962	BALANCER ASSEMBLY-CRANKSHAFT													1	1							
(D)	409219	BALANCER ASSEMBLY-CRANKSHAFT			1	1	1		1	1		1	1	1							1	1	1
	568738	WASHER-BALANCER TO CRANKSHAFT			1	1	1		1	1		1	1	1		1	1				1	1	1
	271630	BOLT-BALANCER TO CRANKSHAFT			1	1	1		1	1		1	1	1		1	1				1	1	1

REVISIONS: 1105 D WAS 348262 1105 C 408187 ADDED 1105 B 409219 ADDED 1105 A SERVICE ENGINES ADDED										TITLE: CHART - ENGINE ASSEMBLY DATE: MAR. 8, 1969 DR. BY: J. LOCKETT CHECKED: J. S. F.					FIRST USED: 1970 SERIES: A-B		MANUAL SEC: 6 PAGE: 53		PART NO: 405925								
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	DATE	SYM	REVISION	DR	CK	APPR.	DATE	SYM	REVISION	DR	CK	APPR.

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP	PART NO.	PART NAME	ENGINE		350 CU. IN. - A CAR																		350 CU. IN. - B CAR		
			ENG CODE	PROD CODE	A2	AZE	AZN	S2	SE	Ad	A4N	AE	S4	S4	S4E	S6W	AGW	L.C.	H.C.	W31	A2	A2N	S2		
			ASMS	ALL	QA	QC	QJ	QI	QK	QN	QP	QD	QV	QB	QY	QX	QD	SER	SER	SER	TD	TC	TL		
6D	399986	ROD SHOP ASSEMBLY-CONNECTING-R.			4		4		4								4				4	4	4		
	399987	ROD SHOP ASSEMBLY-CONNECTING-L.			4		4		4								4				4	4	4		
	399988	ROD SHOP ASSEMBLY-CONNECTING-R.								4	4		4	4							4				
	399989	ROD SHOP ASSEMBLY-CONNECTING-L.								4	4		4	4							4				
	399990	ROD SHOP ASSEMBLY-CONNECTING-R.													4								4		
	399991	ROD SHOP ASSEMBLY-CONNECTING-L.													4								4		
	402208	ROD SHOP ASSEMBLY-CONNECTING-R.															4	4		(B)		4			
	402209	ROD SHOP ASSEMBLY-CONNECTING-L.															4	4				4			
	5468278	BEARING-CONNECTING ROD(IM300)			16	16	16		16	16									16			16	16	16	
	5470451	BEARING-CONNECTING ROD(IM390)								16	16	16		16	16	16				16					
	5466948	BEARING-CONNECTING ROD (IM400)															16	16				16			
6E	391440	PAN ASSEMBLY-OIL			1	1	1		1	1		1	1	1		1	1					1	1	1	
	383494	SEAL-OIL PAN FRONT			1	1	1		1	1		1	1	1		1	1					1	1	1	
	383495	SEAL-OIL PAN REAR			1	1	1		1	1		1	1	1		1	1					1	1	1	
	393574	GASKET-OIL PAN SIDE-R.			1	1	1		1	1		1	1	1		1	1					1	1	1	
	393575	GASKET-OIL PAN SIDE-L.			1	1	1		1	1		1	1	1		1	1					1	1	1	
	388708	BOLT-OIL PAN			14	14	14		14	14		14	14	14		14	14					14	14	14	
	397132	BOLT-OIL PAN (OPTION)			*	*	*		*	*		*	*	*		*	*					*	*	*	
	385099	BOLT ASM-OIL PAN (FRONT & REAR)			4	4	4		4	4		4	4	4		4	4					4	4	4	
6F	402386	PUMP ASSEMBLY-OIL			1	1	1		1	1		1	1	1		1	1					1	1	1	
	579237	SHAFT ASM-OIL PUMP DRIVE EXTENSION			1	1	1		1	1		1	1	1		1	1					1	1	1	
	9421124	BOLT ASM-OIL PUMP TO BEARING CAP			1	1	1		1	1		1	1	1		1	1					1	1	1	
	9418548	BOLT ASM-OIL PUMP TO BEARING CAP			1	1	1		1	1		1	1	1		1	1					1	1	1	
	380628	PIN-DOWEL			2	2	2		2	2		2	2	2		2	2					2	2	2	

TITLE												CHART - ENGINE ASSEMBLY												SHEET 5	
DATE MARCH 8, 1969												FIRST USED 1970												MANUAL SEC. PAGE 6 54	
OR BY K. LOVELL												OLDSMOBILE ENGINE ASSEMBLY MANUAL												SERIES A-B	
CHECKED [Signature]												APPR. [Signature]												PART NO. 405925	
REVISION												REVISION												REVISION	

1/24/69 C 405925B ADDED  
 3/24/69 B USAGE RELOCATED  
 6-26-69 A SERVICE ENGINES ADDED

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP	PART NO.	PART NAME	ENGINE		350 CU. IN. - A CAR															350 CU. IN. - B CAR			
			ENG CODE	PROD CODE	A2	AZE	AZN	S2	SZE	A4	A4N	A4E	S4	S4	S4E	S4W	A4W	L.C.	H.C.	W31	A2	AZN	S2
			ASMS	ALL	QA	QC	QJ	QI	QK	QH	QP	QQ	QV	QB	QY	QX	QD	SER	SER	SER	TD	TC	TL
6G1	444697	PLUG-OIL PASSAGE REAR-R.H.	1																				
	404199	PLUG-OIL PASSAGE REAR-L.H.	1																				
	557319	PLUG-OIL PASSAGE REAR OUTER	1																				
	380101	PLUG-OIL PASSAGE FRONT-R.H.	1																				
	390895	PLUG-OIL PASSAGE FRONT-L.H.	1																				
	585927	PIN-OIL SWITCH TRANSFER HOLE	1																				
6G2	400474	TUBE ASSEMBLY-OIL FILLER			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400476	CAP ASSEMBLY-OIL FILLER TUBE			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6410315	CAP ASM-OIL FILLER TUBE (OPTION)			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	383379	BAFFLE-OIL FILLER TUBE	1																				
6G4	401568	GUIDE-OIL LEVEL INDICATOR			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6G5	6438197	FILTER ASSEMBLY-OIL			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	382455	GASKET-FILTER TO BLOCK			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	179839	BOLT-FILTER TO BLOCK			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
6H	385283	GROMMET-VENT VALVE TO VALVE COVER			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6424982	VALVE ASSEMBLY-VENTILATION			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1357031	CONNECTOR-VENT VALVE HOSE TO CARB.			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	392995	HOSE-VENT VALVE TO CARBURETOR			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	404518	HOSE-VENT VALVE TO CARBURETOR								1	1	1	1	1	1	1	1	1	1	1	1	1	1
	403604	BRACKET-VENT HOSE			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

TITLE										CHART - ENGINE ASSEMBLY										SHEET 6				
DATE <i>MARCH 8, 1969</i>										FIRST USED										1970				
DR. BY <i>DON MALKIN</i>										OLDSMOBILE ENGINE ASSEMBLY MANUAL										MANUAL SEC. PAGE				
										SERIES										6 55				
REVISION										PART NO.										405925				
<i>1/21/69 B 408188 ADDED RA-JF</i> <i>6/4/69 A SERVICE ENG'S ADDED RA-JF</i>										CHECKED <i>RA-JF</i> APPR. <i>RA-JF</i>										A-B				
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.





# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP	PART NO.	PART NAME	ENGINE		350 CU. IN. - A CAR															350 CU. IN. - B CAR		
			ENG CODE	ALL	A2	A2E	A2N	S2	S2E	A4	A4N	A4E	S4	S4E	S4N	A4N	L.C.	H.C.	V31	A2	A2N	S2
					QA	QC	QJ	QI	QK	QN	QP	QO	QV	QB	QY	QX	QO	SCR	SER	SER	SER	TD
ENG ASMS	PROD CODE	40577	40578	40578D	40579	40578I	40578C	40578J	40578A	40578S	408188	40578T	405786	405788	Z31009	Z31010	Z31011	405805	405805	405804		
6L	398583	MANIFOLD-INTAKE (2-BBL.)			1	1	1	1	1										1	1	1	
	404520	MANIFOLD-INTAKE (4-BBL.)								1	1	1	1	1	1							
	406114	MANIFOLD-INTAKE (4-BBL.)											1	1								
	401447	GASKET-INTAKE MANIFOLD			1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	382798	SEAL-INTAKE MANIFOLD FRONT			1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	382799	SEAL-INTAKE MANIFOLD REAR			1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	179847	BOLT-INT. MANIF. TO CYL. HD. (2.00)			8	8	8	8	8	8	8	8	8	8	8				8	8	8	
	179841	BOLT-INT. MANIF. TO CYL. HD. (1.25)			3	3	3	3	3	3	3	3	3	3	3				3	3	3	
	406165	BOLT-INT. MANIF. TO CYL. HD. (STUD END)			1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	555698	WASHER-INTAKE MANIFOLD BOLT			10	10	10	10	10	10	10	10	10	10	10				10	10	10	
	103878	PLUG-1/4 VACUUM HOLE			1	1	1	1	1	1	1	1	1	1	1							
	103877	PLUG-1/8 VACUUM HOLE			1	1		2	2	1	1	2	2	2	2						1	
	398704	MANIFOLD-EXHAUST-R.H.			1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	403453	MANIFOLD-EXHAUST-L.H.			1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	393383	MANIFOLD-EXHAUST-L.H.																	1	1	1	
	179841	BOLT-EXH. MANIF. TO CYL. HEAD			10	10	10	10	10	10	10	10	10	10	10				10	10	10	
	399423	LOCK-EXHAUST MANIFOLD BOLT			4	4	4	4	4	4	4	4	4	4	4				4	4	4	
	555698	WASHER-EXH. MANIFOLD CLAMP			10	10	10	10	10	10	10	10	10	10	10				10	10	10	
6M1	7040155	CARBURETOR ASSEMBLY (2-BBL.)						1	1												1	
	7040156	CARBURETOR ASSEMBLY (2-BBL.)			1	1	1												1	1		
	7040250	CARBURETOR ASSEMBLY (4-BBL.)								1	1	1	1	1	1							
	7040255	CARBURETOR ASSEMBLY (4-BBL.)												1	1							
(D)	7040253	CARBURETOR ASSEMBLY (4-BBL.)													1							

32370 E QUANTITY WAS 10 112168 D 2090253 ADDED 112168 C 1031815 ADDED 97-09 B USAGE ADDED 1-1955 A SERVICE ENGINES ADDED										TITLE CHART-ENGINE ASSEMBLY		SHEET 8			
DATE SYM REVISION DR. CK. DATE SYM REVISION DR. CK. DATE SYM REVISION DR. CK.										FIRST USED 1970		OLDSMOBILE ENGINE ASSEMBLY MANUAL		MANUAL SEC. PAGE 6 57	
REF. SERIES PART NO.										A-B		405925			

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP	PART NO.	PART NAME	ENGINE		350 CU. IN. - A CAR															350 CU. IN. - B CAR			
			ENG ASMS	ALL	A2	A2E	A2N	S2	S2E	A4	A4N	A4E	S4	S4E	S4W	A4W	L.C.	H.C.	W3	A2	A2N	S2	
					QA	QC	QJ	QI	QK	QN	QP	QO	QV	QB	QY	QX	QO	SER	SER	SER	TD	TC	TL
GM1 CONTINUED	578912	GASKET-CARBURETOR (2-DOL.)			1	1	1	1	1											1	1	1	
	404188	GASKET-CARBURETOR (4-DOL.)								1	1	1	1	1	1								
	179819	BOLT-CARB. TO INTAKE MANIFOLD			4	4	4	4	4	2	2	2	2	2	2	2	2	2			4	4	4
	9419407	BOLT-CARB. TO INTAKE MANIFOLD								2	2	2	2	2	2	2	2	2					
	382706	TUBE ASSEMBLY-CHOKE HEATER			1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1
	382709	GASKET-CHOKE HEATER			1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1
	106324	BOLT-TUBE ASM TO INT. MANIFOLD			2	2	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2
	406048	PIPE-CHOKE CLEAN AIR (2-BBL.)			1	1	1	1	1												1	1	1
	406050	PIPE-CHOKE CLEAN AIR (4-DOL.)								1	1	1	1	1	1	1	1	1					
	403930	PIPE ASM-CHOKE HOT AIR (2-BBL.)			1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1
406220	PIPE ASM-CHOKE HOT AIR (4-BBL.)								1	1	1	1	1	1	1	1	1						
D B H J	405200	HOSE-CLEAN AIR PIPE TO CARBURETOR			1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1
	406312	SHROUD ASSEMBLY-EXHAUST MANIFOLD			1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1
	406315	SHROUD ASSEMBLY-EXHAUST MANIFOLD								1	1	1	1	1	1	1	1	1			1	1	1
C GM3	395283	CLIP-ADPTR. TO VLV. CVR. SPNG.																					
	393030	ELBOW-AIR CLR. VAC. TO INT. MANIFOLD			1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1
GM4	382892	ECCENTRIC-FUEL PUMP	1																				
	6440713	PUMP ASSEMBLY-FUEL			1	1		1	1	1	1	1	1	1	1	1	1			1	1	1	
	6440772	PUMP ASSEMBLY-FUEL					1														1	1	1
	382897	GASKET-FUEL PUMP			1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1
	402720	STUD-FUEL PUMP TO BLOCK			1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1

32920 J	USAGE ADDED	NS	4/10/69	D	406856	REMOVED	NS	4/10/69	J	TITLE	CHART - ENGINE ASSEMBLY	SHEET 9					
32920 H	395283 REMOVED	NS	4/10/69	C	395283	ADDED	NS	4/10/69	J	DATE	MARCH 13, 1969	FIRST USED	1970	OLDSMOBILE ENGINE ASSEMBLY MANUAL	MANUAL SEC. PAGE	6 58	
12009 G	406300 ADDED	R	4/10/69	B	405840				J	DR BY	DON MILKIN	CHECKED	W. J. ...	SERIES	A-B	PART NO.	405925
12009 I	USAGES REMOVED	R	4/10/69	A	SERVICE ENGINES ADDED				J	APPR.	(Signature)	RET.					

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

		ENGINE	350 CU. IN. - A CAR																	350 CU. IN. - B CAR												
		ENG CODE	A2			AZE	AZN	S2			SZE	A4			AN	AE	S4		S4E	S4W		AW	L.C.	H.C.	WCI	A2		A2V	S2			
		PROD CODE	QA	QC	QJ		QI	QK			QN	QP	QQ		QV	QB	QY		QX	QD		SER	SER	SER		TD	TC	TL				
GRP	PART NO.	PART NAME	ENG ASMS	ALL			405777	405778	405780		405779	405781			405782	405783	405784		405785	405788	405787		405784	405788		21009	21010	21012		405803	405805	405804
6M4 CONTINUED	9418892	NUT-FUEL PUMP TO BLOCK				1	1	1		1	1			1	1	1			1	1	1									1	1	1
	9419275	WASHER-FUEL PUMP TO BLOCK				1	1	1		1	1			1	1	1			1	1	1								1	1	1	
	1195016	BOLT-FUEL PUMP TO BLOCK				1	1	1		1	1			1	1	1			1	1	1								1	1	1	
	405996	PIPE ASM-FUEL PUMP TO CARB. (2-BBL.)				1	1	1		1	1																		1	1	1	
	406000	PIPE ASM-FUEL PUMP TO CARB. (4-BBL.)													1	1	1			1	1											
6N2	403654	BRACKET-THROTTLE CABLE (2-BBL.)				1	1	1		1	1																		1	1	1	
	399627	BRACKET-THROTTLE CABLE (4-BBL.)												1	1	1			1	1												
	9419029	BOLT-THROTTLE CABLE DRKT. (2-BBL.)				2	2	2		2	2																		2	2	2	
	401170	SPRING-THROTTLE RETURN				1	1	1		1	1			1	1	1			1	1								1	1	1		
	399625	BRACKET-DASHPOT ASSEMBLY																														
	401159	DASHPOT-SLOW IDLE																														
	9419029	BOLT-BRACKET TO MANIFOLD																														
	9418892	NUT-DASHPOT TO BRACKET																														
6X1	393859	CAMSHAFT ASSEMBLY-ENGINE																														
	400081	CAMSHAFT ASSEMBLY-ENGINE				1	1	1		1	1			1	1	1				1	1							1	1	1		
	402194	CAMSHAFT ASSEMBLY-ENGINE																														
	588577	PLUG-CAMSHAFT REAR BEARING CUP		1																												
	383263	SPROCKET-CAMSHAFT		1																												
	383788	SPROCKET-CAMSHAFT (OPTION)																														

DATE		SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APP	TITLE: CHART - ENGINE ASSEMBLY DATE: MARCH 15, 1969 DR BY: DON NALBIN CHECKED: J. S. H.		FIRST USED: 1970 REF.	OLDSMOBILE ENGINE ASSEMBLY MANUAL SERIES: A-B PART NO.: 405925	MANUAL SEC: 6 PAGE: 59	SHEET 10
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**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP	PART NO.	PART NAME	ENGINE		350 CU. IN. - A CAR																		350 CU. IN. - B CAR		
			ENG CODE	PROD CODE	AZ	AZE	AZN	SZ	SZE	AA	AAV	AAE	SA	SA	SAE	SAW	SAW	L.C.	H.C.	W31	TA	TAN	TZ		
			ASMS	ALL	QA	QC	QJ	QI	QK	QN	QP	QO	QV	QB	QY	QX	QD	SEB	SEB	SEB	TD	TC	TL		
6X1 CONTINUED	382888	BOLT-ECCENTRIC & CAMSHAFT SPROCKET		1																					
	382880	SPROCKET-CRANKSHAFT		1																					
	588526	KEY-CRANKSHAFT SPROCKET		1																					
	382881	CHAIN-TIMING		1																					
	401584	CHAIN-TIMING (OPTION)		*																					
	5232755	LIFTER ASSEMBLY-VALVE (STD.)			16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
	5232756	LIFTER ASSEMBLY-VALVE I.D.I.D O.S.I			A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	A.R.	
	398687	ROD-VALVE PUSH			16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
6X3 B	401384	ARM-VALVE ROCKER			16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
	391208	PIVOT-VALVE ROCKER ARM			8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
	9423842	BOLT-ROCKER ARM PIVOT			16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
	392323	COVER ASSEMBLY-VALVE			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	393573	GASKET-VALVE COVER			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	388708	BOLT-VALVE COVER TO CYL. HEAD			20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
	397132	BOLT-VALVE COVER TO CYL. HEAD (OPT.)			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	6Y1	397209	BRACKET-GENERATOR			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
9418822		BOLT-GEN. BRACKET TO CYL. HEAD			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
1108386		MOTOR ASSEMBLY-STARTER			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
6Y2	1108387	MOTOR ASSEMBLY-STARTER								1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	3830134	BOLT-STARTER MOTOR TO BLOCK			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		

TITLE										CHART - ENGINE ASSEMBLY										SHEET 11				
DATE MARCH 15, 1969										FIRST USED 1970										OLDSMOBILE ENGINE ASSEMBLY MANUAL		MANUAL SEC. PAGE 6 60		
DR. BY DON MALVIN										CHECKED [Signature]										SERIES A-B		PART NO. 405925		
6-25-69 B GROUP 6X3 REVISED										6-4-69 A SERVICE ENG'S ADDED										APPR [Signature]		REF.		
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

© GENERAL MOTORS CORP. 1969

GRP	PART NO.	PART NAME	ENGINE		350 CU. IN. - A CAR															350 CU. IN. - B CAR			
			ENG CODE	PROD CODE	A2	AZE	AZN	SZ	SZE	A4	A4N	A4E	S4	S4	S4E	S4W	A4W	L.C.	H.C.	W31	A2	A2N	S2
			ASMS	ALL	0A	0C	0J	0I	0K	0N	0P	0O	0V	0B	0Y	0X	0D	SER	SER	SER	TD	TC	TL
6Y2 CONTINUED	407007	BRACE-STARTER MOTOR (B)			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	9418821	BOLT-BRACE TO CYLINDER BLOCK			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	106324	BOLT-BRACE TO STARTER MOTOR			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	9419275	WASHER-BRACE TO STARTER MOTOR			1	1	1								1					1	1		
6Y3	(C) 1111976	DISTRIBUTOR ASSEMBLY-IGNITION			1	1	1	1	1											1	1	1	
	1111975	DISTRIBUTOR ASSEMBLY-IGNITION								1	1	1	1	1	1	1							
	383524	SEAL-DISTRIBUTOR "O" RING			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	3835505	CLAMP-DISTRIBUTOR			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	100136	BOLT-CLAMP TO CYLINDER BLOCK			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	1114428	SOLENOID-DISTRIBUTOR VACUUM			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	5638476	SOLENOID-DISTRIBUTOR VACUUM (OPTION)			*	*	*	*	*	*	*	*	*	*	*	*				*	*	*	
	406215	BRACKET-SOLENOID			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	9419400	SCREW-SOLENOID TO BRACKET			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	9418931	NUT-SOLENOID BRKT. TO INT. MANIFOLD			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1	
	103880	PLUG-THERMO. VACUUM SWITCH HOLE			1	1		1	1	1	1	1	1	1	1	1				1		1	
	(D) 1230500	SWITCH ASM-THERMOSTATIC VACUUM					1				1										1		
	573297	CONNECTOR-VACUUM HOSE TO CARB.			1	1	1	1	1	1										1	1	1	
388218	CLIP-VAC. HOSE TO VALVE COVER			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1		
(E) 395283	CLIP-VAC. HOSE TO VLV. COVER														1	1							
392912	HOSE-DISTRIBUTOR TO SOLENOID			1	1		1	1	1	1	1	1	1	1	1				1		1		
404517	HOSE-DISTRIBUTOR TO T.V.S.					1				1										1			
393536	HOSE-SOLENOID TO CARBURETOR (REAR)			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1		
406209	HOSE-SOLENOID TO CARB. (FRT.) (2-BBL.)			1	1	1	1	1	1	1	1	1	1	1	1				1	1	1		

0469 E 395283 ADDED	LS/J	TITLE	CHART - ENGINE ASSEMBLY	SHEET 12
8769 D WAS 403398	LS/J	DATE MARCH 15, 1969	FIRST USED	1970
8769 C WAS 1111979	LS/J	DR. BY DON MALKIN	OLDSMOBILE ENGINE ASSEMBLY MANUAL	MANUAL SEC. PAGE 6 61
8769 B WAS 382193	LS/J	CHECKED O.B. Ford	REF.	SERIES A-B
112169 F 908188 ADDED	LS/J	APPR. Volney	PART NO.	405925
112169 A SERVICE ENGINES ADDED	LS/J	DR. CK. APPR.		





GRP.	PART NO.	PART NAME	ENGINE ASM.	ENGINE											
				455 CU. IN. ROCKET "A" CAR				455 CU. IN. ROCKET "B-C" CAR				455 CU. IN. TORONADO			
			ALL	UPC GRP.	PROD. CODE	TRANS.		CARB.		EXP.	COMP. RATIO		AIR COND.		
						SM	A.T.	2 BBL	4 BBL		REG. FUEL	PREM. FUEL			
				L33	TY	X	X	X					X		
				C60	TX	X	X						X		
				M40	TW-	X		X					X		
				C60	TV	X		X					X		
				6	TU	X		X					X		
				90-6	SER	X			442				X		
				W30	TT		X						X		
				W30	T5	X		X					X		
				90-6	SER	X			W30				X		
				L31	TQ		X						X		
				C60	TP		X						X		
				90-6	SER	X			W30				X		
				M40	UC		X			X			X		
				C60	UD		X			X			X		
				L90	UE		X			X			X		
				90-6	SER	X				X			X		
				6	UJ	X				X			X		
				L90	UK	X				X			X		
				90-6	SER	X				X			X		
				M40	UN		X			X			X		
				C60	UO		X			X			X		
				L90	UP		X			X			X		
				W33	UL		X			X			X		
				90-6	SER		X			X			X		
				90-6	SER		X			TORO.			X		
				6	US		X			X			X		
				C60	UT		X			X			X		
				W34	UW		X			X			X		
				C60	UV		X			X			X		

REF. KEY  
A.R. - AS REQUIRED  
★ - OPTION

GRP.	PART NO.	PART NAME	ENGINE ASM.	ALL	UPC GRP.	PROD. CODE	SM	A.T.	2 BBL	4 BBL	EXP.	COMP. RATIO	REG. FUEL	PREM. FUEL	AIR COND.
1A2C	1485744	VALVE - PRESSURE REDUCER													
	399467	NIPPLE - HEATER HOSE													
	382890	ELBOW - HEATER VACUUM													
	393853	CONNECTOR - HEATER VACUUM													
5	580826	CONNECTOR - POWER BRAKE VAC.													
	143343	ELBOW - POWER BRAKE VAC. PIPE													

TITLE												CHART - ENGINE ASSEMBLY			SHEET 1 OF 15		
DATE <u>MARCH 20, 1969</u>												FIRST USED		MANUAL SEC.		PAGE	
DR BY <u>DON MALHIN</u>												1970		6		64	
CHECKED <u>by [Signature]</u>												REF.		SERIES		PART NO.	
APPR. <u>S. J. [Signature]</u>														A-B-C-E		405926	
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION





**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP.	PART NO.	PART NAME	ENGINE		455 CU. IN. ROCKET "A" CAR (E)													455 CU. IN. ROCKET "B-C" CAR								455 CU. IN. TORONADO									
			ENG. CODE	PROD. CODE	AZH	AZH	A4	A4N	S4	A42	A4W	S4W	W305	A4V	A4NV	W30A	A2	A2N	A2E	L.C.	S2	S2E	H.C.	A4	A4N	A4E	A4P	W33	H.C.	A4	A4N	A4W	A4NV		
			ASM	ALL	TY	TX	TW	TV	TU	5ER	TT	TS	5ER	TQ	TP	5ER	UC	UD	UE	5ER	UJ	UK	5ER	UN	UD	UP	UL	5ER	5ER	US	UT	UW	UV		
6A1	385938	SEAL - CRANKSHAFT REAR BEARING		2																															
(D)	444619	PLUG - CYLINDER BLOCK DRAIN		3																															
6A2	405587	HEAD ASSEMBLY - CYLINDER					2	2	2																2								2	2	
	405588	HEAD ASSEMBLY - CYLINDER										2																							
	405586	HEAD ASSEMBLY - CYLINDER			2	2							2	2			2	2			2	2		2	2	2						2	2		
(B)	406741	HEAD ASSEMBLY - CYLINDER										2																							
	404896	GASKET - CYLINDER HEAD			2	2	2	2	2			2	2			2	2	2			2	2		2	2	2		2				2	2	2	2
	585927	PIN (DOWEL) CYL. HEAD TO BLOCK		4																															
	380252	BOLT - CYLINDER HEAD (4.17 LONG)			15	13	15	13	13			15	15			15	13			14	14		14	14		14					15	13	15	13	
	380253	BOLT - CYLINDER HEAD (3.00 LONG)			4	4	4	4	4			4	4			4	4			4	4		4	4		4					4	4	4	4	
	383038	BOLT - CYLINDER HEAD (STUD END)			1	3	1	3	3			1	1			1	3			2	2		2	2		2					2		2		
	404008	BOLT - CYLINDER HEAD (4.17 LONG-T. S.)																														1	1	1	1
6A5	387445	STRAP - ENGINE LIFTING			1	1	1	1	1			1	1			1	1	1			1	1		1	1	1					1	1	1	1	
	9418931	NUT - ENGINE LIFT STRAP																														1	1	1	1
6C1	406453	CRANKSHAFT SHOP ASM - ENGINE											1																						
	406686	CRANKSHAFT SHOP ASM - ENGINE							1																										
	405357	CRANKSHAFT SHOP ASM - ENGINE																						1	1										
	405360	CRANKSHAFT ASM - ENGINE			1	1																		1	1	1						1	1	1	1
	405362	CRANKSHAFT ASM - ENGINE					1	1				1													1										
	230907	CRANKSHAFT - ENGINE																																	
	405361	CRANKSHAFT - ENGINE																														1			
	405363	CRANKSHAFT - ENGINE																																	
(C)	230908	CRANKSHAFT - ENGINE								1																								1	
	38257E	SLINGER - CRANKSHAFT OIL			1																														
6C2	406541	BALANCER ASM - CRANKSHAFT	(F)	(G)	1	1	1	1	1																										

886E WAS W305	DR. CK.	DATE	SYM.	REVISION	886D QUANTITY WAS (4)	DR. CK.	DATE	SYM.	REVISION	886C WAS #05451	DR. CK.	DATE	SYM.	REVISION	886B 406741 ADDED	DR. CK.	DATE	SYM.	REVISION	886A SERVICE ENGINES ADDED	DR. CK.	DATE	SYM.	REVISION	10216 G QUANTITIES ADDED	DR. CK.	DATE	SYM.	REVISION	10216 F 400133 REMOVED	DR. CK.	DATE	SYM.	REVISION
TITLE: CHART-ENGINE ASSEMBLY																																		
FIRST USED: 1970															DATE: MARCH 19, 1969																			
DR. BY: L. SPITZLEY															CHECKED: A. J. FINE																			
SERIES: A-B-C																																		
PART NO.: 405000																																		
MANUAL SEC. PAGE: 6 66																																		

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP.	PART NO.	PART NAME	ENGINE		455 CU. IN. ROCKET "A" CAR <sup>(B)</sup>												455 CU. IN. ROCKET "B-C" CAR										455 CU. IN. TORONADO										
			ENGINE ASM	ENG. CODE	TY	TX	TW	TV	TU	SER	TT	TS	SER	TQ	TP	SER	UC	UD	UE	SER	UJ	UK	SER	UN	UO	UP	UL	SER	SER	H.C.	US	UT	UW	UV			
																																			ALL	AZH	AZH
6C2	568738	WASHER-BALANCER ASM TO CRANKSHAFT			1	1	1	1	1	1		1	1			1	1	1			1	1		1	1	1							1	1	1	1	
	271630	BOLT-BALANCER ASM TO CRANKSHAFT			1	1	1	1	1	1		1	1			1	1	1			1	1		1	1	1						1	1	1	1		
6D	404068	ROD SHOP ASM - CONNECTING R. H. <sup>(E)</sup>					4	4	4	4																4	4										
6D	404069	ROD SHOP ASM - CONNECTING L. H. <sup>(E)</sup>					4	4	4	4																4	4										
	406456	ROD SHOP ASM - CONNECTING R. H.									4	4	4			4																					
	406457	ROD SHOP ASM - CONNECTING L. H.									4	4	4			4																					
	399996	ROD SHOP ASM - CONNECTING R. H.													4	4		4		4																	
	399997	ROD SHOP ASM - CONNECTING L. H.													4	4		4		4																	
	399998	ROD SHOP ASM - CONNECTING R. H. <sup>(E)</sup>			4	4						4	4						4		4	4				4	4	4	4	4	4	4	4	4	4	4	
	399999	ROD SHOP ASM - CONNECTING L. H. <sup>(E)</sup>			4	4						4	4						4		4	4				4	4	4	4	4	4	4	4	4	4	4	4
	400000	ROD SHOP ASM - CONNECTING R. H.																	4		4				4												
	400001	ROD SHOP ASM - CONNECTING L. H.																	4		4				4												
	5470447	BEARING - CONNECTING ROD	16																																		
6E	399270	PAN ASM - OIL			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1											
	398438	PAN ASM - OIL																									1	1	1	1	1	1	1	1	1	1	1
	383494	SEAL - OIL PAN FRONT			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	383495	SEAL - OIL PAN REAR			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	393574	GASKET - OIL PAN SIDE R.			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	393575	GASKET - OIL PAN SIDE L.			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	388708	BOLT - OIL PAN			14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	397132	BOLT - OIL PAN (OPTION)			★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
	385099	BOLT ASM - OIL PAN (FRONT & REAR)			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	

								399999 E9 USAGE REVISED W30S		DATE MARCH 18, 1969		TITLE CHART - ENGINE ASSEMBLY		SHEET 4	
								399999 D WAS 405923		DR BY DON MALKIN		FIRST USED 1970		OLDSMOBILE ENGINE ASSEMBLY MANUAL	
								399999 C WAS 405922		CHECKED A.W. [Signature]		REF.		MANUAL SEC. PAGE 6 67	
								399999 B WAS W30S		APPR.		SERIES		PART NO.	
								399999 A SERVICE ENG'S ADDED		OR. CK.		A-B-C-E		405926	
DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	OR.	CK.	APPR.



OLDSMOBILE DIVISION GENERAL MOTORS CORPORATION LANSING - MICHIGAN

Main parts catalog table with columns for GRP, PART NO., PART NAME, ENGINE ASM, and various vehicle codes (TY, TX, TW, TV, TU, SER, TT, TS, TP, TP30A, UC, UD, UE, UJ, UK, UN, UO, UP, UL, US, UT, UW, UV).

Metadata block containing title 'CHART-ENGINE ASSEMBLY', date 'MARCH 15, 1968', first used '1970', series 'A-B-C-E', part no. '405926', and sheet information 'SHEET 6'.

**OLDSMOBILE DIVISION**

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP.	PART NO.	PART NAME	ENGINE		455 CU. IN. ROCKET "A" CAR <sup>(B)</sup>										455 CU. IN. ROCKET "B-C" CAR										455 CU. IN. TORONADO										
			ENG. CODE	PROD. CODE	A2H	A2HN	A4	A4N	S4	442	A4V	S4V	W305	A4V	A4V	W30A	A2	A2N	A2E	L.C.	S2	S2E	H.C.	A4	A4N	A4E	A4P	W33	H.C.	A4	A4N	A4V	A4V		
			ASM	ALL	TY	TX	TW	TV	TU	SER	TT	TS	SER	TQ	TP	SER	UC	UD	UE	SER	UJ	UK	SER	UN	UO	UP	UL	SER	Z101d	US	UT	UV	UV		
6J	382927	GASKET - FRONT COVER			1	1	1	1	1		1	1			1	1	1			1	1		1	1							1	1	1	1	
	585927	PIN (DOWEL) FRONT COVER TO BLOCK		2																															
	403902	INDICATOR - ENGINE TIMING			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
	9420049	BOLT - FRONT COVER TO BLOCK			3	3	3	3	3		3	3			3	3	3			3	3		3	3											
	179822	BOLT - FRONT COVER TO DLOCK			2	2	2	2	2		2	2			2	2	2			2	2		2	2											
	271486	BOLT - FRONT COVER TO BLOCK			1		1		1		1	1			1		1			1	1		1												
	394453	BOLT - FRT. COVER TO BLOCK (STUD END)				1		1															1												
	404352	BOLT - IND. & FRT. CVR. TO BLK. (STUD END)			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
	398444	BOLT-FRONT COVER TO BLOCK (STUD END)			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
	398446	BOLT-IND. & FRT. CVR. TO BLOCK (STUD END)																																	
(C)	186619	BOLT-FRT. COVER & SUPPORT TO BLOCK																																	
6K3	404632	OUTLET - WATER			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
	404633	GASKET - WATER OUTLET			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
	3885009	THERMOSTAT ASM - WATER			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
	179817	BOLT-WATER OUTLET TO INTAKE MANIFOLD			2	2	2	2	2		2	2			2	2	2			2	2		2	2											
(D)	409009	HOSE-WATER BY-PASS			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
	9423576	CLAMP-BY-PASS HOSE UPPER			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
	9427689	CLAMP-BY-PASS HOSE LOWER			1	1	1	1	1		1	1			1	1	1			1	1		1	1											
6L	398625	MANIFOLD - INTAKE (2 BARREL)			1	1																													
	404521	MANIFOLD - INTAKE (4 BARREL)					1	1															1	1											
	404848	MANIFOLD - INTAKE (4 BARREL)							1																										
	406115	MANIFOLD - INTAKE (4 BARREL)									1	1																							
	404522	MANIFOLD - INTAKE (4 BARREL)																																	

DATE SYM REVISION DR. CK. DATE SYM REVISION DR. CK. DATE SYM REVISION DR. CK. DATE SYM REVISION DR. CK. DATE SYM REVISION DR. CK.

*15E*

*311X D WAS 404733*  
*202C WAS 495611*  
*3865 B WAS W305*  
*666A SERVICE ENGINES ADDED*

TITLE CHART - ENGINE ASSEMBLY SHEET 7  
 DATE MARCH 18, 1969 FIRST USED 1970  
 OR BY DON MALKIN  
 CHECKED *3 of 7*  
 APPR. *John*

OLDSMOBILE ENGINE ASSEMBLY MANUAL MANUAL SEC. 6 PAGE 70  
 SERIES A-B-C-E PART NO. 405926







**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GRP.	PART NO.	PART NAME	ENGINE ASM	ENGINE	455 CU. IN. ROCKET "A" CAR (B)													455 CU. IN. ROCKET "B-C" CAR								455 CU. IN. FORONADO									
				ENG. CODE	A2H	A2HN	A4	A4N	S4	442	A4V	S4V	W30S	A4V	A4NV	W30A	A2	A2N	A2E	H.C.	S2	S2E	H.C.	A4	A4N	A4E	A4P	W33	H.C.	A4	A4N	A4V	A4NV		
				PROD. CODE	T	TX	TV	TV	TU	SER 442	T	T5	SER W30S	TQ	TP	SER W30A	UC	UD	UE	SER H.C.	UJ	UK	SER H.C.	UN	UO	UP	UL	SER W33	SER H.C.	US	UT	UV	UV		
6M3	395283	CLIP-ADPTR. TO VLV. CVR. SPRING																																	
6M4	382892	ECCENTRIC - FUEL PUMP	1																																
	6440711	PUMP ASM - FUEL		1																															
	6440712	PUMP ASM - FUEL			1	1	1	1	1					1	1																				
	382897	GASKET - FUEL PUMP			1	1	1	1	1					1	1																				
	402720	STUD - FUEL PUMP TO BLOCK			1	1	1	1	1					1	1																				
	9418892	NUT - FUEL PUMP TO BLOCK			1	1	1	1	1					1	1																				
	9419275	WASHER - FUEL PUMP TO BLOCK			1	1	1	1	1					1	1																				
	1195016	BOLT - FUEL PUMP TO BLOCK			1	1	1	1	1					1	1																				
	405998	PIPE ASM-FUEL PUMP TO CARB. (2 BARREL)			1	1								1	1																				
	406000	PIPE ASM-FUEL PUMP TO CARB. (4 BARREL)					1	1	1					1	1																				
	406001	PIPE ASM-FUEL PUMP TO CARB.																																	
6N2																																			
	403654	BRACKET - THROTTLE CABLE (2 BARREL)			1	1																													
	399622	BRACKET - THROTTLE CABLE (4 BARREL)					1	1	1					1	1																				
	396505	BRACKET - THROTTLE CABLE																																	
	9419029	BOLT - THROTTLE CABLE BRACKET (2 BARREL)																																	
	454779	PIN - THROTTLE CABLE BRACKET TO CARB.																																	
	401170	SPRING - THROTTLE RETURN			1	1	1	1	1					1	1																				
	399625	BRACKET - DASHPOT																																	
	9419029	BOLT - DASHPOT BRACKET TO MANIFOLD																																	
	401159	DASHPOT ASM - SLOW IDLE																																	
	9418892	NUT - DASHPOT TO BRACKET																																	

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK
1207E USAGE ADDED										RAFF										TITLE																			
1207U USAGE REMOVED										KRF										DATE MARCH 20, 1969																			
1208C 395283 ADDED										RJA										FIRST USED 1970																			
1209B WAS W30S										SJA										OLDSMOBILE ENGINE ASSEMBLY MANUAL																			
1210A SERVICE ENGINES ADDED										LSJ										MANUAL SEC. PAGE 6 73																			
																				SERIES A-B-C-E																			
																				PART NO. 405926																			









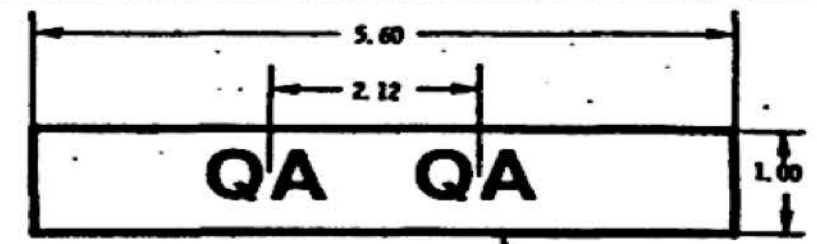
**OLDSMOBILE DIVISION**

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

			ENGINE	455 CU. IN. ROCKET "A" CAR (C)												455 CU. IN. ROCKET "B-C" CAR									455 CU. IN. TORONADO													
			ENG. CODE	AZH	AZHN	A4	A4N	S4	442	A4V	S4V	W30S	AAV	AAV	W30A	A2	A2N	A2E	L.C.	S2	S2E	H.C.	A4	A4N	A4E	A4P	W33	H.C.	A4	A4N	A4V	A4NV						
			PROD. CODE	TY	TX	TW	TV	TU	54	442	44V	54V	W30S	TQ	TP	54A	UC	UD	UE	54C	UJ	UK	54C	UN	UO	UP	UL	W33	54C	US	UT	UV	UV					
GRP.	PART NO.	PART NAME	ENGINE ASM	ALL	40447	40448	40442	40443	40444	231016	40445	40446	231017	406449	406450	231018	405806	405807	405808	231012	405809	405810	231013	405811	405812	405813	405814	231015	231014	405815	405816	405818	405817					
7B1																																						
	9420825	SCREW-COVER TO FLYWHEEL HOUSING						1			1										1	1																
	9787069	FORK ASSEMBLY-CLUTCH RELEASE						1			1										1	1																
	3729000	STUD-CLUTCH BALL FORK						1			1										1	1																
	392335	RING-CLUTCH FORK STUD						1			1										1	1																
	392336	RETAINER-CLUTCH FORK STUD RING						1			1										1	1																
	3841738	BOOT-FORK ASSEMBLY						1			1										1	1																
	388910	BRACKET-CLUTCH RETURN SPRING						1			1										1	1																
	3816341	STUD-BALL IEQUALIZER TO ENGINE						1			1																											
	388908	STUD-BALL IEQUALIZER TO ENGINE																			1	1																
	382658	SEAL-EQUALIZER STUD						1			1																											
	388906	SEAL-EQUALIZER STUD																			1	1																
	3736406	PIN IDOWEL FLYWHEEL HOUSING TO BLOCK						2				2	2								2	2																
7B3																																						
	3736406	PIN IDOWEL TRANSMISSION TO BLOCK						2	2	2	2		2	2	2	2	2	2	2	2			2	2	2	2	2	2	2	2	2	2	2	2	2			
	393030	ELBOW-INTAKE MANIFOLD VACUUM						1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
	395283	CLIP-MODULATOR PIPE TO VALVE COVER																																				
	406137	HOSE-MODULATOR VACUUM									1						1		1				1		1													
	392616	HOSE-MODULATOR VACUUM						1	1									1																				
	406209	HOSE-MODULATOR VACUUM								1	1				1	1								1		1												
(D)	393535	HOSE-MODULATOR VACUUM																															1	1	1	1		
12																																						
	3815936	SWITCH ASSEMBLY-OIL PRESSURE						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
	5653197	SWITCH ASSEMBLY-OIL PRESSURE (OPTION)						*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
	1993582	SWITCH ASSEMBLY-WATER TEMPERATURE						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
	1993581	SWITCH ASSEMBLY-WATER TEMPERATURE															1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
	6489435	SWITCH ASSEMBLY-METAL TEMPERATURE																																	1	1	1	1
(E)	388218	CLIP-WIRING HARNESS TO VALVE COVER								2		(G)	1																						1	1	1	1
(F)	404003	CLIP-WIRING HARNESS TO VALVE COVER						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		

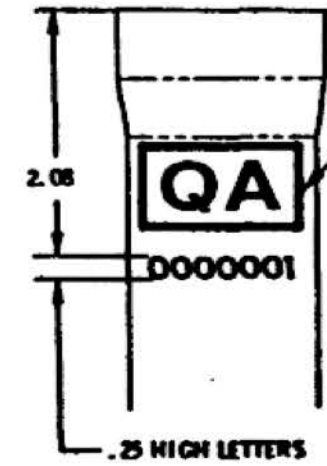
								91568 E WAS 409003		LSJ		TITLE		CHART - ENGINE ASSEMBLY			SHEET 15						
								82569 D WAS 409572		LSJ		DATE		APRIL 3, 1969			FIRST USED		OLDSMOBILE ENGINE		MANUAL SEC. PAGE		
								8869 C WAS W30S		RKF		DR. BY		DON MALKIN			1970		ASSEMBLY MANUAL		6 78		
								PAGE G QUANTITY REVISED		RKF		CHECKED		J [signature]			REF.		SERIES		PART NO.		
								91568 F WAS 388218		LSJ		APPR.		[signature]			A-B-C-E		405926				
DATE	SYM	REVISION	DR. CK.	DATE	SYM	REVISION	DR. CK.	DATE	SYM	REVISION	DR. CK.	DATE	SYM	REVISION	DR. CK.	APPR.							

NOTE:  
 (B) G.M.A.D. PLANT USAGE ONLY  
 ENGINE OIL #9985183 T10W-30  
 PERMISSIBLE FOR TOPPING OFF  
 ALL ENGINES - YEAR AROUND

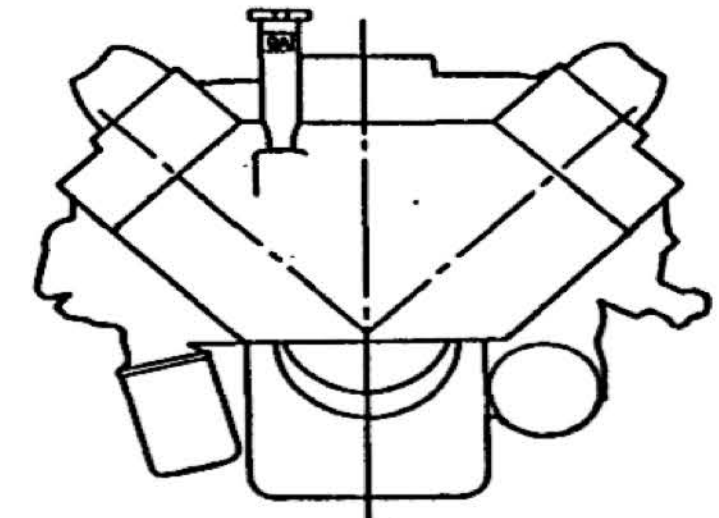


TAPE TO HAVE RED LETTERS ON WHITE BACKGROUND

TYPE OF TAPE TO BE DETERMINED BY MANUFACTURING

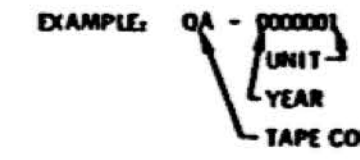


INSTALL TAPE ON OIL FILLER TUBE ABOVE ENGINE NUMBER AS SHOWN.



ENGINE NUMBER TO BE STAMPED ON OIL FILL TUBE AS SHOWN AND TUBE TO BE ASSEMBLED TO ENGINE SO NUMBER MAY BE READ FROM FRONT.

ALL ENGINES WILL BE NUMBERED CONSECUTIVELY STARTING WITH 000001  
 FOR COMPLETE ENGINE IDENTIFICATION, THE ENGINE NUMBER & ENGINE TAPE CODE SHOULD BE USED TOGETHER



NOTE: THIS NUMBER IS USED FOR MANUFACTURING AND SERVICE ONLY. IT IS NOT INTENDED FOR ANY LEGAL USE.

PART NUMBER	UPC GROUP	PROD. CODE	TRANSMISSION		CARBURETOR		COMPRESSION RATIO			ACCESSORIES	
			SYNCHROMESH	AUTOMATIC	2 BARREL	4 BARREL	EXPORT	LOW	HIGH	AIR CONDITION	C60
405777	M38	QA		X	X			X			
405778	L90	QC		X	X		X				
405779	6	QI	X		X			X			
405780	C60	QJ		X	X			X		X	
405781	L90	QK	X		X		X				
405782	M38	QN		X		X			X		
405783	C60	QP		X	X				X	X	
405784	L90	QO		X	X		X				
408188	6	QB	X		X				X		
405786	W31	QX	X		X				X		
405787	L90	QY	X		X		X				
405788	W31	OD		X	X				X		
406447	L33	TY		X	X				X		
406448	C60	TX		X	X				X	X	
406442	M40	TW		X	X				X		
406443	C60	TV		X	X				X	X	
406444	6	TU	X		X				X		
406445	W30	TT		X	X				X		
406446	W30	TS	X		X				X		
406449	L31	TO		X	X				X		
406450	C60	TP		X	X				X	X	

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	TITLE	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	SERIES	PART NO.
																					CHART - ENGINE IDENTIFICATION	JAN. 25, 1969	1970		6-1	80	A	405775
																					12/1/68 C WAS 405785 (OV)							
																					2369 B NOTE ADDED							
																					4/18/69 A WAS 400 CU. IN.							

ⓑ

**I THROTTLE SWITCH DOWNSHIFT CIRCUIT ADJUSTMENT - THM 400 ONLY**

- A. REQUIRED CONDITIONS.**
1. DOWNSHIFT SWITCH AND CARPET INSTALLED.
- B. ADJUSTMENTS.**
1. PUSH PLUNGER OF DOWNSHIFT SWITCH FORWARD UNTIL FLUSH WITH SWITCH HOUSING.
  2. PUSH ACCELERATOR PEDAL TO WIDE OPEN POSITION TO SET SWITCH.

**II THROTTLE DOWNSHIFT CABLE ADJUSTMENT - THM 350 ONLY**

- A. REQUIRED CONDITIONS.**
1. CARPET INSTALLED.
- B. ADJUSTMENTS.**
1. POSITION DOWNSHIFT CABLE CLIP AT INITIAL ADJUSTMENT. (SEE SECTION 1-11).
  2. PUSH ACCELERATOR PEDAL TO WIDE OPEN THROTTLE POSITION TO ADJUST CLIP.

**III DASHPOT ADJUSTMENTS (PERTAINS TO MODELS SO EQUIPPED)**

- A. REQUIRED CONDITIONS.**
1. CARBURETOR LEVER AT SLOW IDLE, CHOKE FULLY OPEN.
  2. ENGINE OFF, DASHPOT FULLY COMPRESSED.
- B. ADJUSTMENT.**
1. ADJUST DASHPOT FOR .060 CLEARANCE BETWEEN DASHPOT AND THROTTLE LEVER.
  2. TIGHTEN NUT TO LOCK.

**NOTE:** THESE ADJUSTMENTS ARE FOR ASSEMBLY LINE ONLY. FOR REPAIR AREA OR DEALER SERVICE SEE SERVICE MANUAL TO CORRECTLY SET SLOW IDLE, FAST IDLE, AND CHOKE.

2 & 4 BBL. (V8)

Ⓐ

				TITLE				CHART - THROTTLE ADJUSTMENT				
11566	B	SLOW IDLE		DATE	SEPT. 28, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT	MANUAL SEC.	PAGE	6-1	84
		ADJUSTMENT REMOVED		OR BY	DALE GRAY			INFORMATION MANUAL				
1295A	A	SHEET NO. REMOVED		CHECKED	JOHN RIMES							
				APPR.	RONALD H. HARRIS							
				APPR.	H. J. B. PAGE			SERIES	A	PART NO.	404411	
DATE	SYM	REVISION	DR. CK.									



**I SLOW IDLE ADJUSTMENT**

- A. CARBURETOR AS RECEIVED FROM ROCHESTER PRODUCTS AND INSTALLED BY ENGINE PLANT REQUIRES NO ADJUSTMENT ON FINAL ASSEMBLY LINE.
- B. IDLE SPEED CHECK
  - 1. SMT - APPROX. 700 RPM IN NEUTRAL, SOLENOID ELECTRICALLY CONNECTED, 400 RPM ELECTRICALLY DISCONNECTED.
  - 2. AMT - APPROX. 575 RPM IN NEUTRAL, SOLENOID ELECTRICALLY CONNECTED, 400 RPM ELECTRICALLY DISCONNECTED.
  - 3. CHECK TO SEE THROTTLE RETURN SPRING IS EFFECTIVELY HOLDING THROTTLE AGAINST STOP.

**II THROTTLE SWITCH DOWNSHIFT CIRCUIT ADJUSTMENT JT CARS ONLY**

- A. REQUIRED CONDITIONS
  - 1. DOWNSHIFT SWITCH & CARPET INSTALLED.
- B. ADJUSTMENTS
  - 1. PUSH PLUNGER OF DOWNSHIFT SWITCH FORWARD UNTIL FLUSH WITH SWITCH HOUSING.
  - 2. PUSH ACCELERATOR PEDAL TO WIDE OPEN POSITION TO SET SWITCH.

**NOTE:** THESE ADJUSTMENTS ARE FOR ASSEMBLY LINE ONLY, FOR REPAIR AREA OR DEALER SERVICE SEE SERVICE MANUAL TO CORRECTLY SET SLOW IDLE, FAST IDLE, AND CHOKE.

250 CUBIC IN. L-6

SHEET 2

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK

<b>TITLE CHART - THROTTLE ADJUSTMENT</b>											
DATE <i>SEP. 20, 1960</i>				FIRST USED		OLDSMOBILE PRODUCT		MANUAL SEC.		PAGE	
DR BY <i>DALE BOBY</i>				1970		INFORMATION MANUAL		6-1		85	
CHECKED <i>John Brown</i>				SERIES		PART					
APPR <i>Ken V. Brown</i>				A		NO.				404411	
APPR <i>H. J. ...</i>											

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

TO CONVERT 350 DOMESTIC S. M. OR EXPORT S. M. & A. T. ENGINES TO C60 OR Y72 EXC. C60 THE FOLLOWING IS REQUIRED:

ITEM	2 BBL.		4 BBL.		REMOVE	INSTALL
	S. M.	A. T.	S. M.	A. T.		
BODY ASSEMBLY - WATER PUMP	X	X	X	X	404655	404846
GASKET - W/P	X	X	X	X	★ 385936	385936
BOLT - FRONT COVER TO BLOCK	X	X	X	X	271486	394453
BRACKET - GENERATOR ★★	X	X	X	X	397209	--
BOLT - GENERATOR BRACKET ★★	X	X	X	X	(3) 9418822	--
DASHPOT ASSEMBLY ★★				X	--	401159
BRACKET - DASHPOT ★★				X	--	399625
NUT - DASHPOT TO BRACKET ★★				X	--	9418892
BOLT - BRACKET TO MANIFOLD ★★				X	--	9419029
NIPPLE - HEATER HOSE ★★	X	X	X	X	399467	--
PLUG - T. V. S. HOLE	X	X	X	X	103880	--
SWITCH ASM-THERMOSTATIC VACUUM	X	X	X	X	--	1230500
HOSE-DISTRIBUTOR VACUUM	X	X	X	X	392912	404517
PLUG-INT. MANIFOLD VAC. HOLE	X		X		103877	--
ELBOW-INTAKE MANIFOLD VACUUM	X		X		--	393030
HOSE - MODULATOR VACUUM		X			406137	392616
HOSE - MODULATOR VACUUM				X	406137	406209
HOSE-T. V. S. TO DIST. VAC. SOL.	X	X	X	X	--	392617
HOSE-T. V. S. TO INT. MANIFOLD	X				--	400508
HOSE-T. V. S. TO INT. MANIFOLD			X		--	393586
TEE - VACUUM		X		X	--	406026
HOSE - T. V. S. TO TEE		X		X	--	404572
HOSE-TEE TO INTAKE MANIFOLD		X			--	392613
HOSE-TEE TO INTAKE MANIFOLD				X	--	406209
PUMP ASSEMBLY-FUEL (4800 ONLY)				X	6440713	6440772
PUMP ASM - FUEL ★★		X			6440713	6440772
GASKET - FUEL PUMP ★★		X	X	X	★ 382897	382897

DOMESTIC A. T. ENGINES SHOULD NOT BE CONVERTED.  
★★ APPLIES TO C60 CONVERSIONS ONLY.

### 1970 350 & 455 CUBIC INCH ENGINE ASSEMBLY CONVERSION PROCEDURES

CONVERT ENGINE ASSEMBLY 405783 (QPI) FOR 4800 WITH L74 AND C60 AND M40 BY THE FOLLOWING:

ITEM	REMOVE	INSTALL
PUMP ASSEMBLY - FUEL	6440713	6440772
GASKET-FUEL PUMP	★ 382897	382897

ALL PROCEDURES WHICH APPLY TO PARTS ASSEMBLED IN THE ENGINE PLANT REGARDING TORQUES, PAINTING, LUBRICANTS, PROCESS MATERIALS, ETC., ALSO APPLY TO ALL FINAL ASSEMBLY CONVERSION PARTS.

#### NOTES:

- ★ SCRAP
- # PAINT WITH ENGINE ENAMEL

FOR ENGINE CONVERSION INSTALLATION DRAWINGS, SEE SECTION 6-0 AND 6-1.

TO CONVERT 455 CU. IN. SM ENGINE (TU) TO C60, THE FOLLOWING IS REQUIRED:

ITEM	REMOVE	INSTALL
BODY ASSEMBLY - WATER PUMP	404655	# 404846
GASKET - WATER PUMP	★ 385936	385936
BOLT - FRONT COVER TO BLOCK	271486	394453
BRACKET - GENERATOR	397209	--
BOLT - GENERATOR BRACKET	(3) 9418822	--
ELBOW - INT. MANIFOLD VAC. (REAR)	103877 (PLUG)	382890
VALVE - PRESSURE REDUCER	1485744	--
CLIP - VALVE COVER	(1) 388218	--

CONVERT ENGINES TO K30 BY THE FOLLOWING:

ITEM	REMOVE	INSTALL
HOSE - VENT VALVE TO CARB. (4 BBL. ONLY)	404538	403602
ELBOW - MANIFOLD VACUUM	103877 (PLUG)	382890

CONVERT TO V01 BY THE FOLLOWING:

ITEM	REMOVE	INSTALL
BODY ASSEMBLY - WATER PUMP	404655	# 404846
GASKET - WATER PUMP	★ 385936	385936

CONVERT TO U21 BY THE FOLLOWING:

ITEM	REMOVE	INSTALL
GAGE - ENGINE OIL	3815936	6462137
ELBOW - GAGE TO BLOCK	--	401559
SWITCH ASSEMBLY-WATER TEMP.	1993582	6402383

CONVERT TO J50 OR JL2 BY THE FOLLOWING:

ITEM	REMOVE	INSTALL
PLUG - POWER BRAKE VACUUM HOLE	103878	143343 (ELBOW)

TO CONVERT 455 ENGINE TY, TW, TU OR TQ TO Y72 EXC. C60 THE FOLLOWING IS REQUIRED:

ITEM	REMOVE	INSTALL
BODY ASSEMBLY - WATER PUMP	404655	# 404846
GASKET - WATER PUMP	★ 385936	385936

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	
TITLE CHART - ENGINE CONVERSION SHEET 1 OF 3															FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. 6-1		PAGE 86				
															SERIES A		PART NO. 406559								

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

GM 406559

TO CONVERT 455 AT W2J ENGINE (TT) TO C60, THE FOLLOWING IS REQUIRED:

ITEM	REMOVE	INSTALL
BRACKET - GENERATOR	397209	--
BOLT - GENERATOR BRACKET	(3) 9418822	--
PLUG - MANIFOLD VACUUM REAR	103877	--
ELBOW - MANIFOLD VACUUM	--	382890
VALVE - PRESSURE REDUCER	1485744	--
PLUG - T. V. S. HOLE	103880	--
SWITCH ASM - THERMO VACUUM	--	1230500
HOSE - DISTRIBUTOR VACUUM	392912	404517
HOSE - MODULATOR VACUUM	406137	406209
HOSE - T. V. S. TO DIST. VAC. SOL.	--	392617
TEE - VACUUM	--	406026
HOSE - T. V. S. TO TEE	--	404572
HOSE - TEE TO INTAKE MANIFOLD	--	406209

## 1970 350 & 455 CUBIC INCH ENGINE ASSEMBLY CONVERSION PROCEDURES

ALL PROCEDURES WHICH APPLY TO PARTS ASSEMBLED IN THE ENGINE PLANT REGARDING TORQUES, PAINTING, LUBRICANTS, PROCESS MATERIALS, ETC. ALSO APPLY TO ALL FINAL ASSEMBLY CONVERSION PARTS.

NOTES:

★ SCRAP

FOR ENGINE CONVERSION INSTALLATION DRAWINGS, SEE SECTION 6-0 AND 6-1.

TO CONVERT 350 A. T. A/C ENGINES TO Y72 EXC. C60, THE FOLLOWING IS REQUIRED:

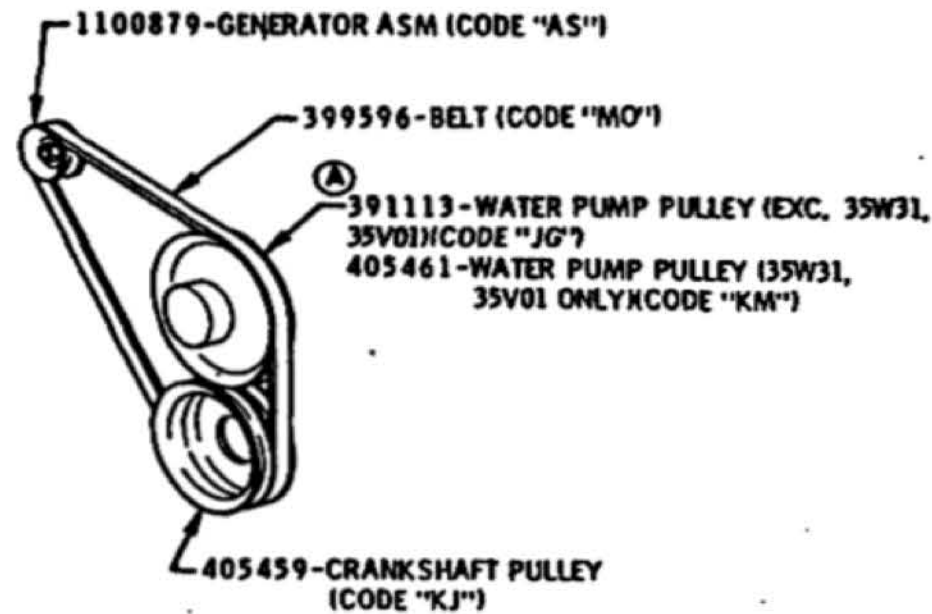
ITEM	2 BBL	4 BBL	REMOVE	INSTALL
BRACKET - GENERATOR	X	X	--	397209
BOLT - GENERATOR BRACKET	X	X	--	(3) 9418822
NIPPLE - HEATER HOSE	X	X	--	399467
BRACKET - DASHPOT ASM	X	X	399625	--
DASHPOT - SLOW IDLE	X	X	401159	--
BOLT - DASHPOT BRKT. TO MANIF.	X	X	9419029	--
NUT - DASHPOT TO BRACKET	X	X	9418892	--
PUMP ASM - FUEL	X		6440772	6440713
GASKET - FUEL PUMP	X		★ 382897	382897
ELBOW - INT. MANIF. VAC. (REAR)	X	X	382890	--
PLUG - INT. MANIF. VAC. (REAR)	X	X	--	103877

TO CONVERT TO W25, THE FOLLOWING IS REQUIRED:

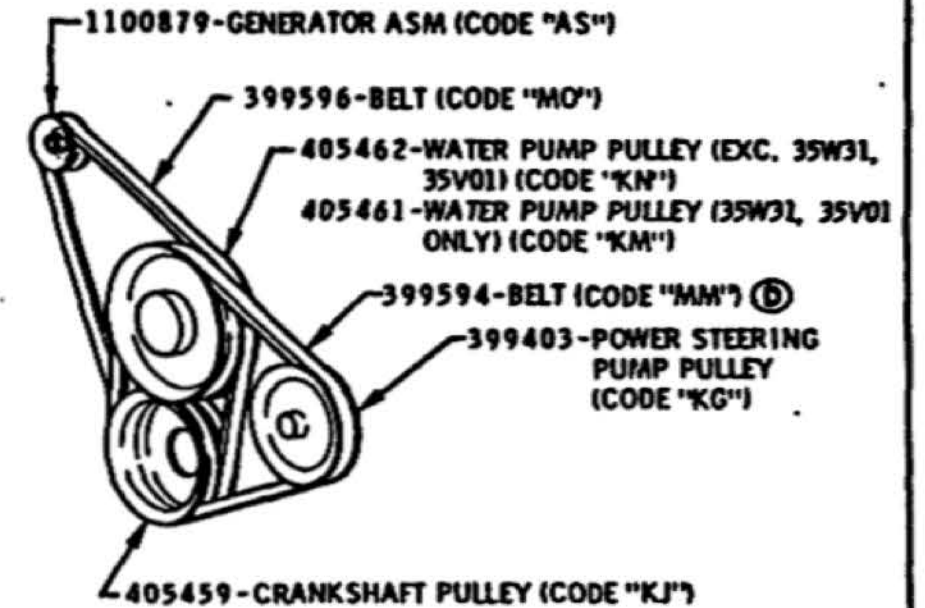
ITEM	350		455		REMOVE	INSTALL
	S. M.	A. T.	S. M.	A. T.		
CLIP - VAC. HOSE TO VALVE COVER	X	X	X		(1) 388218	--
CLIP - WIRING HARNESS TO VALVE COVER	X		X		(1) 388218	--
CLIP - ADAPTER TO VLV. CVR. SPRING	X		X		--	(2) 395283
CLIP - ADAPTER TO VLV. CVR. SPRING		X			--	(1) 395283

SHEET 3

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.																																																																																																									
<table border="1"> <tr> <td colspan="12">TITLE</td> <td colspan="16">CHART - ENGINE CONVERSION</td> </tr> <tr> <td colspan="12">DATE <i>AUG 14, 1969</i></td> <td colspan="4">FIRST USED</td> <td colspan="4">OLDSMOBILE PRODUCT</td> <td colspan="4">MANUAL SEC.</td> <td colspan="4">PAGE</td> </tr> <tr> <td colspan="12">DR BY <i>DON MALKIN</i></td> <td colspan="4">1970</td> <td colspan="4">INFORMATION MANUAL</td> <td colspan="4">6-1</td> <td colspan="4">87</td> </tr> <tr> <td colspan="12">CHECKED <i>[Signature]</i></td> <td colspan="4">SERIES</td> <td colspan="4">PART NO.</td> <td colspan="4">406559</td> </tr> <tr> <td colspan="12">APPR. <i>[Signature]</i></td> <td colspan="4">A</td> <td colspan="4"></td> <td colspan="4"></td> </tr> </table>																												TITLE												CHART - ENGINE CONVERSION																DATE <i>AUG 14, 1969</i>												FIRST USED				OLDSMOBILE PRODUCT				MANUAL SEC.				PAGE				DR BY <i>DON MALKIN</i>												1970				INFORMATION MANUAL				6-1				87				CHECKED <i>[Signature]</i>												SERIES				PART NO.				406559				APPR. <i>[Signature]</i>												A											
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STANDARD

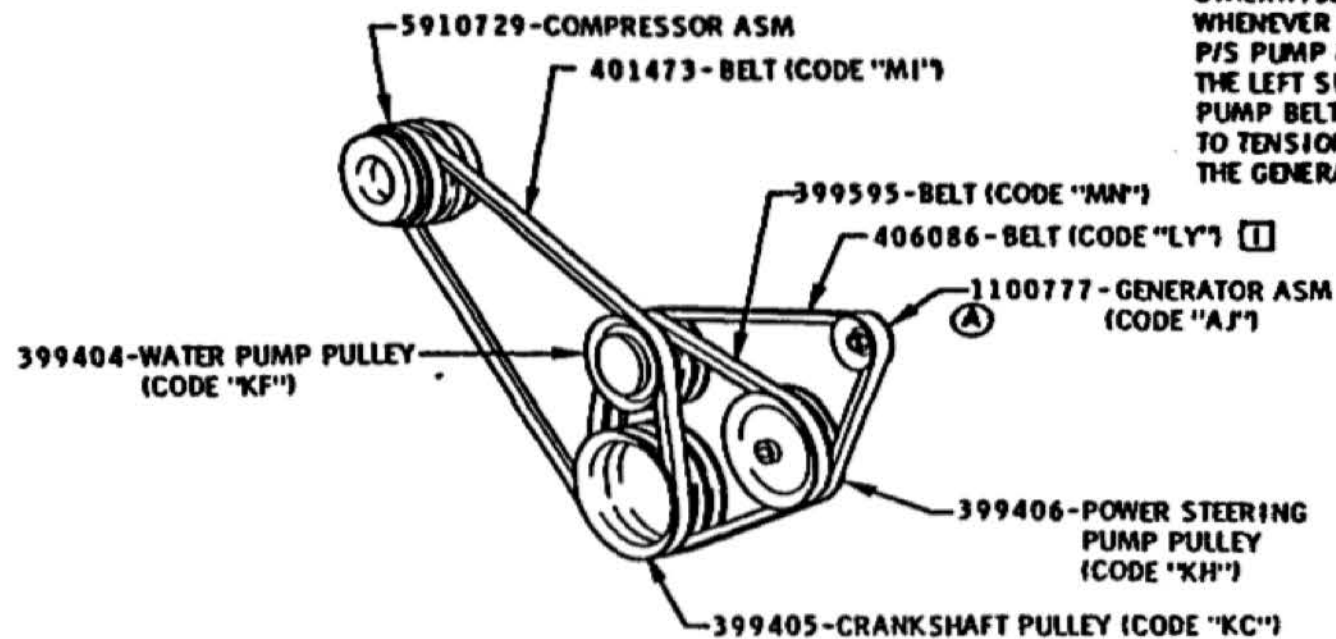


POWER STEERING

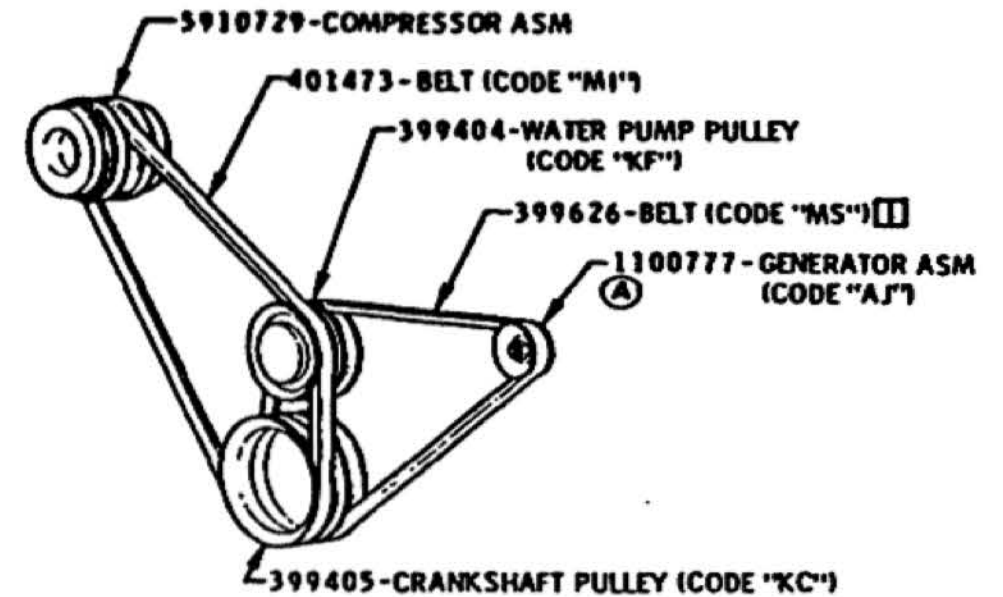
BELT TENSION

BELT TENSION TO CHECK 110/125# ON BURROUGHS TOOL 33-95 ON INSTALLATION, TO CHECK 70# MINIMUM AFTER CAR HAS BEEN RUN ON TEST ROLLS, UNLESS OTHERWISE SPECIFIED. WHENEVER THE COMBINATION OF P/S PUMP & GENERATOR ARE ON THE LEFT SIDE OF ENGINE, THE P/S PUMP BELT MUST BE ADJUSTED TO TENSION BEFORE TIGHTENING THE GENERATOR BELT.

(B)



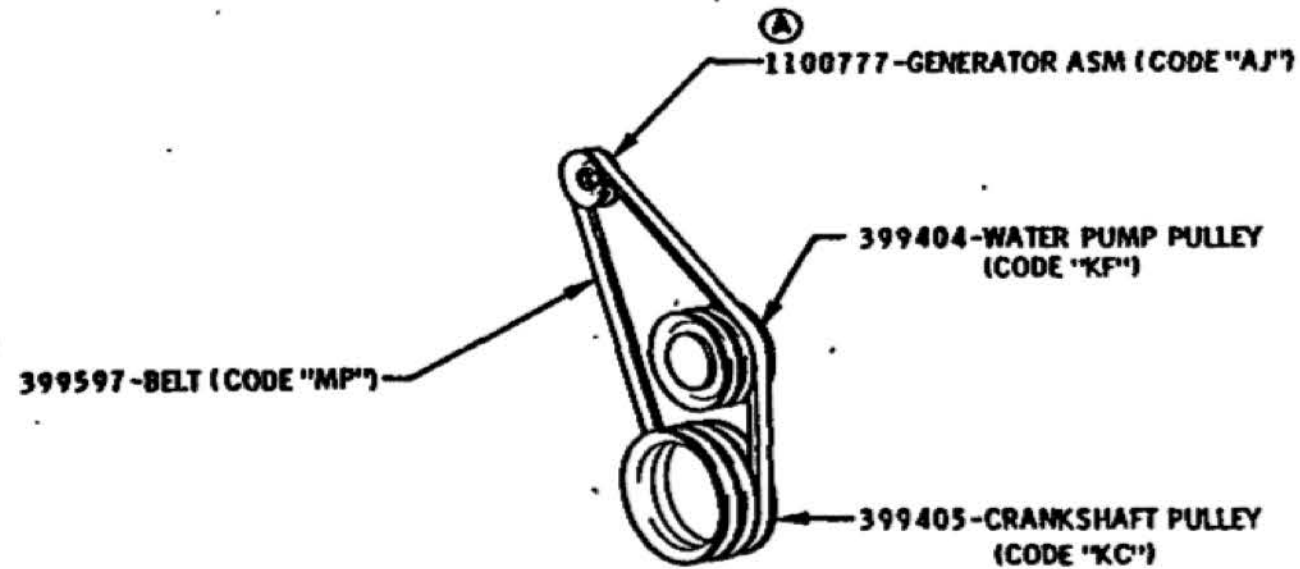
AIR CONDITIONING WITH POWER STEERING



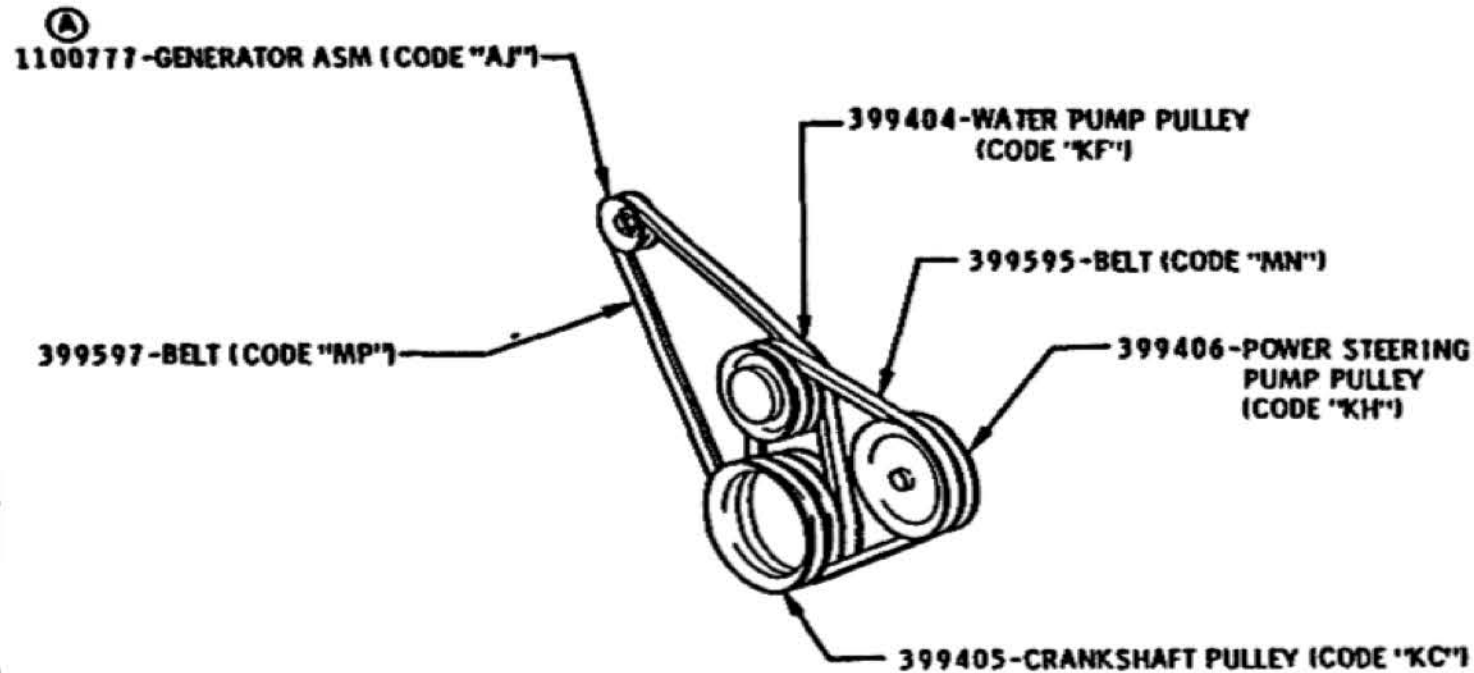
AIR CONDITIONING

(I) BELT TENSION 60# MIN. AFTER CAR HAS RUN ON TEST ROLLS

DATE	SYM	REVISION	DR	CL	APPR.	TITLE	FIRST USED	OLDMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
7-31-69	D	CODE WAS "MN"				PULLEY AND BELT DIAGRAM 350 CU. IN. V8 ENGINE	1970		6-1	90
7-31-69	C	NOTE ADDED								
7-31-69	B	NOTE REVISED								
7-31-69	A	PART NOS REVISED								
									A	404411



HEAVY DUTY GENERATOR & ENGINE COOLING



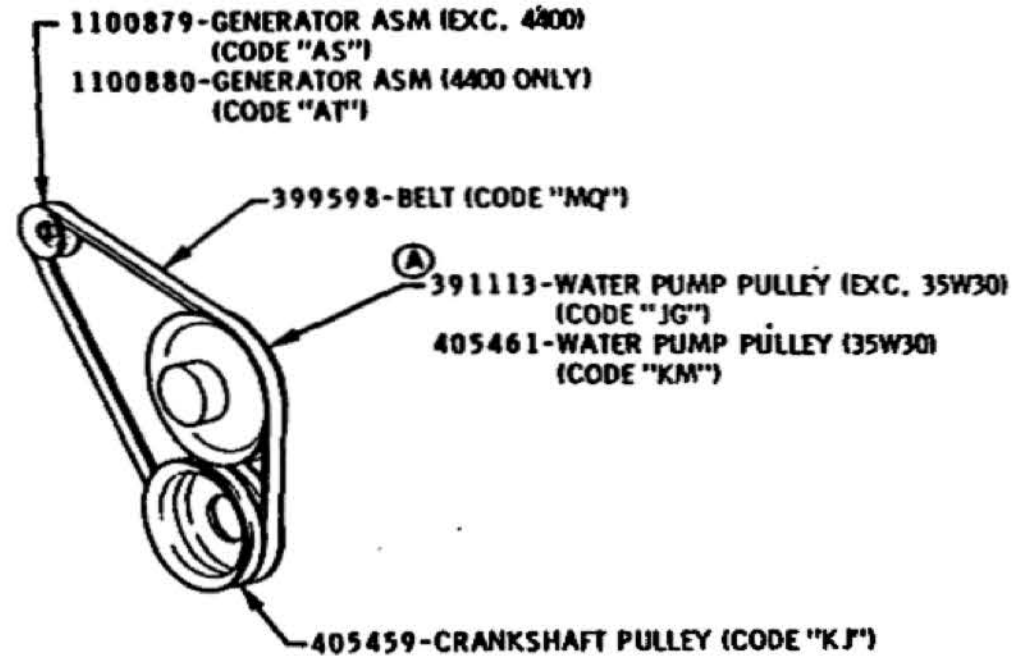
HEAVY DUTY GENERATOR & ENGINE COOLING WITH POWER STEERING

**BELT TENSION**

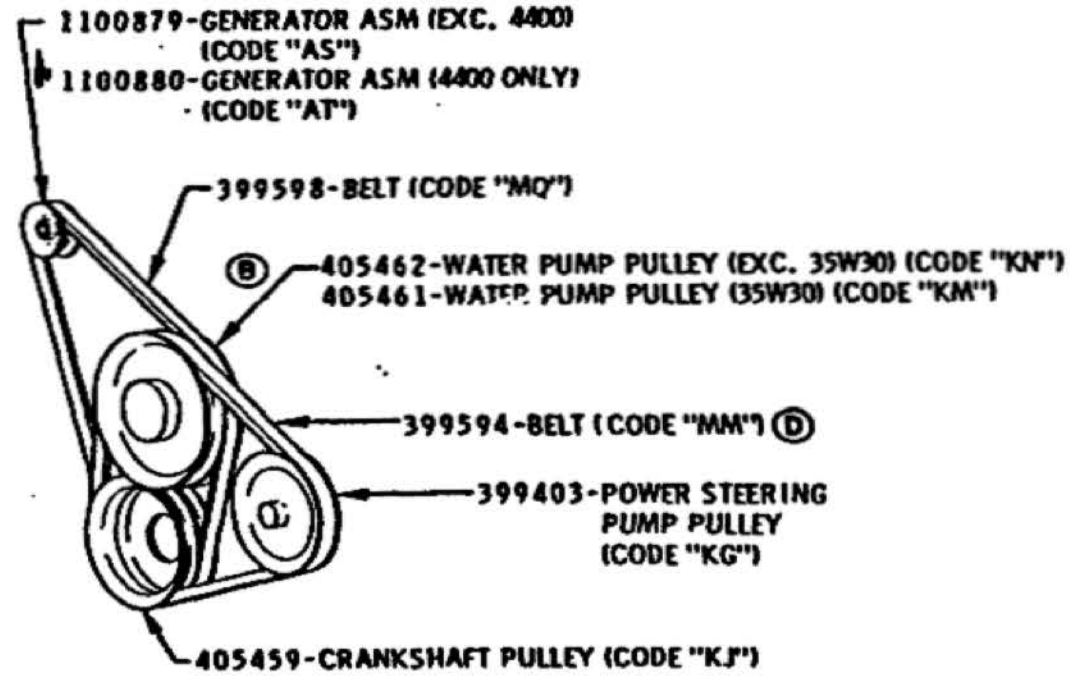
BELT TENSION TO CHECK 110/125# ON BURROUGHS TOOL 33-95 ON INSTALLATION, TO CHECK 70# MINIMUM AFTER CAR HAS BEEN RUN ON TEST ROLLS.

WHENEVER THE COMBINATION OF P/S PUMP & GENERATOR ARE ON THE LEFT SIDE OF ENGINE, THE P/S PUMP BELT MUST BE ADJUSTED TO TENSION BEFORE TIGHTENING THE GENERATOR BELT.

		TITLE		PULLEY AND BELT DIAGRAM 350 CU. IN. V8 ENGINE	
		DATE	APRIL 11, 1969	FIRST USED	1970
		DR BY	CURT MOY	OLDSMOBILE PRODUCT	MANUAL DOC. PAGE
		CHECKED	<i>[Signature]</i>	INFORMATION MANUAL	6-1 91
7-31-69	A2	PART NO. REVISED	ALPTS	APPR	<i>[Signature]</i>
DATE	BY	REVISION	DR. CK.	NO.	REVISED
				SERIES	A
				PART NO.	404411



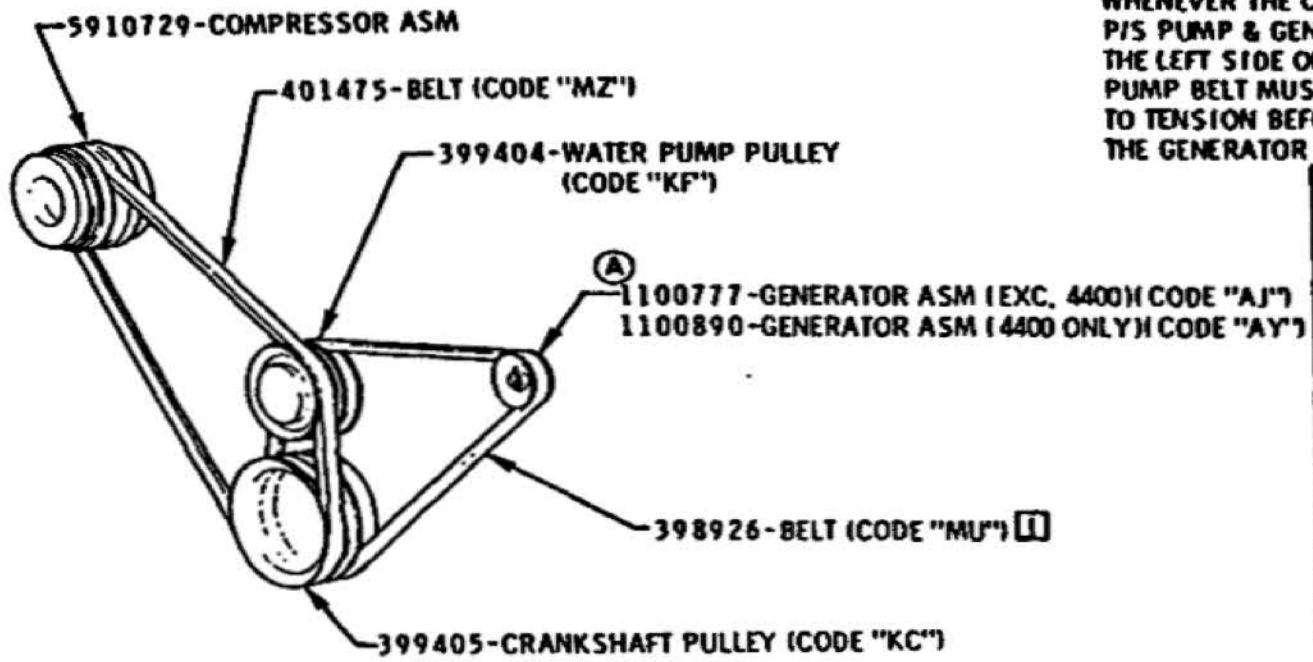
STANDARD



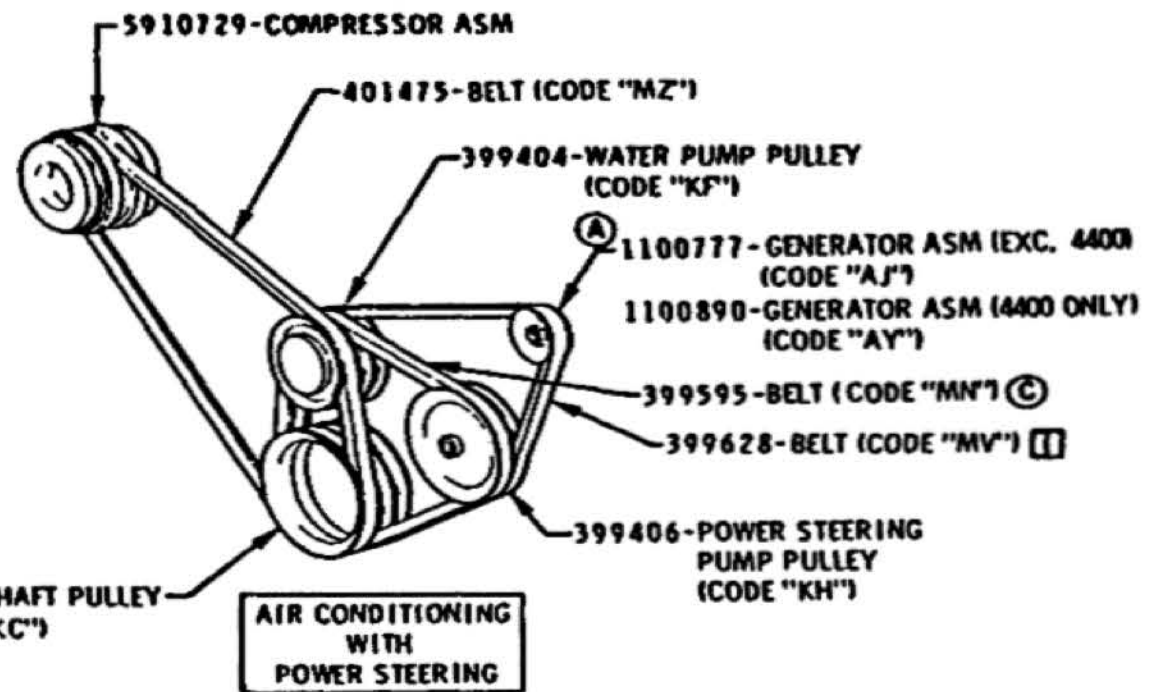
POWER STEERING

BELT TENSION

BELT TENSION TO CHECK 110/125# ON BURROUGHS TOOL 33-95 ON INSTALLATION. TO CHECK 70# MINIMUM AFTER CAR HAS BEEN RUN ON TEST ROLLS, UNLESS OTHERWISE SPECIFIED. WHENEVER THE COMBINATION OF P/S PUMP & GENERATOR ARE ON THE LEFT SIDE OF ENGINE, THE P/S PUMP BELT MUST BE ADJUSTED TO TENSION BEFORE TIGHTENING THE GENERATOR BELT.



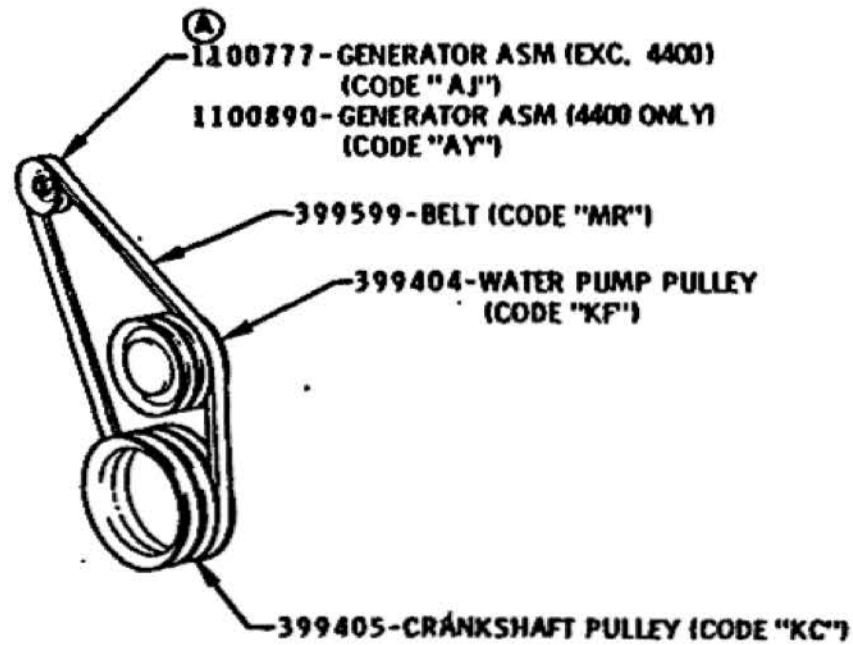
AIR CONDITIONING



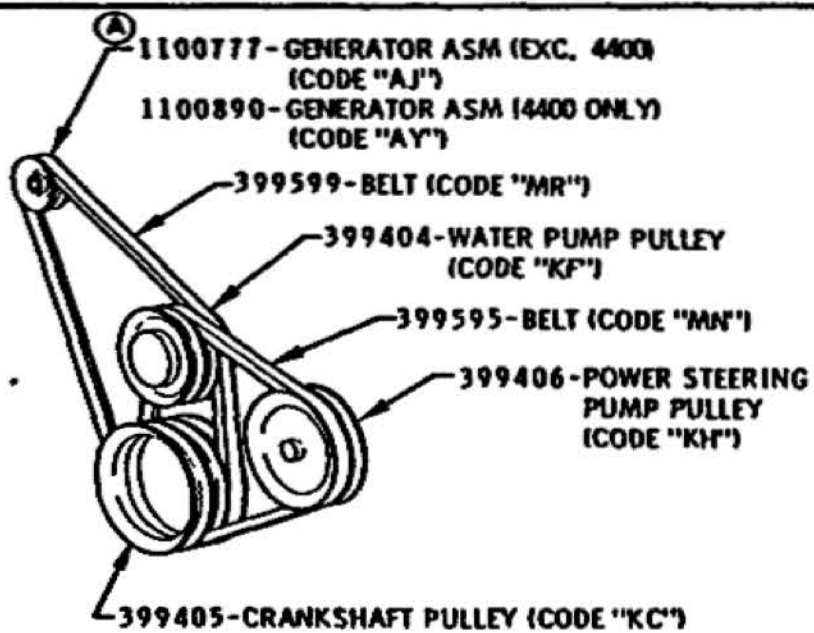
AIR CONDITIONING WITH POWER STEERING

1 BELT TENSION 60# MIN. AFTER CAR HAS RUN ON TEST ROLLS

DATE	SYM	REVISION	DR	CL	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	
7-31-69	D	CODE WAS "MN"				PULLEY & BELT DIAGRAM - 455 CU. IN. ENGINE	1970		6-1	92	
7-31-69	C2	NOTE ADDED									
7-31-69	B2	NOTE REVISED									
7-31-69	A3	PART NO.'S REVISED									
							REF.	SERIES	PART NO.		
								A	404411		



HEAVY DUTY GENERATOR  
AND  
ENGINE COOLING



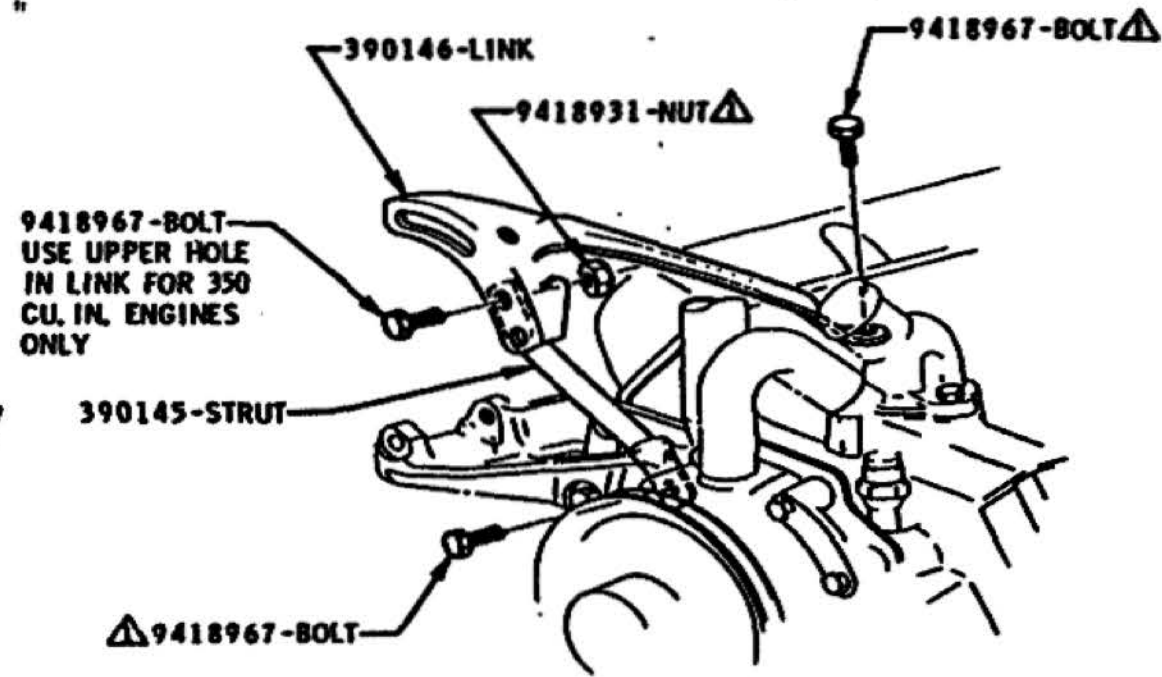
HEAVY DUTY GENERATOR AND ENGINE COOLING  
WITH  
POWER STEERING

**BELT TENSION**

BELT TENSION TO CHECK 110/125#  
ON BURROUGHS TOOL 33-95 ON  
INSTALLATION. TO CHECK 70#  
MINIMUM AFTER CAR HAS BEEN  
RUN ON TEST ROLLS.

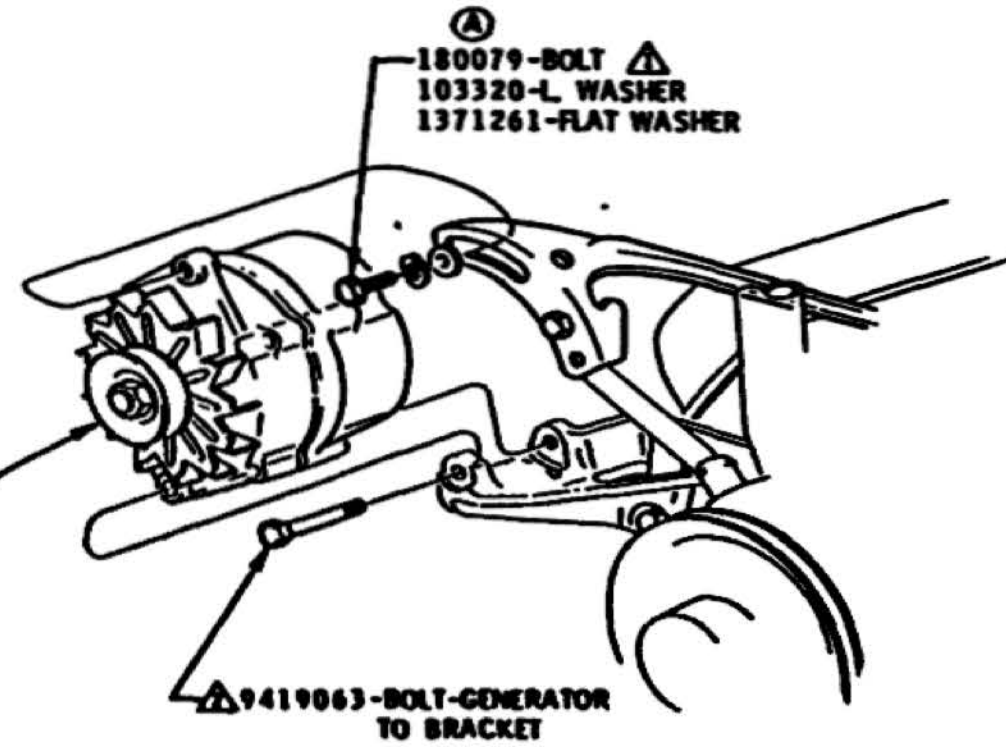
WHENEVER THE COMBINATION OF  
P/S PUMP & GENERATOR ARE ON  
THE LEFT SIDE OF ENGINE, THE P/S  
PUMP BELT MUST BE ADJUSTED  
TO TENSION BEFORE TIGHTENING  
THE GENERATOR BELT.

				TITLE		PULLEY & BELT DIAGRAM - 455 CU. IN. ENGINE	
		DATE		APRIL 11, 1969		FIRST USED	
		DR BY		CUT MAY		1970	
		CHECKED		P. S. G. H. S.		OLDSMOBILE PRODUCT	
		APPR.		O. S. G. H. S.		INFORMATION MANUAL	
7-31-69		A2		PART NO. REVISED		MANUAL SEC.	
DATE		SYM		REVISION		PAGE	
						6-1	
						93	
						SERIES	
						A	
						PART NO.	
						404411	



GENERATOR SUPPORTING PARTS

GENERATOR ASM - SEE  
PULLEY & BELT DIAGRAM  
IN FRONT OF SECTION



GENERATOR TO BRACKETS

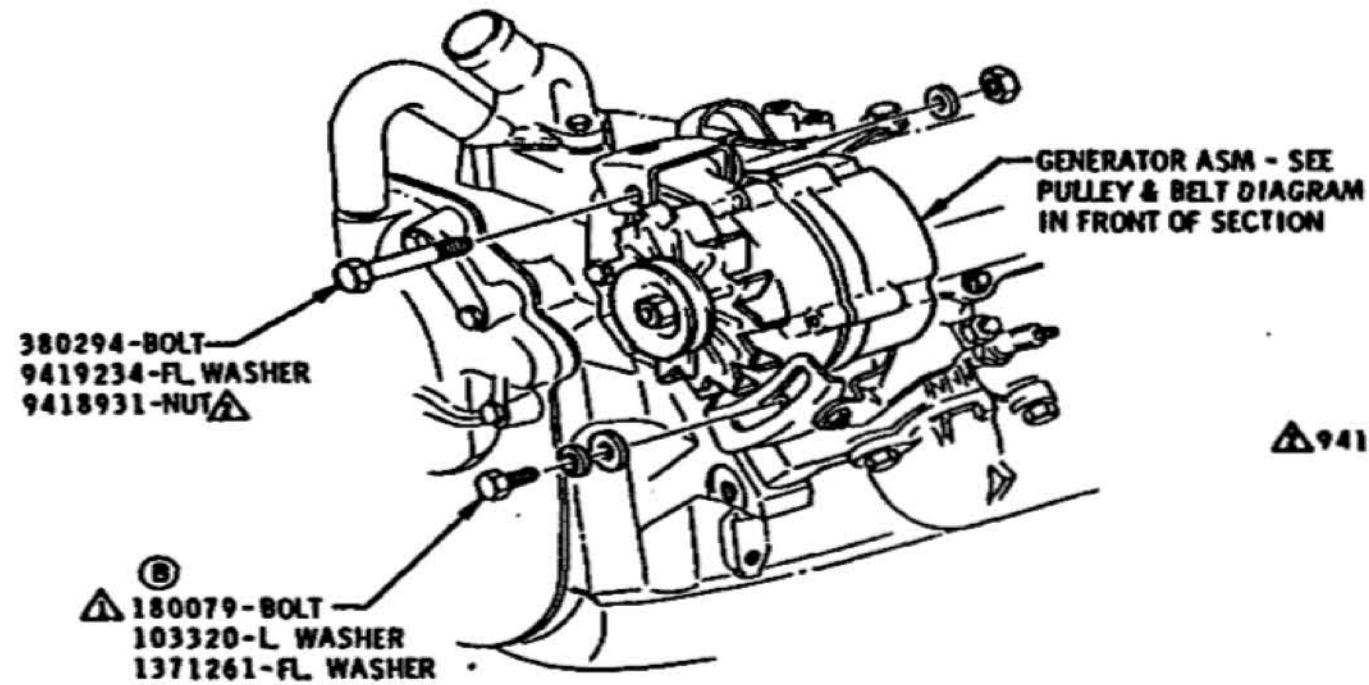
- ▲ 25 - 35 LB. FT.
- ▲ 20 - 25 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

(EXC. AIR CONDITIONING)

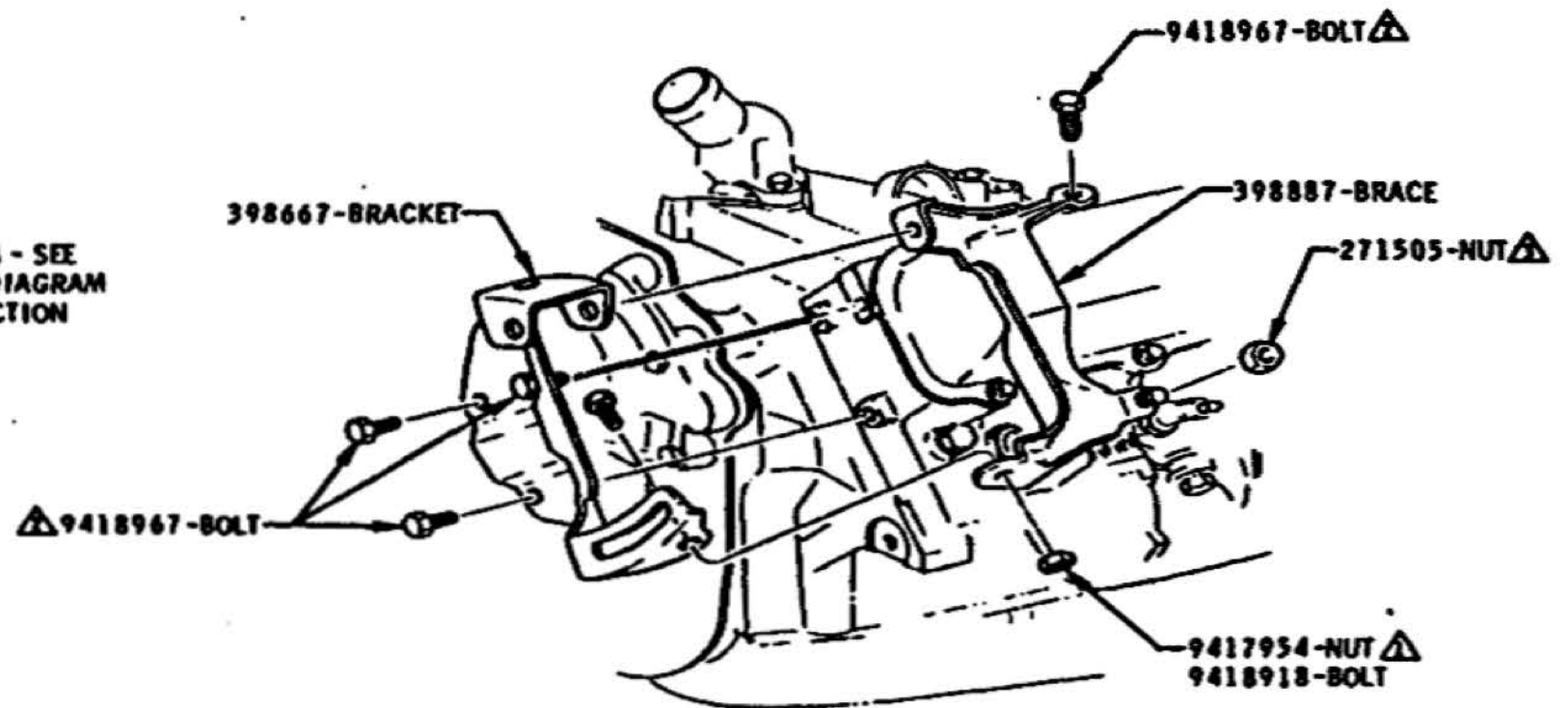
				TITLE				GENERATOR AND MOUNTING			
				DATE		FIRST USED		OLDSMOBILE PRODUCT		MANUAL SEC. PAGE	
				DECEMBER 18, 1968		1970		INFORMATION MANUAL		6-1 100	
				DR BY		CHKD BY		REV.		SERIES	
				C. W. MAY		M. J. AMBART		6V1		A-B-C-E	
				APPR.		APPR.				PART NO.	
				J. B. G. A		J. B. G. A				404411-2-3	
DATE	SYM	REVISION	DR.	CK.	APPR.						



Ⓐ



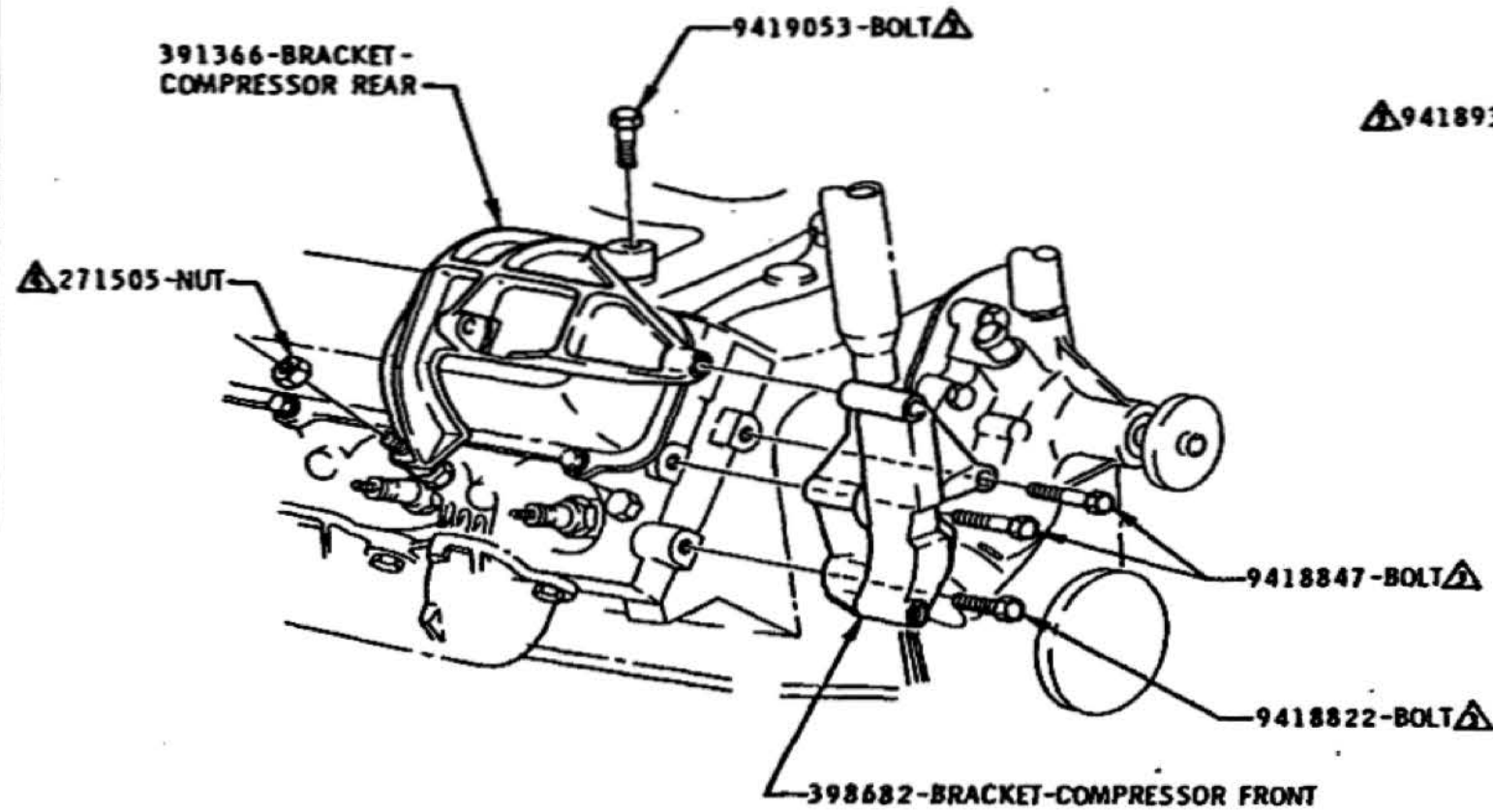
INSTALLATION OF  
GENERATOR TO SUPPORTING  
BRACKETS



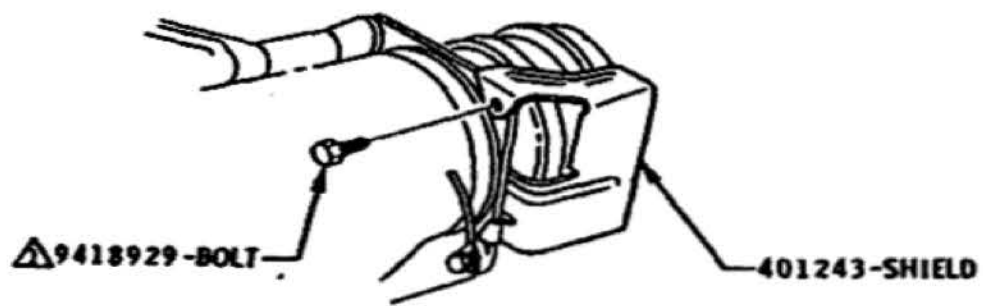
INSTALLATION OF GENERATOR  
BRACKET AND BRACE

- ▲ 40-50 LB. FT.
- ▲ 25-35 LB. FT.
- ▲ 20-25 LB. FT.
- ▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE		SYN	REVISION	DR	CL	APPR	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
3-7-69		A	VIEW REMOVED				AIR CONDITIONING GENERATOR MOUNTING	1970		6-1	102
8-19-68		B	WAS 9416740 BOLT	J13	P21		DATE DECEMBER 18, 1968 DR BY CUBT MAY CHECKED BY [Signature] APPR. [Signature]	REV. 35C60 35C61 (6V)	SERIES	A-B-C-E	PART NO. 404411-2-3

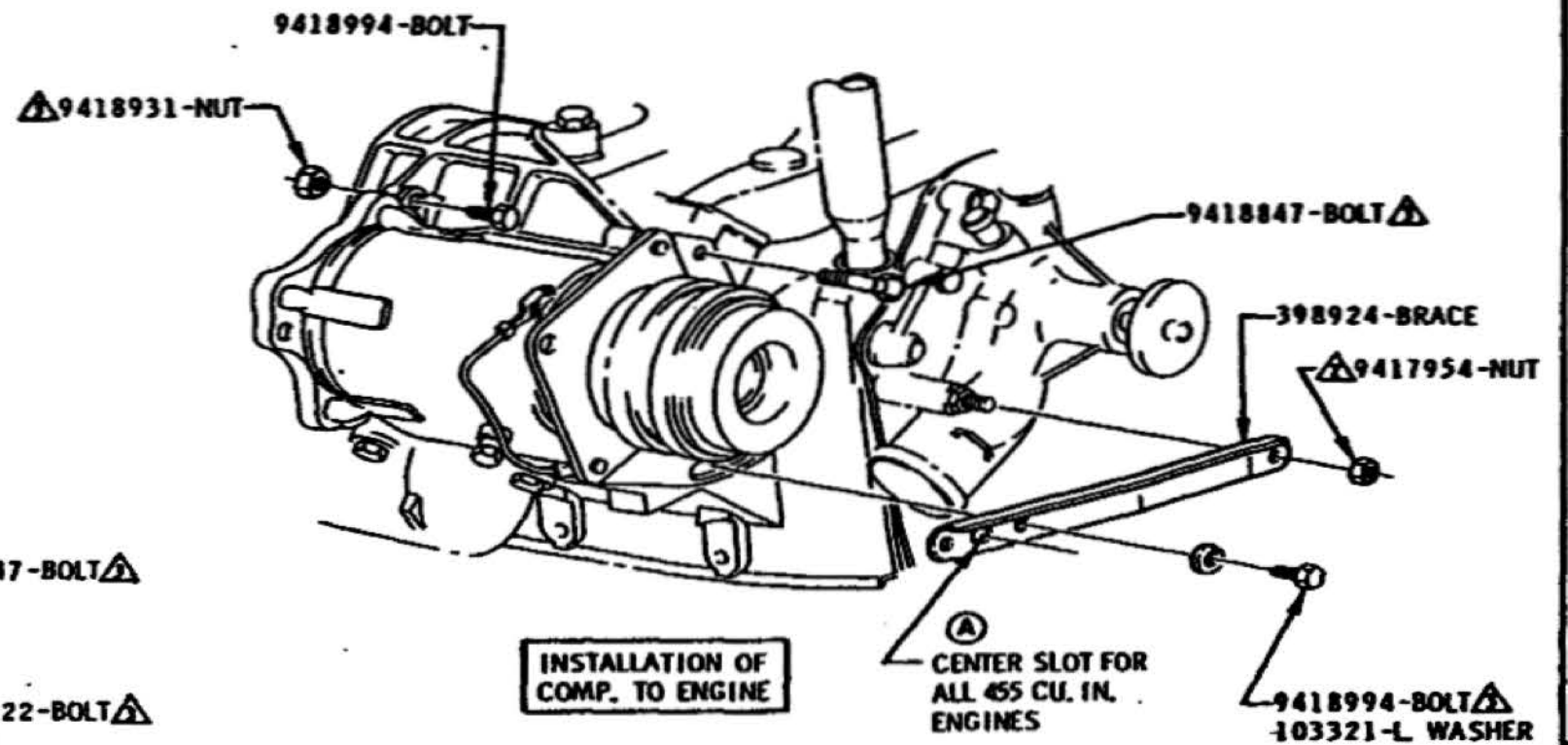


INSTALLATION BRACKETS TO ENGINE



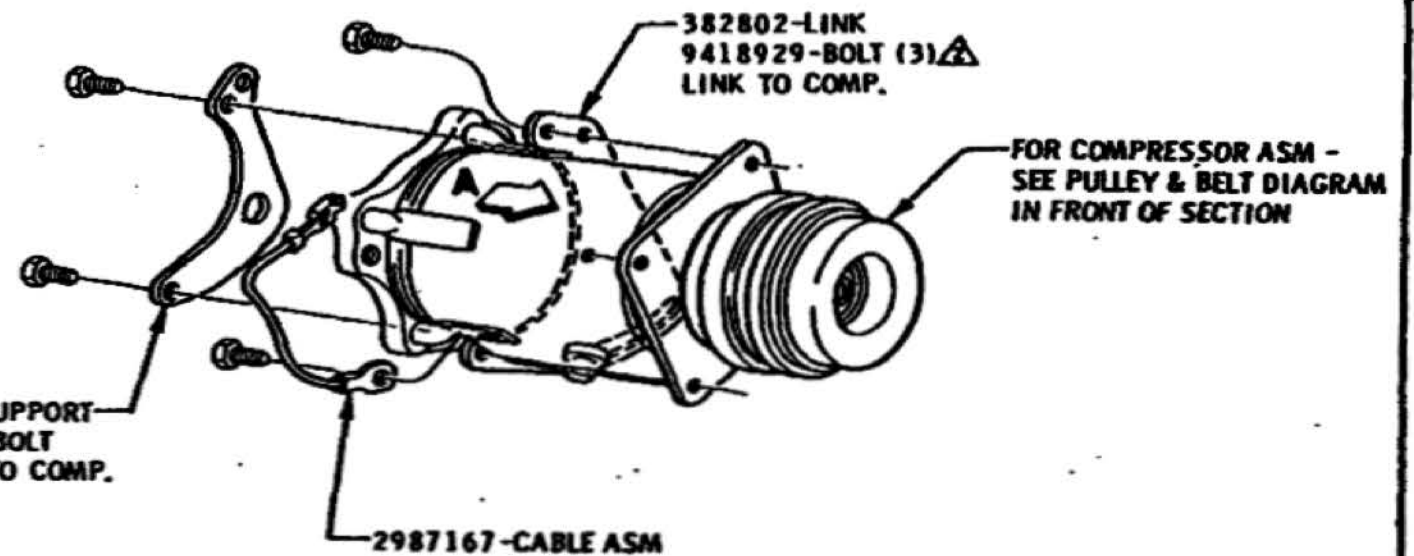
SHIELD TO COMPRESSOR  
(E CAR ONLY)  
VIEW A

- ▲ 40 - 50 LB. FT.
- ▲ 25 - 35 LB. FT.
- ▲ 20 - 25 LB. FT.
- ▲ 10 - 15 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED



INSTALLATION OF COMP. TO ENGINE

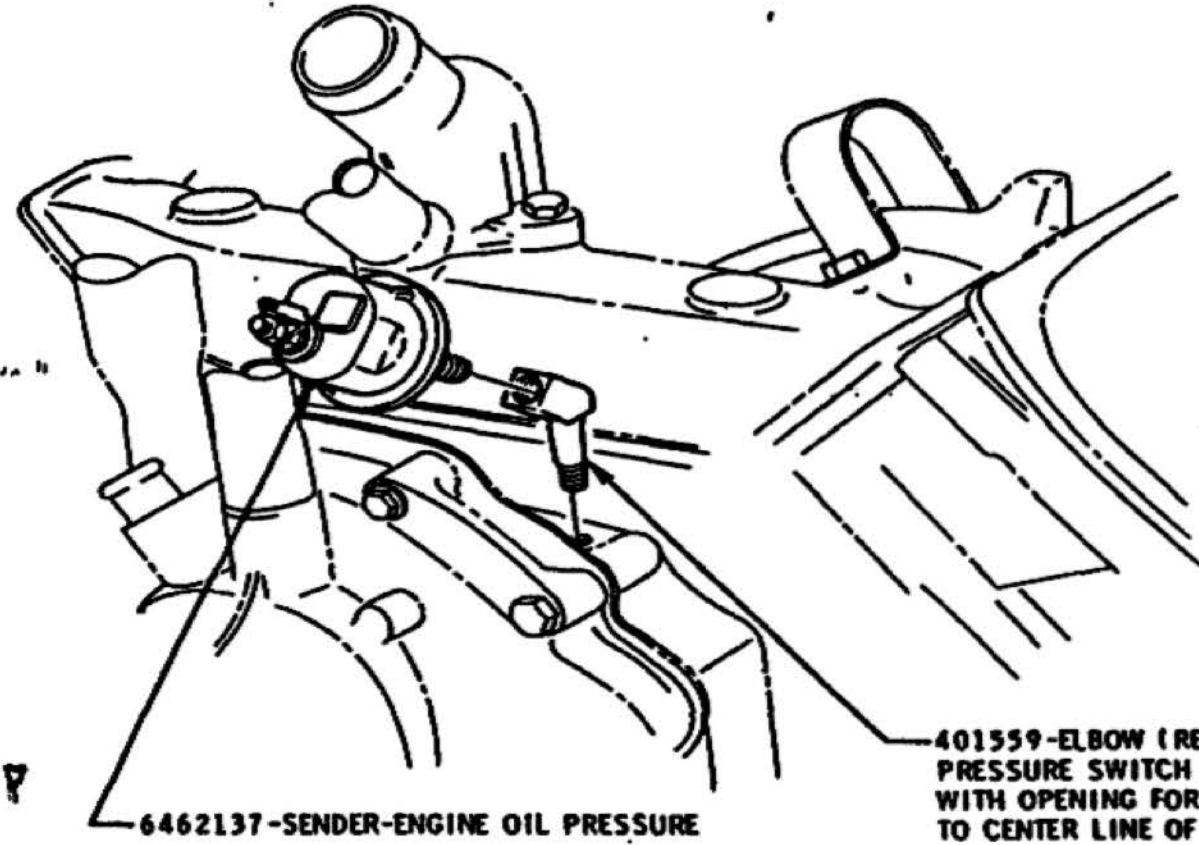
A CENTER SLOT FOR ALL 455 CU. IN. ENGINES



COMPRESSOR & COMPONENT PARTS

DATE		SYN	REVISION	DR.	CL.	APPR.	TITLE	PARTS USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE	
							AIR CONDITIONING COMPRESSOR AND BRACKETS	1970		6-1	104	
							DATE DECEMBER 10, 1969					
							DR. BY CLYDE MAY					
							CHECKED [Signature]					
							APPR. [Signature]					
							DR. CL.					
							APPR.					
							REV. 442-474					
							4-35C60					
							E-35C60-1					
										A-E		
											404411-3	

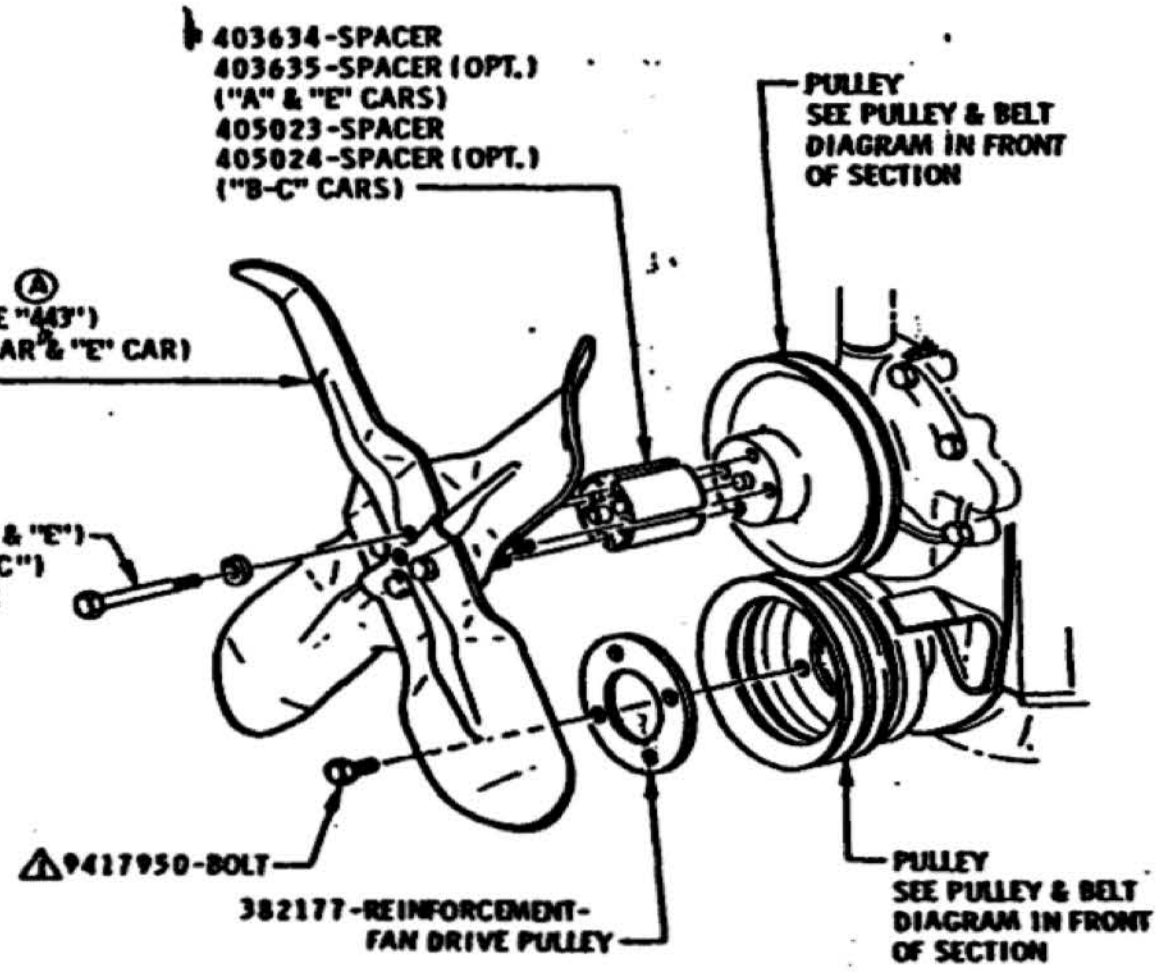




INSTALLATION OF  
RALLY PACK OIL PRESSURE GAGE  
TO ENGINE (A CAR ONLY)

- 405442-FAN BLADE ASM  
(350 CU. IN. "A" CAR) (A)
- 405443-FAN BLADE ASM (CODE "443")  
(EXC. 350 CU. IN. "A" CAR & "E" CAR)
- 403677-FAN BLADE ASM  
("E" CAR)

- ⚠ 181351-BOLT ("A" & "E")
- ⚠ 433099-BOLT ("B-C")
- 103320-L. WASHER



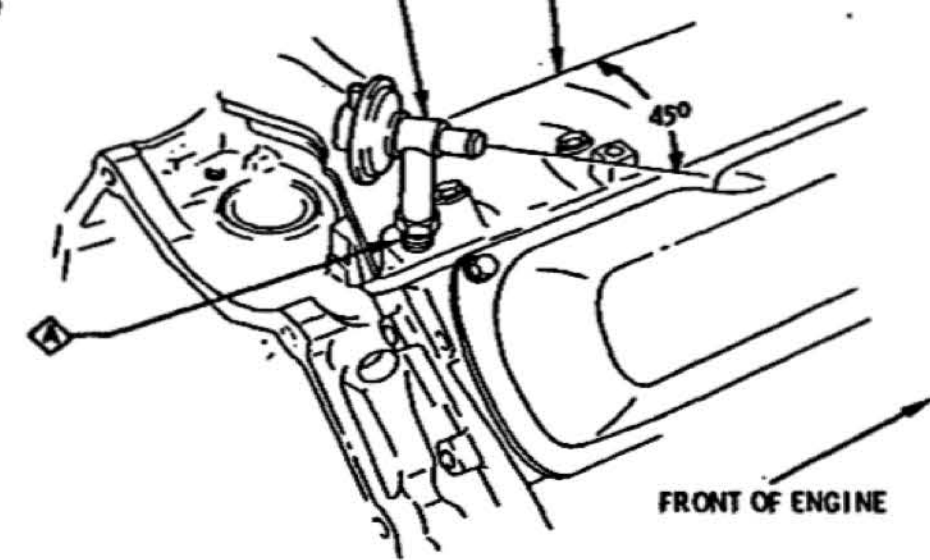
STANDARD FAN & PULLEYS  
(A-B-C-E)

⚠ 15-20 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

		TITLE		PULLEY, STANDARD FANS & 35U21 OIL GAGE	
		DATE	DECEMBER 20, 1968	FIRST USED	1970
		DR BY	CURT MAY	OLDSMOBILE PRODUCT	MANUAL SEC. PAGE
		CHECKED	J. Lambert	INFORMATION MANUAL	6-1 108
6-24-69	A	CODE ADDED		REV. 6K1	SERIES
DATE	SYM	REVISION	DR. CK. APPR.	35U21	PART NO.
				A-B-C-E	404411-2-3

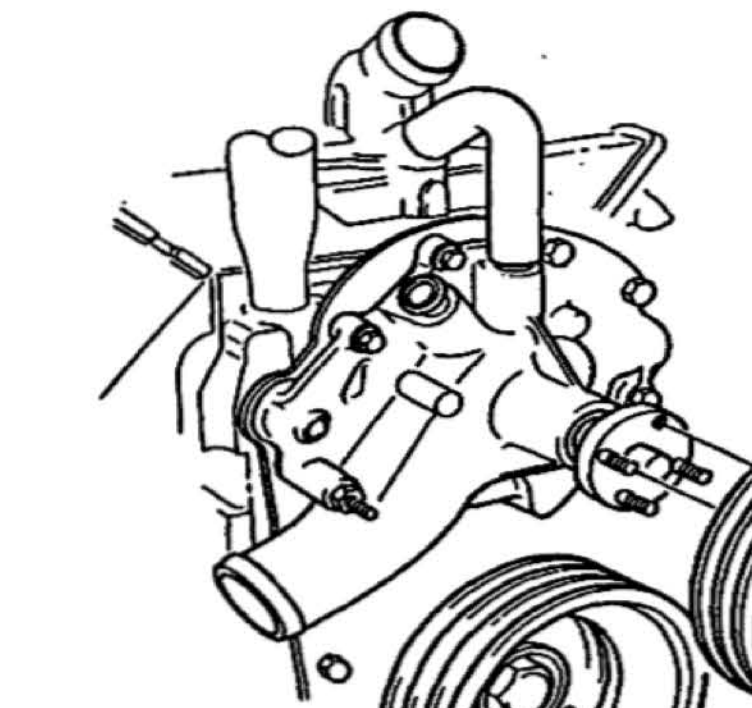
399679-WATER CONTROL VALVE ASSEMBLY  
(EXCEPT 35C61)  
399715-WATER CONTROL VALVE ASSEMBLY  
(35C61)

LINE PARALLEL TO  
CENTERLINE OF ENGINE



FRONT OF ENGINE

INSTALLATION  
A/C WATER VALVE



PULLEY  
SEE PULLEY AND BELT  
CHART IN FRONT OF  
SECTION 6-1

▲ BOLT (2) SAME AS  
STANDARD CAR

9419031-BOLT ▲  
103320-L. WASHER

CLUTCH, FAN AND PULLEY  
INSTALLATION TO WATER PUMP

35C60, 35C61, 35V01, 35W30, 35W31, 35Y72

▲ 401372-FAN BLADE ASM

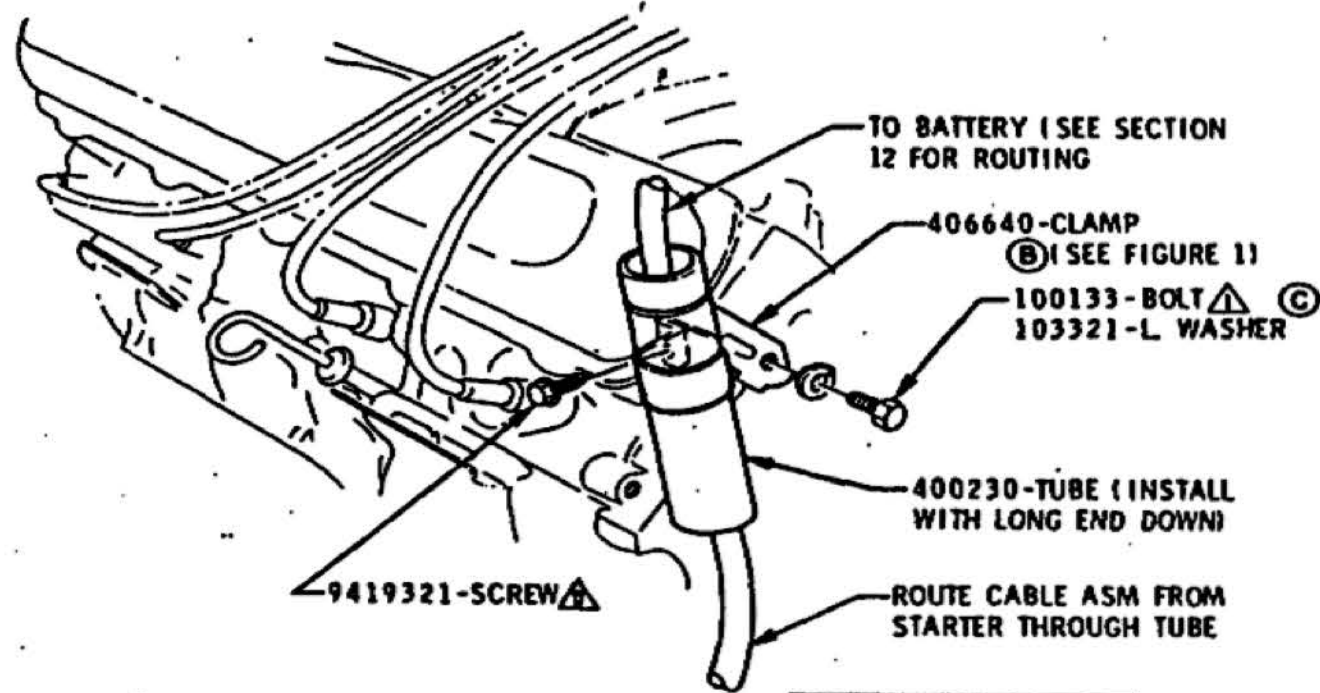
9417954-NUT ▲  
402720-STUD ▲

- 403982-FAN CLUTCH ASM (CODE "OU")
- 4939985-FAN CLUTCH ASM (CODE "OU") (OPT.)  
(32, 36, 4200 WITH 35C60) ("A" CAR WITH 35V01, 35W31)
- 4949861-FAN CLUTCH ASM (CODE "OR")  
(44, 4800 WITH 35C60)
- ▲ 401797-FAN CLUTCH ASM (CODE "OS")
- 4939873-FAN CLUTCH ASM (CODE "OS") (OPT.)  
("A" AND "B-C" CARS WITH 35Y72)
- 403983-FAN CLUTCH ASM (CODE "OW")
- 4939984-FAN CLUTCH ASM (CODE "OW") (OPT.)  
("B-C" CARS WITH 35C60, 35C61)

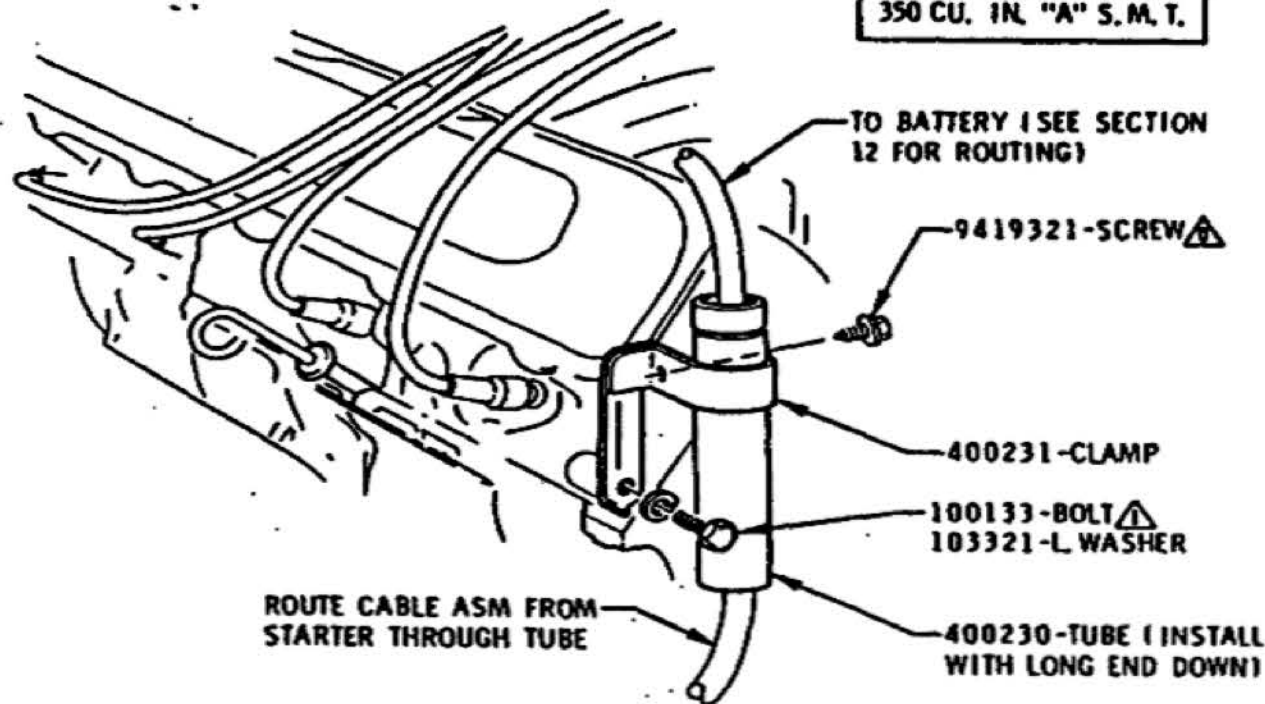
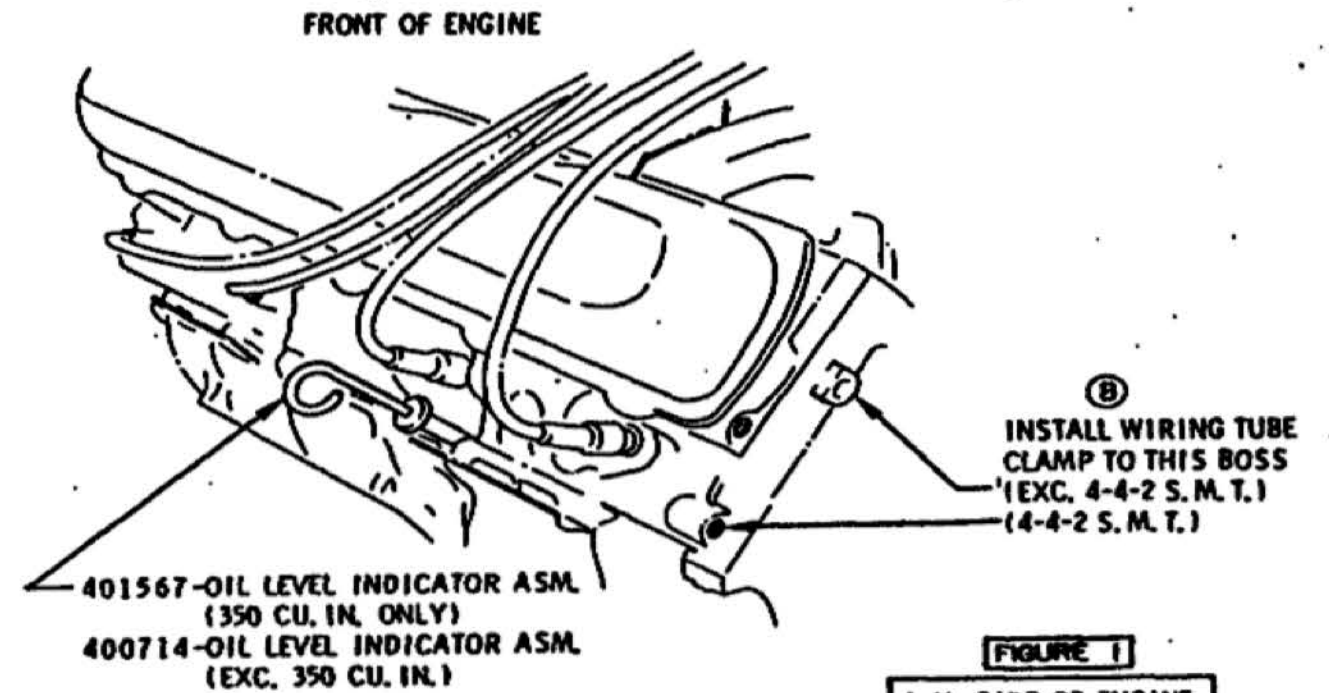
- ▲ 48 - 96 LB. IN.
- ▲ 15 - 20 LB. FT.
- ▲ 10 - 15 LB. FT.
- ▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

APPLY SEALER 9985000  
TO AREA INDICATED ▲  
PRIOR TO ASSEMBLY

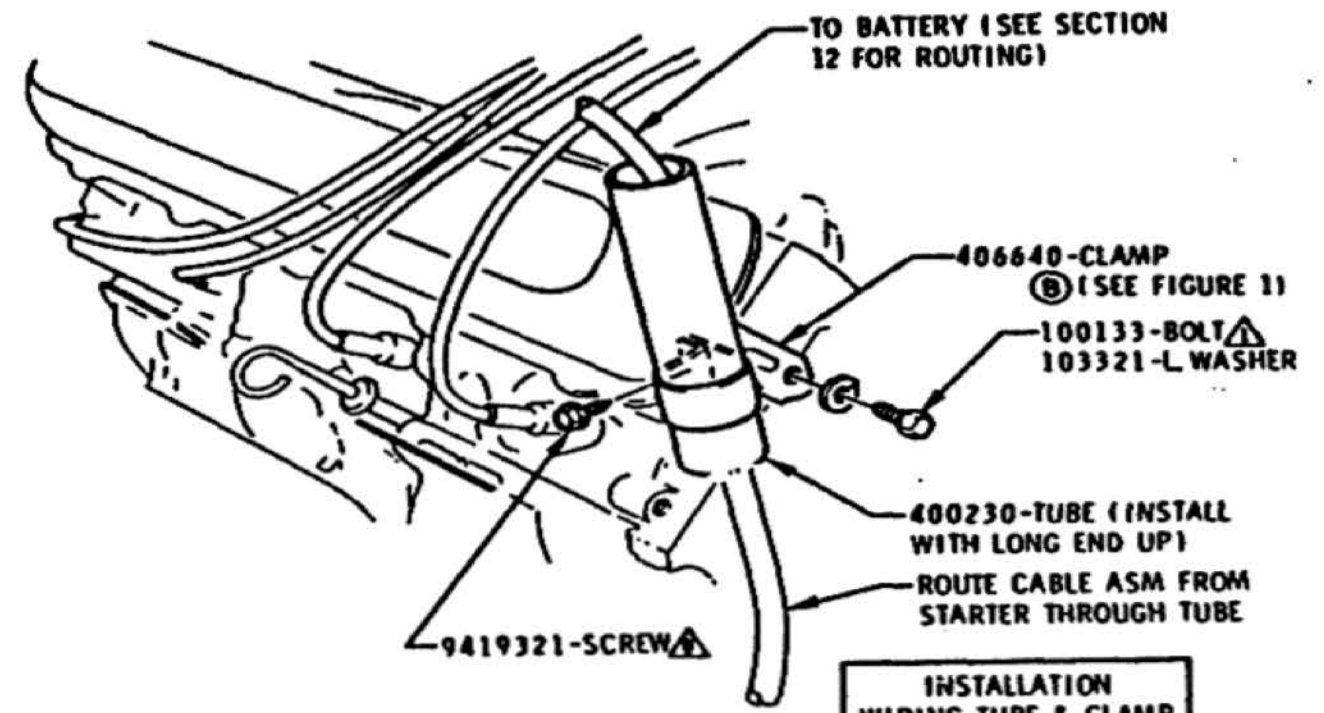
TITLE				AIR CONDITIONING & HEAVY DUTY FAN, PULLEY, CLUTCH & WATER VALVE			
DATE	SYN	REVISION	DR. CL.	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
8-9-69	C	PART NO'S REM	CMP	FEBRUARY 4, 1969	1970	6-1	110
8-6-69	C	35W30 USAGE REV	CMP	DR BY GUYT MAY			
7-1-69	A	PART NO'S REVISED	CMP	CHECKED [Signature]	REV. 35C60, CL	A-B-C	404411-2
				APP. [Signature]	VOL. N10 N11		
					472		



INSTALLATION  
WIRING TUBE & CLAMP  
350 CU. IN. "A" S.M.T.



INSTALLATION  
WIRING TUBE & CLAMP  
442 S.M.T. ONLY

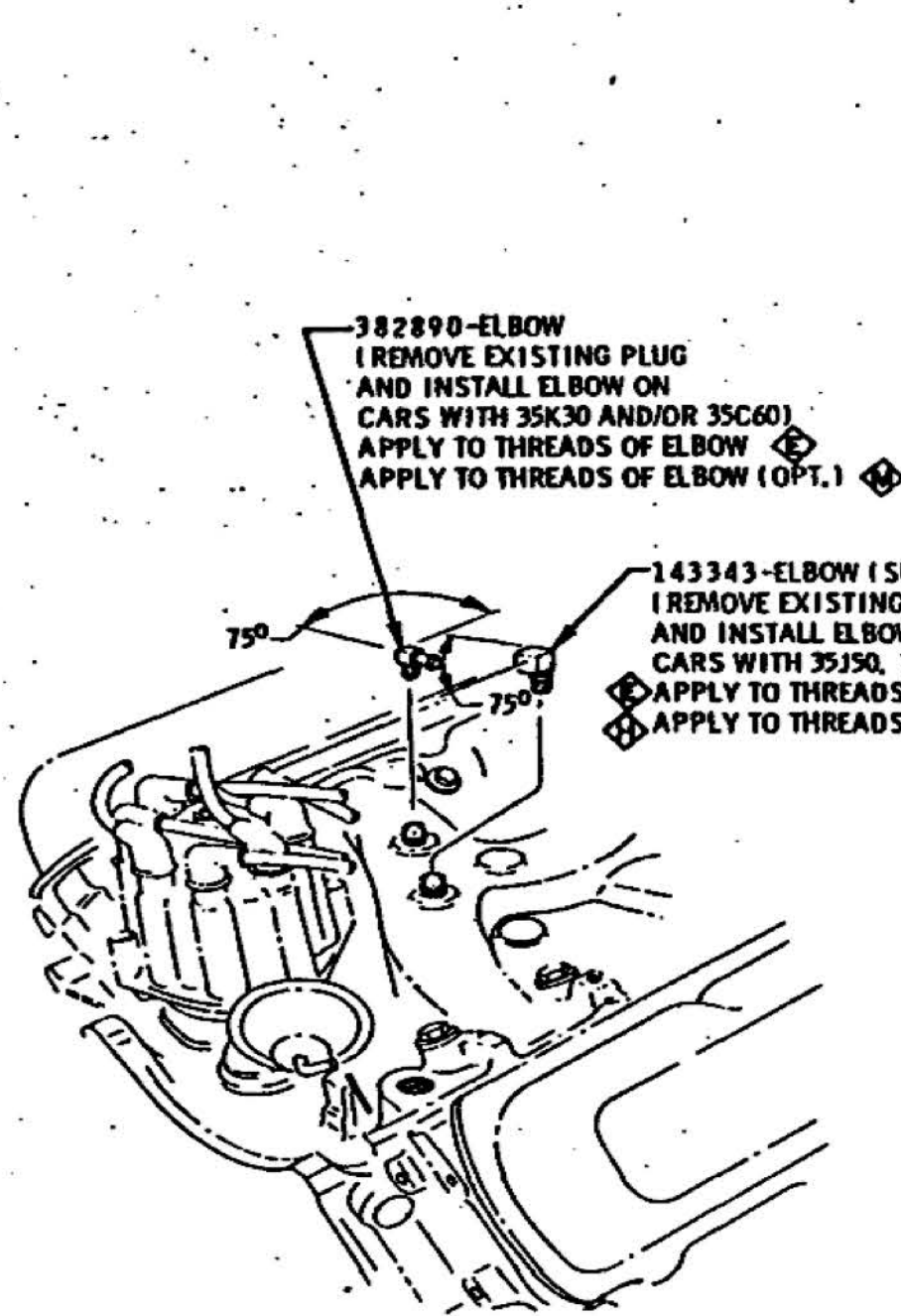


INSTALLATION  
WIRING TUBE & CLAMP  
B-C ONLY

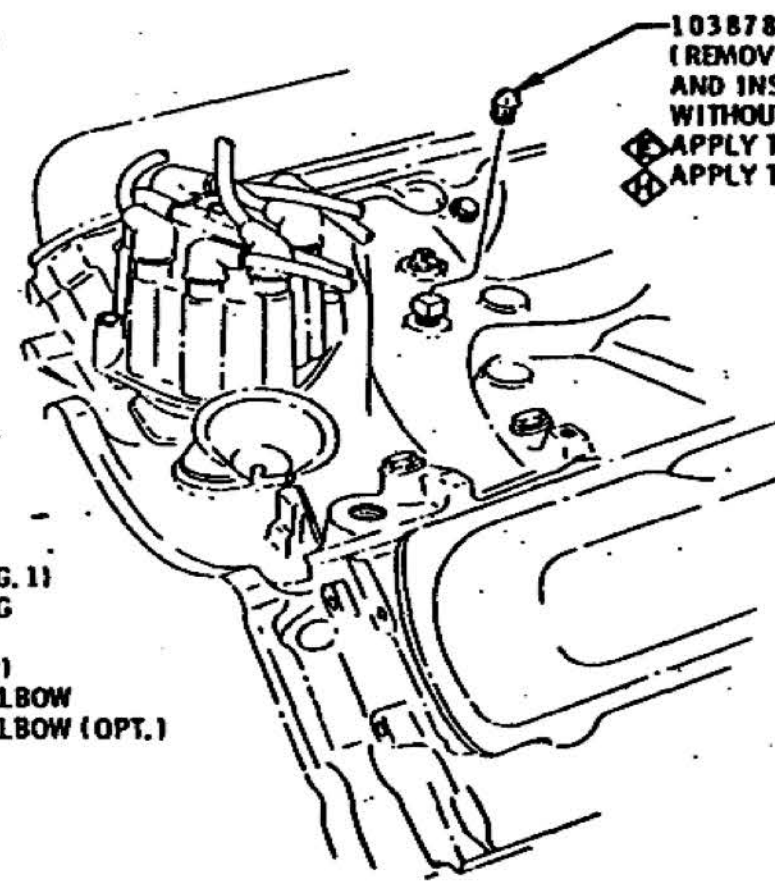
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

▲ 25-35 LB. FT.

REVISION				TITLE				FIRST USED		MANUAL SEC.		PAGE	
1-27-70	C	WAS 100131		OIL LEVEL INDICATOR & STARTER CABLE TUBES				1970		6-1	112		
10-18-69	B	NOTE ADDED		DATE MARCH 8, 1969									
7/1/69	A	REVISED / REDRAWN		DR BY CUYT 1969									
				CHECKED BY Barnhart									
				APPR. KMS				REF. 606	SERIES	PART NO.			
				APPR.				12A	A-B-C-E	404411-2-3			



INSTALLATION  
MANIFOLD VACUUM FITTINGS  
("A" CAR ONLY)



PLUG INSTALLATION  
("B" CAR ONLY)

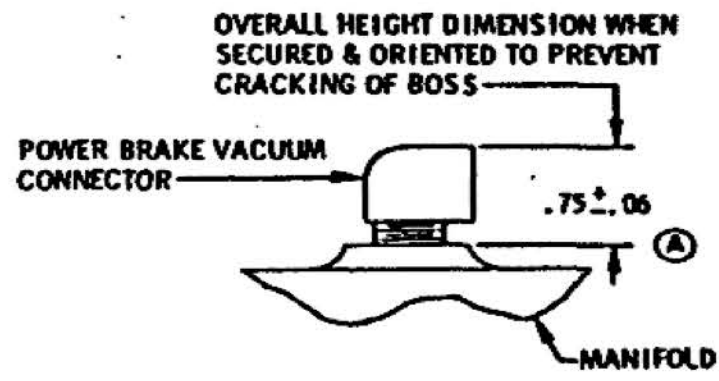
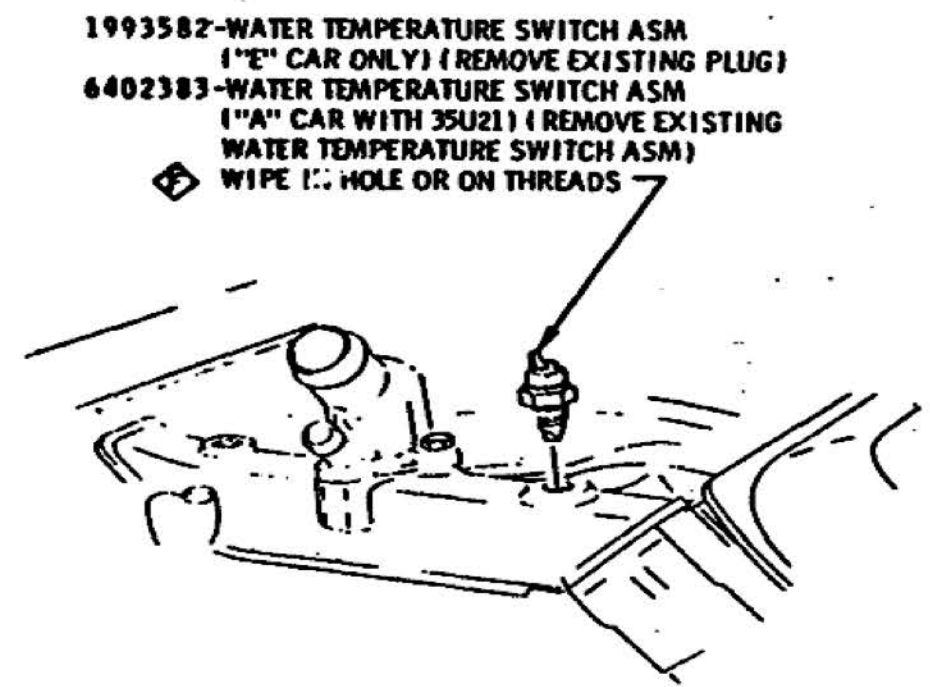


FIGURE 1

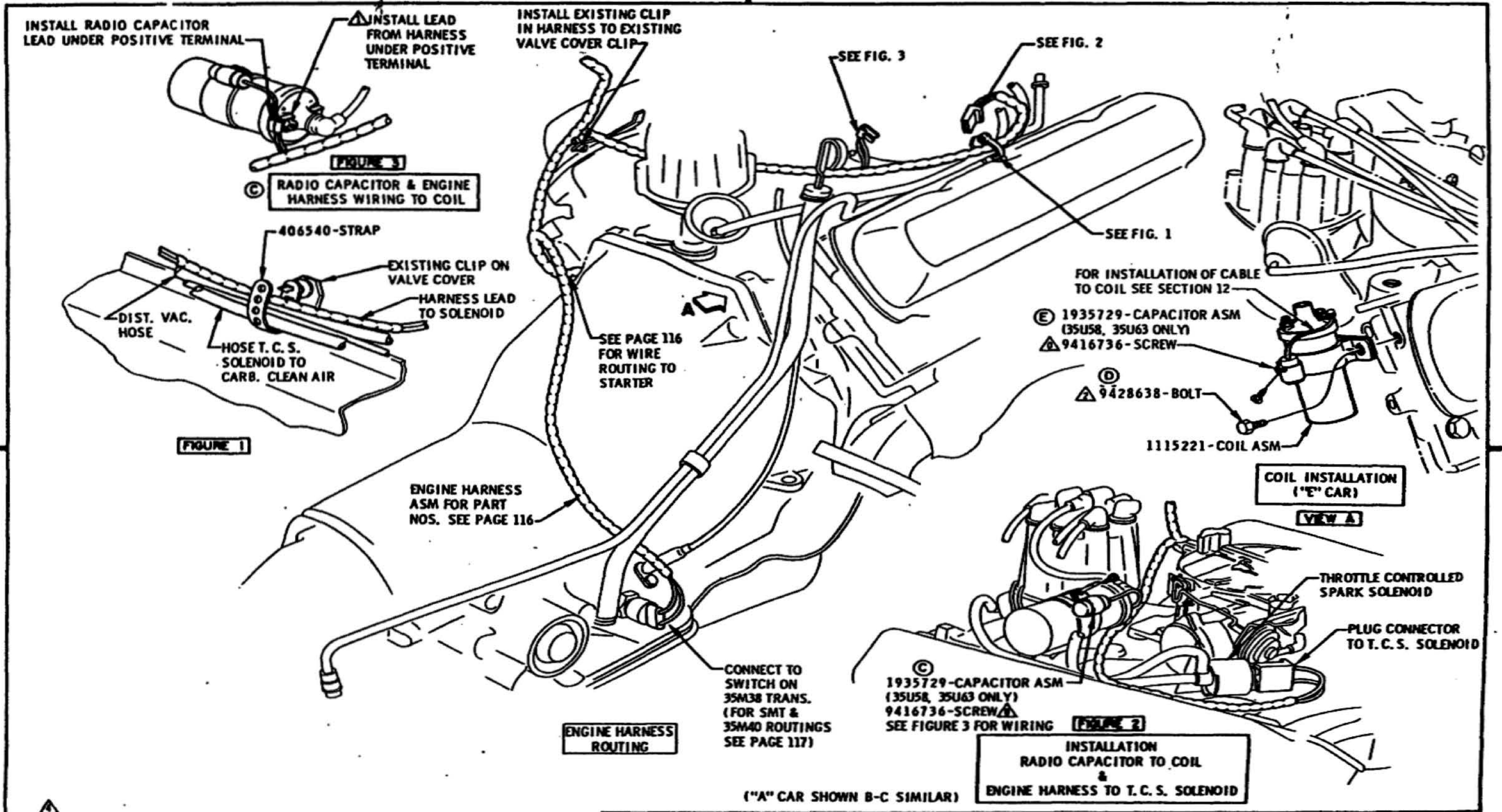


INSTALLATION  
WATER TEMPERATURE SWITCH

- ◆ 9985212-DUPONT PASTE 563-4012  
OR P. O. B. #3 SEALER
- ◆ 9985000-C. P. #9 SEALER  
(NAT'L. MACHINE PROD. CO.)
- ◆ 9985211-TEFLON SEALING TAPE  
(1/4" WIDE)
- ◆ 9985210-TEFLON SEALING TAPE  
(3/16" WIDE)

▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE				MANIFOLD VACUUM FITTINGS & WATER TEMP. SWITCH			
DATE		JANUARY 14, 1969		FIRST USED		1970	
DR BY		CUT 124V		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
CHECKED		M/S ambart		MANUAL SEC.		PAGE	
APPR.		21.27 [Signature]		6-1		114	
DATE		12-16-69		SERIES		A-B-E	
SYM		A DIM. REV		PART NO.		404411-2-3	
REVISION		DR. CK.		APPR.			

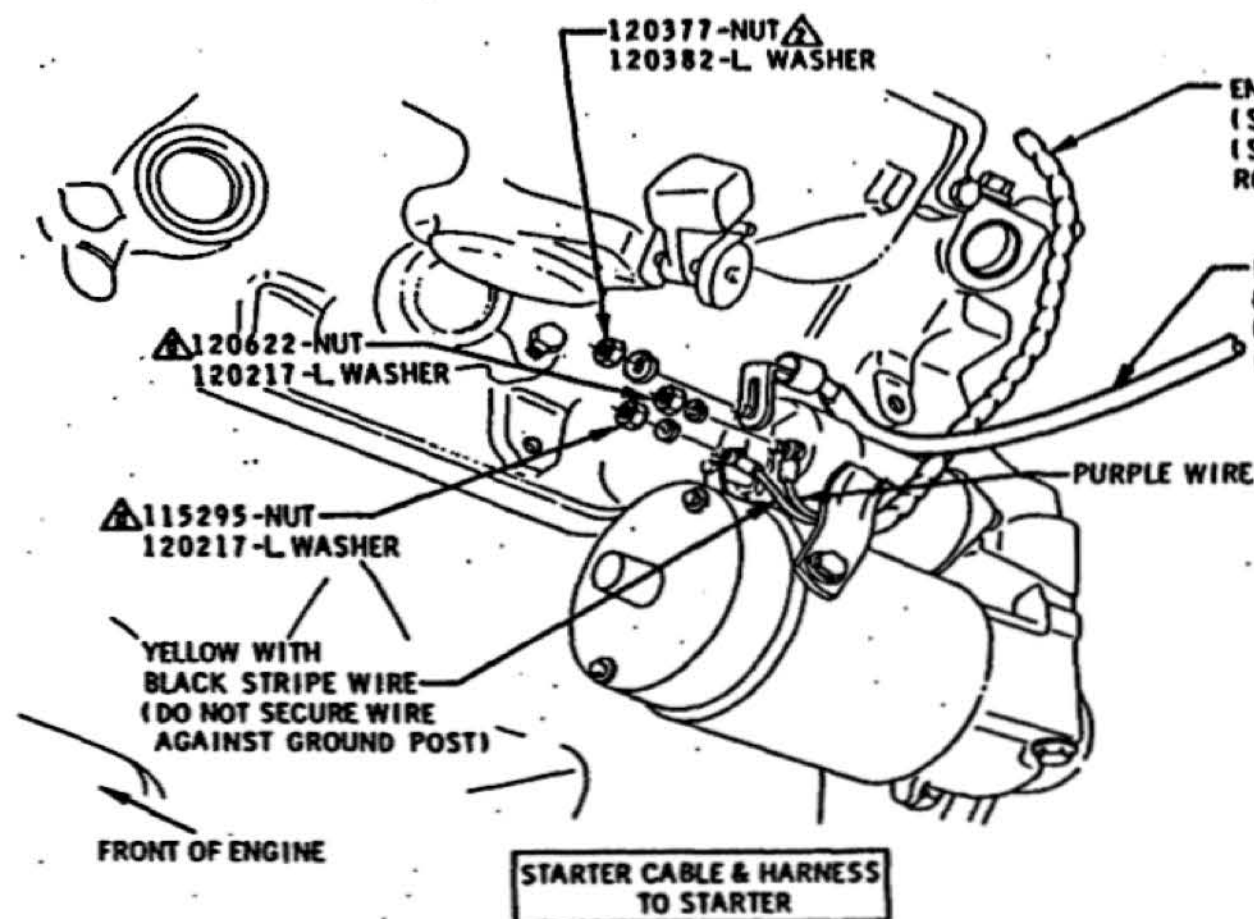


("A" CAR SHOWN B-C SIMILAR)

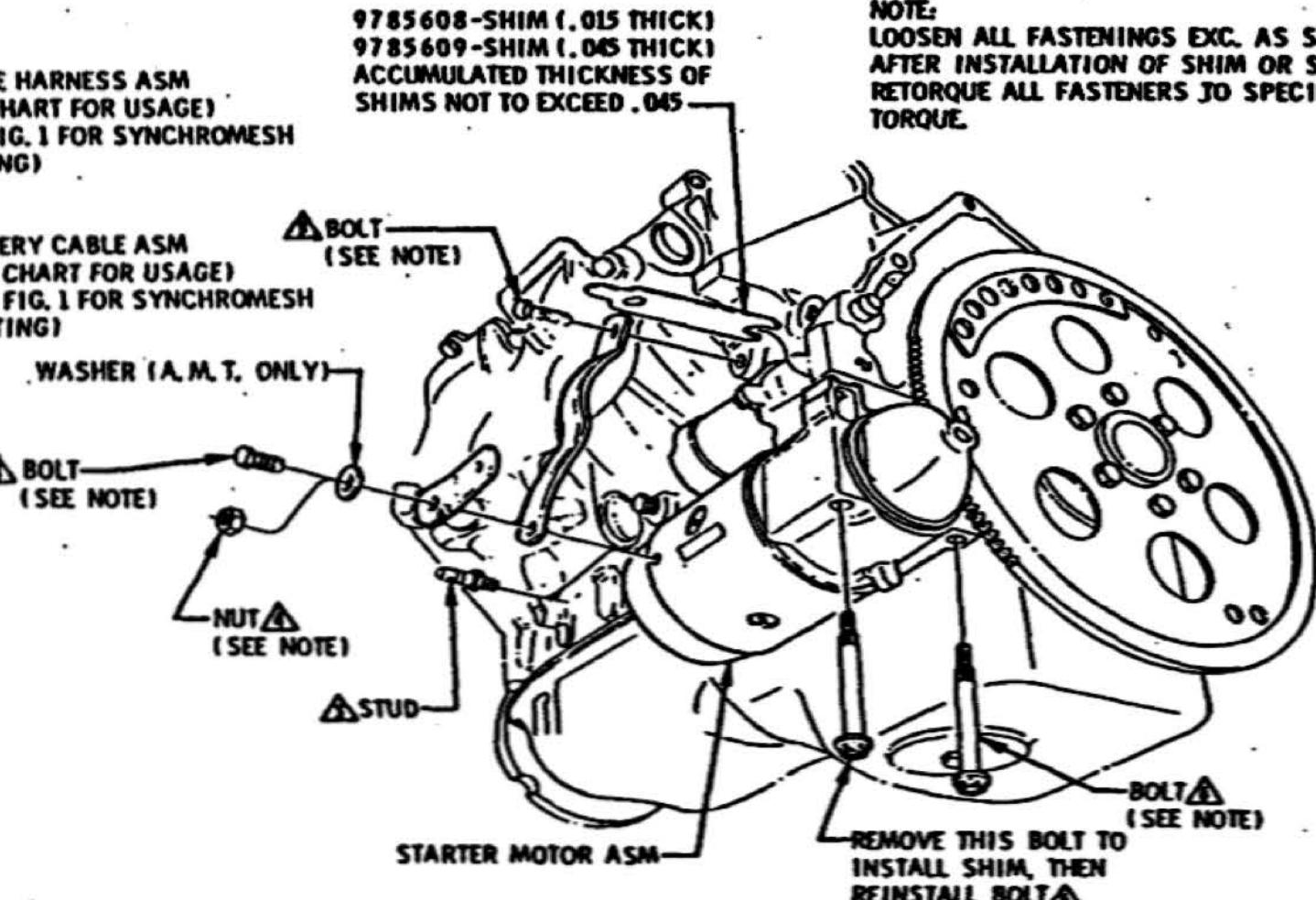
▲ 15-25 LB. FT.  
▲ 15-20 LB. IN.  
▲ FULLY DRIVEN AND NOT STRIP

REVISION					TITLE			FIRST USED		MANUAL NO.		PAGE	
5-13-70	E	CAPACITOR ADDED	3	PT	ENGINE HARNESS ROUTING			1970		6-1		115	
4-29-70	D	WAS 122104-BOLT	2	PT	DATE MAY 29, 1969								
10-1-69	C	BAND CAPACITOR ADDED	1	PT	DR. BY C. J. MARY								
7-31-69	B	WAS 54 7-BAND CLIP	1	PT	CHECKED P. J. HANCOCK								
7-16-69	A	NEW A	1	PT	APPR. RABY								
DATE	BY	REVISION	DR.	CL.	APPR.			A-B-C-E		40441-2-3			

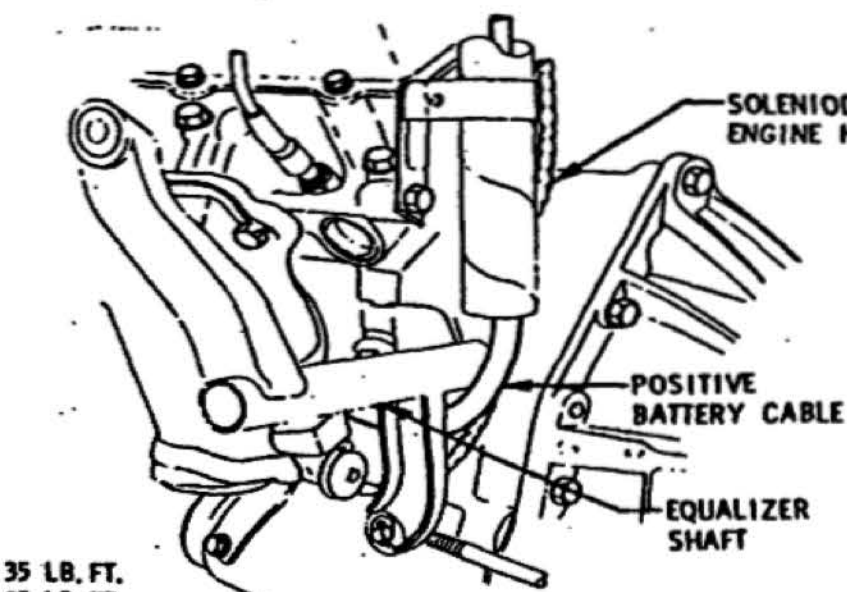




STARTER CABLE & HARNESS TO STARTER



INSTALLATION OF STARTER MOTOR SHIMS FOR THE ADJUSTMENT OF GEAR LASH



STARTER CABLE AND ENGINE HARNESS ROUTING (SYNCHROMESH ROUTING)

CHART - ENGINE HARNESS ASSEMBLY

PART NO.	CODE	MODEL	USAGE
8903733	FZ	"A"	S.M.T.
8903732	FG	"A"	A.M.T.
8903726	KZ	"B"	S.M.T.
8903725	KM	"B-C"	A.M.T.

CHART - POSITIVE BATTERY CABLE ASSEMBLY

PART NO.	CODE	MODEL	USAGE
(E) 8901056	HV	"A"	S.M.T. 350 CU. IN. AND A.M.T. 350 CU. IN. 2 BBL.
8901058	GN	"A"	ALL 455 CU. IN. ENGINES AND A.M.T. 350 CU. IN. 4 BBL.
(D) 6296739	KU	"B"	ALL 350 CU. IN. ENGINES AND 455 CU. IN. S.M.T.
6296741	KT	"B-C"	A.M.T. 455 CU. IN. ENGINES

- ▲ 25-35 LB. FT.
- ▲ 15-25 LB. FT.
- ▲ 10-15 LB. FT.
- ▲ 5-8 LB. FT.
- ▲ 60-120 LB. IN.
- ▲ 15-20 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

11-4-69 C WAS CODE BP  
 7-21-69 D WAS 6296740  
 6-25-69 C VIEW ADDED  
 6-23-69 D CHART REV.  
 6-23-69 A CHART ADDED

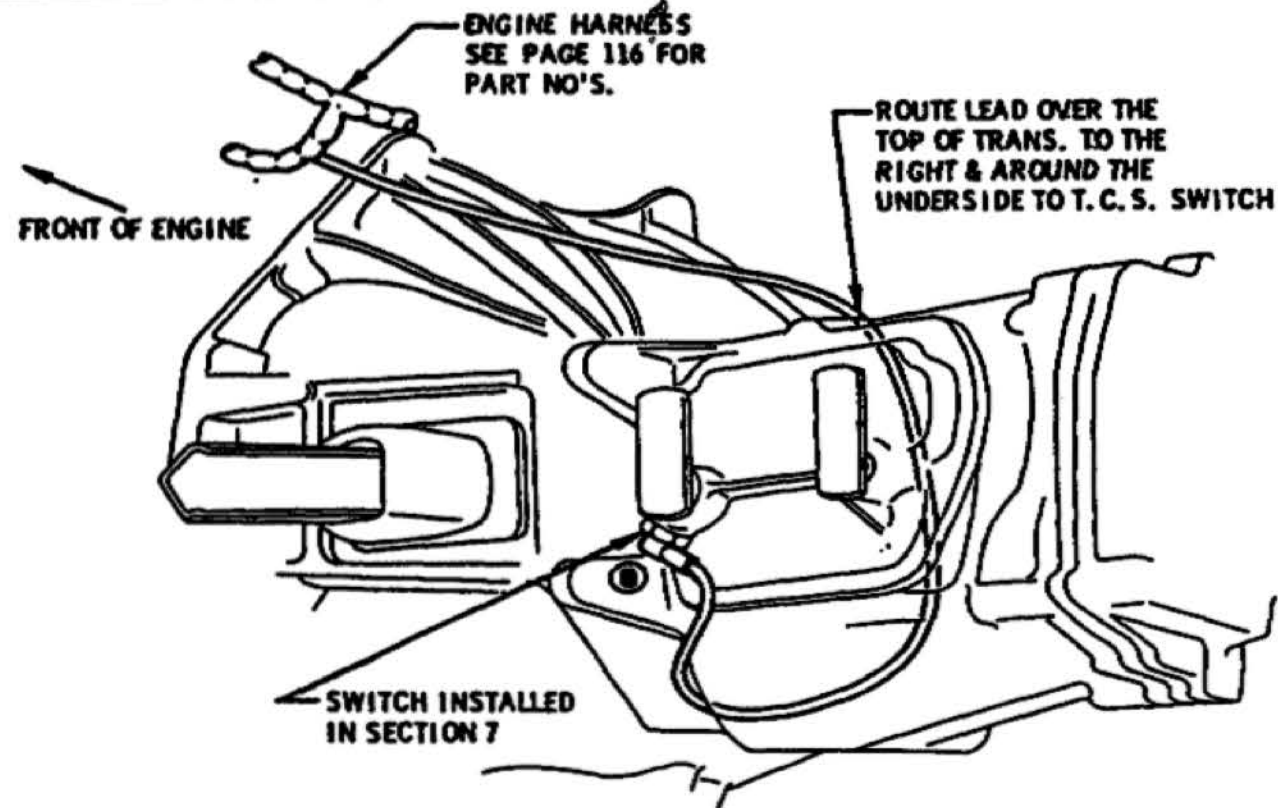
DATE BYM REVISION

TITLE STARTER CABLE, ENGINE HARNESS & STARTER MOTOR ADJUSTMENT TO ENGINE  
 DATE MARCH 7, 1969  
 DR. BY CRET MAY  
 CHECKED BY [Signature]  
 APPR. [Signature]

FIRST USED 1970  
 DR. 6V6, L90  
 LB. 1955, L74  
 12A 120 6V2

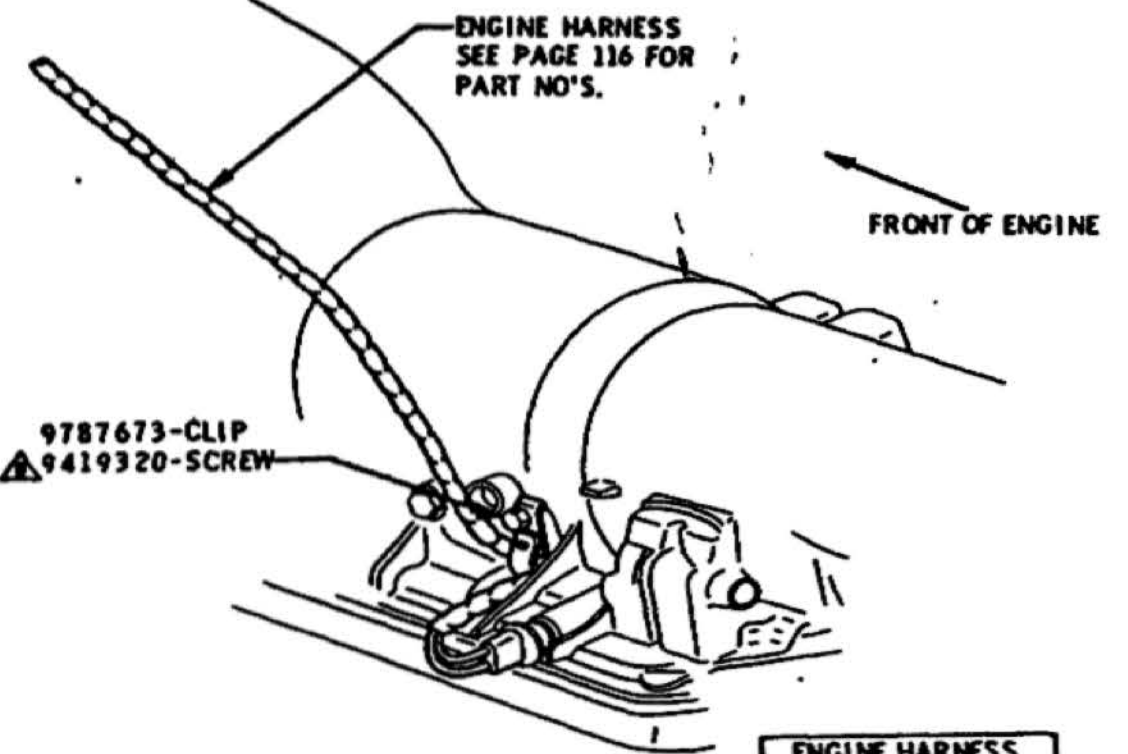
OLDSMOBILE PRODUCT INFORMATION MANUAL  
 SERIES A-B-C  
 PART NO. 404411-2

MANUAL SEC. PAGE 6-1 116



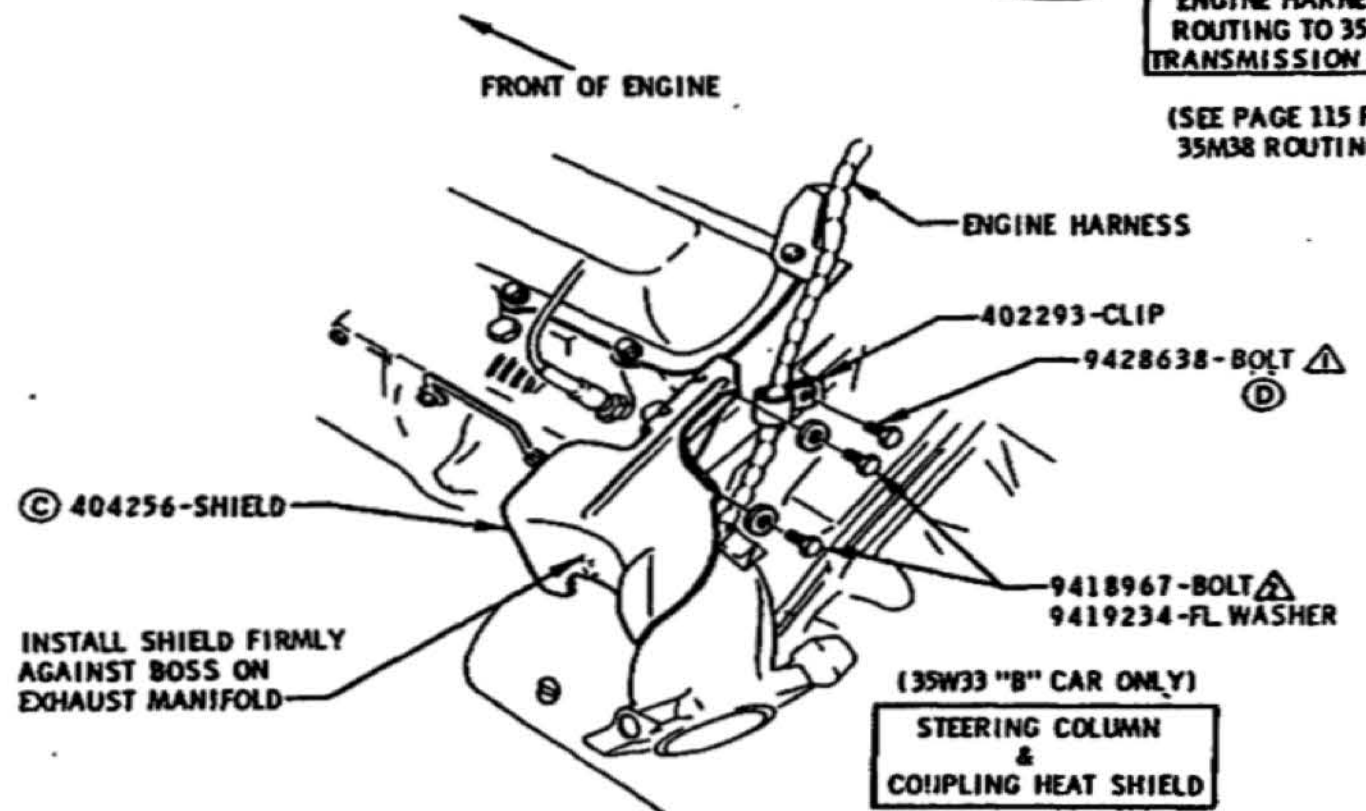
TYPICAL THROTTLE CONTROLLED SPARK SOLENOID LEAD ROUTING ON CARS EQUIPPED WITH S. M. T.

(EXCEPT "B" CARS)



ENGINE HARNESS ROUTING TO 35M40 TRANSMISSION ONLY

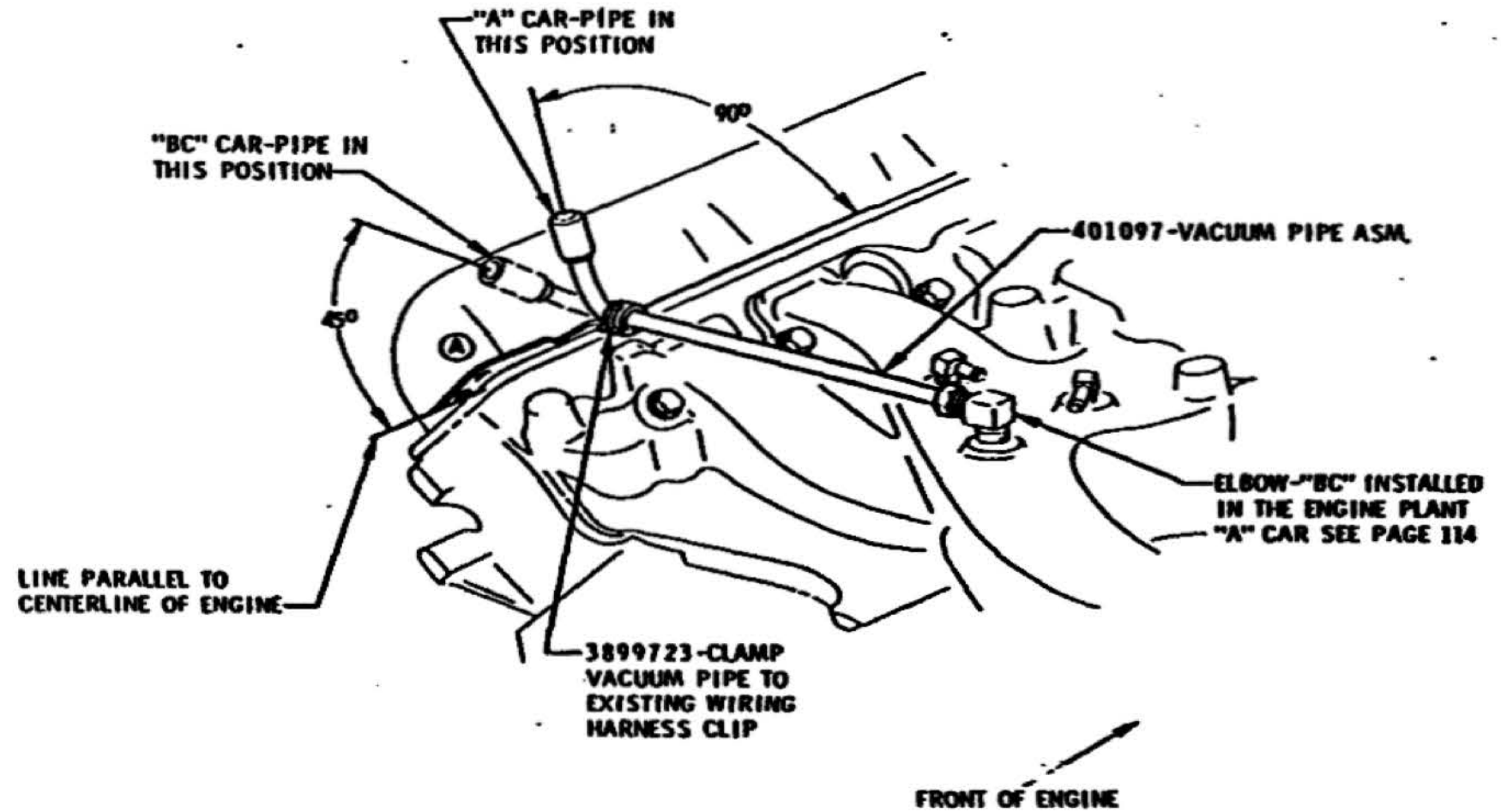
(SEE PAGE 115 FOR 35M38 ROUTING)



(35W33 "B" CAR ONLY)  
STEERING COLUMN & COUPLING HEAT SHIELD

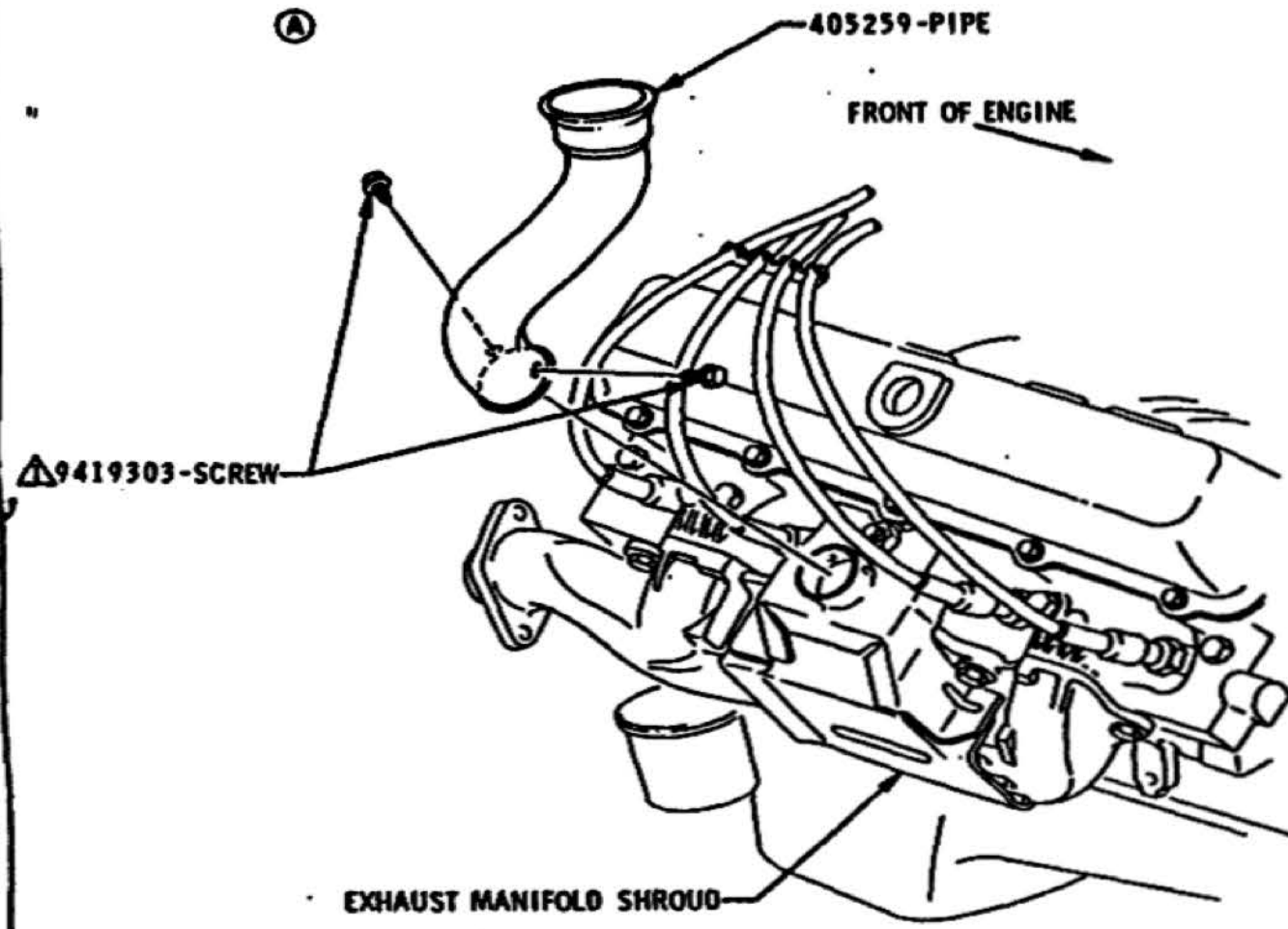
▲ 25-35 LB. FT.  
▲ 15-25 LB. FT.  
▲ STRIPPED

REVISION		TITLE	ENGINE WIRING	MANUAL SEC.	PAGE
4-25-70	D	WAS 122104-BOLT	DATE JANUARY 16, 1969	6-1	117
3-25-70	C	REVISED TO DETAIL	DR BY C. J. FAY		
6-15-69	B	CONNECTOR REVISED	CHECKED BY J. M. HARRIS		
5-15-69	A	REDESIGNED	APPROVED BY R. W. HULL		
			FIRST USED 1970		
			NO. 35W33, 35W38, 35W39		
			35W33		
			A-B-C		
			404411-2		

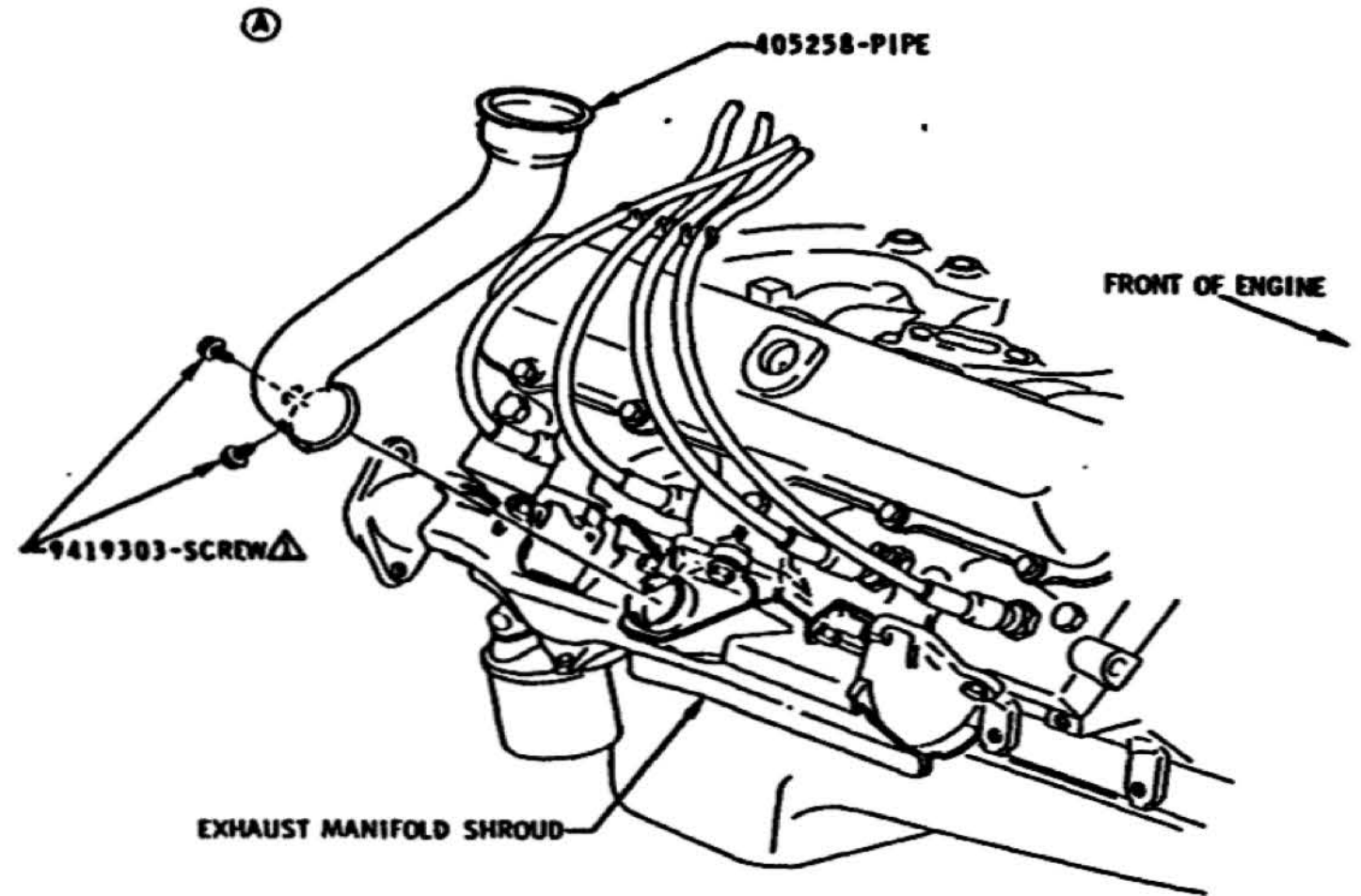


FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE		SYM		REVISION		DR. CL.		APPR.		TITLE		FIRST USED		MANUAL SEC.		PAGE	
1-22-70		A		REV TO DETAIL		C.M.P.		J.S.S.		POWER BRAKE VACUUM PIPE		1970		6-1		118	
										CHECKED BY <i>J. S. S.</i>		REV. 30		A-B-C		PART NO. 404411-2	
										APPR. <i>J.S.S.</i>		REV. 30					



INSTALLATION HOT  
 AIR PIPE 455 CU. IN. ENGINE

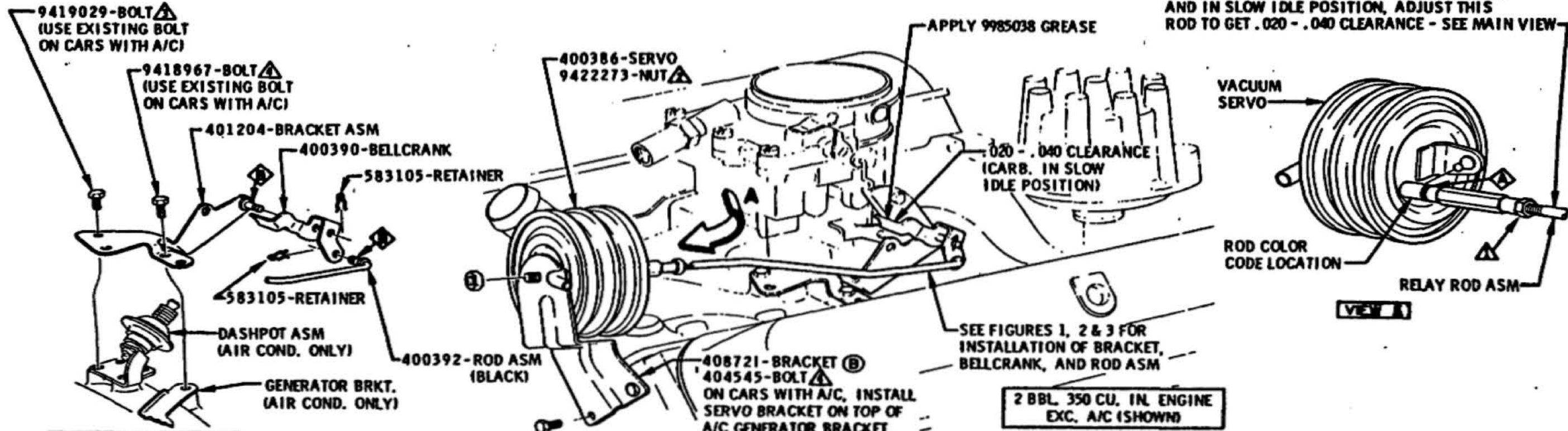


INSTALLATION HOT  
 AIR PIPE 350 CU. IN. ENGINE

▲  
 ▲  
 ▲ 25-30 LB. IN.  
 ▲ FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

				TITLE		CARBURETOR AIR PRE-HEATER			
				DATE		FIRST USED		MANUAL NO. PAGE	
				DECEMBER 18, 1968		1970		6-1 126	
				DR. BY		CHECKED		PART NO.	
				CURT MAY		P. Bamhart		404411	
8-5-69				A		PART NOS REMOVED		SERIES	
DATE				SYM		REVISION		DR. CK. APPR.	
								A	

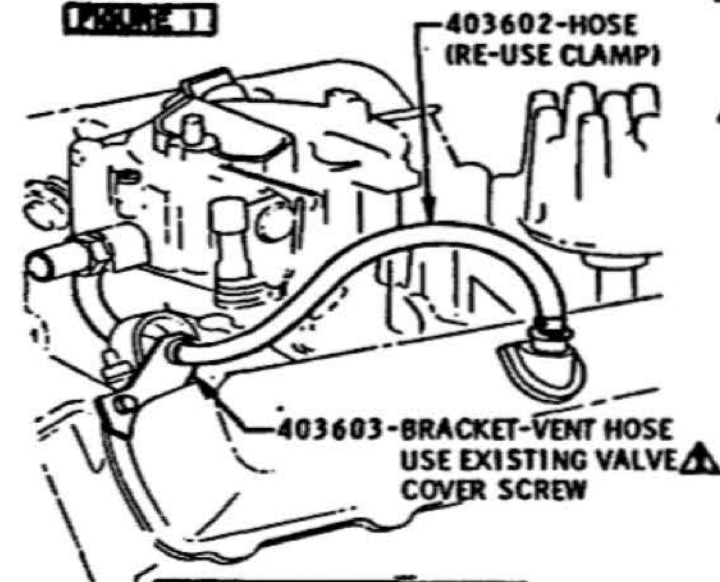
ADJUSTMENT: WITH CARB SET FOR SLOW IDLE AND IN SLOW IDLE POSITION, ADJUST THIS ROD TO GET .020 - .040 CLEARANCE - SEE MAIN VIEW



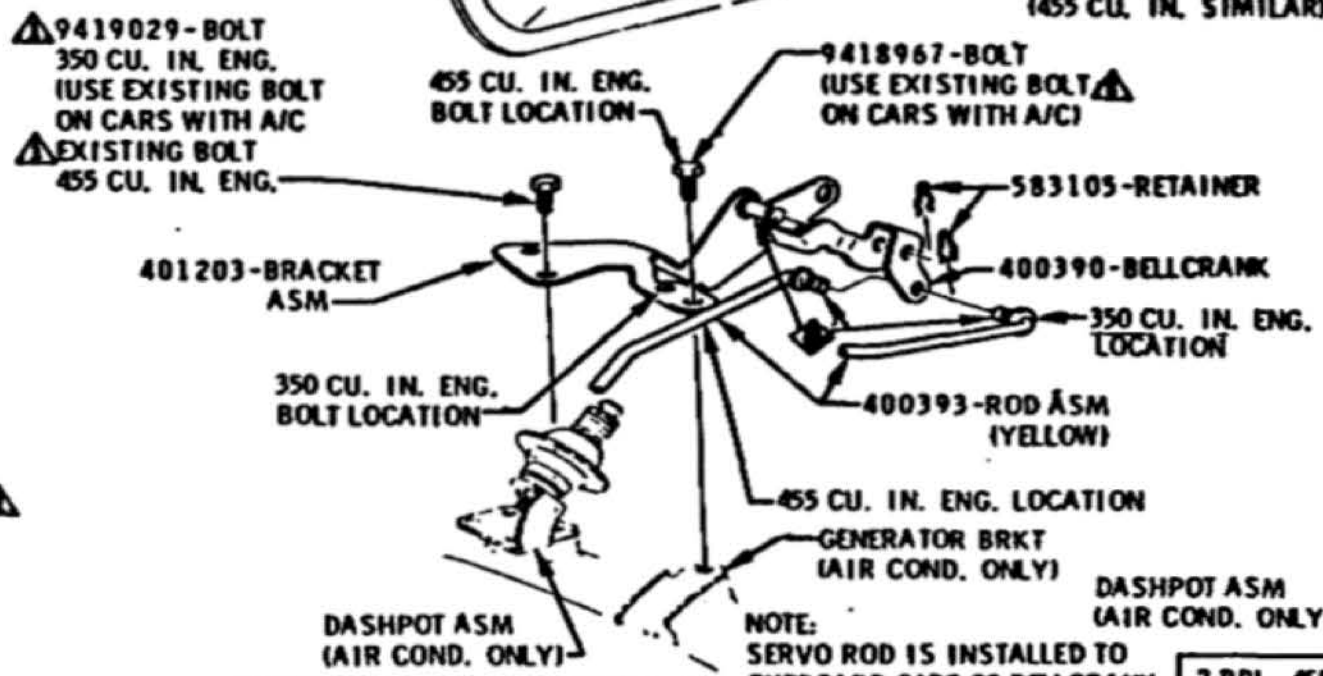
VIEW 1

2 BBL. 350 CU. IN. ENG.

FIGURE 1



INSTALLATION  
CRANKCASE VENTILATION  
HOSE AND BRACKET  
(4 BBL. CARBURETOR ONLY)



4 BBL. 350 & 455 CU. IN. ENGINE

FIGURE 3

NOTE:  
SERVO ROD IS INSTALLED TO  
OUTBOARD SIDE OF BELLCRANK  
ON 350 CU. IN. ENGINES AND  
INBOARD SIDE OF BELLCRANK  
ON 455 CU. IN. ENGINES.

2 BBL. 455 CU. IN. ENGINE

FIGURE 2

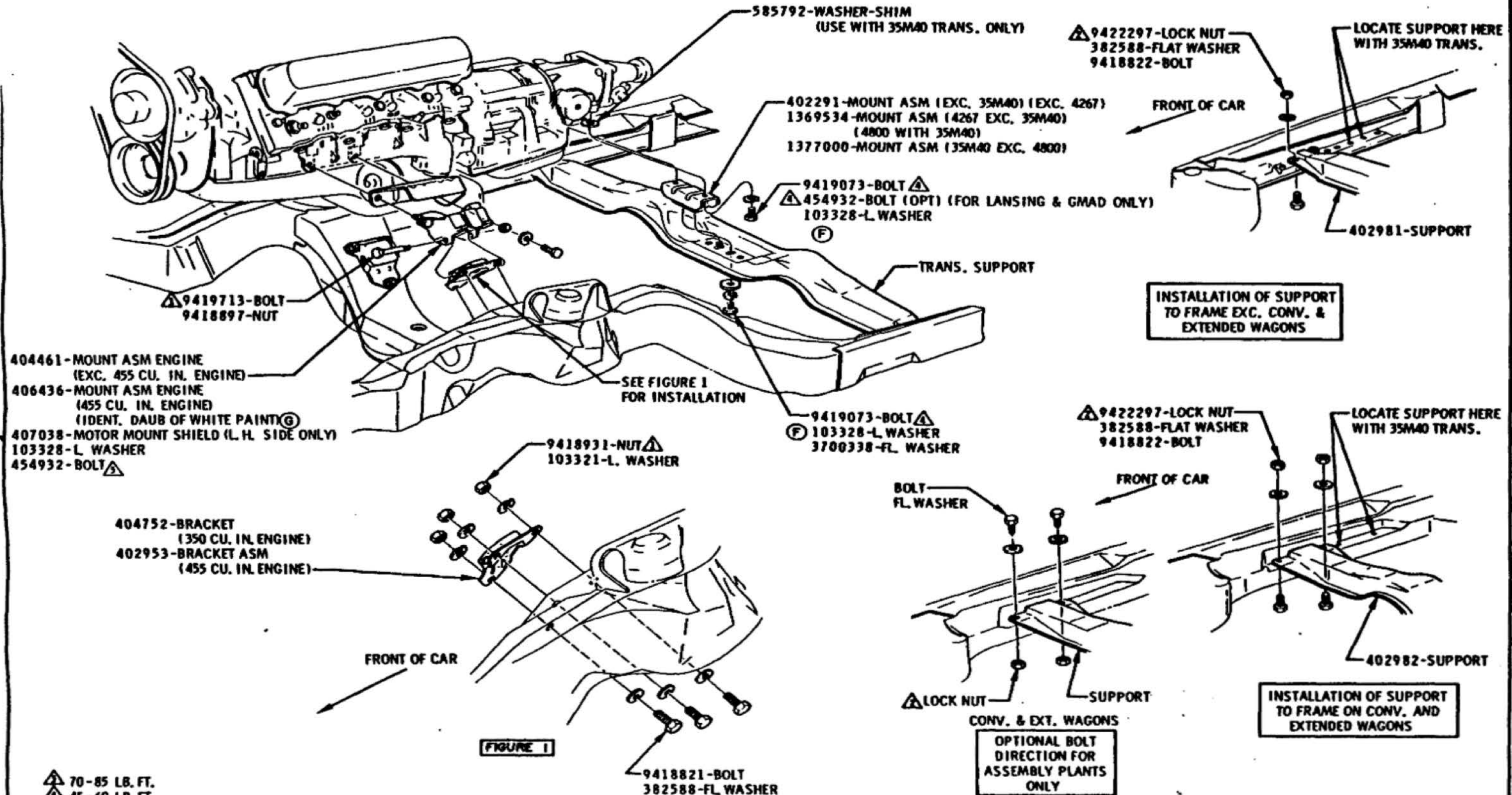
APPLY 9985038-GREASE TO BALL  
SOCKET PRIOR TO ASSEMBLY  
LUBRICATE AREAS INDICATED  
WITH 404753-OIL (404754-OIL OPT.)

- ▲ 60-90 LB. IN.
- ▲ 25-35 LB. FT.
- ▲ 14-17 LB. FT.
- ▲ 30-40 LB. IN.
- ▲ 48-72 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.

TITLE				CRUISE CONTROL CARBURETOR LINKAGE (FIRST TYPE)			
DATE				AUGUST 6, 1969			
DR. BY				ED J. ROE			
CHECKED				M. J. ...			
APPR.				R. J. ...			
FIRST YR. BLD		1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE	
SERIES		A-B-C		PART NO.		404411-2	





- ▲ 70-85 LB. FT.
- ▲ 45-60 LB. FT.
- ▲ 40-55 LB. FT.
- ▲ 30-40 LB. FT.
- ▲ 25-40 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

FIGURE 1

DATE		SYM	REVISION	DR. CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL REC.	PAGE
4-25-70		G	NOTE ADDED			POWER PLANT TO FRAME	1970		6-1	130
3-13-70		F	WAS 103922							
DATE		SYM	REVISION	DR. CL.	APPR.		REV. 20,691, 35M40	SERIES	PART NO.	
								A	404411	

- 403402-CABLE ASM. (2BBL "A" CAR) (CODE "OA")
- 403403-CABLE ASM. (4BBL "A" CAR) (CODE "OC")
- 403551-CABLE ASM. (2BBL "B" CAR) (CODE "OG")
- 403552-CABLE ASM. (4BBL "BC" CAR) (CODE "OH")

BOTH LOCKING LUGS  
 MUST BE EXPANDED  
 AND LOCKED IN HOLE

BOTH LOCKING LUGS  
 MUST BE EXPANDED  
 AND LOCKED IN HOLE

392237-SEAL

DASH PANEL

ROUTE CABLE OVER TOP  
 OF THROTTLE CABLE

FOR INSTALLATION OF CABLE TO  
 TRANSMISSION SEE SECTION 7

FOR INSTALLATION OF CABLE TO  
 ACCELERATOR PEDAL LEVER SEE  
 SECTION 1-1

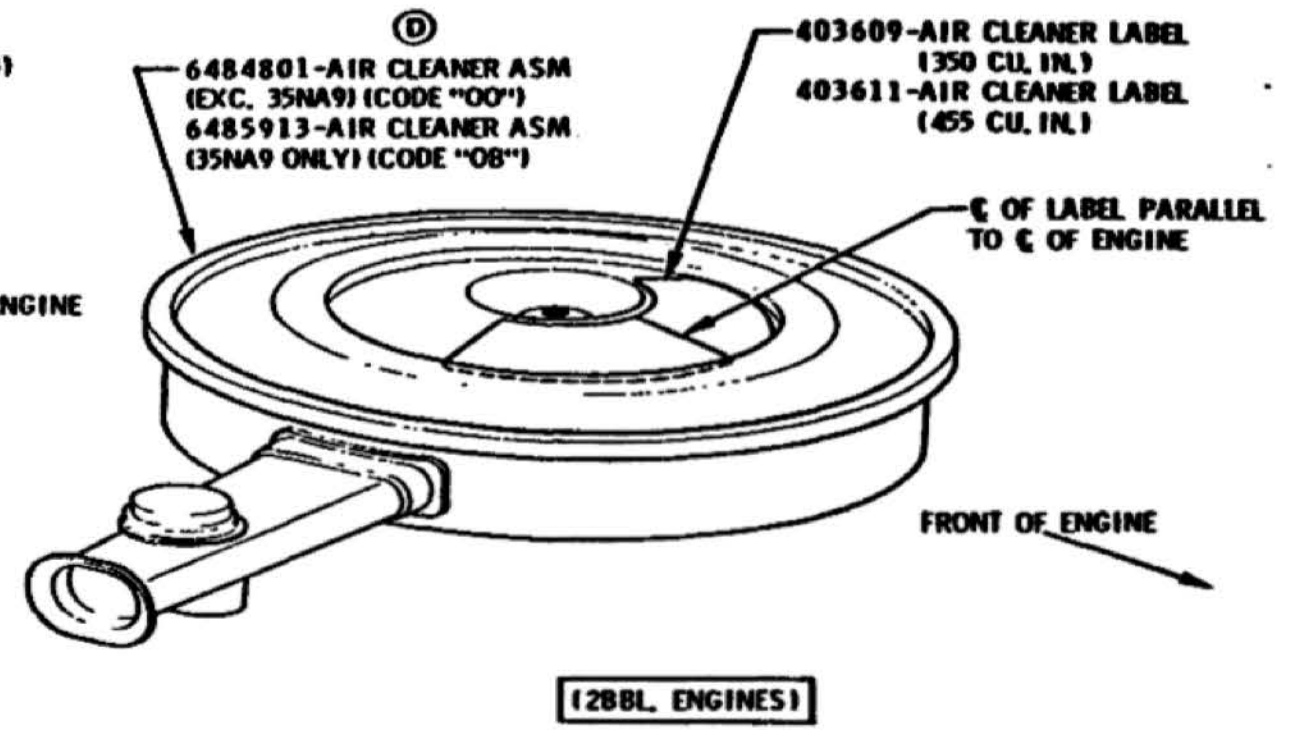
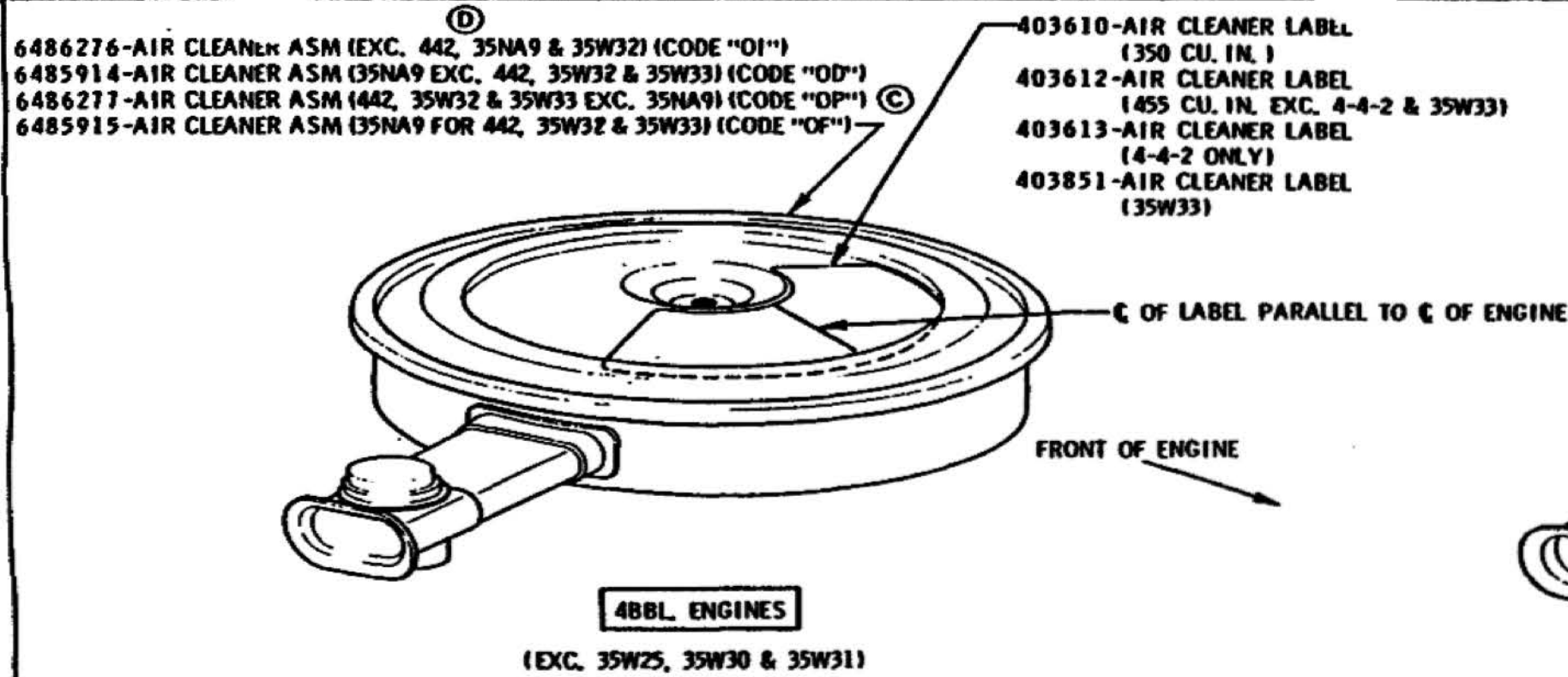
- 583105-RETAINER
- 507295-WASHER
- 403409-SLEEVE
- 403410-BUSHING

FOR THROTTLE ADJUSTMENTS,  
 SEE CHART ON PAGE 84

35M38 TRANSMISSION  
 DOWN SHIFT CABLE ROUTING  
 TO DASH PANEL

				TITLE				THROTTLE CONTROL			
				DATE				FIRST USED			
				JANUARY 13, 1969				1970			
				DR BY				OLDSMOBILE PRODUCT			
				CUT MAY				INFORMATION MANUAL			
				CHECKED				MANUAL SEC.			
				APR. 2, 1969				6-1			
				APPR.				PAGE			
								132			
				DATE				REV.			
								6N2			
				REVISION				SERIES			
								A-B-C			
				DR. CK.				PART NO.			
								4411-2			
				APPR.							

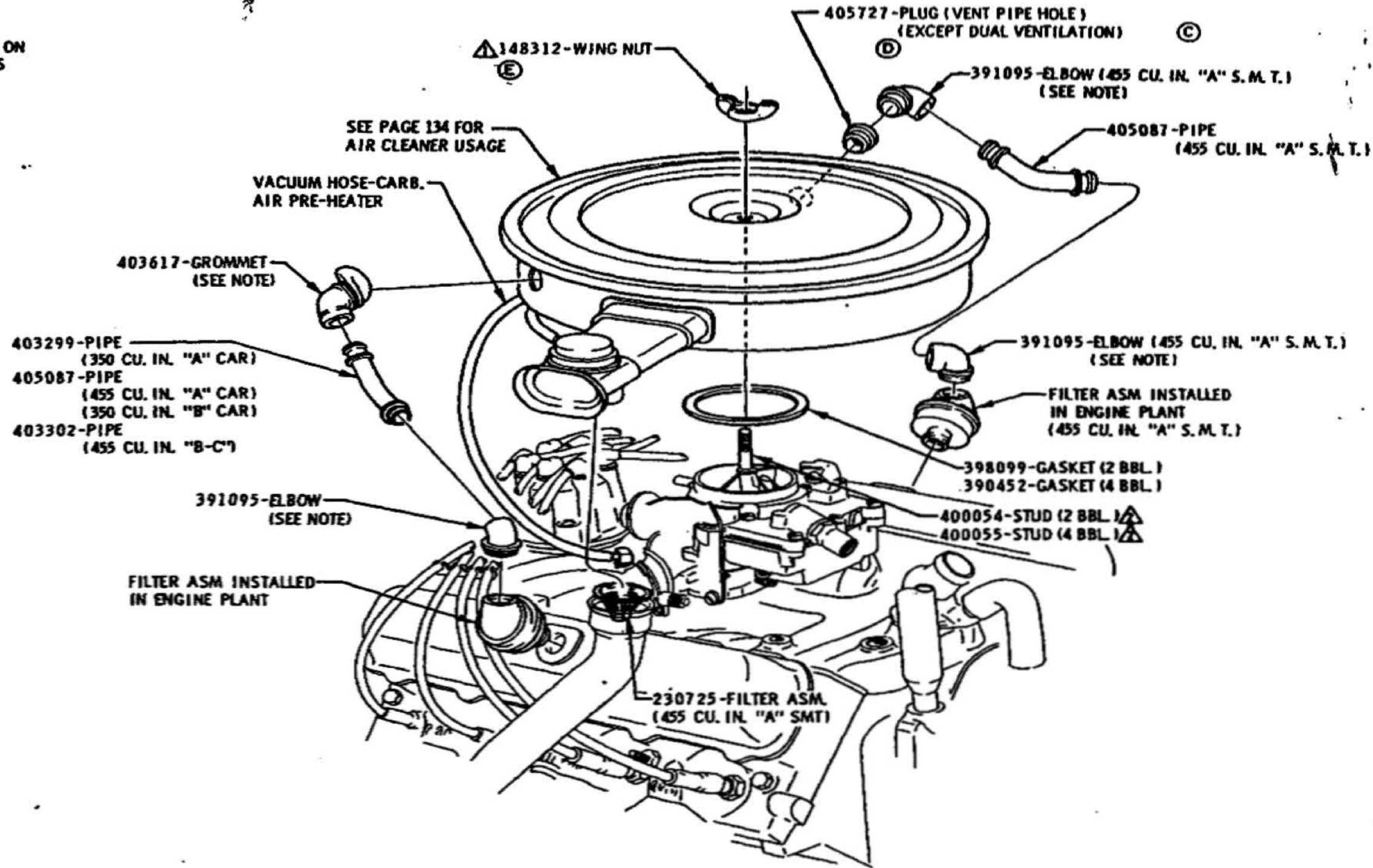




ⓑ

DATE	BY	REVISION	DR.	CL.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
3-25-69	D	CODES ADDED			DATE JANUARY 18, 1969	1970		6-1	134
10-8-69	C	35W32 ADDED			DR BY CUET MSV				
8-8-69	G	VIEW REMOVED			CHECKED BY Bombardier				
8-6-69	J	PART NOS REVISED			APPR. [Signature]				
						NO. 4-3	SERIES	PART NO.	
						35W30 W33	A-B-C	404411-2	
						W32 C SE L74			

NOTE:  
USE SOAP SOLUTION ON  
GROMMETS & ELBOWS  
BEFORE ASM



▲ 3-5 LB. FT.  
▲ 12-20 LB. IN.  
▲ FULLY SEATED AND TIPPED

DATE	SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	MANUAL SEC.	PAGE
8-28-70	E	WAS 219281-WING NUT	DR.	PK.		STANDARD AIR CLEANER, CRANKCASE VENTILATION			
3-31-70	D	NOTE REVISED	DR.	PK.		DATE FEBRUARY 21, 1969	1970	6-1	136
1-13-70	C	35W33 ADDED	DR.	PK.		DR. BY CURT MAY			
10-6-69	B	35W32 ADDED	DR.	PK.		CHECKED BY J. J. ...			
2-24-69	A	655 400 ON 'A' CAR	DR.	PK.		APPR. ...			
								A-B-C	4411-2

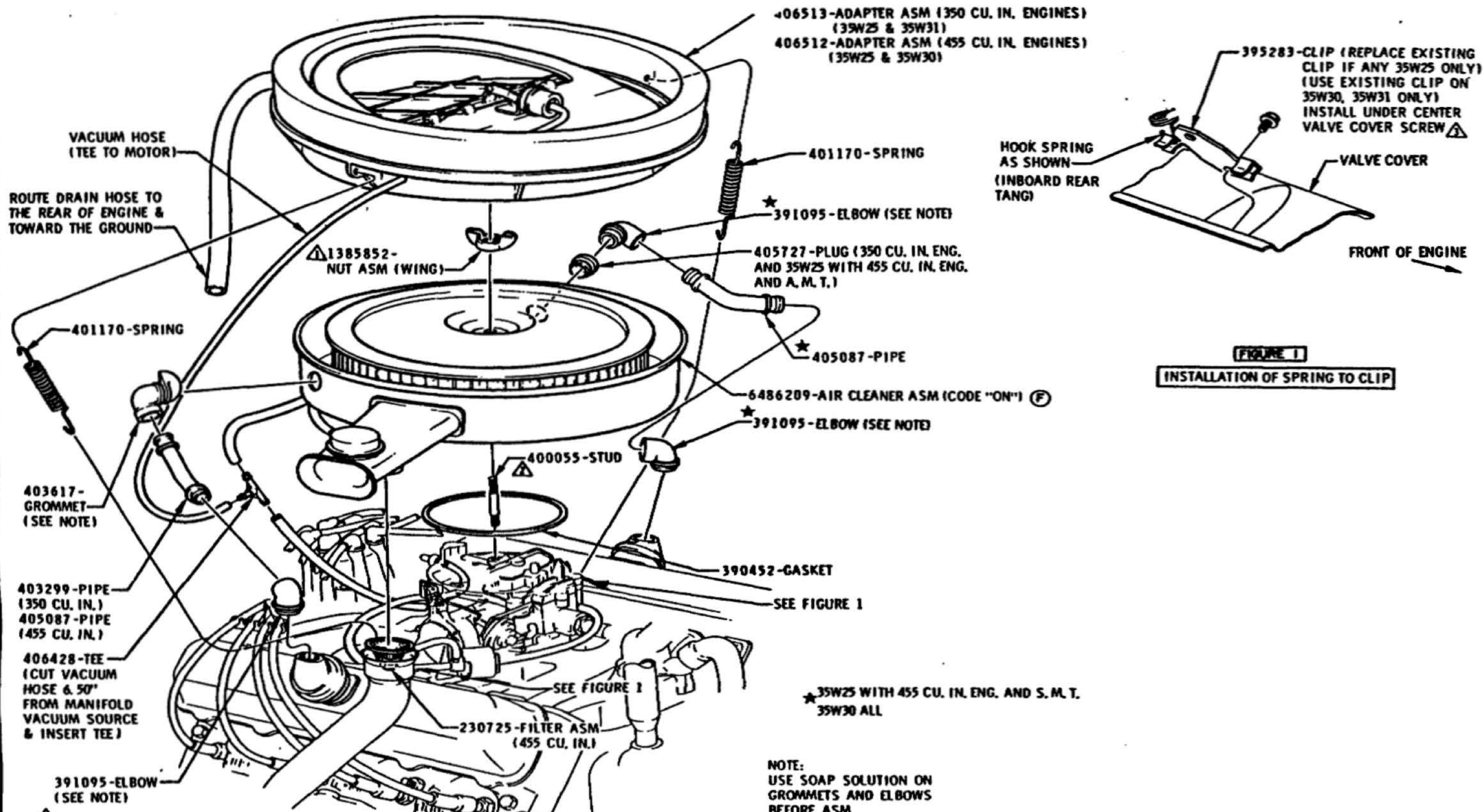
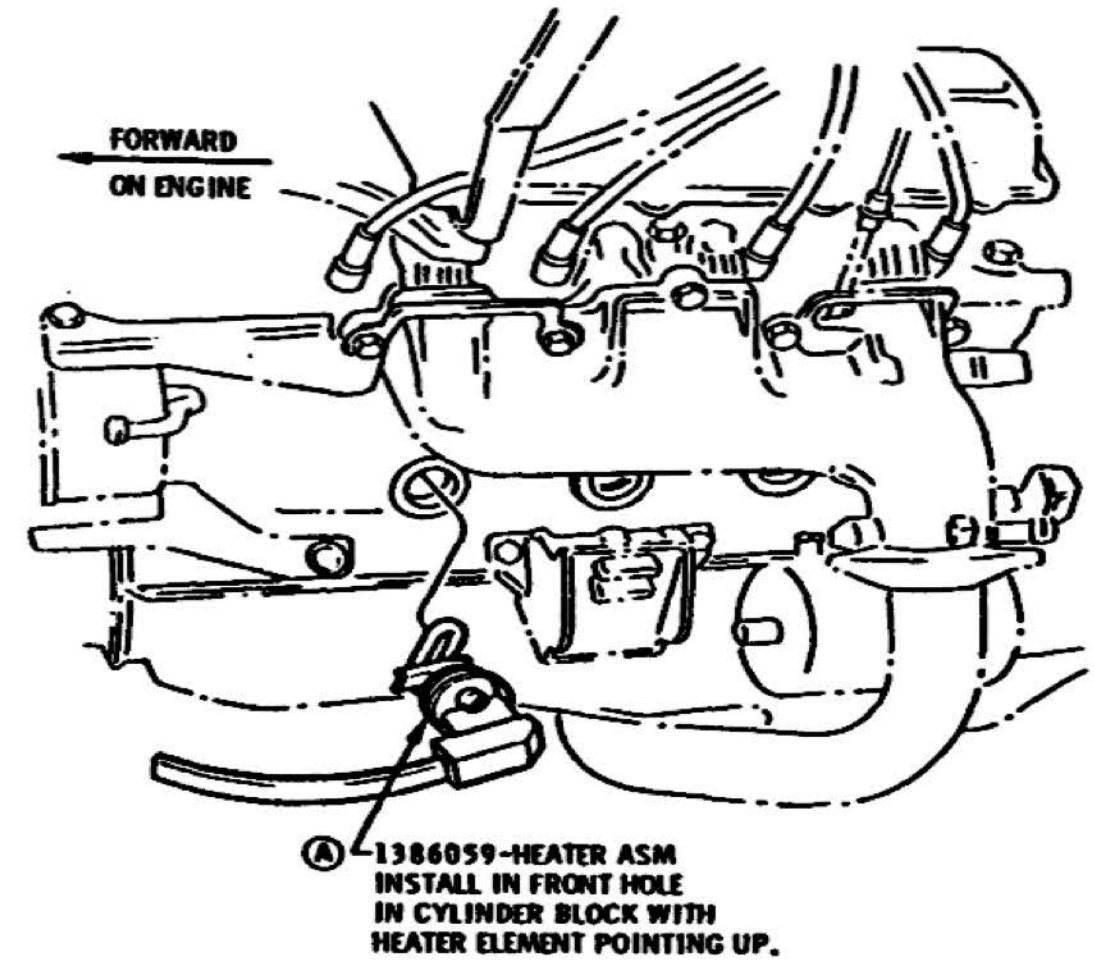
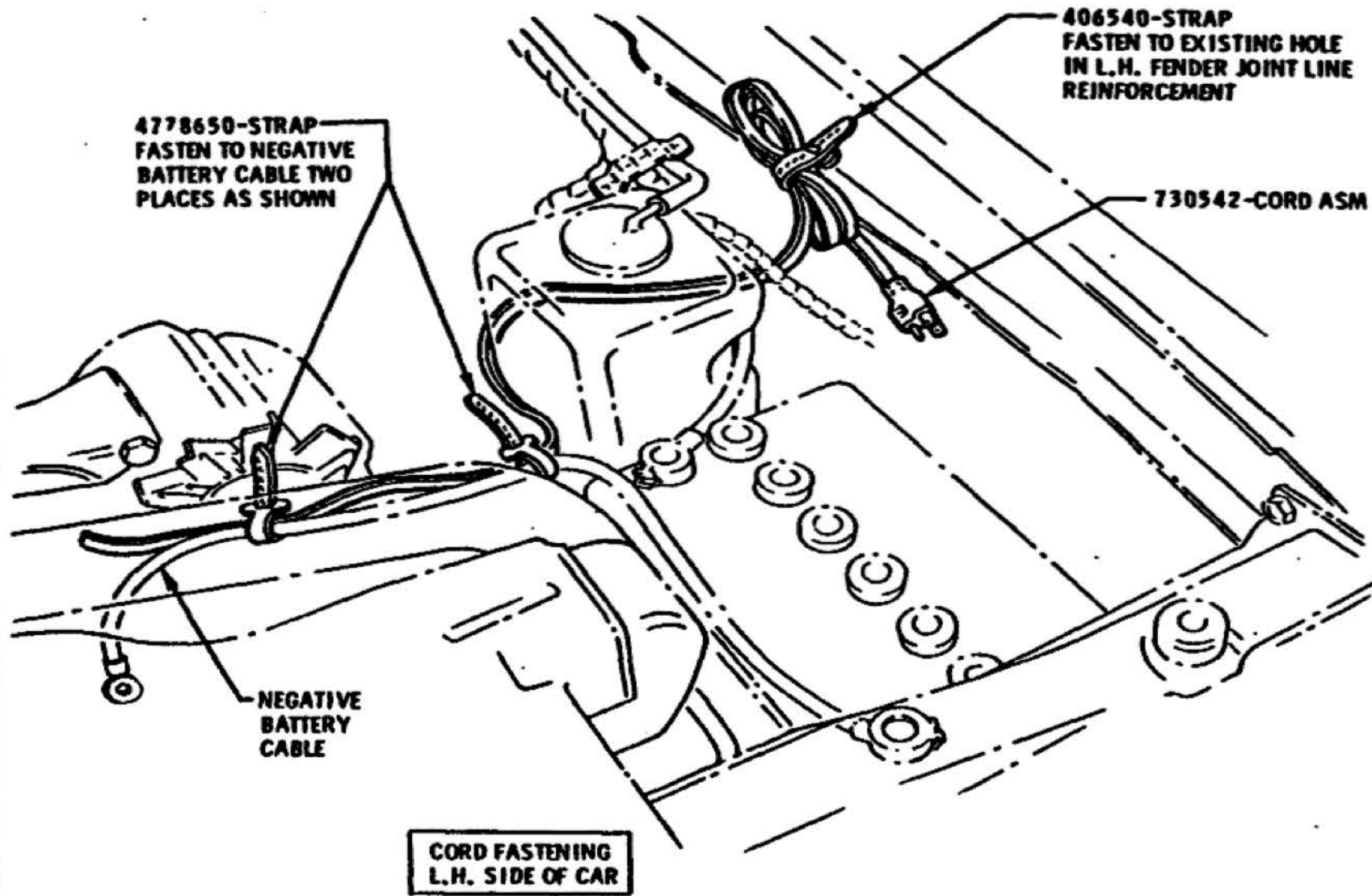


FIGURE 1  
INSTALLATION OF SPRING TO CLIP

- ▲ 60-90 LB. IN.
- ▲ 3-5 LB. FT.
- ▲ 12-20 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION
5-25-70	F	CRUI. ADD'D.

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
1-27-70	E	NOTES REV.									AIR CLEANER & CRANKCASE VENTILATION (AIR INDUCTION)				
12-22-69	D	-NET NO REVISED									DATE MARCH 3, 1969	1970		6-1	138
10-2-69	C	WAS 388218-CLIP									DR BY CURT MAY				
10-2-69	B	FIGURE 2 REMOVED PLT.									CHECKED BY [Signature]				
7-3-69	A	REVISED F FEEDING									APPR. [Signature]	NO. 35W25 35W30 35W31	SERIES A	PART NO. 404411	



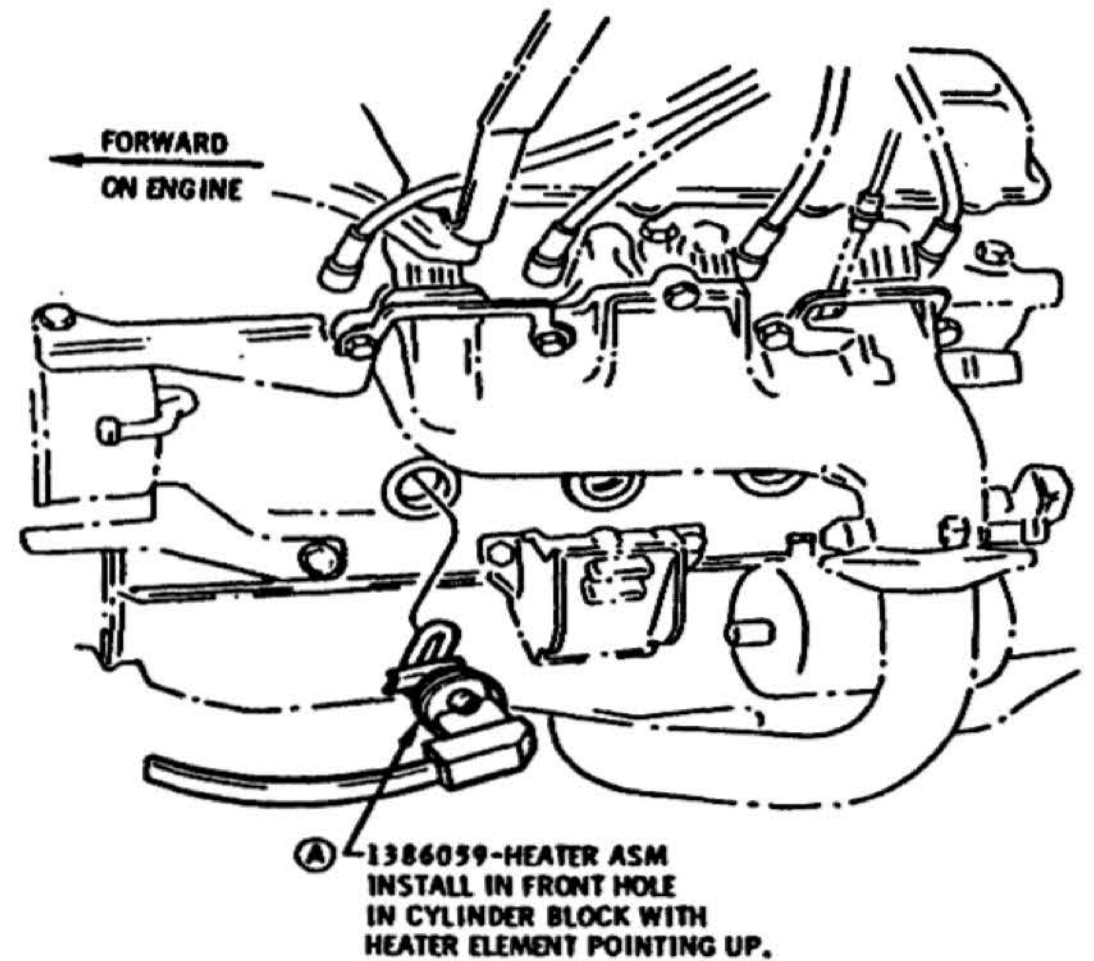
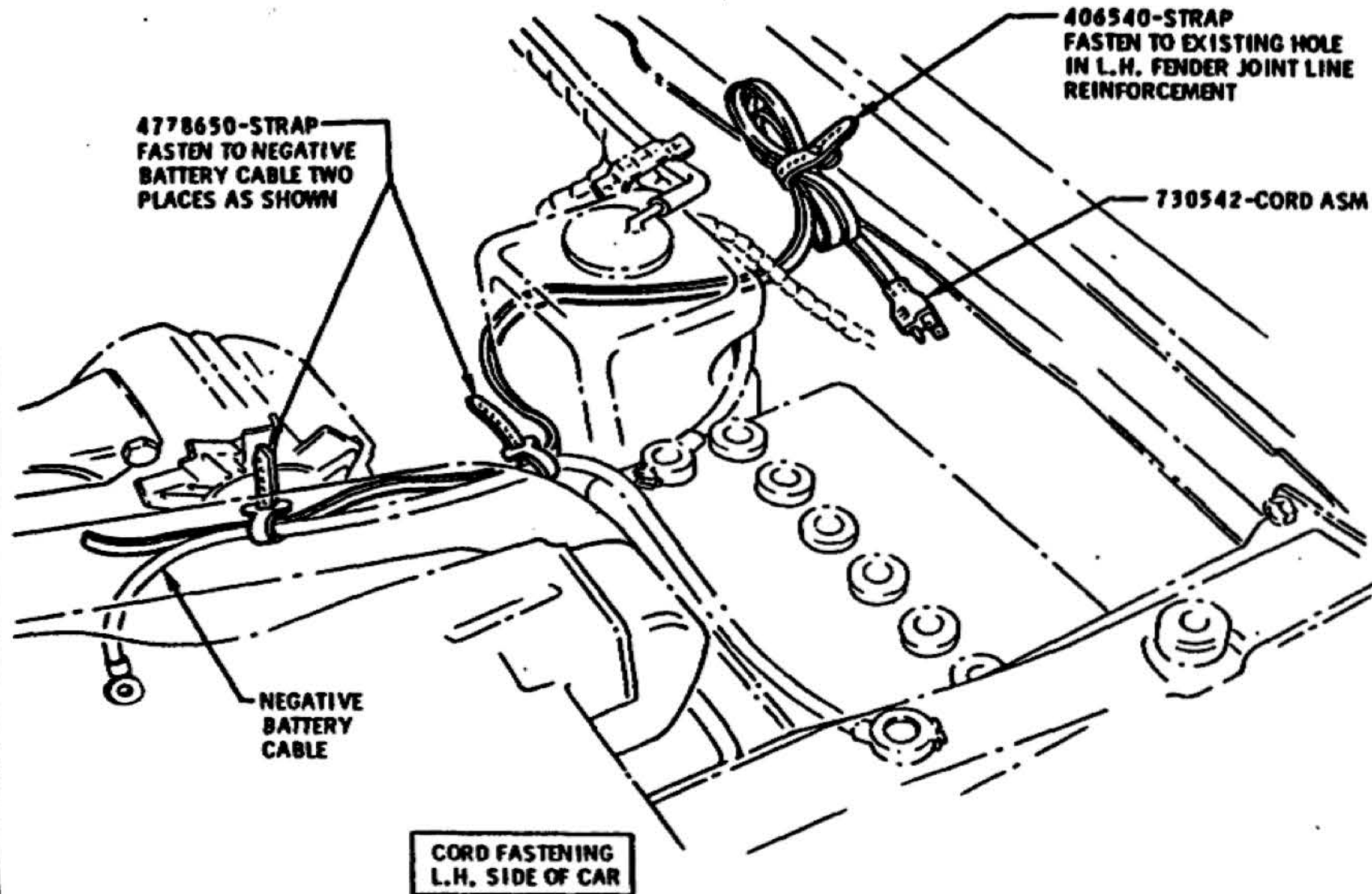
INSTALLATION INSTRUCTIONS

1. REMOVE FROST PLUG BY TAPPING CAREFULLY NEAR OUTER EDGE CAUSING IT TO ROTATE OUT OF HOLE. DO NOT SCORE THE MACHINED SURFACE OF THE HOLE.
2. THOROUGHLY CLEAN FROST PLUG HOLE REMOVING ANY BURRS, COMPOUND, PAINT OR ROUGH SPOTS.
3. APPLY A COATING OF CHASSIS GREASE OR VASELINE TO "O" RING AND MACHINED SURFACE OF HOLE. (THIS PREVENTS DAMAGE TO RUBBER "O" RING AND MAKES INSTALLATION EASIER.)
4. INSERT HEATER AND PUSH TIGHT TO BLOCK, TURN LOCKING SCREW CLOCKWISE UNTIL LOCKING WINGS DRAW TIGHT AGAINST INNER WALL OF ENGINE BLOCK. BE SURE THAT BOTH SIDES OF LOCKING WING HAVE ENGAGED THE BLOCK. (EXCESSIVE TIGHTENING IS NOT ADVISABLE.)
5. ROUTE CORD THRU STRAPS AND FASTEN EXCESS AS SHOWN.

HEATER INSTALLATION  
L.H. SIDE OF ENGINE

CANADIAN CARS ONLY  
8 CYLINDER ENGINES ONLY

		TITLE		ENGINE BLOCK HEATER			
		DATE		JULY 31, 1969			
		DR BY		BEAUDOIN			
		ENGR		F. J. M. [Signature]			
8-20-69		A		WAS 3401217			
DATE	SYM	REVISION	DR.	CL.	APP.	FIRST USED	1970
						OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO. 6-1
						96-K-05	PAGE 150
						SERIES A	PART NO. 404411



HEATER INSTALLATION  
L.H. SIDE OF ENGINE

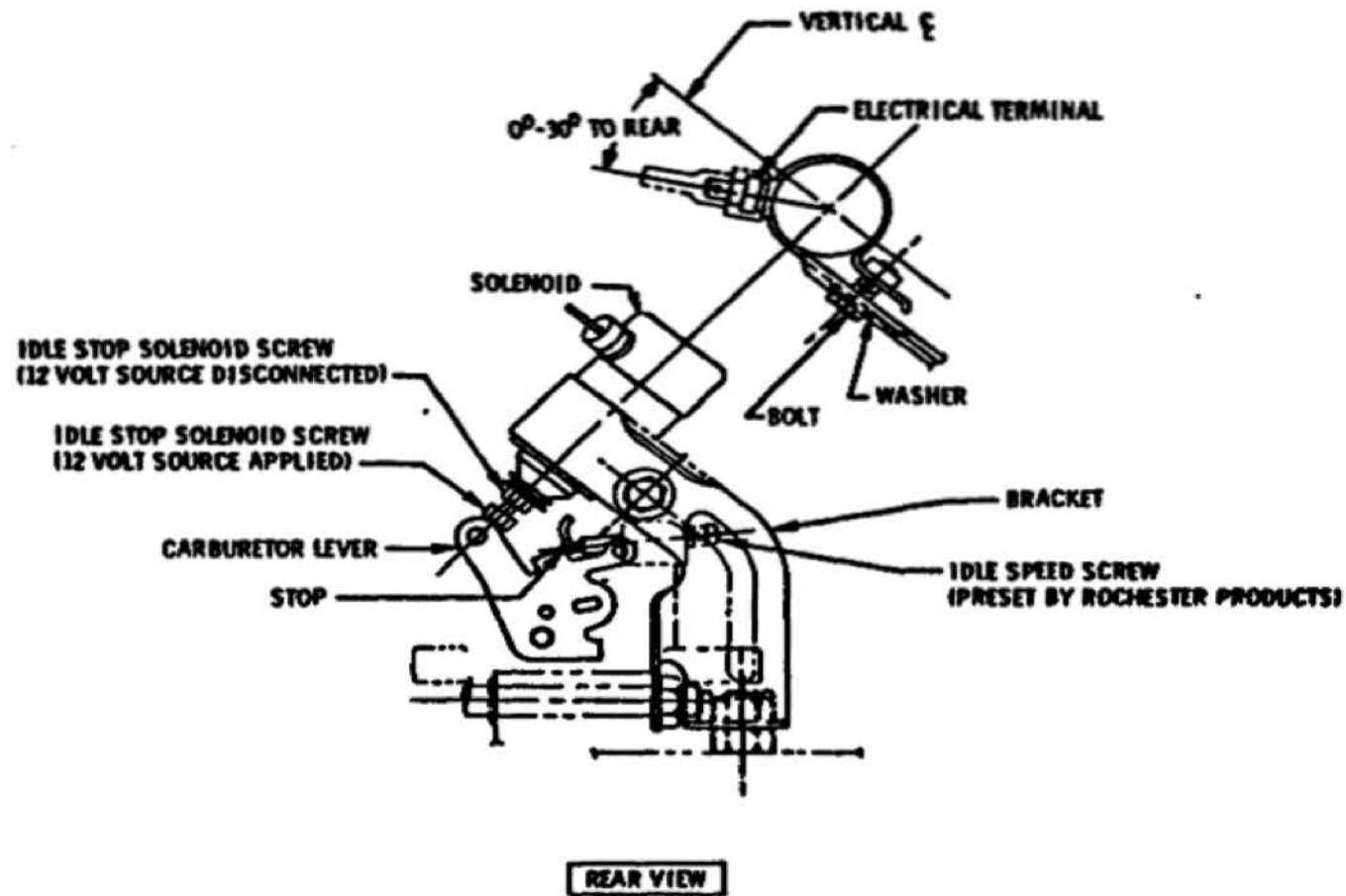
**INSTALLATION INSTRUCTIONS**

1. REMOVE FROST PLUG BY TAPPING CAREFULLY NEAR OUTER EDGE CAUSING IT TO ROTATE OUT OF HOLE. DO NOT SCORE THE MACHINED SURFACE OF THE HOLE.
2. THOROUGHLY CLEAN FROST PLUG HOLE REMOVING ANY BURRS, COMPOUND, PAINT OR ROUGH SPOTS.
3. APPLY A COATING OF CHASSIS GREASE OR VASELINE TO "O" RING AND MACHINED SURFACE OF HOLE. (THIS PREVENTS DAMAGE TO RUBBER "O" RING AND MAKES INSTALLATION EASIER.)
4. INSERT HEATER AND PUSH TIGHT TO BLOCK, TURN LOCKING SCREW CLOCKWISE UNTIL LOCKING WINGS DRAW TIGHT AGAINST INNER WALL OF ENGINE BLOCK. BE SURE THAT BOTH SIDES OF LOCKING WING HAVE ENGAGED THE BLOCK. (EXCESSIVE TIGHTENING IS NOT ADVISABLE.)
5. ROUTE CORD THRU STRAPS AND FASTEN EXCESS AS SHOWN.

CANADIAN CARS ONLY  
8 CYLINDER ENGINES ONLY

		TITLE		ENGINE BLOCK HEATER		FIRST USED		OLDSMOBILE PRODUCT		MANUAL SEC. PAGE	
		DATE		JULY 31, 1969		1970		INFORMATION MANUAL		6-1 150	
		DR BY		BEAUDOIN		REV.		96-K-05		SERIES	
		CHECKED		F. J. [Signature]		REV.		A		PART NO.	
8-20-69		A		WAS 3401217		DR. CK.		APP.		404411	
DATE	SYM	REVISION	DR.	CK.	APP.						





INSTALLATION PROCEDURE

1. LOOSE ASSEMBLE SOLENOID IN BRACKET.
2. WITH CHOKE FULLY OPEN AND IDLE SPEED SCREW RESTING AGAINST STOP, EXTEND SOLENOID PLUNGER MANUALLY TO FULL TRAVEL AND SLIDE SOLENOID IN BRACKET UNTIL IDLE STOP SOLENOID SCREW JUST CONTACTS CARBURETOR LEVER.
3. TIGHTEN BOLT TO 30-50 LB. IN.
4. BACK OFF (TURN COUNTER-CLOCKWISE) IDLE SPEED SCREW 2 TURNS.

250 CUBIC IN. I-6

TITLE												CHART-THROTTLE CLOSING SOLENOID INSTALLATION AND ADJUSTMENT									
DATE						APR. 18, 1969						FIRST USED		1970		OLDSMOBILE PRODUCT		MANUAL SEC.		PAGE	
DR. BY						C. GORDON										6-2		82			
CHECKED						C. H. HARRIS						SERIES		A		PART NO.		404411			
APPR.						R. HARRIS 2.5.69						REF.									
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.						

I SLOW IDLE ADJUSTMENT

- A. CARBURETOR AS RECEIVED FROM ROCHESTER PRODUCTS AND INSTALLED BY ASSEMBLY LINE REQUIRES NO ADJUSTMENT ON FINAL ASSEMBLY LINE.
- B. IDLE SPEED CHECK
  - 1. SMT - APPROX. 700 RPM IN NEUTRAL, SOLENOID ELECTRICALLY CONNECTED, 400 RPM ELECTRICALLY DISCONNECTED.
  - 2. AMT - APPROX. 575 RPM IN NEUTRAL, SOLENOID ELECTRICALLY CONNECTED, 400 RPM ELECTRICALLY DISCONNECTED.
  - 3. CHECK TO SEE THROTTLE RETURN SPRING IS EFFECTIVELY HOLDING THROTTLE AGAINST STOP.

©

NOTE: THESE ADJUSTMENTS ARE FOR ASSEMBLY LINE ONLY, FOR REPAIR AREA OR DEALER SERVICE SEE SERVICE MANUAL TO CORRECTLY SET SLOW IDLE, FAST IDLE, AND CHOKE.

250 CUBIC IN. L-6

ⓑ

DATE		SYM	REVISION	DR.	CL.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC	PAGE
SEPT 28, 1968						CHART - THROTTLE ADJUSTMENT	1970		6-2	85
BY GALE GRAY										
CHECKED John Brown										
DATE		SYM	REVISION	DR.	CL.	SERIES	FILE NO.			
						A	404411			



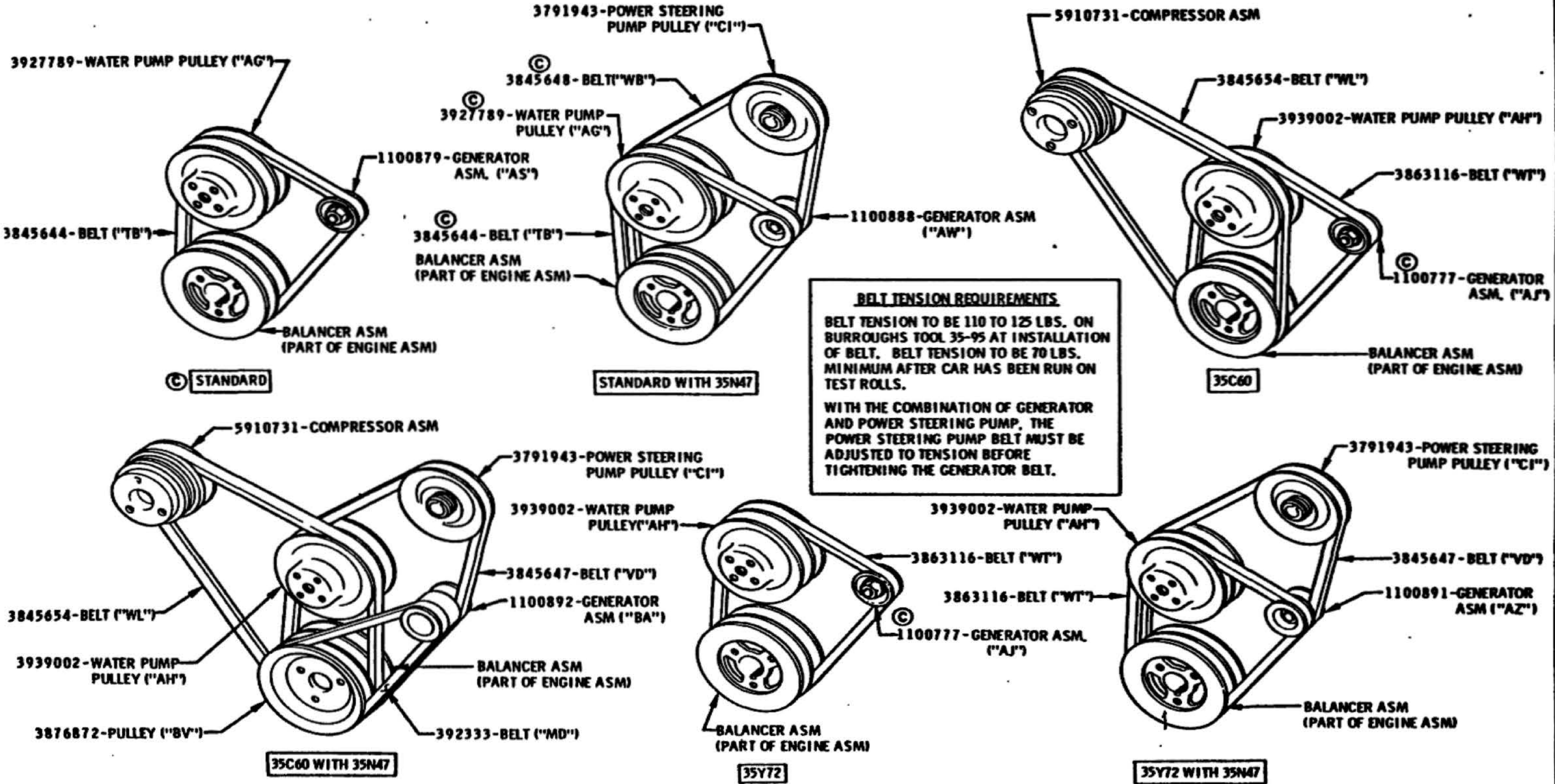
**1970 250 CUBIC INCH IL-6 ENGINE ASSEMBLIES  
CONVERSION PROCEDURES**

CALIFORNIA ONLY CONVERT TO 35NA9 BY THE FOLLOWING		
ITEM	REMOVE	INSTALL
STUD - CARBURETOR TO INLET MANIFOLD	383386★	3967070

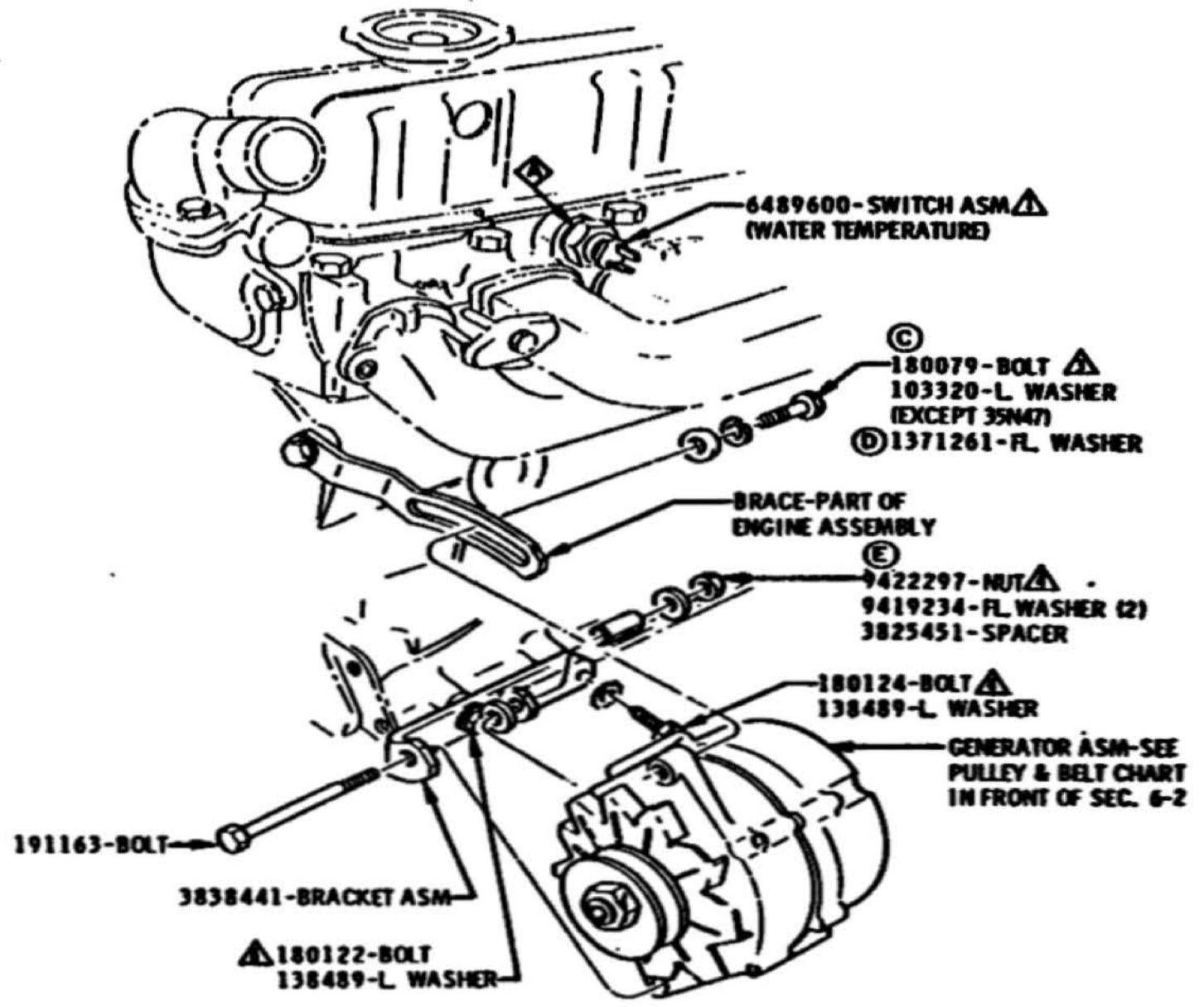
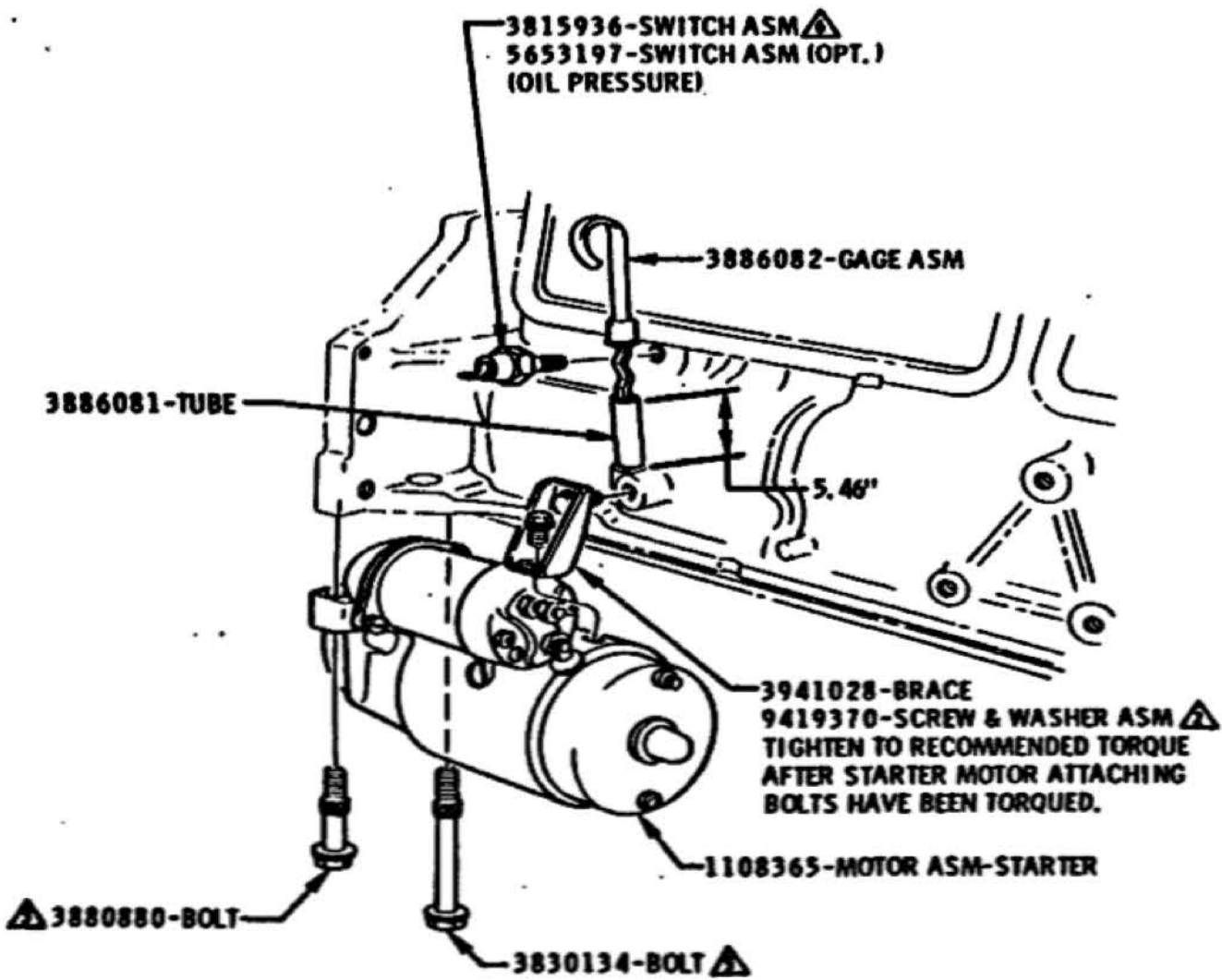
Ⓐ

★SCRAP

										TITLE		CHART - ENGINE CONVERSION		SHEET 2					
										DATE		FIRST USED		OLDSMOBILE PRODUCT		MANUAL SEC.		PAGE	
										APRIL 17, 1969		1970		INFORMATION MANUAL		6-2		86	
										DR BY		SERIES		PART					
										BARRY PARKER		A		NO.					
										CHECKED		APPR.		SERIES		PART			
										C. J. ...		ed - 2/2/69		A		NO.			
										APPR.		APPR.		406559					
										2/2/69									
DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.



DATE		SYM	REVISION	DR	CL	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	HANDL. DOC.	PAGE
5-28-69	C6		PART NOS. REVISED	PL	72		L6 ENGINE PULLEY AND BELT DIAGRAM	NOVEMBER 8, 1968	1970	6-2	90
4-23-69	B		BELT + PULLEY NOS REVISED	PL	72			DR BY P. LOCATELLI			
2-27-69	A		GEN. & COMP. PART NOS. REV.	PL	72			CHECKED BY [Signature]			
								APPL. [Signature]	NO. 247 2V7	SERIES	PART NO.
									35C60, N47, Y7E	A	404411

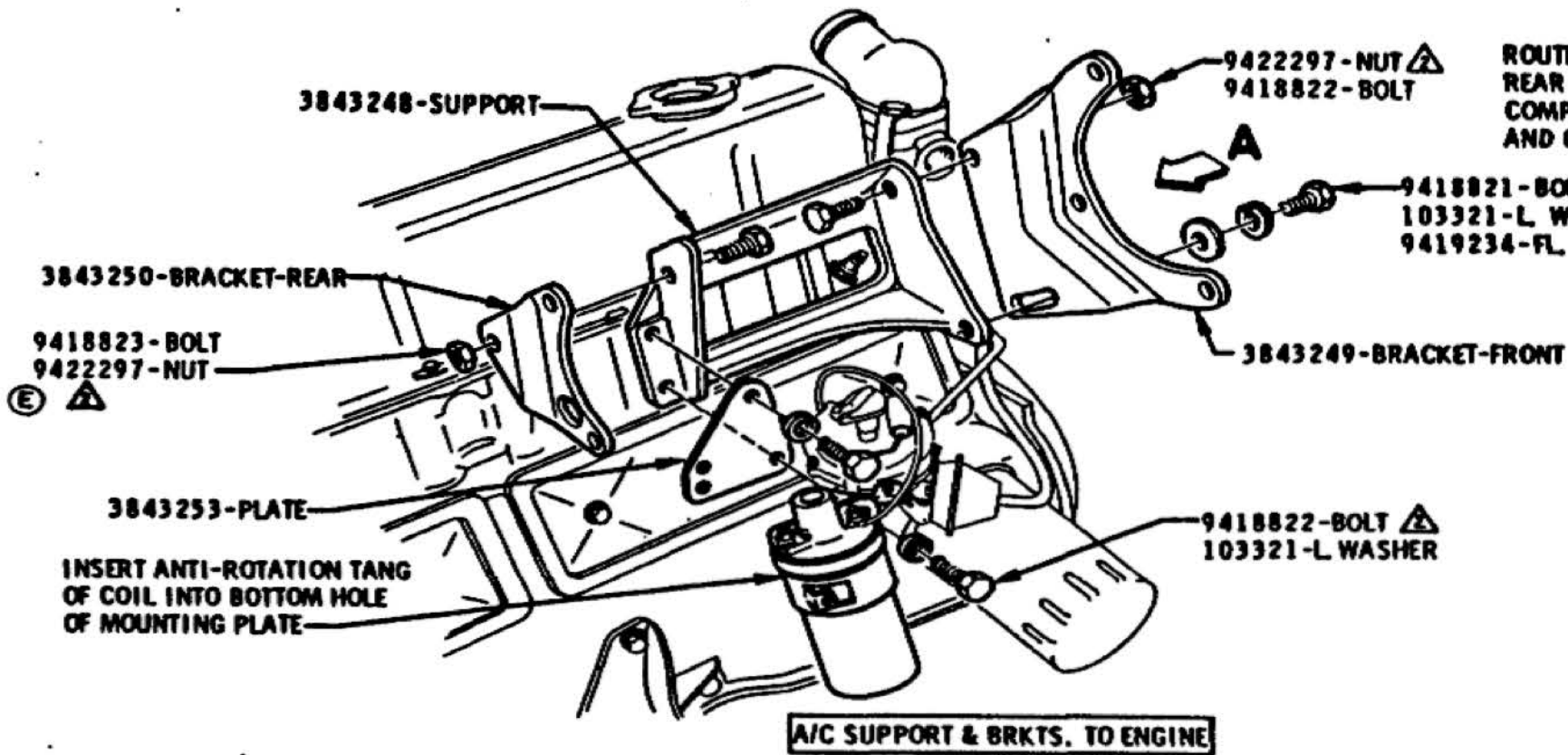


TYPICAL GENERATOR INSTALLATION

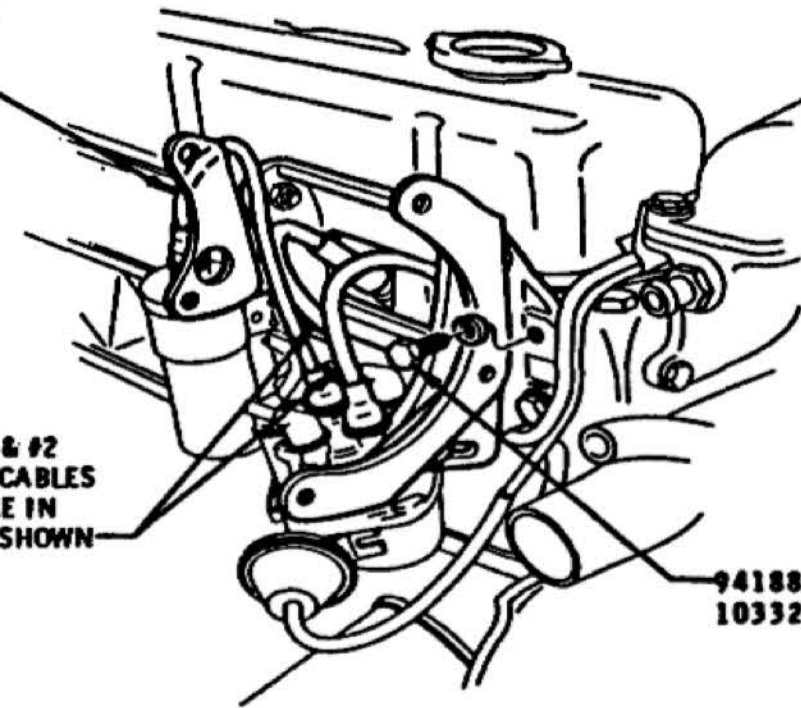
- ▲ 100-125 LB. IN.
- ▲ 30-40 LB. FT.
- ▲ 25-35 LB. FT.
- ▲ 20-25 LB. FT.
- ▲ 15-20 LB. FT.
- ▲ 14-20 LB. FT.
- ▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

◆ APPLY SEALER 9985000 TO  
AREAS INDICATED  
PRIOR TO ASSEMBLY

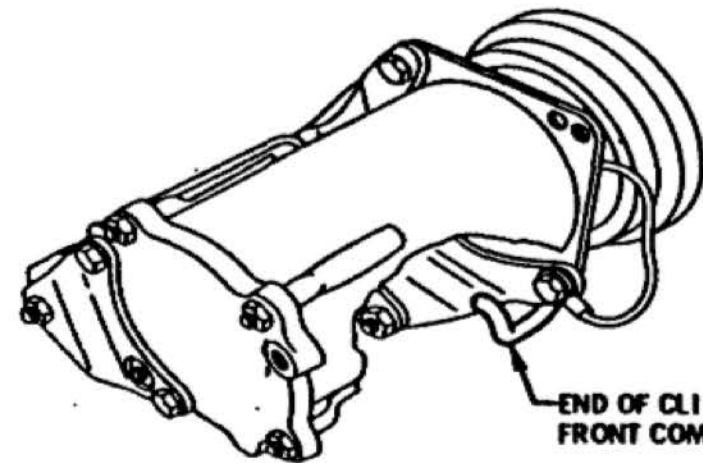
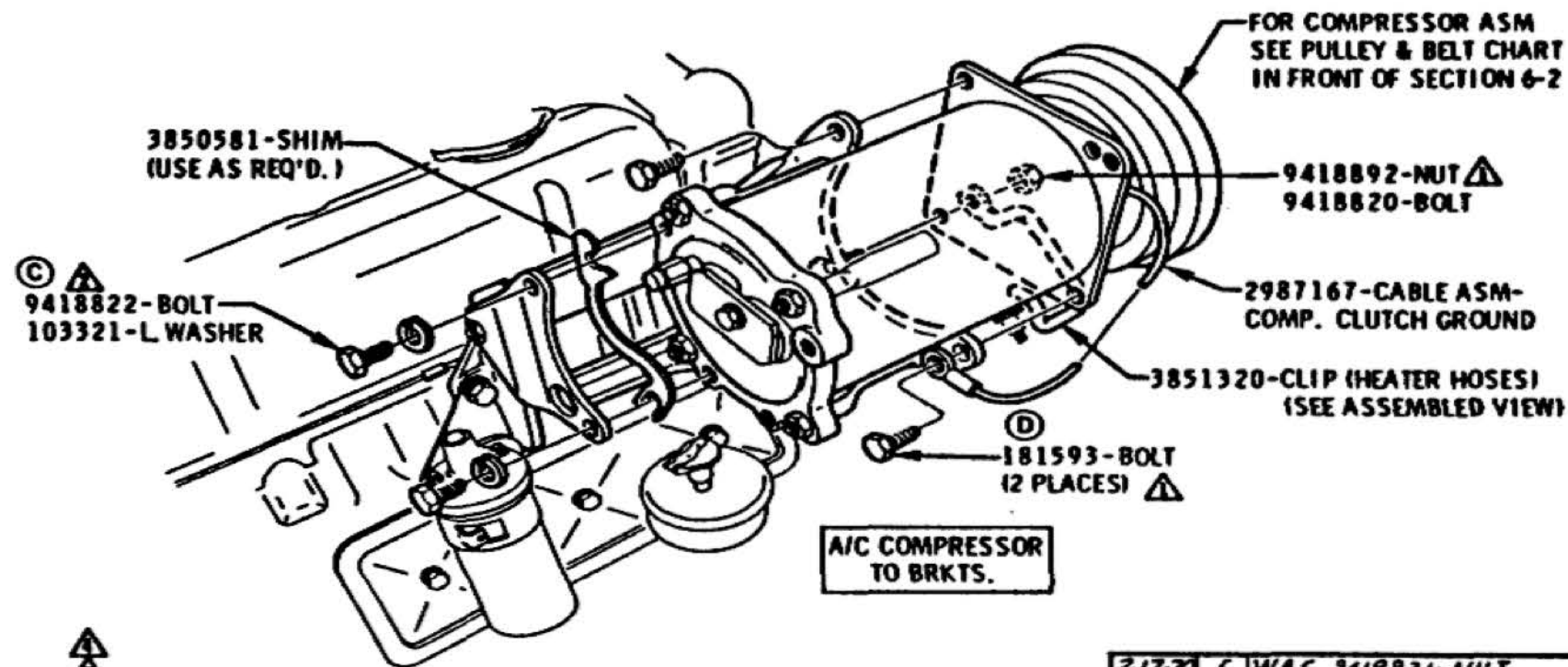
2-6-70	E	WAS 2487146-NUT	PL	TITLE OIL PRESSURE & WATER TEMP. SWITCH, OIL DIP STICK, STARTER & GENERATOR		MANUAL SEC.	PAGE
2-6-70	D	WAS 3852446-WASHER	PL	DATE NOVEMBER 11, 1968	FIRST USED	6-2	100
2-6-70	C	WAS 9418918-BOLT	PL	DR. BY P. LOCATELLI	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	
8-5-69	B	WAS 1993582-SWITCH	PL	CHECKED BY <i>[Signature]</i>	REV. 500		
6-12-69	A	WAS EXC. 35N40	PL	APPR. <i>[Signature]</i>	BY 6V2 120	A	404411
DATE	BY	REVISION	DR.	CK.	APPR.		



ROUTE COIL WIRE OVER REAR BRACKET BETWEEN COMPRESSOR SUPPORT AND COMPRESSOR



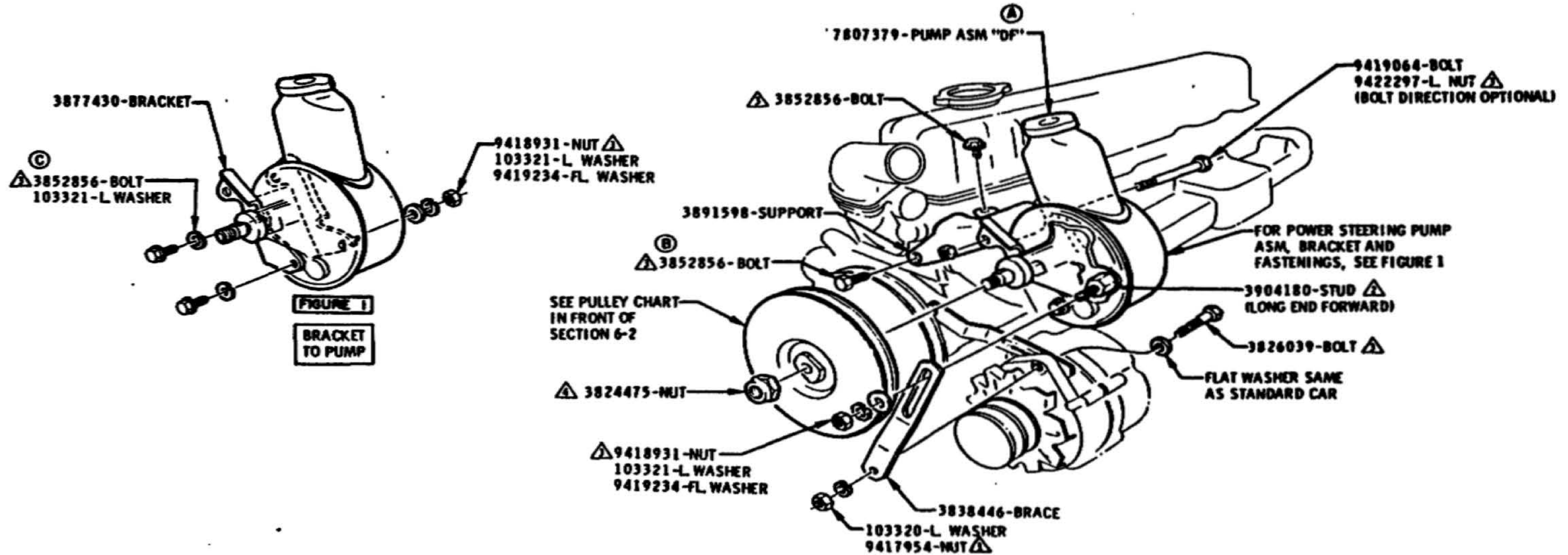
VIEW A



ASSEMBLED VIEW OF COMPRESSOR & BRKTS.

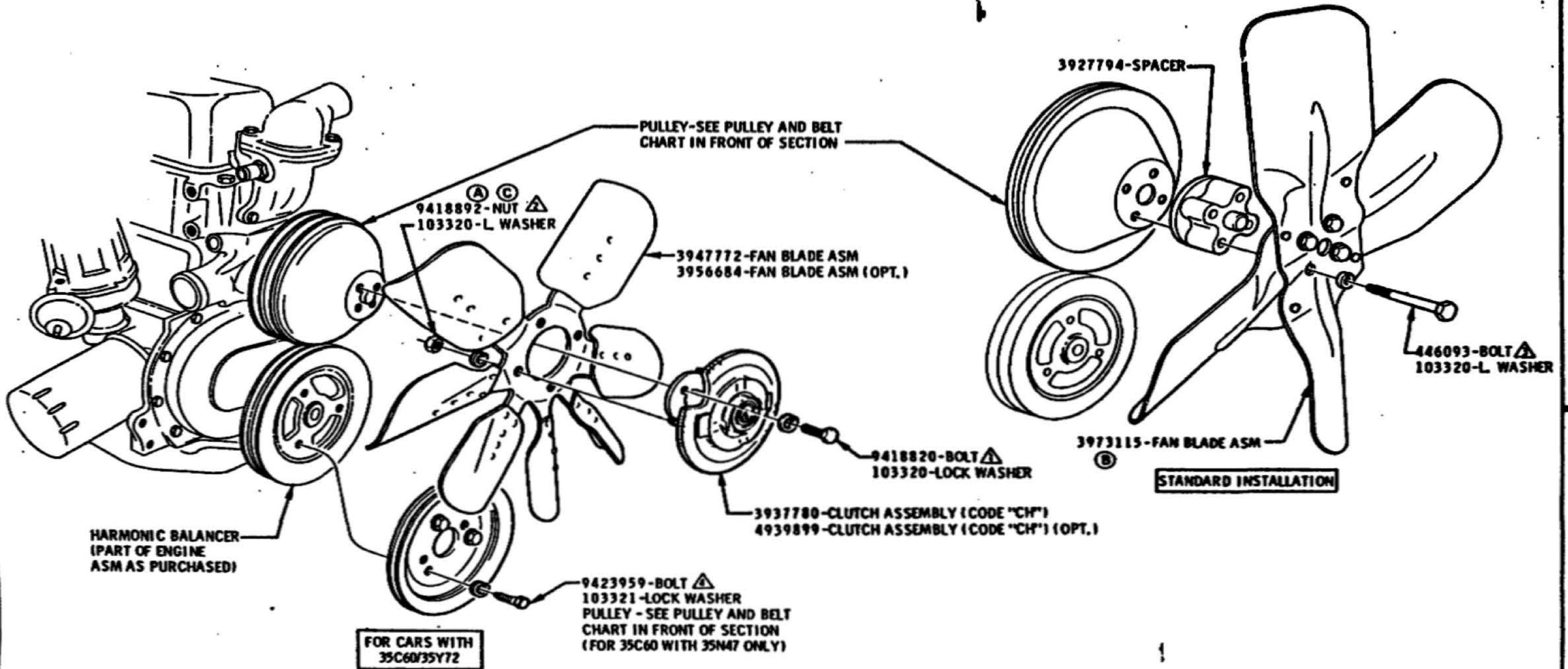
▲ 25-35 LB. FT.  
▲ 20-25 LB. FT.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	BY	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
2-17-70	E	WAS 9418931-NUT				AIR CONDITIONING COMPRESSOR & BRACKETS				
2-6-70	D	WAS 9418929-BOLT				DATE NOVEMBER 11, 1968	1970		6-2	104
2-6-70	C	103321-L WASHER ADDED				DR BY P. LOCATELLI				
2-6-70	B	WAS 9418931-NUT, 9418823-BOLT				CHECKED <i>[Signature]</i>				
4-14-70	A <sub>2</sub>	WAS 9418823 BOLT				APPR. <i>[Signature]</i>	REV. 35C60 (MC) (ORD) (128)		A	404411



- ▲ 55-70 LB. FT.
- ▲ 25-35 LB. FT.
- ▲ 25-30 LB. FT.
- ▲ 20-25 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYM	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSDMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
2-17-70	C		WAS 389051-BOLT				POWER STEERING PUMP & BRACKET	1970		6-2	106
2-6-70	B		WAS 9419051-BOLT				DATE NOVEMBER 11, 1968 DR BY P. LOCATELLI				
4-2-69	A		CODE ADDED				CHECKED P. Lambert PLD	35N47			
									A		404411



- ▲ 25 - 35 LB. FT.
- ▲ 15 - 25 LB. FT.
- ▲ 15 - 20 LB. FT.
- ▲ 10 - 15 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE		FAN, PULLEY AND CLUTCH			
1-22-70	C	WAS 120368 - NUT		DATE	NOVEMBER 11, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
4-23-69	B	WAS 3927791 FAN		DR BY	P. LOCATELLI				6-2 108
3-11-69	A	WAS 9419031 BOLT		CHECKED	<i>[Signature]</i>	REV. 6X1		SERIES	A
DATE	SYM	REVISION	DR. CK.	APPR.	<i>[Signature]</i>	35C60		PART NO.	404411
						35Y72			

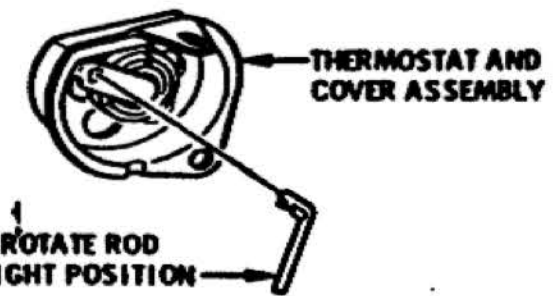
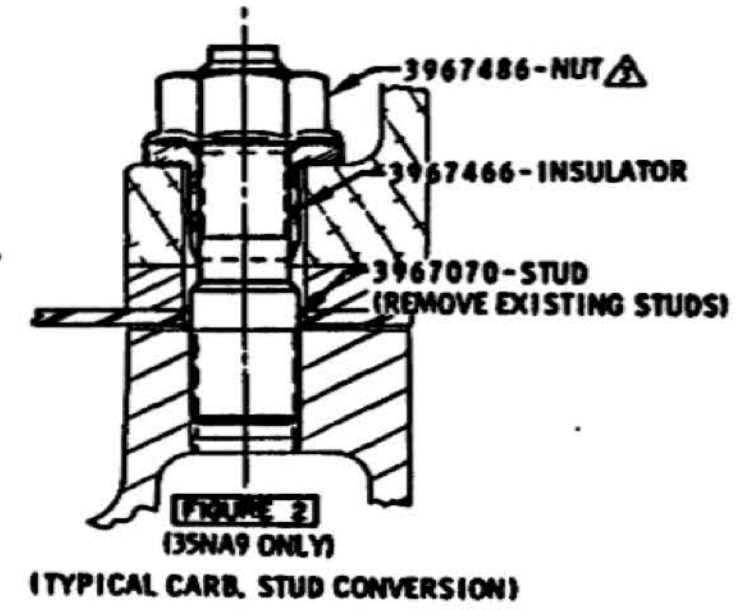
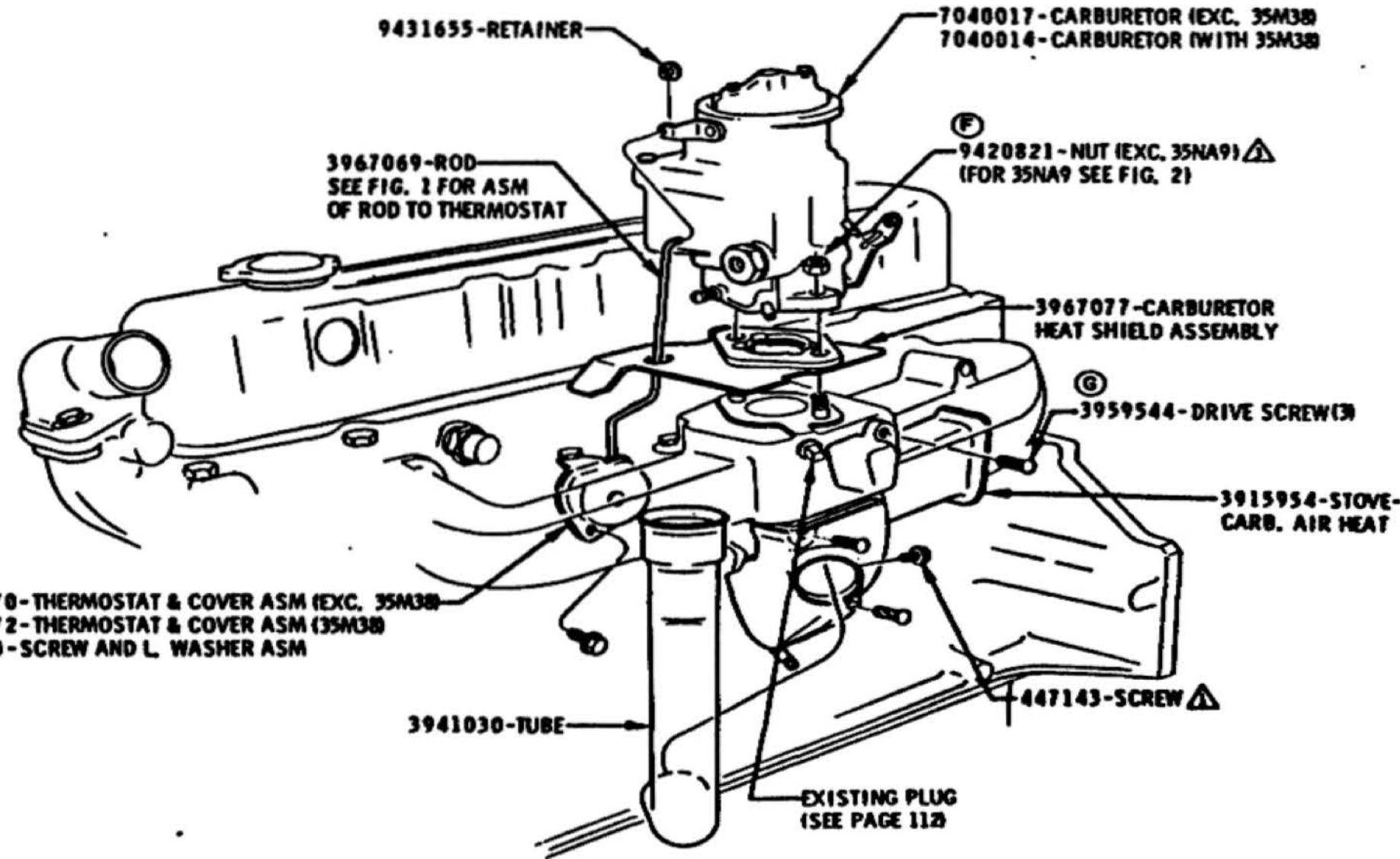
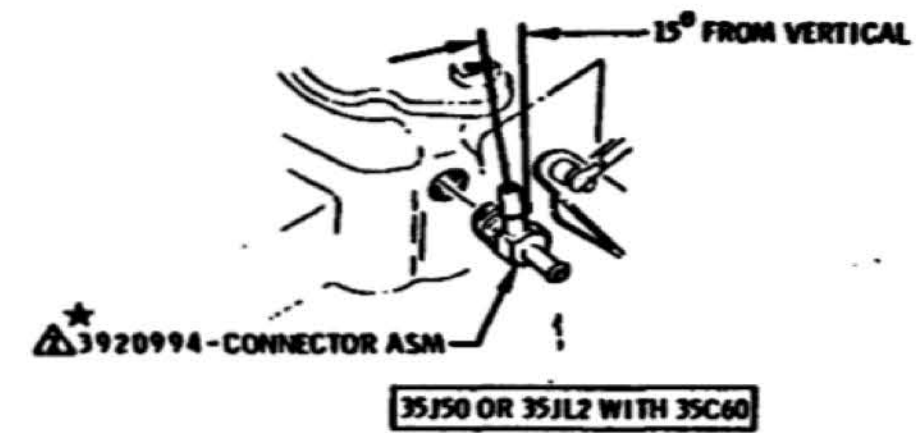
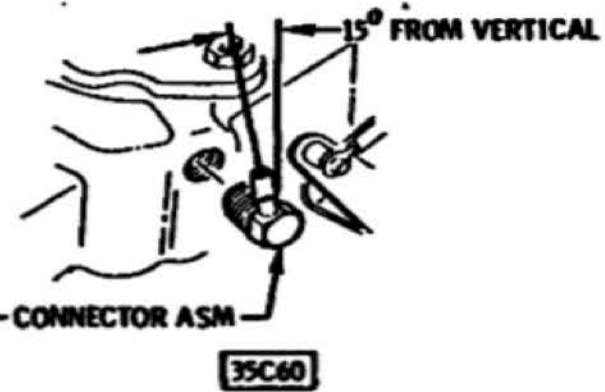
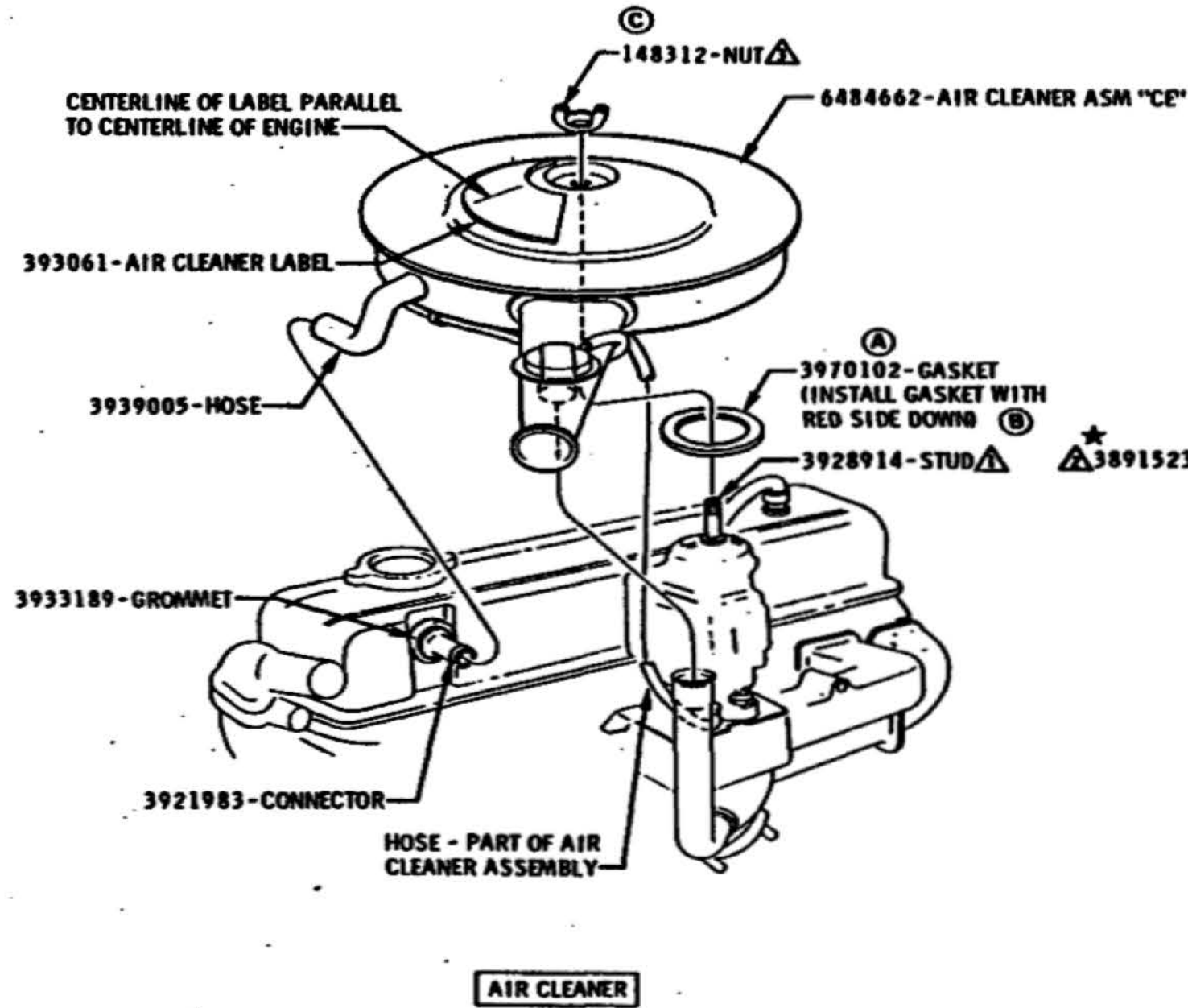


FIGURE 1

- ▲ 10 - 14 LB. FT.
- ▲ 30 - 50 LB. IN.
- ▲ 15 - 25 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	BY	REVISION	DR	CK	DATE	BY	REVISION	DR	CK	APPR.	TITLE	PART NO.	MANUAL NO.	FIG.
					10-11-69	E	WAS 3977155-COVER	PL	PL		CARBURETOR, HEAT STOVE & AIR PIPE			
					8-5-69	D	USAGE REVISED	PL	PL		DATE NOVEMBER 11, 1968			
					5-8-69	C	WAS 3927770 COVER	PL	PL		DR BY P. LOCATELLI			
2-6-70	G	WAS 220529-SCREW	PL	PL	3-20-69	B	NOTE REVISED	PL	PL		CHECKED P. Locatelli	1970	6-2	110
2-6-70	F	WAS 120369-NUT	PL	PL	2-22-69	A	REVISED + REDRAWN	PL	PL		APPR. J. Ford	35NA9	A	404411
											APPR. Helmer			



**NOTE** **VACUUM FITTINGS**  
REMOVE EXISTING PLUG AND  
INSTALL THESE FITTINGS AS REQUIRED

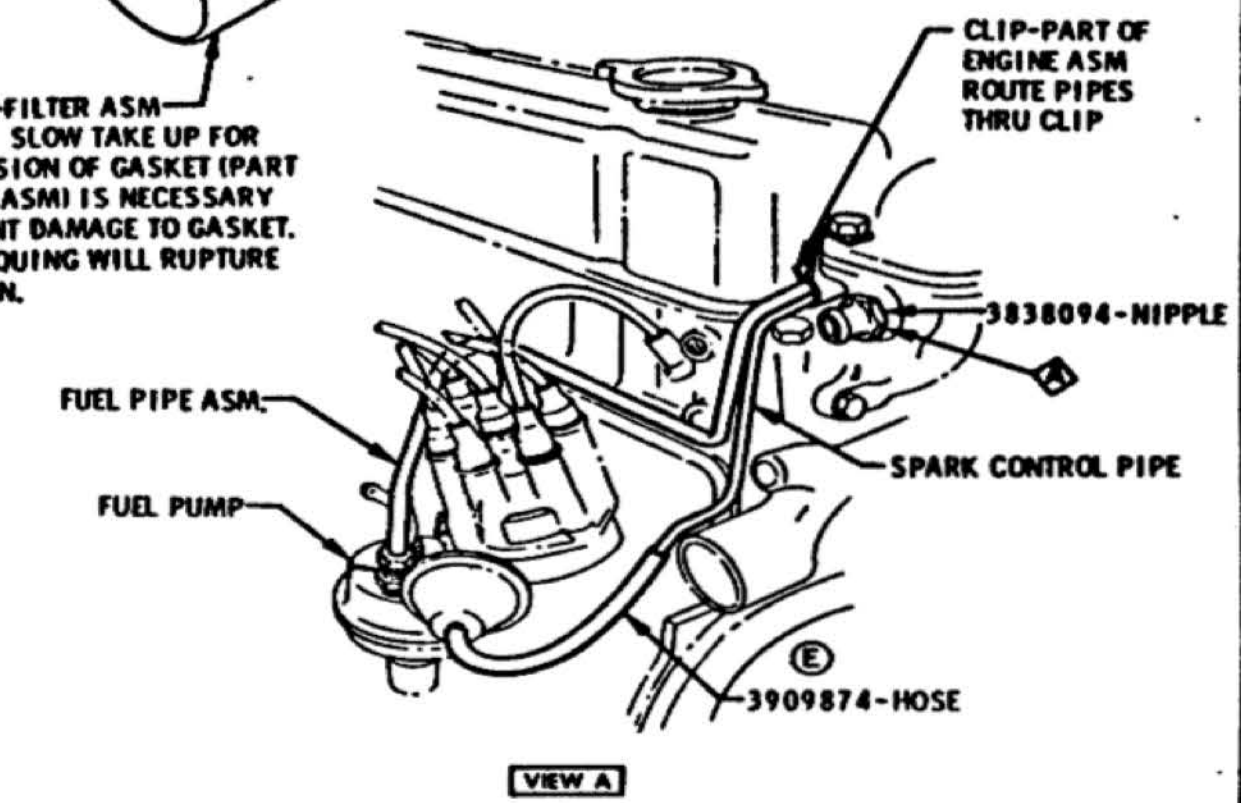
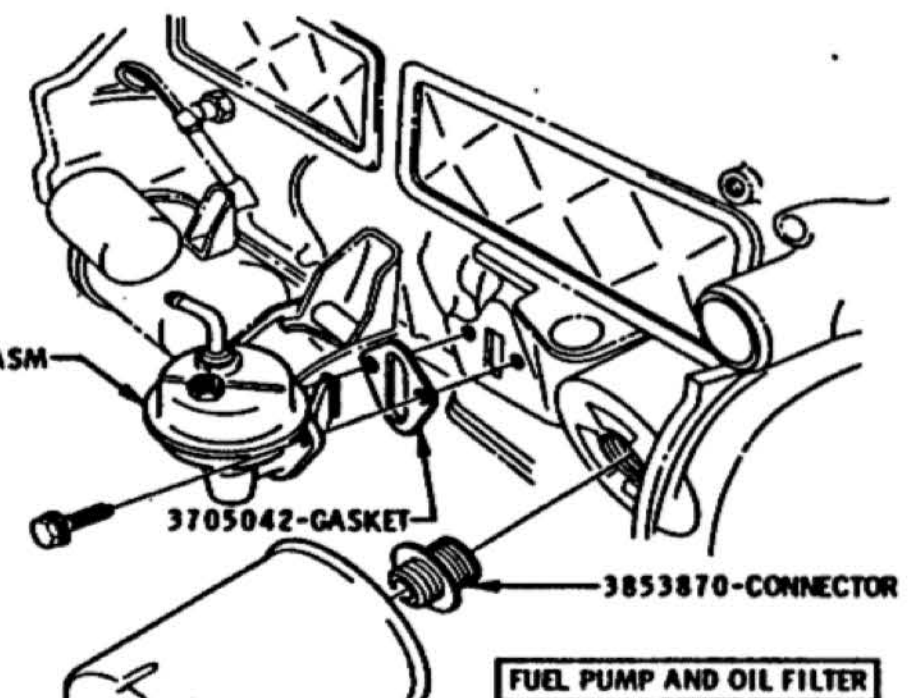
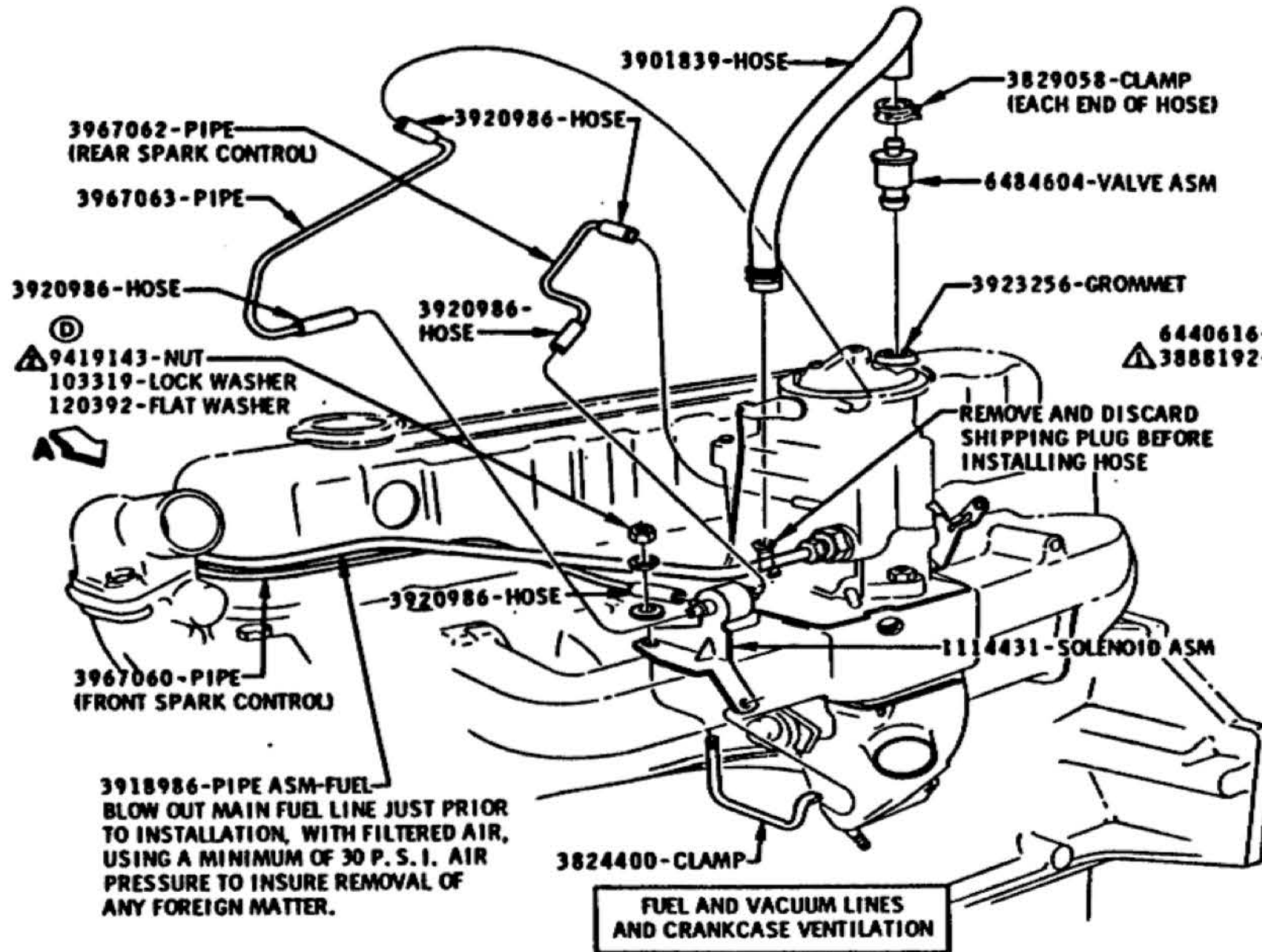
- ▲ 12 - 20 LB. IN.
- ▲ 100 LB. IN.
- ▲ 15 - 20 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

★ PLUS TORQUE REQUIRED TO ALIGN FITTINGS

DATE		SYN	REVISION	DR.	CR.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
11-13-69	C		WAS 9418699 NUT	JL			AIR CLEANER AND VACUUM FITTINGS	1970		6-2	112
4-23-69	B		NOTE ADDED								
4-2-69	A		WAS 3708408-GASKET	FZ							

PART NO. 404411





3918986-PIPE ASM-FUEL  
BLOW OUT MAIN FUEL LINE JUST PRIOR TO INSTALLATION, WITH FILTERED AIR, USING A MINIMUM OF 30 P. S. I. AIR PRESSURE TO INSURE REMOVAL OF ANY FOREIGN MATTER.

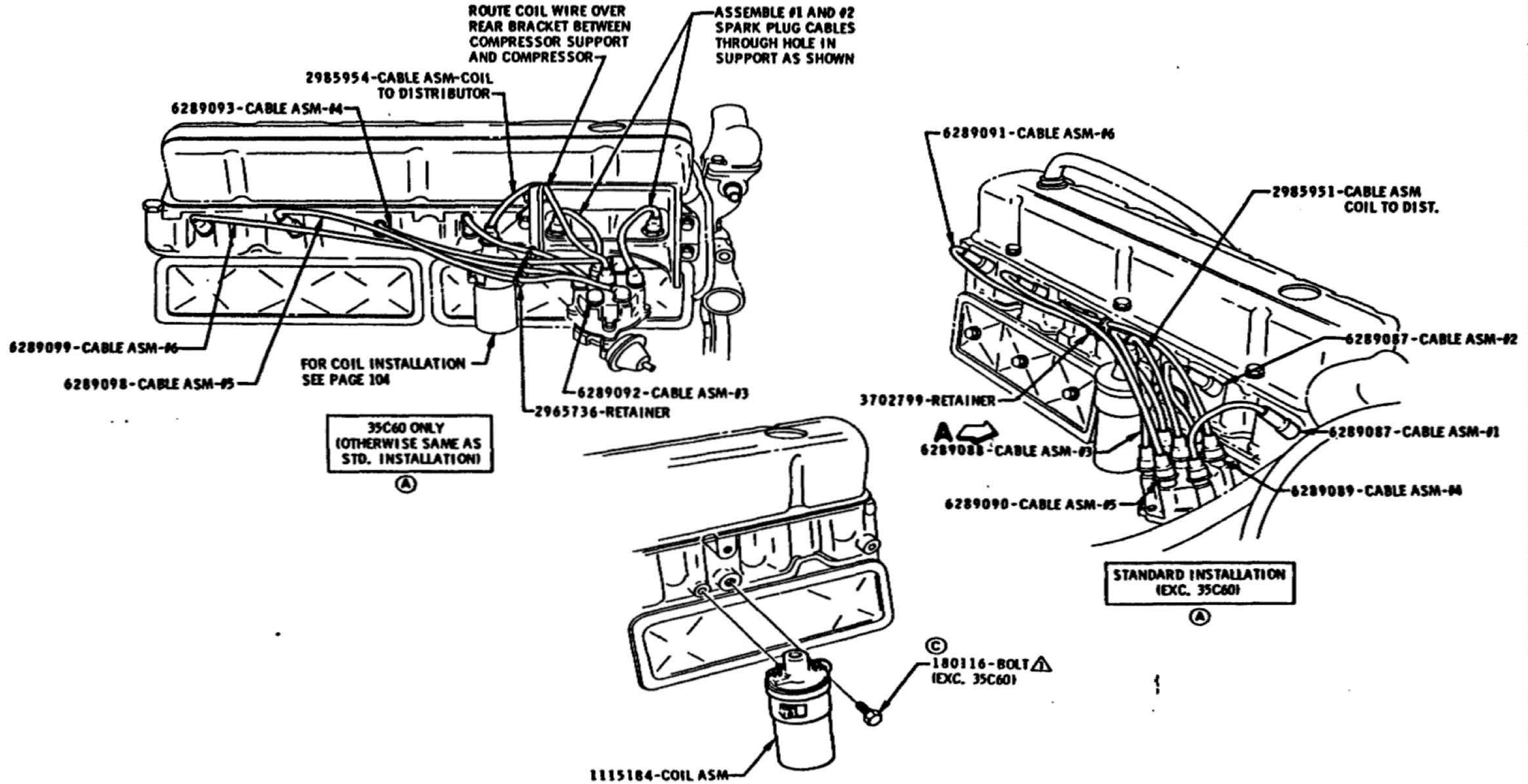
FUEL AND VACUUM LINES AND CRANKCASE VENTILATION

L-6 ENGINE CRANKCASE OIL				
FILL OIL PAN THRU OIL FILLER HOLE IN VALVE COVER				
PLANTS	G. M. SPEC.	QUANTITY	TYPE	TIME
③ OLDS FINAL ASM	6041-M	5 QTS.	S. A. E. 10W-30	START OF MODEL YEAR TO MARCH 1
			S. A. E. 20W	MARCH 1 TO END OF MODEL YEAR
G. M. A. D.	6041-M	5 QTS.	S. A. E. 10W-30	ALL SEASONS

▲ 35 - 50 LB. IN.  
▲ 14 - 22 LB. FT.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

▲ APPLY SEALER 9985000 TO AREAS INDICATED PRIOR TO ASSEMBLY

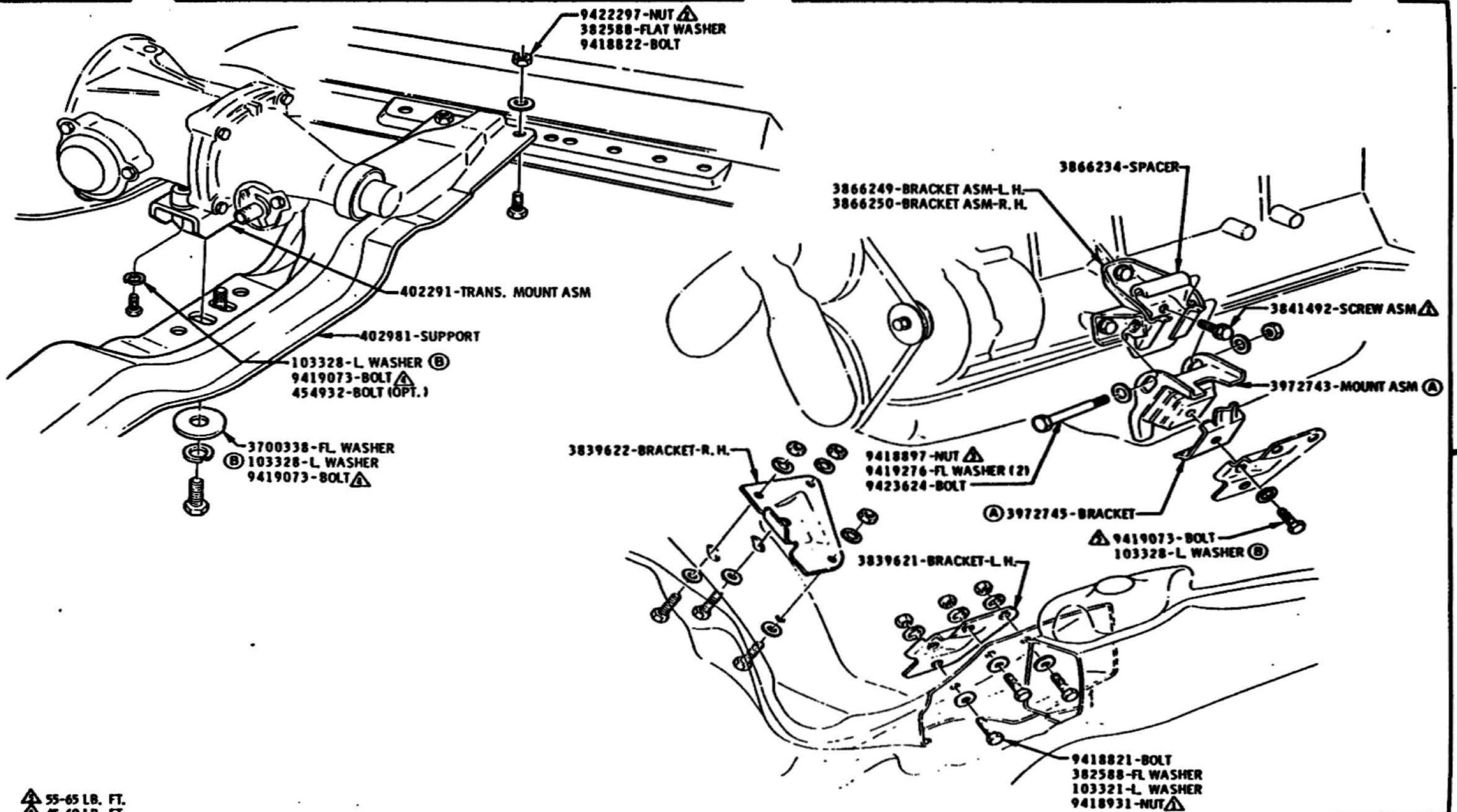
DATE	SYM	REVISION	DR.	CK.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
1-31-70	E	WAS 3821534 HOSE			PIPES, VENTILATION, OIL FILTER AND FUEL PUMP	1970	665 6N 6M6 03	A	40441
1-22-70	D	WAS 114378-NUT							
5-8-69	C	CHART REVISED							
2-14-69	B	WAS BOARD NO. 112							
2-14-69	A	REVISED & REDRAWN							



VIEW A

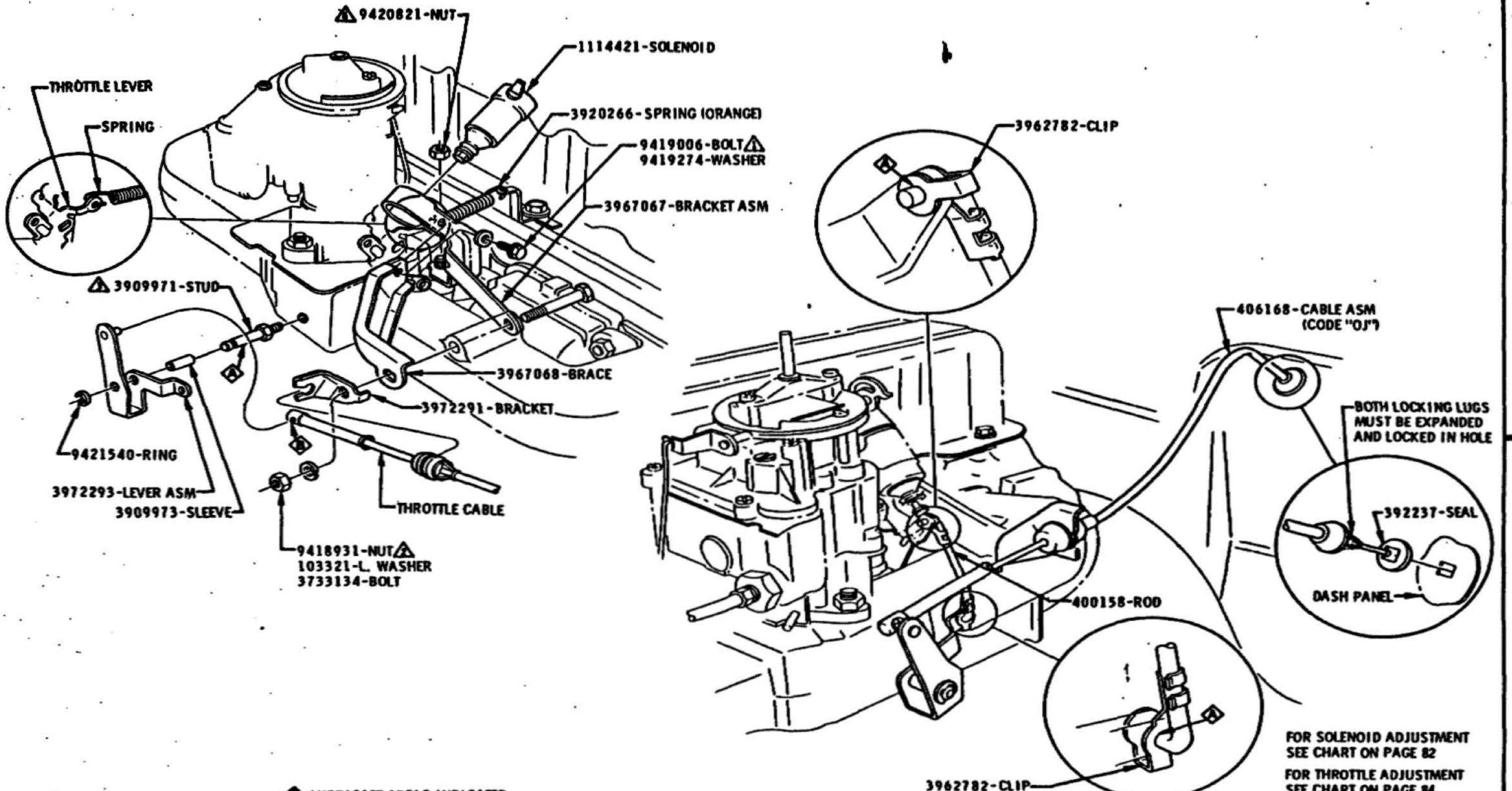
TITLE				IGNITION COIL AND CABLE			
2-6-70	C	WAS 12185E-BOLT	DR. BY P. LOCATELLI	DATE NOVEMBER 12, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL
2-28-69	B	WAS BOARD NO 114	CHECKED P. J. ...		MANUAL SEC.	6-2	PAGE 116
2-28-69	A	PART NOS REVISED	APPR. ...		REV. 578		
DATE	BY	REVISION	DR. CK.	APPR.	35C60	SERIES	PART NO.
						A	404411

▲▲▲ 100-140 LB. IN.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED



- $\Delta$  55-65 LB. FT.
- $\Delta$  45-60 LB. FT.
- $\Delta$  40-55 LB. FT.
- $\Delta$  30-40 LB. FT.
- $\Delta$  25-40 LB. FT.
- $\Delta$  FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYN	REVISION	DR.	CHK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL DEC.	PAGE
3-10-70	B		WAS 103322-L WASHER				POWER PLANT TO FRAME	1970		6-2	130
6-11-69	A2		PART NO. REVISED					28 6Q	A		404411

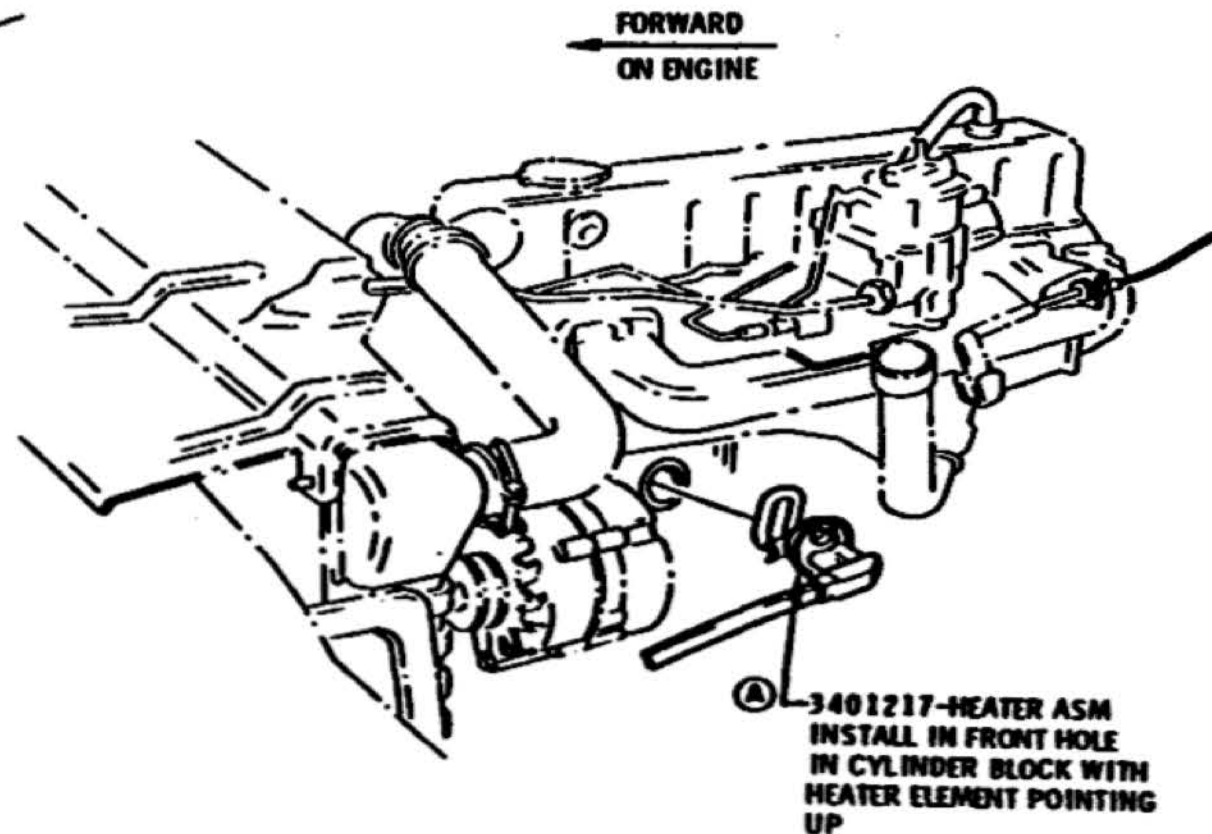
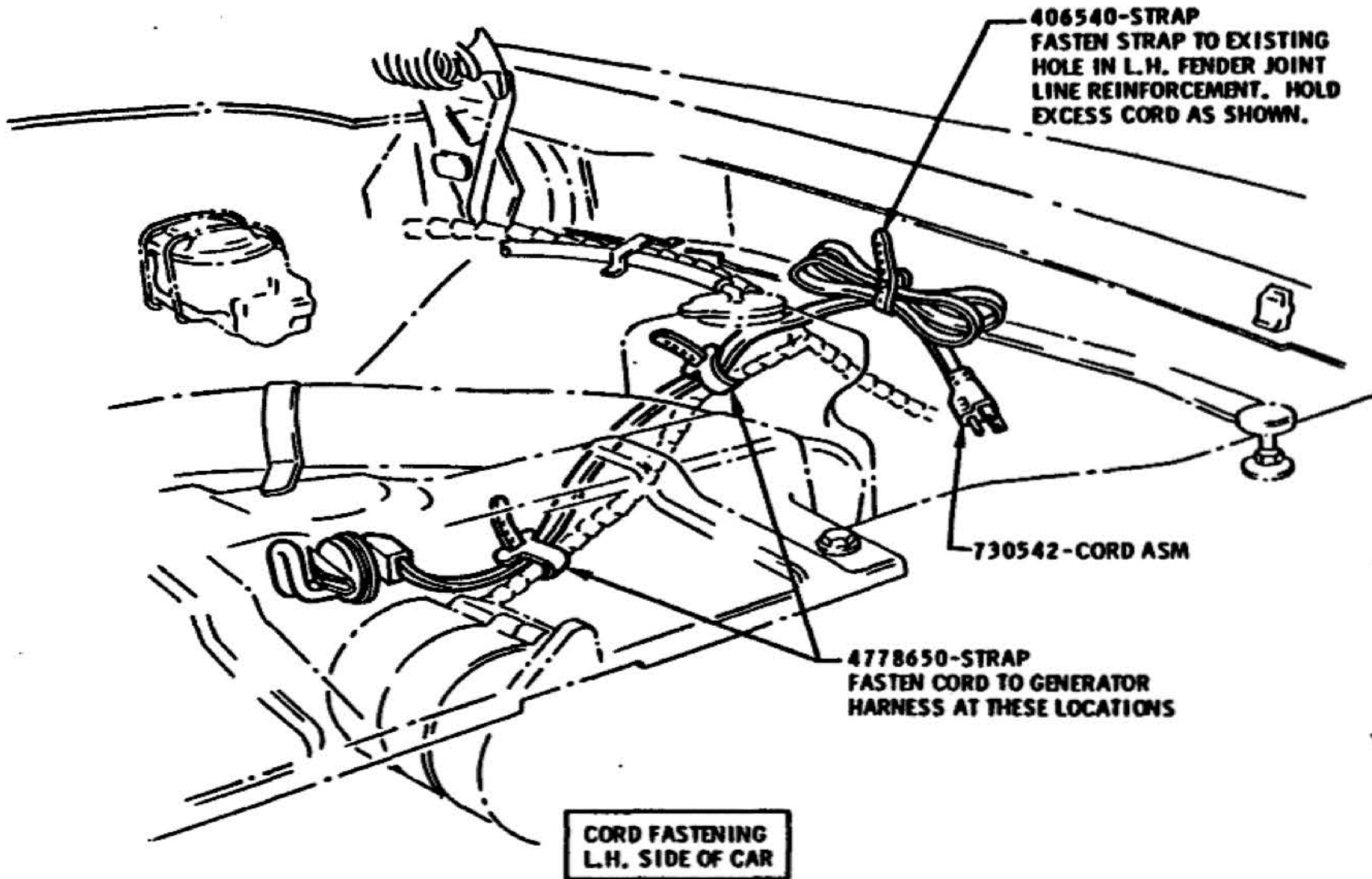


FOR SOLENOID ADJUSTMENT  
SEE CHART ON PAGE 82  
FOR THROTTLE ADJUSTMENT  
SEE CHART ON PAGE 84

- ▲ 16 - 26 LB. FT.
- ▲ 70 - 100 LB. IN. (D)
- ▲ 15 - 25 LB. FT.
- ▲ 38 - 50 LB. IN. (D) (E)
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

- ◆ LUBRICATE AREAS INDICATED WITH 9985038-GREASE.
- ◆ LUBRICATE AREAS INDICATED WITH 404753-OIL
- © 404754-OIL (OPTIONAL)

10-31-69	E	WAS LB. FT.	PL	PL	TITLE	THROTTLE CONTROL	MANUAL NO.	PAGE
10-27-69	D	TORQUE REVISED	PL	PL	DATE NOVEMBER 12, 1969	FIRST USED	6-2	132
9-30-69	C	WAS 9985002-OIL	PL	PL	DR BY P. LOCATELLI	1970	6-2	132
9-29-69	B	WAS CODE "OE"	PL	PL	CHECKED <i>[Signature]</i>	REF. LN2	A	404411
4-12-69	A	REVISED + REDRAWN	PL	PL	APPR. <i>[Signature]</i>			
DATE	BY	REVISION	DR.	CL.	APPR.			



HEATER INSTALLATION  
L.H. SIDE OF ENGINE

INSTALLATION INSTRUCTIONS

1. REMOVE FROST PLUG BY TAPPING CAREFULLY NEAR OUTER EDGE CAUSING IT TO ROTATE OUT OF HOLE. DO NOT SCORE THE MACHINED SURFACE OF THE HOLE.
2. THOROUGHLY CLEAN FROST PLUG HOLE REMOVING ANY BURRS, COMPOUND, PAINT OR ROUGH SPOTS.
3. APPLY A COATING OF CHASSIS GREASE OR VASELINE TO "O" RING AND MACHINED SURFACE OF HOLE. (THIS PREVENTS DAMAGE TO RUBBER "O" RING AND MAKES INSTALLATION EASIER.)
4. INSERT HEATER AND PUSH TIGHT TO BLOCK, TURN LOCKING SCREW CLOCKWISE UNTIL LOCKING WINGS DRAW TIGHT AGAINST INNER WALL OF ENGINE BLOCK. BE SURE THAT BOTH SIDES OF LOCKING WING HAVE ENGAGED THE BLOCK. (EXCESSIVE TIGHTENING IS NOT ADVISABLE.)
5. ROUTE CORD THRU STRAPS AND FASTEN EXCESS AS SHOWN.

CANADIAN CARS ONLY  
L-6 ENGINES ONLY

		TITLE		ENGINE BLOCK HEATER					
		DATE		JULY 31, 1969		FIRST USED		1970	
		DR BY		BEAUDOIN		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
		CHECKED		A. S. [Signature]		MANUAL SEC.		6-2 150	
8-20-69		A		WAS 1386059		REV.		96-K-05	
DATE		SYM		REVISION		SERIES		PART NO.	
						A		404411	

3 SPEED FULLY SYNCHRONIZED TRANSMISSION

(COLUMN SHIFT ONLY)

AVL RATIO	TIRE CODE *	SPEEDO DRIVEN GEAR			ADAPTER RATIO
		TEETH	PART NO.	COLOR	
2.78 (46:14)	14, 15, 20, 21, 25, 26	17	3M7051	PURPLE	NONE
	33	18	3M6941	BROWN	1.1250
	30, 35	20	3M6950	BLUE	1.2020
1.08 (40:13)	30, 33, 35	18	3M6941	BROWN	NONE
	14, 15, 21, 26	19	3M6942	NATURAL	NONE
	20, 23, 25	21	3M6944	RED	1.1250
1.23 (42:13)	20, 25	17	3M7051	PURPLE	.865
	21, 30, 33, 35	19	3M6942	NATURAL	NONE
	14, 15, 21, 26	20	3M6940	BLUE	NONE
1.42 (41:12)	20, 25	18	3M6941	BROWN	.865
	30, 33, 35	20	3M6940	BLUE	NONE
	14, 15, 21, 25, 26	21	3M6944	RED	NONE
1.91 (40:11)	20, 23, 25	17	3M7051	PURPLE	.7222
	30, 35	17	3M7051	PURPLE	.7333
	33	20	3M6940	BLUE	.865
1.01 (36:9)	14, 15, 20, 21, 25, 26	19	3M6942	NATURAL	.7222
	21, 30, 35	19	3M6942	NATURAL	.7333
	33	18	3M6941	BROWN	.7222
1.66 (42:9)	30, 35	17	3M7051	PURPLE	.6190
	20, 23, 25	20	3M6940	BLUE	.7222
	33	20	3M6940	BLUE	.7333
1.00 (45:9)	14, 15	21	3M6944	RED	.7222
	21, 26	21	3M6944	RED	.7333
	30, 33, 35	18	3M6941	BROWN	.6190
1.00 (45:9)	14, 15, 21, 26	19	3M6942	NATURAL	.6190
	20, 23, 25	21	3M6944	RED	.7333
	30, 35	21	3M6944	RED	.6190

\* DEALER INSTALLED

\* SEE TIRE CHART 40364

- .6190 - ADAPTER 54010 (ORANGE)
- .6944 - ADAPTER 535413 (GRAY)
- .7222 - ADAPTER 54013 (LT. BLUE)
- .7333 - ADAPTER 535614 (RED)
- .865 - ADAPTER 535617 (BLUE)
- 1.1250 - ADAPTER 54074 (NONE)

3M7051 - SPEEDO DRIVEN GEAR FITTING ASSEMBLY FOR 17, 18, 19, 20, 21 TOOTH GEAR.  
SPEEDO DRIVE GEAR 3M1503 (28 PITCH & TOOTH)

DATE		SYM		REVISION		DATE		SYM		REVISION		DATE		SYM		REVISION		DATE		SYM		REVISION	
TITLE CHART - SPEEDOMETER GEAR USAGE																							
DATE <u>MAY 9, 1969</u>												FIRST USED <u>1970</u>				OLDSMOBILE PRODUCT INFORMATION MANUAL				MANUAL SEC. <u>7</u>		PAGE <u>80</u>	
DR BY <u>DON MALKIN</u>												CHECKED <u>[Signature]</u>				SERIES <u>A</u>				PART NO. <u>404907</u>		REV.	
<p style="text-align: center;"><i>COPIES A HAS SHEET 1 OF 3 15/7</i></p>																							

4 SPEED FULLY SYNCHRONIZED (WIDE RATIO) M20 (CLOSE RATIO) M21 TRANSMISSION

AXLE RATIO	TIRE CODE *	SPEEDO DRIVEN GEAR				ADAPTER RATIO #	SPEEDO CABLE
		TEETH	PART NO.	COLOR			
3.08 (42:13)	30, 33, 35	18	3860341	BROWN	NONE	6477217	
	10, 15, 21, 26	19	3860342	NATURAL	NONE	6477217	
	20, 23, 25	21	3860344	RED	1.1320	6477217	
3.23 (42:13)	20, 25	17	3870351	PURPLE	.6660	6477217	
	23, 30, 33, 35	19	3860342	NATURAL	NONE	6477217	
	10, 15, 21, 26	20	3860340	BLUE	NONE	6477217	
3.42 (41:12)	23	18	3860341	BROWN	.8660	6477217	
	30, 33, 35	20	3860340	BLUE	NONE	6477217	
	10, 15, 20, 21, 25, 26	21	3860344	RED	NONE	6477217	
3.91 (42:11)	20, 25	17	3870351	PURPLE	.7330	6477217	
	33	18	3860341	BROWN	.7850	6477217	
	23, 30, 35	20	3860340	BLUE	.8660	6477217	
4.53 (34:9)	10, 15, 21, 26	21	3860344	RED	.8660	6477217	
	23	19	3860342	NATURAL	.7330	6477217	
	30, 33, 35	20	3860340	BLUE	.7850	6477217	
4.66 (42:9)	10, 15, 20, 21, 25, 26	21	3860344	RED	.7330	6477217	
	33	21	3860344	RED	.7850	6477217	
	20, 21, 23, 25, 26, 30, 35	20	3860340	BLUE	.6660	6477217	
4.90 (45:9)	10, 15	21	3860344	RED	.6660	6477217	
	33	21	3860344	RED	.7330	6477217	
	20, 21, 23, 25, 26, 30, 35	20	3860340	BLUE	.6660	6477217	

# DEALER INSTALLED.  
# USE RIGHT ANGLE SPEEDOMETER DRIVE ADAPTERS ONLY.

\* SEE TIRE CHART 406364  
A 3869912 - SPEEDO DRIVE GEAR FITTING ASSEMBLY FOR 17, 18, 19, 20, 21 TOOTH GEAR.  
SPEEDO DRIVE GEAR 3915003 (28 PITCH & TOOTH).

- .6660 - ADAPTER 406755 (DK. BROWN)
- .7330 - ADAPTER 406754 (RED)
- .7850 - ADAPTER 396336 (YELLOW)
- .8660 - ADAPTER 395430 (BLUE)
- 1.1320 - ADAPTER 395431 (NO COLOR)

TITLE		CHART - SPEEDOMETER GEAR USAGE		MANUAL REF. PAGE	
DATE	MAY 12, 1969	FIRST USED	1970	7	81
DR BY	DON MALKIN	OLDSMOBILE PRODUCT INFORMATION MANUAL			
CHECKED	John P. ...	SERIES	A	PART NO. 404907	
APPR.					
DR. CL.					
REVISION	NO. B COLUMN ADDED				
REVISION	2228 A WAS 3775589				
DATE		DATE		DATE	
SYM		SYM		SYM	

3 SPEED AUTOMATIC TRANSMISSION

AXLE RATIO	TIRE CODE *	SPEEDO DRIVEN GEAR			ADAPTER RATIO
		TEETH	PART NO.	COLOR	
2.56 (4L36)	30, 33, 35	34	977413	LT. GREEN	NONE
	10, 15, 20, 21, 23, 25, 26	35	978087	ORANGE	NONE
	33	36	139270	WHITE	NONE
	30, 35	37	139271	RED	NONE
2.78 (4L30)	10, 15, 20, 23, 25	38	139272	BLUE	NONE
	33	39	139273	BROWN	NONE
	30, 35	40	136208	BLACK	NONE
	10, 15, 20, 23, 25	42	136209	GREEN	NONE
3.08 (4L33)	21, 26, 30, 35	43	136216	PURPLE	NONE
	33	42	136209	GREEN	NONE
	10, 15, 20, 23, 25	44	978070	DR. GRAY	NONE
	30, 35	43	136216	PURPLE	NONE
3.23 (4L39)	10, 15, 21, 26	45	9775187	LT. BLUE	NONE
	10, 15	34	977413	LT. GREEN	.7222
	20, 25	34	977413	LT. GREEN	.7333
	30, 35	43	136216	PURPLE	NONE
3.42 (4L42)	10, 15, 21, 26	41	136219	YELLOW	.8653
	20, 25	37	139271	RED	.6944
	30, 33, 35	45	9775187	LT. BLUE	NONE
	30, 35	39	139273	BROWN	.7333
3.91 (4L51)	10, 15	39	139273	BROWN	.7222
	21, 26	40	136208	BLACK	.7333
	30, 35	40	136208	BLACK	.7692
	33	44	978070	DR. GRAY	.8653
4.33 (4L59)	10, 15, 21, 26	35	978087	ORANGE	.6190
	30, 35	40	136208	BLACK	.6944
	23	45	9775187	LT. BLUE	.7692
	20, 23, 25	39	139273	BROWN	.6190
4.66 (4L59)	10, 15, 21, 26	40	136208	BLACK	.6190
	30, 35	43	136216	PURPLE	.6944
	33	44	978070	DR. GRAY	.7222
	30, 35	41	136219	YELLOW	.6190
4.88 (4L59)	10, 15, 21, 26	42	136209	GREEN	.6190
	30, 35	43	136216	PURPLE	.6190
	10, 15, 21, 26	43	136216	PURPLE	.6190
	33	45	9775187	LT. BLUE	.6944

\* DEALER INSTALLED

\* SEE TIRE CHART 48364

- .6190 - ADAPTER 54010 (ORANGE)
- .6944 - ADAPTER 535613 (GRAY)
- .7222 - ADAPTER 54010 (LT. BLUE)
- .7333 - ADAPTER 535614 (RED)
- .7692 - ADAPTER 535615 (YELLOW)
- .8653 - ADAPTER 535617 (BLUE)

- 97807 (MAD), 396793 (MAD) - SPEEDO DRIVEN GEAR SLEEVE ASSEMBLY FOR 34, 35, 36, 37, 38, 39 AND 97806 (MAD), 396794 (MAD) FOR 40, 41, 42, 43, 44, 45 TOOTH GEAR.
- SPEEDO DRIVE GEAR (26 PITCH 18 TOOTH)
- M38 - 6260037
- MAD - 862313

TITLE		CHART - SPEEDOMETER GEAR USAGE		MANUAL SEC. PAGE	
DATE	MAY 9, 1969	FIRST USED	1970	7	82
DR BY	DON MALKIN	OLDSMOBILE PRODUCT INFORMATION MANUAL			
CHECKER	John Powell	SERIES	A	PART NO.	404907
APPR.					
DATE		REVISION		DR.	CK.



3 SPEED FULLY SYNCHRONIZED TRANSMISSION

FLOOR SHIFT ONLY

AXLE RATIO	TIRE CODE *	SPEEDO DRIVEN GEAR			ADAPTER RATIO	SPEEDO CABLE
		TEETH	PART NO.	COLOR		
2.78 (46:14)	10, 15, 20, 21, 23, 25, 26	17	307051	PURPLE	NONE	6477217
	33	18	306941	BROWN	L.1320	6477217
	30, 35	21	306944	RED	L.2720	6477217
3.08 (42:13)	30, 33, 35	18	306941	BROWN	NONE	6477217
	10, 15, 21, 26	19	306942	NATURAL	NONE	6477217
	20, 23, 25	21	306944	RED	L.1320	6477217
3.23 (42:13)	20, 25	17	307051	PURPLE	.8660	6477217
	23, 30, 33, 35	19	306942	NATURAL	NONE	6477217
	10, 15, 21, 26	20	306943	BLUE	NONE	6477217
3.42 (41:12)	20, 25	18	306941	BROWN	.8660	6477217
	30, 33, 35	20	306943	BLUE	NONE	6477217
	10, 15, 21, 23, 26	21	306944	RED	NONE	6477217
3.91 (43:11)	20, 23, 25, 30, 35	17	307051	PURPLE	.7330	6477217
	33	20	306943	BLUE	.8660	6477217
	10, 15, 21, 26	21	306944	RED	.8660	6477217
4.33 (39:9)	10, 15	18	306941	BROWN	.6660	6477217
	20, 23, 25, 30, 35	19	306942	NATURAL	.7330	6477217
	33	20	306943	BLUE	.7850	6477217
4.66 (42:9)	21, 26	21	306944	RED	.7850	6477217
	20, 23, 25	19	306942	NATURAL	.6660	6477217
	30, 33, 35	20	306943	BLUE	.7330	6477217
5.00 (45:9)	10, 15, 21, 26	21	306944	RED	.7330	6477217
	20, 21, 23, 25, 26, 30, 35	20	306943	BLUE	.6660	6477217
	10, 15, 33	21	306944	RED	.6660	6477217

\* DEALER INSTALLED

\* SEE TIRE CHART 40394

ⓐ 306992 - SPEEDO DRIVEN GEAR FITTING ASSEMBLY FOR 17, 18, 19, 20, 21 TOOTH GEAR.

SPEEDO DRIVE GEAR 391508 (28 PITCH) 8 TOOTH

# USE RIGHT ANGLE SPEEDOMETER DRIVE ADAPTER.

- .6660 - ADAPTER 40675 (DARK BROWN)
- .7330 - ADAPTER 40674 (RED)
- .7850 - ADAPTER 39638 (YELLOW)
- .8660 - ADAPTER 39540 (BLUE)
- L.1320 - ADAPTER 39541 (NONE)
- L.2720 - ADAPTER 40159 (GREEN)

TITLE CHART - SPEEDOMETER GEAR USAGE										SHEET 4		
DATE <u>OCT. 13, 1969</u>				FIRST USED <u>1970</u>		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE <u>7</u> <u>83</u>				
DR. BY <u>L. SPITZLEY</u>				CHECKED <u>John Powell</u>		SERIES <u>A</u>		PART NO. <u>404907</u>				
APPR. <u>[Signature]</u>				REF. <u>[Signature]</u>								
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION

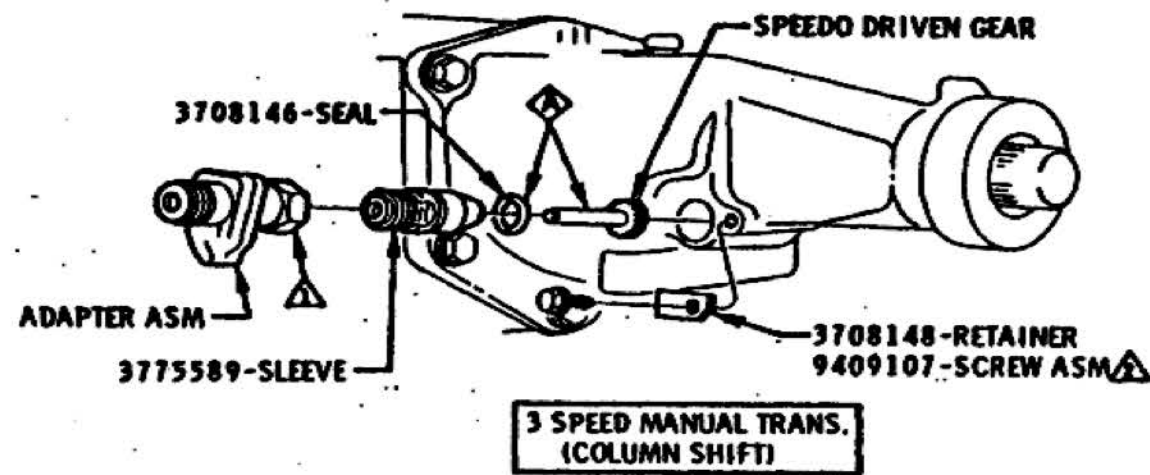
**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

PART NO.	IDENTIFICATION	SERIES	R. GROUP	SPEEDOMETER DRIVE GEAR	LOCATION OF IDENTIFICATION
3974484 3968029 3952657 3952657 9793426	R3 RT RM RM DA	MANUAL 3-SPEED 31, 3500 32, 36, 42, 4800 4400 32, 36, 4200 54, 64, 6600	7 7 7 M14 7	8 TOOTH 8 TOOTH 8 TOOTH 8 TOOTH NONE	2" HIGH LETTERS ON R.H. SIDE OF CASE ↓ 2" HIGH LETTERS ON R.H. SIDE OF EXTENSION
3952659 1234762	WB KA	MANUAL 4-SPEED 32, 36, 4200 (WIDE RATIO) 32, 36, 42, 4400 (CLOSE RATIO)	M20 M21	8 TOOTH (28 PITCH) 8 TOOTH (28 PITCH)	2" HIGH LETTERS ON R.H. SIDE OF CASE ↓
6260127 6260133 6260169 6260134	JE JL JM JM	TURBO-HYDRAMATIC (350) 31, 3500 32, 36, 4200 EXC. W31 32, 3600 AND W31 4800 EXC. L31	M38 M38 M38 M38	18 TOOTH 18 TOOTH 18 TOOTH 18 TOOTH	2" HIGH LETTERS ON R.H. SIDE OF CONVERTOR HOUSING ↓
8626868 8626708 8626708 8626713 8626709 8626707 8626704 8626706 8626705 8626705 8626710 8626709 8626709 8626712 8626712 8626717 8626718	OD OG OG OW OK OF OA OC OB OB OL OK OK OR OR OJ OM	TURBO-HYDRAMATIC (400) 36, 4200 EXC. W32 4200 AND W32 4400 EXC. W30 4400 AND W30 4800 WITH L31 5400 (W/350 ENGINE) EXC. K30 5400 (W/350 ENGINE) AND K30 5400 (W/455) 64, 6600 EXC. L31, K30 84, 8600, 9860 EXC. K30 54, 64, 6600 AND L31 EXC. K30 54, 64, 6600 AND W33 54, 64, 6600 AND K30 AND L31 84, 8600, 9860 AND K30 5400 (W/455) AND K30 EXC. L31 64, 6600 AND K30 EXC. L31 92, 94, 9600 EXC. W34 94, 9600 AND W34	M40 M40 M40 M40 M40 M40 M40 M40 7 M40 M41 M40 K30 M40 7 W34	18 TOOTH 18 TOOTH 18 TOOTH 18 TOOTH 18 TOOTH NONE 18 TOOTH NONE NONE NONE 18 TOOTH 18 TOOTH 18 TOOTH 18 TOOTH 18 TOOTH 14 TOOTH 14 TOOTH	2" HIGH LETTERS ON R.H. SIDE OF CONVERTOR HOUSING ↓ 2" HIGH LETTERS ON L.H. SIDE OF CONVERTOR HOUSING

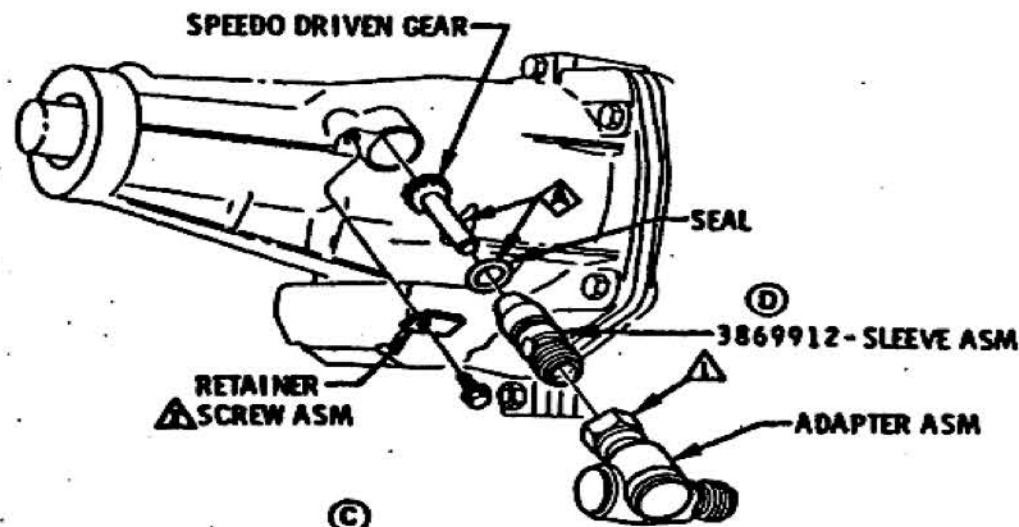
M40 TURBO-HYDRAMATIC TRANSMISSION  
RECOMMENDED FOR TRAILER HAULING FOR  
B SERIES CARS.

DATE	SYN	REVISION	DR.	CK.	DATE	SYN	REVISION	DR.	CK.	DATE	SYN	REVISION	DR.	CK.	APPR.	TITLE	CHART - TRANSMISSION USAGE			
																5220 U WITH L31 ADDED	FIRST USED	OLDSMOBILE PRODUCT	MANUAL SEC.	PAGE
																5220 T EXC L31 ADDED	1970	INFORMATION MANUAL	7	98
																6238 S 4 BBL. REMOVED	REV.	SERIES	PART NO.	
																6260129 REMOVED	A-B-C-E	405690		

### MANUAL TRANSMISSION



ⓑ

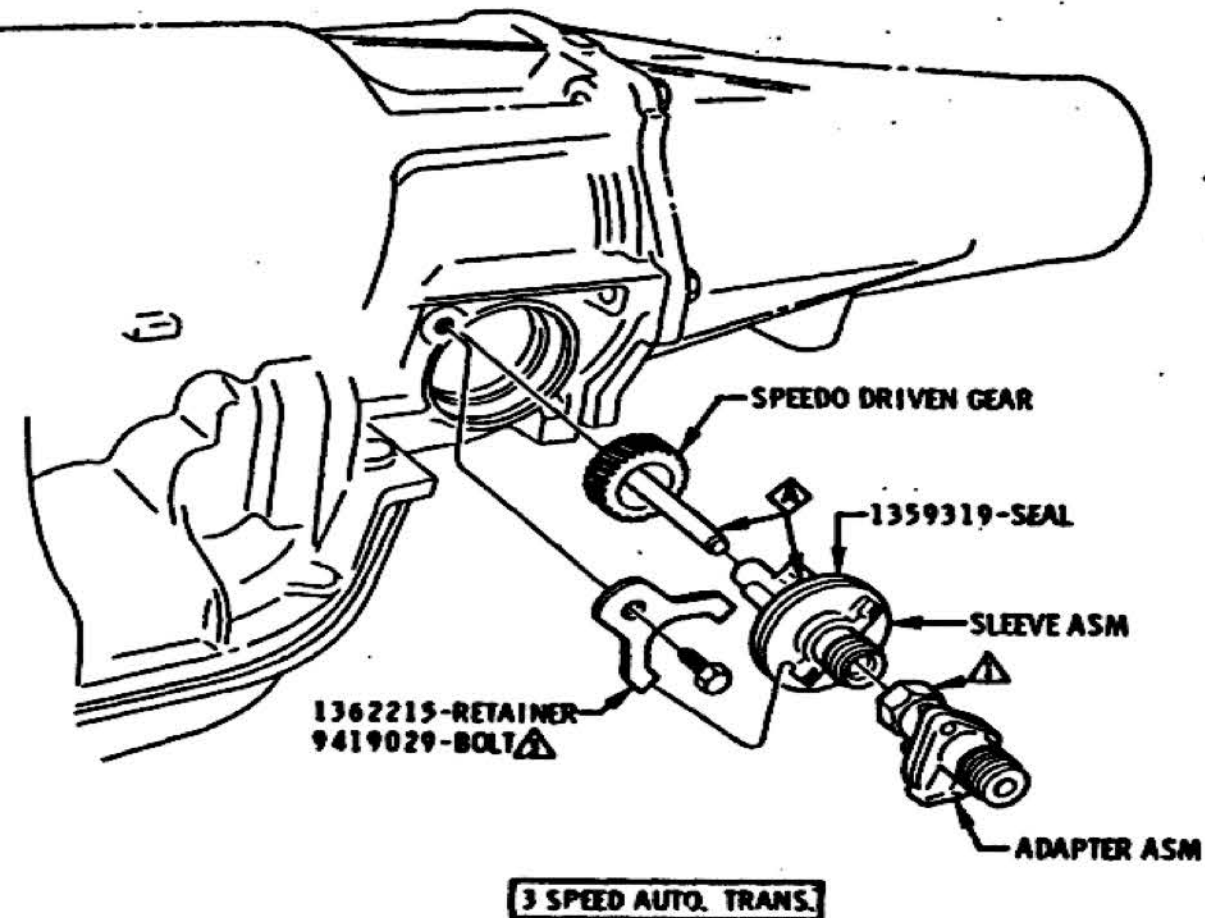


ⓒ

- ▲ 96-192 LB. IN.
- ▲ 48-84 LB. IN.
- ▲ 20-80 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

▲ LUBRICATE DRIVEN GEAR SHAFT AND SEAL AT ASSEMBLY WITH 9985158 OIL

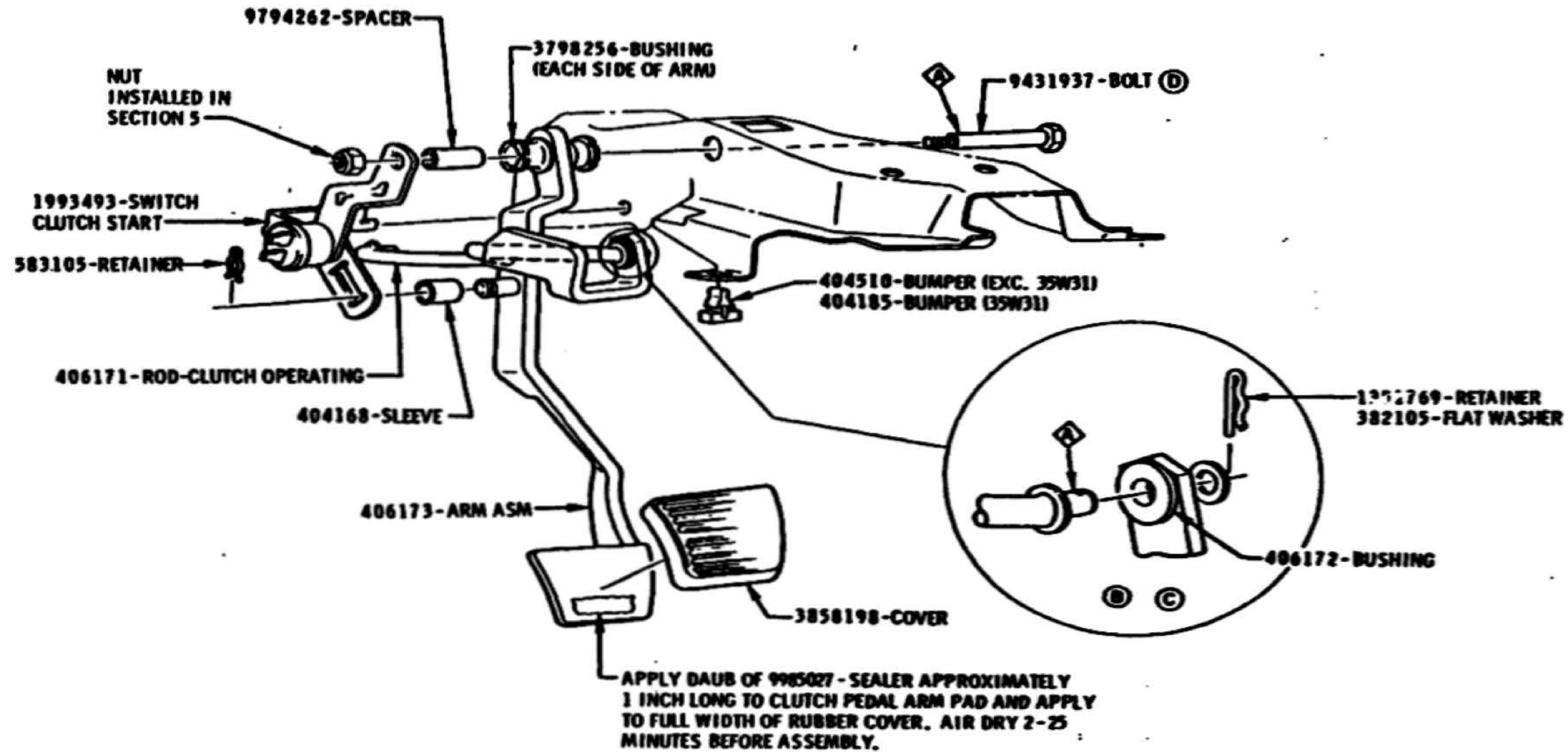
### AUTOMATIC TRANSMISSION



**NOTE**

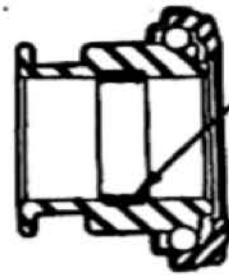
FOR SPEEDO DRIVEN GEAR, ADAPTER ASM, AND AUTO. TRANS. SLEEVE ASM USAGE, SEE CHART IN FRONT OF SECTION

DATE	SYM	REVISION	DR.	CK.	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
1-6-70	D	WAS 3775589-SLEEVE				SPEEDOMETER DRIVEN GEAR AND ADAPTER ASSEMBLY	1970		7	100
10-28-69	C	TITLE REVISED				DATE OCTOBER 31, 1968 DR. BY W.E. MASON				
10-28-69	B	VIEW REMOVED				CHECKED BY [Signature]				
7-3-69	A	WAS 3869912				APP. [Signature]				
							SERIES	A	PART NO. 404411	



LUBRICATE WITH 9985038 GREASE PRIOR TO ASSEMBLY

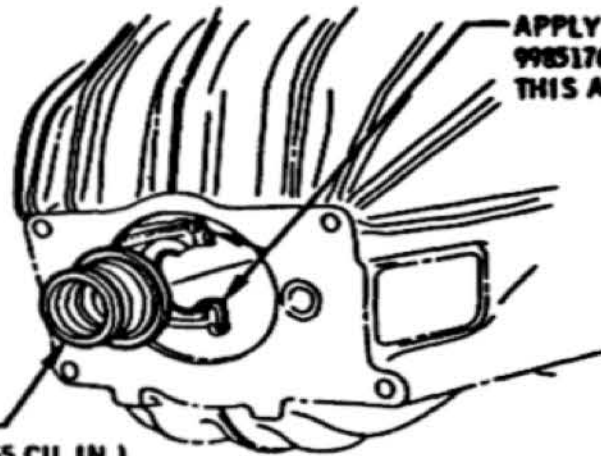
DATE	SYM	REVISION	DR	CL	APPR	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
2-25-70	D	WAS 9422585 BOLT				CLUTCH CONTROL	1970		7	102
5-1-69	C	VIEW REVISED				DATE NOVEMBER 4, 1966 DR BY H.C. MASON				
2-28-69	B	VIEW REVISED				CHKD BY [Signature]				
2-28-69	A	PART NUMBERS REVISED				APPR. [Signature]	REP. 7818 7A	SERIES A	PART NO. 404411	



FILL RECESS ON INSIDE DIA. OF CLUTCH RELEASE BEARING WITH .08 OUNCES OF 9985176 GREASE

FIGURE 1

SECTION THROUGH CLUTCH RELEASE BEARING



APPLY LIGHT COAT OF 9985176 GREASE IN THIS AREA

- 909422 - BEARING ASM (2 BBL. ENGINES-EXC. 455 CU. IN.)
- 900018 - BEARING ASM (4 BBL. ENGINES & 455 CU. IN.)

(SEE FIG. 1)

CLUTCH RELEASE BEARING INSTALLATION

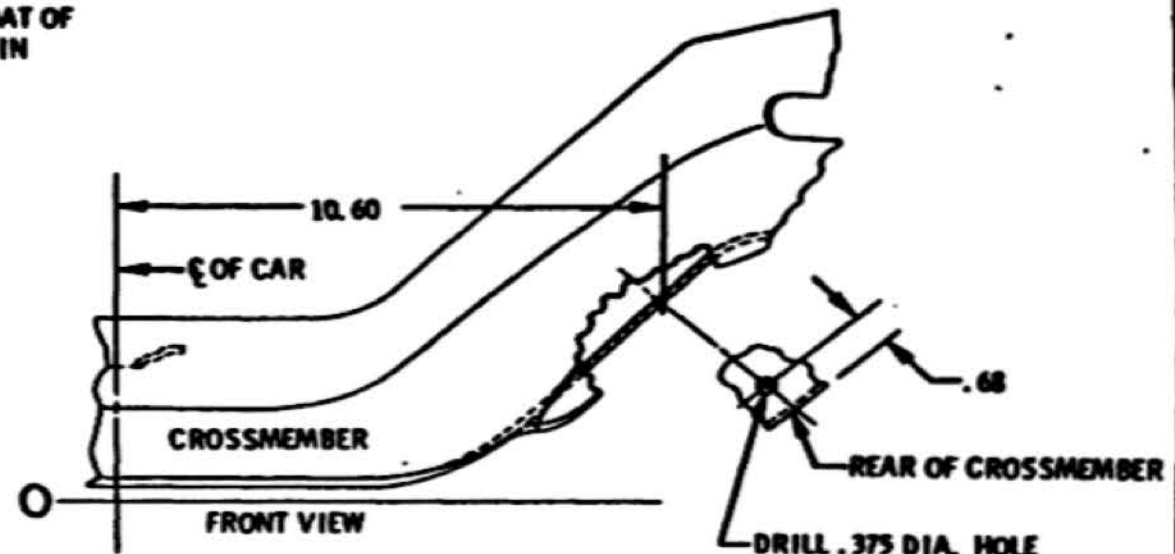
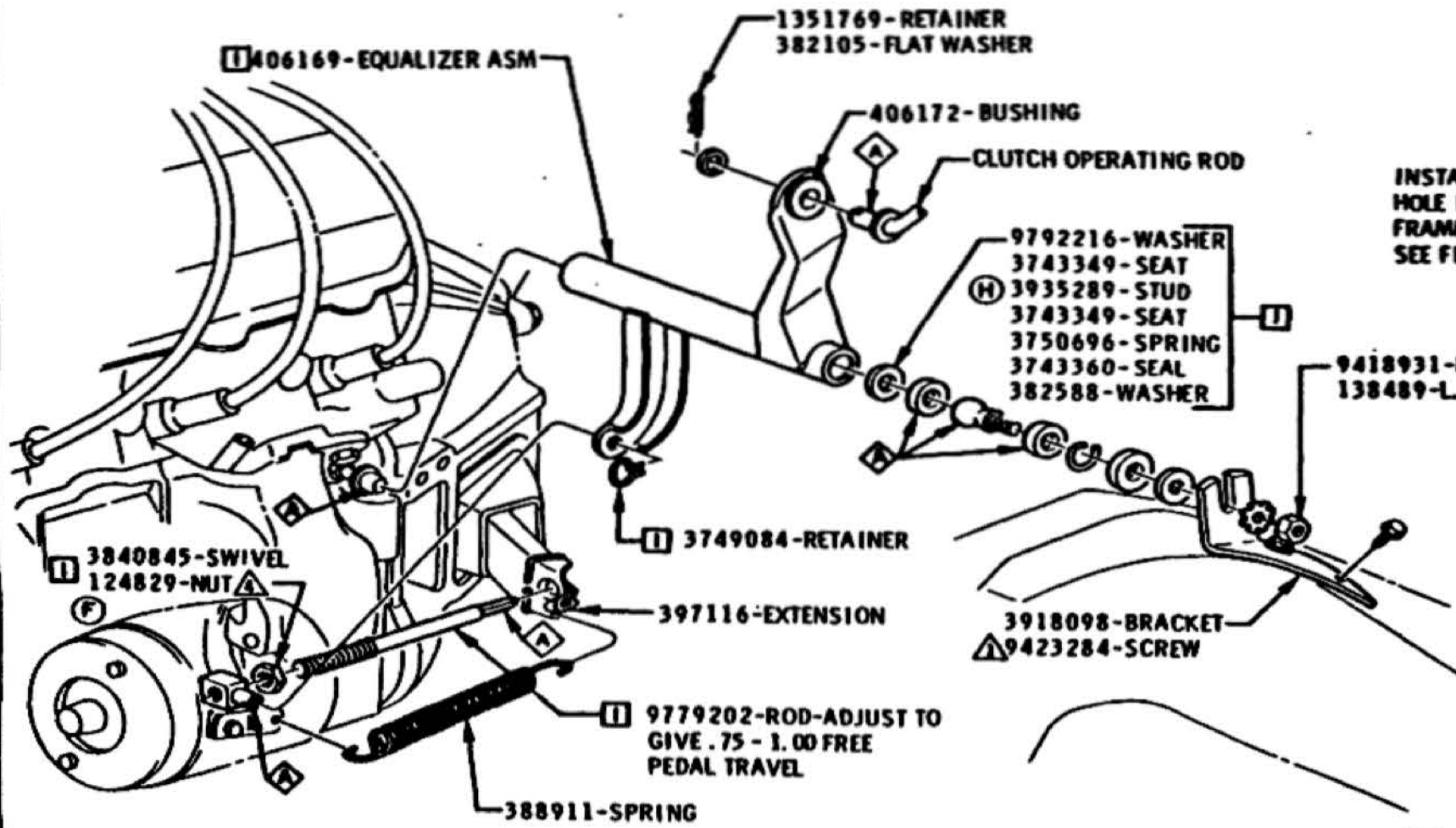
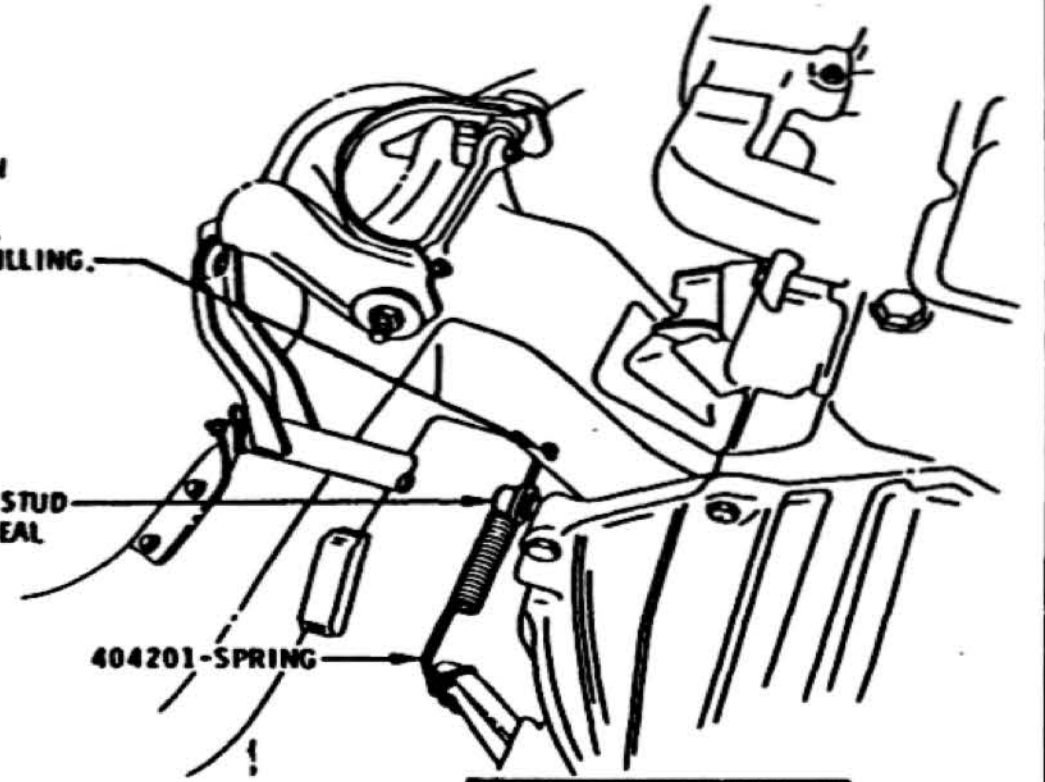


FIGURE 2

DRILL .375 DIA. HOLE IN BOTTOM OF CROSSMEMBER AS SHOWN



INSTALL SPRING END IN HOLE IN UNDERSIDE OF FRAME CROSS MEMBER. SEE FIG. 2 FOR HOLE DRILLING.



L-6 INSTALLATION (OTHERWISE SAME AS V-8)

- ▲ 8 - 26 LB. FT.
- ▲ 25 - 30 LB. FT.
- ▲ 16 - 26 LB. FT.
- ▲ 120 - 180 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

□ PART OF 406274-EQUALIZER SHOP ASM (ASSEMBLY PLANTS ONLY)

◆ LUBRICATE INDICATED AREAS WITH 9985038 GREASE PRIOR TO ASSEMBLY

REVISIONS				TITLE				CLUTCH CONTROL		MANUAL DEC. PAGE				
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APP.	REV. NO.	74	A	404411
9-22-69	E	455 CU. IN. WAS 400 CU. IN.												
5-1-69	D	RETAINER & WASHER ADDED												
2-28-69	C	WAS 401488												
2-28-69	B	BUSHING WAS RETAINED												
2-28-69	A	WAS 401077												
4-8-70	H	WAS 382461 - STUD												
1-31-70	G	NOTE REVISED												
12-22-69	F	TORQUE WAS 16-26 LB. FT.												

SHIFT ROD ASSEMBLY

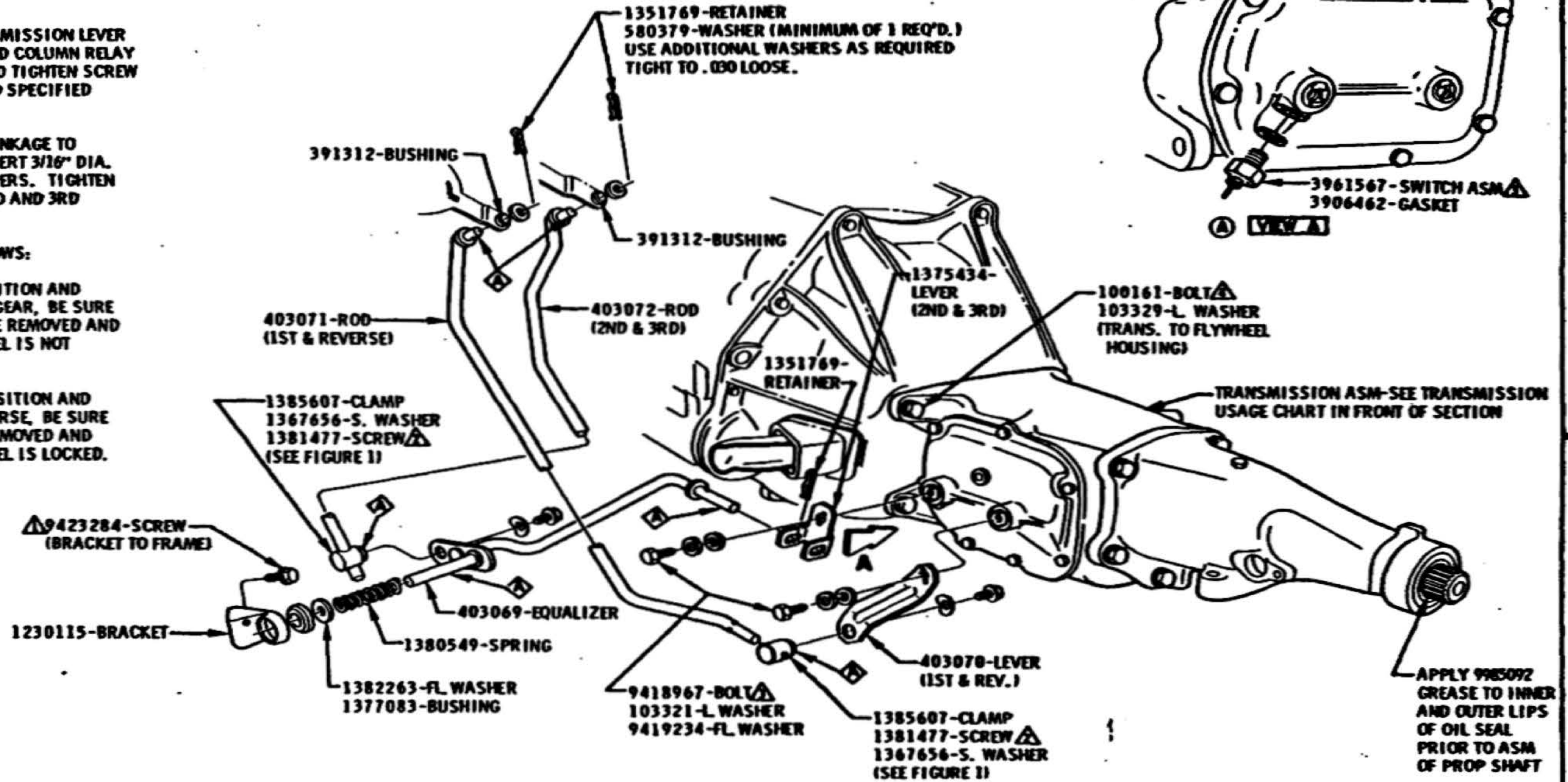
WITH SHIFT ROD CLAMPS AND SCREWS LOOSE ASSEMBLED TO SHIFT RODS, TRANSMISSION SHIFT LEVERS IN NEUTRAL POSITION AND IGNITION KEY LOCKED:

1. SET 1ST AND REVERSE TRANSMISSION LEVER IN REVERSE POSITION. HOLD COLUMN RELAY IN FIRST REVERSE LEVER AND TIGHTEN SCREW ON 1ST AND REVERSE ROD TO SPECIFIED TORQUE.
2. RETURN 1ST AND REVERSE LINKAGE TO NEUTRAL POSITION AND INSERT 3/16" DIA. GAGE PIN THRU COLUMN LEVERS. TIGHTEN CLAMP AT LOWER END OF 2ND AND 3RD SHIFT ROD.
3. CHECK OPERATION AS FOLLOWS:
  - A. WITH KEY IN "RUN" POSITION AND TRANSMISSION IN 2ND GEAR, BE SURE THAT THE KEY CANNOT BE REMOVED AND THAT THE STEERING WHEEL IS NOT LOCKED.
  - B. WITH KEY IN "LOCK" POSITION AND TRANSMISSION IN REVERSE, BE SURE THAT THE KEY CAN BE REMOVED AND THAT THE STEERING WHEEL IS LOCKED.

INSTALL WASHER IN THIS POSITION



FIGURE 1

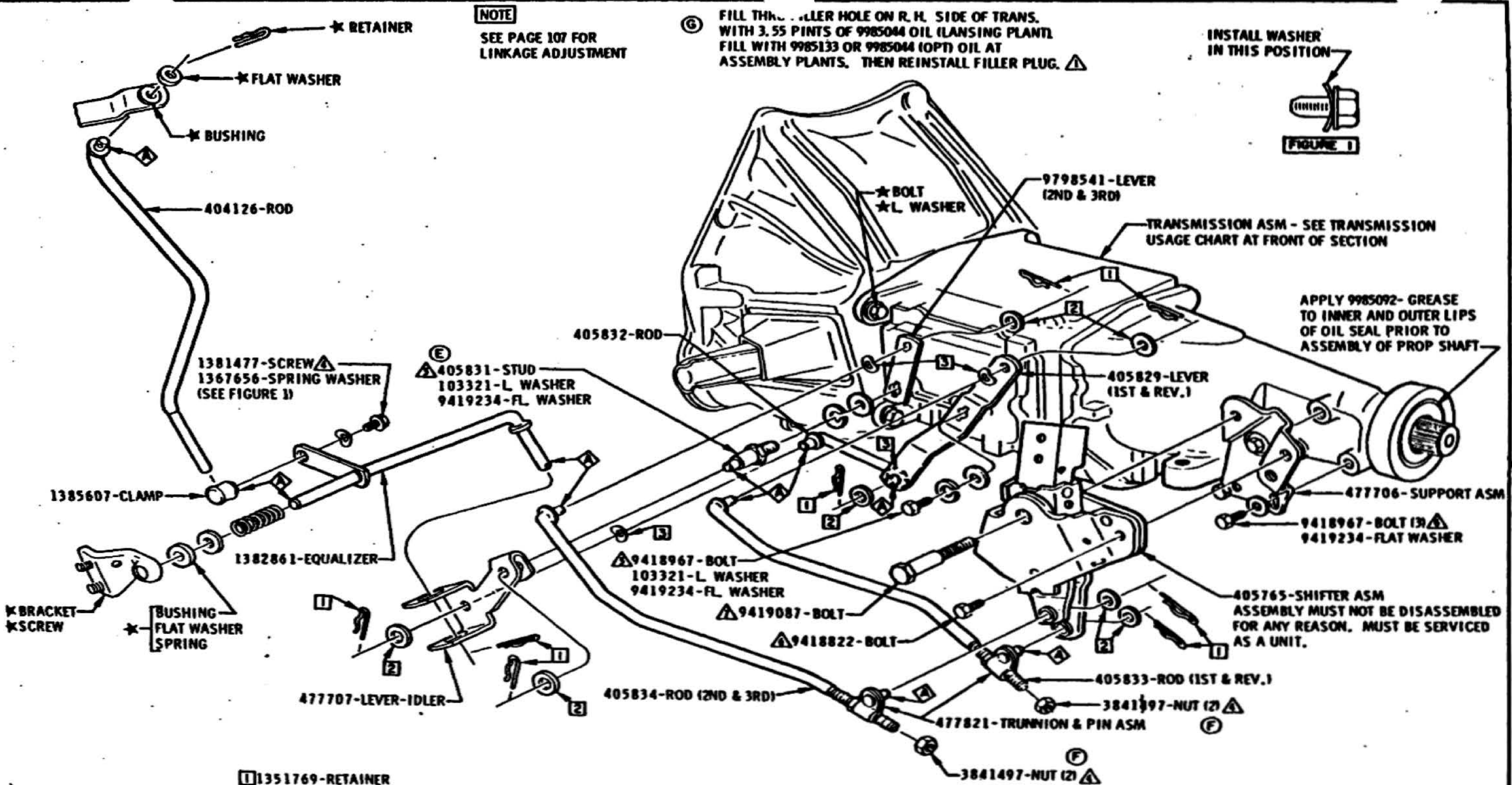


FILL THRU FILLER HOLE ON R. H. SIDE OF TRANS. WITH 3.55 PINTS OF 9985044 OIL (LANSING PLANT). FILL WITH 9985133 OR 9985044 (OPT.) OIL AT ASSEMBLY PLANTS, THEN REINSTALL FILLER PLUG.

LUBRICATE INDICATED AREAS WITH 9985038 GREASE PRIOR TO ASSEMBLY

- ▲ 45-60 LB. FT.
- ▲ 20-30 LB. FT.
- ▲ 17-23 LB. FT.
- ▲ 120-180 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE		SYNCHROMESH COLUMN SHIFT CONTROL	
DATE	NOVEMBER 8, 1968	FIRST USED	1970
DR BY	W.E. MASON	OLDSMOBILE PRODUCT	INFORMATION MANUAL
CHECKED	M. Barnhart	REVISION	7
APPROV.	T. L. Seane	PAGE	104
DATE	3-14-69	REV.	7A
SYM	A	REVISION	181A
REVISION	VIEW 2" ADDED	REVISION	A
DR.		REVISION	
CL.		REVISION	
APP.		REVISION	
		PART NO. 404411	



**NOTE**  
SEE PAGE 107 FOR LINKAGE ADJUSTMENT

ⓐ FILL THROUGH FILLER HOLE ON R.H. SIDE OF TRANS. WITH 3.55 PINTS OF 998504 OIL (LANSING PLANT). FILL WITH 9985133 OR 998504 (OPT) OIL AT ASSEMBLY PLANTS. THEN REINSTALL FILLER PLUG. ⚠

INSTALL WASHER IN THIS POSITION



APPLY 9985092- GREASE TO INNER AND OUTER LIPS OF OIL SEAL PRIOR TO ASSEMBLY OF PROP SHAFT

405765-SHIFTER ASM ASSEMBLY MUST NOT BE DISASSEMBLED FOR ANY REASON. MUST BE SERVICED AS A UNIT.

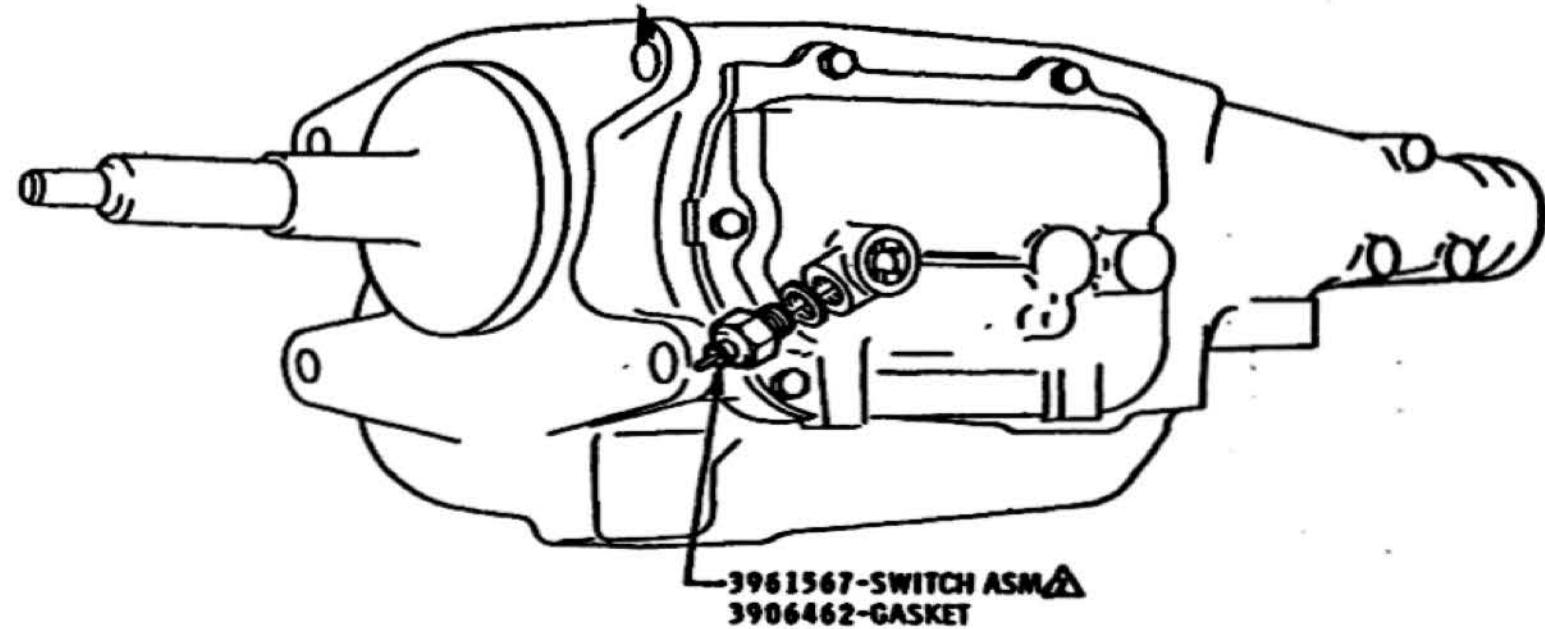
Ⓛ LUBRICATE THESE AREAS WITH 9985038 GREASE PRIOR TO ASSEMBLY

\* THESE PARTS SAME AS TRANSMISSION SHIFT CONTROL SHOWN ON PAGE 104

- Ⓛ 40 - 50 LB. FT.
- Ⓛ 25 - 35 LB. FT.
- Ⓛ 20 - 30 LB. FT.
- Ⓛ 17 - 23 LB. FT.
- Ⓛ 120 - 180 LB. IN.
- Ⓛ FULLY DRIVEN, SEATED AND NOT STRIPPED

- 1 1351769-RETAINER
- 2 382105-FLAT WASHER
- 3 3709568-SPRING WASHER

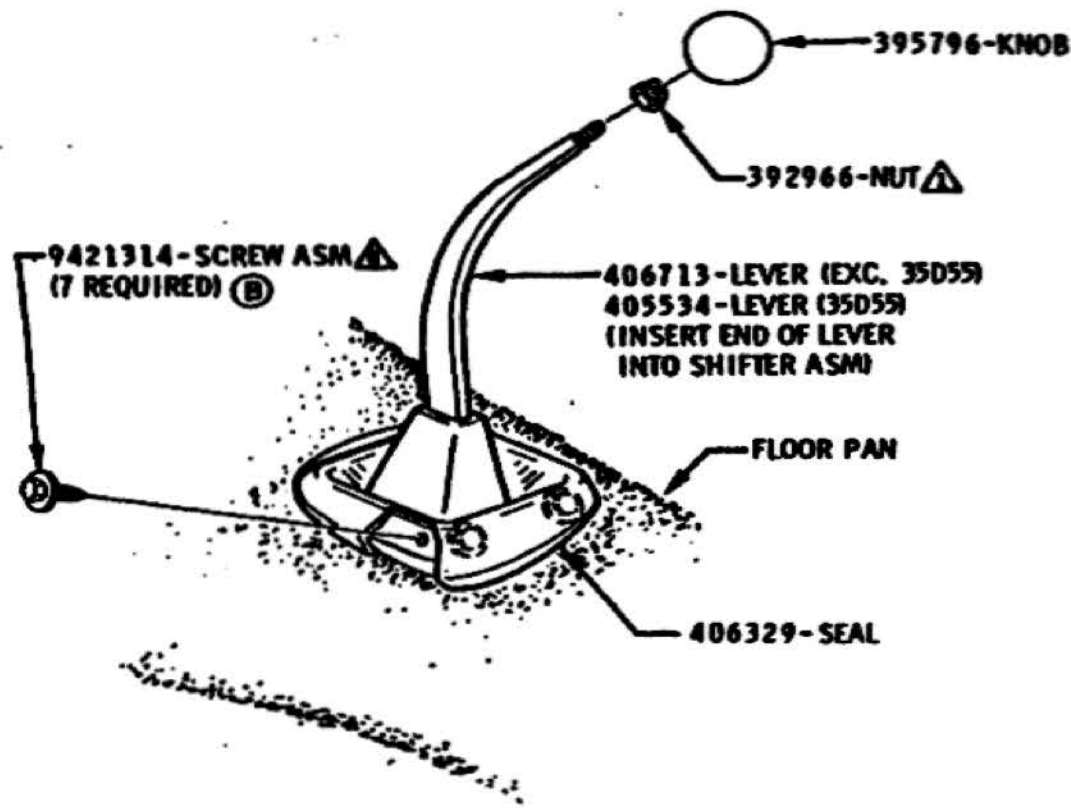
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
					9-25-69	E	TORQUE REVISED				3- SPEED MANUAL FLOOR SHIFT CONTROL	1970		7	106
					9-23-69	D	WASHER ADDED				DATE MARCH 15, 1969				
					9-23-69	C	PART NUMBERS REVISED				DR BY W.E. MASON				
1-15-70	G	NOTE REVISED			9-23-69	B	TORQUE REVISED				CHECKED JTB				
11-7-69	F	TORQUE REVISED			6-11-69	A	NAS 405830 - LEVER				APPR. JTB				






**DISTRIBUTOR CONTROL SWITCH TO TRANSMISSION**

**SHIFT CONTROL LINKAGE ADJUSTMENTS**

1. SHIFT ROD LENGTHS MUST BE SET IN NEUTRAL WITH A .250 DIA. PIN INSTALLED IN BASE OF THE SHIFTER.
2. TRANSMISSION CONTROL ROD SWIVEL MUST BE TIGHTENED TO SPECIFIED TORQUE WITH TRANSMISSION IN REVERSE, IGNITION KEY IN LOCK AND CONTROL ROD PULLED DOWN LIGHTLY AGAINST LOCK STOP.
3. THE FIRST AND REVERSE LEVER OF THE SHIFTER MUST NOT BE SHIFTED INTO FIRST OR REVERSE FROM BELOW. IT MAY BE SHIFTED FROM FIRST OR REVERSE INTO NEUTRAL WITHOUT DAMAGE TO THE SHIFTER.
4. CHECK OPERATION AS FOLLOWS:
  - A. WITH KEY IN "LOCK" POSITION AND TRANSMISSION IN REVERSE, BE SURE THAT KEY CAN BE REMOVED AND THAT STEERING WHEEL IS LOCKED.
  - B. WITH KEY IN "OFF" POSITION AND TRANSMISSION IN NEUTRAL, BE SURE THAT KEY CANNOT BE REMOVED AND THAT STEERING WHEEL IS NOT LOCKED.

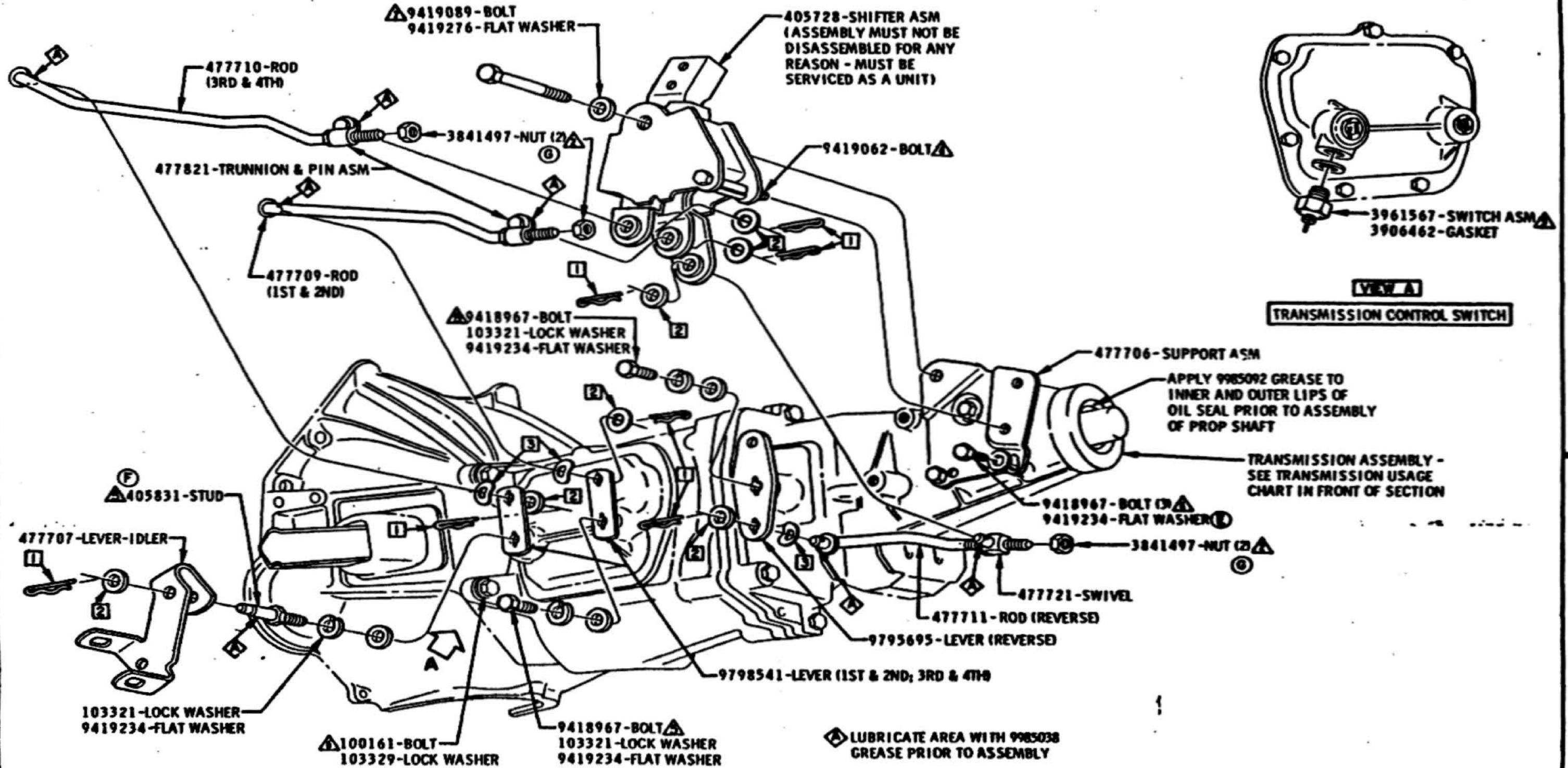


**LEVER, SEAL & KNOB INSTALLATION**

 20 - 30 LB. FT.  
 30 - 50 LB. IN.  
 FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYN	REVISION	DR	CL	APPR	TITLE	YEAR	OLDSDMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
12-22-69		B	NOTE ADDED				3-SPEED MANUAL FLOOR SHIFT CONTROL	1970		7	107
5-1-69		A	VIEW REVISED					7A	A		404411





- ▲ 40 - 50 LB. FT.
- ▲ 45 - 60 LB. FT.
- ▲ 20 - 30 LB. FT.
- ▲ 25 - 35 LB. FT.
- ▲ 17 - 23 LB. FT.
- ▲ 120 - 180 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

FOR SHIFT ROD ADJUSTMENTS  
SEE PAGE 109

▲ LUBRICATE AREA WITH 9985038  
GREASE PRIOR TO ASSEMBLY

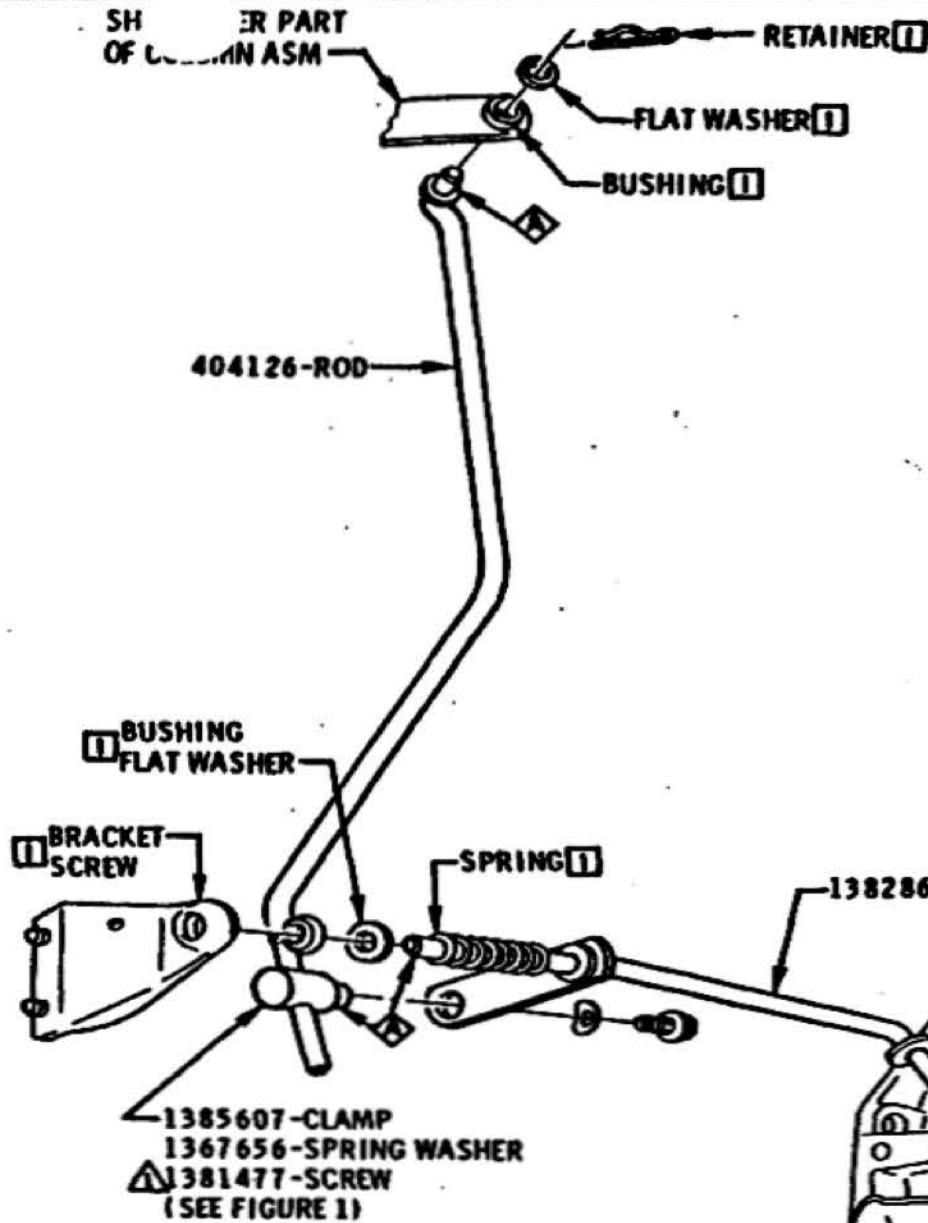
FILL TRANSMISSION THRU FILLER HOLE ON  
R. H. SIDE WITH 2.25 PINTS OF 9985044  
OIL, THEN REINSTALL FILLER PLUG▲

- 1351769-RETAINER
- 382105-FLAT WASHER
- 3709568-SPRING WASHER

REVISION				TITLE				DATE		PART USED		MANUAL REC.		PAGE	
DATE	SYN	REVISION	DR	CK	DATE	SYN	REVISION	DR	CK	APPR.	NO.	REV.	NO.	NO.	
					9-23-69	E	FLAT WASHER ADDED								
					9-23-69	D	WAS NOISE BOLT								
					9-23-69	C	TORQUE REVISED								
11-7-69	G	TORQUE REVISED			3-17-69	B	REVISED & REBRN								
9-25-69	F	TORQUE REVISED			1-29-69	A	PART NO.'S ADDED								
TITLE										4-SPEED TRANSMISSION SHIFT CONTROL LINKAGE					
DATE										DECEMBER 16, 1968					
DR. BY										W.E. MASON					
CHECKED										[Signature]					
APPR.										[Signature]					
										PART USED		MANUAL REC.		PAGE	
										1970		7		108	
										SERIES		PART NO.		404411	
										A					

SHIFT CONTROL LINKAGE ADJUSTMENTS

1. SHIFT ROD LENGTHS MUST BE SET IN NEUTRAL WITH A .250 DIAMETER PIN INSTALLED IN BASE OF SHIFTER.
2. TRANSMISSION CONTROL ROD SWIVEL MUST BE TIGHTENED TO SPECIFIED TORQUE WITH TRANSMISSION IN REVERSE, IGNITION KEY IN LOCK AND CONTROL ROD PULLED DOWN LIGHTLY AGAINST LOCK STOP.
3. THE REVERSE LEVER OF THE SHIFTER MUST NOT BE SHIFTED OUT OF NEUTRAL INTO REVERSE FROM BELOW. IT MAY BE SHIFTED FROM REVERSE INTO NEUTRAL FROM BELOW WITHOUT DAMAGE TO THE SHIFTER.
4. CHECK OPERATION AS FOLLOWS:
  - A. WITH KEY IN "LOCK" POSITION AND TRANSMISSION IN "REVERSE", BE SURE THAT KEY CAN BE REMOVED AND THAT STEERING WHEEL IS LOCKED.
  - B. WITH KEY IN "OFF" POSITION AND TRANSMISSION IN NEUTRAL, BE SURE THAT KEY CANNOT BE REMOVED AND THAT STEERING WHEEL IS NOT LOCKED.



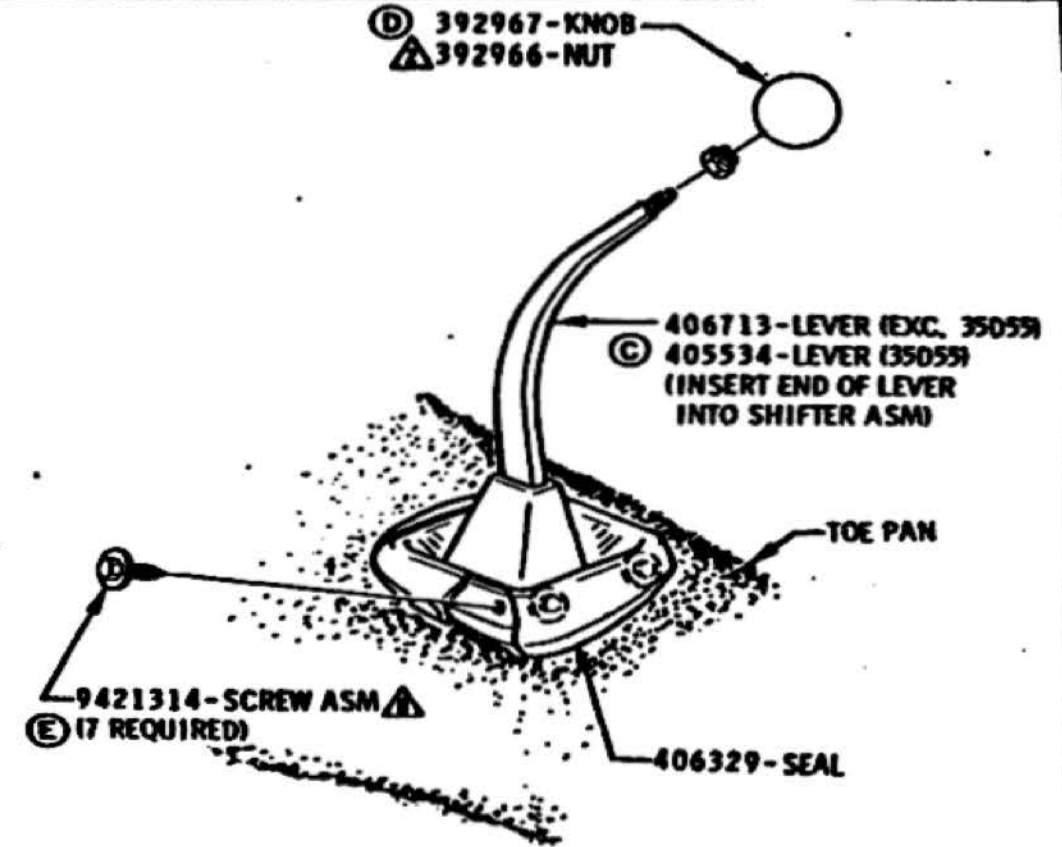
1351769-RETAINER  
382105-FLAT WASHER  
3709568-SPRING WASHER  
(BOTH ENDS OF ROD)

RETAINER

477708-ROD-OUTER SHIFT LEVER  
AND IDLER LEVER

LUBRICATE AREA WITH 9985038  
GREASE PRIOR TO ASSEMBLY

THESE PARTS SAME AS TRANSMISSION  
SHIFT CONTROL SHOWN ON PAGE 104



SHIFT LEVER, SEAL  
AND KNOB INSTALLATION

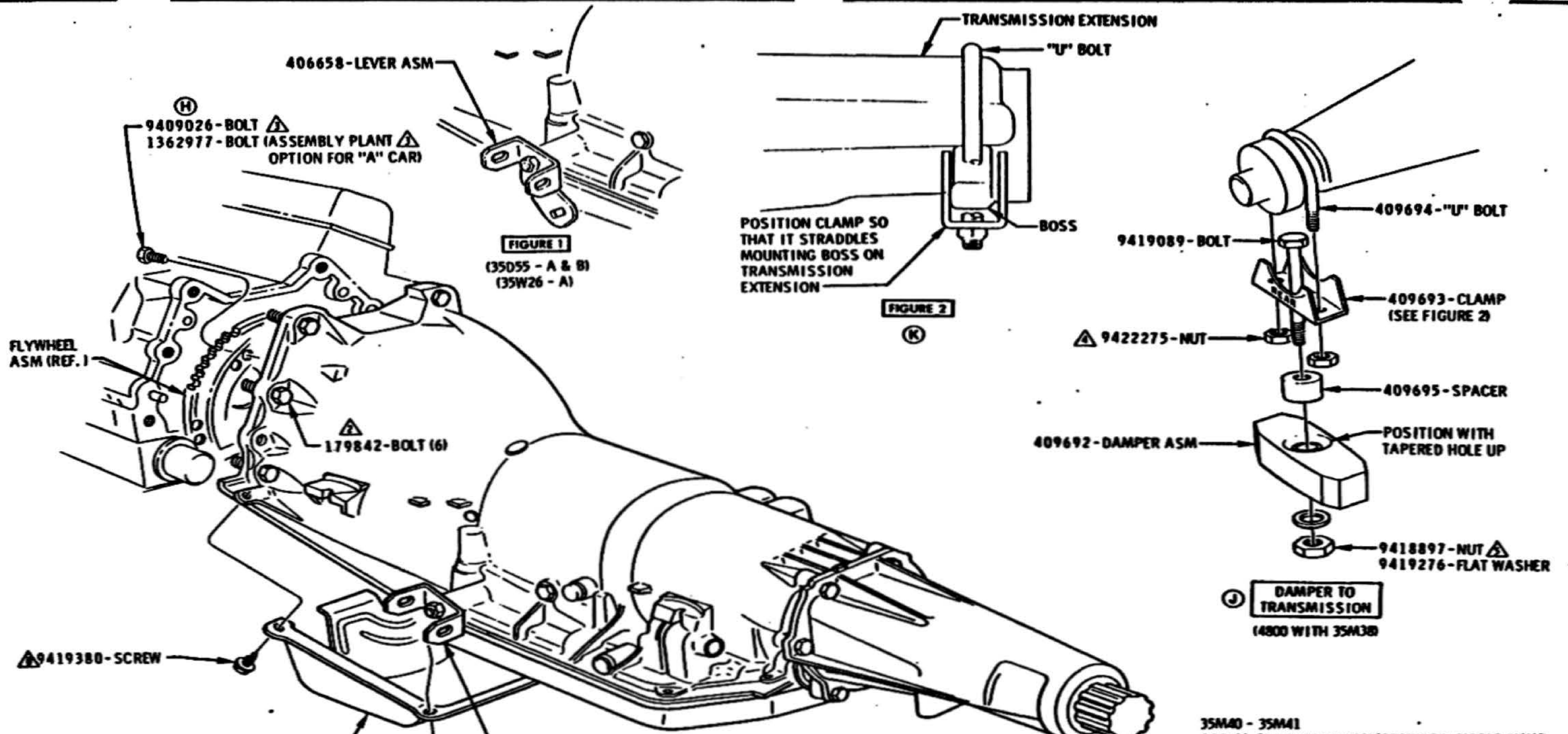
INSTALL WASHER  
IN THIS POSITION



FIGURE 1

30 - 50 LB. IN.  
17 - 23 LB. FT.  
FULLY DRIVEN 3/8" - 16  
AND NOT 5/16" - 18

DATE	BY	REVISION	DR	CHK	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
12-22-65	E	NOTE ADDED				4-SPEED TRANSMISSION BACK DRIVE LINKAGE				
9-23-69	D	USAGE REVISED				DATE DECEMBER 16, 1968	FIRST USED 1970		7	109
5-7-69	C	PART NOS REVISED				DR BY W.E. MASON				
5-1-69	B	VIEW REVISED				CHECKED BY [Signature]				
3-17-69	A	REVISED & REDRAWN				APPR. G.R. Stone	REV. 35M20 35M21	A		404411



406658-LEVER ASM  
 9409026-BOLT (H)  
 1362977-BOLT (ASSEMBLY PLANT OPTION FOR "A" CAR)

FIGURE 1  
 (35D55 - A & B)  
 (35W26 - A)

TRANSMISSION EXTENSION  
 "U" BOLT  
 BOSS  
 POSITION CLAMP SO THAT IT STRADDLES MOUNTING BOSS ON TRANSMISSION EXTENSION  
 FIGURE 2  
 (K)

409694-"U" BOLT  
 9419089-BOLT  
 409693-CLAMP (SEE FIGURE 2)  
 9422275-NUT  
 409695-SPACER  
 409692-DAMPER ASM  
 POSITION WITH TAPERED HOLE UP  
 9418897-NUT  
 9419276-FLAT WASHER

J  
 DAMPER TO TRANSMISSION  
 (4800 WITH 35M38)

FLYWHEEL ASM (REF.)

179842-BOLT (6)

9419380-SCREW

1376685-LEVER (EXC. 35D55 & 35W26)(SEE FIG. 1)  
 9418931-NUT  
 LEVER TO TRANSMISSION  
 (DO NOT USE IMPACT WRENCH)

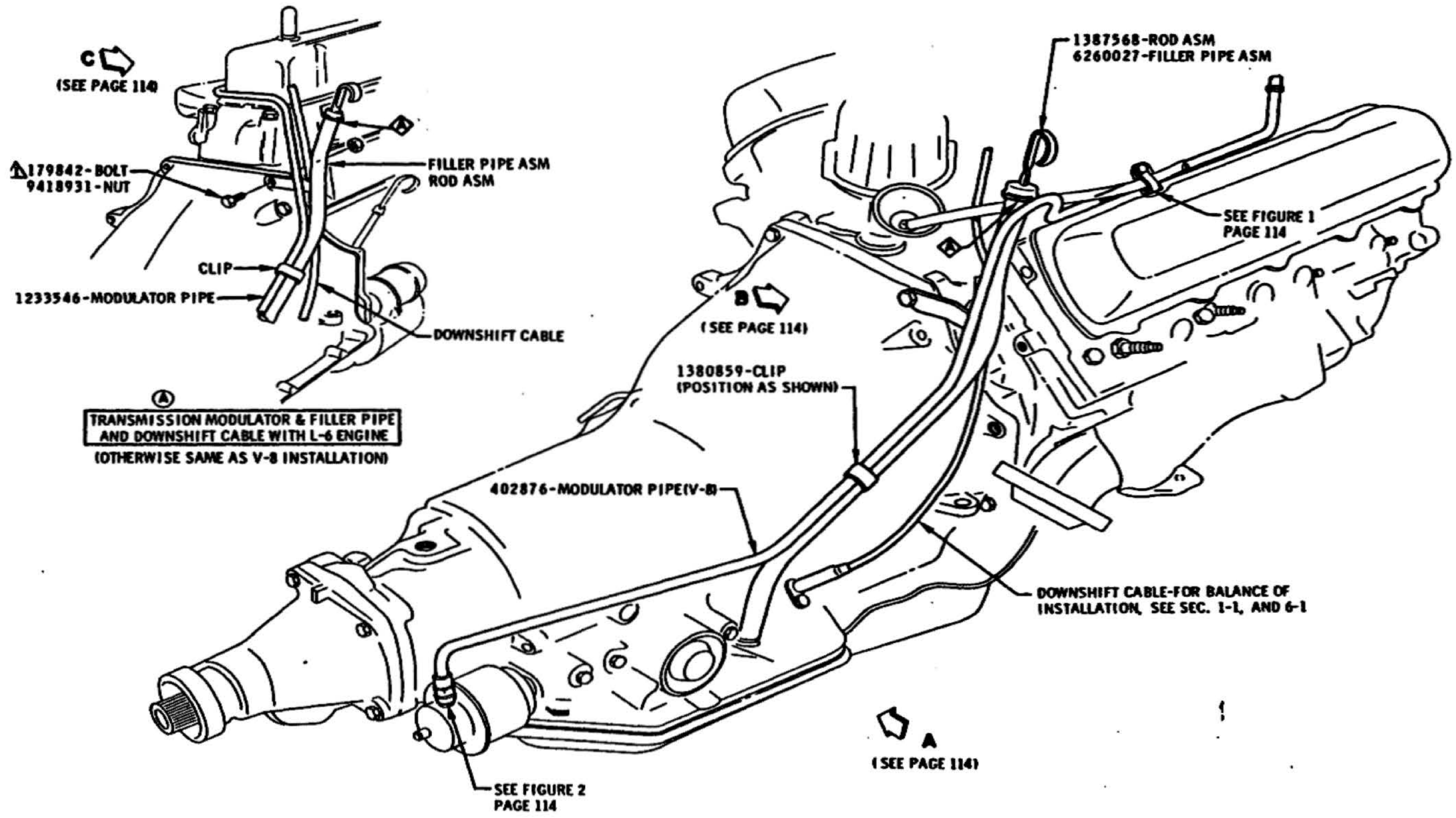
403703-PAN (V8)  
 389039-PAN (V8) (OPT. EXC. 35M38)  
 403678-PAN (V8) (OPT. 35M38 ONLY)  
 6261091-PAN (L-6)

35M40 - M41 SHOWN  
 35M38 SIMILAR

35M40 - 35M41  
 ADD 11.70 PINTS OF 9985158 HYDRA-MATIC FLUID THRU FILLER TUBE TO APPROXIMATELY 10.8 PINTS FURNISHED IN TRANSMISSION FOR A TOTAL OF 22.50 PINTS. SEE 401004 FOR FILL SPECIFICATIONS.  
 35M38  
 ADD 7.5 PINTS OF 9985158 HYDRA-MATIC FLUID THRU FILLER TUBE TO APPROXIMATELY 13.5 PINTS FURNISHED IN TRANSMISSION FOR A TOTAL OF 21 PINTS. SEE 401004 FOR FILL SPECIFICATIONS.

- 5 40 - 55 LB. FT.
- 4 10 - 15 LB. FT.
- 3 30 - 35 LB. FT.
- 2 20 - 30 LB. FT.
- 1 16 - 26 LB. FT.
- FULLY DRIVEN, SEATED AND NOT STRIPPED

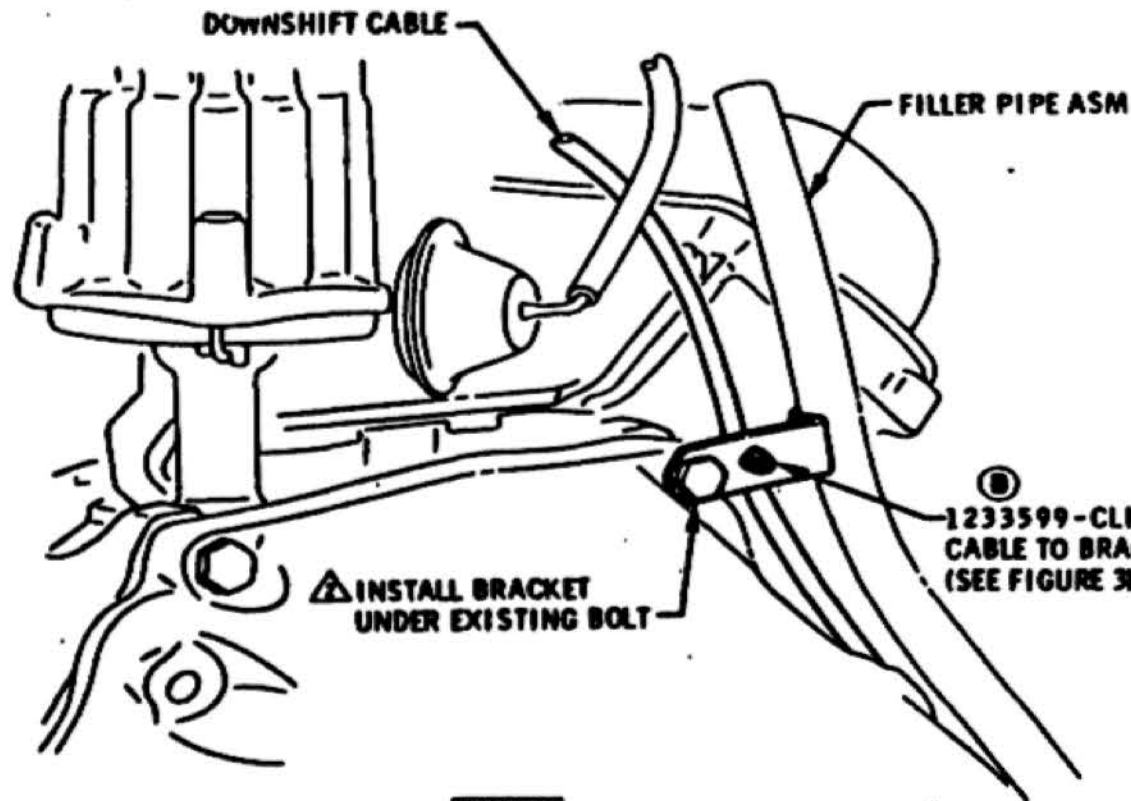
REVISION		DATE		SYMBOL		DESCRIPTION		APPROVAL		TITLE		MANUAL SEC. PAGE	
62-70	K					FIGURE 2 ADDED				AUTOMATIC TRANSMISSIONS		7	110
5-76-70	J					VIEW ADDED				DATE NOVEMBER 20, 1968			
3-19-70	H					PART NUMBERS REVISED				FIRST USED 1970			
2-12-70	G					PART NUMBERS REVISED				OR BY ED ROE			
11-5-69	F					WAS 9419727				CHECKED BY [Signature]			
9-22-69	E					TORQUE REVISED				REV. 35M30 15M40-41 FR-12199			
										SERIES A-B-C		PART NO. 404411-2	



▲▲▲ 20 - 30 LB. FT.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

▲ APPLY 9981117-LUBE  
TO SEAL PRIOR TO ASM

TITLE		MODULATOR AND FILLER PIPES (35M38)	
DATE	NOVEMBER 19, 1968	FIRST USED	1970
DR BY	ED ROE	OLDSMOBILE PRODUCT INFORMATION MANUAL	
CHECKED	MB	MANUAL SEC.	7
APPR.	TL	PAGE	113
DATE	2-28-69	REV	10730 (2830, 703C) 81-626
SYM	A	SERIES	A
REVISION	L-6 INFO. ADDED	PART NO.	404411
DR	CL		
APP.			



VIEW B  
FILLER PIPE AND DOWNSHIFT CABLE FASTENING TO ENGINE

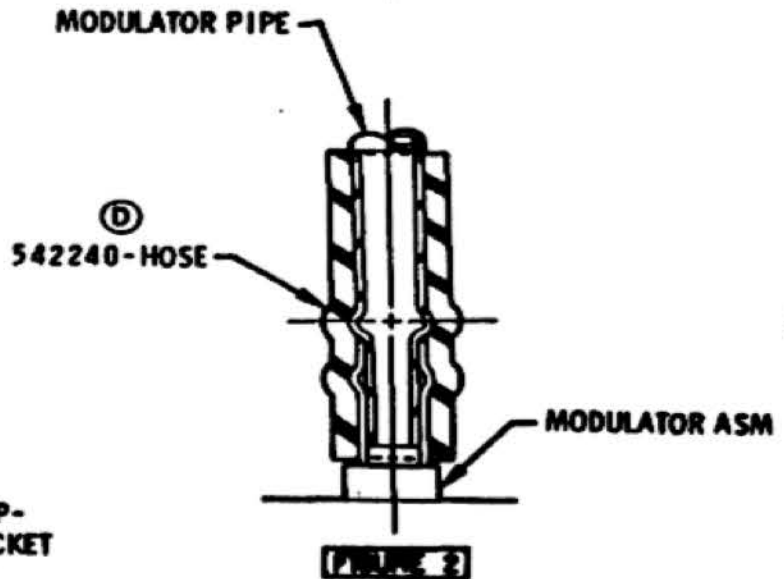


FIGURE 2

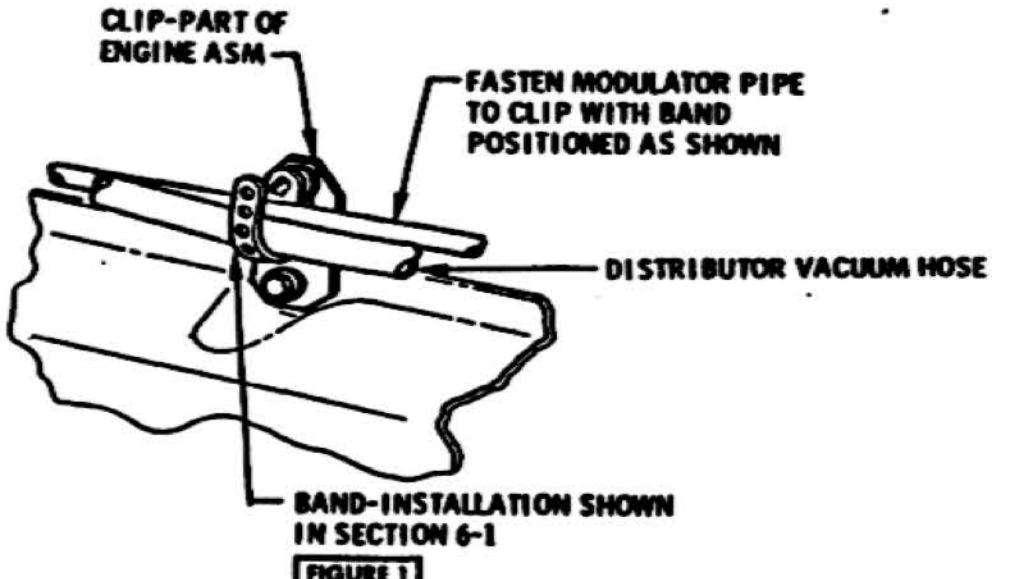


FIGURE 1

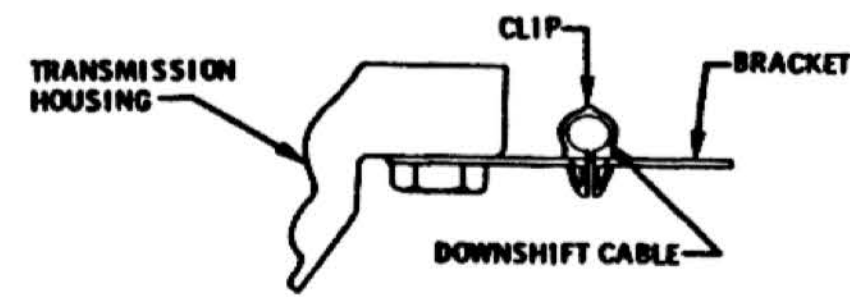
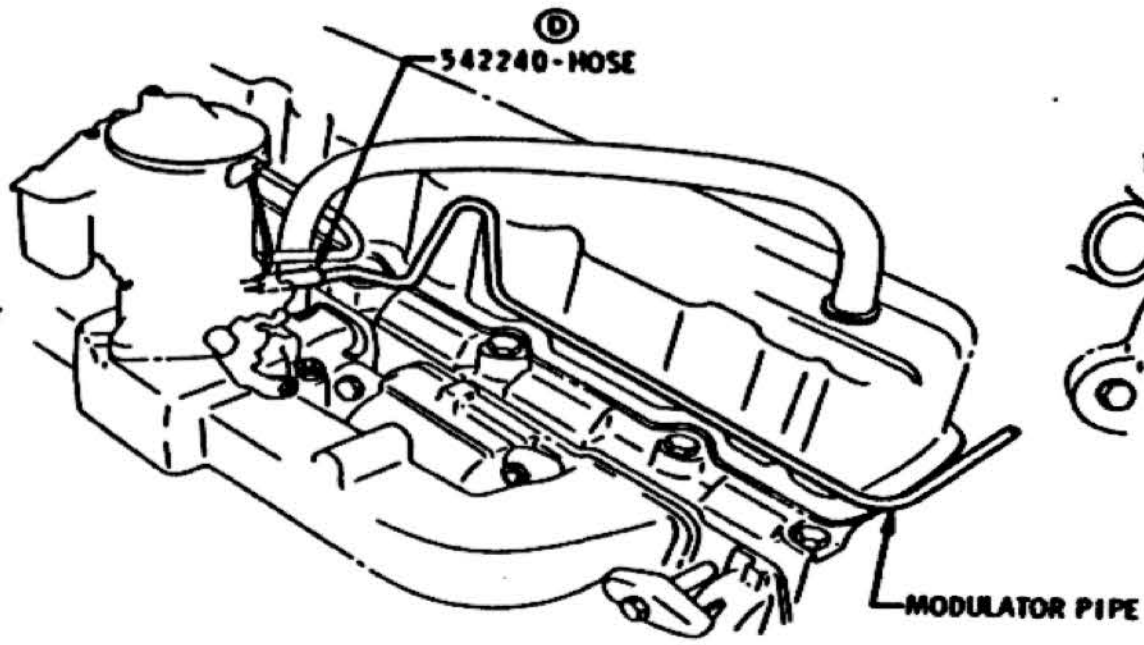
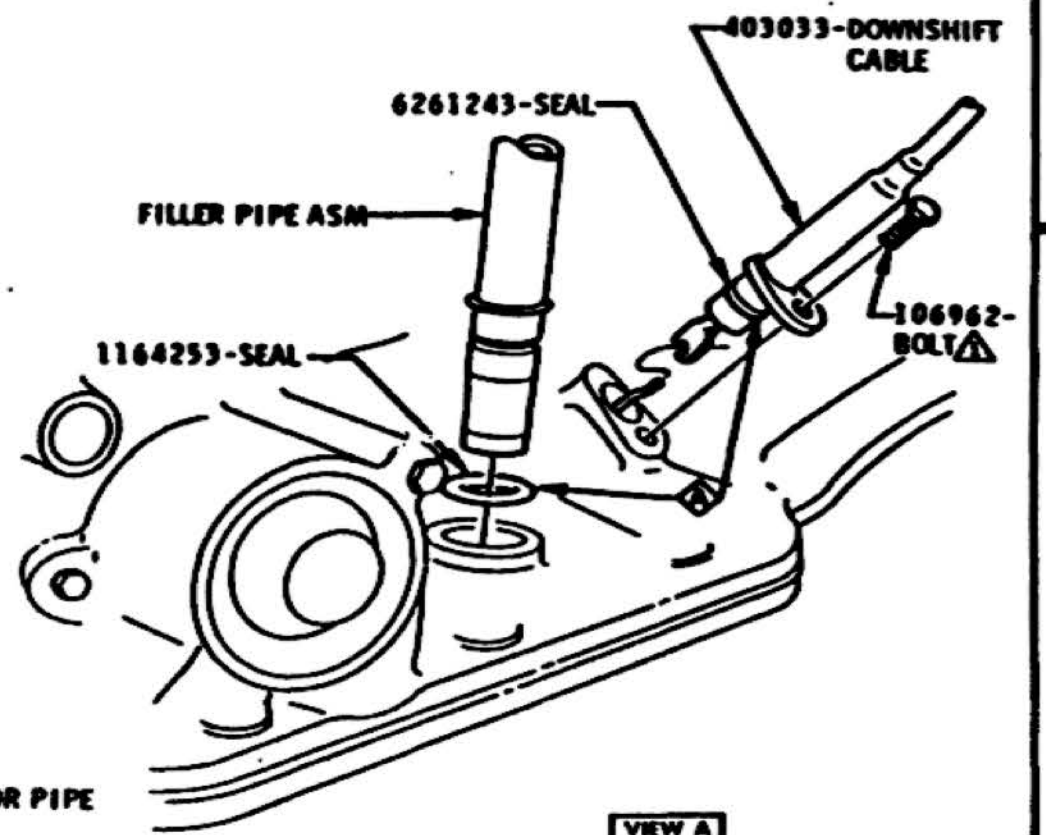


FIGURE 3



VIEW C  
(L-6 ONLY)

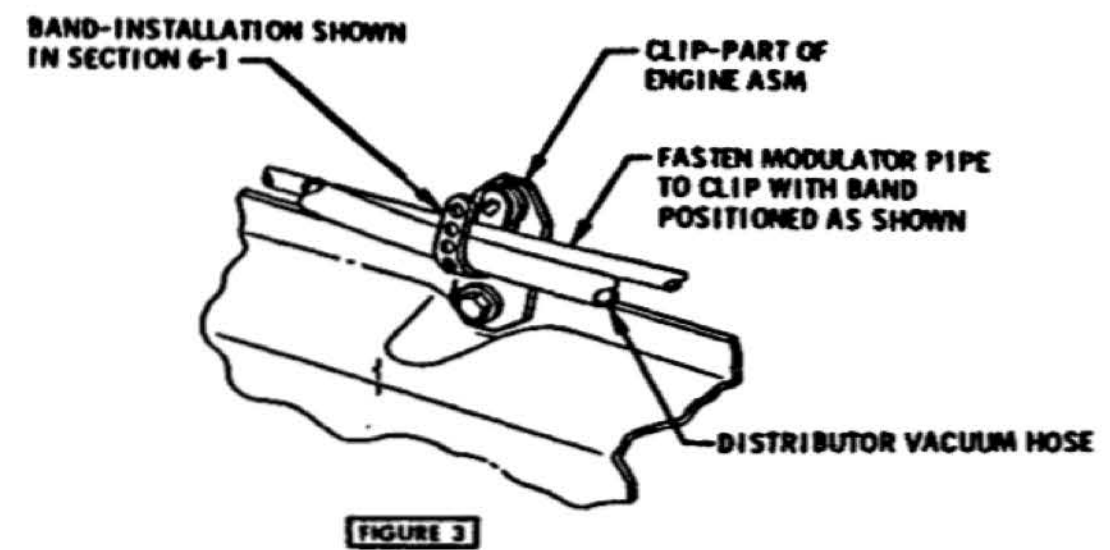
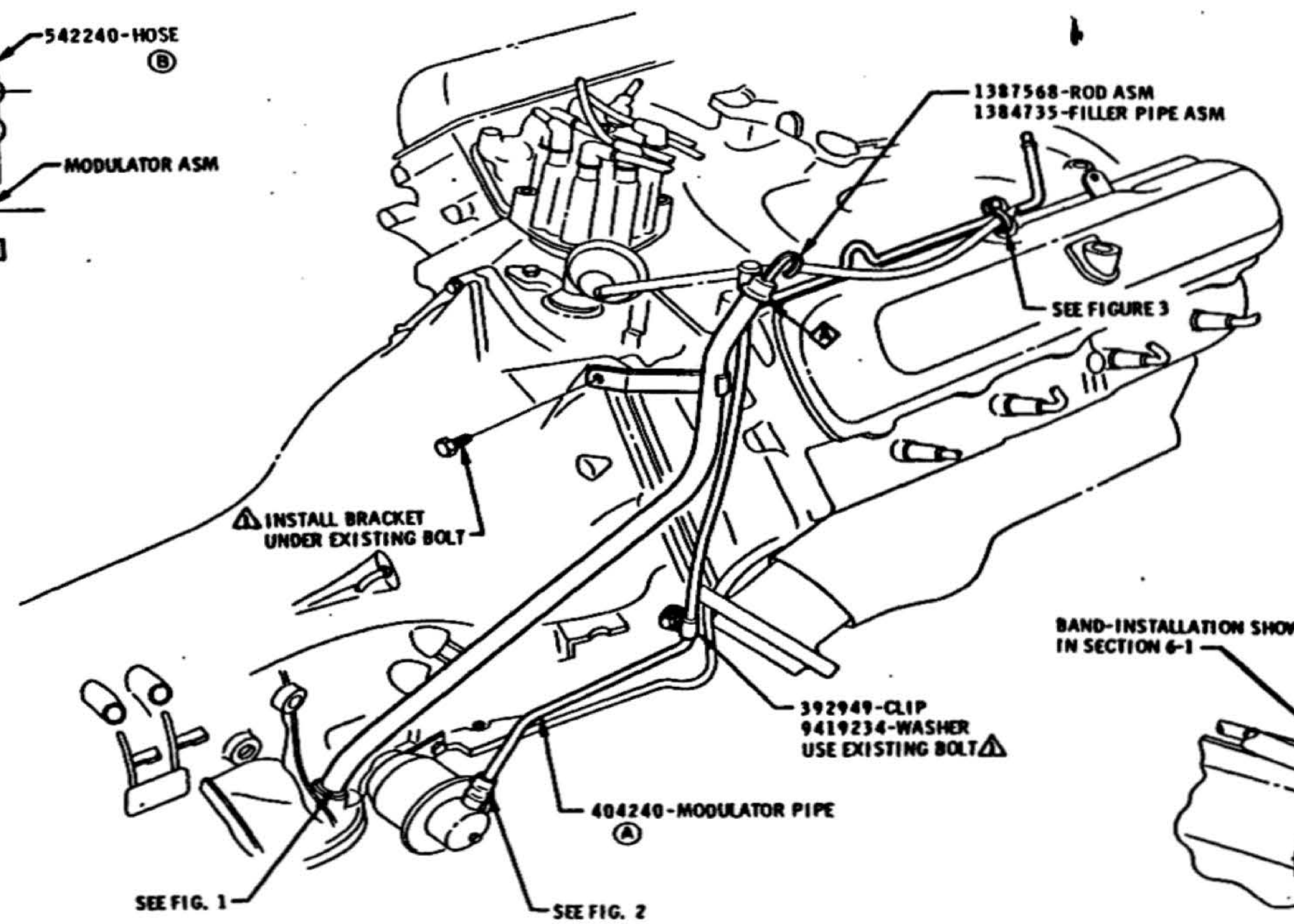
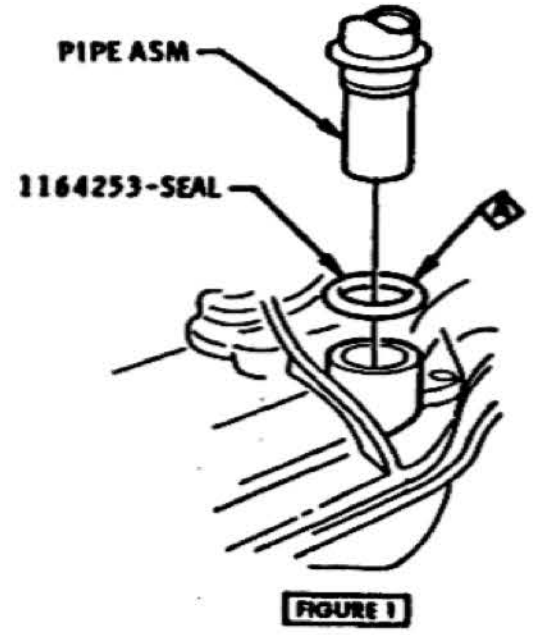
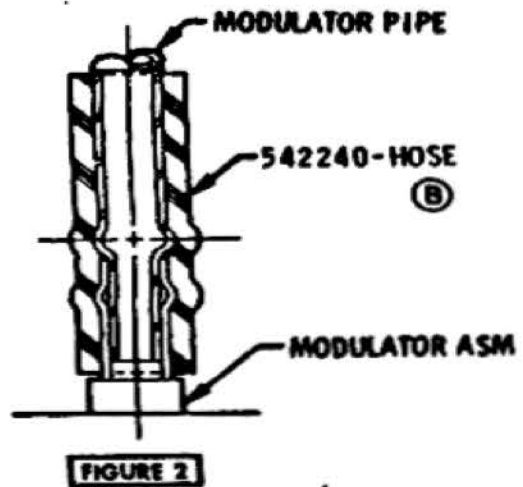


VIEW A  
FILLER PIPE AND DOWNSHIFT CABLE INSTALLATION

▲ 20 - 30 LB. FT. ©  
▲ 60 - 90 LB. IN.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

▲ APPLY 9981117-LUBE TO SEAL PRIOR TO ASM

DATE	BY	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	PART NO.
3-13-70	D	WAS 1363063-HOSE				MODULATOR AND FILLER PIPES (35M38)	1970		7	114	
2-12-70	C	WAS 15-25 LB. FT.									
4-26-69	D	WAS M92429 - CLIP									
2-28-69	A	L-6 MFG. ADDED									
									A		404411

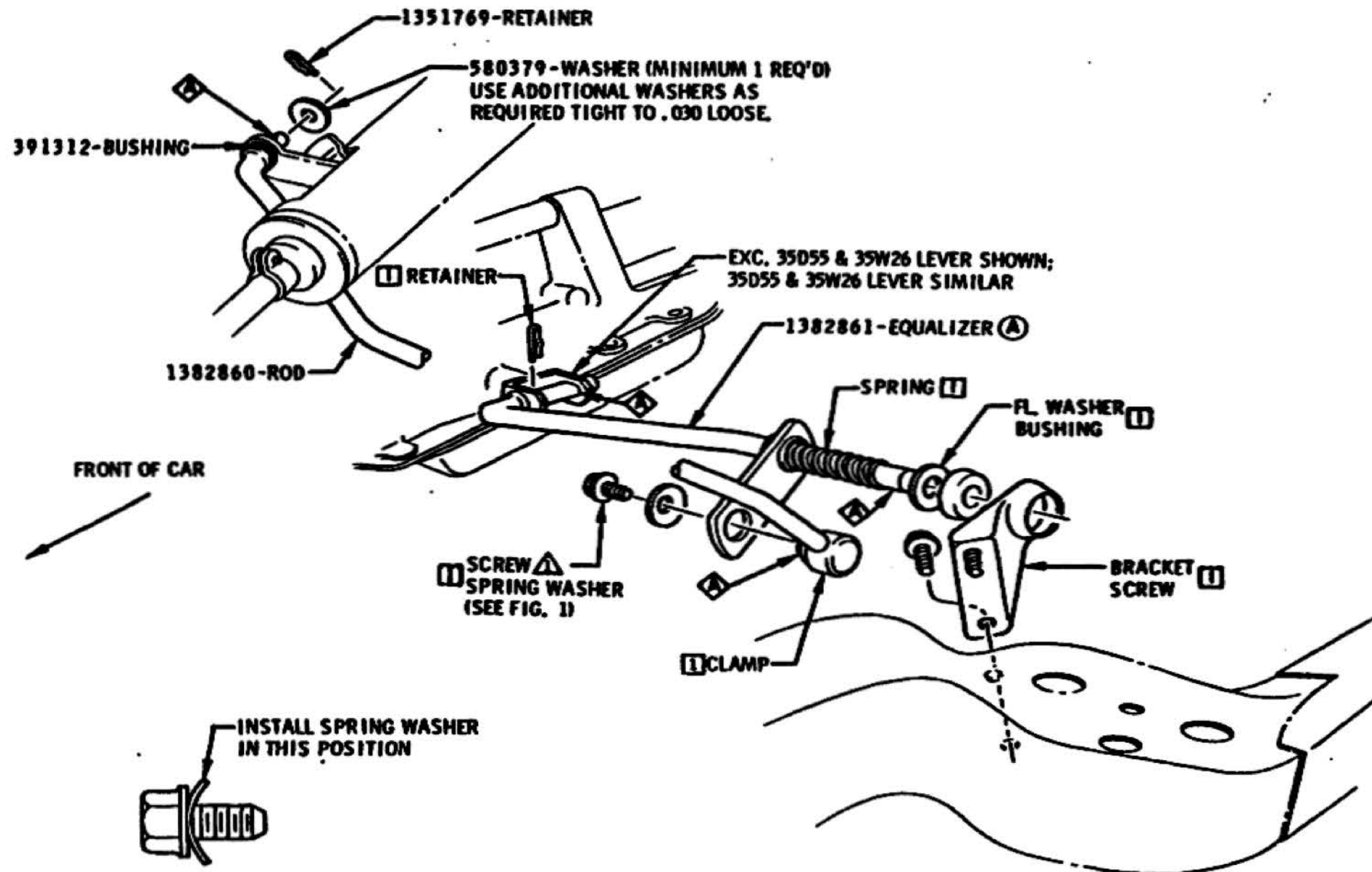


▲  
▲  
▲  
20-30 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

◆ APPLY 9981117 - LUBE TO SEAL PRIOR TO ASM

				TITLE		VB MODULATOR AND FILLER PIPES (35M40) (455 CLL INL. ENG.)	
				DATE	NOVEMBER 19, 1968	FIRST USED	1970
				DR BY	ED ROE	OLDSMOBILE PRODUCT INFORMATION MANUAL	7 115
3-13-70	B	WAS 1365068-HOSE	25	CHKD BY	INT. QUAL. DEPT.	REVISION	A
8-4-69	A	404241-PIPE REMOVED	4	APPV.			404411
DATE	BY	REVISION	DR. CL.	APPV.			





**SHIFT ROD ADJUSTMENT**

1. SET TRANSMISSION OUTER LEVER IN DRIVE POSITION.
2. HOLD UPPER SHIFT LEVER AGAINST DRIVE POSITION STOP IN UPPER STEERING COLUMN. (DO NOT RAISE LEVER).
3. TIGHTEN SCREW IN CLAMP ON LOWER END OF SHIFT ROD TO SPECIFIED TORQUE.
4. CHECK OPERATION:
  - A. WITH KEY IN "RUN" POSITION AND TRANSMISSION IN "REVERSE" BE SURE THAT KEY CANNOT BE REMOVED AND THAT STEERING WHEEL IS NOT LOCKED.
  - B. WITH KEY IN "LOCK" POSITION AND SHIFT LEVER IN "PARK", BE SURE THAT KEY CAN BE REMOVED, THAT STEERING WHEEL IS LOCKED, AND THAT THE TRANSMISSION REMAINS IN PARK WHEN THE STEERING COLUMN IS LOCKED.

**A** LUBRICATE INDICATED AREAS WITH 9985038 GREASE PRIOR TO ASSEMBLY.

**B** THESE PARTS SAME AS MANUAL TRANSMISSION SHIFT CONTROL SHOWN ON PAGE 104.

**▲** 17 - 23 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE				FIRST USED		MANUAL SEC.		PAGE	
AUTOMATIC TRANSMISSION SHIFT CONTROL				1970		7		118	
DATE DECEMBER 20, 1968				DR BY W.E. MASON		CHECKED J.P. ...		APPR. J. ...	
5-23-69	A	MMS 1231654							
DATE	SYM	REVISION	DR.	CL.	APPR.				

PART NO. 404411



NEUTRAL START AND BACK-UP SWITCH ADJUSTMENT

WITH LINK ASSEMBLED TO SHIFT LEVER AND SWITCH, SWITCH BRACKET LOOSELY ASSEMBLED TO SHIFT LEVER BRACKET AND SHIFT LEVER IN PARK POSITION, ADJUST SWITCH TO GAGE DIMENSION SHOWN AND TIGHTEN SWITCH BRACKET FASTENING SCREW.

NOTE:

ALL PARTS ON THIS PAGE ARE PART OF SHOP ASSEMBLIES 405713 ("A" CAR - LANSING PLANT ONLY), 407954 ("A" CAR - GMAD PLANT), 405714 ("B" - "E" CAR - LANSING PLANT ONLY) AND 407955 ("B" CAR - GMAD PLANTS) UNLESS OTHERWISE NOTED. THE DIFFERENCE BETWEEN 405713 AND 405714 (LANSING PLANT) OR 407954 AND 407955 (EXC. LANSING PLANT) IS SHOWN IN FIGURE 5.

PARTS WHICH ARE NOT PART OF ANY OF THESE SHOP ASSEMBLIES ARE DENOTED [1]  
PARTS WHICH ARE NOT PART OF GMAD SHOP ASSEMBLIES ARE DENOTED [2]

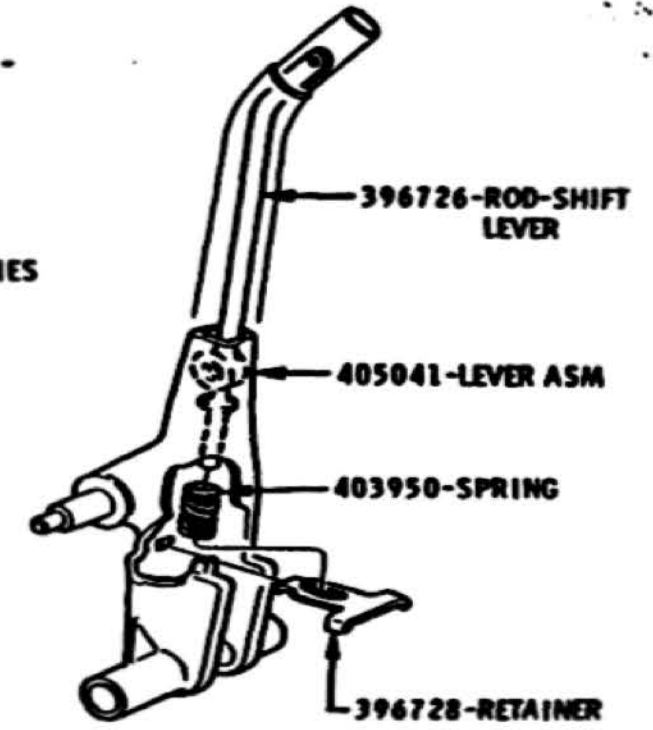
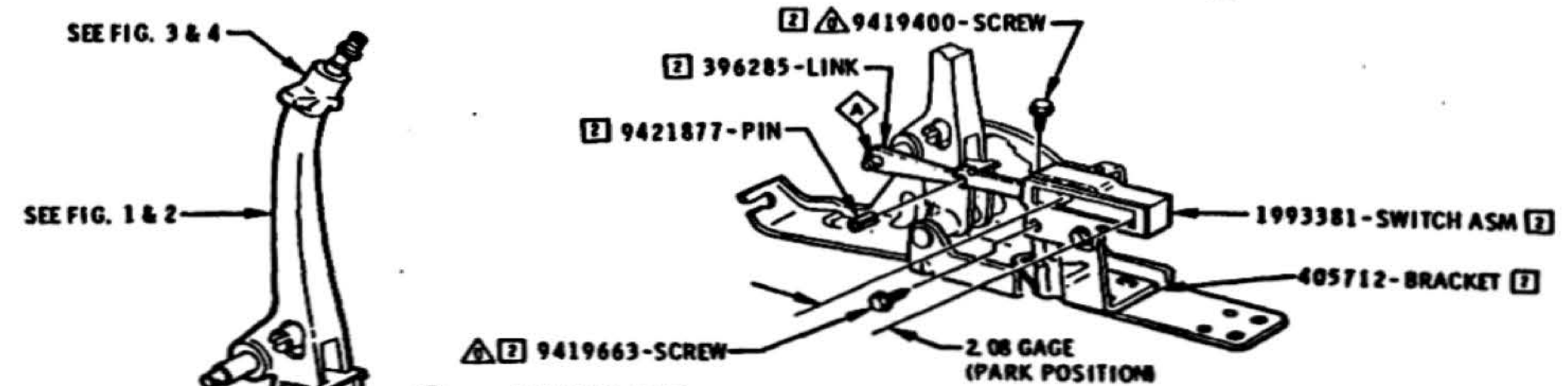


FIGURE 1



NEUTRAL START & BACK-UP LAMP SWITCH TO BRACKET

FIGURE 2

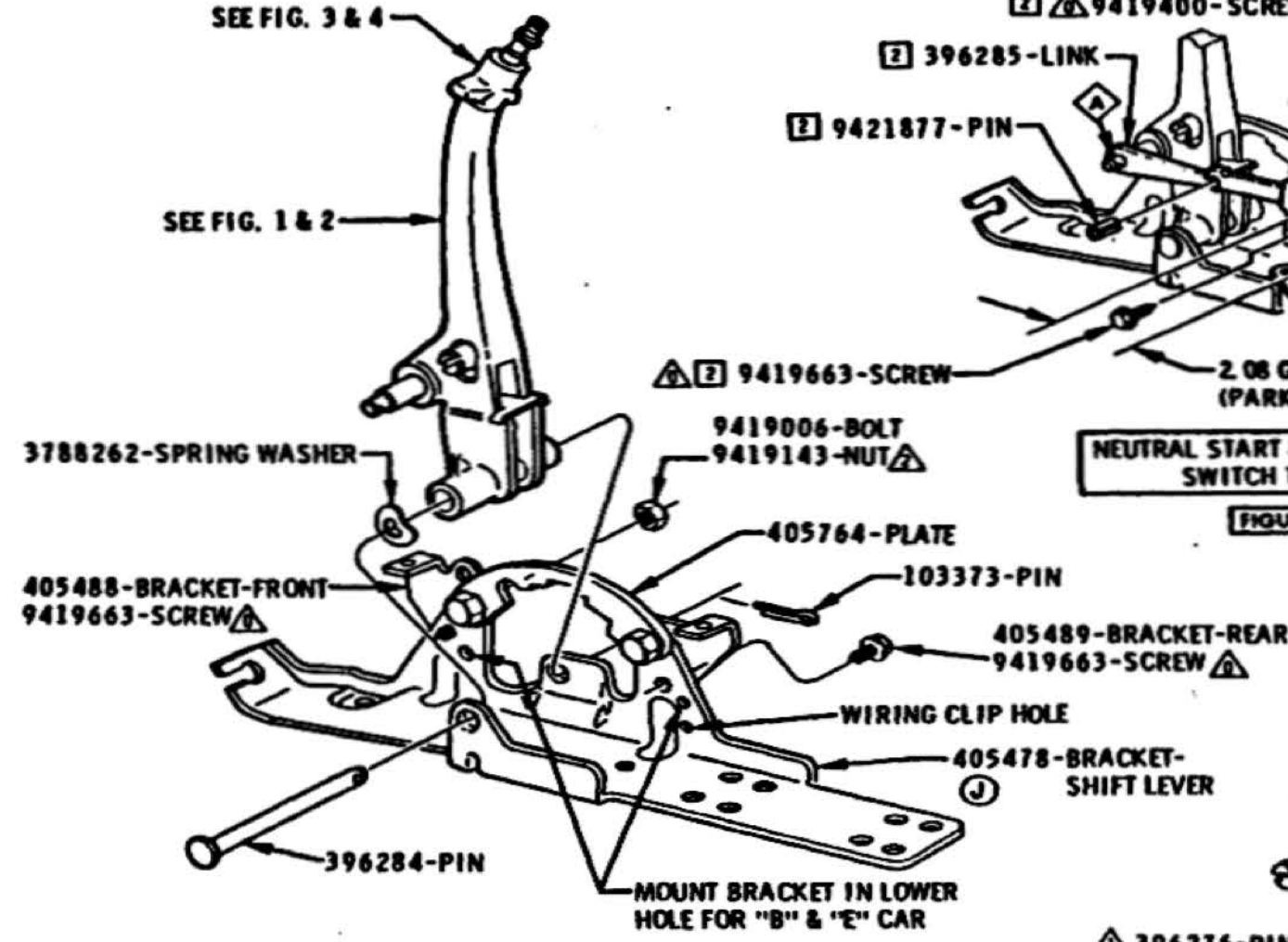


FIGURE 3

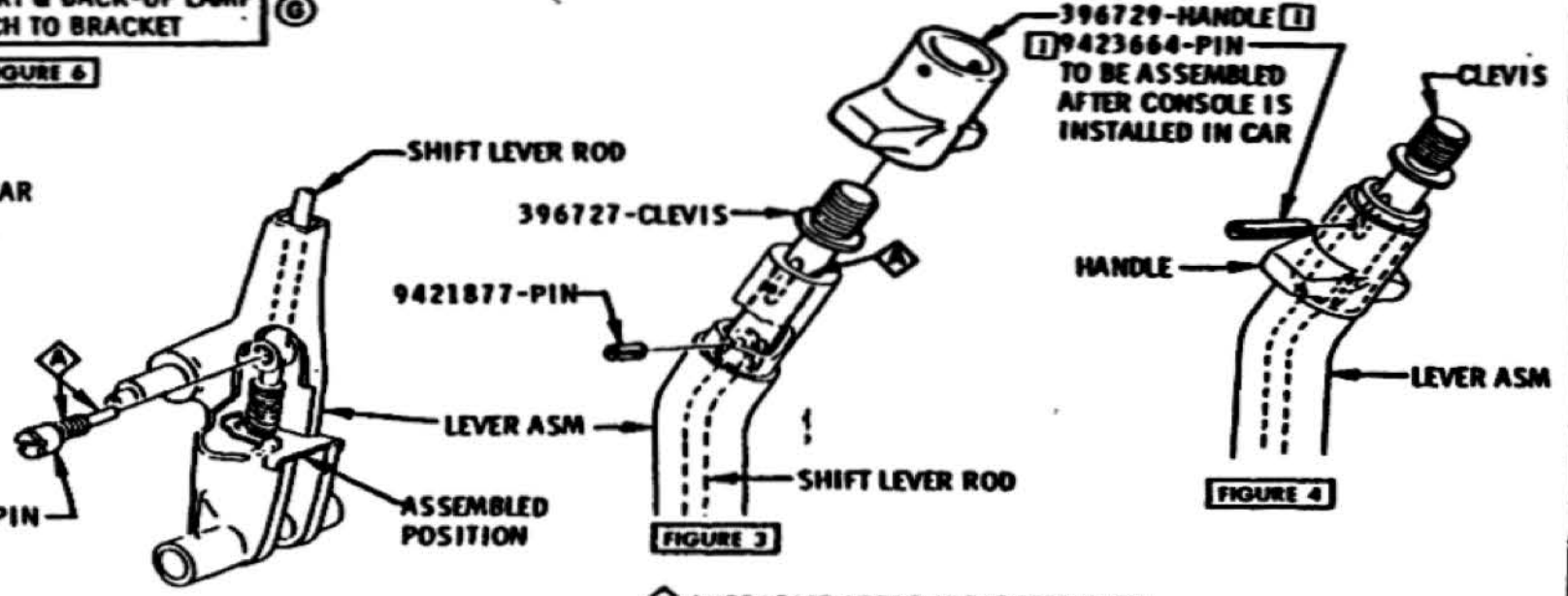


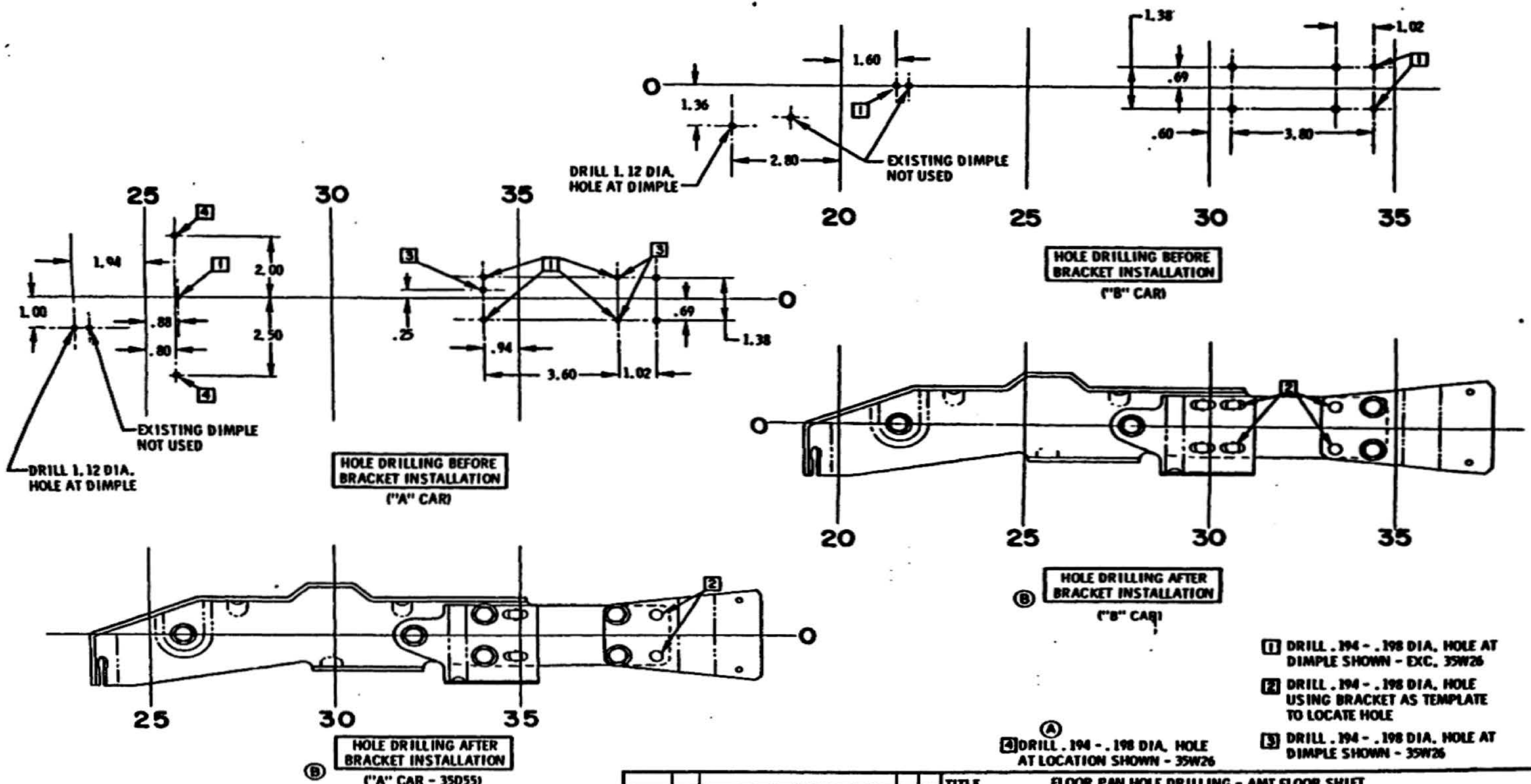
FIGURE 4

[A] LUBRICATE AREAS INDICATED WITH 9985038 GREASE PRIOR TO ASSEMBLY

(EXC. 35W28)

- [A] 30 - 60 LB. IN.
- [B] 48 - 84 LB. IN.
- [C] 30 - 50 LB. IN.
- [D] FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYN	REVISION	DR.	CK.	DATE	SYN	REVISION	DR.	CK.	APPL.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL REC.	PAGE
5-27-70	J	BRACKET REVD TO DETAIL	AL	PTS	7-11-67	D	REVISED & REDRAWN	PTS			AUTOMATIC TRANSMISSION FLOOR SHIFT CONTROL	1970		7	120
12-17-69	H	NOTE REVISED	PTS		5-28-69	C	TOLERANCES ADDED	PTS							
9-16-69	G	NOTE REVISED	PTS		4-25-69	B	TORQUES REVISED	PTS							
9-16-69	F	VIEW REMOVED	PTS		3-14-69	A	VIEW REVISED	PTS							

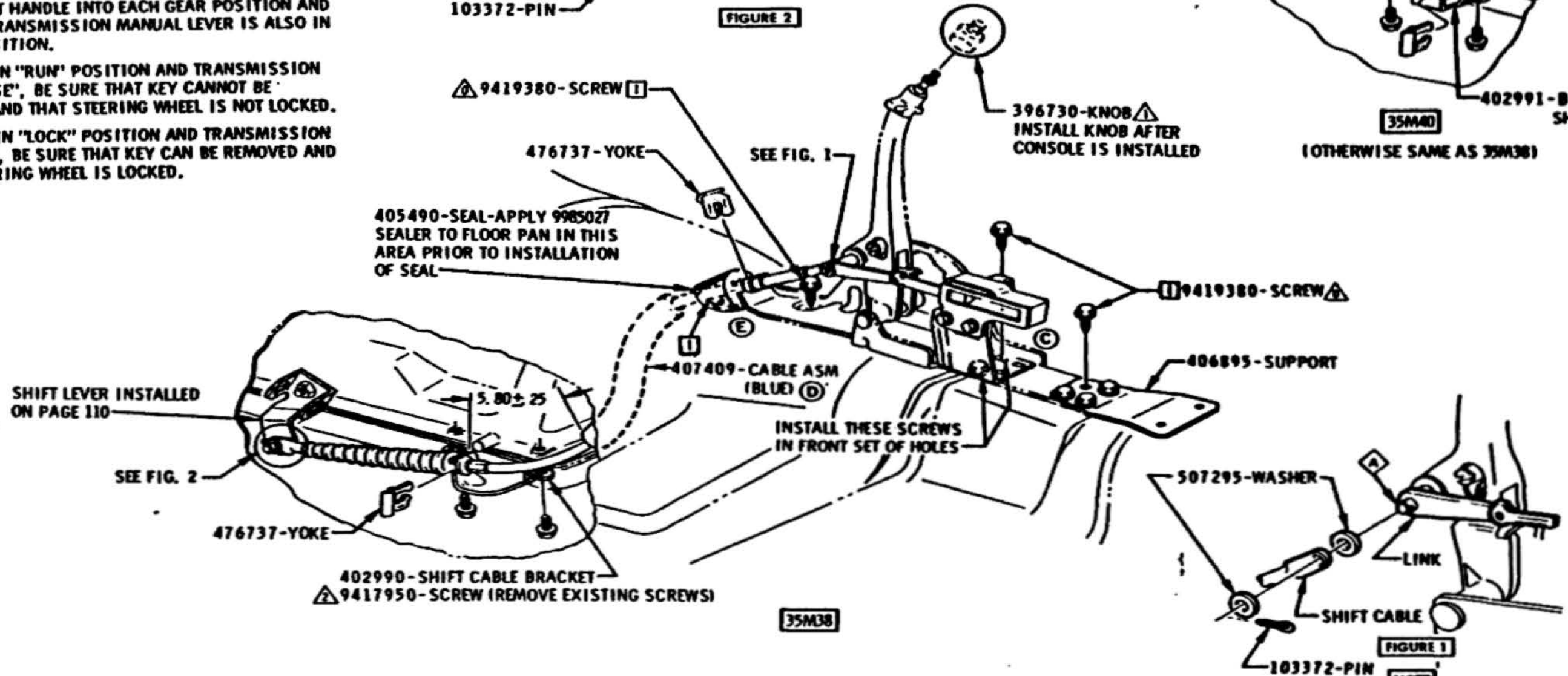
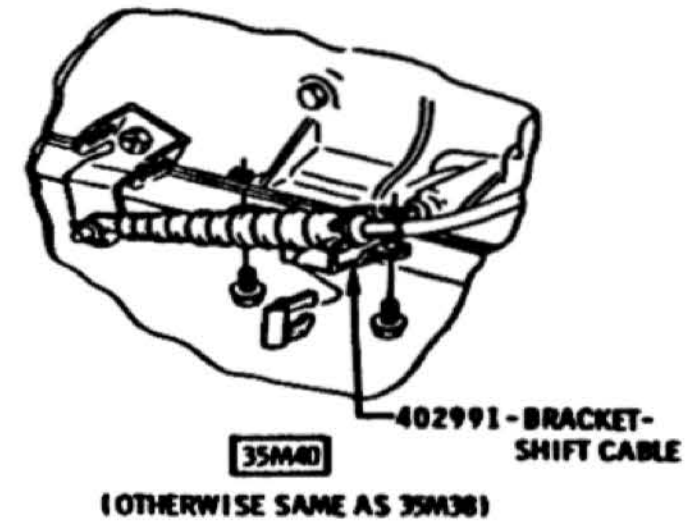
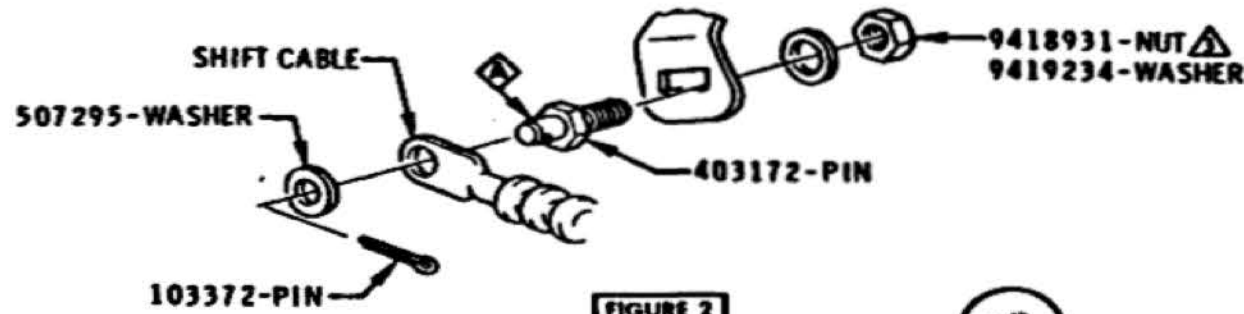


- ① DRILL .194 - .198 DIA. HOLE AT DIMPLE SHOWN - EXC. 35W26
- ② DRILL .194 - .198 DIA. HOLE USING BRACKET AS TEMPLATE TO LOCATE HOLE
- ③ DRILL .194 - .198 DIA. HOLE AT DIMPLE SHOWN - 35W26

5-2770		B, BRACKET REV'D TO DETAIL		DATE	SYN	REVISION	DR.	CK.	APP.	TITLE	FLOOR PAN HOLE DRILLING - AMT FLOOR SHIFT	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL INC.	7	PAGE	121
9-22-69		A NOTE ADDED								DR. BY	W.C.M. AL.M.							
										ENGR'D	E.R.P.							
										APP.	J. G. [Signature]							
										REV. TO	10-10-70							
										APP.								
												SERIES	A-B	PART NO.	404411-2			

**SHIFT CABLE ADJUSTMENT PROCEDURE**

1. PUT SHIFT HANDLE IN PARK POSITION, TRANSMISSION MANUAL LEVER IN PARK POSITION AND IGNITION KEY IN LOCK POSITION.
2. WITH ROD PULLED LIGHTLY AGAINST LOCK STOP, TIGHTEN SCREW IN CLAMP AT LOWER END OF SHIFT ROD TO SPECIFIED TORQUE.
3. MOVE PIN 403172 TO GIVE "FREE PIN" FIT IN MANUAL LEVER AND TIGHTEN ATTACHING NUT TO SPECIFIED TORQUE.
4. CHECK OPERATION:
  - A. MOVE SHIFT HANDLE INTO EACH GEAR POSITION AND SEE THAT TRANSMISSION MANUAL LEVER IS ALSO IN DETENT POSITION.
  - B. WITH KEY IN "RUN" POSITION AND TRANSMISSION IN "REVERSE", BE SURE THAT KEY CANNOT BE REMOVED AND THAT STEERING WHEEL IS NOT LOCKED.
  - C. WITH KEY IN "LOCK" POSITION AND TRANSMISSION IN "PARK", BE SURE THAT KEY CAN BE REMOVED AND THAT STEERING WHEEL IS LOCKED.



▲ LUBRICATE AREAS INDICATED WITH 9985038 GREASE PRIOR TO ASSEMBLY

□ FOR DRILLING INFORMATION SEE PAGE 121

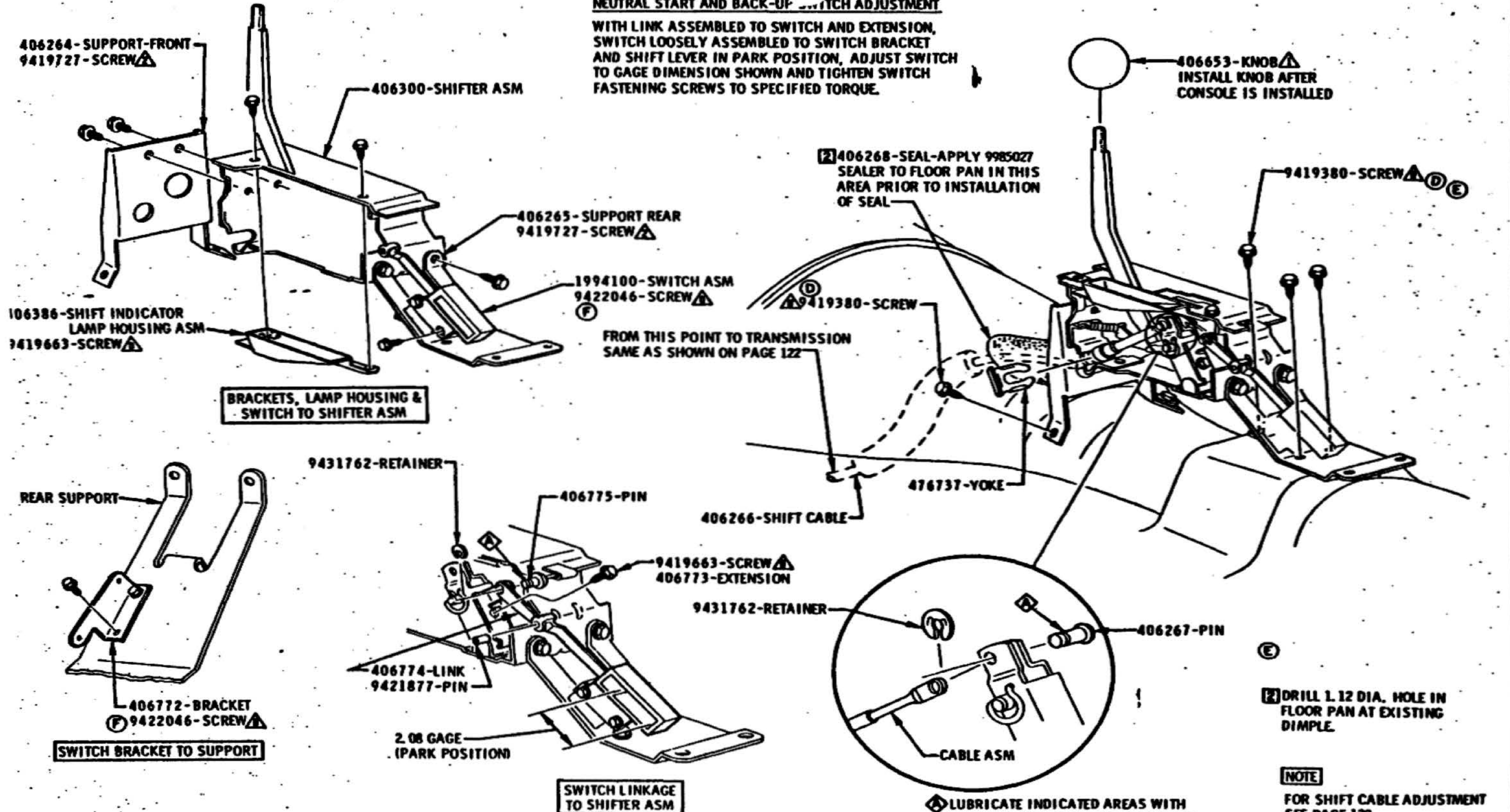
SEE PAGE 124 FOR 35W26 DUAL GATE SHIFTER.

- ▲ 16 - 26 LB. FT.
- ▲ 14 - 17 LB. FT.
- ▲ 25 - 40 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CHK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
5-27-70	E	BRACKET REV'D TO DETAIL				AUTOMATIC TRANSMISSION FLOOR SHIFT CONTROL				
9-22-69	D	WAS 402989-CABLE				DATE JANUARY 28, 1969	1970		7	122
8-20-69	C	BACKGROUND REVISED				DR. BY N.E. MASON				
7-31-69	B	REVISED & REDRAWN				CHECKED BY [Signature]				
5-28-69	A	REVISED & REDRAWN				APPR. [Signature]	35M38 35M40		A	404411

**NEUTRAL START AND BACK-UP SWITCH ADJUSTMENT**

WITH LINK ASSEMBLED TO SWITCH AND EXTENSION, SWITCH LOOSELY ASSEMBLED TO SWITCH BRACKET AND SHIFT LEVER IN PARK POSITION, ADJUST SWITCH TO GAGE DIMENSION SHOWN AND TIGHTEN SWITCH FASTENING SCREWS TO SPECIFIED TORQUE.



- ▲ 30 - 60 LB. IN.
- ▲ 25 - 40 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYM	REVISION	DR.	CL.	DATE	SYM	REVISION	DR.	CL.	APP.	TITLE	FIRST USE	OLDMOBILE PRODUCT INFORMATION MANUAL	SERIAL NO.	PAGE
9-18-69		E	NOTE REMOVED			9-18-69	D	WAS 9419727-SCREW				DUAL GATE SHIFTER ASM	1970	7	124	
6-12-69		C	REVISED & REDRAWN			4-30-69	B	REVISED TO DETAIL								
4-30-69		A	WAS 949663			4-30-69	A	WAS 946730-KNOB								



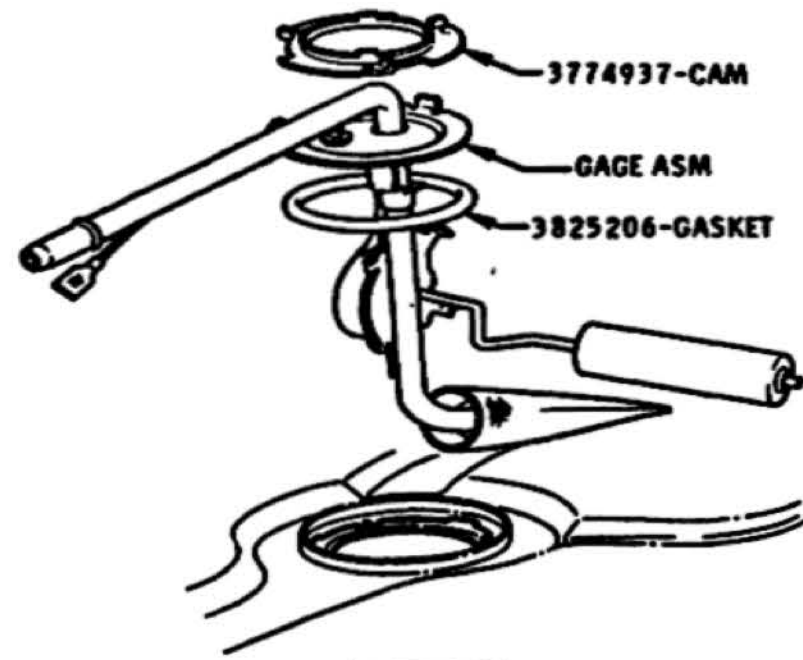


FIGURE 1

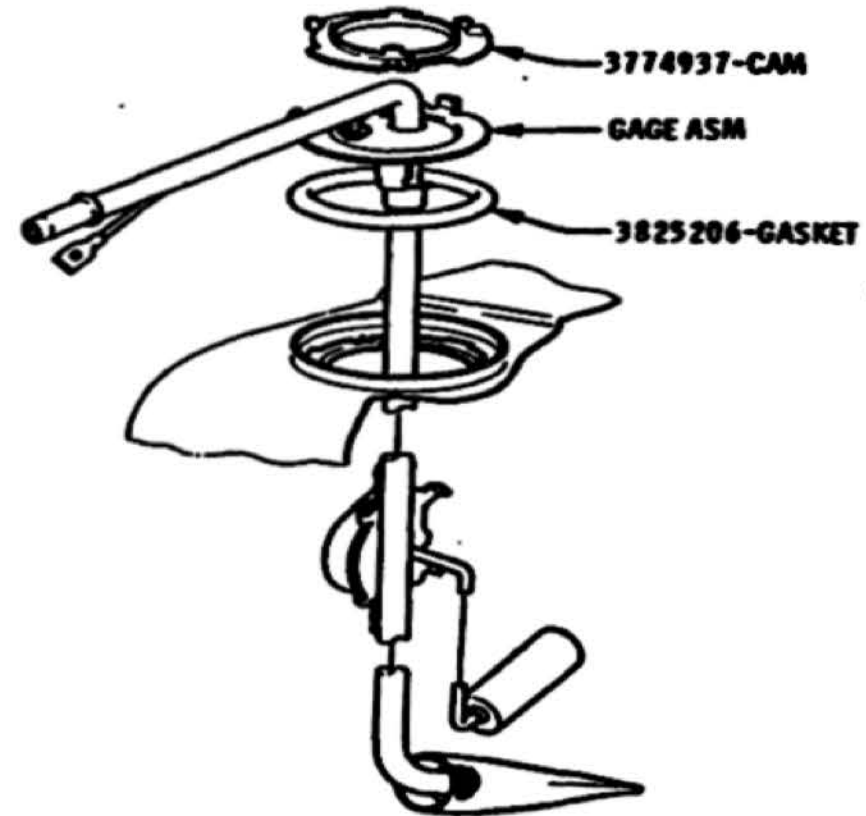
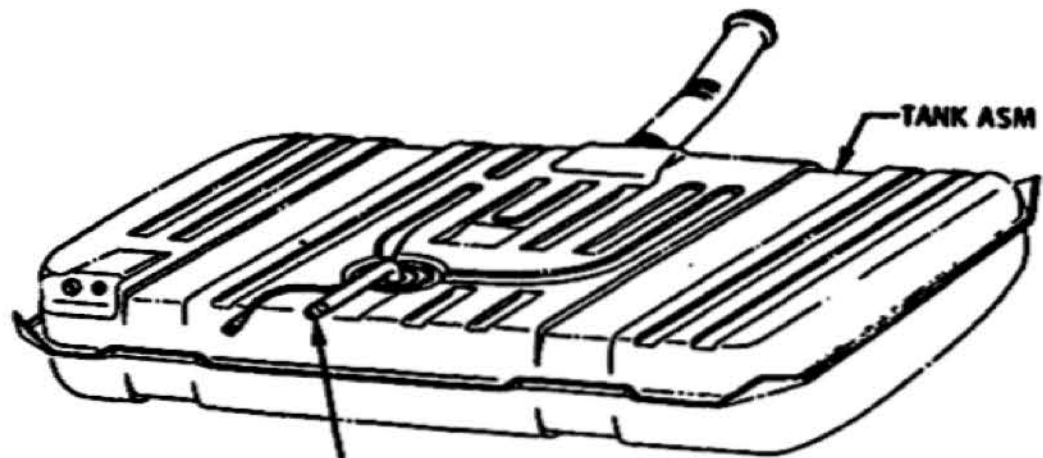


FIGURE 2



SEE FIG. 1 FOR GAGE  
 ASM INSTALLATION

COUPES AND SEDANS

SEE FIG. 2 FOR GAGE  
 ASM INSTALLATION

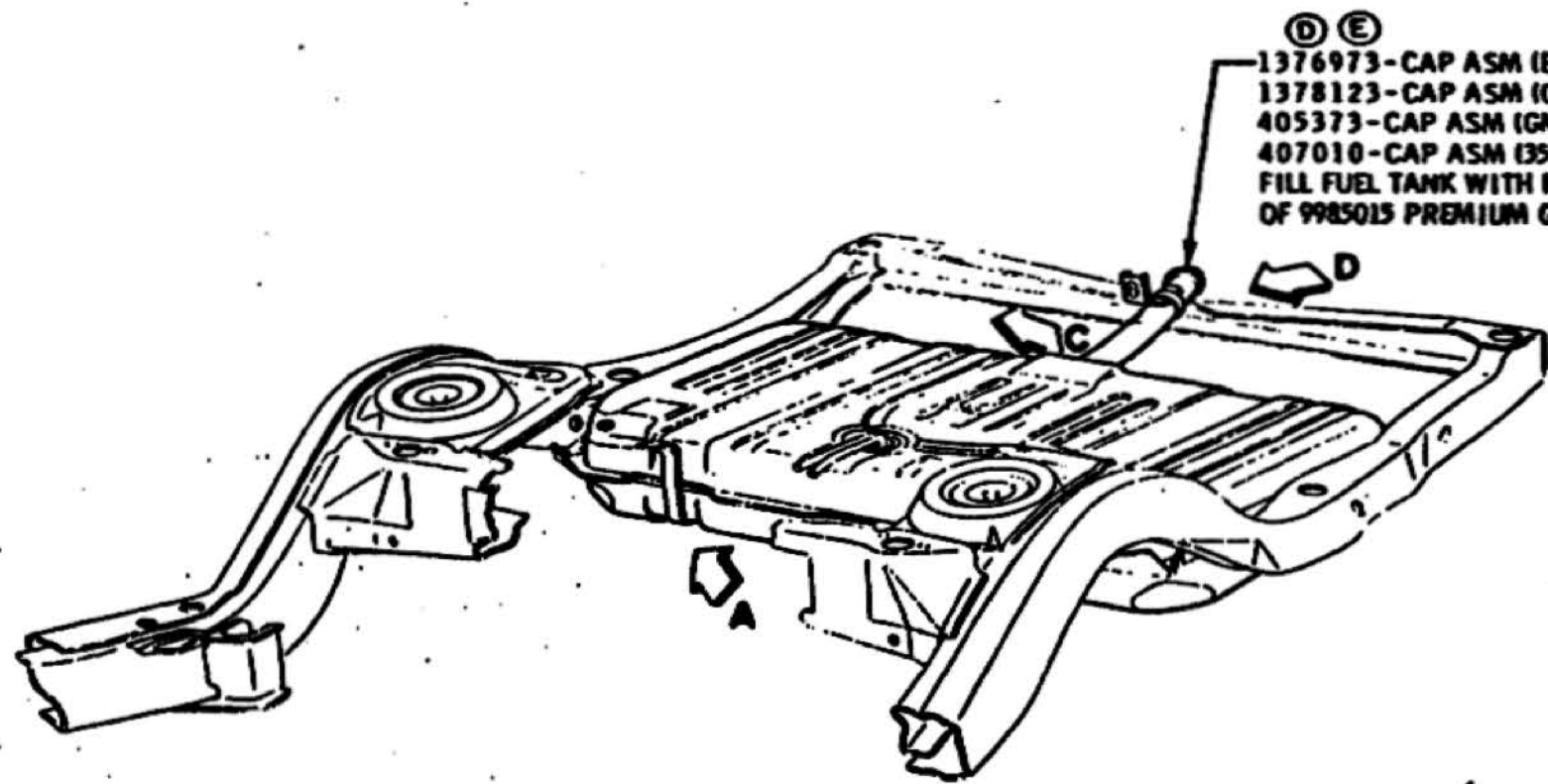


TANK ASM

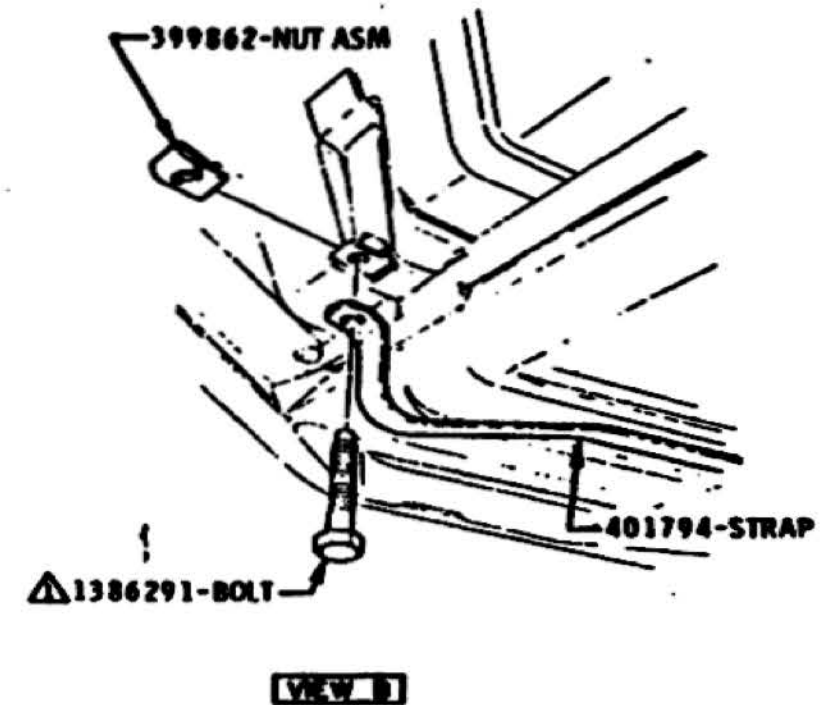
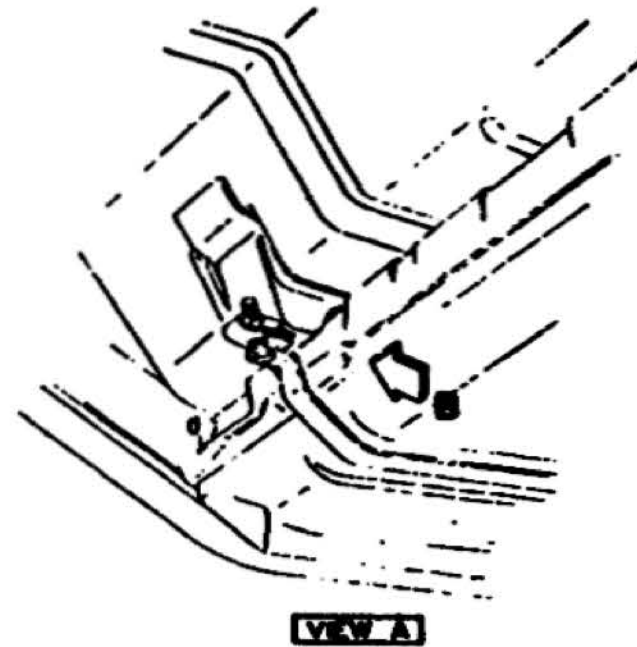
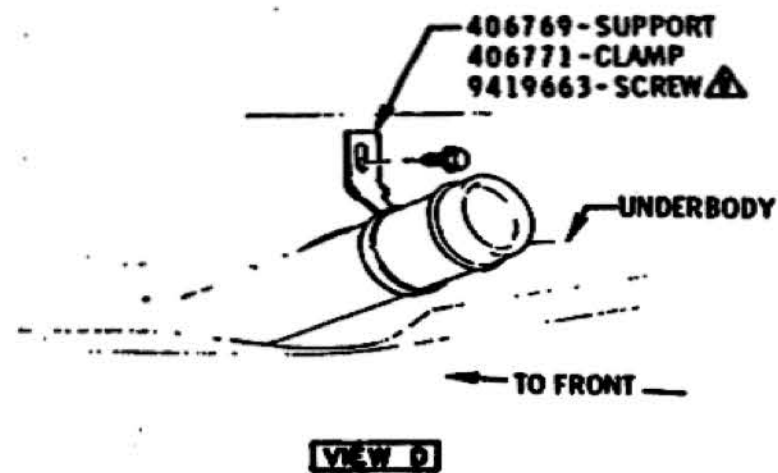
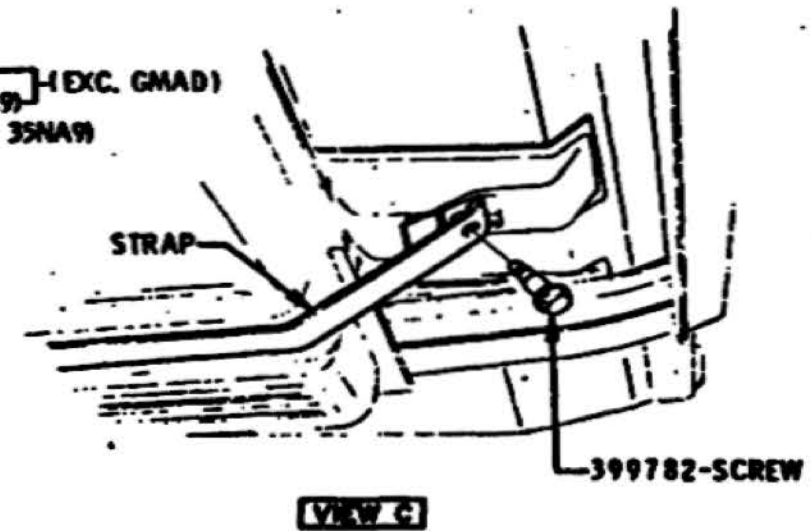
STATION WAGONS

FOR FUEL TANK CHART  
 (COMPLETE) SEE PAGE 100

DATE				TITLE			
				DATE	NOV. 25, 1968	FIRST USED	1970
				BY	BOYER	OLDSMOBILE PRODUCT	INFORMATION MANUAL
				CHECKED	[Signature]	MANUAL SEC.	8 101
				APPROVED	[Signature]	REV.	404411
DATE	SYM	REVISION	DR.	CL.	APP.		

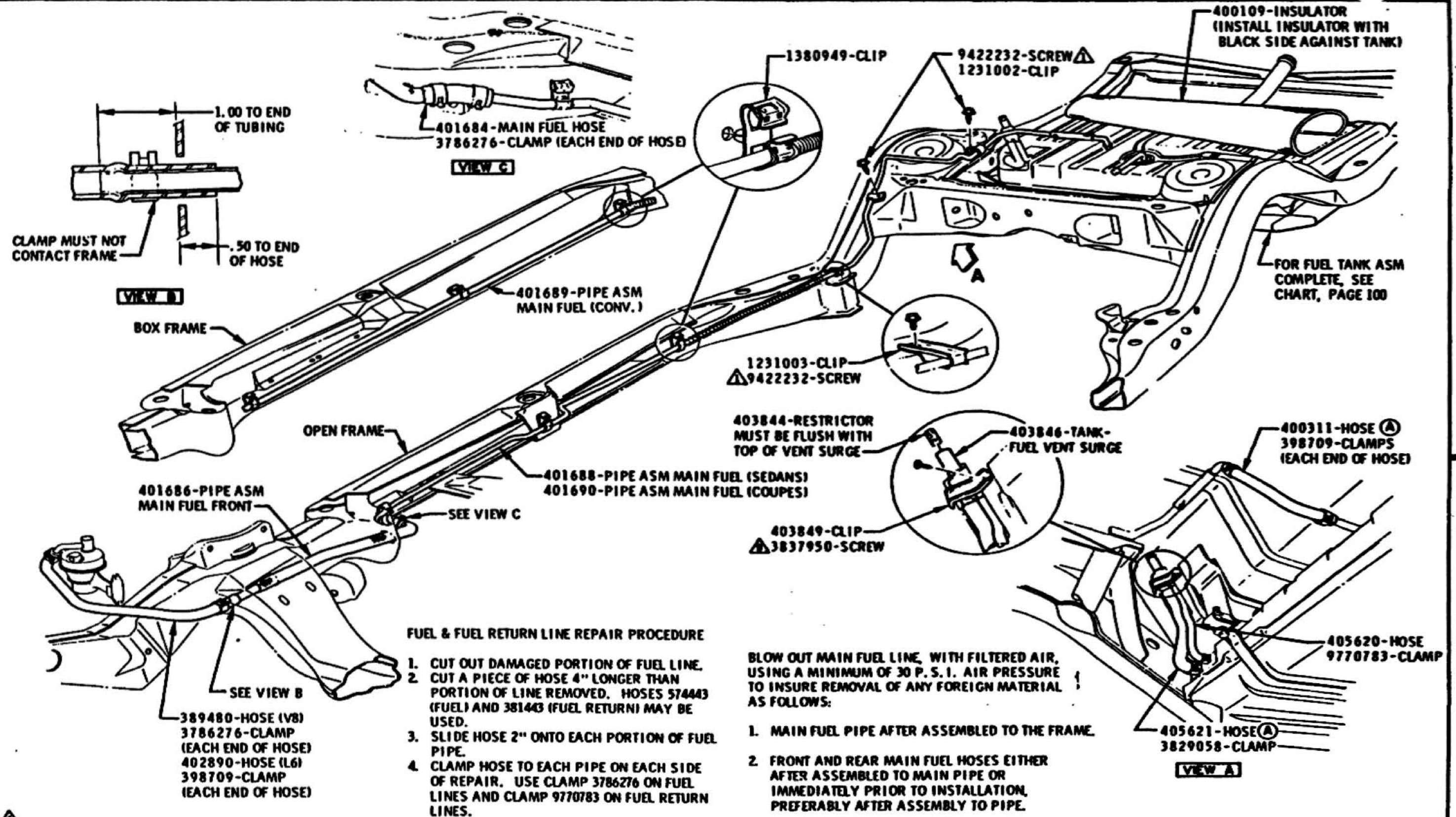


(D) (E)  
 1376973-CAP ASM (EXC. 35NA9) (EXC. GMAD)  
 1378123-CAP ASM (OPT. H EXC. 35NA9)  
 405373-CAP ASM (GMAD ONLY) (EXC. 35NA9)  
 407010-CAP ASM (35NA9) (C)  
 FILL FUEL TANK WITH FOUR GALLONS  
 OF 9985015 PREMIUM GASOLINE



▲  
 ▲  
 ▲  
 96-120 LB. IN.  
 FULLY DRIVEN, SEALED  
 AND NOT STRIPPED

DATE	SYM	REVISION	CHK	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
11-12-63	E	405373 CAP ADDED	J13	DP	FUEL TANK MOUNTING (EXCEPT STATION WAGONS)	1970	8	102	
9-10-63	D	WAS 405373-406045 CAP	J13	DP					
9-29-63	C	407010 CAP ASM ADDED	J13	DP					
6-16-63	B	CLAMP REVISED	J13	DP					
5-29-63	A	VIEW ADDED	J13	DP					
					DATE NOV. 2, 1968				
					DR BY 110Y11				
					CHECKED [Signature]				
					APP. [Signature]				
					APPR. [Signature]	8A	A	404411	



**FUEL & FUEL RETURN LINE REPAIR PROCEDURE**

1. CUT OUT DAMAGED PORTION OF FUEL LINE.
2. CUT A PIECE OF HOSE 4" LONGER THAN PORTION OF LINE REMOVED. HOSES 574443 (FUEL) AND 381443 (FUEL RETURN) MAY BE USED.
3. SLIDE HOSE 2" ONTO EACH PORTION OF FUEL PIPE.
4. CLAMP HOSE TO EACH PIPE ON EACH SIDE OF REPAIR. USE CLAMP 3786276 ON FUEL LINES AND CLAMP 9770783 ON FUEL RETURN LINES.

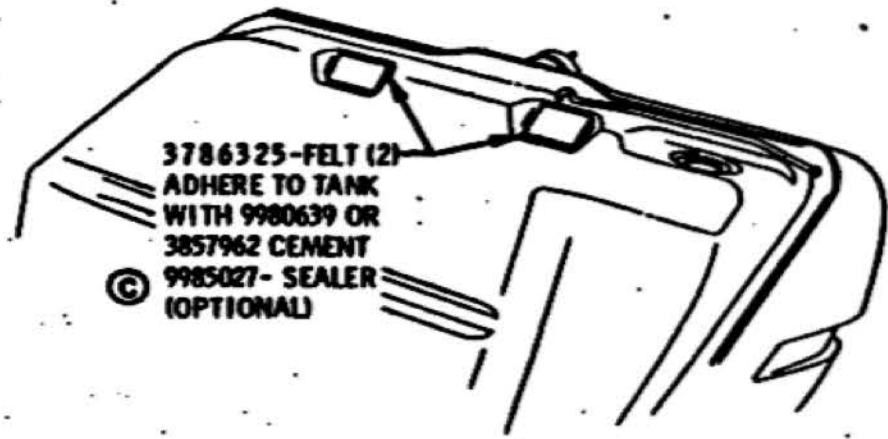
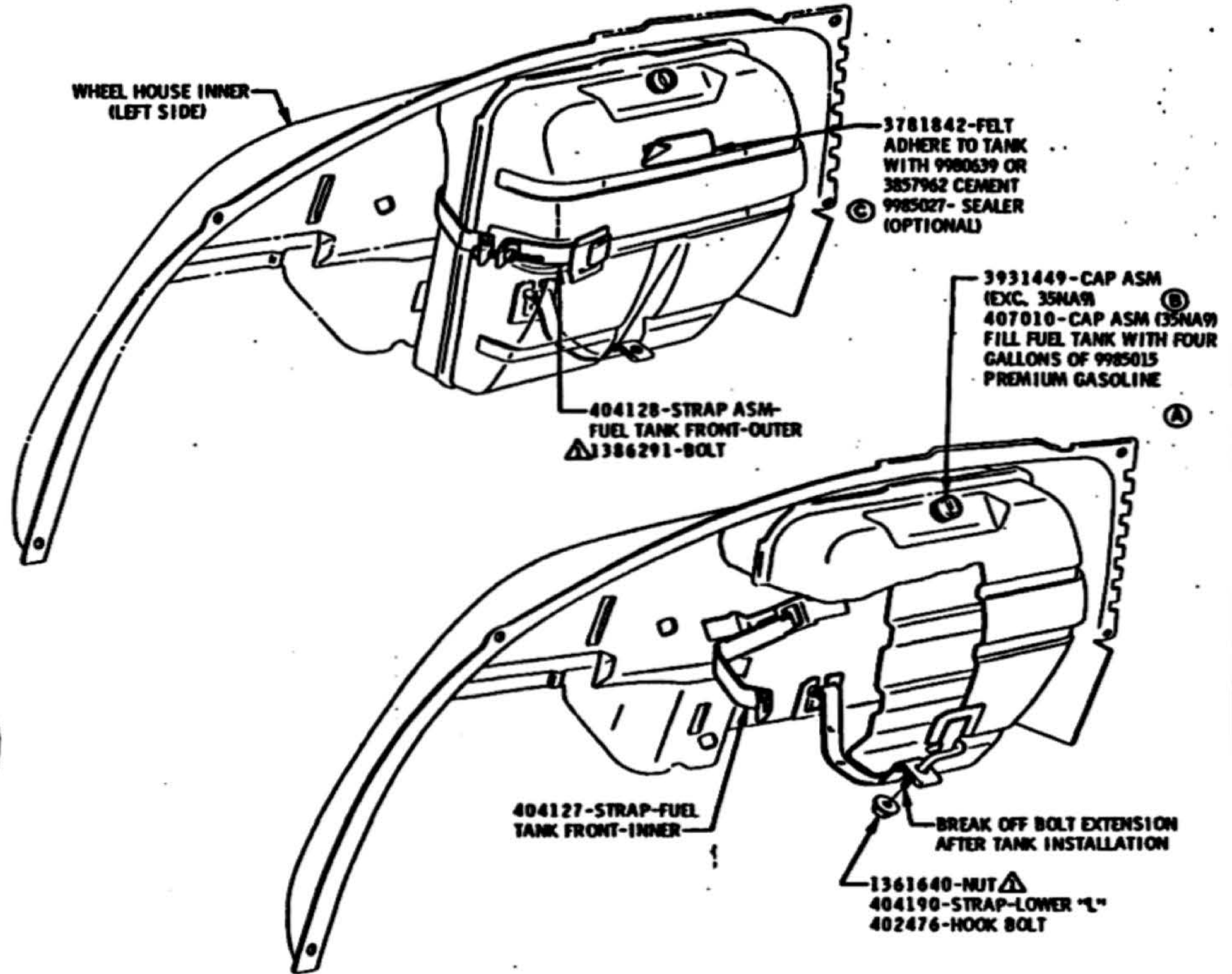
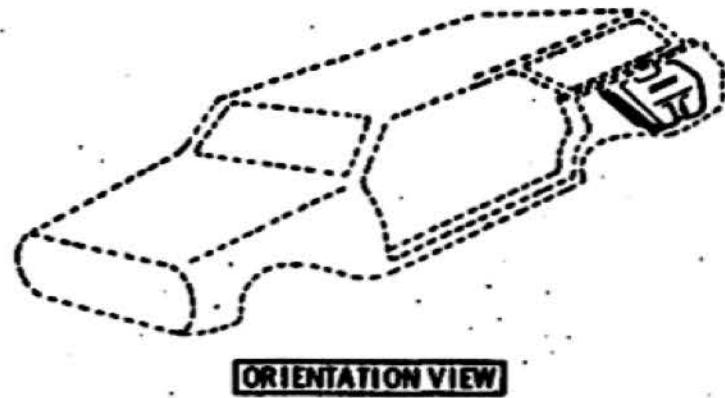
**BLOW OUT MAIN FUEL LINE, WITH FILTERED AIR, USING A MINIMUM OF 30 P. S. I. AIR PRESSURE TO INSURE REMOVAL OF ANY FOREIGN MATERIAL AS FOLLOWS:**

1. MAIN FUEL PIPE AFTER ASSEMBLED TO THE FRAME.
2. FRONT AND REAR MAIN FUEL HOSES EITHER AFTER ASSEMBLED TO MAIN PIPE OR IMMEDIATELY PRIOR TO INSTALLATION, PREFERABLY AFTER ASSEMBLY TO PIPE.

**72-120 LB. IN.**  
**FULLY DRIVEN, SEATED AND NOT STRIPPED**

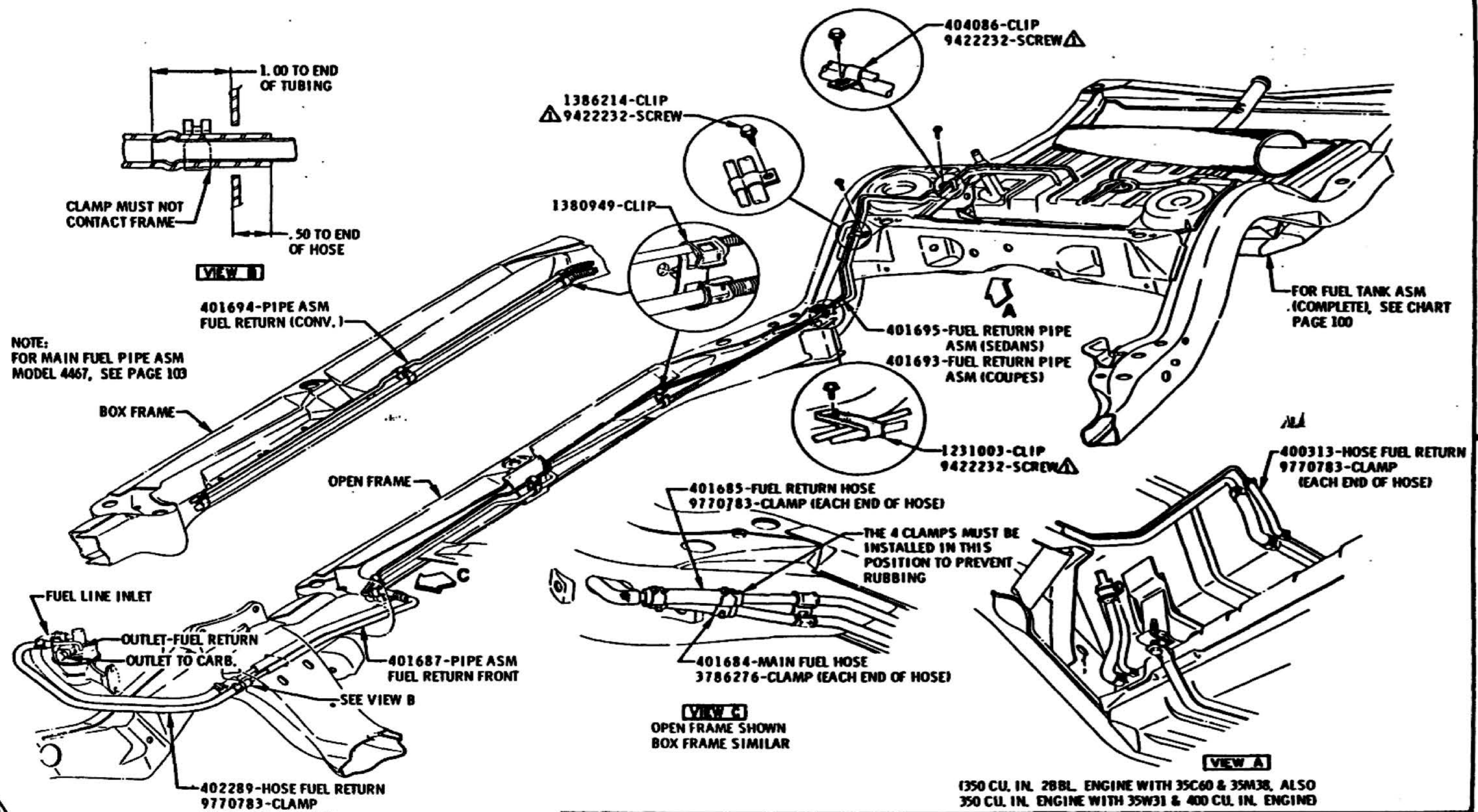
TITLE		FUEL SYSTEM (EXCEPT STATION WAGONS AND 400 CU. IN. ENGINES)			
DATE	DEC. 10, 1968	FIRST USED	1970	MANUAL SEC.	8
DR BY	J30YER	CHECKED	APP. [Signature]	INFO MANUAL	103
DATE	1-22-69	SYN	A2	REV.	BA-8B
REVISION	WAS 403848 / 403850 HOSES	DR.	CL.	SERIES	A
				PART NO.	404411





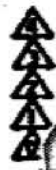
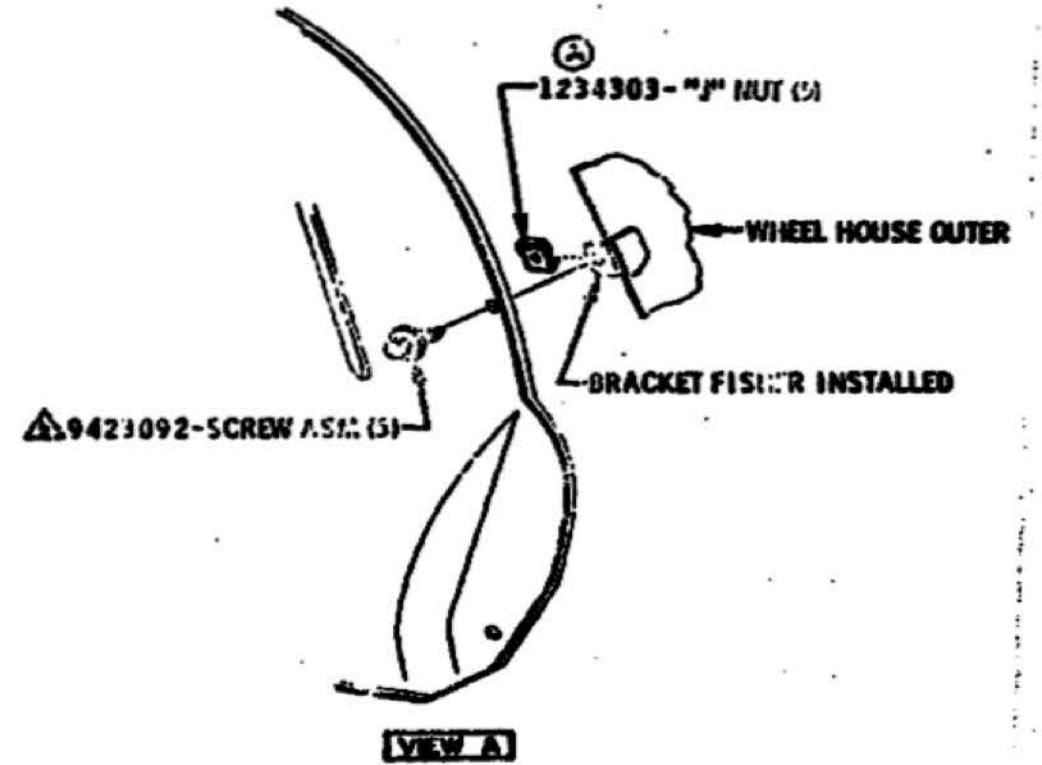
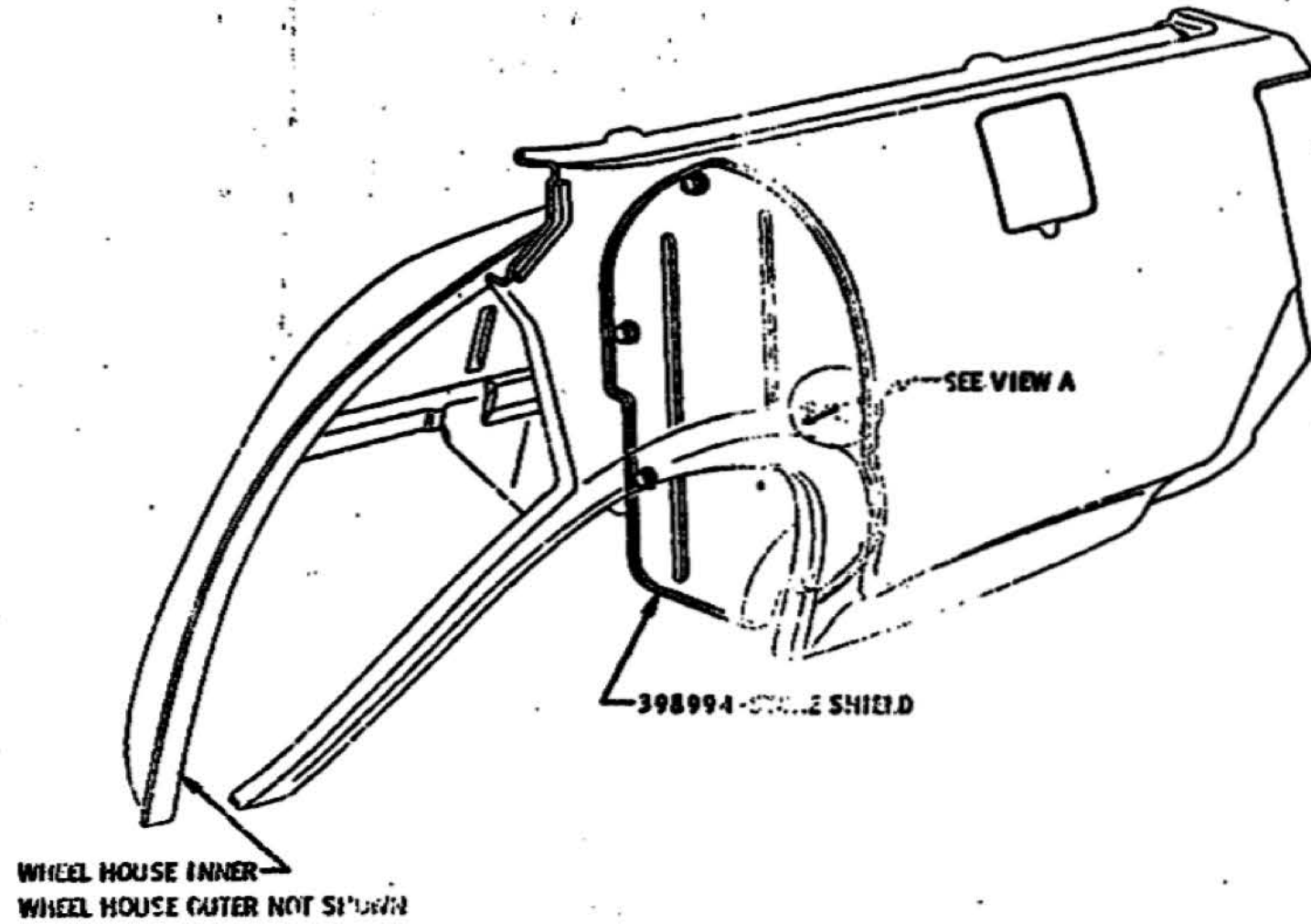
▲ 80-140 LB. IN. FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYM	REVISION	ENL	CL	APPR	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
1970		B	407010 CAP ASM ADDED	43	27	COVER	FUEL TANK MOUNTING (STATION WAGON)	1970		8	104
6-22-68		A	NOTE ADDED	43	27			8A	A		404411



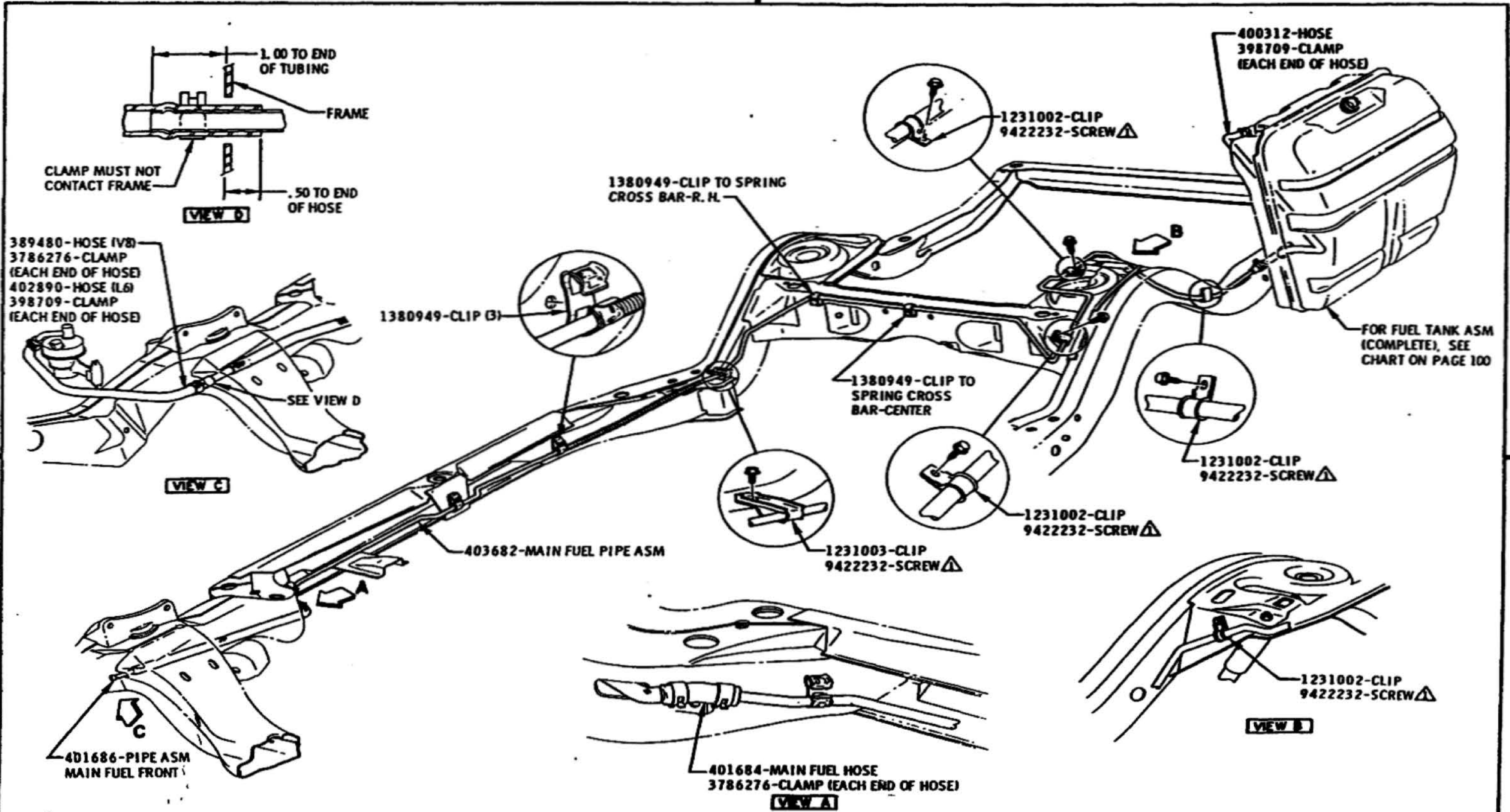
TITLE					FUEL SYSTEM - FUEL RETURN			
DATE	BY	CHECKED	APPR.	REV. USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
	DEC. 2, 1968						8	105
DATE	SYM	REVISION	DR.	CL.	APPR.	REV. NO.	PART NO.	
						BA 88	A	404411

▲  
▲  
▲  
72-120 LB. IN.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED



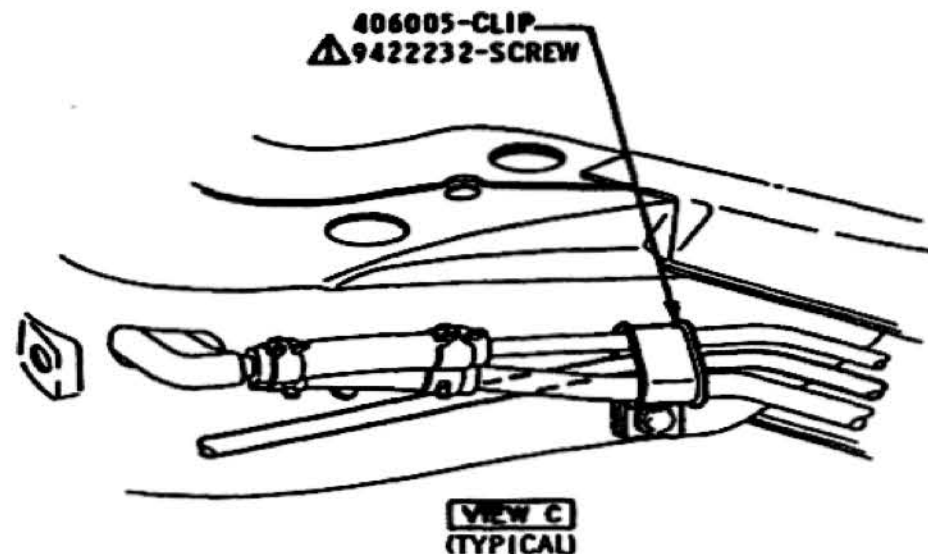
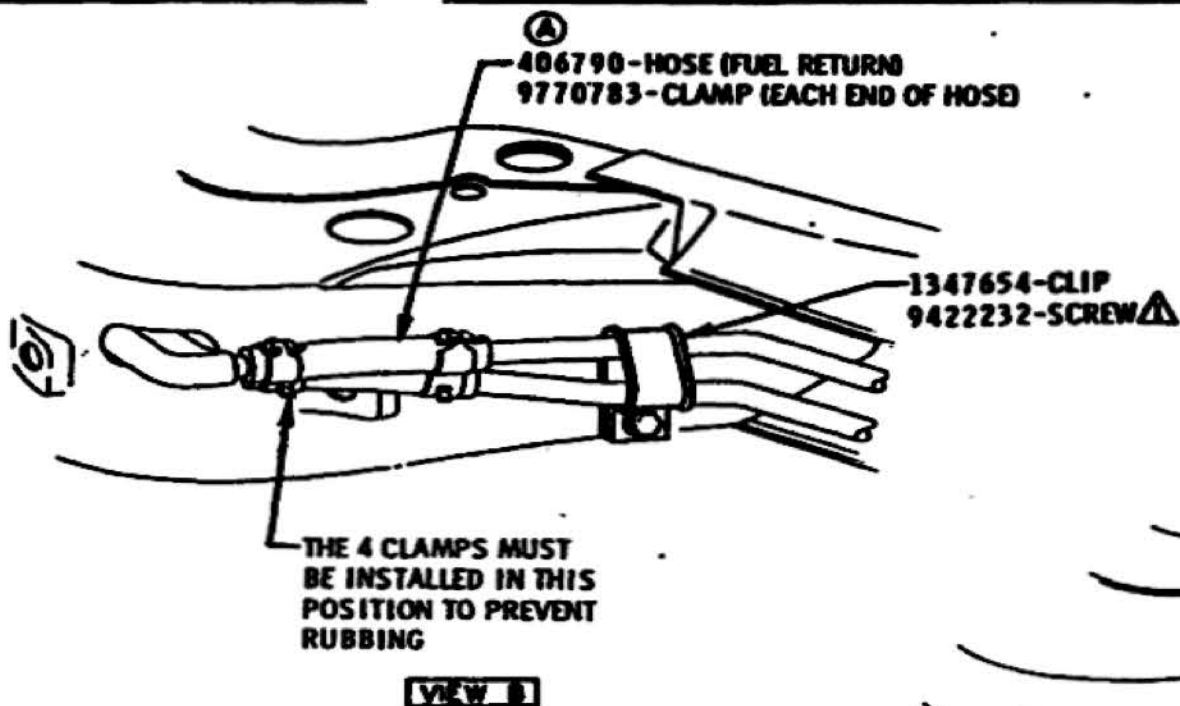
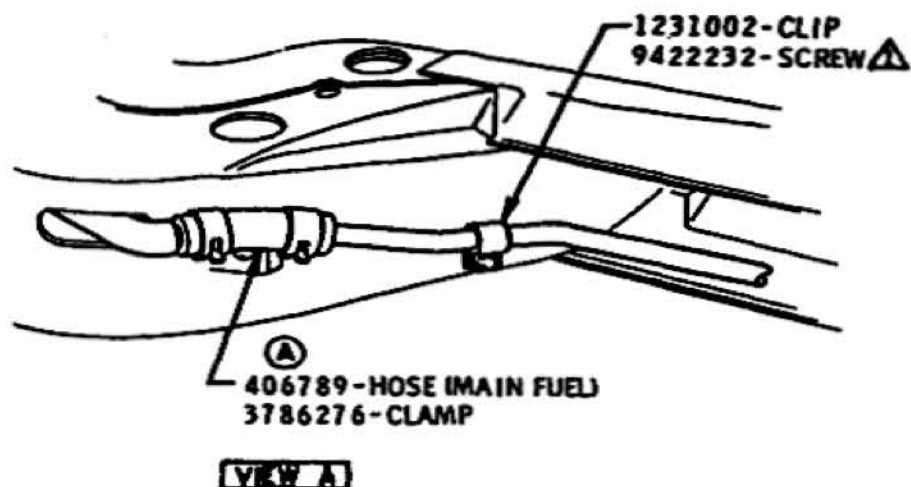
DRIVEN, SEATED  
NOT STRIPPED

TITLE		FUEL TANK STONE SHIELD (STATION WAGONS)		MANUAL NO.		PAGE	
DATE		OCT. 22, 1968		FIRST USED		1970	
DR. BY		BOYER		OLDSMOBILE PRODUCT		INFORMATION DEPT.	
CHECKED		[Signature]		REV.		8	
APPROV.		[Signature]		REV.		106	
DATE		7/9/67		REV.		A	
SYM		A		REV.		A	
REVISION		422032 NUT		REV.		404411	
DR. BY		J. [Signature]		REV.		A	
APPROV.		[Signature]		REV.		A	



⚠  
⚠  
⚠  
72-120 LB. IN.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE									
					FUEL SYSTEM STATION WAGON				
DATE	BY	CHKD	APPV.	REV.	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
						1970		B	107
DATE	SYM	REVISION	DR.	CL.	APPV.	REV.	SERIES	PART NO.	
						8B	A	404411	

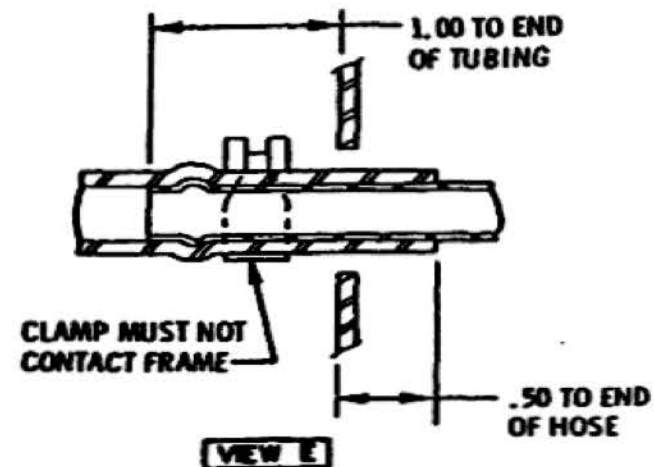


FUEL & FUEL RETURN LINE REPAIR PROCEDURE

1. CUT OUT DAMAGED PORTION OF FUEL LINE.
2. CUT A PIECE OF HOSE 4' LONGER THAN PORTION OF LINE REMOVED. HOSES 574443 (FUEL) AND 381443 (FUEL RETURN) MAY BE USED.
3. SLIDE HOSE 2' ONTO EACH PORTION OF FUEL PIPE.
4. CLAMP HOSE TO EACH PIPE ON EACH SIDE OF REPAIR. USE CLAMP 3786276 ON FUEL LINES AND CLAMP 9770783 ON FUEL RETURN LINES.

BLOW OUT A MAIN FUEL LINE, WITH FILTERED AIR USING A MINIMUM OF 30 P.S.I. AIR PRESSURE TO INSURE REMOVAL OF ANY FOREIGN MATERIAL AS FOLLOWS:

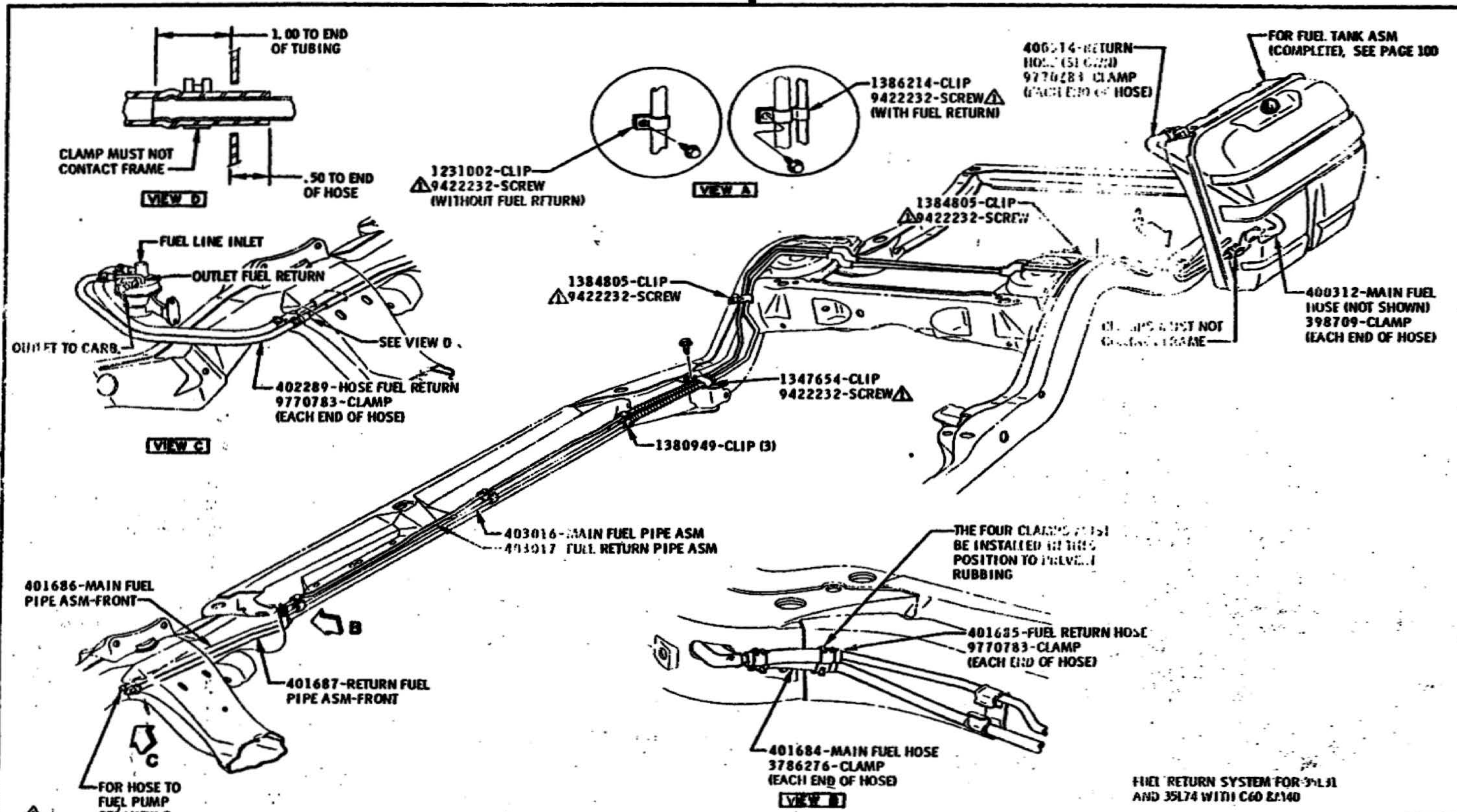
1. MAIN FUEL PIPE AFTER ASSEMBLED TO THE FRAME.
2. FRONT AND REAR MAIN FUEL HOSES EITHER AFTER ASSEMBLED TO MAIN PIPE OR IMMEDIATELY PRIOR TO INSTALLATION, PREFERABLY AFTER ASSEMBLY TO PIPE.



▲ MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND 72 LB. IN. MINIMUM.

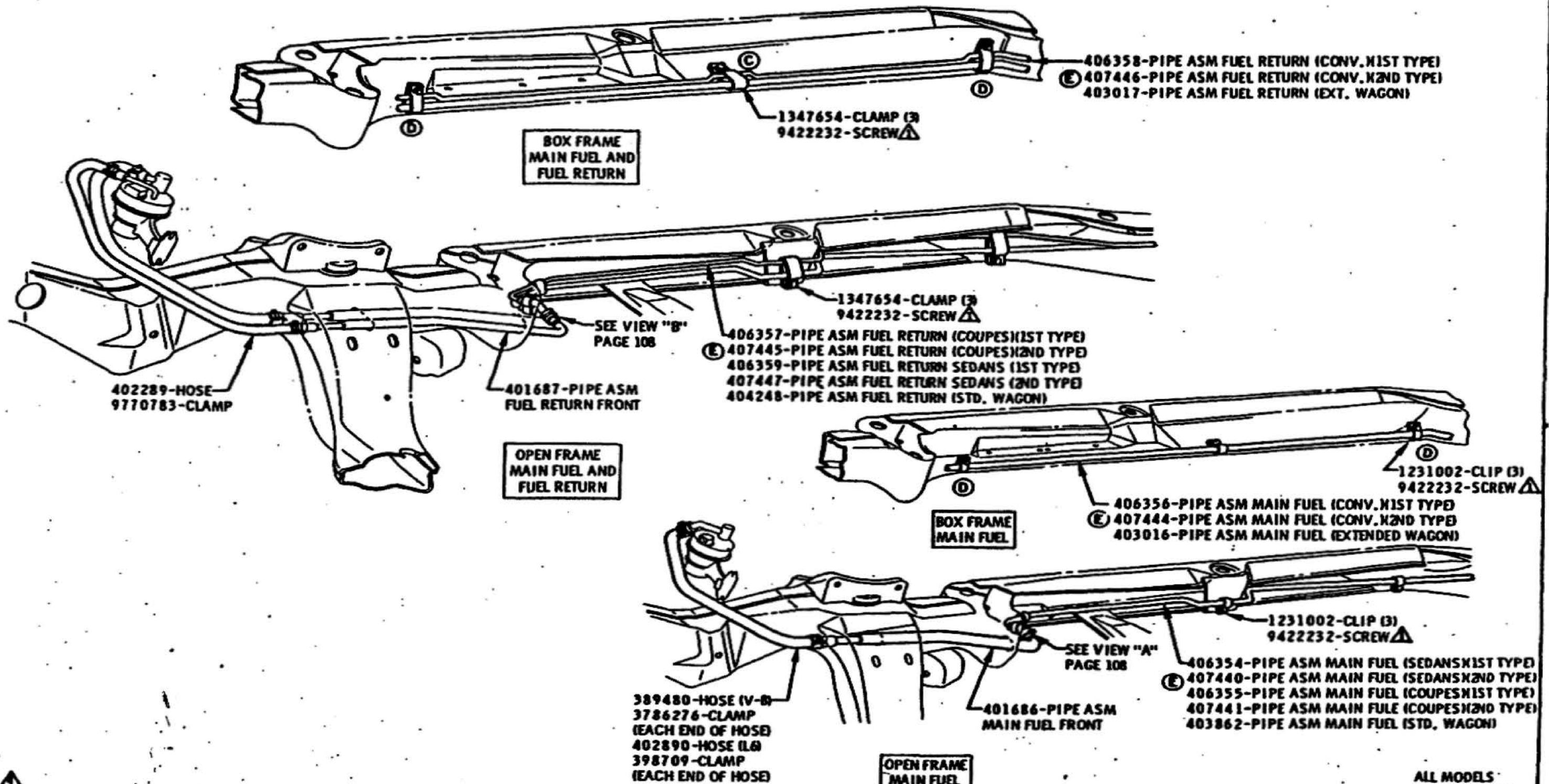
▲ FULLY SEATED AND PROVED

DATE		SYN		REVISION		DR. CK.		APPR.		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE		PART NO.	
7-10-68	B	MINIMUM TORQUE ADDED								1970	FUEL SYSTEM-HOSE & PIPE CONNECTIONS		8		108		04411		
5-1-68	A2	HOSE CLAMPS REVISED											A						



▲ 72-120 LB. IN.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED

DATE		SYM		REVISION		DIL. CL.		TITLE		FUEL LINE AND FUEL RETURN LINE EXTENDED WAGC:1		FIRST USED		OLDSMOBILE PRODUCT INFORMATION BOARD		MANUAL SEC.		PAGE	
								DATE		DEC. 11, 1968		1970				8		10	
								DR. BY		BOYER		REF. 8B		REVISE		A		404411	
								CHECKED		FIVE		35L31							
								APPR.		J. R. [Signature]									
								APPR.		R. [Signature]									



▲▲▲  
▲ MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND NOT STOPPED  
▲▲▲  
▲ MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND NOT STOPPED  
▲▲▲

ALL MODELS WITHOUT 35NA9

DATE	SYN	REVISION	DR	CL	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
4-12-68	E	2ND TYPE ADDED	J13	ED		FUEL PIPING - SIDE RAIL	1970		8	110
7-4-68	D	CLIP ROTATED	J13	ED						
7-11-68	C	FUEL PIPING REVISED	J13	ED						
7-10-68	B	MIN. TORQUE ADDED	J13	ED						
7-10-68	A	FIG. NOTE REMOVED	J13	ED						

04411

MODEL	GROUP	CROSS OVER PIPE ASM	EXHAUST PIPE		MUFFLER ASM		MUFFLER TO RESONATOR PIPE	RESONATOR ASM	TAIL PIPE	
			R.H.	L.H.	R.H.	L.H.			R.H.	L.H.
31 - 3500 L-6	8C	NONE	NONE	399590 (COUPE & CONV.) 399589 (EXC. COUPE & CONV.)	NONE	138455 1382345 (OPT.) 1382344 (OPT.) 400024 (OPT.)	NONE	NONE	NONE	405839 (EXC. S.W.) 400663 (S.W.)
4800 V-8	35L31 400 CU. IN.	399592	400026 (INTERMEDIATE)	NONE	1386484 1386485 (OPT.)	NONE	403879	403881	NONE	NONE
	8C 350 CU. IN.		399591	NONE				NONE	403880	NONE
32 - 3600 V-8 350 CU. IN.	8C	382629	399546 (COUPE & CONV.) 396658 (EXC. COUPE & CONV.)	NONE	1382346 1382347 (OPT.) 1384456 (OPT.)	NONE	NONE	NONE	404724 (EXC. S.W.) 1387769 (S.W.)	NONE
4200	8C			NONE						NONE
4400 V-8 400 CU. IN.	8C	NONE	399547	402618	NONE	NONE	NONE	NONE	404664	404665
32 - 3600 350 CU. IN.	35N10	NONE								403413 (COUPE & CONV.) 403411 (EXC. COUPE & CONV.)
4200 350 CU. IN.	35N10	NONE	399547 (COUP & CONV) 401155 (EXC. COUPE & CONV)	1382346 1382347 (OPT) 1384456 (OPT)	NONE	NONE	NONE	NONE	NONE	
4200 400 CU. IN.	35L31	NONE								

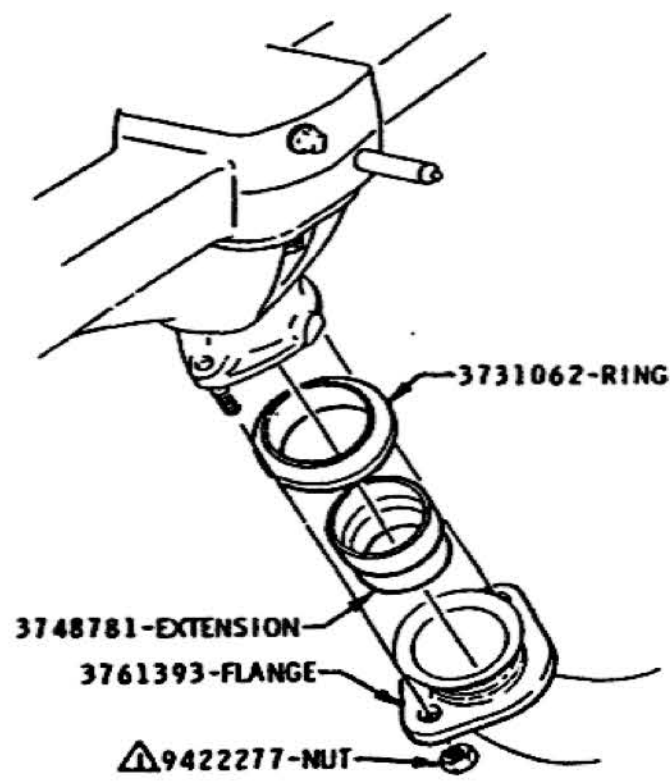


FIGURE 1 (L-6 ENGINE)

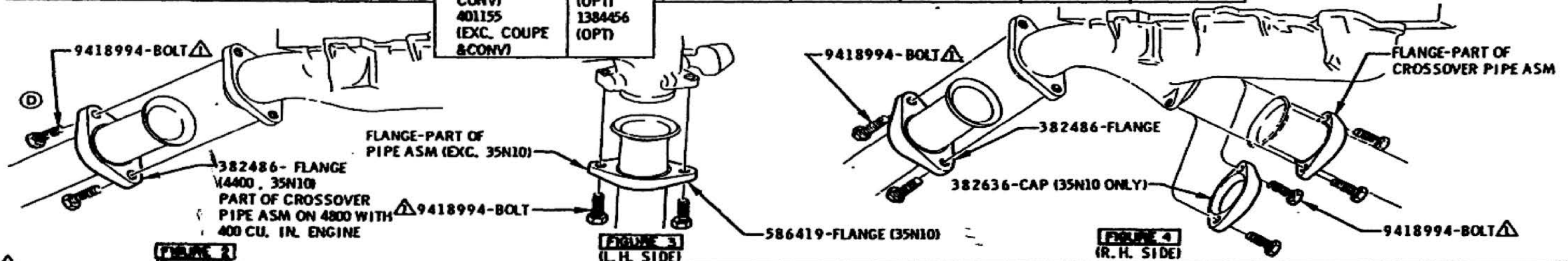


FIGURE 2 (R.H. SIDE)

FIGURE 3 (L.H. SIDE)

FIGURE 4 (R.H. SIDE)

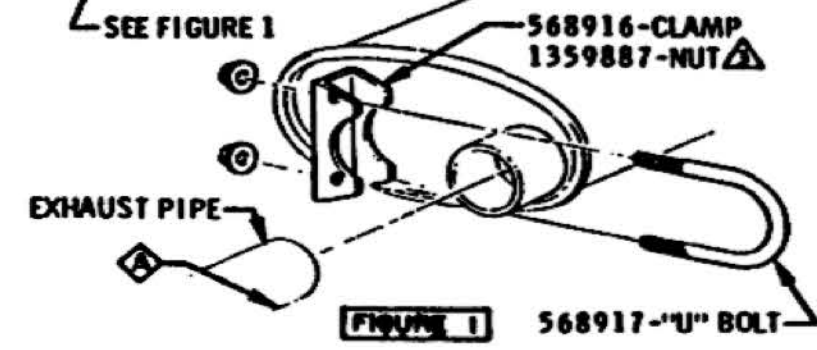
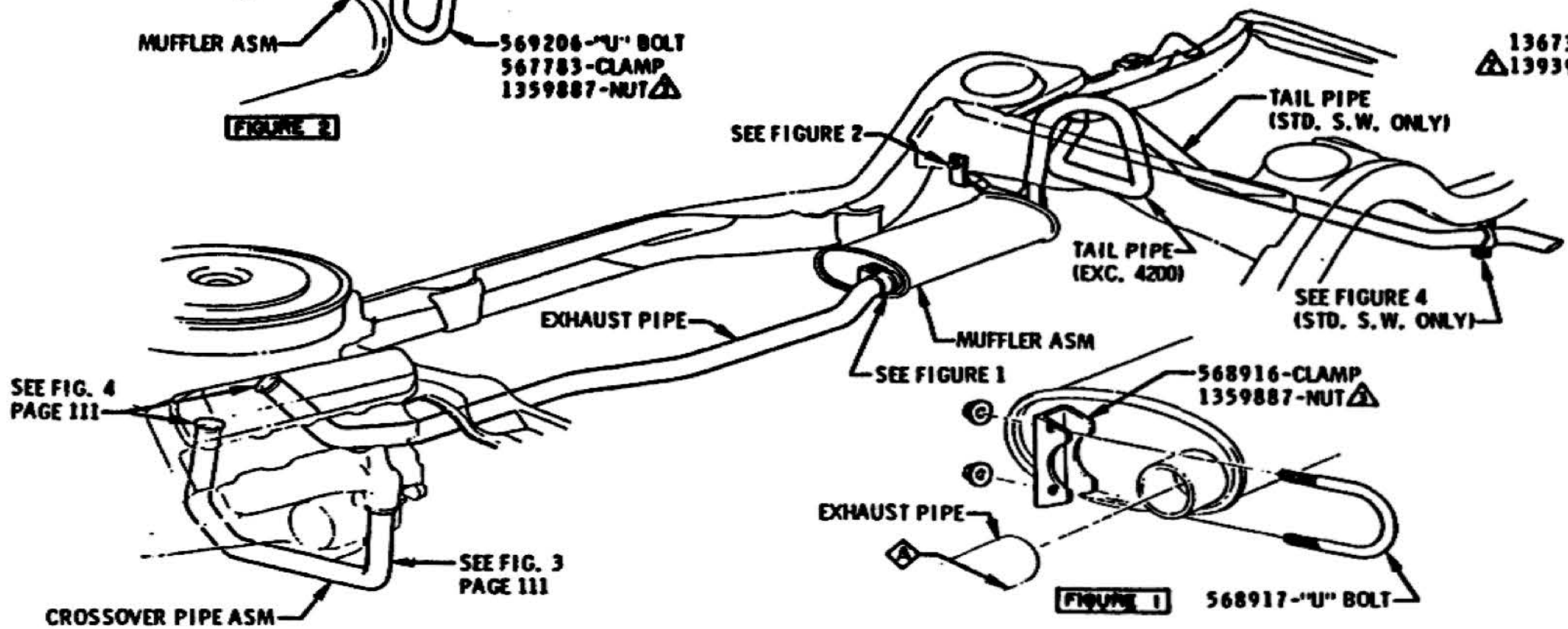
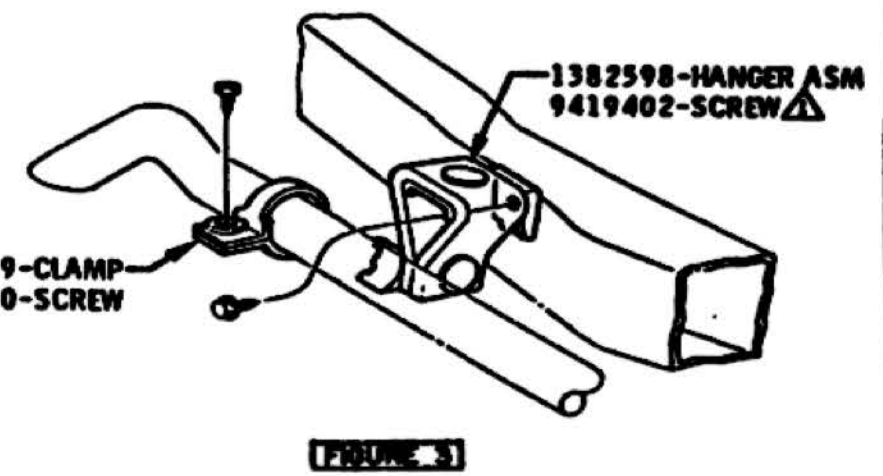
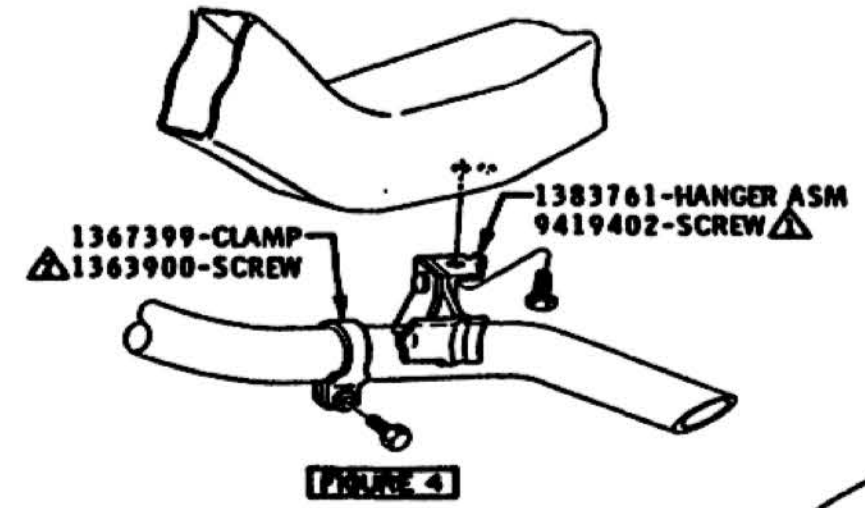
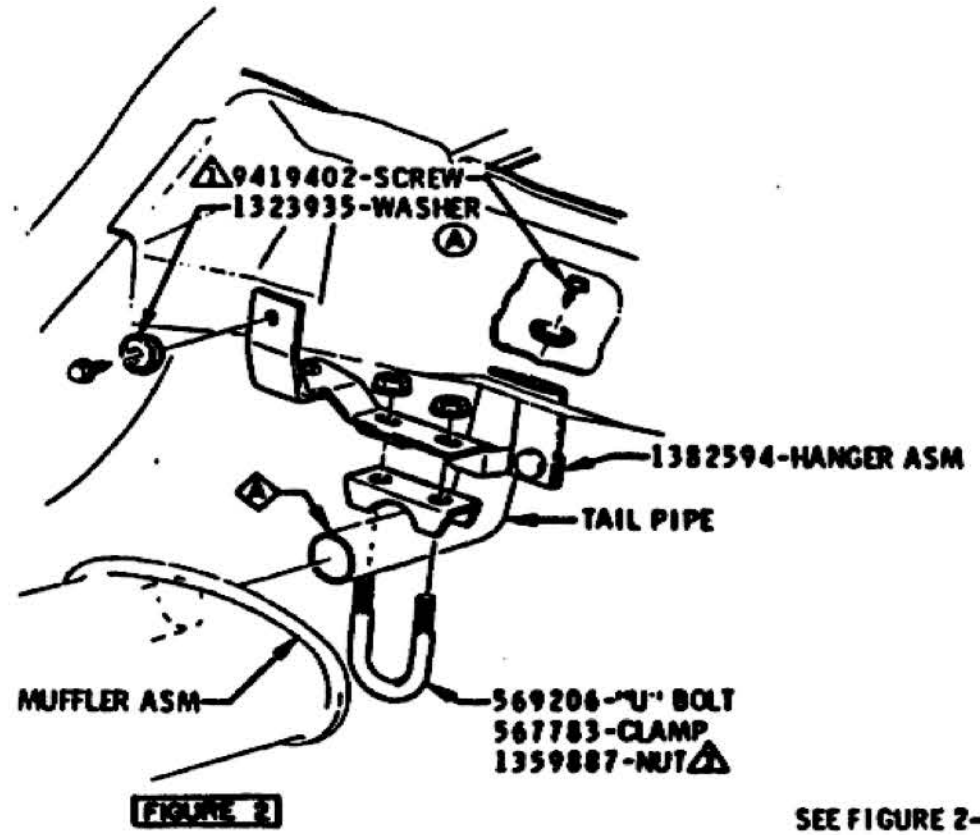
▲ 10-18 LB. FT.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

EXHAUST SYSTEM USAGE CHART AND MANIFOLD FLANGES			
3-17-69	D	ARROW RELOCATED	J13
2-14-69	C	CHART REVISED	J13
2-14-69	B	35L31 ADDED	J13
2-22-69	A	WAS 1384482 TAIL PIPE	J13
DATE	SYM	REVISION	DR. CL.

TITLE	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
EXHAUST SYSTEM USAGE CHART AND MANIFOLD FLANGES	OCT. 2, 1968	1970		8	111
DR. BY BOYER	CHECKED	APPR.	REP.	SERIES	PART NO.
			8c	A	404411







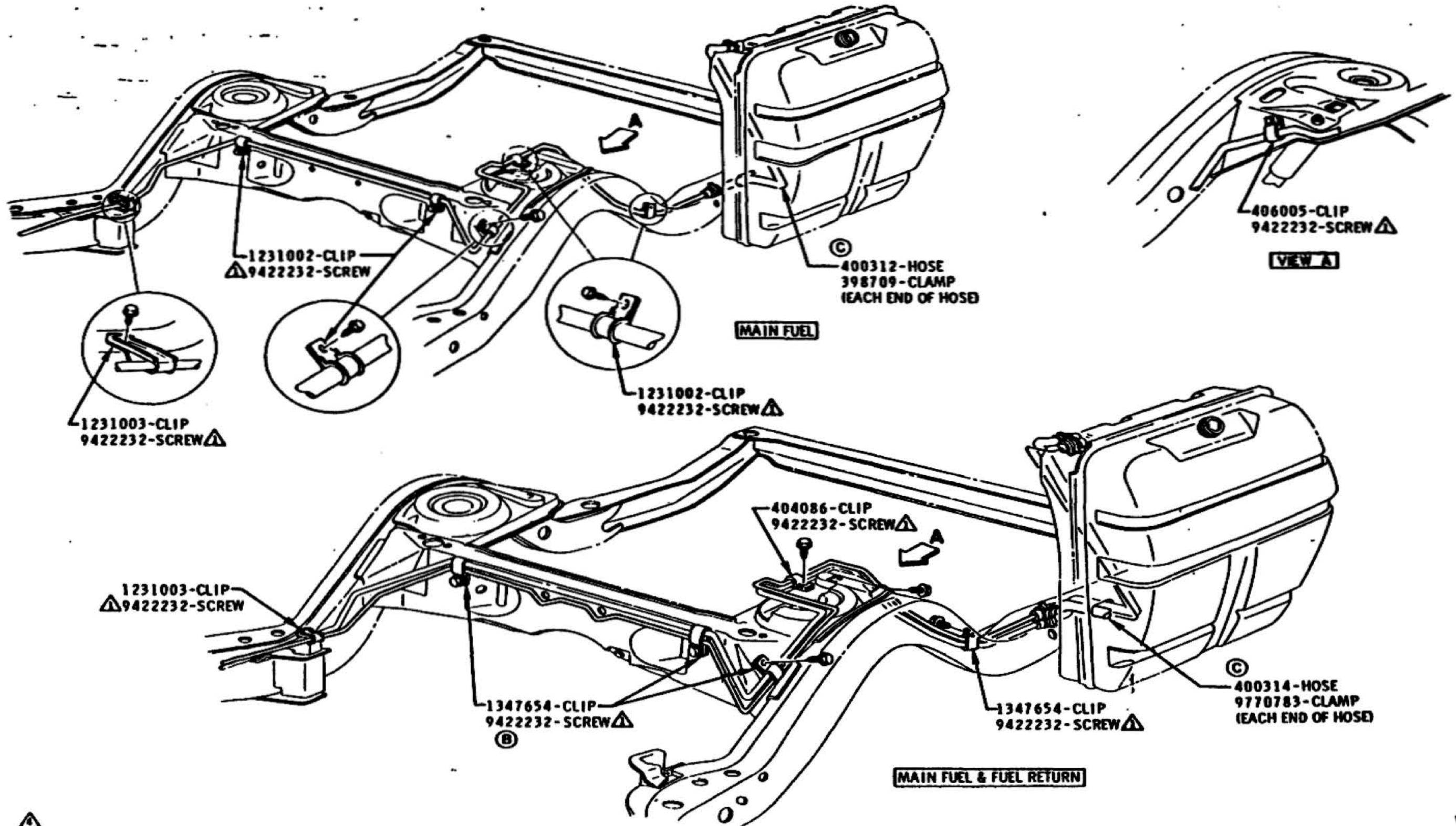
- ▲ 132-180 LB. IN.
- ▲ 108-144 LB. IN.
- ▲ 72-96 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

SEAL AREAS INDICATED WITH 998502D SEALER

FOR EXHAUST SYSTEM PART NUMBERS, EXC. FASTENINGS, SEE CHART PAGE 111

(32-36-4200 35N10)

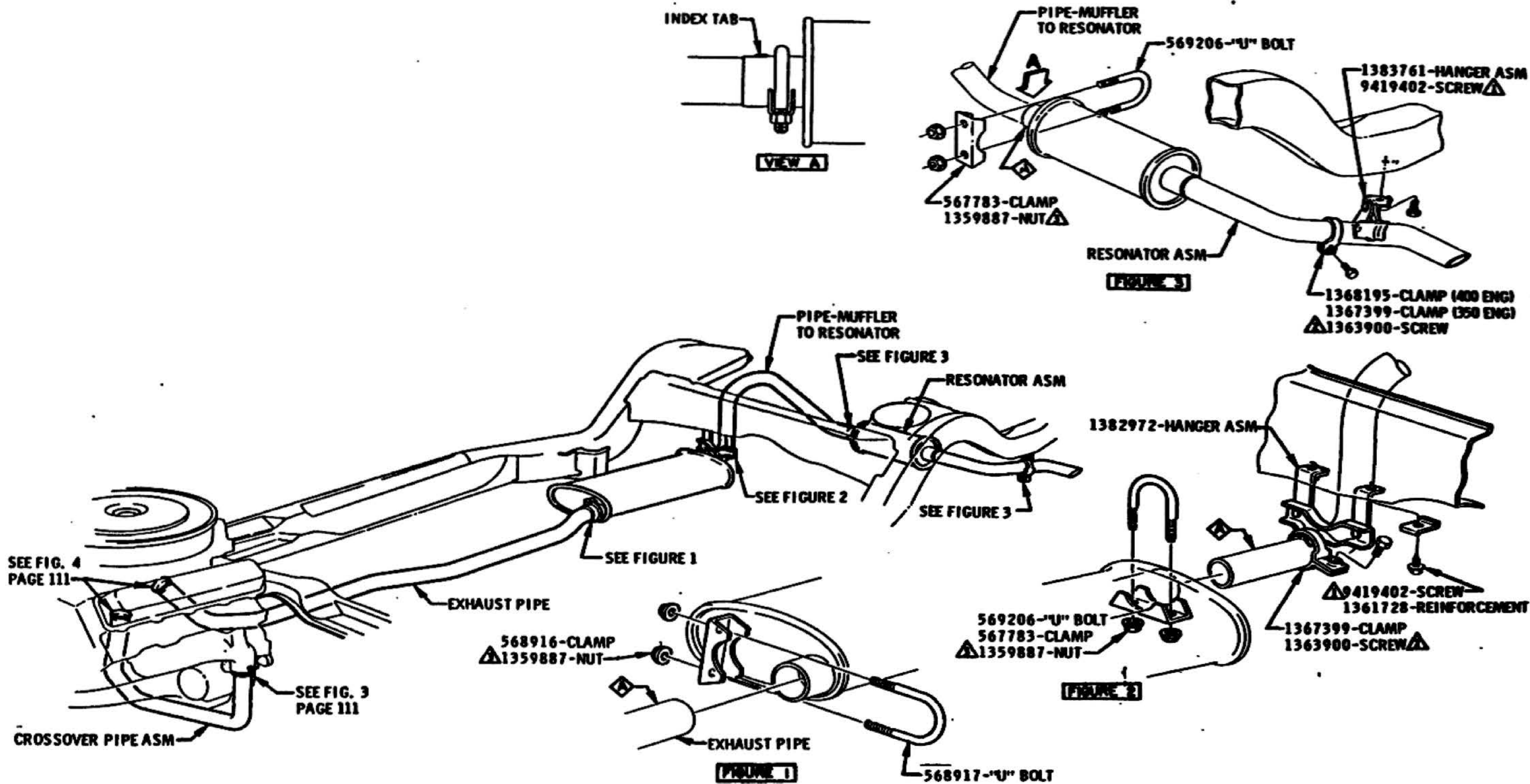
				TITLE		V-8 EXHAUST SYSTEM			
				DATE	OCT. 7, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
				DR. BY	BOYER			8	113
				CHECKED	<i>T. J. ...</i>	REF. 55N10	SERIES	A	PART NO.
				DATE	2-7-69	APPR.	BC	404411	
DATE	SYM	REVISION	DR.	CL.	APPR.				



- ▲▲▲ (A) MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND 72 LB. IN. MINIMUM.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

WITHOUT 35NA9

DATE		SYN		REVISION		DR. CL.		APPR.		TITLE				
4-8-70	CL			PART NUMBERS ADDED						FUEL PIPING - REAR CROSSMEMBER - SW (EXC 4000)				
3-12-70	B			9422232 WAS 9422202						DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
7-10-69	A			MINIMUM TORQUE ADDED						APR. 1969	1970		8	114
										APPR.	SERIES	PART NO.		
										RE.Ford	A	404411		



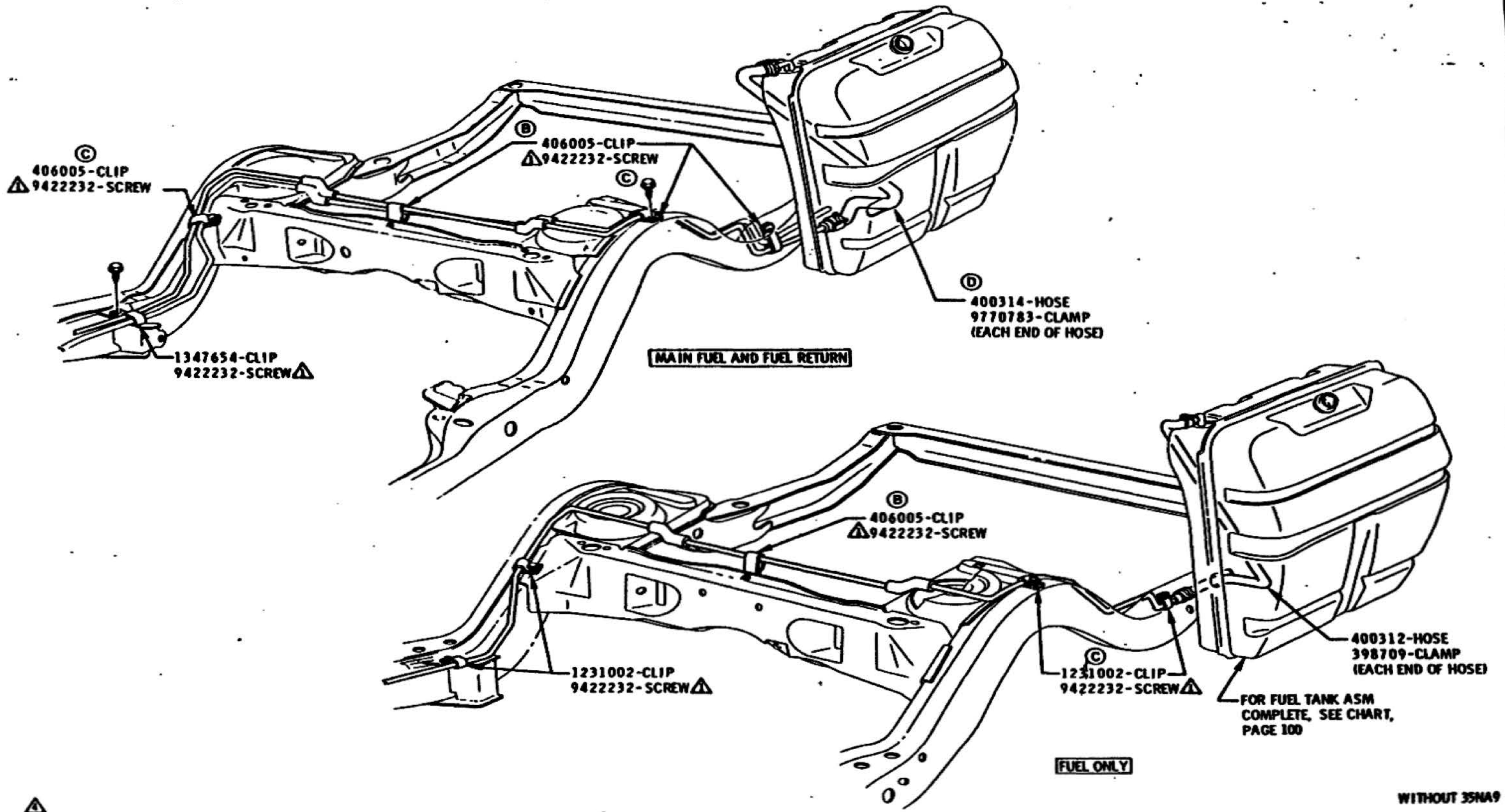
SEAL AREAS INDICATED WITH 9985020 SEALER

FOR EXHAUST SYSTEM PART NUMBER EXCEPT FASTENINGS, SEE CHART PAGE 111

- ▲ 132-180 LB. IN.
- ▲ 108-144 LB. IN.
- ▲ 72-96 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE				V-8 EXHAUST SYSTEM			
DATE	BY	CHKD	APPD	FIG. USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
10-7-68	BOYER			1970		8	115
DATE	SYN	REVISION	DR. CK.	APPR.	REV.	GEN.	PART NO.
					bc	A	404411

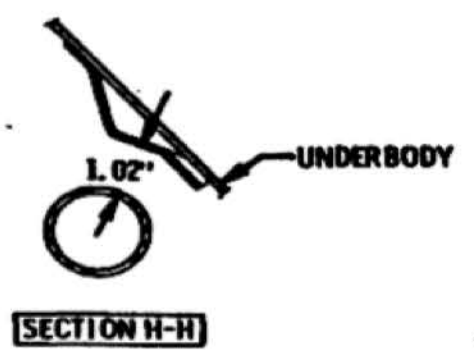
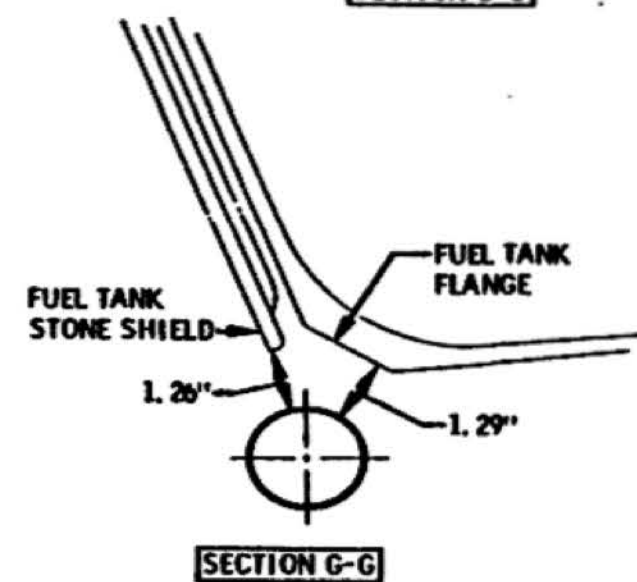
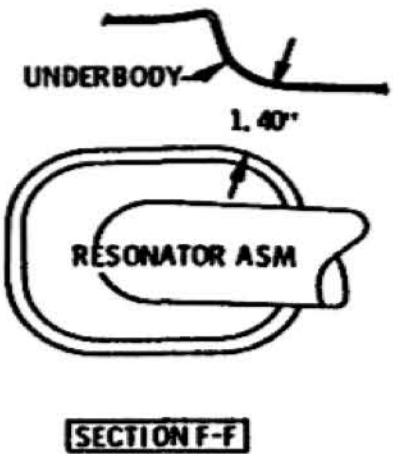
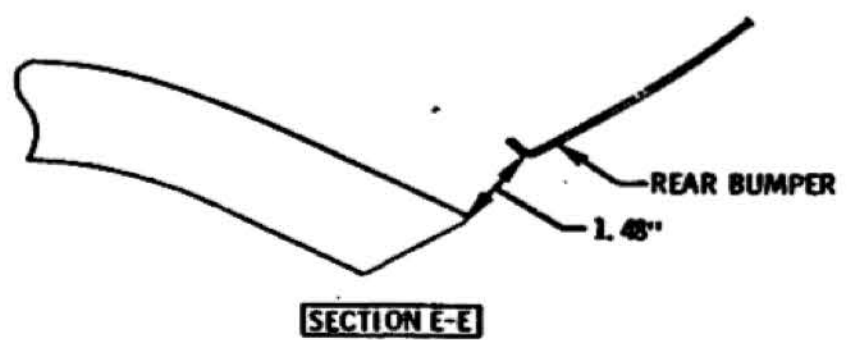
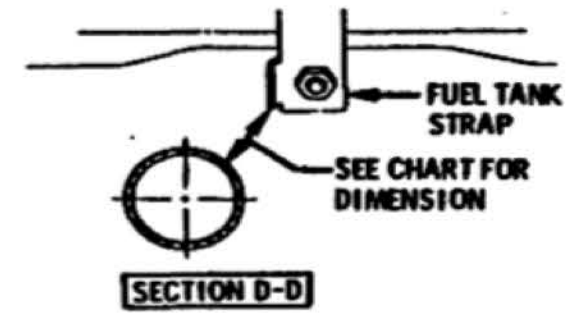
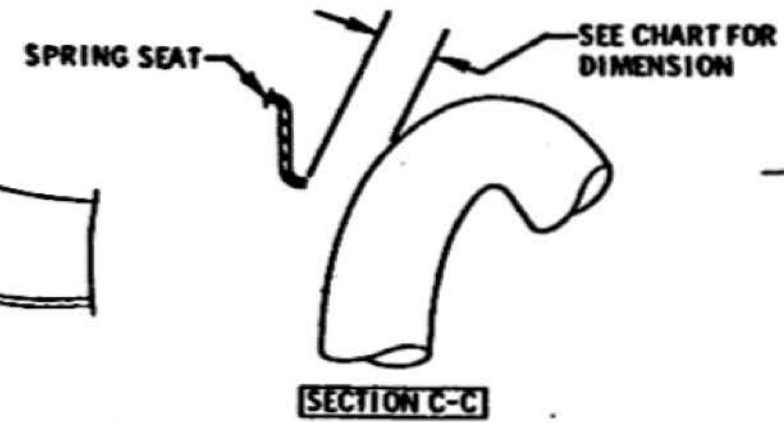
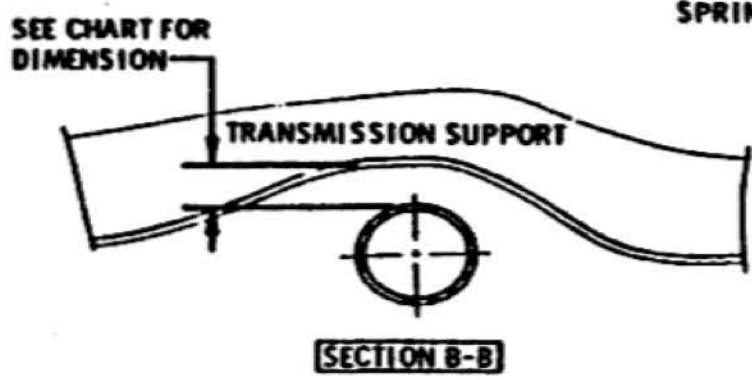
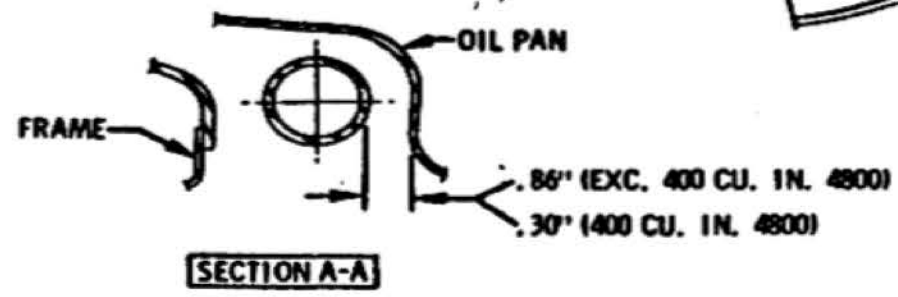
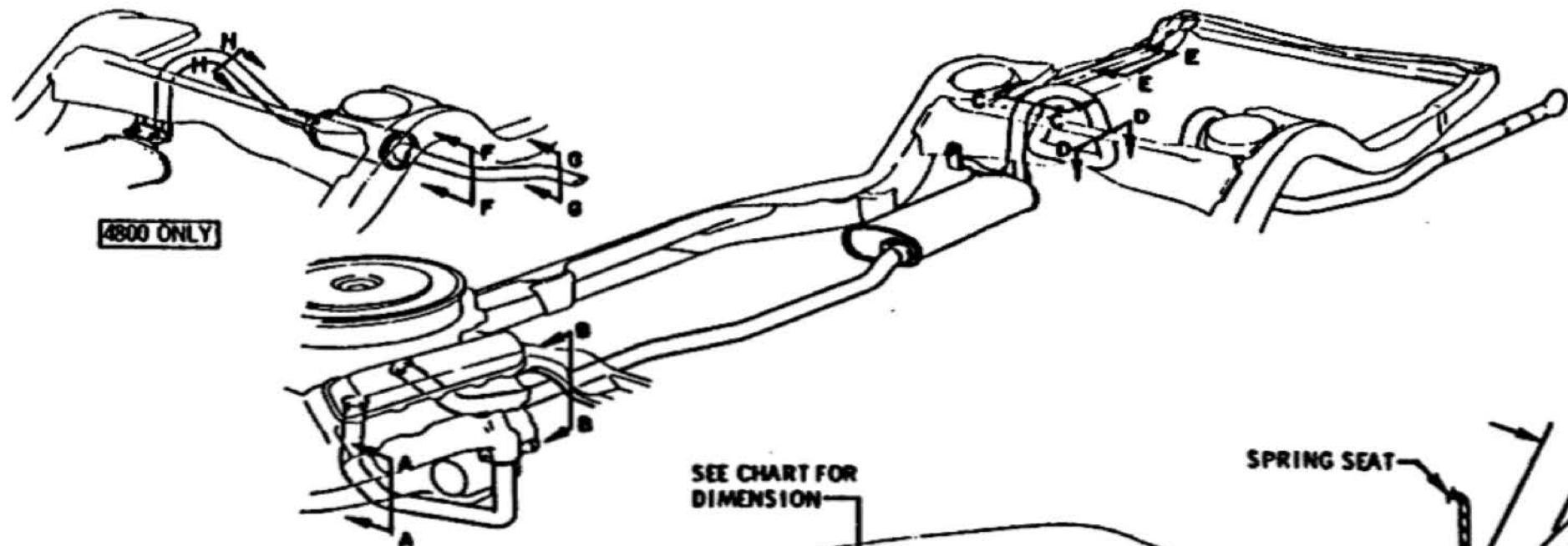
(4800)



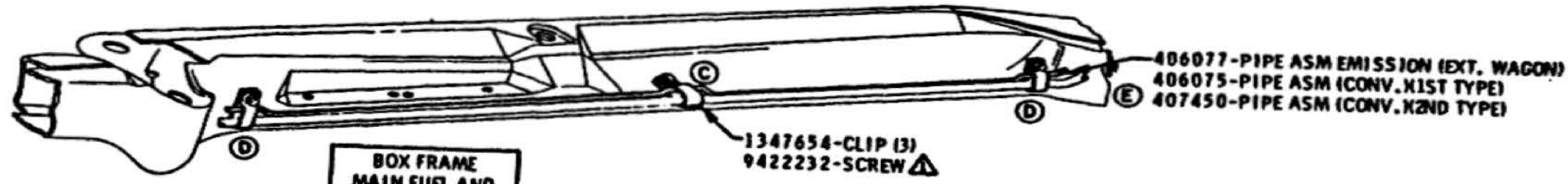
▲▲▲  
▲ MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND 72 LB. IN. MINIMUM.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYM	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
1-8-70	D		PART NUMBERS ADDED				FUEL PIPING-REAR CROSS MEMBER -4800	1970		8	116
1-8-70	C		CLIP REVISED				DATE APR. 9, 1969 DR. BY JOYER				
1-8-70	B		CLIP ADDED				CHECKED APPR. R. E. Ford				
7-10-69	A		MINIMUM TORQUE ADDED							A	404411

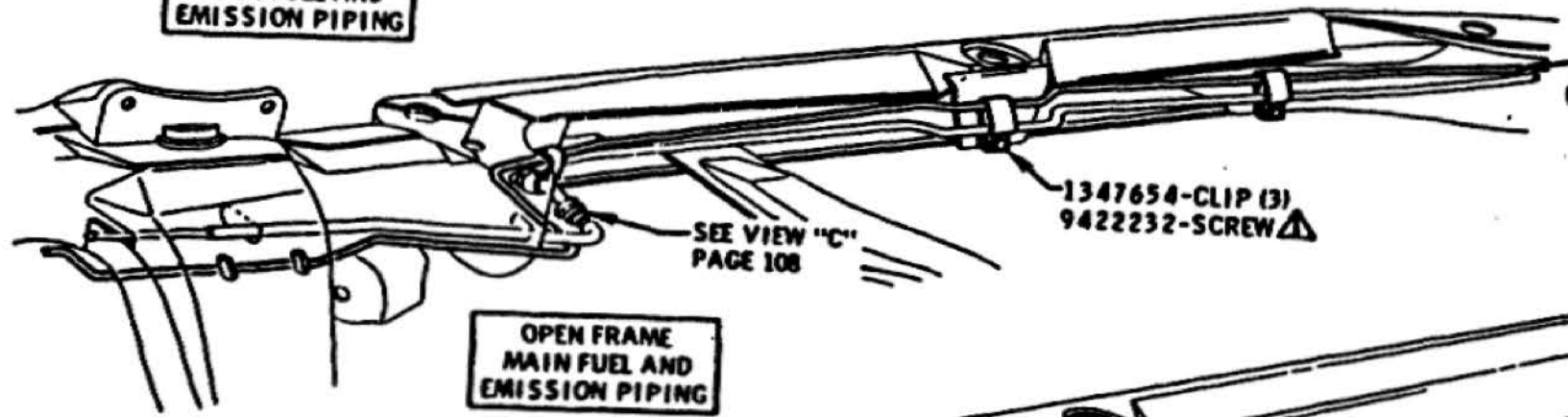
ENGINE	SECTION B-B		SECTION C-C		SECTION D-D	
	R. H.	L. H.	R. H.	L. H.	R. H.	L. H.
L-6	--	.80"	--	1.34"	--	1.48"
350 V-8 EXC. S. W.	.82"	.68"	1.20"	--	1.34"	--
350 V-8 S. W.	.82"	.68"	1.34"	--	--	--
400 V-8 (4400)	.70"	1.02"	1.06"	1.06"	1.56"	1.56"
350 V-8 (4800)	.68"	--	1.10"	--	--	--
400 V-8 (4800)	.61"	--	1.10"	--	--	--



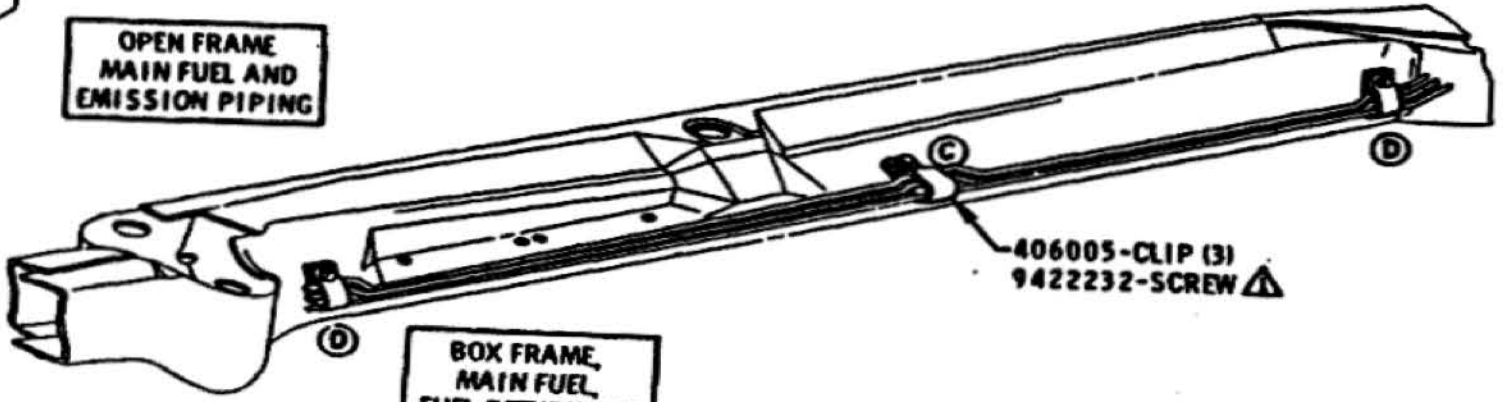
				TITLE: EXHAUST SYSTEM CLEARANCES			
				DATE: OCT. 2, 1968	FIRST USED: 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE: 8 117
				DR. BY: BOYER			
				CHECKED: [Signature]	REV. BC	SERIES A	PLANT NO. 404411
DATE	BY	REVISION	DR. CL.	APPR. [Signature]			



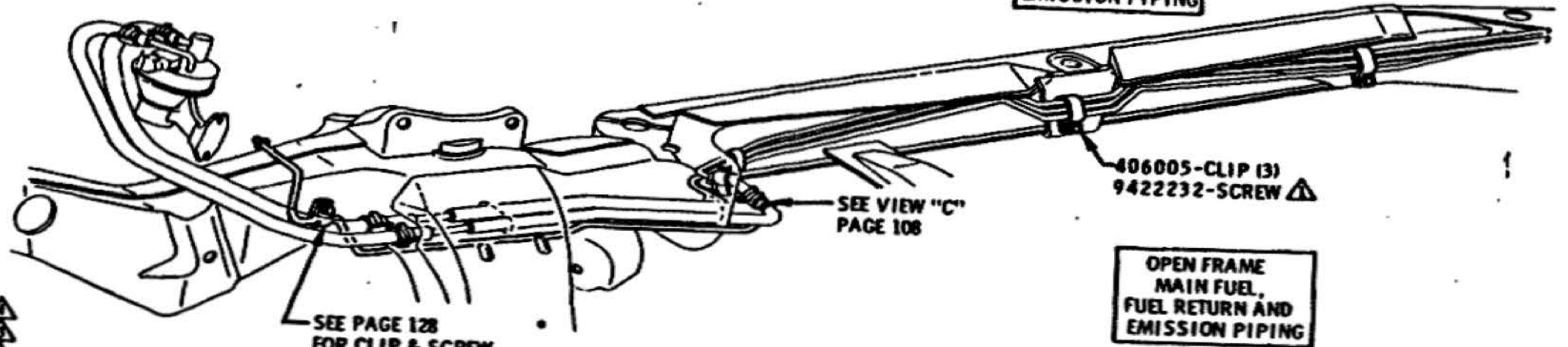
BOX FRAME  
MAIN FUEL AND  
EMISSION PIPING



OPEN FRAME  
MAIN FUEL AND  
EMISSION PIPING



BOX FRAME,  
MAIN FUEL,  
FUEL RETURN AND  
EMISSION PIPING



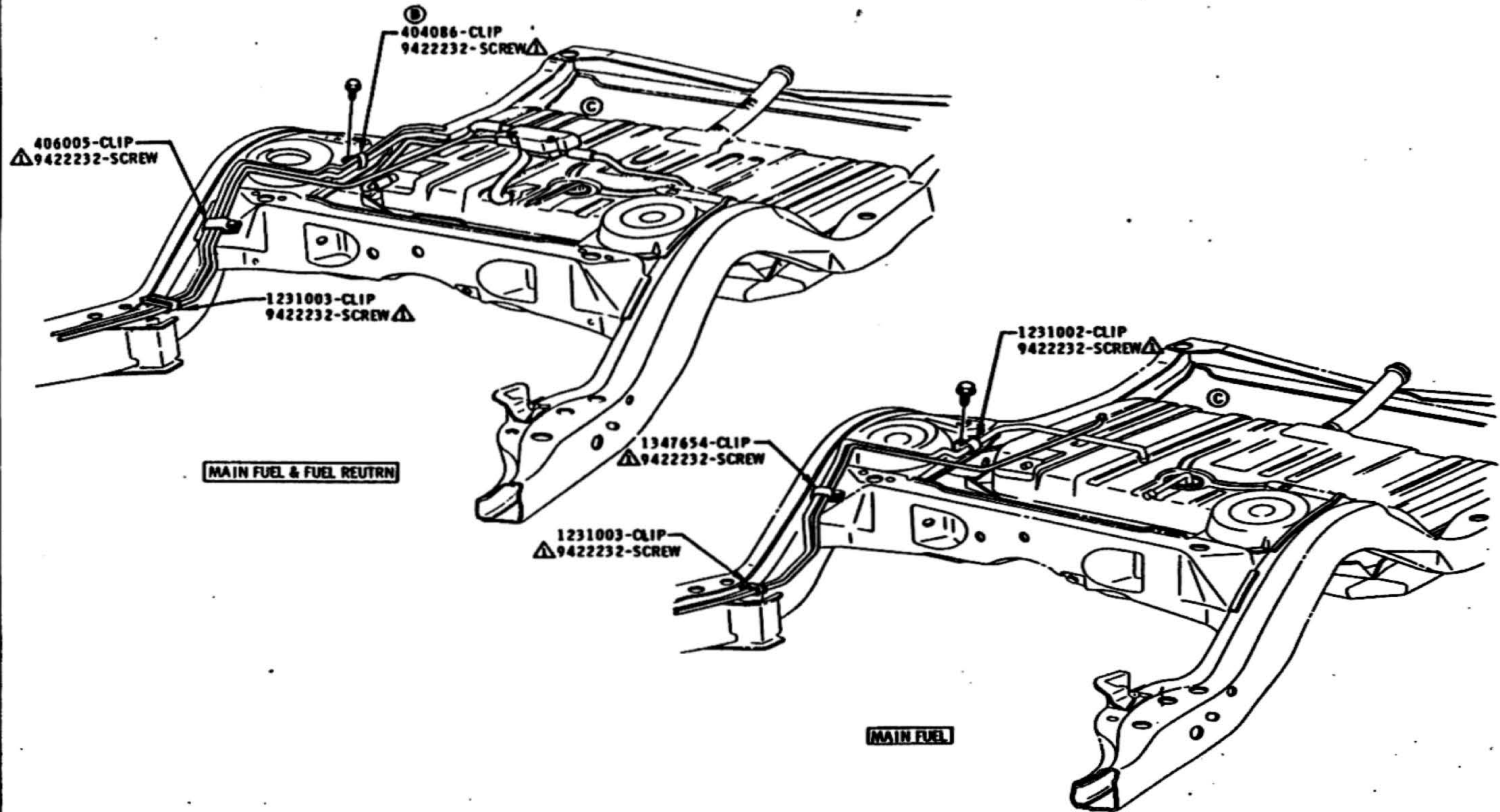
OPEN FRAME  
MAIN FUEL,  
FUEL RETURN AND  
EMISSION PIPING

SEE PAGE 128  
FOR CLIP & SCREW  
PART NO'S.

- ▲▲▲ MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND 72 LB. IN. MINIMUM.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

ALL MODELS  
WITH 35NA9

DATE	BY	REVISION	DR.	CR.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE	PART NO.
11-10-65	E2	2 ND TYPE PIPE ADDED	J13	DT		FUEL PIPING - SIDE RAIL	1970		8	118	404411
7-25-64	D4	CLIP ROTATED	J13	BT							
7-25-64	C2	FUEL LINES REVISED	J13	BT							
7-18-64	B	MINIMUM TORQUE ADDED	J13	BT							
7-10-65	A	FIG. 1 & NOTE REMOVED	J13	DT							

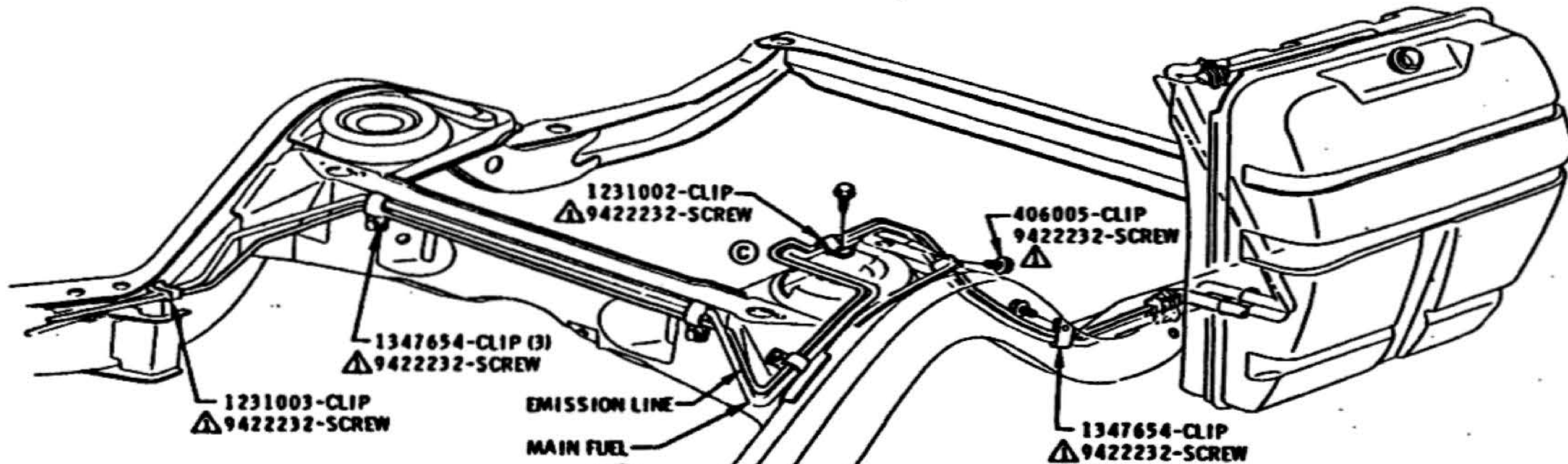


ALL MODELS  
WITH 35NA9

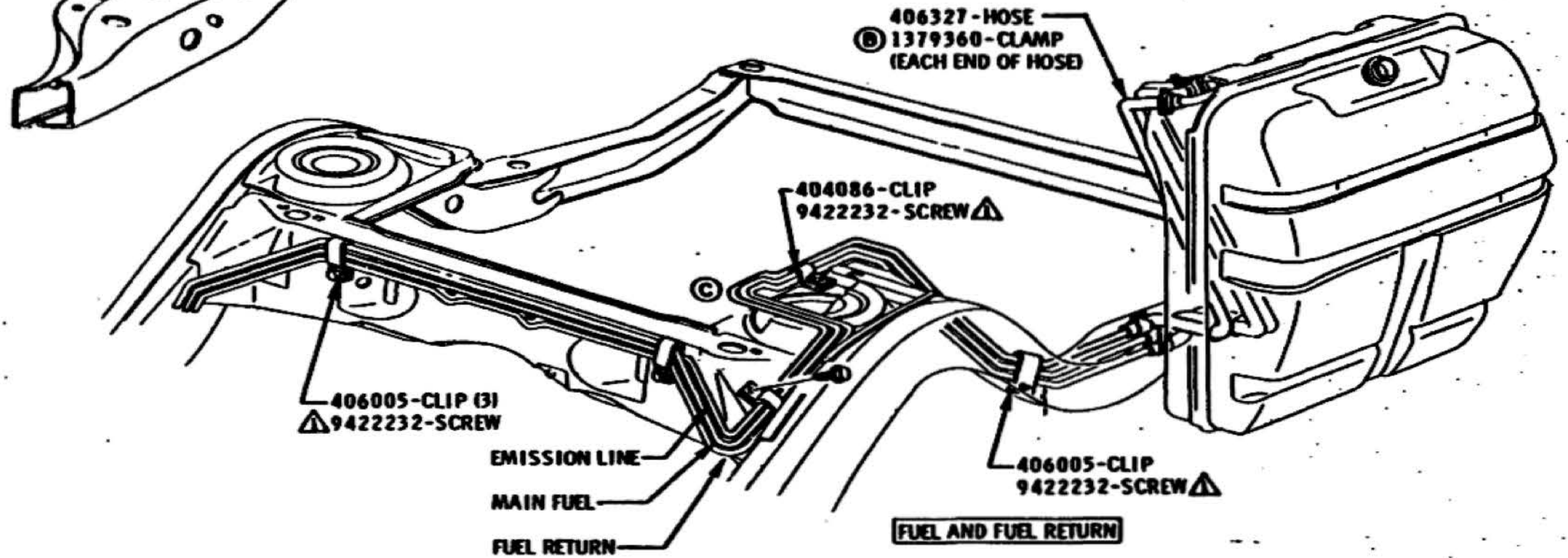
- ▲▲▲ (A) MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND 72 LB. IN. MINIMUM.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		SYM		REVISION		DR. CL.		APPR.		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		SERIAL NO.		PAGE	
12-28-68	C			INSULATOR REMOVED	J13	DT				APR 8 1969	1970				8		120		
2-25-69	B			WAS 404086 CLIP	J13	DT													
7-10-69	A			MINIMUM TORQUE ADDED	J13	ZP													
													A		404411				





**FUEL AND EMISSION**

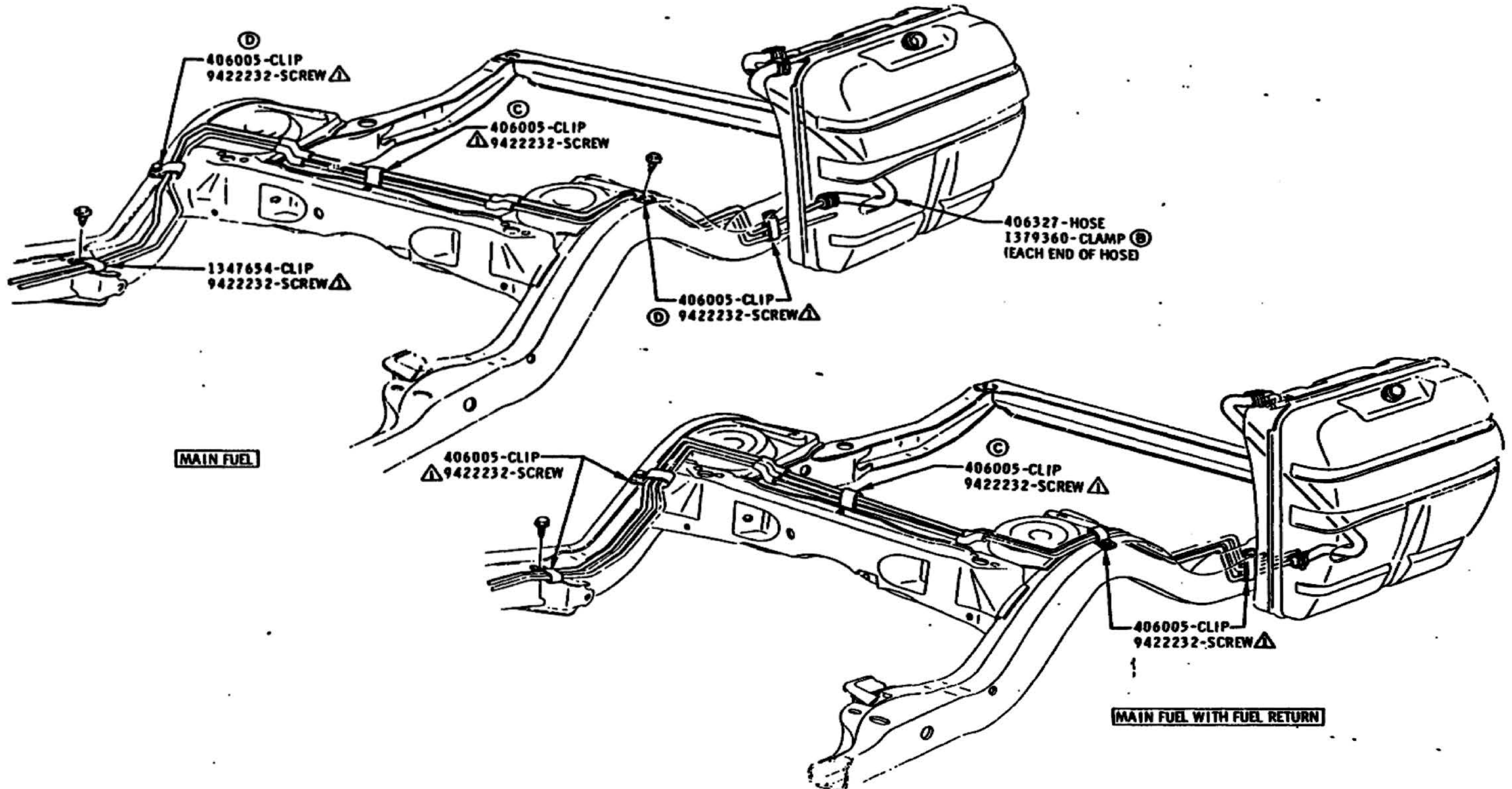


**FUEL AND FUEL RETURN**

- ▲ MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND 72 LB. IN. MINIMUM. (A)
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

WITH 35NA9

				TITLE		FUEL PIPING - REAR CROSSMEMBER - SWIEXC 4800			
DATE	BY	REVISION	DR.	CHK.	APPR.	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
11-14-66	C2	EMISSION LINE REVISED	J13	DP		1970		8	122
8-7-69	B	WAS 3786275 CLAMP	J13	DP					
7-10-69	A	MINIMUM TORQUE ADDED	J13	DP					
								A	404411



MAIN FUEL

MAIN FUEL WITH FUEL RETURN

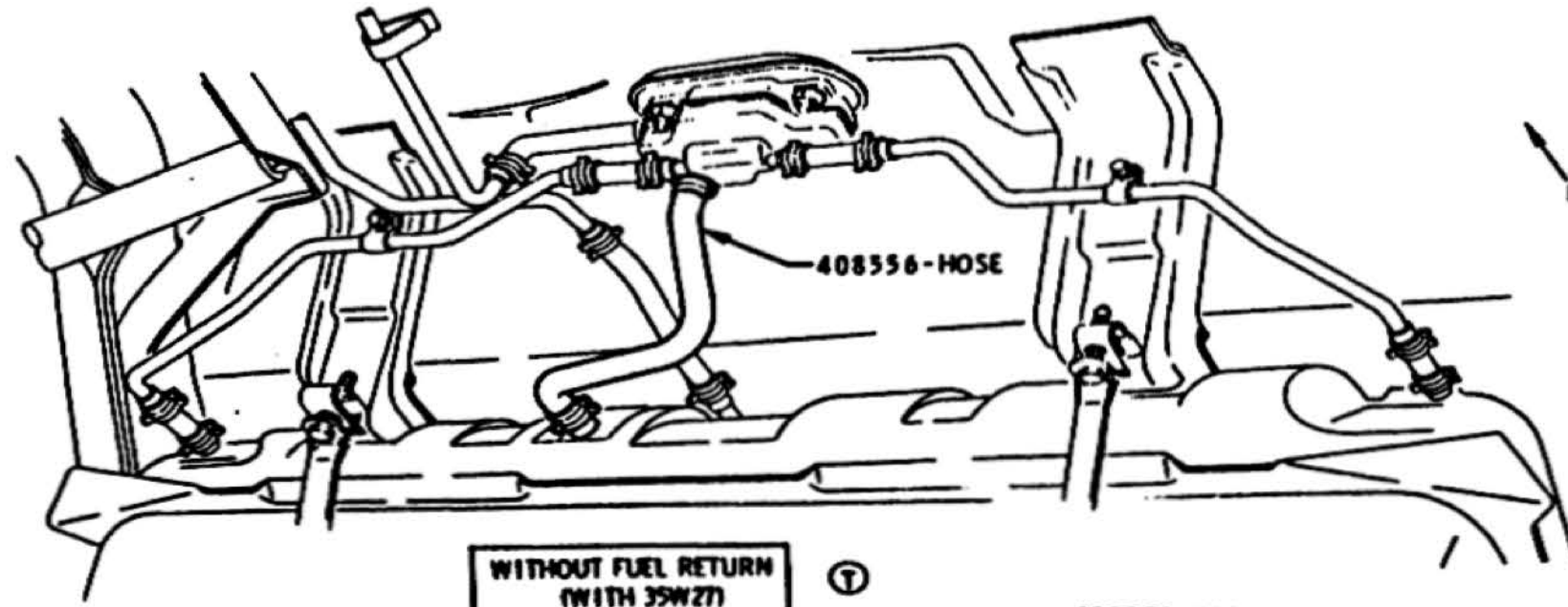
WITH 35NA9

- ▲▲▲ MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND 72 LB. IN. MINIMUM.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

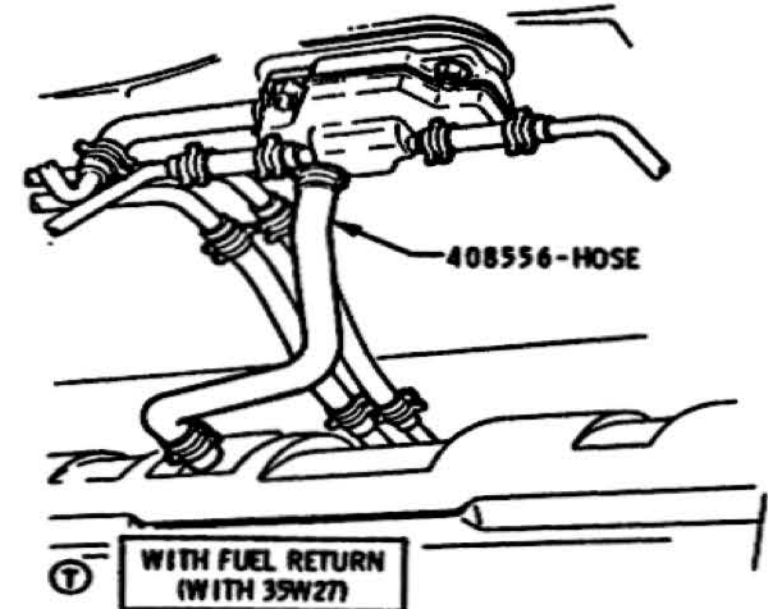
DATE		SYN	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL DEC.	PAGE
4-9-70	D <sub>2</sub>		CLIP REVISED	J13	DT		FUEL PIPING-REAR CROSSMEMBER -4800	1970		8	124
4-8-70	C <sub>2</sub>		CLIP ADDED	J13	DT						
9-7-69	B		WAS 3786275 CLAMP	J13	DT						
7-10-69	A		MINIMUM TORQUE ADDED	J13	DT						

A

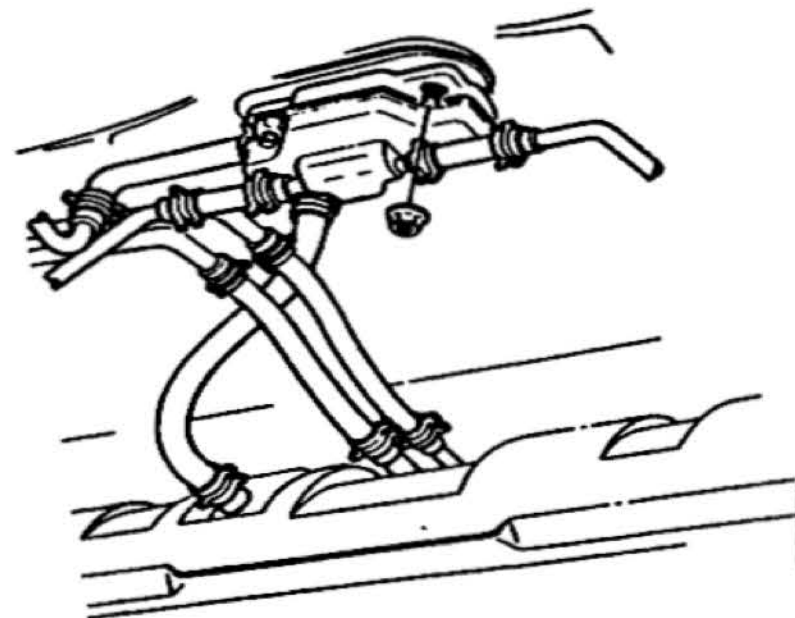
404411



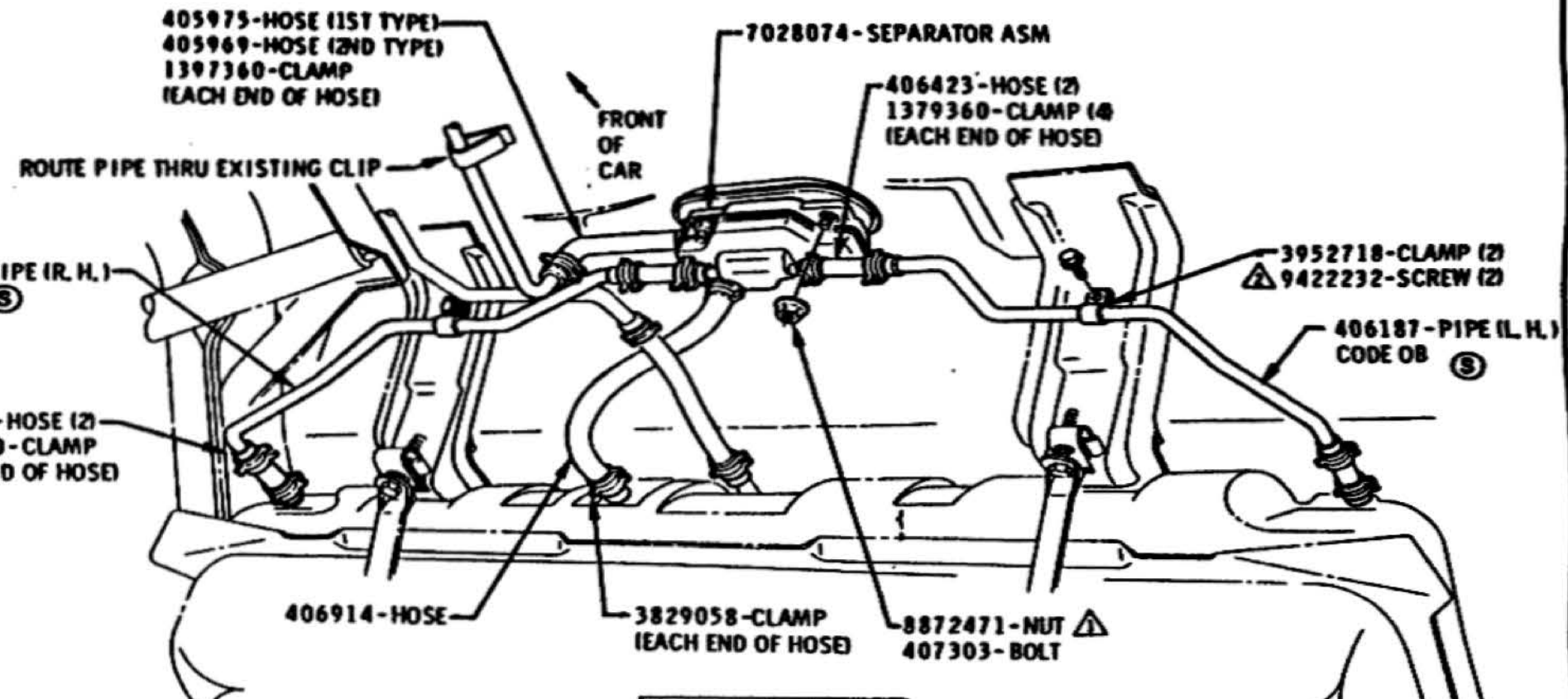
WITHOUT FUEL RETURN  
(WITH 35W27) (T)



WITH FUEL RETURN  
(WITH 35W27) (T)



WITH FUEL RETURN  
(EXC. 35W27)



WITHOUT FUEL RETURN  
(EXC. 35W27)

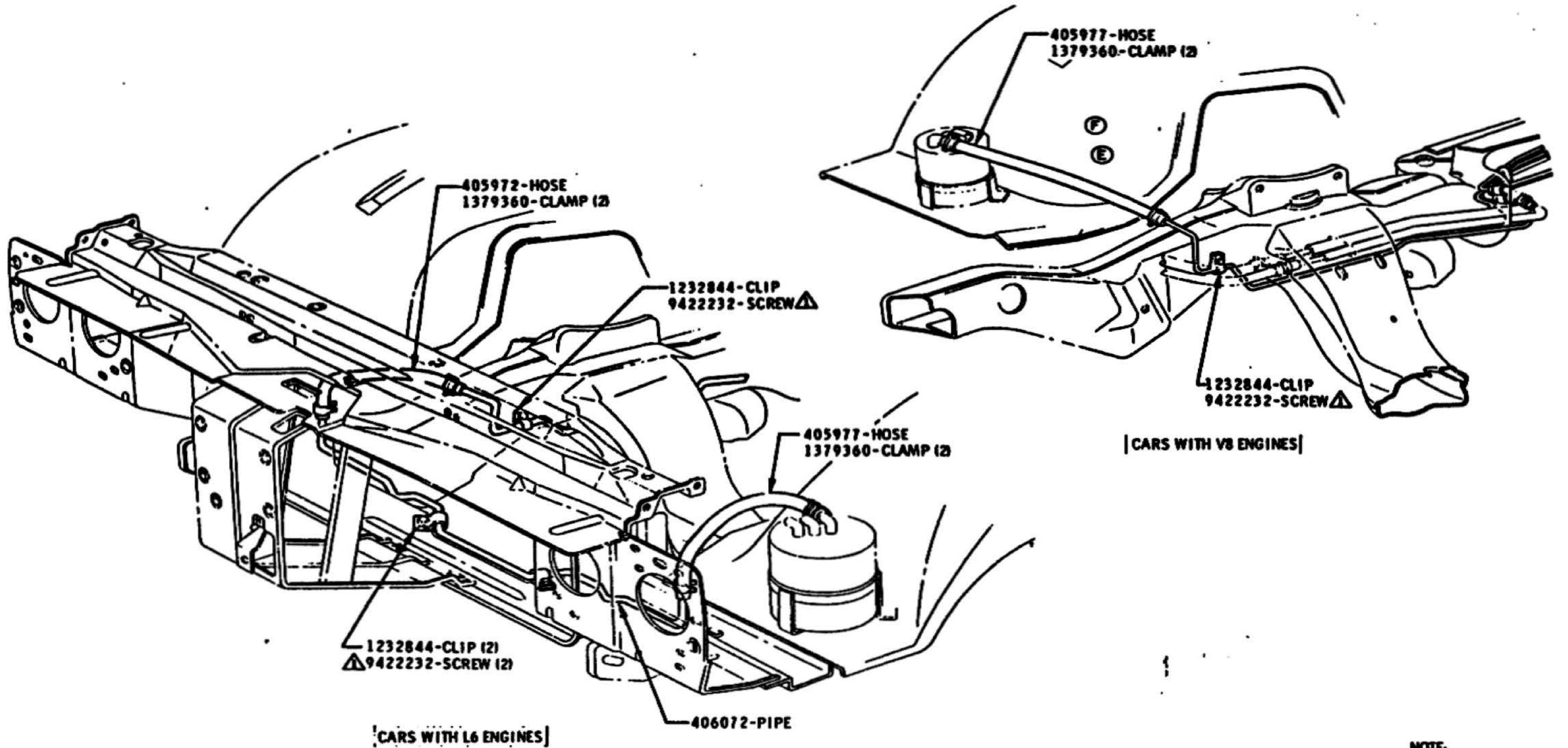
- 405975-HOSE (1ST TYPE)
- 405969-HOSE (2ND TYPE)
- 1397360-CLAMP (EACH END OF HOSE)
- 7028074-SEPARATOR ASM
- 406423-HOSE (2)
- 1379360-CLAMP (4) (EACH END OF HOSE)
- 3952718-CLAMP (2)
- 9422232-SCREW (2)
- 406187-PIPE (L.H.) CODE OB (S)
- 406186-PIPE (R.H.) CODE OA (S)
- 406423-HOSE (2)
- 1379360-CLAMP (EACH END OF HOSE)
- 406914-HOSE
- 3829058-CLAMP (EACH END OF HOSE)
- 8872471-NUT (A)
- 407303-BOLT

ROUTE PIPE THRU EXISTING CLIP

NOTE: ORIENT CLIP TABS SO THAT THEY CANNOT CONTACT ADJACENT HOSES

- MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED, AND 72 LB. IN. MINIMUM.
- 35-45 LB. IN.
- FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE				FUEL SYSTEM - SEPARATOR & PIPING (35NA9)(EXC. S.W.)			
DATE	BY	REVISION	DR.	CHK.	APPR.	FIRST USED	1970
3-18-70	T2	35W27 VIEWS ADDED				BY	BOYER
1-28-70	S2	PART NOS REVERSED				CHECKED	T. F. V. 1/4"
						APPR.	R. E. FORD 1/2"
						REV.	NR 06405
						SERIES	A
						PART NO.	404411
						MANUAL SEC.	8
						PAGE	126



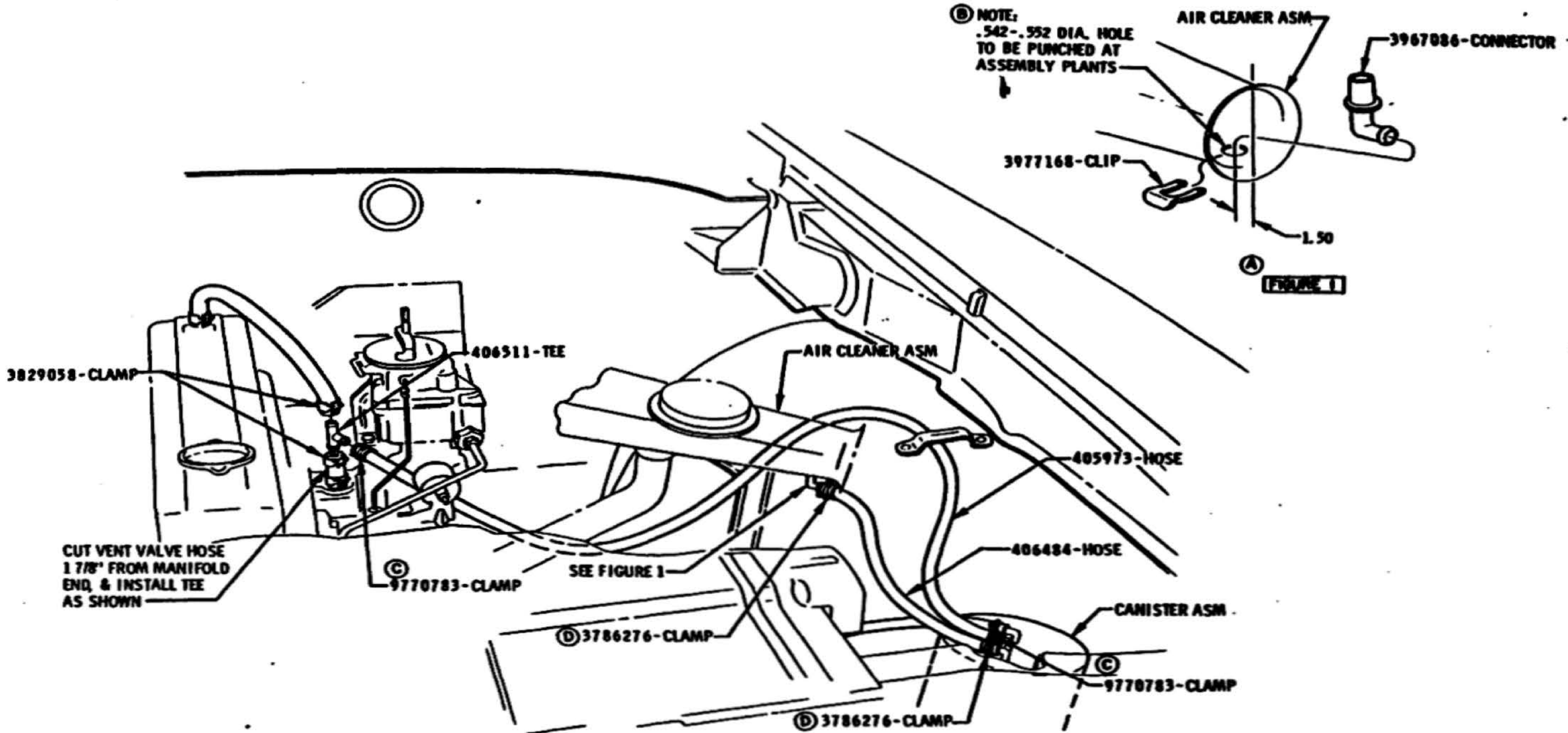
**NOTE:**  
SEE SECT. 11 FOR  
CANISTER INSTALLATION



**MUST BE FULLY DRIVEN, SEATED, NOT STRIPPED AND 72 LB. IN. MINIMUM.**

**FULLY DRIVEN, SEATED AND NOT STRIPPED**

		TITLE		FUEL SYSTEM CANISTER PIPING		FIRST USED		MANUAL SEC.	PAGE
		DATE	APR 9, 1968	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	8	128		
9-2-68	F	NOTE REMOVED	JLS/DT						
9-2-68	E	HOSE REQUIRED	JLS/DT						
DATE	SYM	REVISION	DR. CK.	APPR.	SERIES	A	PART NO.	404411	

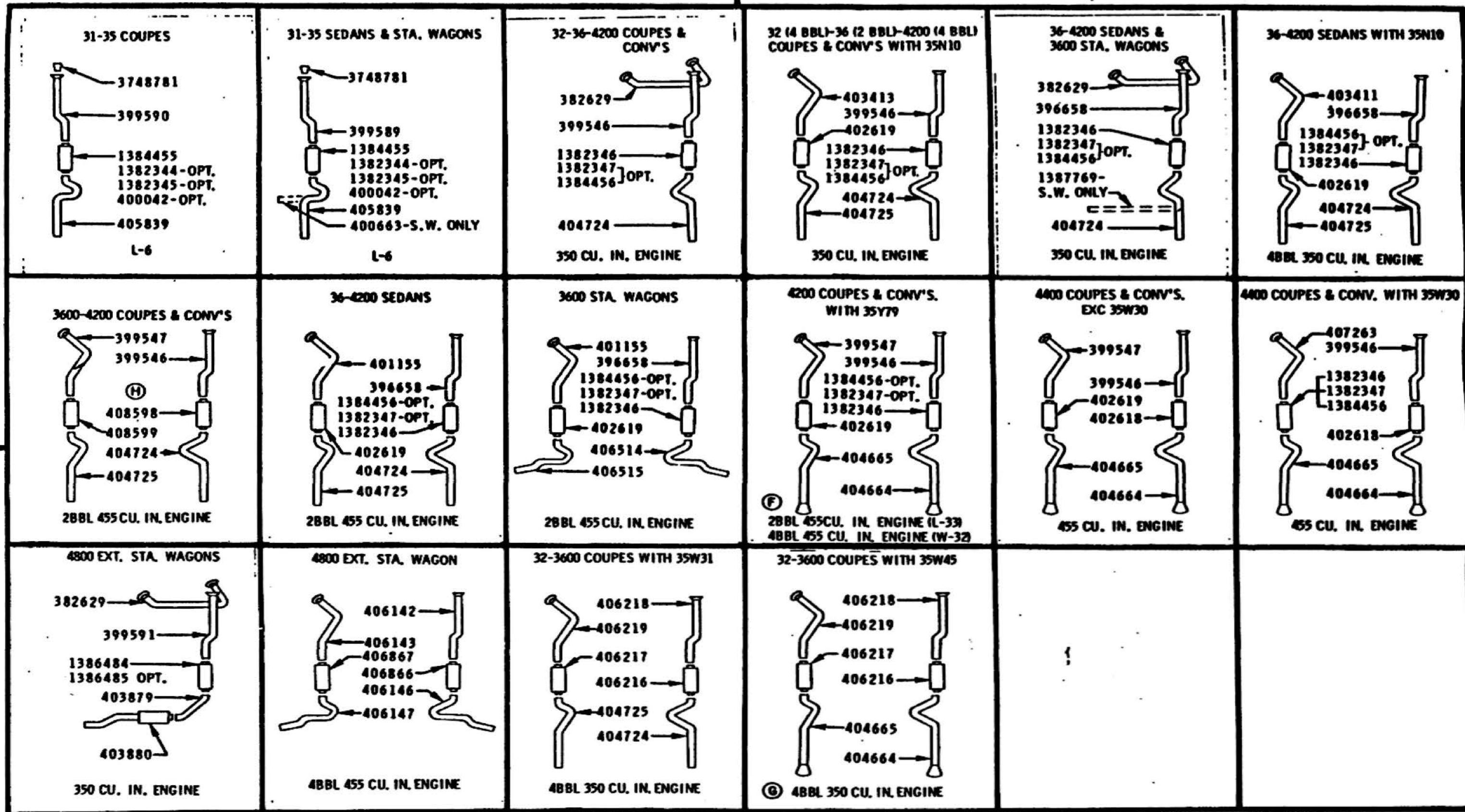


L-6

REVISION				TITLE				YEAR USED		MANUAL NO.		PAGE		
7-21-69	D	3786276	DIAM. ADDED	CANISTER TO AIR CLEANER & MANIFOLD (35NA9)				1970		8		130		
7-21-69	C	9770783	DIAM. ADDED	DATE	APR. 23, 1969			DR. BY	P. LOCATELLI			FILE NO.	404411	
7-21-69	B			CHECKED	[Signature]			APPV.						
6-19-69	A		DIAM. ADDED	DATE				DR. CL.						







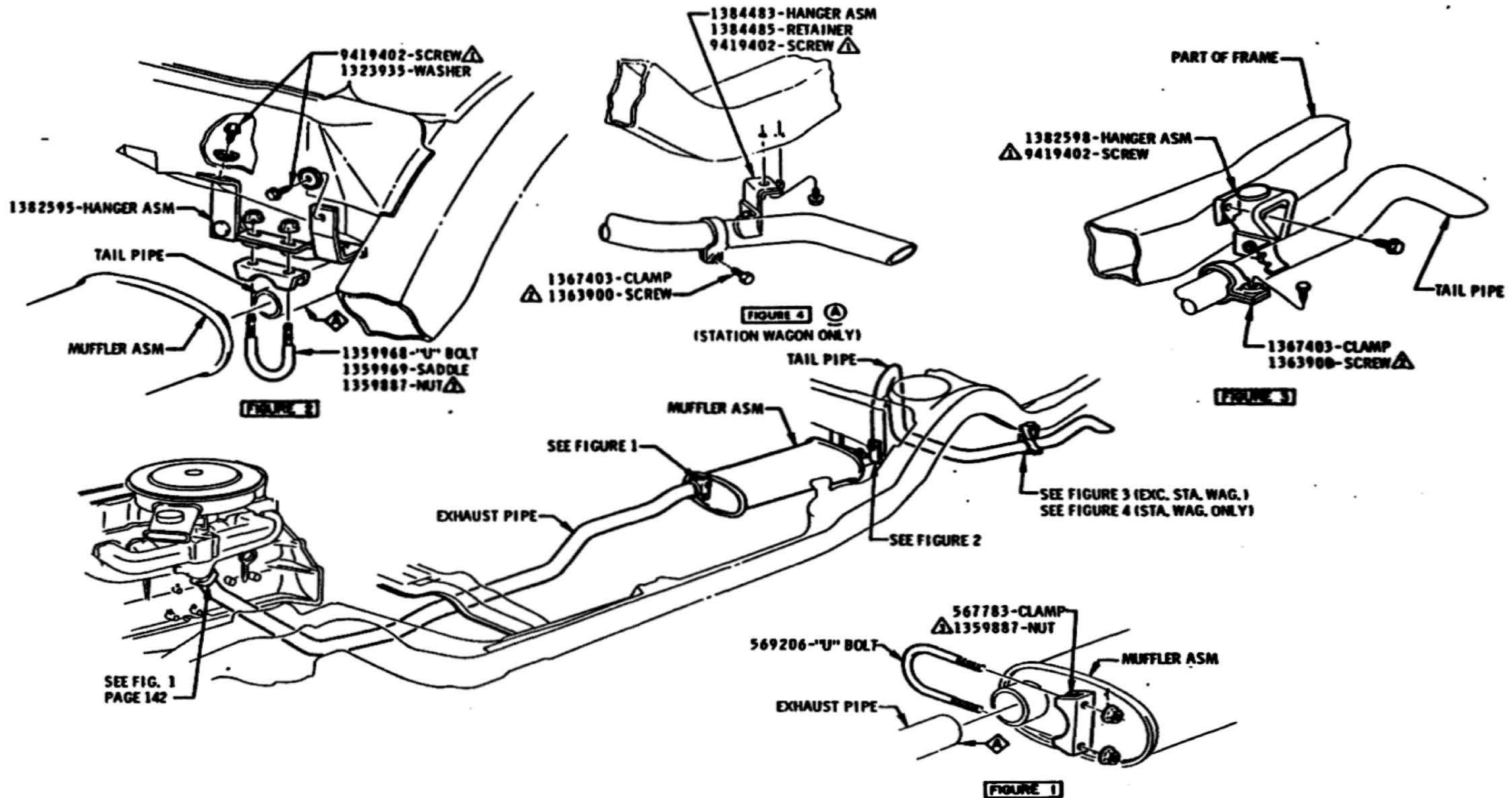
REVISION				DATE		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO.	PAGE
2-OR-N		APPLS & NOS REVISED	5	12	DATE	MAY 19, 1969		1970			B	140	
1-8-70	G	35W45 EXHAUST ADD.	4	20	DR. BY	BOYER							
5-30-69	F	ENGINE OPT. REVISED	1	20	CHECKED	J. J. [Signature]							
DATE	SYM	REVISION	DR	CK.	APPL.								

CHART - EXHAUST SYSTEM		REF. XE06105	REVISION A	PART NO. 404411
------------------------	--	--------------	------------	-----------------



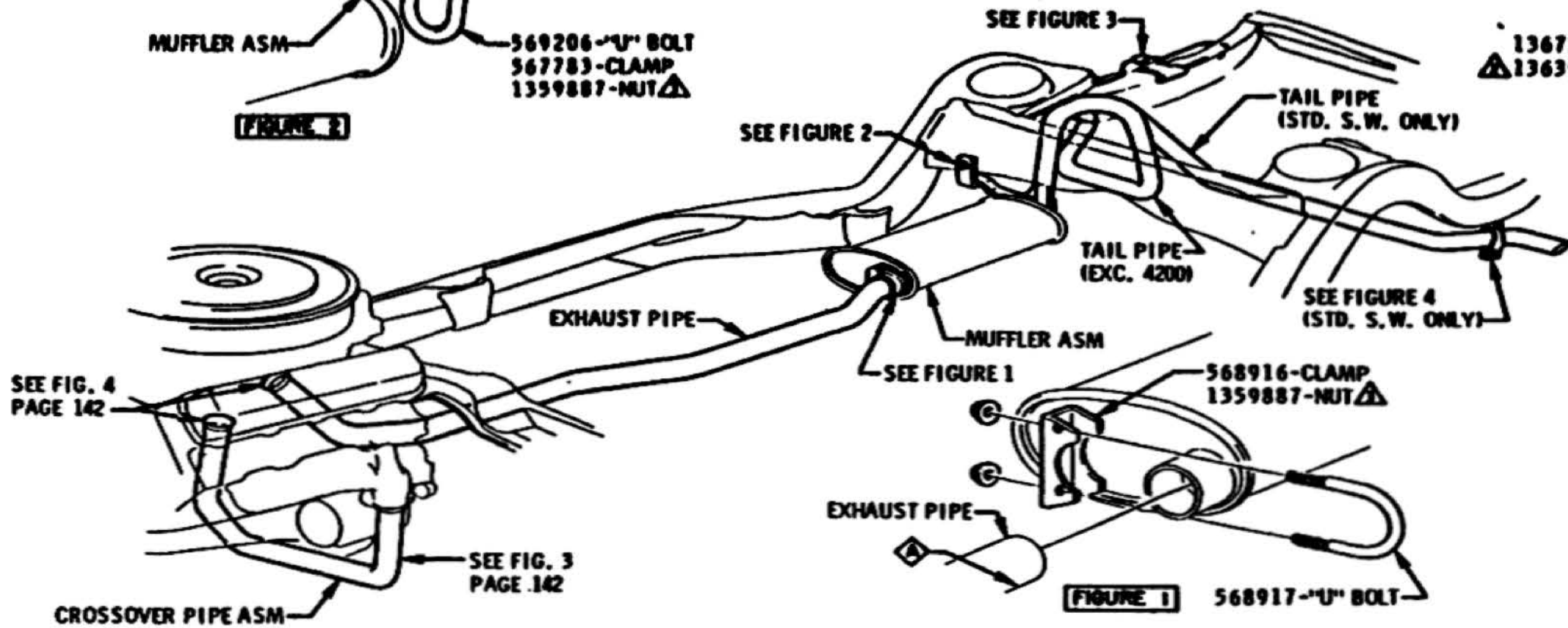
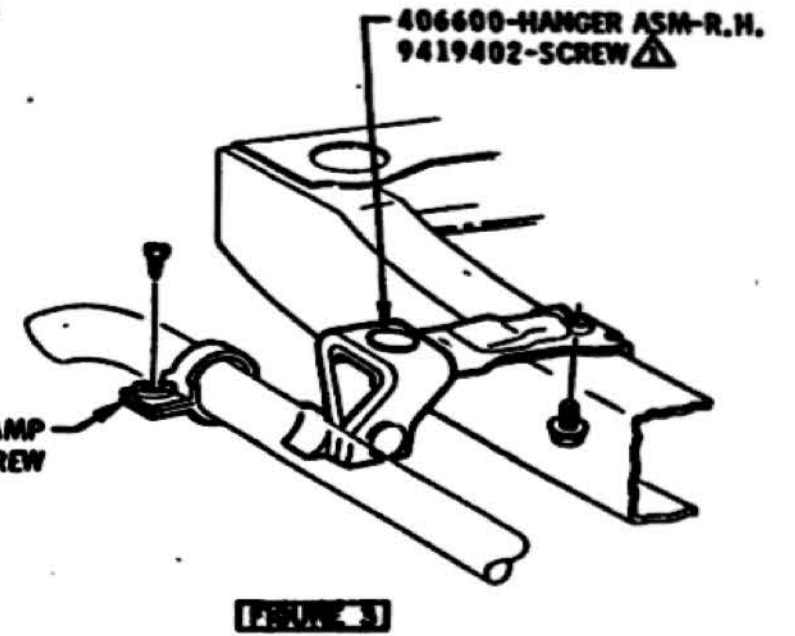
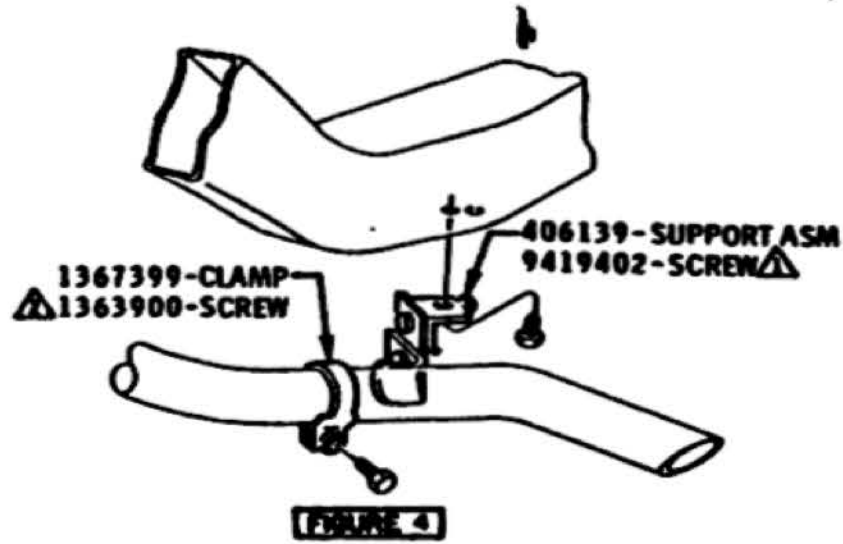
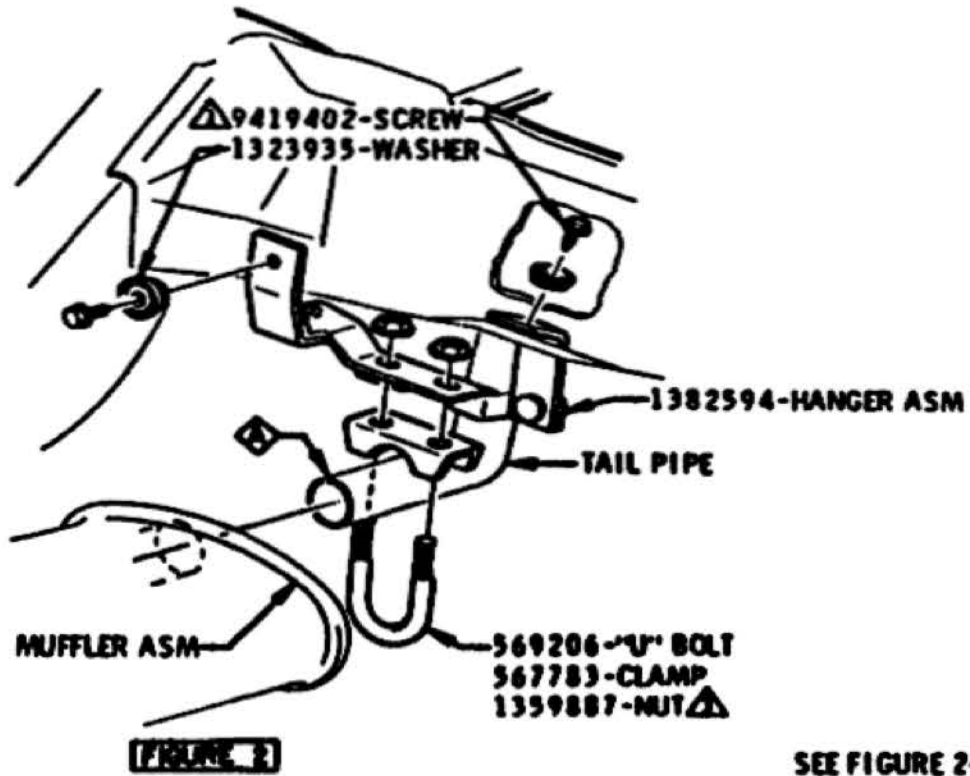




SEAL AREAS INDICATED WITH 9985020 SEALER  
 FOR EXHAUST SYSTEM PART NUMBERS, EXC. FASTENINGS, SEE CHART PAGE 140

- ▲ 132-180 LB. IN.
- ▲ 108-144 LB. IN.
- ▲ 72-96 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE		L-6 EXHAUST SYSTEM	
				DATE	1970	MANUAL REF.	8
				DR. BY	BOYER	PAGE	144
				CHECKED	<i>[Signature]</i>	REV.	BC
4-18-70	A	FIG. 4 ADDED		DR.		FORM	A
DATE	SYM	REVISION		DR.	CK	APP.	404411



SEE FIG. 4  
PAGE 142

SEE FIG. 3  
PAGE 142

SEE FIGURE 2

SEE FIGURE 3

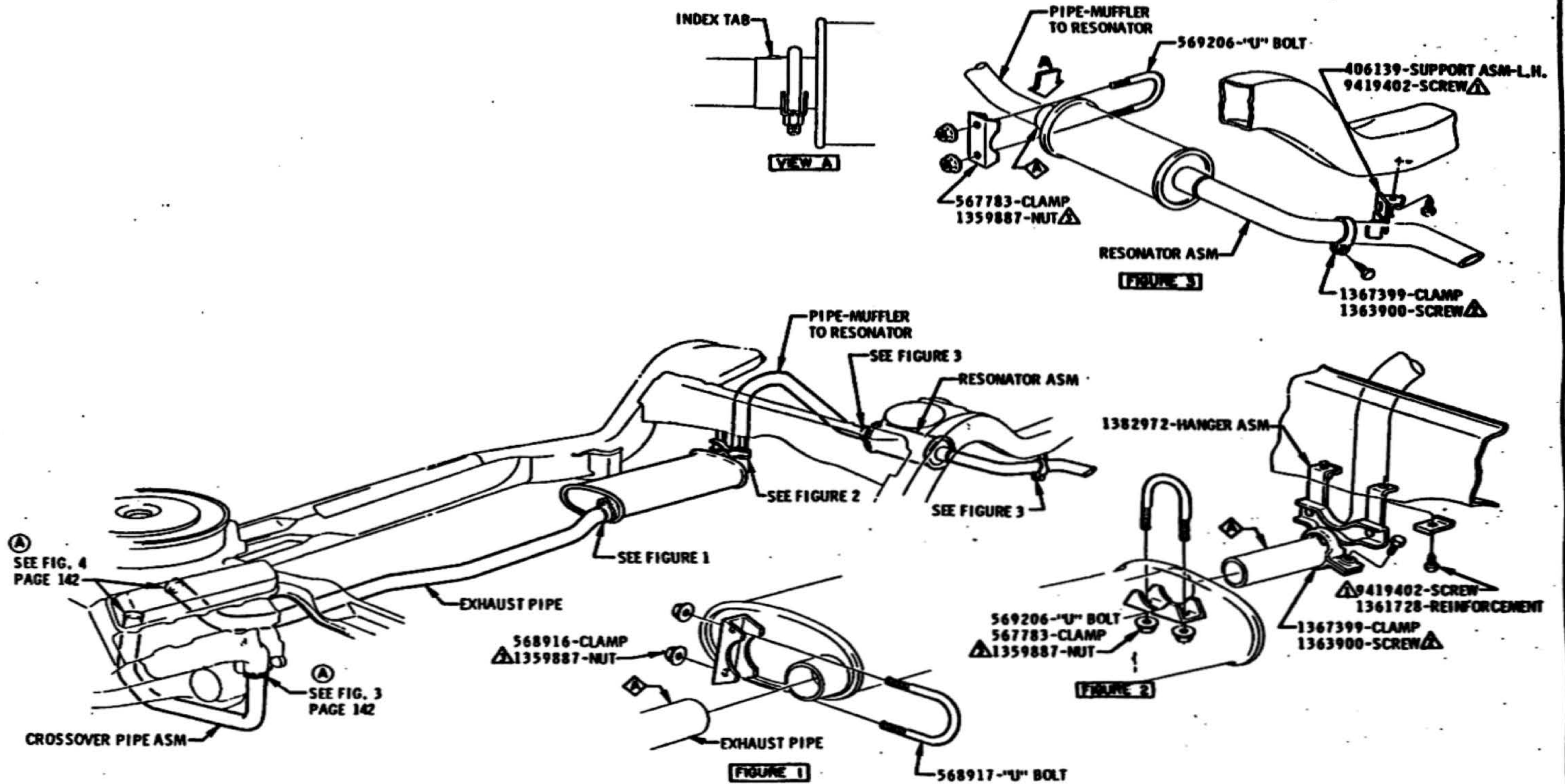
SEE FIGURE 4  
(STD. S.W. ONLY)

(32-36-4200)

- ▲ 132-180 LB. IN.
- ▲ 108-144 LB. IN.
- ▲ 72-96 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

SEAL AREAS INDICATED WITH 9985020 SEALER  
FOR EXHAUST SYSTEM PART NUMBERS, EXC. FASTENINGS, SEE CHART PAGE 140

DATE	BY	REVISION	DR.	CL.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	HANDL. NO.	PAGE
					V-8 EXHAUST SYSTEM (SINGLE EXHAUST)	1970		8	146
					DATE: MAY 14, 1969				
					DR BY: BOYER				
					CHECKED: [Signature]				
					APPR.:				
					APPR.:	8c		A	404411



SEAL AREAS INDICATED  
 WITH 9985020 SEALER

FOR EXHAUST SYSTEM PART NUMBERS  
 EXCEPT FASTENINGS, SEE CHART PAGE 140.

- ▲ 132-180 LB. IN.
- ▲ 108-144 LB. IN.
- ▲ 72-96 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE				V-8 EXHAUST SYSTEM (SINGLE EXHAUST)					
DATE	MAY 16 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	8	PAGE	148	
DR. BY	BOYER	CHECKED		REV.	BC	SECTION	A	PART NO.	404411
APPR.	J. [Signature]	APPR.							
DATE	SYM	REVISION	DR.	CL.	APPR.				
1-9-70	A2	NOTES REVISED							

(4800)

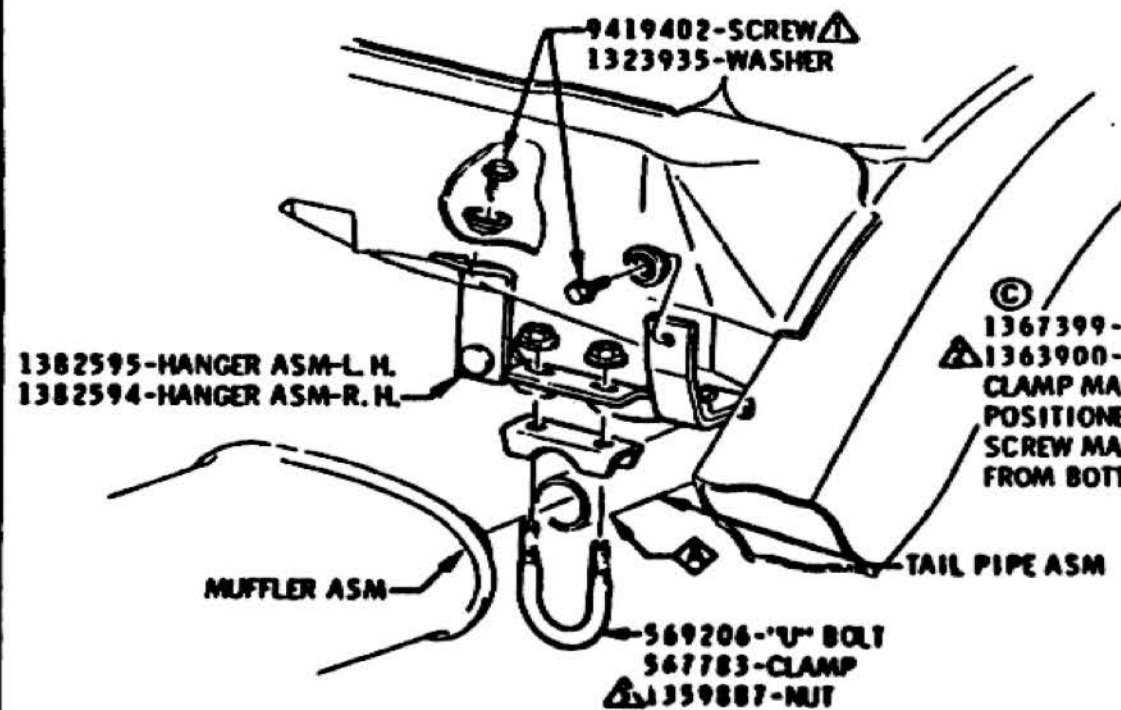


FIGURE 2  
(L. H. SHOWN, R. H. OPPOSITE)

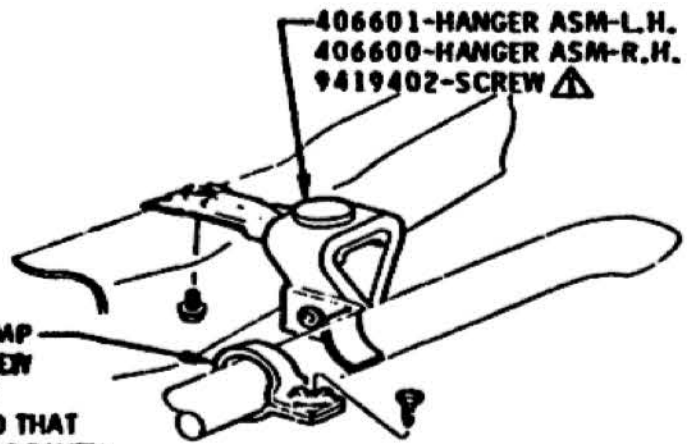


FIGURE 4  
(L. H. SHOWN; R. H. OPPOSITE)  
EXC. 4400 & SX MODELS

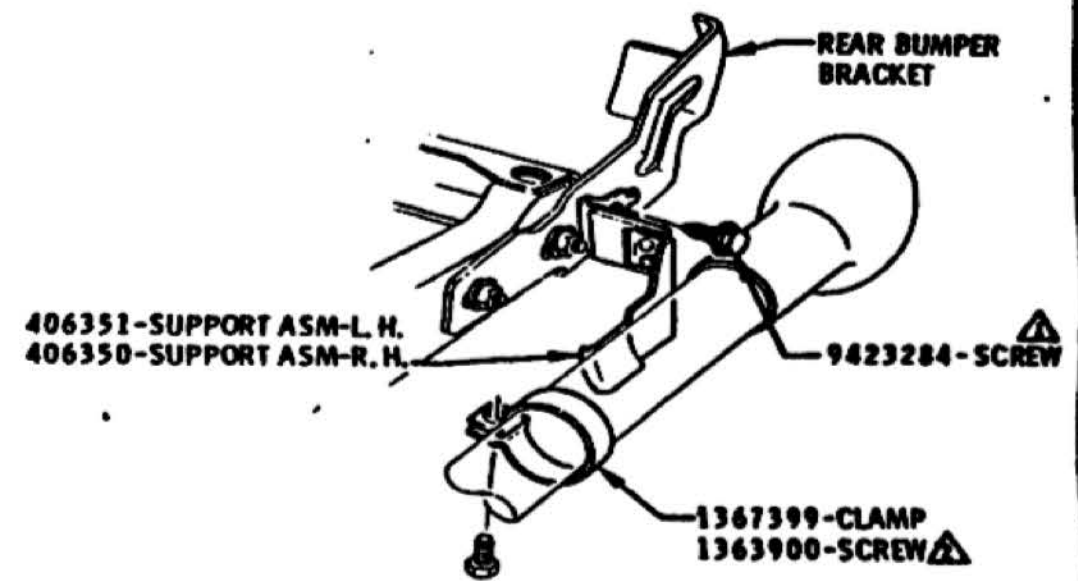


FIGURE 3  
(L. H. SHOWN; R. H. OPPOSITE)  
4400 & SX MODELS

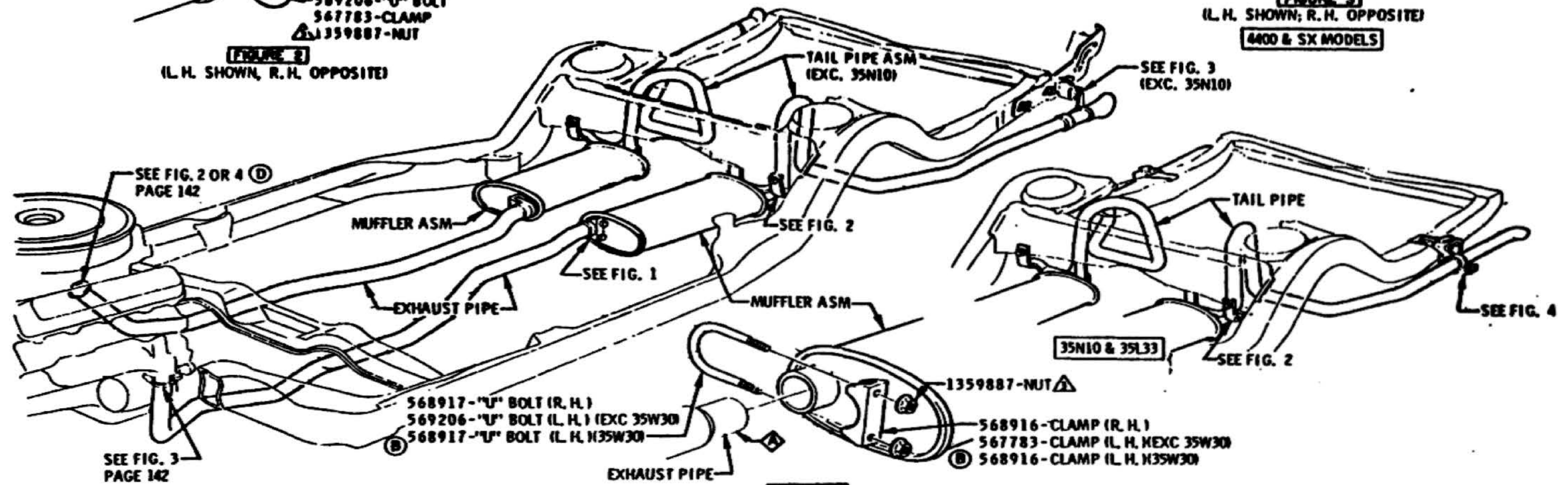


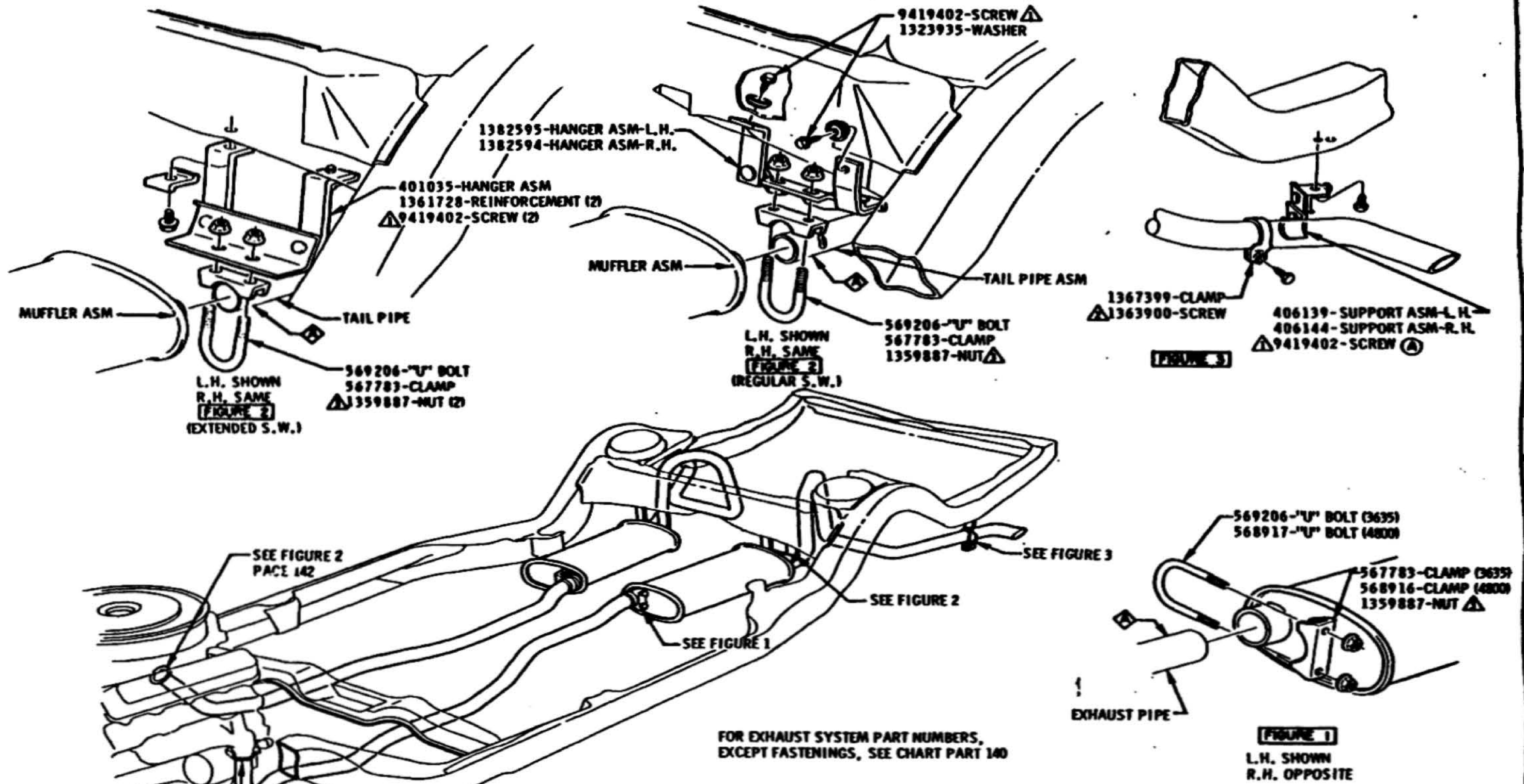
FIGURE 1  
(L. H. SHOWN; R. H. OPPOSITE)

FOR EXHAUST SYSTEM PART NUMBERS, EXC. FASTENINGS, SEE CHART PAGE 140

SEAL AREAS INDICATED WITH 9985020 SEALER

- ▲ 132-180 LB. IN.
- ▲ 108-144 LB. IN.
- ▲ 72-96 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

REVISION				TITLE		V-8 EXHAUST SYSTEM (DUAL EXHAUST)							
1-8-70	D	NOTE REVISED	46	DR	DATE	MAY 14, 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	8	PAGE	150
10-16-68	C	NOTE ADDED	113	DR	DR. BY	BOYER	REF.	8C	SERIES	A	PART NO.	404411	
9-19-69	U2	35W30 U BOLT & CLAMP ADDED	113	DR	CHECKED	Jones							
9-17-69	A	WAS 9419402 SCREW	113	DR	APPR.	Jones							
DATE	SYM	REVISION	DR.	CL.	APPR.								



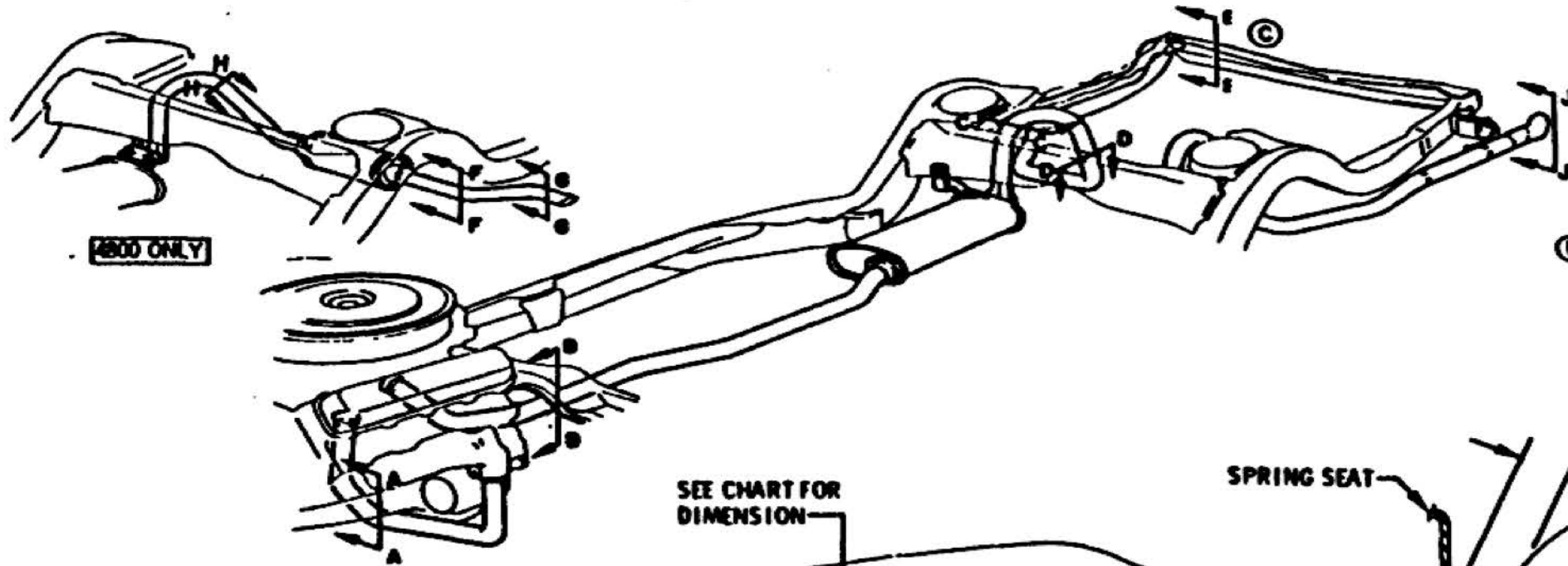
FOR EXHAUST SYSTEM PART NUMBERS,  
EXCEPT FASTENINGS, SEE CHART PART 140

SEAL AREAS INDICATED  
WITH 9985020 SEALER

- ▲ 132 - 180 LB. IN.
- ▲ 108 - 144 LB. IN.
- ▲ 72 - 96 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

SEE FIGURE 3  
PAGE 142

DATE		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO.	PAGE
4-13-70		V-8 EXHAUST S.W. - DUAL EXHAUST		1970		A		8	152
DATE	BY	REVISION	DR. CK. APPR.	DATE	BY	REVISION	DR. CK. APPR.	MANUAL NO.	PAGE
		A	WAS 4019402-SCREW					404411	



ENGINE	SECTION B-B		SECTION C-C		SECTION D-D	
	R.H.	L.H.	R.H.	L.H.	R.H.	L.H.
L-6	--	.80"	--	1.34"	--	1.40"
350 V-8 EXC. S.W.	.82"	.68"	1.20"	--	1.34"	--
350 V-8 S.W.	.82"	.68"	1.34"	--	--	--
455 V-8 (4400)	.70"	1.02"	1.06"	1.06"	1.56"	1.56"
350 V-8 (4800)	.68"	--	1.10"	--	--	--
455 V-8 (4800)	.61"	--	1.10"	--	--	--

4800 ONLY

SEE CHART FOR DIMENSION

SPRING SEAT

SEE CHART FOR DIMENSION

BUMPER

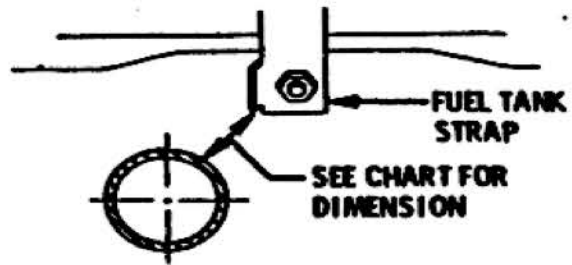
TAIL PIPE EXTENSION

SECTION J-J



SECTION B-B

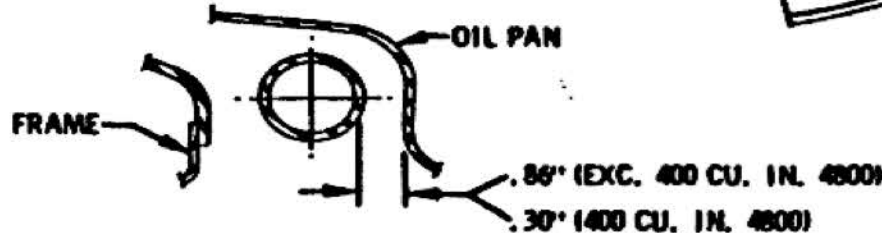
SECTION C-C



FUEL TANK STRAP

SEE CHART FOR DIMENSION

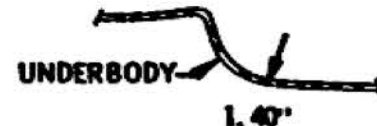
SECTION D-D



OIL PAN

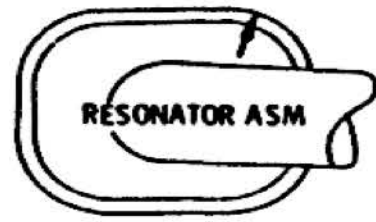
.86" (EXC. 400 CU. IN. 4800)  
.30" (400 CU. IN. 4800)

SECTION A-A



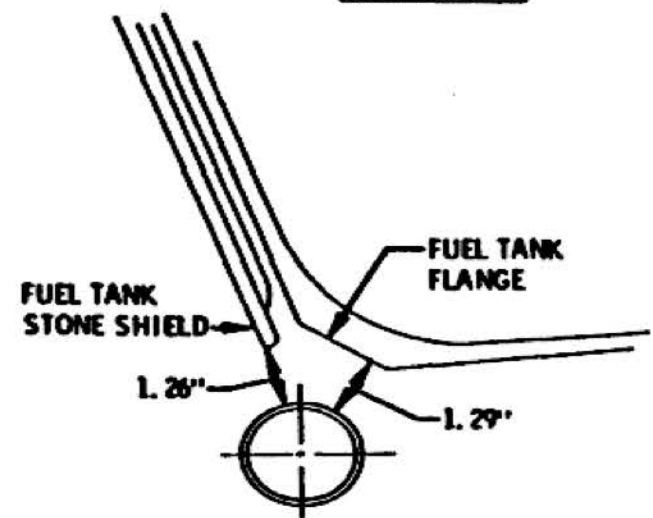
UNDERBODY

1.40"



RESONATOR ASM

SECTION F-F



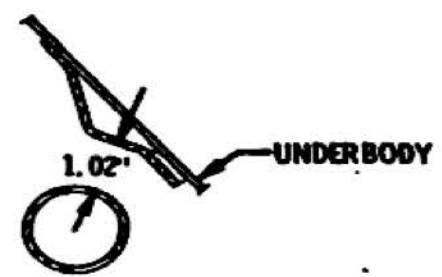
FUEL TANK STONE SHIELD

FUEL TANK FLANGE

1.28"

1.29"

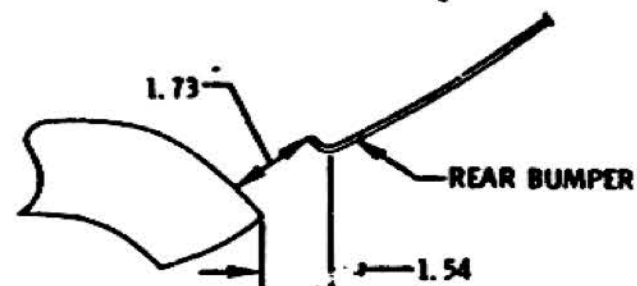
SECTION G-G



UNDERBODY

1.02"

SECTION H-H



REAR BUMPER

1.73

1.54

SECTION E-E

DATE	SYM	REVISION	DR.	CHK.	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
11-74	D	DEM ADDED	YF	DT		EXHAUST SYSTEM CLEARANCES	1970	SERIES A	B	154
1-11-74	C	SECT E-E RELOCATED	YF	DT	DATE MAY 13, 1968 DR BY BOYER					
9-11-74	B	CHART REVISED	JG	DT	CHECKED BY [Signature]					
9-11-74	A	SECTION J-J ADDED	JG	DT	APPR. [Signature]					
					APPR. [Signature]					
						REF. OC			40441	





# POWER STEERING INSTALLATION AND FILL PROCEDURE

1. POWER STEERING GEAR TO BE INSTALLED ON FRAME WITH PLASTIC PLUGS IN PLACE.  
 (B) NOTE: "E" ONLY - PITMAN ARM TO BE PREASSEMBLED TO GEAR PRIOR TO INSTALLATION ON FRAME. (SEE PAGE 126 SEC. 9)
- (C) 2. DO NOT REMOVE PLASTIC PLUGS FROM STEERING GEAR UNTIL IMMEDIATELY BEFORE INSTALLING THE HOSE ASSEMBLIES TO THE GEAR.
3. DO NOT CRANK THE GEAR UNTIL AFTER FILL OPERATION.
4. ROUTE HOSES AFTER POWER STEERING PUMP BELT IS TIGHTENED.
- (D) 5. FILL POWER STEERING SYSTEM WITH A RECIRCULATING FILL SYSTEM USING POWER STEERING FLUID 19985010.  
 FILL SYSTEM VACUUM IS NOT TO EXCEED 28" HG AND PRESSURE IS NOT TO EXCEED 35 PSI AT POWER STEERING PUMP.
6. CHECK FLUID LEVEL AND ADD AS REQUIRED PRIOR TO TEST ROLLS. LEVEL TO BE 3.5 INCHES FROM TOP OF FILLER NECK, (EXCEPT L6 TO BE 2.5 INCHES).
7. DO NOT CRANK STEERING WHEEL UNTIL FILL OPERATION IS COMPLETED AND LEVEL CHECKED.
8. CHECK HOSES AND FITTINGS FOR LEAKS.
9. INSPECT FLUID LEVEL AFTER ROLLS WHILE OIL IS HOT. ADJUST FLUID LEVEL, AS REQUIRED, TO FLUID LEVEL MARK ON THE PUMP DIP STICK.

1268 D	NOTE REMOVED	DR. W.	TITLE	CHART - POWER STEERING INSTALLATION FILL PROCEDURE		
1269 C	NOTE REVISED	DR. W.	DATE	OCT. 5, 1968	FIRST USED	1970
1769 B	NOTE REVISED	DR. W. D. MARKIN	CHECKED	J. AMES	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
1768 A	REISSUED ON NEW FORMAT	DR. W. D. MARKIN	APPR.	J. ROENEIS	A-B-C-E	9 100
		DR. CK.	APPR.		PART NO.	40441-2-3
DATE	SYM	REVISION	DR.	CK.	APPR.	

MANDATORY INSTRUCTIONS

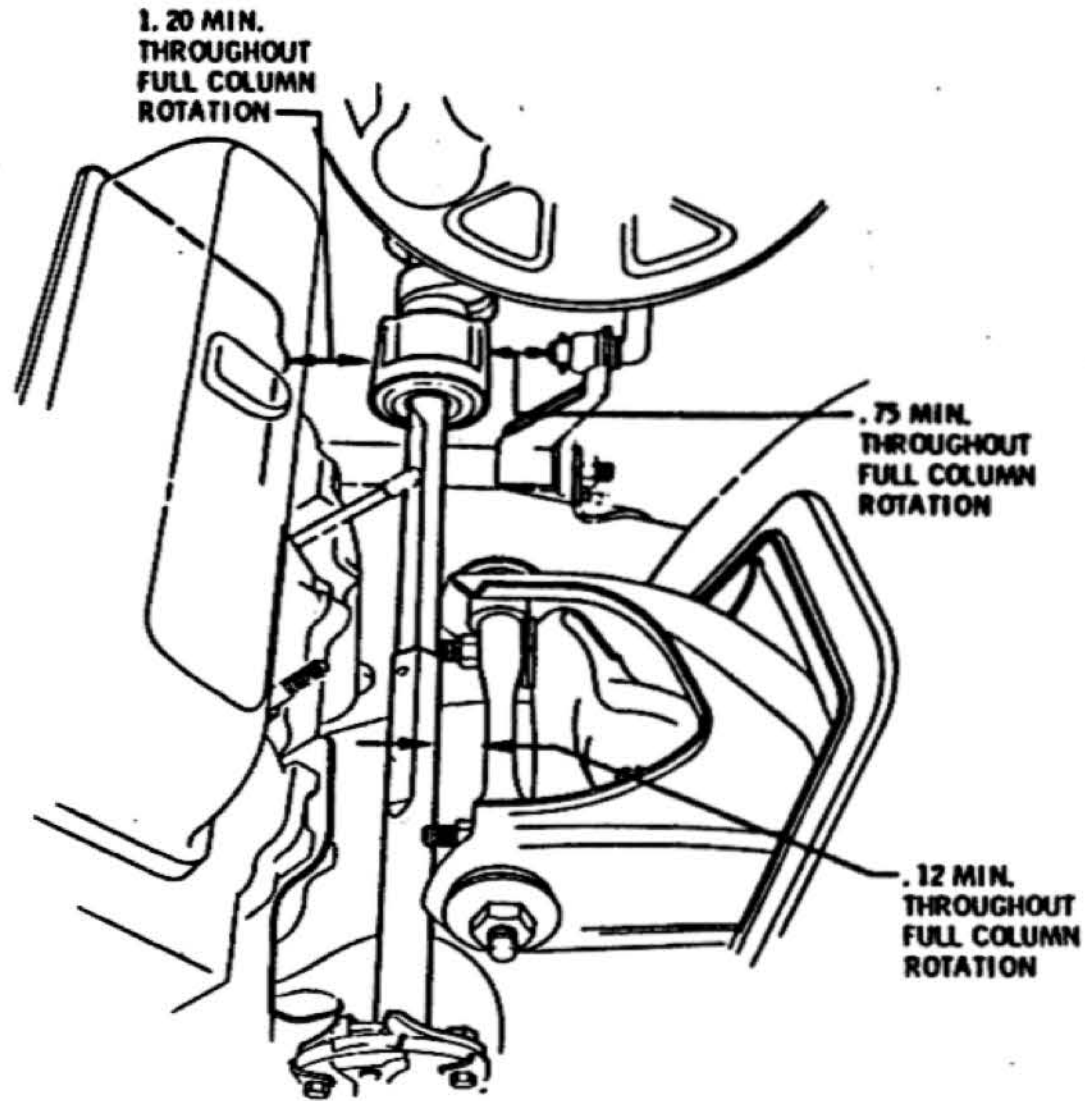
1. LOOSE ASSEMBLE INNER [1] AND OUTER [2] DASH COVER ON COLUMN WITH TWO SCREWS [3]. OPTIONAL TO TIGHTEN TOP SCREW. DASH COVER MUST BE ABLE TO SLIDE ON COLUMN.
2. GLUE COVER SEAL [4] TO THE OUTER COVER [2].
3. SET BODY ON FRAME WITH SPECIFIED GAGE PINS AT #1 AND #4 LOCATIONS. TIGHTEN TWO BODY BOLTS PRIOR TO REMOVAL OF GAGE PINS.  
(USE OLDS GAGE PIN 77481-JF OR EQUIVALENT AT #1 LOCATION.)  
(USE OLDS GAGE PIN 77480-JF OR EQUIVALENT AT #4 LOCATION.)

MANDATORY INSTALLATION SEQUENCE

1. COLUMN WILL BE INSTALLED INTO THE BODY AFTER BODY DROP OR THE COLUMN MAY BE CARRIED IN THE BODY PRIOR TO BODY DROP, SUPPORTED PROPERLY, BUT NOT ATTACHED TO DASH PANEL, AND STUDS MUST NOT BE ENGAGED IN CAPSULES.
2. INSTALL IGNITION SWITCH CONNECTOR [5] TO IGNITION SWITCH.
3. POSITION COLUMN IN THE BODY AND POSITION THE FLANGE TO THE RAG JOINT AND INSTALL LOCK WASHERS AND NUTS. (MAY BE TIGHTENED TO SPECIFIED TORQUE AT ANY TIME) (PAGE 126.)
4. LOOSE ASSEMBLE NUTS [6] AT THE INSTRUMENT PANEL.
5. POSITION OUTER COVER TO DASH USING BENCH AWL OR BY STARTING SCREW [7] IN ROUND NET HOLE.
6. INSTALL SCREW [8] AND TIGHTEN TO SPECIFIED TORQUE. TIGHTEN SCREW [7] TO SPECIFIED TORQUE AND INSTALL SCREW [9] TO SPECIFIED TORQUE. ( [7] MAY BE TIGHTENED BEFORE FINAL TIGHTENING OF [7] )
7. TIGHTEN TWO CLAMP SCREWS [3] AND TIGHTEN TO SPECIFIED TORQUE.
8. INSTALL TWO INNER COVER SCREWS [10] AND TIGHTEN TO SPECIFIED TORQUE.
9. TIGHTEN TWO NUTS [6] TO THE SPECIFIED TORQUE.

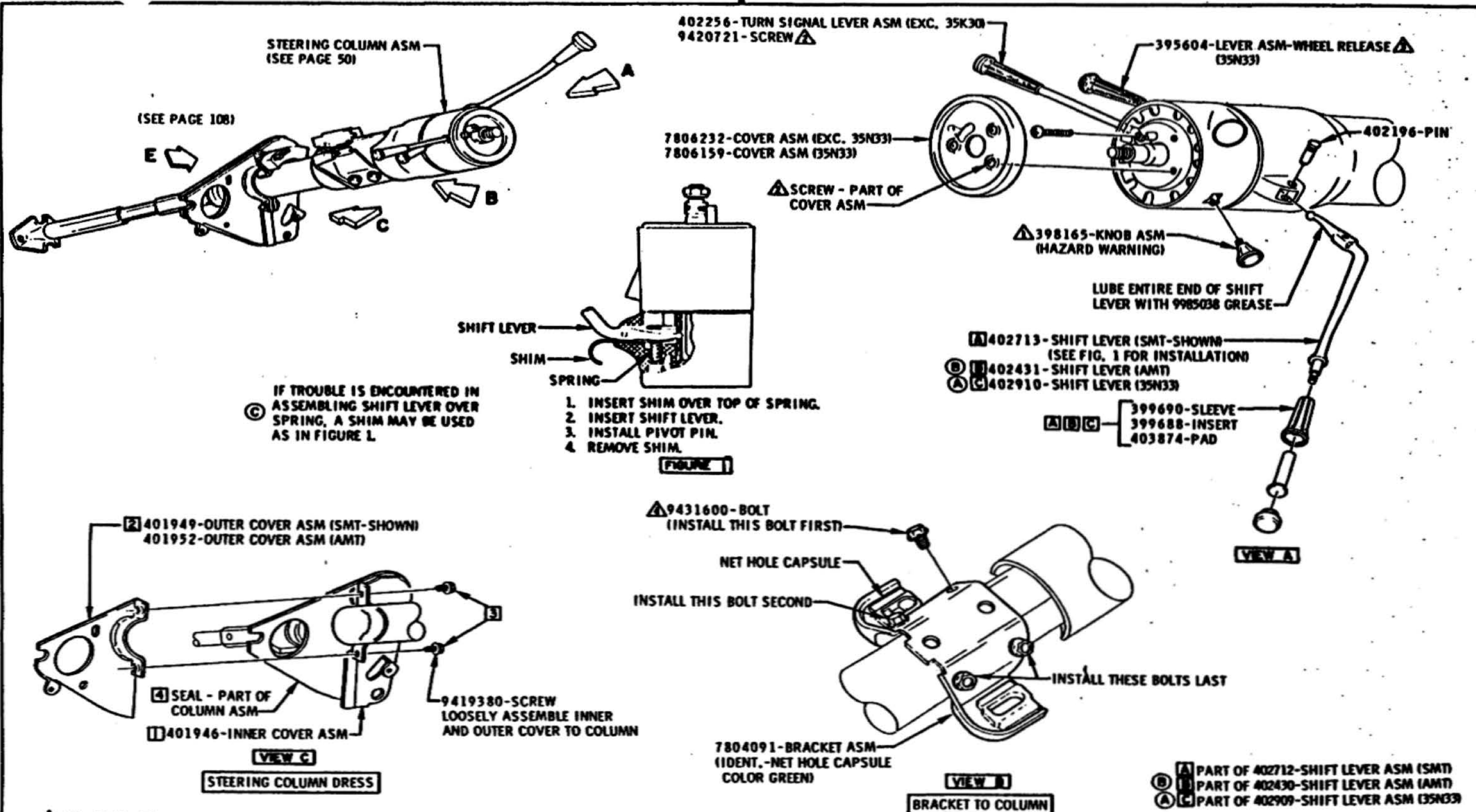
MANDATORY SYSTEM REQUIREMENTS

- A. POT JOINT OPERATING ANGLE MUST NOT EXCEED 5°.
- B. RAG JOINT MUST NOT BE DISTORTED GREATER THAN ± .040 DUE TO POT JOINT BOTTOMING IN EITHER DIRECTION.
- C. MINIMUM CLEARANCE.
  1. UPPER CONTROL ARM SHAFT TO STEERING SHAFT IS 0.12".
  2. ENGINE TO POT JOINT IS 1.20".
  3. CLUTCH LINKAGE TO POT JOINT IS 0.75".



NOTE: IF THESE REQUIREMENTS CANNOT BE MET, IT SIGNIFIES A QUALITY DEFICIENCY IN A COMPONENT PART THAT MUST BE CORRECTED.

				TITLE STEERING COLUMN INSTALLATION REQUIREMENTS			
				DATE NOV. 18, 1968	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE 9 104
				DR. BY H.E. MASON	CHECKED J. J. [signature]	APPV. J. J. [signature]	REV. SERVO A PART NO. 404411
11-20-68	A	NOTE #6 REVISED	DR. CL.	APPV. [signature]			
DATE	SYM	REVISION	DR. CL.	APPV.			

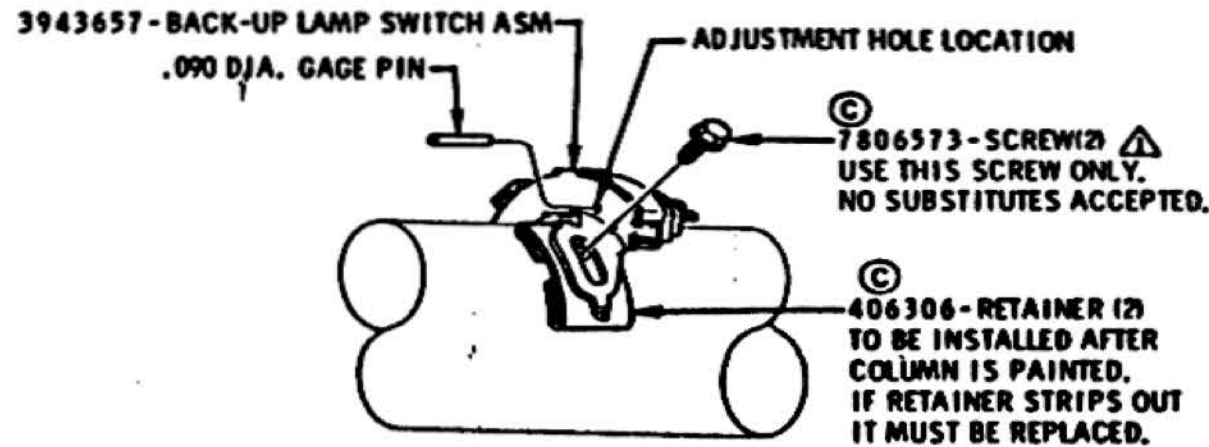


- ▲ 12 - 18 LB. FT.
- ▲ 30 - 40 LB. IN.
- ▲ 15 - 25 LB. IN.
- ▲ 3 - 5 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

- ▲ PART OF 402712-SHIFT LEVER ASM (SMT)
- ▲ PART OF 402430-SHIFT LEVER ASM (AMT)
- ▲ PART OF 402909-SHIFT LEVER ASM (35N33)

REVISION				TITLE		STEERING COLUMN DRESS		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO.		PAGE	
11-20-65	C	NOTE ADDED		DATE	NOV. 14, 1968			1970				9	106		
6-2-69	B	WAS 402537-B SHIFT LEVER		DR. BY	W.E. MASON										
8-25-65	A	WAS 402537-B SHIFT LEVER		CHECKED											
DATE	SYM	REVISION		DR.	CK.	APPR.									

**SYNCHROMESH BACK-UP  
LAMP SWITCH INSTALLATION**



**VIEW A**  
(FROM PAGE 106)

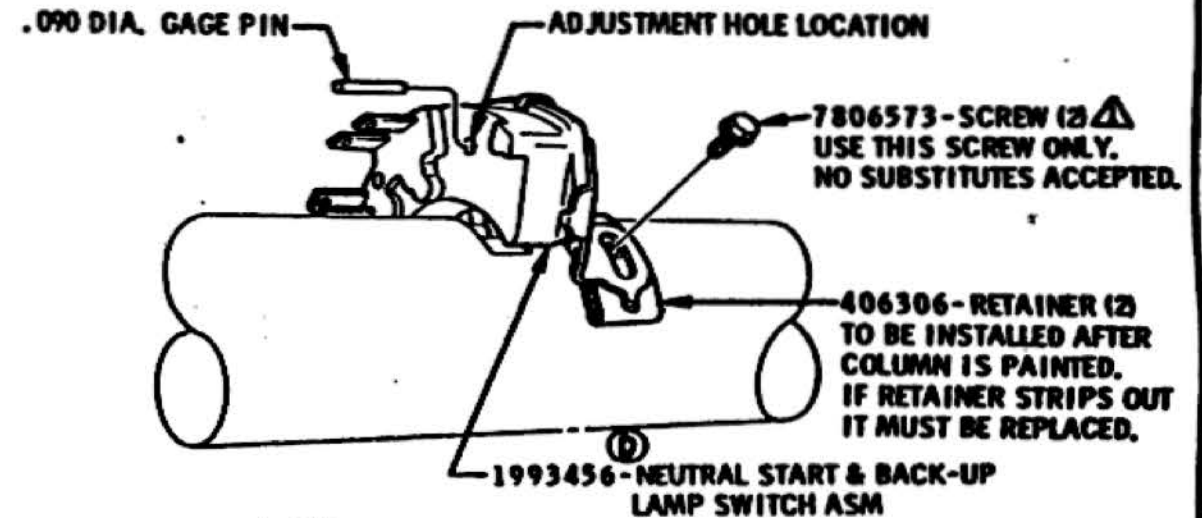
SWITCH ASSEMBLY IS FIXED IN REVERSE POSITION WITH INTERNAL PLASTIC SHEAR PIN. INSTALL SWITCH ON COLUMN DRESS LINE WITH STEERING COLUMN IN LOCK POSITION. INSERT SWITCH DRIVE TANG INTO SHIFT TUBE SLOT, SWITCH BRACKET TANGS INTO RETAINER SLOTS, AND FASTEN WITH PROPER SCREW. AFTER INSTALLATION PLASTIC PIN IN SWITCH WILL SHEAR WHEN SHIFT LEVER IS MOVED OUT OF REVERSE POSITION.

AFTER COLUMN IS INSTALLED IN CAR AND SHIFT LINKAGE ADJUSTED, SWITCH AND CONTACT SUPPORT MUST PERMIT INSERTION OF .090 DIA. GAGE PIN IN REVERSE POSITION.

TO RE-INSTALL OR RE-ADJUST AFTER PLASTIC PIN IN SWITCH HAS BEEN SHEARED, ALIGN HOLE IN SWITCH AND CONTACT SUPPORT, INSERT .090 DIA. GAGE PIN AND INSTALL AS ABOVE. REMOVE GAGE PIN BEFORE MOVING SHIFT LEVER.

**AUTOMATIC TRANSMISSION  
NEUTRAL START & BACK-UP  
LAMP SWITCH INSTALLATION**

(EXC. 35D55, 39W20)  
Ⓛ

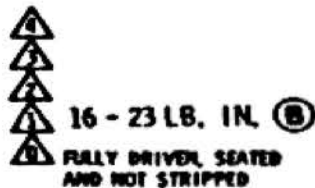


**VIEW B**  
(FROM PAGE 106)

SWITCH ASSEMBLY IS FIXED IN DRIVE POSITION WITH INTERNAL PLASTIC SHEAR PIN. INSTALL SWITCH ON COLUMN DRESS LINE AFTER UPPER SHIFT LEVER IS INSTALLED. HOLD LEVER AGAINST DRIVE POSITION STOP IN STEERING COLUMN, INSERT SWITCH DRIVE TANG INTO SHIFT TUBE SLOT, SWITCH BRACKET TANGS INTO RETAINER SLOTS, AND FASTEN WITH PROPER SCREW. AFTER INSTALLATION PLASTIC PIN IN SWITCH WILL SHEAR WHEN UPPER SHIFT LEVER IS MOVED OUT OF DRIVE POSITION.

AFTER COLUMN IS INSTALLED IN CAR AND SHIFT LINKAGE ADJUSTED, SWITCH AND CONTACT SUPPORT MUST PERMIT INSERTION OF .090 DIA. GAGE PIN IN DRIVE POSITION.

TO RE-INSTALL OR RE-ADJUST AFTER PLASTIC PIN IN SWITCH HAS BEEN SHEARED, ALIGN HOLE IN SWITCH AND CONTACT SUPPORT, INSERT .090 DIA. GAGE PIN AND INSTALL AS ABOVE. REMOVE GAGE PIN BEFORE MOVING UPPER SHIFT LEVER.

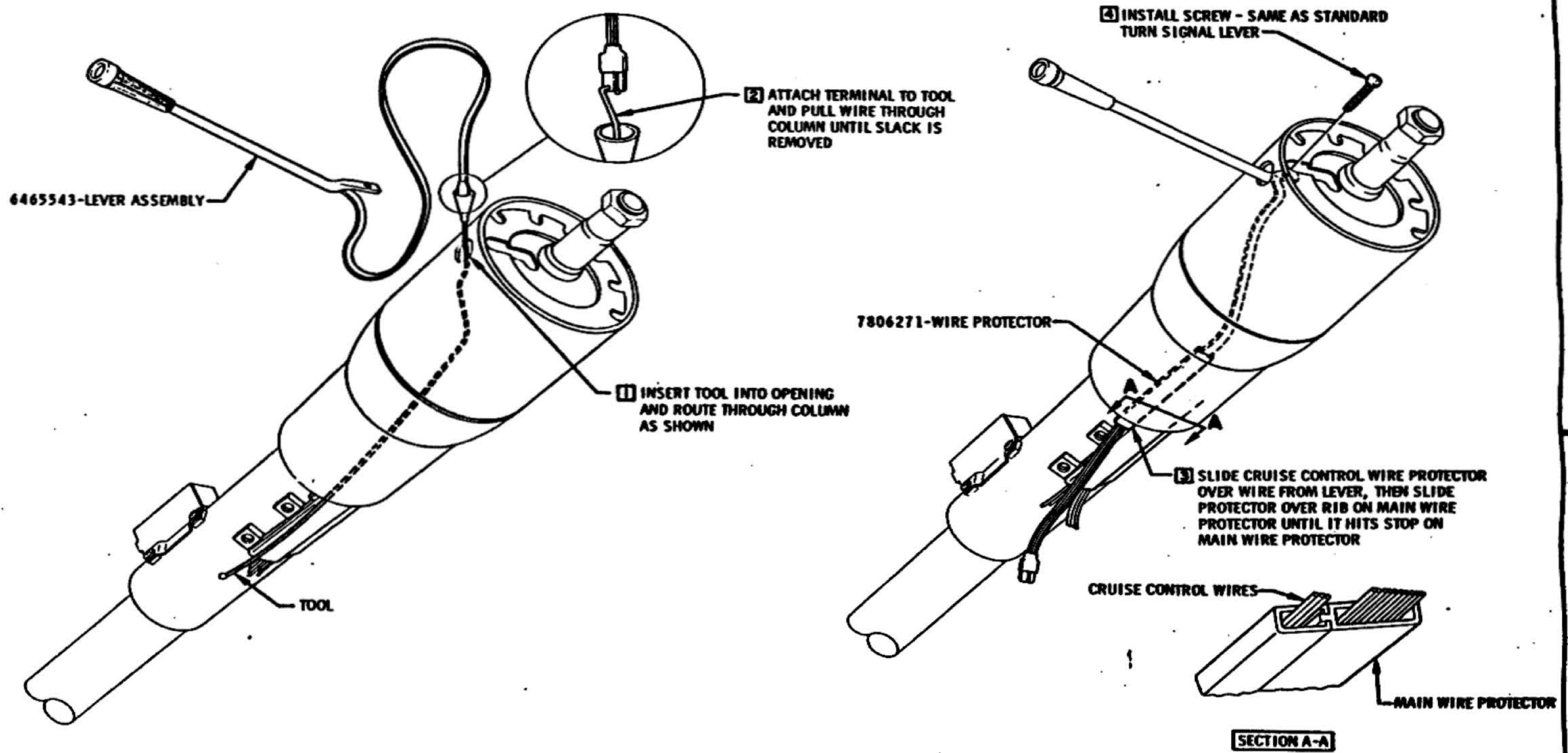


DATE	SYN	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	HANDL. INCL. PAGE	NO.
5-28-63	D <sub>2</sub>	USAGE & SWITCH REVISED	W.E.	DT		DATE NOV. 8, 1968	1970		9	10E
6-26-63	C <sub>1</sub>	PART NOS REVISED	W.E.	DT	DR. BY W.E. MASON					
1-7-69	B	TORQUE REVISED	W.E.	DT	CHECKED BY [Signature]					
1-2-69	A <sub>1</sub>	PART NOS REVISED	W.E.	DT	APPR.					

REF 3818 9/4/9C  
2412 T. 12/1/57  
12/4 60, 25/23

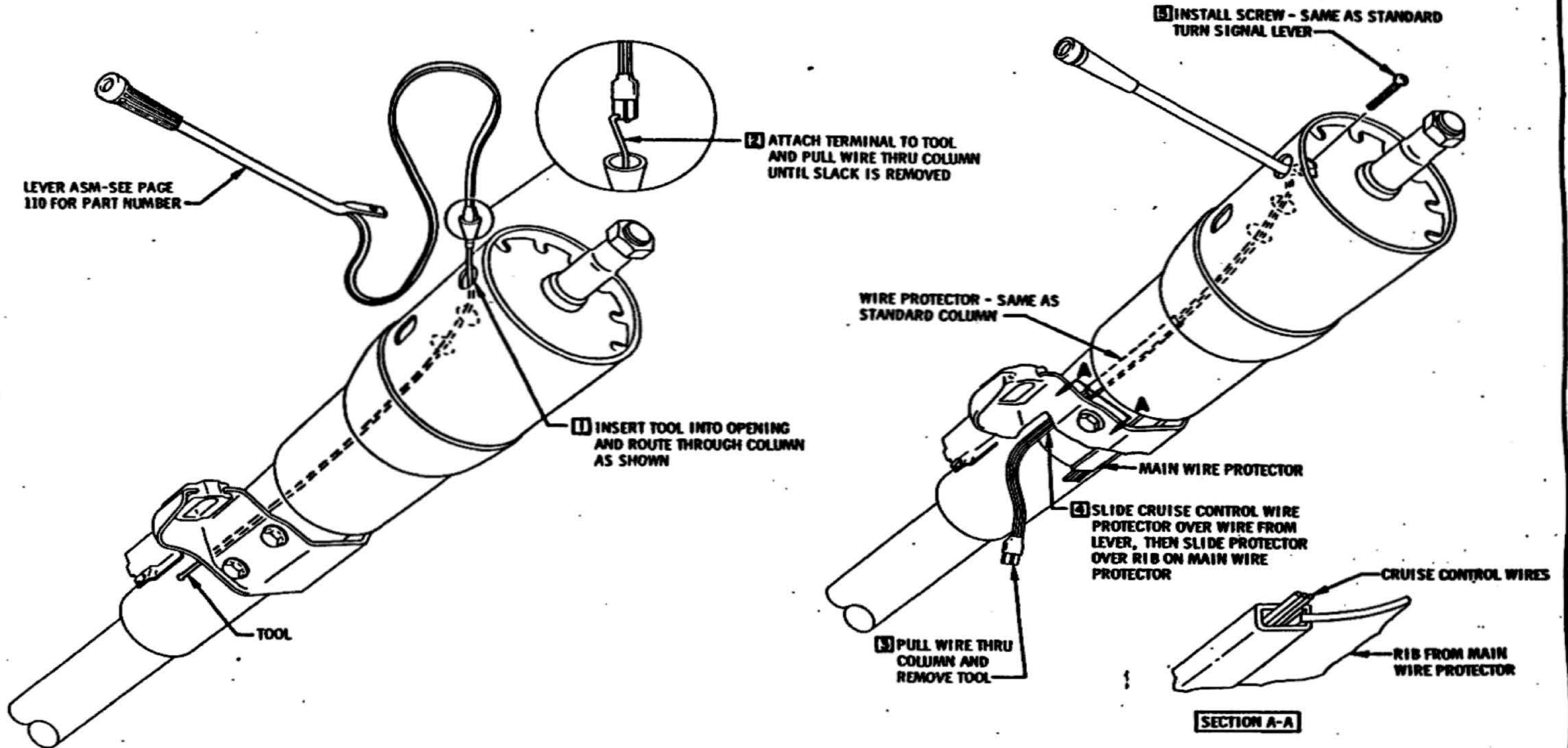
REVISED  
**A-B-C-E**

PART NO. **404411-2-3**



INSTALL LEVER IN SEQUENCE SHOWN STARTING WITH 1

				TITLE CRUISE CONTROL LEVER AND SWITCH ASSEMBLY - EXCEPT 35N33, 35N37			
				DATE NOV. 6, 1968	FIRST USE	OLDSMOBILE PRODUCT INFORMATION MANUAL	
				DR. BY W. C. MASON	1970	MANUAL SEC.	9 110
				CHECKED	REV. 56230	SERIES	
				APPR. [Signature]	A-B-C-E		
				DATE	BYM	REV. NO. 404411-2-3	
				REVISION	DR. CL.	APPR.	



INSTALL LEVER IN SEQUENCE SHOWN, STARTING WITH 1

				TITLE CRUISE CONTROL LEVER AND SWITCH ASSEMBLY - 35N33			
DATE		DR. BY		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL	
9-1-69		W.E. MASON		1970		9 III	
REVISION		DR. CK.		APPR.		PART NO. 404411-2-3	
A		PRELIMINARY STANDARD APPROVAL				A-B-C-E	

STEERING COLUMN SUPPORT  
(INSTALLED IN SECT. 1-1)

SHIFT INDICATOR  
(INSTALLED IN SECT. 1-3)

5 ELECTRICAL CONNECTOR TO BE  
INSTALLED TO IGNITION SWITCH  
ON COLUMN BEFORE COLUMN IS  
INSTALLED TO INSTRUMENT PANEL  
(SEE SECTION 12)

1385587-NUT (PUSH-ON)  
(AS REQUIRED)

402498-STEERING COLUMN CAP

9423489-SCREW

1378333-NUT

404534-LINK

9421485-SCREW

405570-CLIP- SHIFT  
INDICATOR

SHIFT BOWL

AFTER SHIFT LINKAGE HAS BEEN INSTALLED AND  
ADJUSTED, HOLD UPPER SHIFT LEVER AGAINST  
DRIVE POSITION STOP IN STEERING COLUMN.  
ROTATE CLIP IN SLOT ON SHIFT BOWL TO ALIGN  
SHIFT INDICATOR NEEDLE WITH DRIVE POSITION  
ON INSTRUMENT CLUSTER AND TIGHTEN SCREW.

VIEW A

(AUTO. TRANS. -EXC. 35055)

STEERING COLUMN  
TO INSTRUMENT PANEL

10 9429021- SCREW ASM (2)

STEERING COLUMN

399904-SEAL ASM  
(MANUAL TRANS. ONLY)

DASH INSULATOR

REMOVE THIS AREA OF DASH INSULATOR  
BEFORE INSTALLING COLUMN IN CAR  
AND REPLACE AFTER COLUMN IS SET

REMOVE PERFORATED AREA ON  
MANUAL TRANSMISSION CARS

REMOVE PERFORATED AREA ON  
MANUAL BRAKE CARS

INNER AND OUTER COVER  
TO TOE PAN

9429021-SCREW ASM

STEERING COLUMN

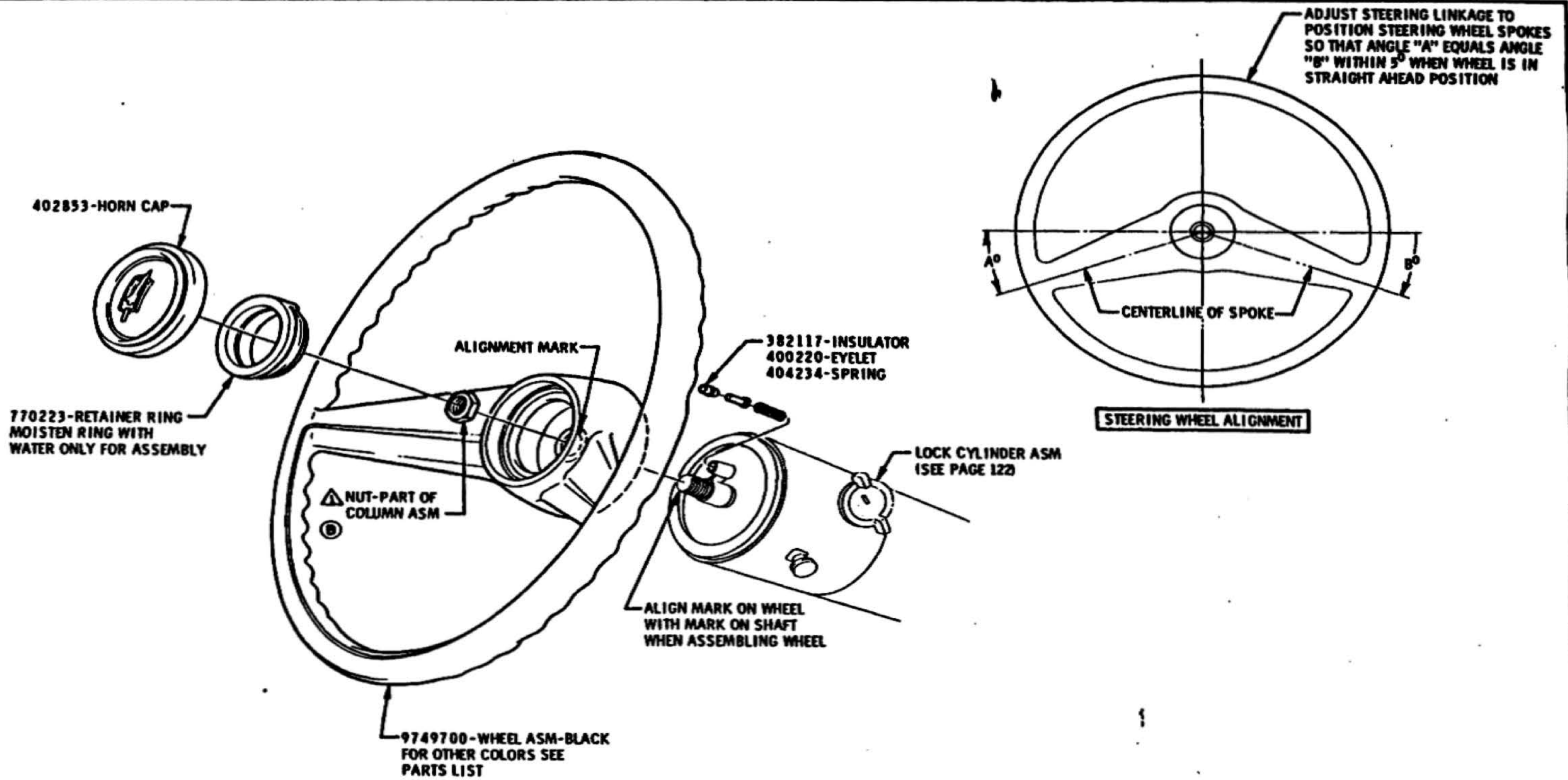
3947979-COVER

9420065-SCREW

TRIM COVER TO TOE PAN

- ▲ 15-25 LB. FT.
- ▲ 30-45 LB. IN.
- ▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE				STEERING COLUMN INSTALLATION			
DATE	NOV 12 1968	FIRST USED	1970	OLDSMOBILE PRODUCT	MANUAL SEC.	PAGE	
DR. BY	W.C. HASON	REF. DES. NO.	7818	INFORMATION MANUAL	9	114	
CHECKED		SERIES	A	PART NO.	404411		
APPR.							
APPR.							
DATE	SYM	REVISION	DR.	CK.			



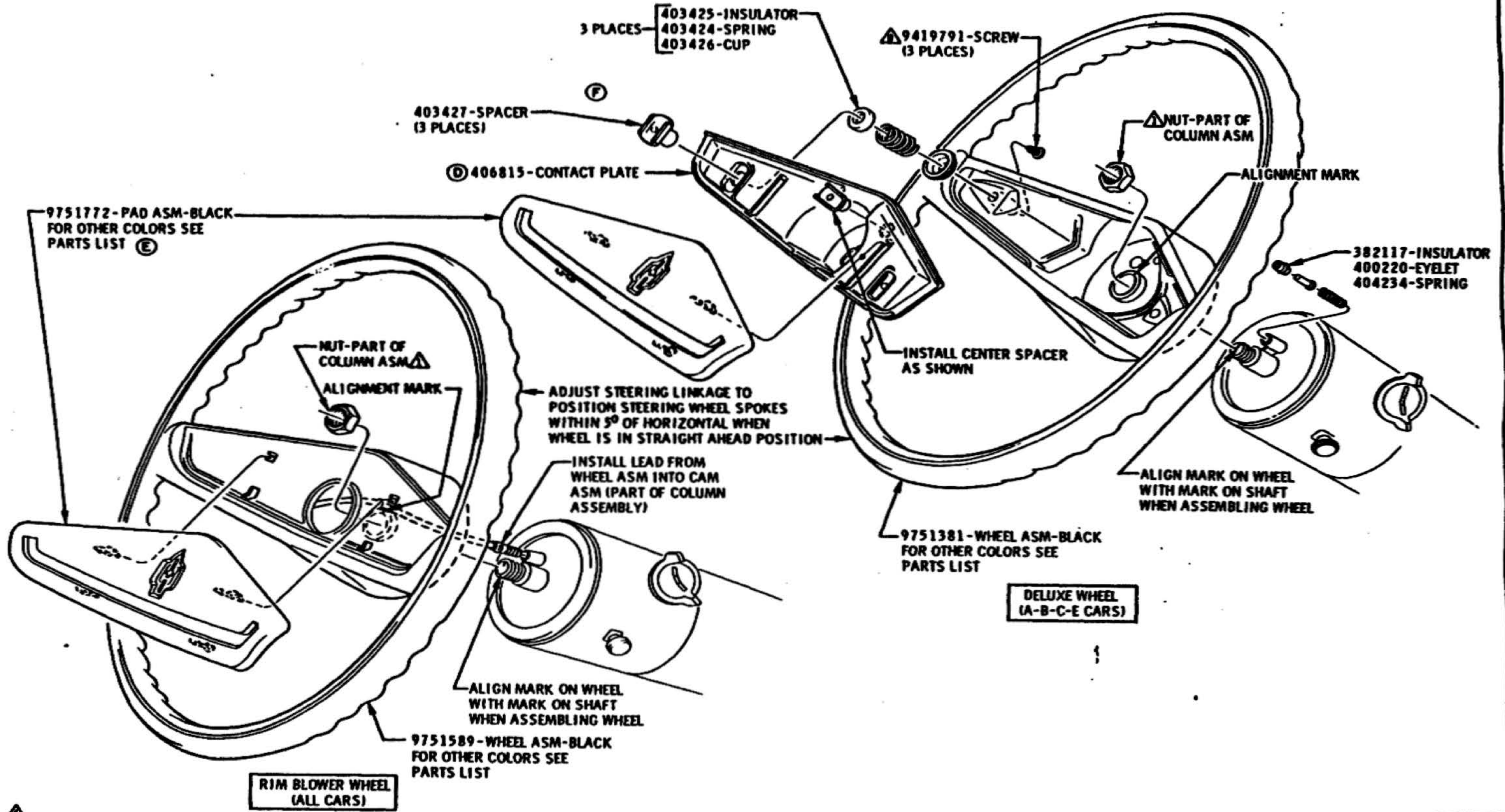
25-35 LB. FT.  
 FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

DATE		SYM	REVISION	DR.	CK.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
7-1-69	C		"B C" USAGE REMOVED			STANDARD STEERING WHEEL	1970		9	116
1-23-69	B		TORQUE RELEASED							
3-6-69	A		DWG. CHECKED & SIGNED							

REF. 9B 126	SERIES A	PART NO. 404411
----------------	-------------	--------------------

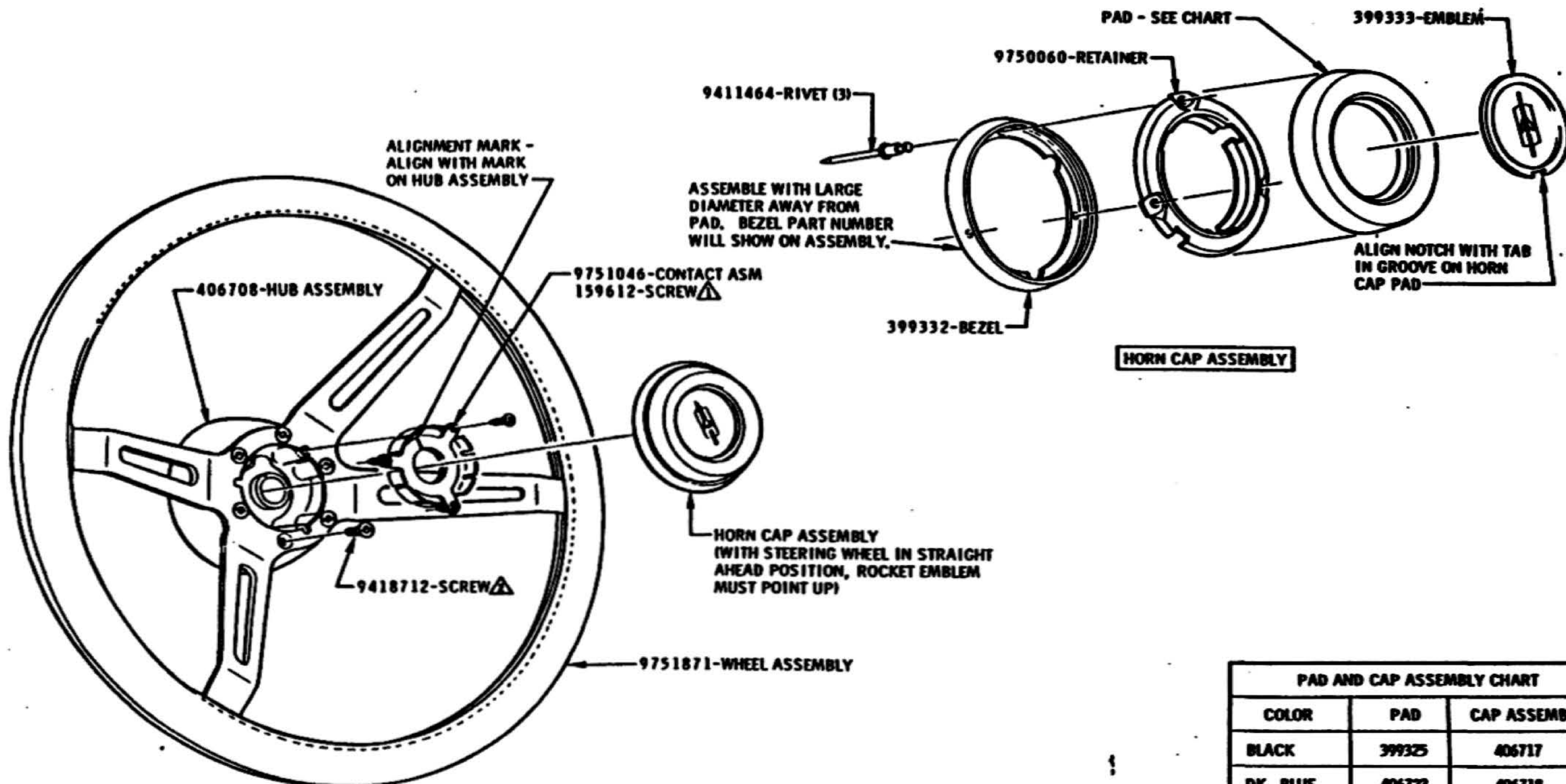




▲ 16 - 23 LB. IN.  
▲ 25 - 35 LB. FT.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYN	REVISION	DR.	CL.	DATE	SYN	REVISION	DR.	CL.	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
					7-15-69	E	NOTE LOCATION REVISED	W.E. MASON	DR.		DELUXE AND RIM BLOWER STEERING WHEELS	1970		9	118
					1-5-69	D	MRS 403428 - RATE	W.E. MASON	DR.						
					6-8-69	C	CAPACITOR ADDED	W.E. MASON	DR.						
					3-8-69	B	MRS 9751387 & 9751589 PAD	W.E. MASON	DR.						
8-4-69	F	CAPACITOR REMOVED	W.E. MASON	DR.	8-7-68	A	REVISED & REDRAWN	W.E. MASON	DR.						

REF. 98 314/10 3547E, 126  
SERIES A-B-C-E  
PART NO. 404411-2-3



**NOTE**

INSTALLATION TO COLUMN OTHERWISE  
SAME AS STANDARD STEERING WHEEL.

PAD AND CAP ASSEMBLY CHART		
COLOR	PAD	CAP ASSEMBLY
BLACK	399325	406717
DK. BLUE	406722	406718
DK. GOLD	406723	406719
DK. GREEN	406724	406720
DK. BROWN	406725	406721

▲ 20 - 30 LB. IN.  
▲ 5 - 10 LB. IN.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE		35N34 STEERING WHEEL	
DATE	APR 1 1968	FIRST USED	1970
DR. BY	M. C. MASON	OLDSMOBILE PRODUCT	INFORMATION MANUAL
CHECKED	[Signature]	MANUAL NO.	9 120
APPR.	[Signature]	FORM NO.	35734
DATE	SYN	REVISION	DR. CIL
5868 A REDESIGNED		A	
		404411	

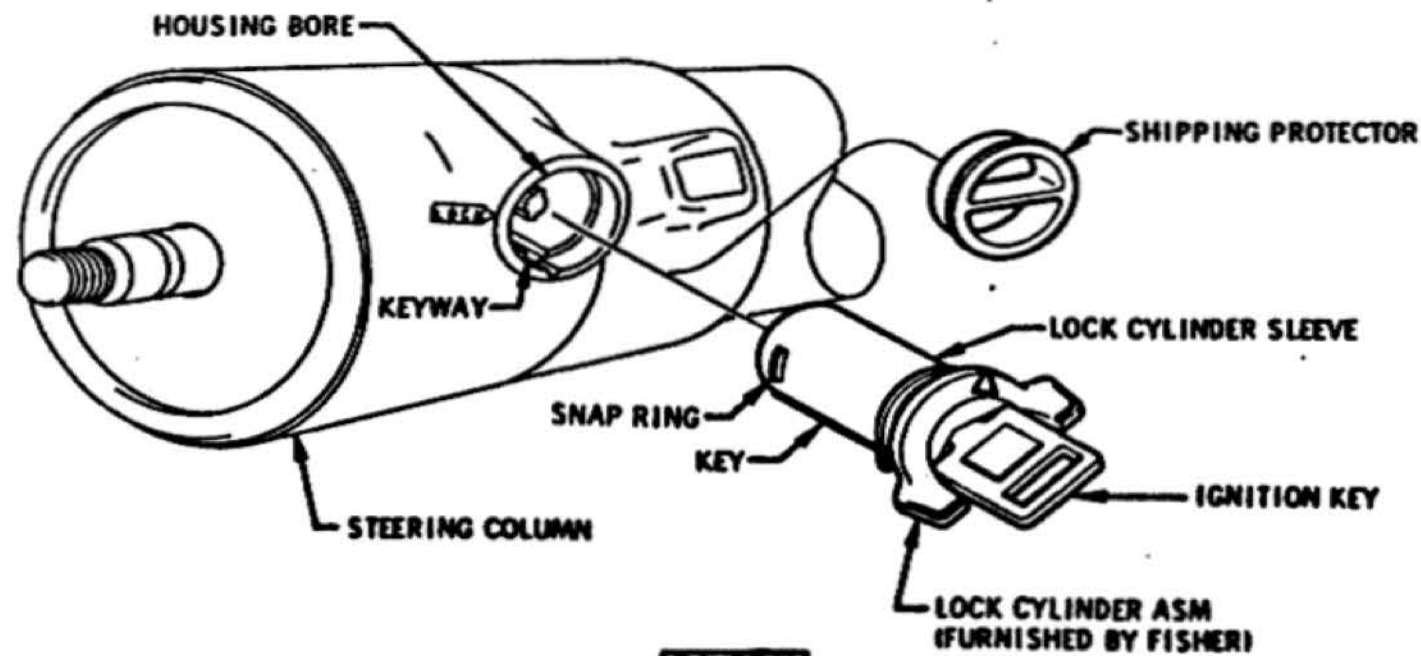


FIGURE 1

- MANDATORY PROCEDURE -  
MUST BE HAND INSTALLED & CHECKED

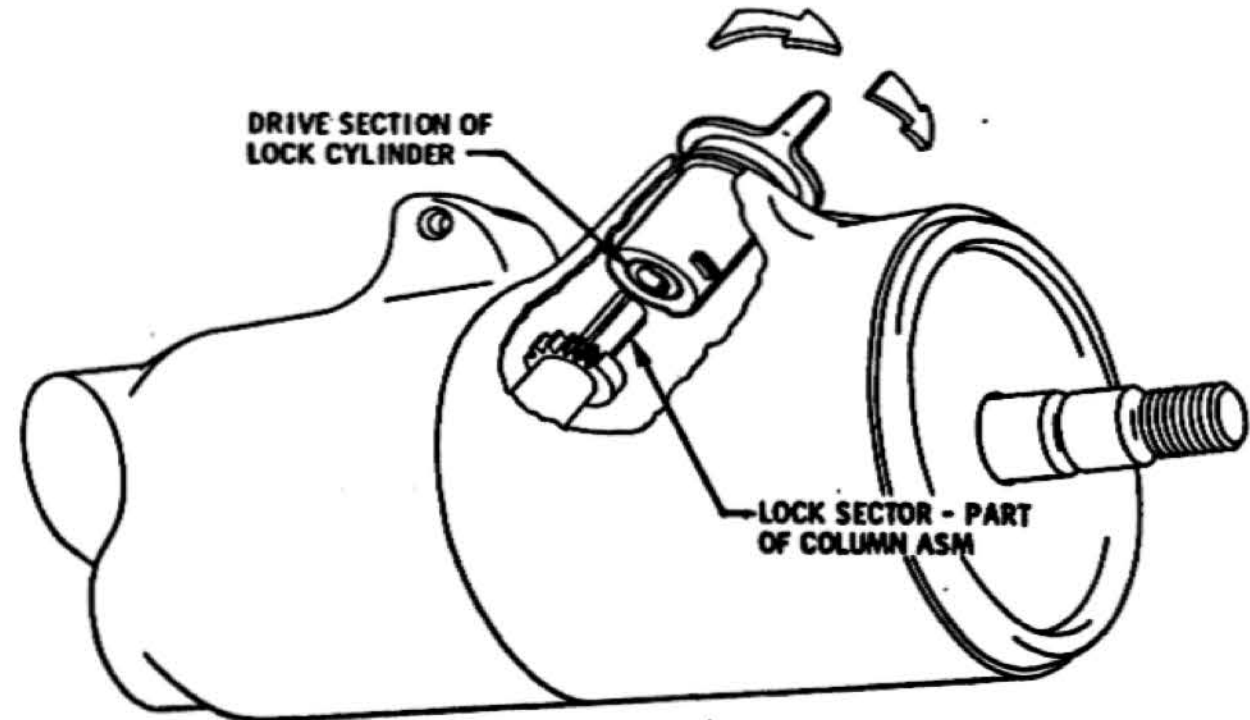


FIGURE 2

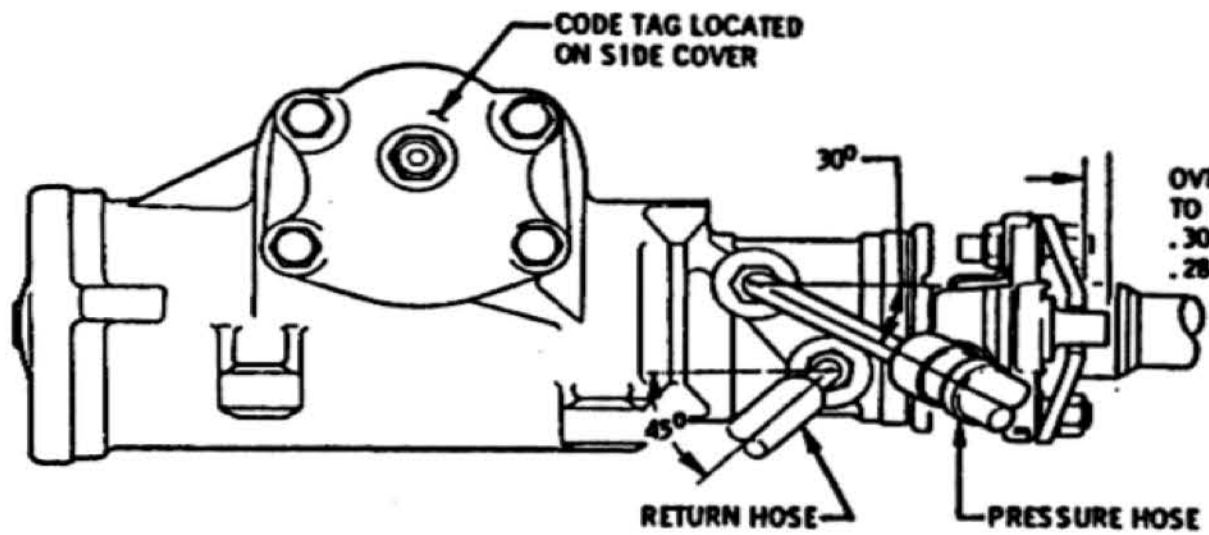
RECOMMENDED PROCEDURE

- 1 REMOVE SHIPPING PROTECTOR.
- 2 WITH IGNITION KEY IN LOCK CYLINDER ASSEMBLY, HOLD LOCK CYLINDER SLEEVE AND ROTATE KNOB CLOCKWISE AGAINST STOP WHEN VIEWED FROM KEY END. (KNOB MUST ROTATE APPROXIMATELY 104°) (FIG. 1).
- 3 INSERT CYLINDER INTO HOUSING BORE WITH KEY ON LOCK CYLINDER SLEEVE ALIGNED TO KEYWAY IN HOUSING. (FIG. 1) PUSH CYLINDER INWARD UNTIL END OF LOCK CYLINDER TOUCHES END OF LOCK SECTOR. (FIG. 2)
- 4 SLOWLY ROTATE LOCK KNOB COUNTERCLOCKWISE, MAINTAINING A LIGHT PUSH INWARD ON LOCK CYLINDER UNTIL DRIVE SECTION OF LOCK CYLINDER MATES WITH SECTOR. (FIG. 2)
- 5 PUSH LOCK CYLINDER INWARD UNTIL SNAP RING POPS INTO GROOVE IN HOUSING BORE. CHECK RETENTION OF LOCK CYLINDER IN HOUSING BORE BY PULLING OUTWARD ON LOCK CYLINDER. IF LOCK CYLINDER PULLS OUT, GO BACK TO STEP 2 AND START PROCEDURE OVER.
- 6 CHECK FREEDOM OF ROTATION OF LOCK CYLINDER IN HOUSING. THERE MUST BE A FREE SPRING RETURN FROM "START" TO "RUN" POSITIONS.

NOTE

THE STEERING COLUMN WILL BE SHIPPED TO ASSEMBLY PLANT WITH THE IGNITION SWITCH POSITIONED IN "RUN".

TITLE				LOCK CYLINDER INSTALLATION PROCEDURE			
DATE	NOV. 6 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	9	PAGE 122
DR. BY	W. C. NASON	CHECKED					
APPR.		APPR.					
DATE	SYM	REVISION	DR. CK.	APPR.			
				REV. 1A/9C	SECS	A-B-C-E	PART NO. 404411-2-3



VIEW B

OVERLAP OF COUPLING PINS TO SHAFT FLANGE TO BE  
 $.302 \pm .06$  - EXC. 35N33  
 $.286 \pm .06$  - 35N33

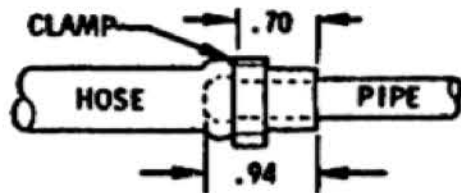
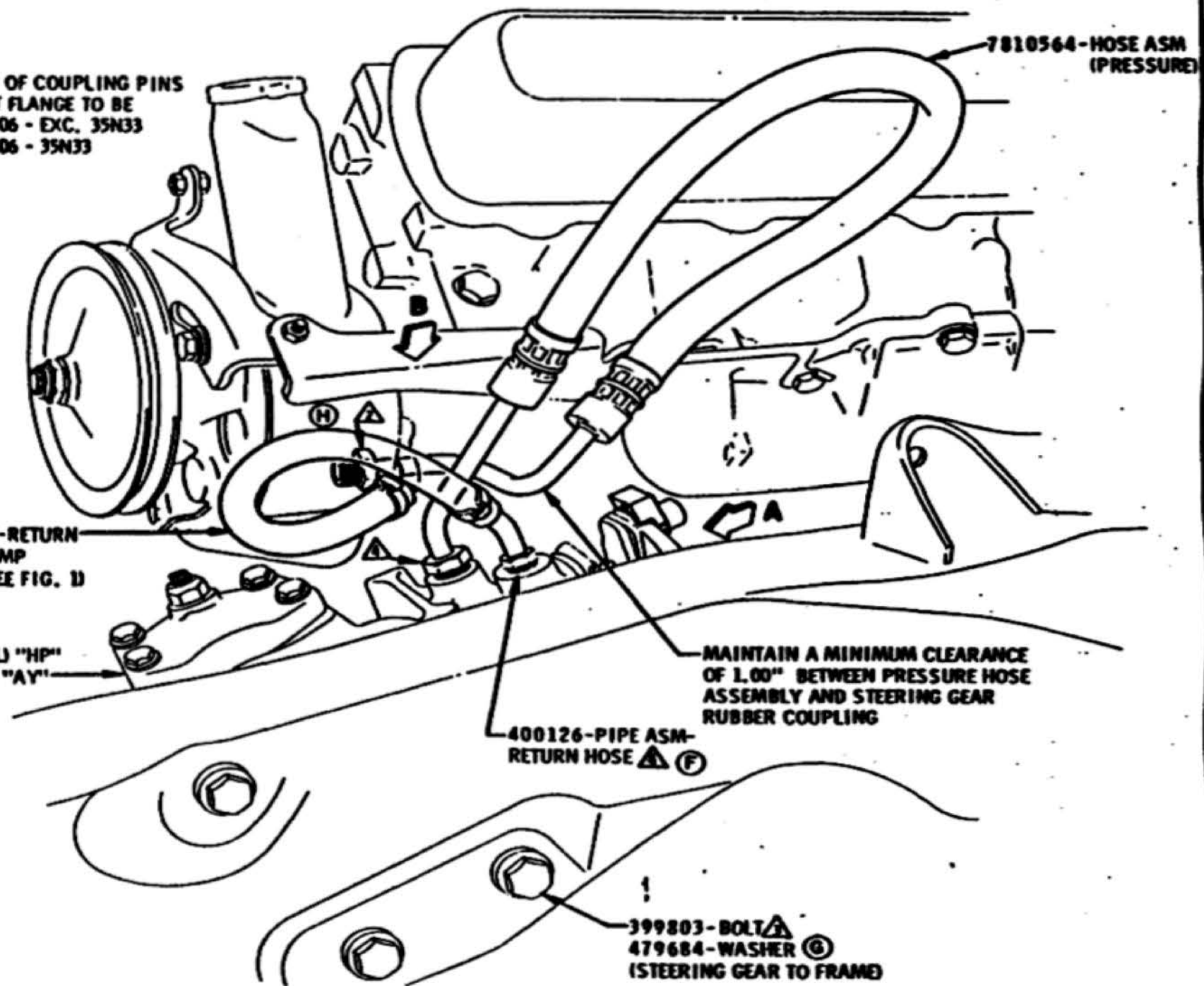
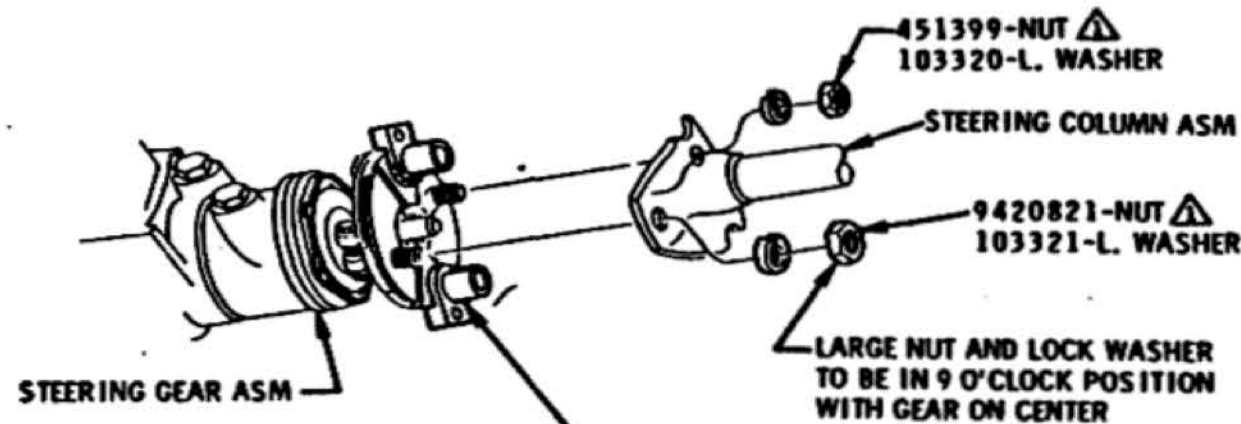


FIGURE 1 (TYPICAL HOSE CLAMPING)



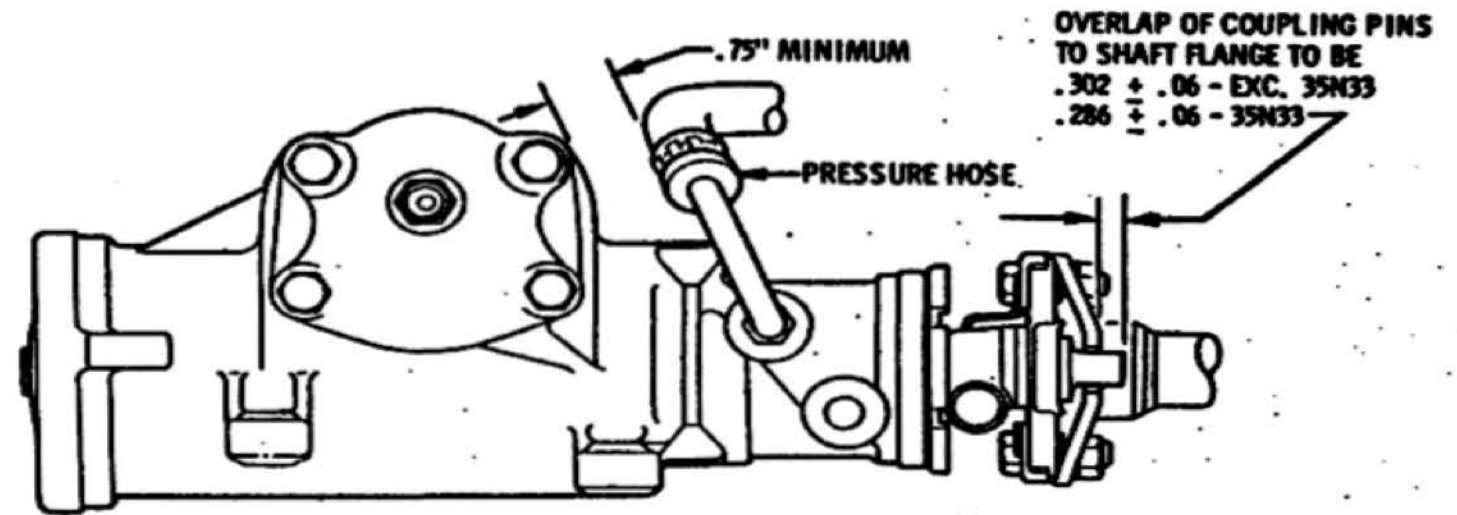
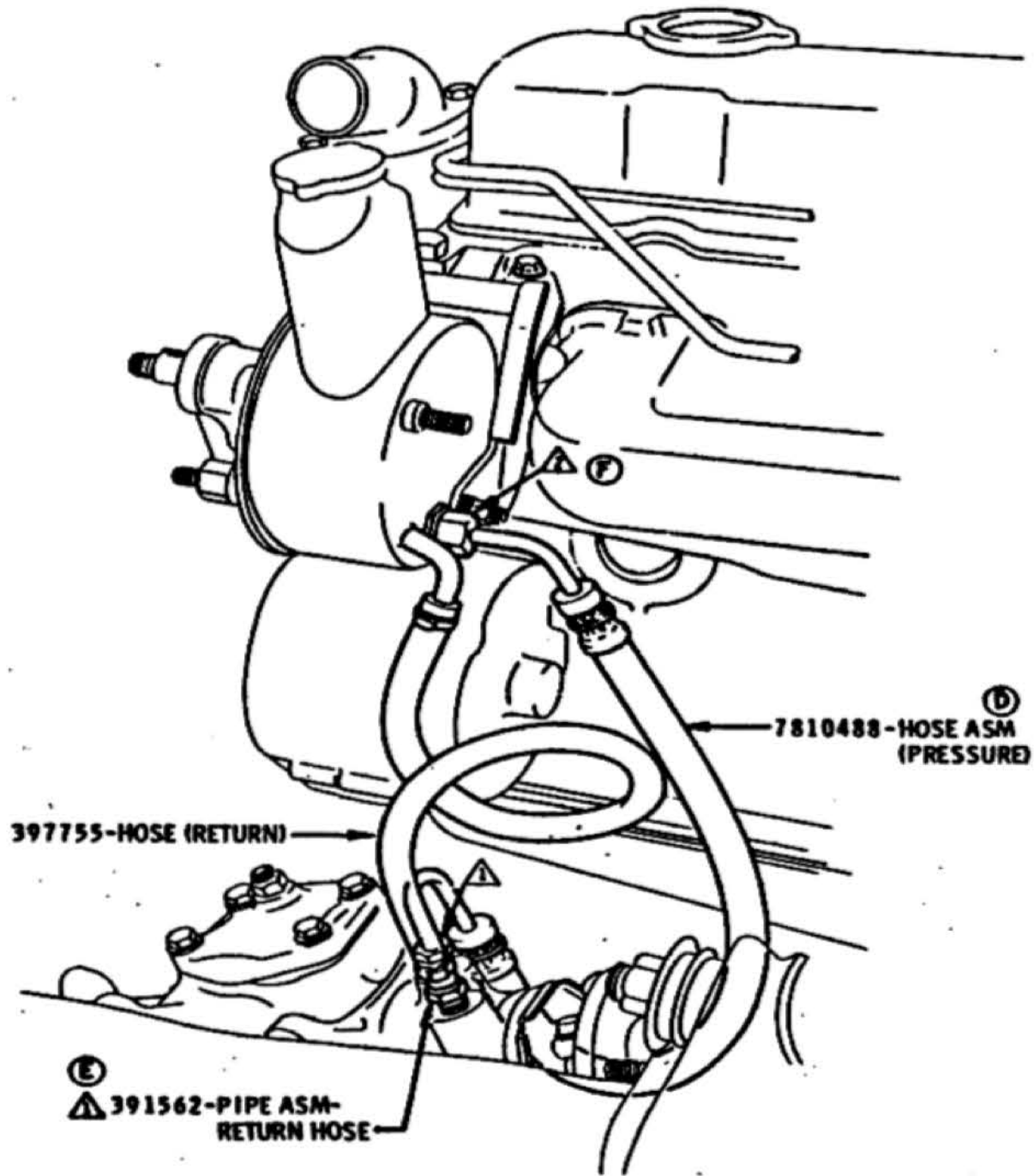
VIEW A

ALIGNMENT SPACERS TO BE REMOVED (ON MANUAL GEAR ONLY) AFTER ASSEMBLY OF STEERING GEAR COUPLING TO STEERING SHAFT LOWER FLANGE

- ▲ 20 - 30 LB. FT.
- ▲ 60 - 80 LB. FT.
- ▲ 30 - 40 LB. FT. (H)
- ▲ 15 - 25 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

FOR POWER STEERING INSTALLATION AND FILL PROCEDURE, SEE FRONT OF SECTION

DATE		SYM	REVISION	DR	CK	APPR	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
11-20-68	11-20-68	1	TORQUE REVISED				V-8 STEERING GEAR AND HOSES	1970		9	126
11-20-68	11-20-68	2	WAS 9420821-WASHER								
11-20-68	11-20-68	3	TORQUE REVISED								



FOR BALANCE OF INFORMATION  
SEE V-8 STEERING GEAR PAGE 126.

▲ 30 - 40 LB. FT.  
▲ 20 - 30 LB. FT.  
▲ FULLY DRIVEN, SEAVED AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
					8-18-64	E	TORQUE REVISED			L-6 POWER STEERING HOSES	1970	A	9	127
				9-11-64	D	TORQUE REVISED								
				2-11-65	C	WAS 780837-ARSE ARM								
				8-5-65	B	NOTE ADDED								
				3-18-65	A	WAS 700412 HOSE ASM								
11-2-67	F	WAS 20-30 LB. FT.												

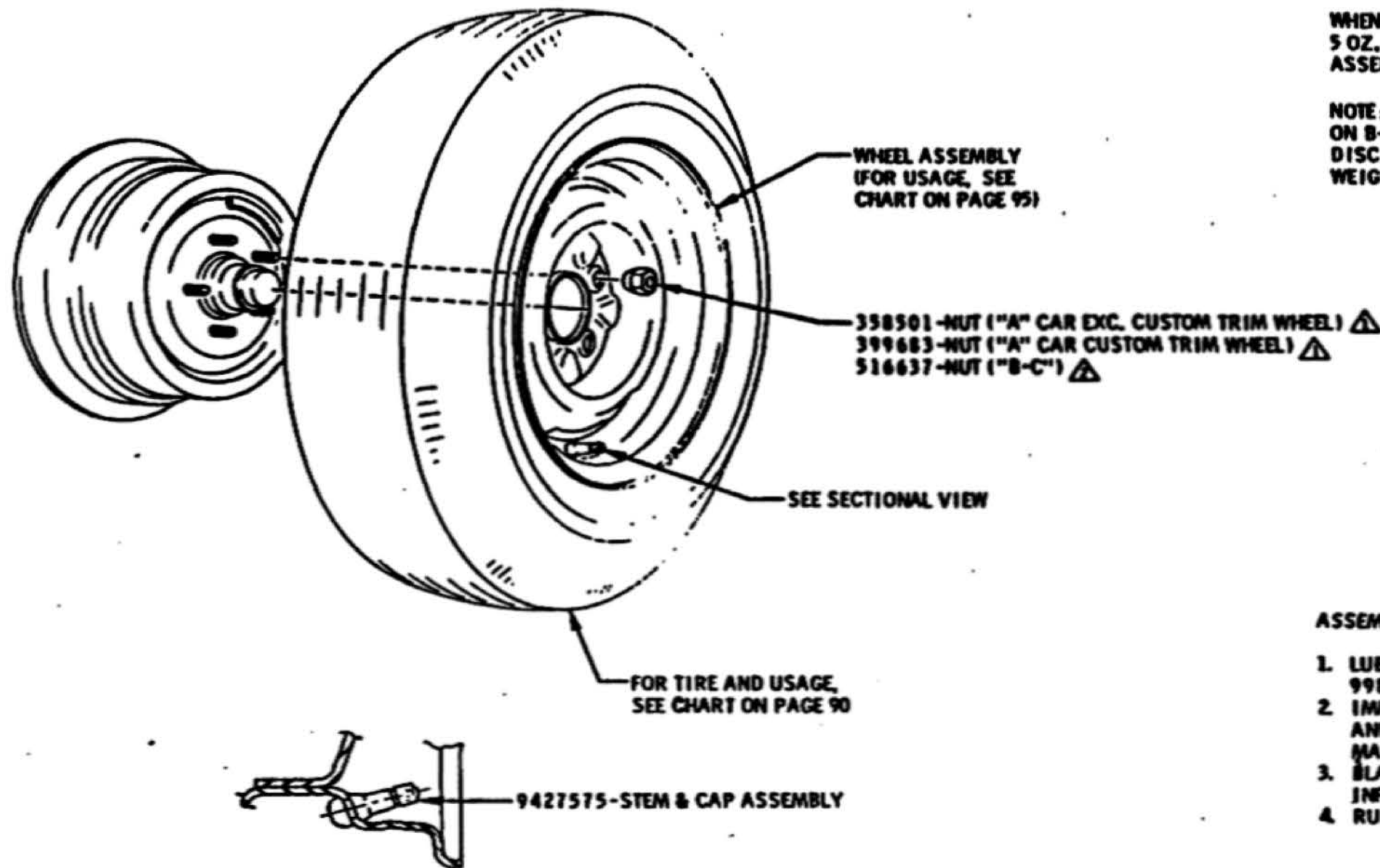


**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

GROUP	DESCRIPTION	A			B			C			E		
		PART NO.	CODE	REMARKS	PART NO.	CODE	REMARKS	PART NO.	CODE	REMARKS	PART NO.	CODE	REMARKS
108		3928297	XE	ALL EXC. 442 & S. W.	402288	LM		402288	LM	(OPTIONAL) ©	405663	LU	
		9791450	HF	ALL EXC. 442 & S. W. (OPT.)	406490	MB	(OPT.)	406490	MB				
		3966936	XT	442									
		9798480	IF	442 (OPT.)									
		403397	LR	S. W.									
FE2	442 WHEEL	3966936	XT										
		9798480	IF	(OPT.)									
J55	HEAVY DUTY FRONT DISC BRAKE				403898	LT		403898	LT				
N66	STYLED WHEEL	406069	MA										
N99	HEAVY DUTY				403898	LT		403898	LT				
PC2	442 WHEEL	3966936	XT										
		9798480	IF	(OPT.)									
P03	DELUXE DISC									405665	LU		
P05	STYLED WHEEL	406070	LZ										
W45	STYLED WHEEL	408071	MA										
Y74	STYLED WHEEL	409059	MA	4267 & 4467									
97-10	CKD	3928395	YB					403898	LT				
99	DRIVEAWAY CHASSIS												

ⓑ  
ⓓ

										TITLE		CHART - WHEEL USAGE			
										311700 Y-74 ADDED		DATE MARCH 5, 1969			
										402288 OPT. ADDED		FIRST USED 1970			
										402288 OPT. ADDED		OLDSMOBILE PRODUCT INFORMATION MANUAL			
										REVISED		MANUAL SEC. 10			
										REVISED		PAGE 95			
										REVISED		SERIES A-B-C-E			
										REVISED		PART NO. 406305			
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.



ⓐ WHEN STATIC BALANCE WEIGHT GREATER THAN 3 OZ. IS REQUIRED, THE ADDITIONAL WEIGHT IS TO BE INSTALLED ON THE OPPOSITE RIM FLANGE.

WHEN TIRE AND WHEEL ASSEMBLY REQUIRES OVER 5 OZ. OF WEIGHT TO BALANCE WITHIN 4 IN. OZ., ASSEMBLY IS TO BE REJECTED.

NOTE:  
ON B-C CARS WITH 35P03 WHEEL DISCS, INSTALL FIRST 3 OZ. OF WEIGHT ON INSIDE RIM FLANGE.

SECTION THROUGH WHEEL AT VALVE STEM

ASSEMBLY INSTRUCTIONS - TIRE TO WHEEL -

1. LUBRICATE TIRE BEADS AND VALVE STEM ASSEMBLY WITH 9985005 LUBRICANT.
2. IMMEDIATELY ASSEMBLE VALVE STEM AND TIRE TO WHEEL AND INFLATE TO 24 - 30 P. S. I. INSTALLATION MUST BE MADE BEFORE LUBRICANT IS DRY.
3. BLACK SIDEWALL TIRES TO BE MOUNTED WITH MANUFACTURING INFORMATION TOWARD CENTERLINE OF CAR.
4. RUNOUT OF WHEEL AND TIRE ASSEMBLY:  
 .060 T. I. R. RADIAL MAXIMUM  
 .085 T. I. R. LATERAL MAXIMUM

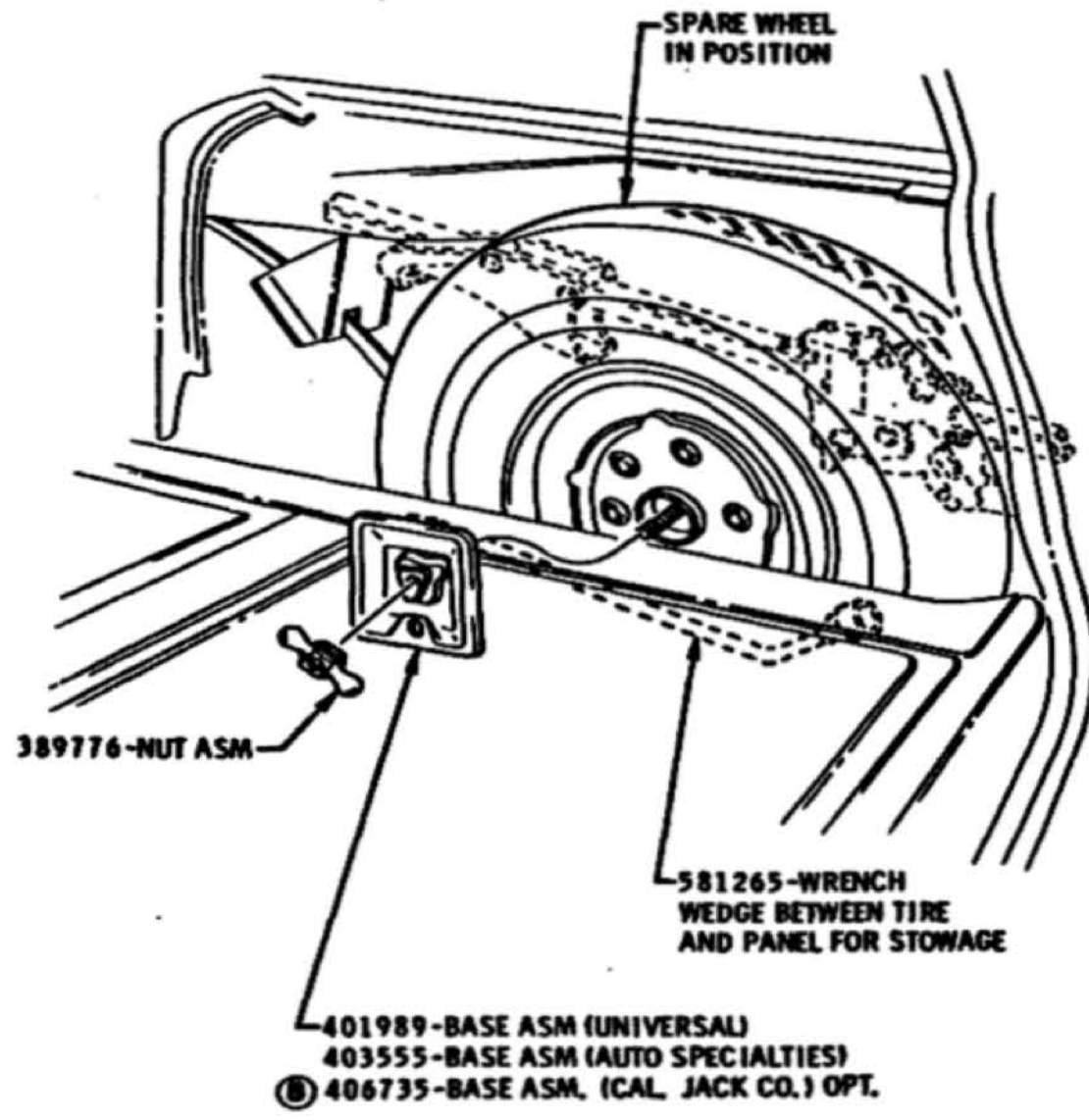
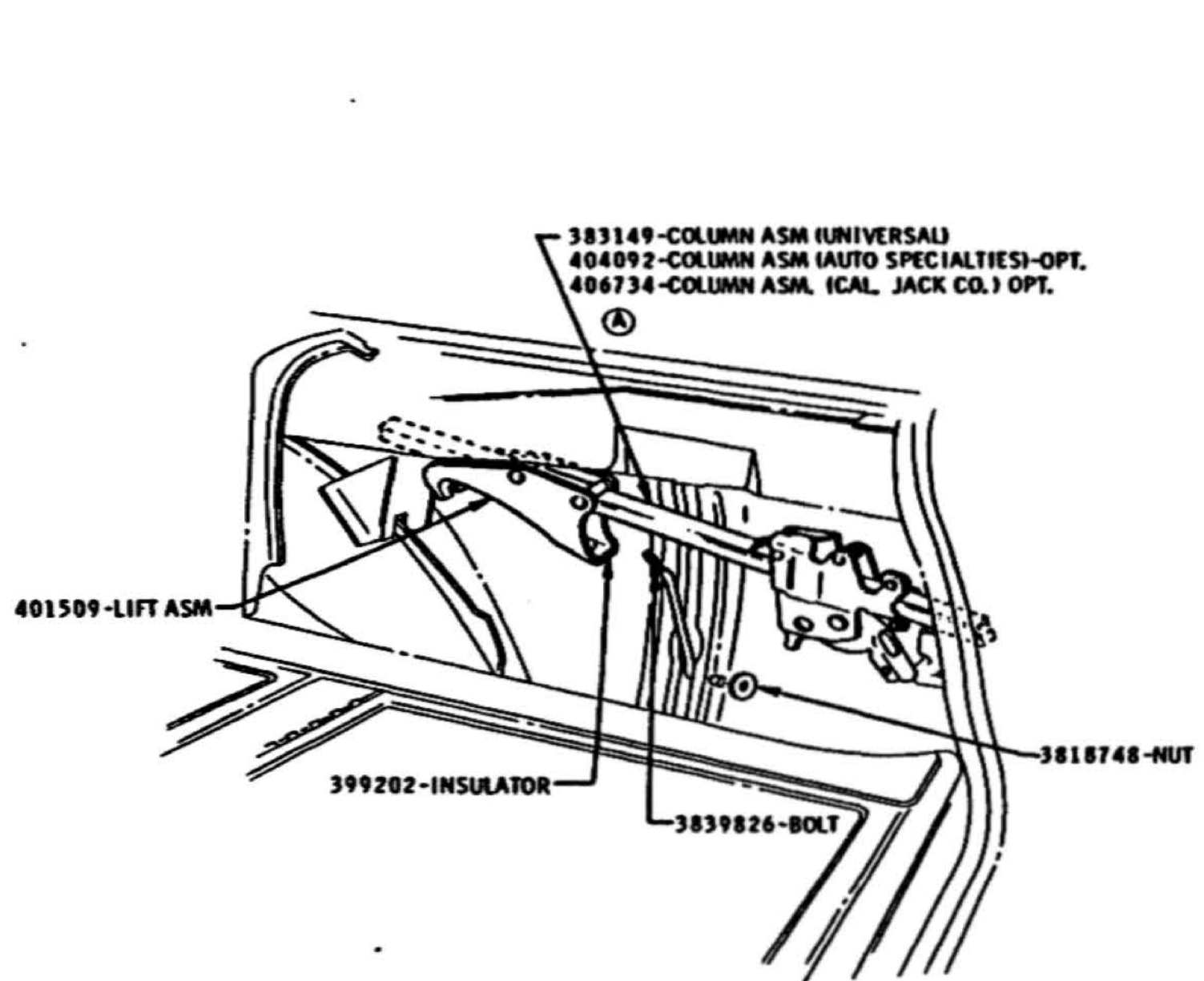
FOR TIRE VALVE EXTENSIONS AND TRIM RING STOWAGE, SEE SECTION "O"

⚠ 65-85 LB. FT.  
 ⚠ 60-80 LB. FT.  
 ⚠ FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE				WHEEL AND TIRE ASSEMBLY					
				DATE <i>MAY 6, 1969</i>				FIRST USED		1970		MANUAL SEC. PAGE	
				DR. BY <i>130YER</i>						OLDSMOBILE PRODUCT INFORMATION MANUAL		10 100	
				CHECKED <i>MBernhart</i>				REV. 108		GROUP		PART NO.	
<i>12-18-68 A</i>				<i>INSTRUCTIONS REVISED</i>						<i>A-B-C</i>		<i>404411-2</i>	
DATE	BY	REVISION	DR. CL.	APP.	DATE	BY	REVISION	DR. CL.	APP.	DATE	BY	REVISION	

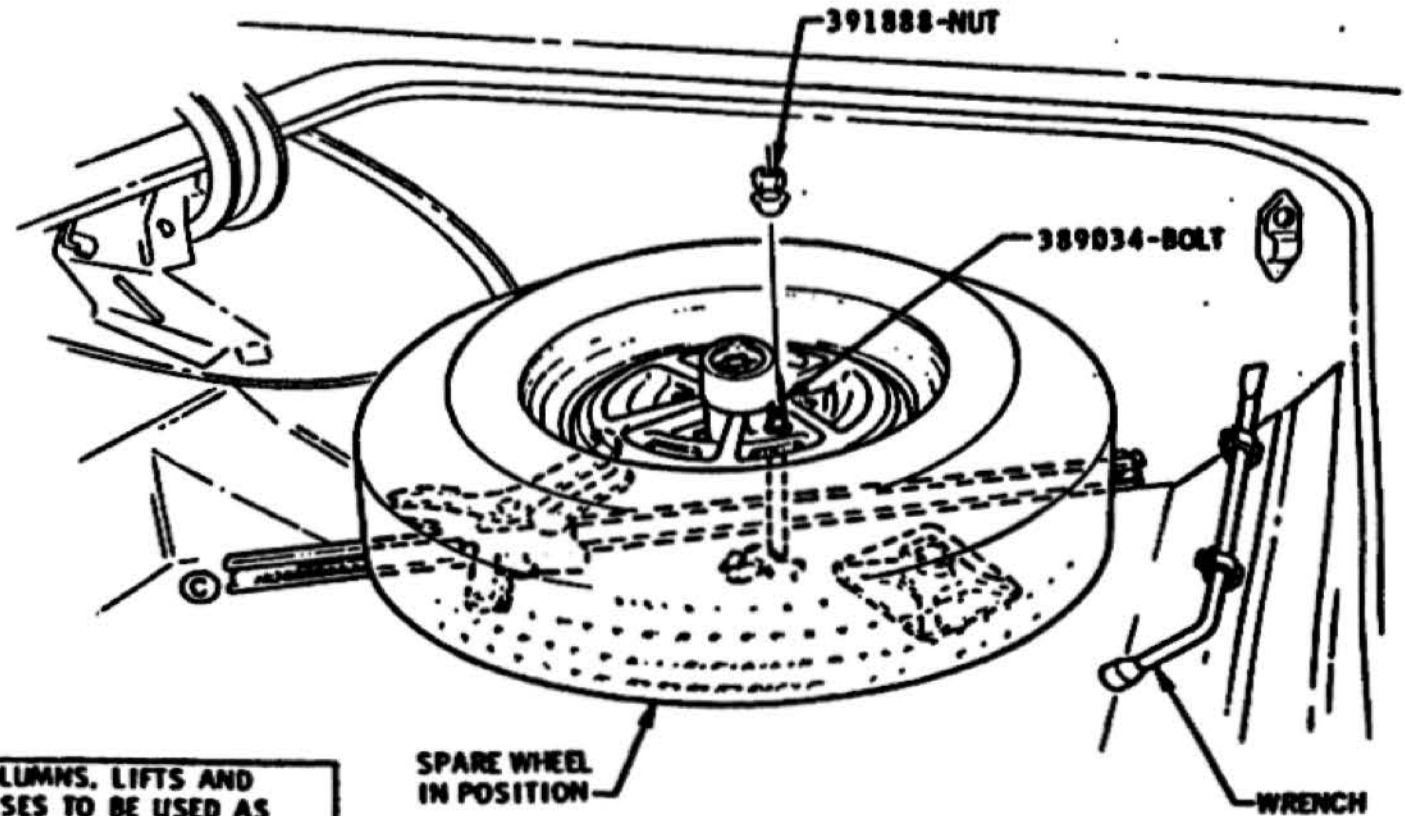




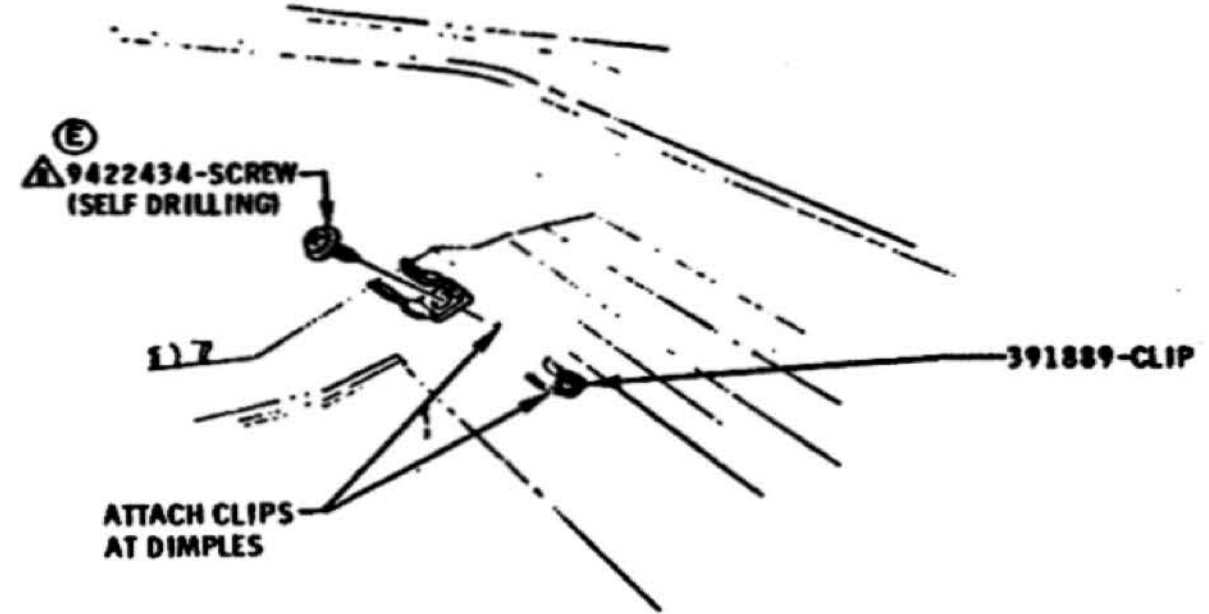
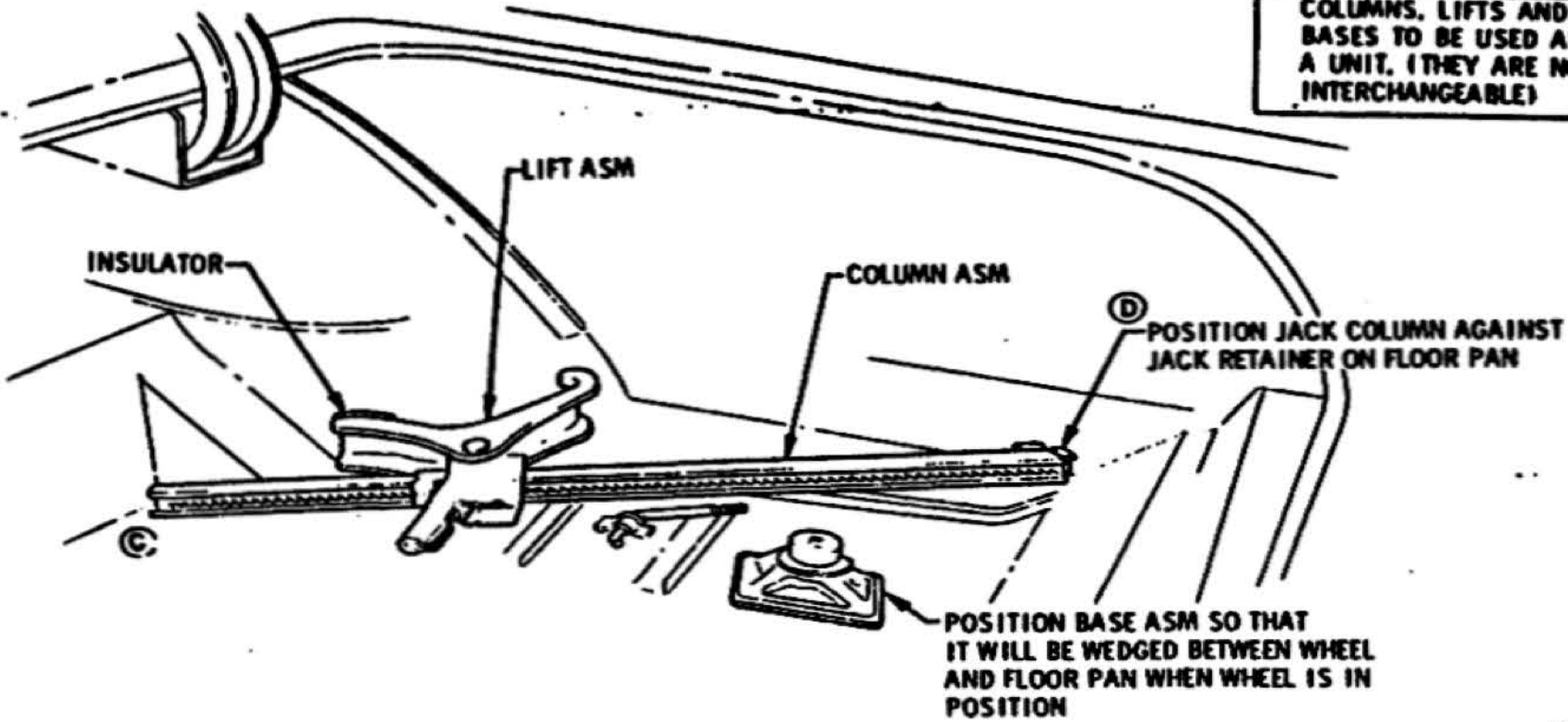


NOTE:  
"UP" AND "DOWN" LEVER  
ON JACK ASM TO BE IN "UP"  
POSITION WHEN JACK IS  
STORED

				TITLE SPARE WHEEL AND JACK STOWAGE (STATION WAGON)								
				DATE	NOVEMBER 19, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	10	PAGE	104
				DR. BY	A. PARKER							
				CHECKED	M. J. GIBBART							
				APPR.	J. J. JAMES							
5-13-69	B	406735-BASE ASM OPT ADDED	BY	TS								
5-13-69	A	406734 COL ASM OPT. ADDED	BY	TS								
DATE	SYM	REVISION	DR.	CK.	APPR.	NO.	100-18E	SERIES	A	PART NO.	404411	



COLUMNS, LIFTS AND BASES TO BE USED AS A UNIT. (THEY ARE NOT INTERCHANGEABLE)



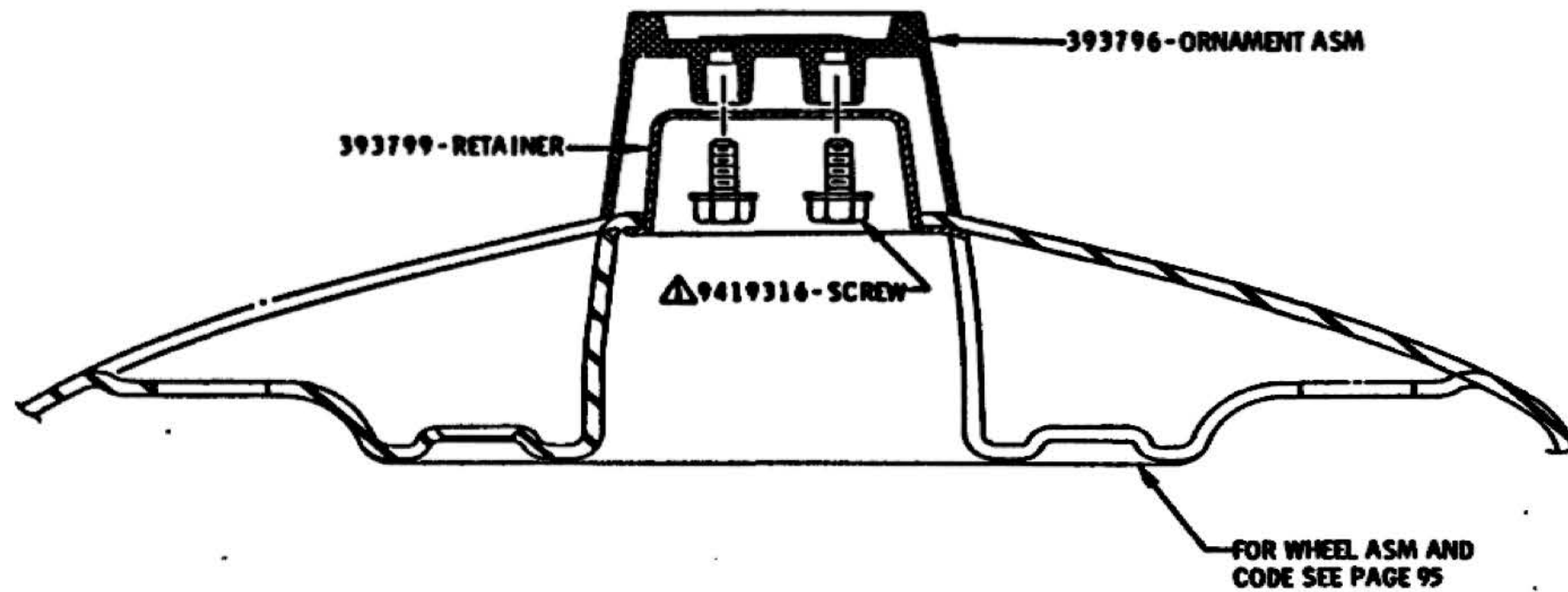
BALANCE OF PARTS SAME AS STANDARD CAR. PART NUMBERS ARE SHOWN ON PAGE 102

NOTE:  
"UP" AND "DOWN" LEVER TO BE IN "UP" POSITION WHEN JACK IS STORED IN TRUNK

10-6-69	E	9422434-SCREW	5/16"	1/2"	TITLE	CUSTOM TRIM WHEEL AND JACK STOWAGE (35P05, 35N66)	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	10	PAGE	106			
5-6-69	D	JACK RETAINER ADDED	5/16"	1/2"	DATE	NOVEMBER 19, 1968	DR. BY	B. PARKER	CHECKED	M. Bamhart	REV.	14E, 35P05	SERIES	A	PART NO.	404411
5-6-69	C	JACK RETAINER REMOVED	5/16"	1/2"	APPR.	V. J. J. J.										
2-25-69	B	TITLE REVISED														
2-12-69	A	TITLE REVISED														
DATE	SYM	REVISION	DR.	CK.	APPR.											

FULLY DRIVEN, SEATED AND NOT STRIPPED

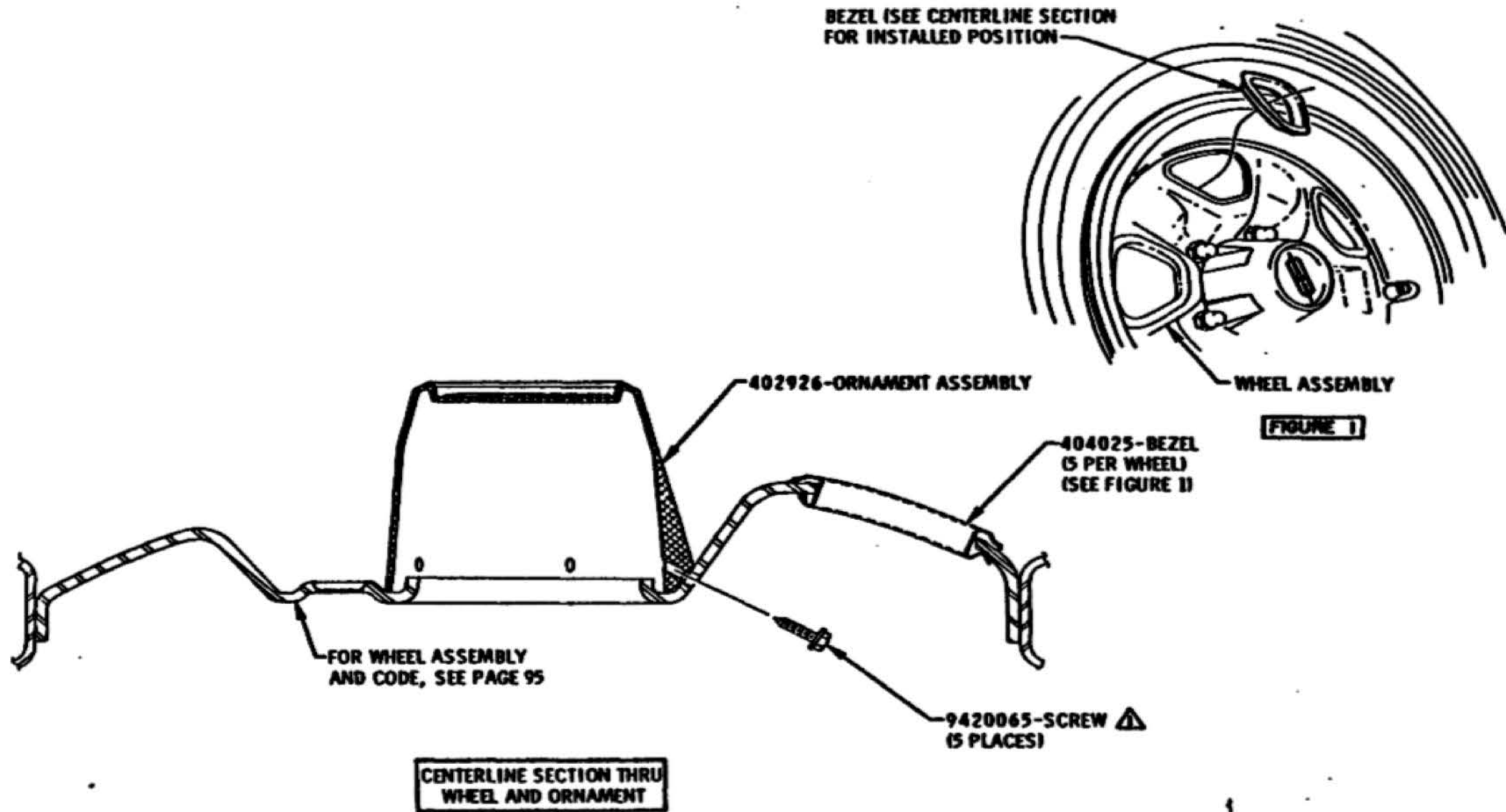




Ⓐ FOR TRIM RING INSTRUCTIONS, SEE LOOSE PARTS STORAGE IN SECTION "O"

△60 - 90 LB. IN.

				TITLE		35P05 WHEEL ASSEMBLY			
				DATE		OCTOBER 29, 1968		FIRST USED	
				DR. BY		P. LOCATELLI		1970	
				CHECKED		P. J. B. [Signature]		OLDSMOBILE PRODUCT INFORMATION MANUAL	
				DATE		12-17-68		REVISION	
				SYN		A		NOTE ADDED	
				REVISION		A		REV. [Signature]	
				DR. CK.		P. J. B.		35P05	
				APPR.		L. W. [Signature]		SERIES	
								A	
								PART NO.	
								404411	
								MANUAL SEC. PAGE	
								10 110	



FOR TRIM RING INSTRUCTIONS, SEE  
 LOOSE PARTS STORAGE IN SECTION 'O'

▲  
 ▲  
 ▲  
 ▲ 60 - 90 LB. IN.  
 ▲ FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

				TITLE		N66 WHEEL ASSEMBLY	
				DATE		FIRST USED	
				MAY 6, 1969		1970	
				DR BY		OLDSMOBILE PRODUCT	
				J. BOYER		INFORMATION MANUAL	
				CHECKED		MANUAL NO.	
				M. J. LAST		10 112	
				APP.		SERIES	
						A	
				DATE		PART NO.	
						404411	
DATE	SYM	REVISION	DR.	CK.	APP.		

COOLANT REQUIRED TO GIVE 40% SOLUTION BY VOLUME WITH FREEZE  
POINT OF -20° F (SEE EXCEPTIONS)

MODELS	TOTAL COOLING SYSTEM CAPACITY	QUANTITY OF COOLANT SOLUTION
ALL 250 CU. IN. EXC. A/C	12.2 QTS.	3.4 QTS.
ALL 250 CU. IN. A/C	12.2 QTS.	3.4 QTS.
ALL 250 CU. IN. Y72	12.7 QTS.	3.6 QTS.
ALL 350 CU. IN. EXC. A/C	15.9 QTS.	7.0 QTS.
ALL 350 CU. IN. A/C OR V01	16.7 QTS.	7.4 QTS.
ALL 350 CU. IN. Y72	17.8 QTS.	7.8 QTS.
ALL 455 CU. IN. EXC. A/C	16.8 QTS.	7.4 QTS.
ALL 455 CU. IN. A/C OR V01	17.3 QTS.	7.7 QTS.
ALL 455 CU. IN. Y72	18.7 QTS.	8.2 QTS.

ⓑ

GENERAL

CAUTION: SOLUTION LEVEL MUST BE HELD TO "FILL COLD" MARK TO PREVENT LEAKAGE DURING TRANSPORTATION AND LOSS OF COOLANT DURING OPERATION. THIS LEVEL IS MEASURED WITH COOLANT AT ROOM TEMPERATURE TO ALLOW EXPANSION VOLUME OF COOLANT UNDER OPERATION CONDITIONS. EXTREME CARE MUST BE TAKEN IN FILLING COOLING SYSTEM TO PREVENT DAMAGE TO CAR FINISH.

NOTE: COOLING SYSTEM OPERATION CAPACITY COOLANT AT ROOM TEMPERATURE FILLED TO "FILL COLD" MARK.

★ ONE (1) ADDITIONAL QUART OF UNDILUTED ETHYLENE GLYCOL COOLANT WHICH MEETS SPECIFICATION #998012 IS TO BE ADDED TO THE RADIATOR PRIOR TO NORMAL FILL AND WILL PROVIDE A 50% SOLUTION FOR ALL CANADIAN EXPORT CARS.

RADIATOR FILL REQUIREMENTS:

1. ETHYLENE GLYCOL TWO YEAR COOLANT MEETING SPECIFICATION #998012 MANDATORY IN ALL SERIES YEAR AROUND TO PROVIDE AN INHIBITED COOLANT IN THE AMOUNTS TABULATED.
2. SOLUBLE OIL MEETING SPECIFICATION OF #998017 TO BE ADDED TO ALL SERIES IN FOLLOWING QUANTITY.  
2.00 ± .25 OZ. PER CAR OR .29 GAL. PER 100 GAL. OF COOLANT.
3. #998168 SEALER TO BE ADDED TO COOLING SYSTEM (2 PELLETS PER CAR) IN ALL SERIES.
4. ANTI FOAM ADDITIVE, SPECIFICATION #998147, TO BE ADDED TO ALL 455 CU. IN. ENGINES IN THE FOLLOWING QUANTITY - 2.00 OZ. PER CAR.

PRODUCTION SAMPLE TO BE TESTED AND APPROVED BY PRODUCT ENGINEERING FOR OLDSMOBILE PARTS.

										TITLE		CHART - COOLING SYSTEM FILL						
										DATE	OCT 5, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	11	PAGE	25
										DR. BY	R. LOVELL							
										CHECKED	John P. ...							
										DR. BY	H. F. ...							
DATE	BY	REVISION	DR. CK.	DATE	BY	REVISION	DR. CK.	DATE	BY	REVISION	DR. CK.	REV.	SERIES	PART NO.				
													A	404587				

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
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		(P)	(R)	(T)	1970 RADIATOR USAGE				
MODEL	Y72	C60 & L31	C60 & W32	C60	V02	V01	M40	M38	STANDARD
3100, 3500	FE 3014745	--	--	SB 3014619	--	--	--	S1 3014744	SH 3014743
(S) 3200, 3600	ED 3017108	--	--	FE 3014745	FE 3014745	EC 3017107	--	FB 3014748	FD 3014740
(U) 4200	ED 3017108	F1 3023114	F1 3023114	FE 3014745	FE 3014745	EC 3017107	FB 3014748	FB 3014748	FD 3014740
4400	ED 3017108	--	--	EC 3014707	FE 3014745	EC 3017107	FB 3014748	--	FA 3014742
4800	ED 3017108	F1 3023114	--	FE 3014745	--	--	FB 3014748	FB 3014748	FD 3014740

MODEL	Y72	C60, C61, L30, L31 & 98L91	C60, C61	M41	M40 L30, L31, & 98L91	M40	STANDARD
5400	LC 3021970	OR 3017166	OU 3020543	OA 3016833	OA 3016833	OT 3018248	OD 3014644
6400, 6600	LC 3021970	--	OR 3017166	OA 3016833	--	OA 3016833	OD 3014644
8400, 8600	LC 3021970	--	OR 3017166	--	--	--	OA 3016833
9860	LC 3021970	--	--	--	--	--	--
9400, 9600	WM 3022066	--	WL 3020533	--	--	--	WJ 3020532

V01 MANDATORY WHENEVER 3.91 AXLE RATIO IS USED.  
NOT AVAILABLE WITH C60 OR Y72.  
V02 MANDATORY WHENEVER 3.42 AXLE RATIO IS USED.  
NOT AVAILABLE WITH C60 OR Y72.  
SEE AXLE RATIO USAGE CHART FOR AVAILABILITY.

TO READ CHART:

READING CHART FROM LEFT TO RIGHT, THE FIRST OPTION REACHED THAT IS COMPLETELY SATISFIED WILL INDICATE THE RADIATOR TO BE USED ON THAT MODEL. IF NONE OF THE CONDITIONS ABOVE ARE SATISFIED, THE LAST COLUMN IS STANDARD CAR (LESS ALL OPTIONS SHOWN TO THE LEFT OF IT) AND WILL INDICATE THE RADIATOR TO BE USED.

- C60 - AIR CONDITIONING
- C61 - AIR CONDITIONING - AUTOMATIC CONTROLS
- L30 - 455 CUBIC INCH V-8 LOW COMPRESSION 2 BBL. (5400)
- L31 - 455 CUBIC INCH V-8 HIGH COMPRESSION 4 BBL. (8 & 4800)
- M38 - 3-SPEED TURBO-HYDRAMATIC TRANSMISSION
- M40 - 3-SPEED TURBO-HYDRAMATIC TRANSMISSION
- M41 - 3-SPEED TURBO-HYDRAMATIC TRANSMISSION WITH 455 CU. IN. ENGINE
- V01 - HEAVY DUTY RADIATOR - 2.70 INCH CORE
- V02 - HEAVY DUTY RADIATOR - 2.00 INCH CORE
- Y72 - HEAVY DUTY ENGINE COOLING

REVISIONS				TITLE				FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE	
32570 U	3023114	ADDED	MS	CHART - RADIATOR IDENTIFICATION				1970			11	50	
32570 T	L33	REMOVED	MS	DATE DEC. 16, 1969									
32570 S	3600	BELOCATED	MS	DR BY D. S. G. T. I									
12981 K	L31	REMOVED	MS	CHECKED J. AMES									
12981 F	COLUMN	ADDED	MS	APPR. SCHEITELBERG									
DATE	SYM.	REVISION	DR.	CK.	APPR.			SERIES		PART NO.		A-B-C-E 404411-2-3	



MODEL	RADIATOR SUPPORT ASSEMBLY				RADIATOR UPPER BAFFLE ASSEMBLY				RADIATOR INSULATORS			
	Y72	C60	V01	STD.	Y72	C60	V01	STD.	Y72	C60	V01	STD.
31-3500	405118	405118	--	405118	403028	403028	--	403028	391321	391321	--	391321
32-36-4200	405125	405118	405125	405119	403029	403028	403029	405038	391320	391321	391320	391321
4400	405125	405125	405125	405119	403029	403029	403029	405038	391320	391320	391320	391321
4800	405125	405118	405125	405119	403029	403028	403029	405038	391320	391321	391320	391321

C60 - AIR CONDITIONING  
V01 - HEAVY DUTY RADIATOR - 2.70 INCH CORE  
Y72 - HEAVY DUTY ENGINE COOLING

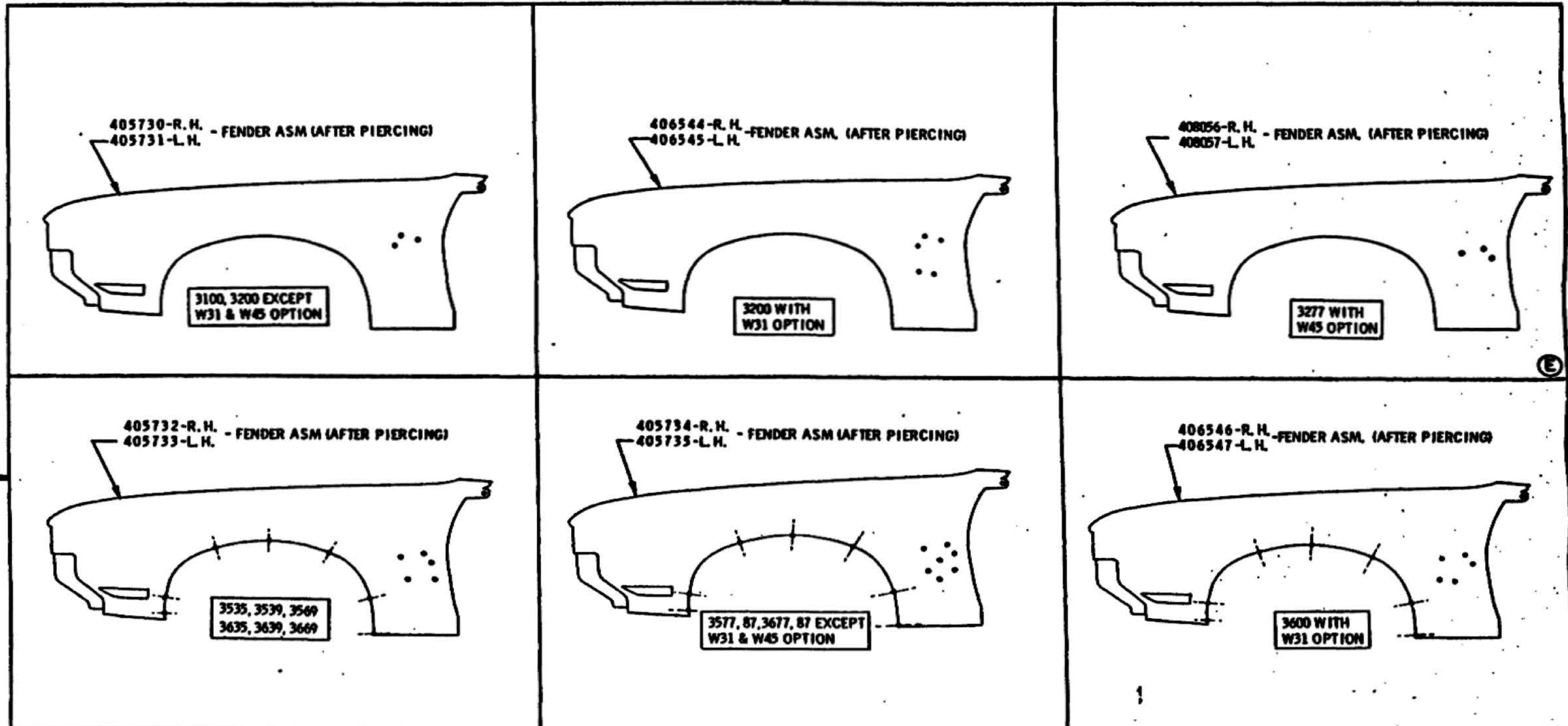
**TO READ CHART:**

READING CHART FROM LEFT TO RIGHT, THE FIRST OPTION REACHED THAT IS COMPLETELY SATISFIED WILL INDICATE THE SUPPORT, BAFFLE AND INSULATORS TO BE USED ON THAT MODEL. IF NONE OF THE CONDITIONS ABOVE ARE SATISFIED, THE LAST COLUMN IS STANDARD CAR (LESS ALL OPTIONS SHOWN TO THE LEFT OF IT) AND WILL INDICATE THE SUPPORT, BAFFLE AND INSULATORS TO BE USED.

										TITLE CHART - SUPPORT, BAFFLE AND INSULATORS IDENTIFICATION									
										DATE FEB. 5, 1970		PART USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO. 11		PAGE 52	
										DR. BY R. BERTON		REV. A		PART NO. 404411					
										CHKD BY [Signature]		REV. A		PART NO. 404411					
										APPR. [Signature]		REV. A		PART NO. 404411					
										APPR.		REV. A		PART NO. 404411					

**OLDSMOBILE DIVISION**

GENERAL MOTORS CORPORATION  
LANSING 21, MICHIGAN

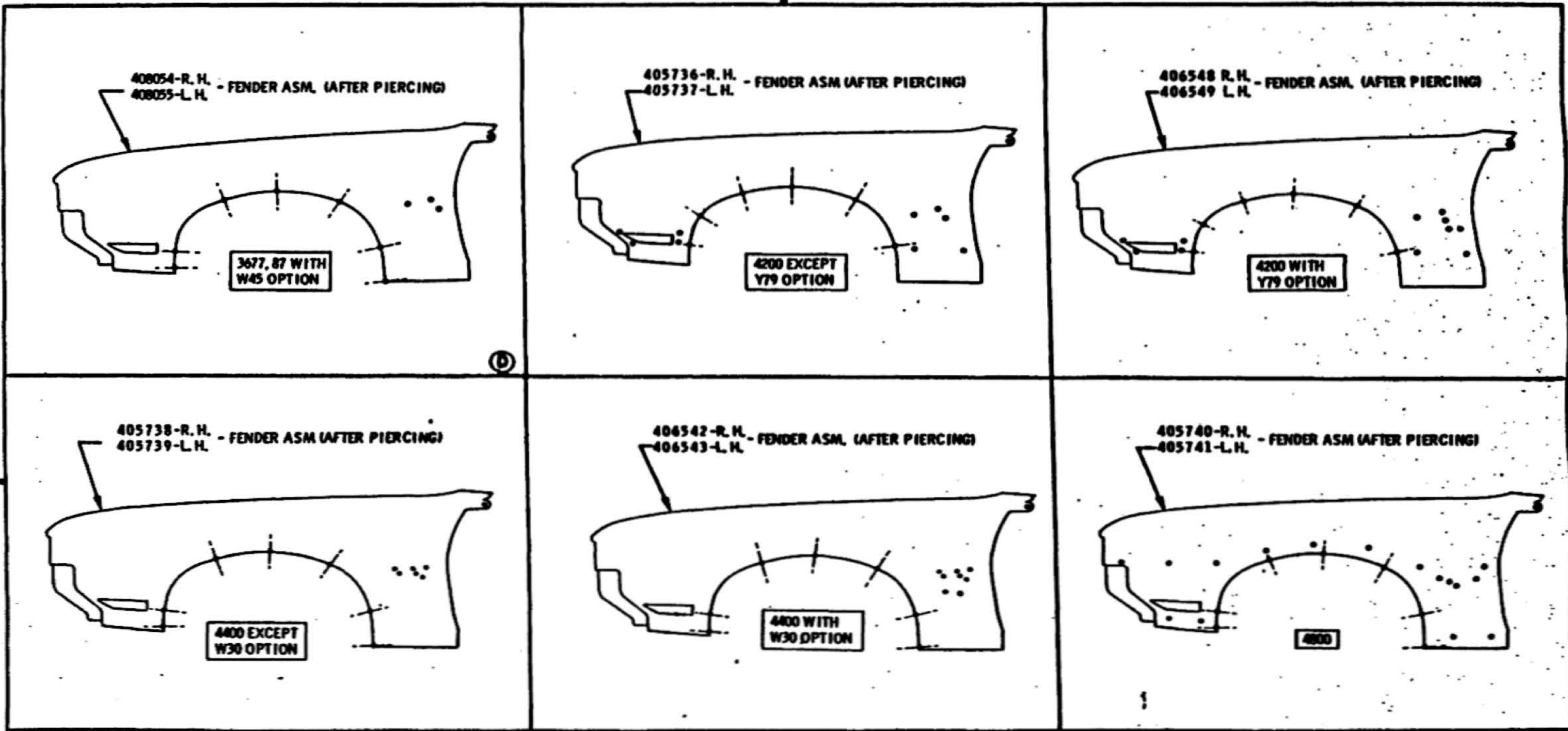


FOR HOLE SIZES AND LOCATIONS,  
SEE DRAWING 405729

L.H. SHOWN

				3769 D, W31 PIERCING RELOCATED				TITLE				CHART - FENDER IDENTIFICATION			
				8509 C CUIGLASS SCRIPT				DATE JAN. 23, 1969				FIRST USED			
				PIERCING REMOVED				DR. BY K. LOVELL				1970			
				6208 B REISSUED ON NEW				CHECKED AMES				OLDSMOBILE PRODUCT			
				FORMAT - NO CHANGE				APPR.				INFORMATION MANUAL			
				11-85 E WAS PIERCING ADDED R.L.F.				APPR.				MANUAL NO.			
												11			
												75			
												A			
												PART NO.			
												404411			
DATE	SYM	REVISION	DR.	CL.	DATE	SYM	REVISION	DR.	CL.	APPR.					

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING MI, MICHIGAN



FOR HOLE SIZES AND LOCATIONS,  
SEE DRAWING 405729

L. H. SHOWN

				3729 C	W30 PIERCING RELOCATED	LS	TITLE CHART - FENDER IDENTIFICATION							
				0568B	112 SCRIPT	LS	DATE	APRIL 18, 1969	YEAR USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. NO.	11	76
				6308 A	REISSUED ON NEW FORMAT - NO CHANGE	LS	DR.	BY K LOVELL	CHKD.	J JAMES	REVISION	A	PART NO.	404411
11865 D	W45 PIERCING ADDED	LS												
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPL.				

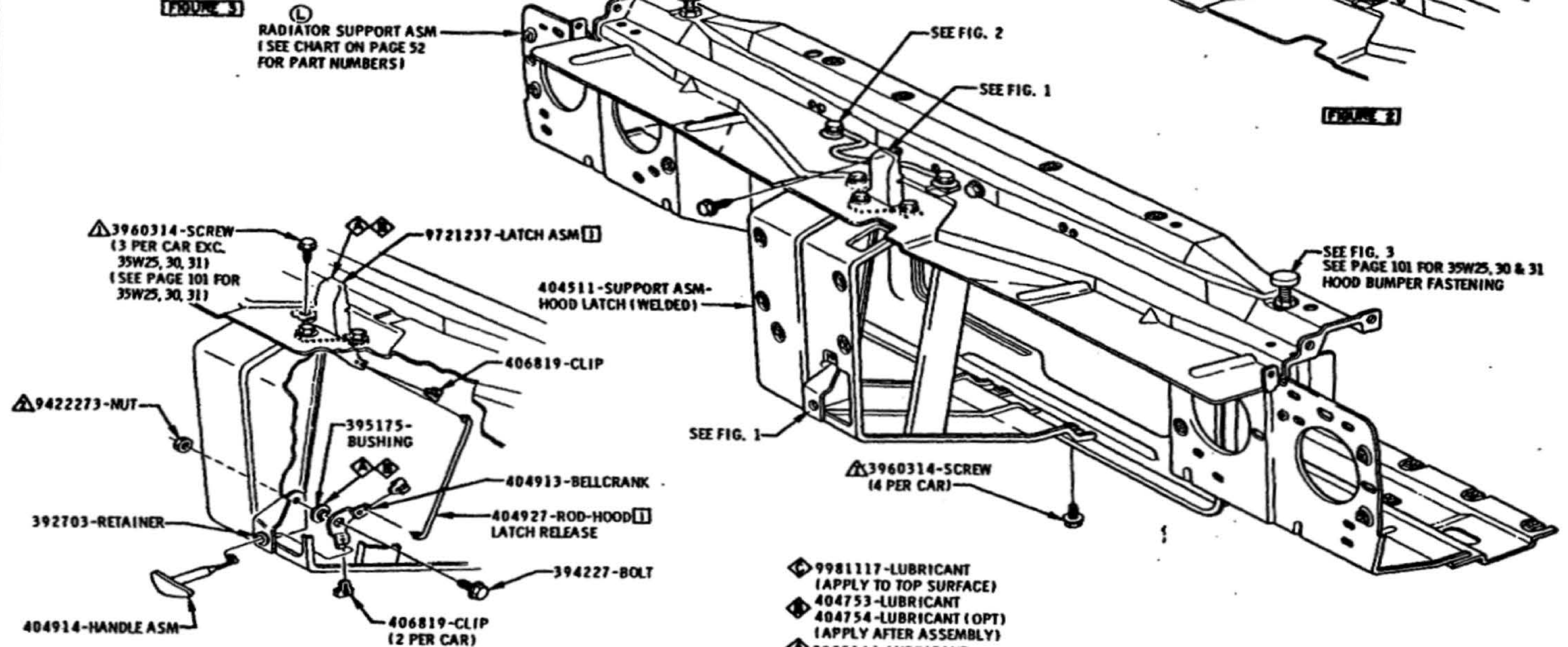
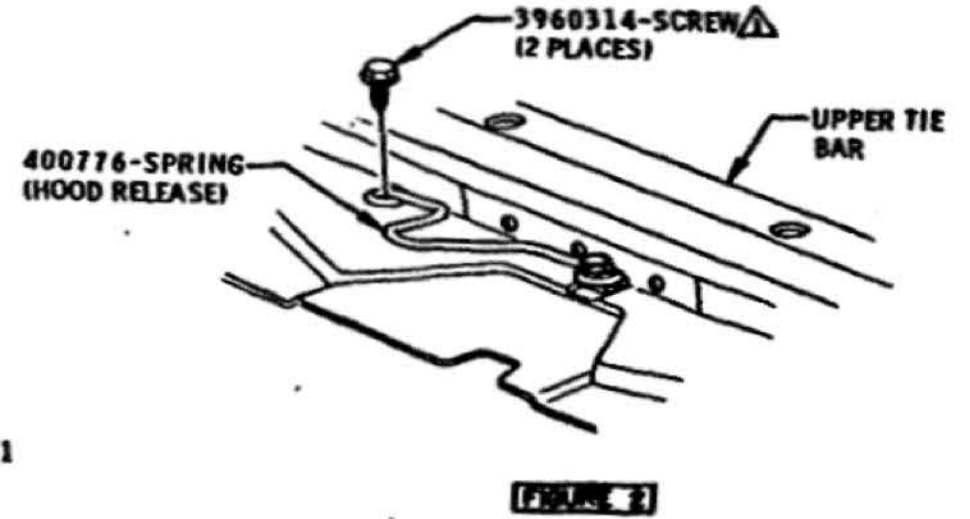
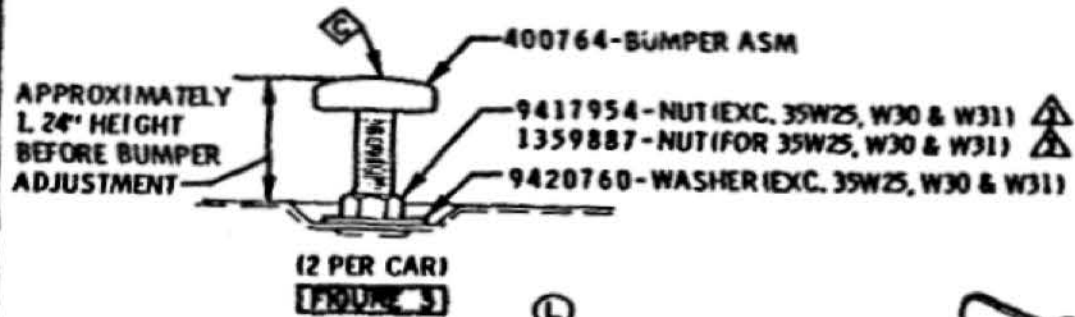


FIGURE 1

- ▲ 10 - 15 LB. FT.
- ▲ 40 - 80 LB. IN.
- ▲ 15 - 22 LB. FT.
- ▲ FULLY DRIVEN, SEATED  
BUSHING CRIPPER

□ FOR 35T44 LATCH ASM & HOOD RELEASE ROD. SEE SECTION 1-5

TITLE		RADIATOR SUPPORT ASSEMBLY	
DATE	FEBRUARY 25, 1969	FIRST USED	1970
DR. BY	JOSEPH V. GALL	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE 11 100
CHECKED	<i>[Signature]</i>	REF. 110,11E	SERIES A
APPR.	<i>[Signature]</i> 2/16 - MIF	PART NO. 404411	
DATE	REV.	REVISION	DR. CK. APPR.

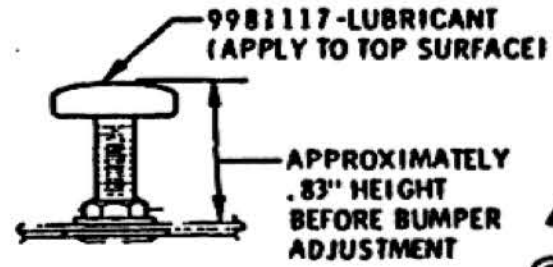
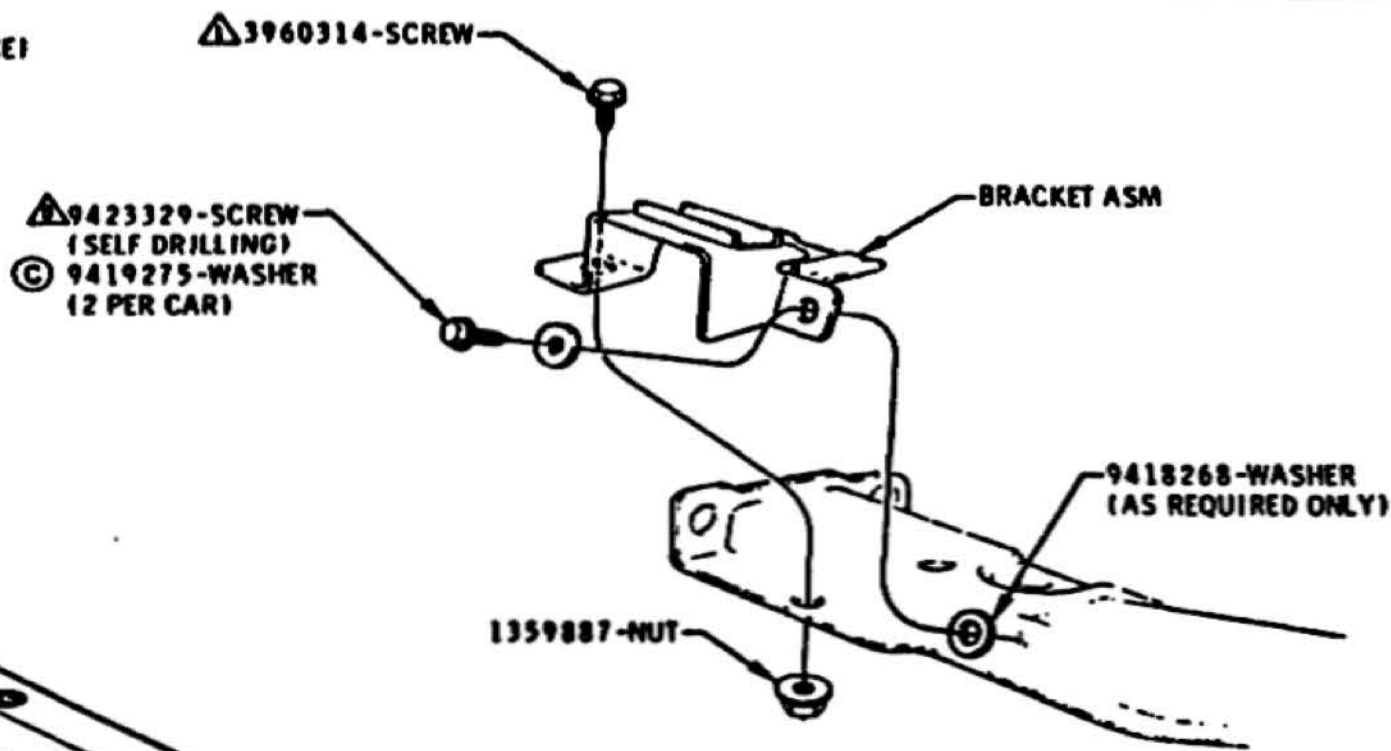
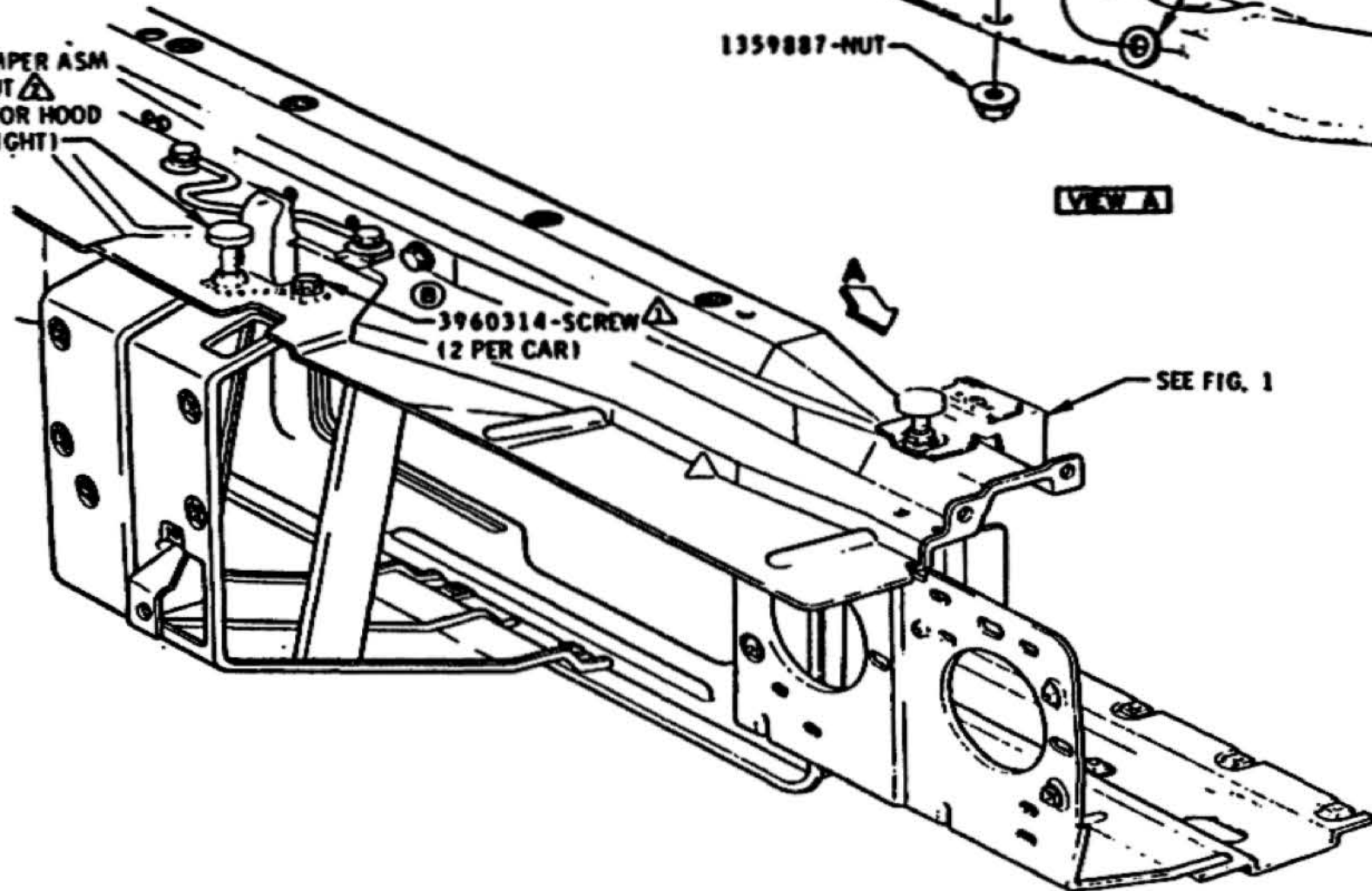


FIGURE 2



VIEW A

400764-BUMPER ASM  
1359887-NUT  
(SEE FIG. 2 FOR HOOD BUMPER HEIGHT)  
(1 PER CAR)



SEE PAGE 100 FOR THESE PARTS

407132-R.H.-BRACKET ASM  
407133-L.H.

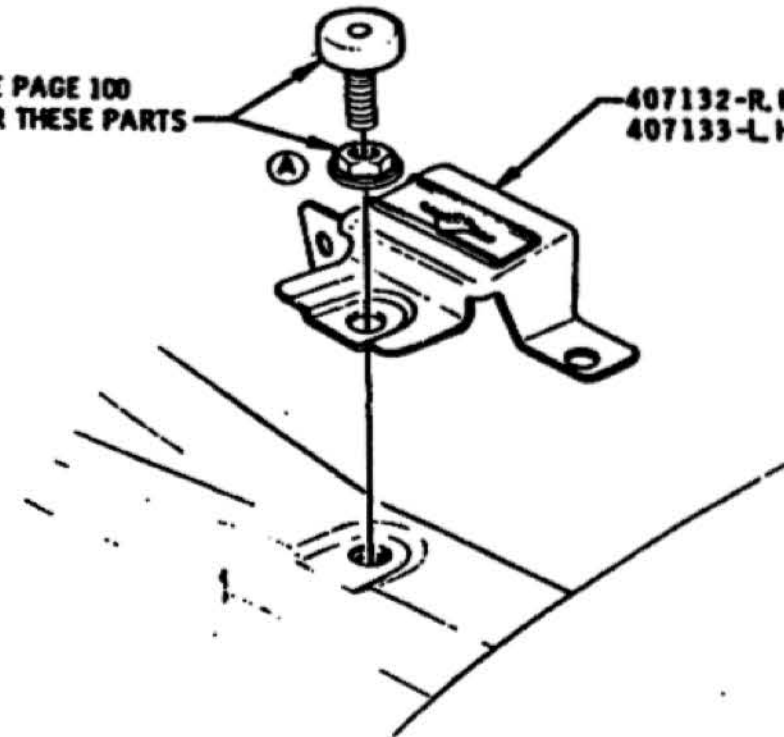
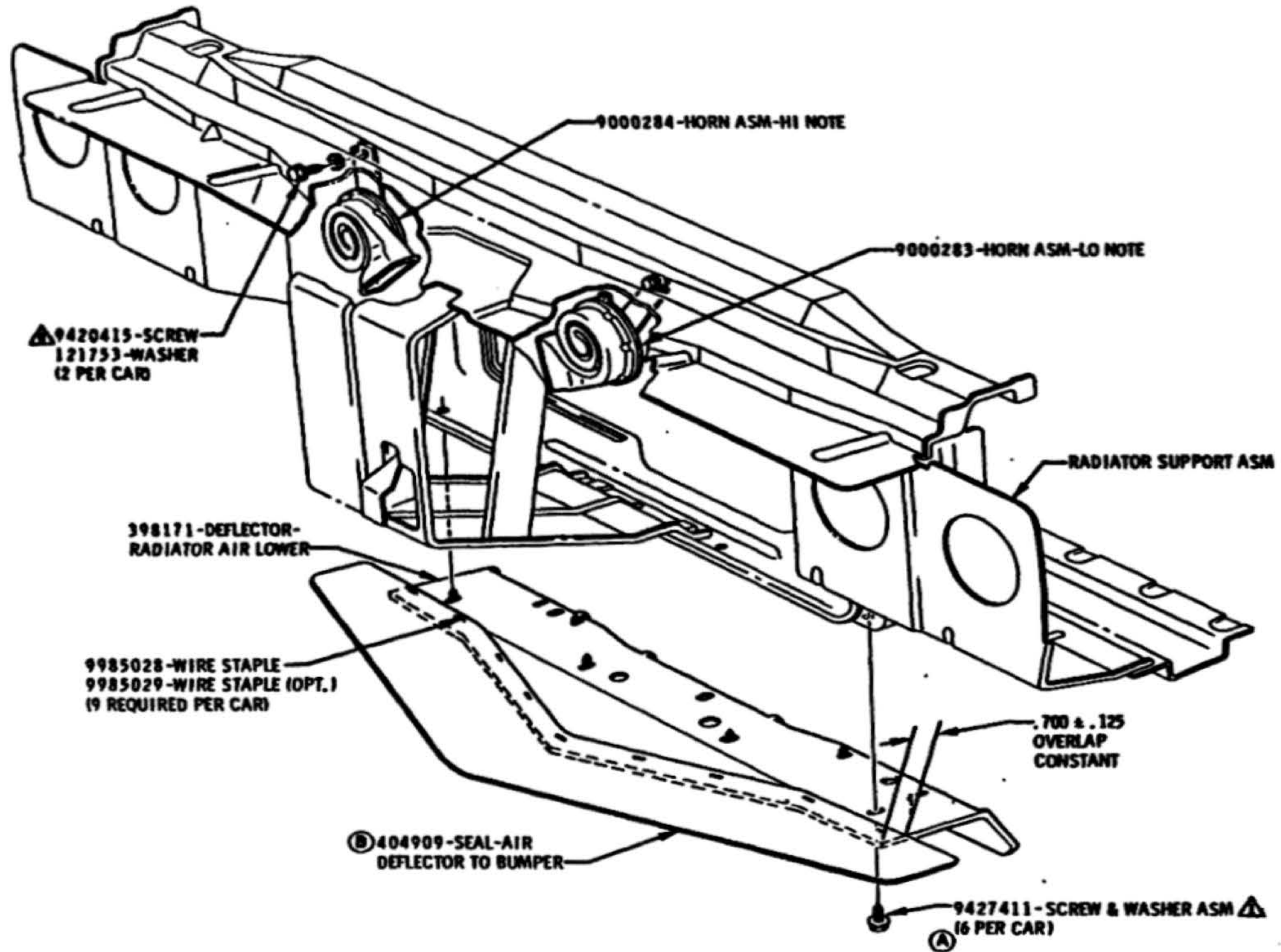


FIGURE 1

- ▲ 10 - 15 LB. FT.
- ▲ 15 - 22 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

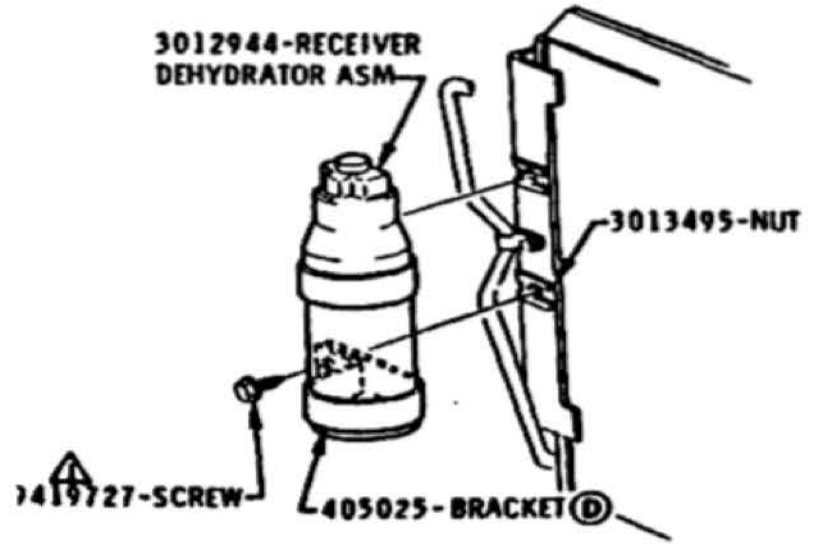
REVISION				TITLE				HOOD LATCH COMPONENTS (35W25-30-31)	
10-26-62	C	9419275-WASHER ADD.	J.P.G.	DATE	KEY 31, 1962	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
9-24-62	P	BUMPER & LATCH FASTENING ADJUST	J.P.G.	DR. BY	JOSEPH V. GALL	REV.	35W 25-30-31		11 101
8-8-69	A	FASTENING REVISED	J.P.G.	CHECKED	J.P.G.	SERVICE	A	PART NO.	404411
DATE	BY	REVISION	DR. CL. APPR.	DATE	DR. CL. APPR.	REV.			



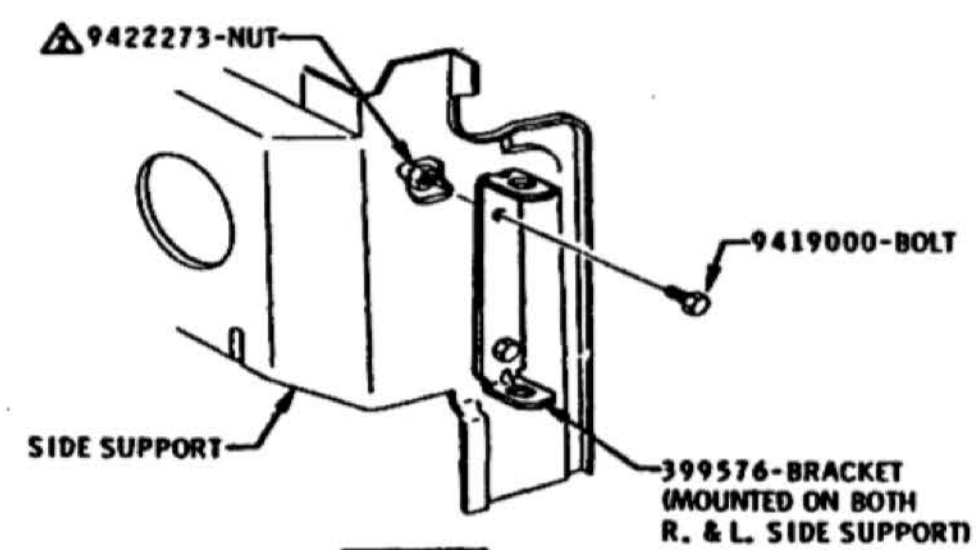
▲  
▲  
▲  
25-35LB. IN.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE				HORNS, AIR DEFLECTOR AND SEAL			
				DATE <u>JANUARY 23, 1969</u>				FIRST USED			
				DR. BY <u>JOE V. GALL</u>				1970			
				CHECKED <u>PT. BARNHART</u>				OLDSMOBILE PRODUCT INFORMATION MANUAL			
				APPR. <u>T.J.</u>				MANUAL NO. <u>11</u> PAGE <u>102</u>			
				DATE <u>3-18-69</u>				REV. <u>A</u> PART NO. <u>404411</u>			
DATE	SYM	REVISION	DR.	CK.	APPR.	12G, 13C	SERIES <u>A</u>				

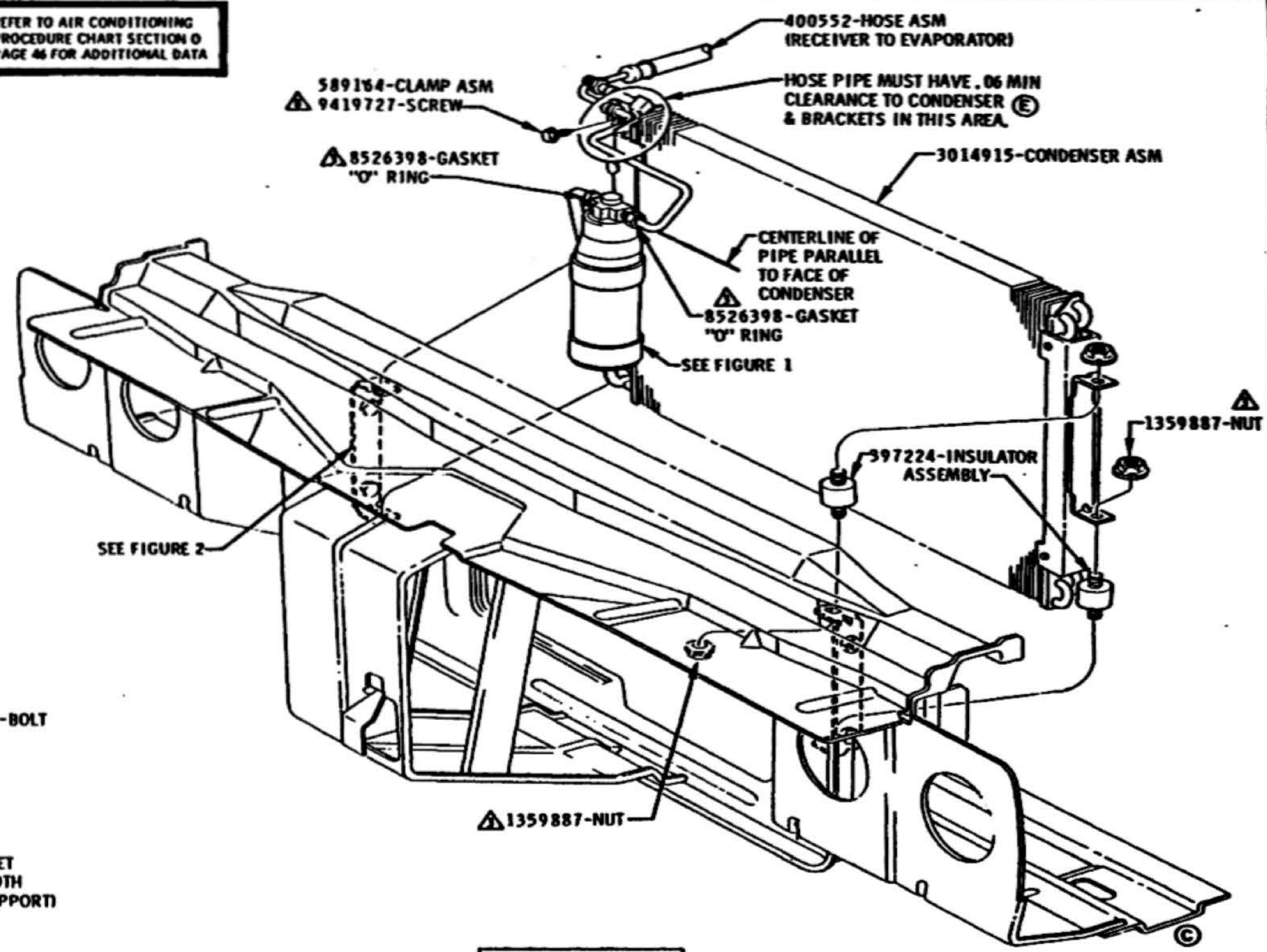
REFER TO AIR CONDITIONING  
PROCEDURE CHART SECTION O  
PAGE 46 FOR ADDITIONAL DATA



**FIGURE 1**  
RECEIVER DEHYDRATOR  
MOUNTING TO CONDENSER



**FIGURE 2**  
BRACKET MOUNTING  
TO SIDE SUPPORT



CONDENSER MOUNTING  
TO SIDE SUPPORT

- ▲ 11 - 15 LB. FT.
- ▲ 60 - 90 LB. IN.
- ▲ 25 - 35 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR	CHK	TITLE	YR	MO	DAY	REV. USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
2-58	E	NOTE ADDED			CONDENSER & SUPPORTS - RECEIVER DEHYDRATOR							
5-9-69	D	WAS 3840341 - CLAMP	RP	PL	DATE NOVEMBER 25 1968				1970		11	104
8-23-69	C	BACKGROUND REVISED	PL	PL	DR. BY P. LOCATELLI							
3-20-68	B	NOTE REMOVED	PL	PL	CHECKED BY Barnhart							
2-1-69	A	NOTE ADDED			APPR. T. L. F.				REV. 25C60	SERIES A		404411

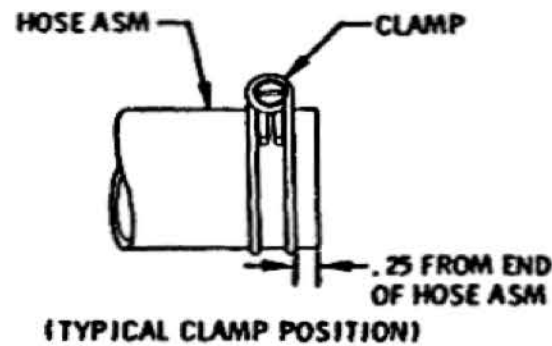
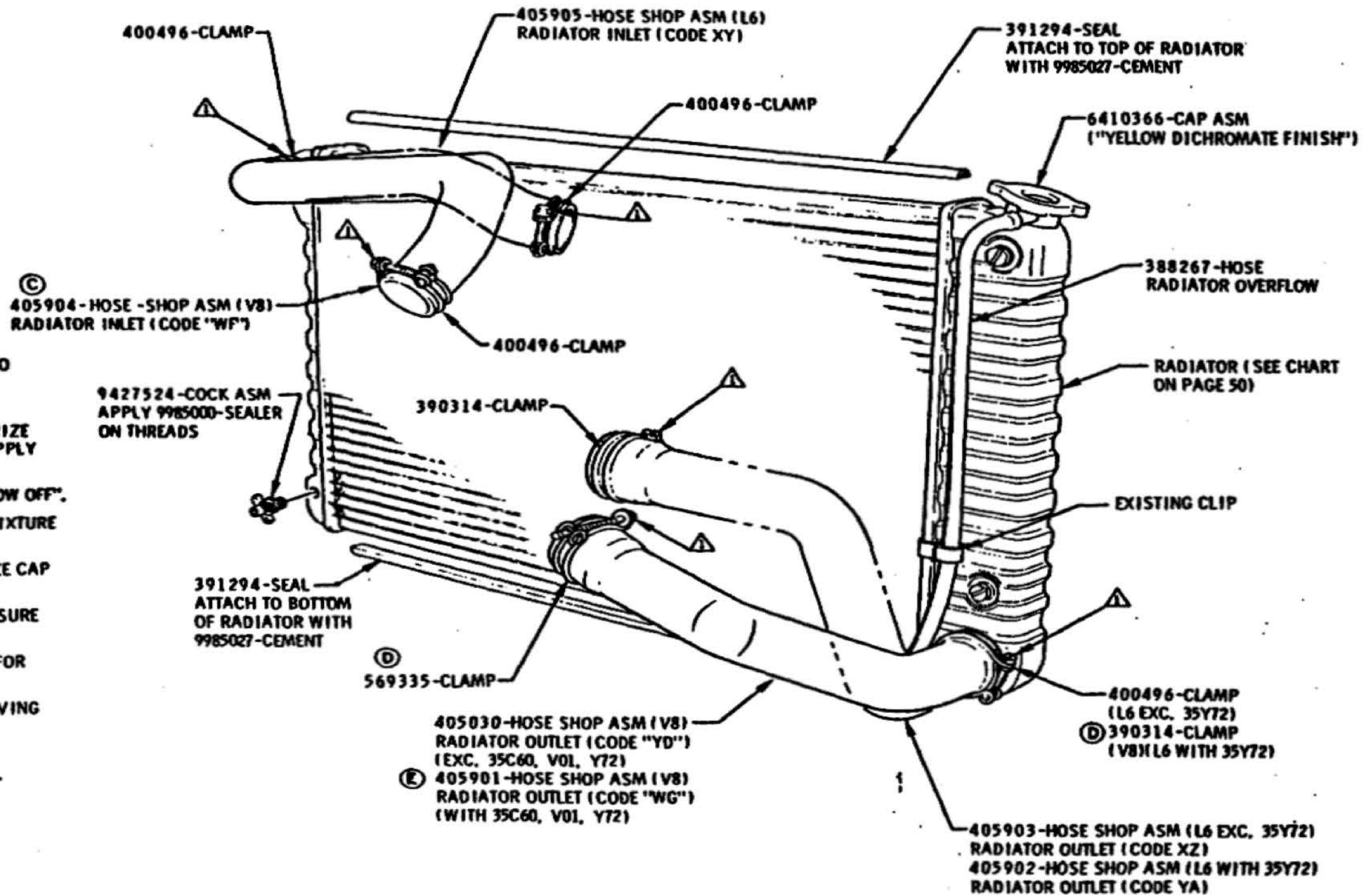


FIGURE 1

COOLING SYSTEM PRESSURE CHECK

1. INSTALL COOLING SYSTEM TEST FIXTURE TO RADIATOR FILL NECK UNTIL FULLY SEATED (REFERENCE GMAD TOOL #09C-1212)
2. OPEN RIGHT CHARGE VALVE AND PRESSURIZE SYSTEM TO 18 PSI. NOTE: ADJUST AIR SUPPLY TO PREVENT EXCEEDING 20 PSI.
3. OBSERVE COOLING SYSTEM FOR HOSE "BLOW OFF".
4. INSTALL RADIATOR CAP ON TOP OF TEST FIXTURE UNTIL FULLY SEATED.
5. OPEN LEFT CHARGE VALVE AND PRESSURIZE CAP TO 18 PSI. CAP MUST "POP OFF".
6. CLOSE LEFT CHARGE VALVE AND CAP PRESSURE MUST LEVEL OFF TO 13.9-17.0 PSI.
7. OBSERVE STATIC NEEDLE ON BOTH GAGES FOR A MINIMUM OF 10 SECONDS.
8. RELEASE SYSTEM PRESSURE BEFORE REMOVING FIXTURE.
9. REMOVE FIXTURE AND REINSTALL CAP ON RADIATOR FILL NECK UNTIL FULLY SEATED.

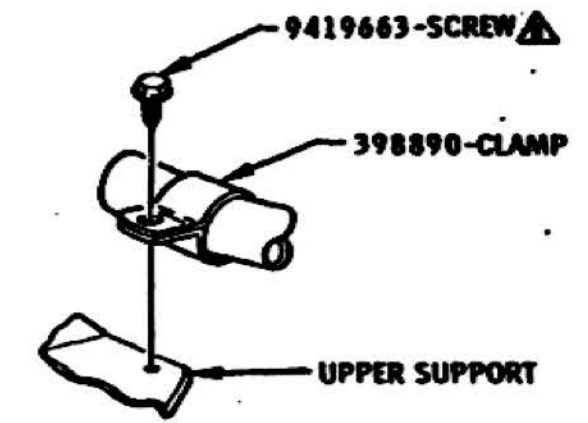
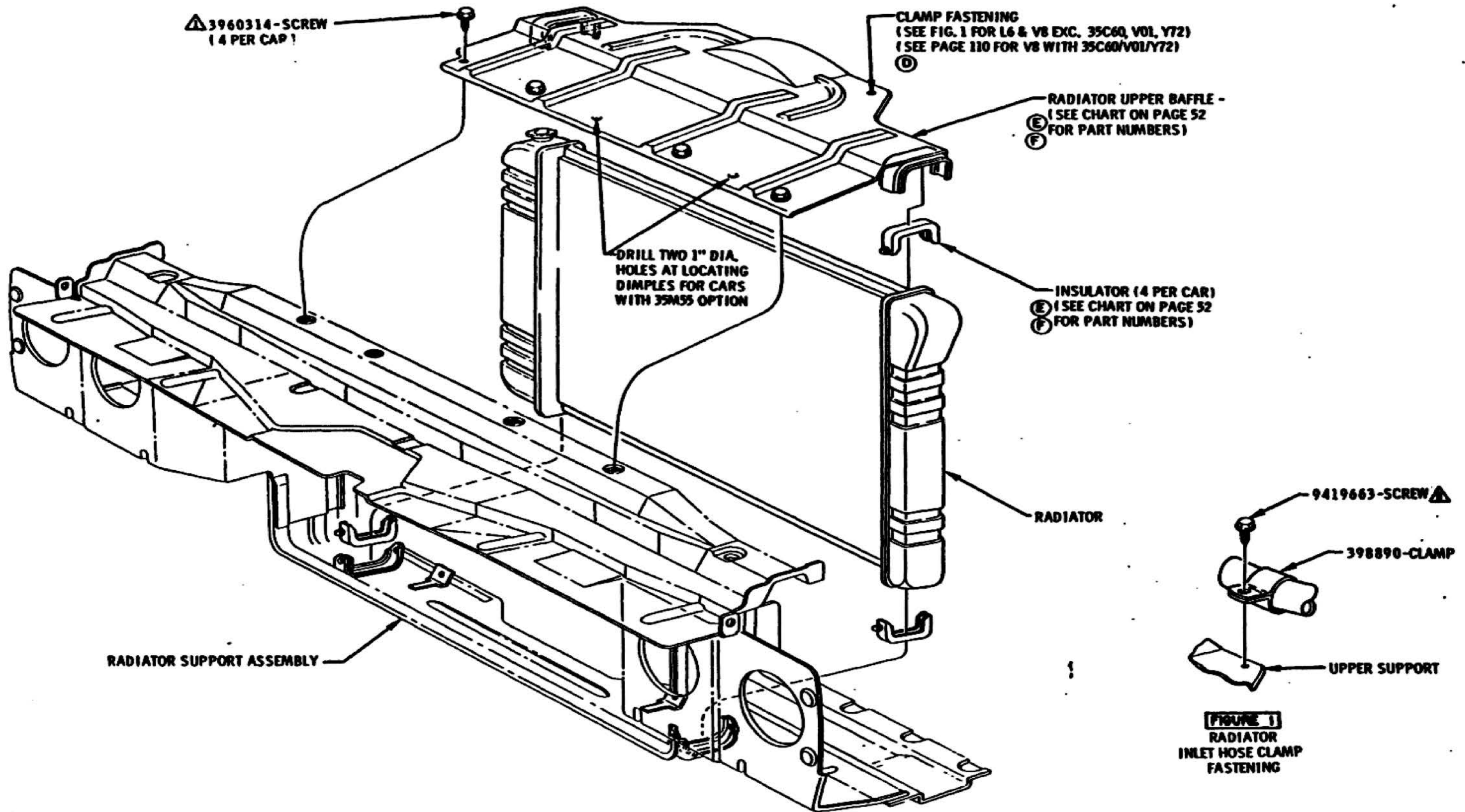
ADD 2 PELLETS OF 9985168 SEALER IN RADIATOR



▲ 18-26 LB. IN.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED

DATE	SYN	REVISION	DR.	CL.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
12-12-69	E	WAS 405897 HOSE ASM.	PL	DT	RADIATOR DRESS	1970		11	106
9-23-69	D	V8 CLAMPS REVISED	PL	DT	DATE FEB. 26, 1969 DR BY JOSEPH GALL				
9-23-69	C	WAS 405027-11/2" P.	PL	DT	CHECKED [Signature]				
6-24-69	B	6410430-CAP REMOVED	PL	DT	APPL. [Signature]				
4-23-69	A	PART NO. ADDED	PL	DT	APPR. [Signature]				
						REF. LK3, LK5 13A, 13C	A	PART NO. 404411	

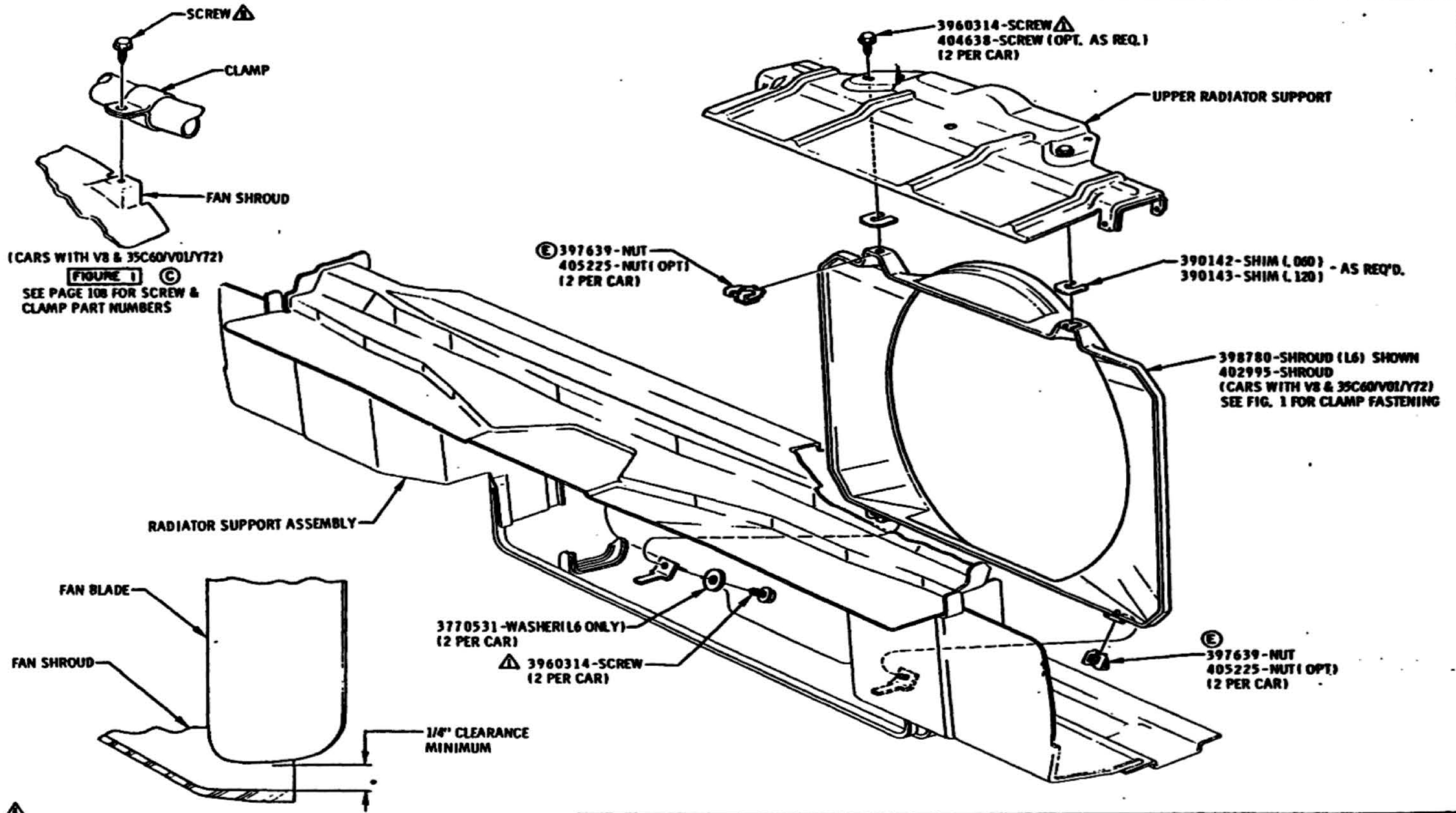




**FIGURE 1**  
RADIATOR  
INLET HOSE CLAMP  
FASTENING

▲▲▲ 15 - 22 LB. FT.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				9-24-69	E <sub>1</sub>	NOTES REVISED	VEP	TITLE				RADIATOR AND UPPER SUPPORT					
				8-20-69	D	NOTE REVISED	VEP	DATE	FEBRUARY 25, 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	11	PAGE	108	
				6-25-69	C <sub>1</sub>	NOTES REVISED	VEP	OR BY	GMP	J.V. GALL	REV.	15B	SERIES	A	PART NO.	404411	
				8-24-69	B	DRILLING NOTE ADDED	VEP	CHECKED	M. Bernhart		6K2						
				8-24-69	A <sub>2</sub>	NOTES REVISED	VEP	APPR.	SM 2/24 - JEL								
REV. TO	DATE	SYM	REVISION	DR.	CL.	DATE	SYM	REVISION	DR.	CL.	APPR.						
F <sub>2</sub> PART NO'S. REMOVED																	



$\Delta$   
 $\Delta$   
 $\Delta$   
15-22 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

SECTION THRU FAN SHROUD AT FAN BLADE  $\odot$

10-22-69	E	MRS 404411 NUT FOR L6	10-1-69	D	SECTION VIEW ADDED	DATE FEBRUARY 25, 1969	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
8-25-69	C	FIGURE 1 ADDED	8-25-69	B	FASTENING USAGE REVISED	DR. BY JOSEPH V. GALL	1970		11	110
4-25-69	A	402995-SHROUD ADDED				CHECKED BY <i>M. Bernhart</i>	REF. 13E 35C60, Vol 35V72		A	404411
DATE	BY	REVISION	DR.	CL.	APPR.					

NOTE:  
ON 35C60 CARS, BE SURE NOTCH  
IN SEAL IS POSITIONED SO AS  
TO CLEAR A/C PIPES.

404055-SEAL  
(L6 EXC. 35C60)  
(V8 WITH 35Y72)  
404056-SEAL  
(L6 WITH 35C60)  
(V8 WITH 35C60)  
406325-SEAL  
(V8 EXC. 35C60/Y72)

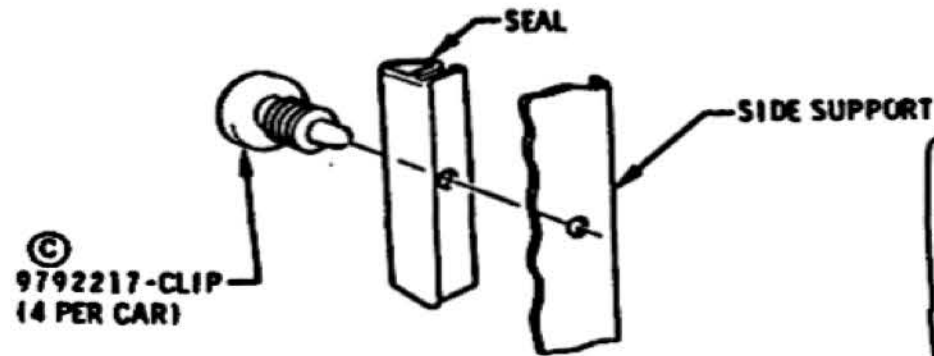
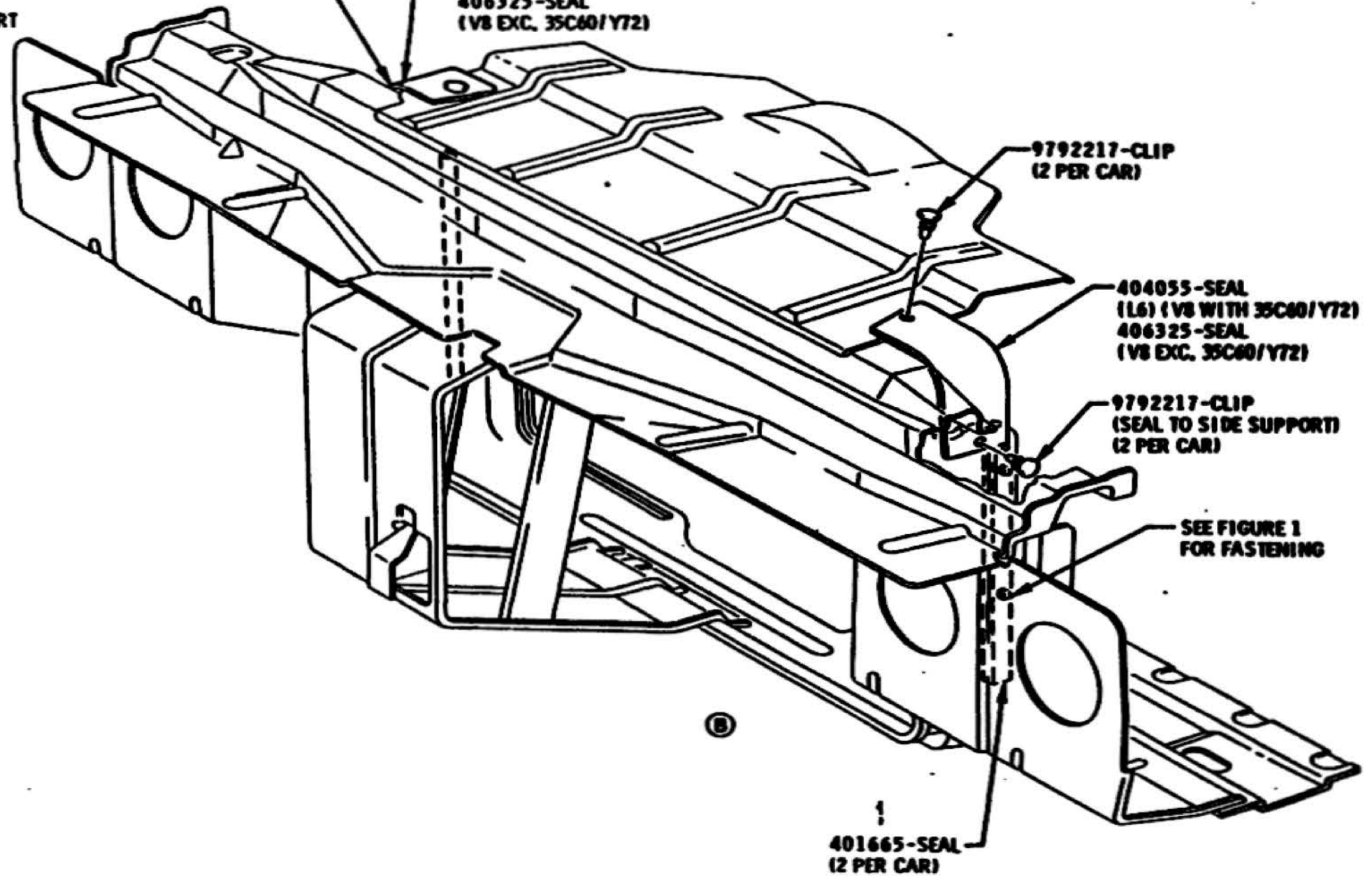
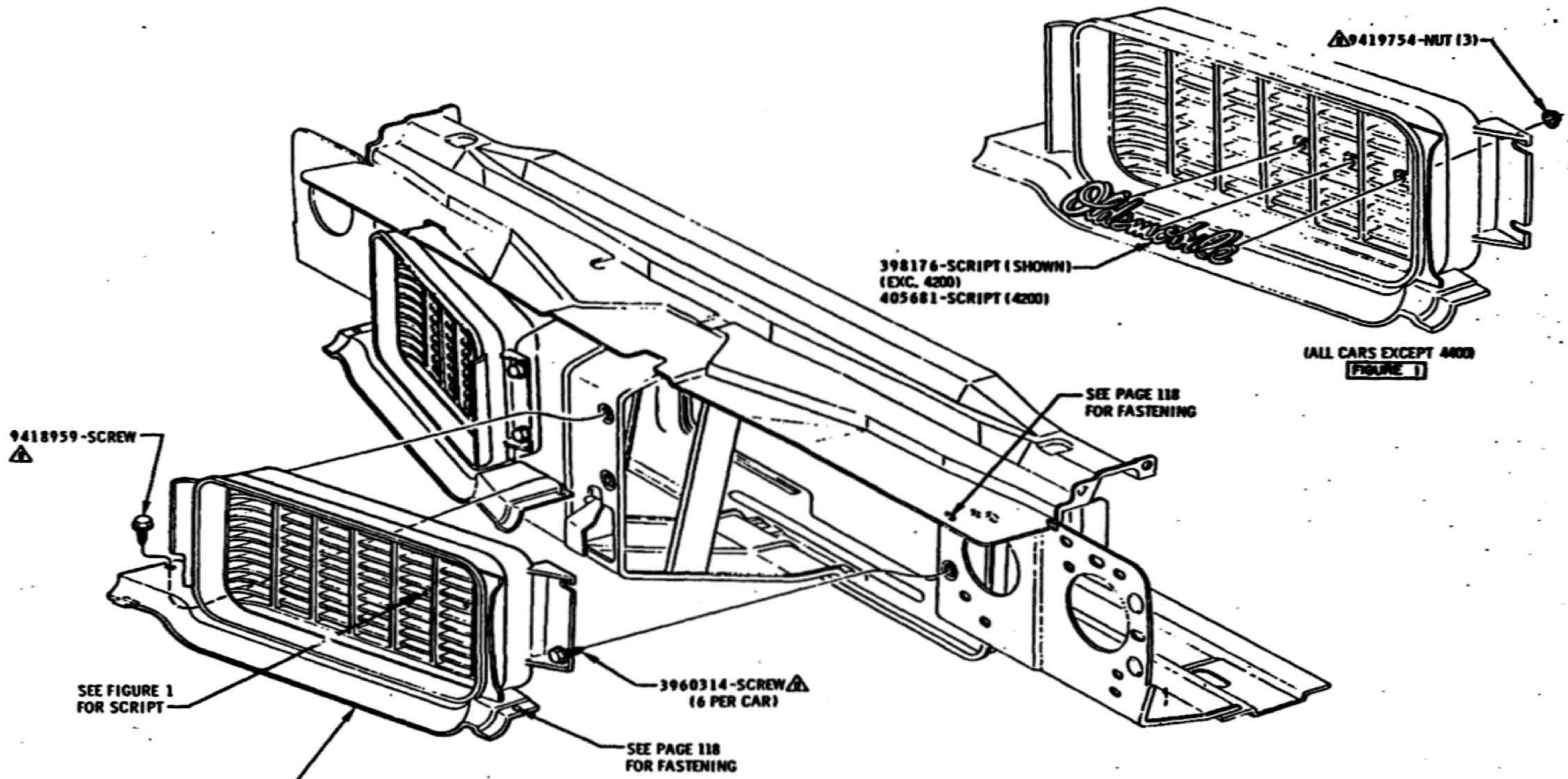


FIGURE 1  
L.H. SHOWN  
R.H. OPPOSITE



TITLE				RADIATOR SUPPORT SEALS			
2-2-69	G	WAS 507283-CLIP	1/2	DATE	APRIL 11, 1969	FIRST USED	1970
6-17-69	B	SEALS REMOVED	1/2	DR. BY	P. LOCATELLI	OLDSMOBILE PRODUCT	11 112
4-25-69	A	WAS 6 CLIPS PER CAR	1/2	CHECKED	M. Lambert	INFORMATION MANUAL	
DATE	SYM	REVISION	DR. CL.	APPR.	TRF	REV. 35C 35C60 35Y72	FILE NO. 404411



- 404690-R. H. -GRILLE-RADIATOR (SHOWN)
- 404691-L. H. (EXCEPT 4200 & 4400)
- (H) (G) 407306-R. H. -GRILLE RADIATOR (4200)
- (H) (F) 407307-L. H.
- 404684-R. H. -GRILLE RADIATOR (4400)
- 404685-L. H.

▲  
▲  
▲  
▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE				GRILLE & GRILLE SCRIPT		MANUAL SECT.		PAGE	
DATE	BY	REVISION	DR.	CHK.	APPR.	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	11	116
9-15-69	H	407326-T GRILLE				1970			
9-2-69	G	4200 GRILLE NO. REVISION							
9-2-69	F	OPTIONAL GRILLE ADD.							
						116 13C	SERIES	A	PART NO. 404411

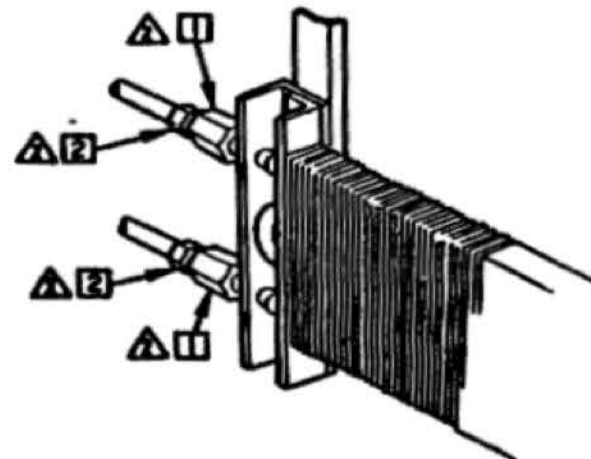
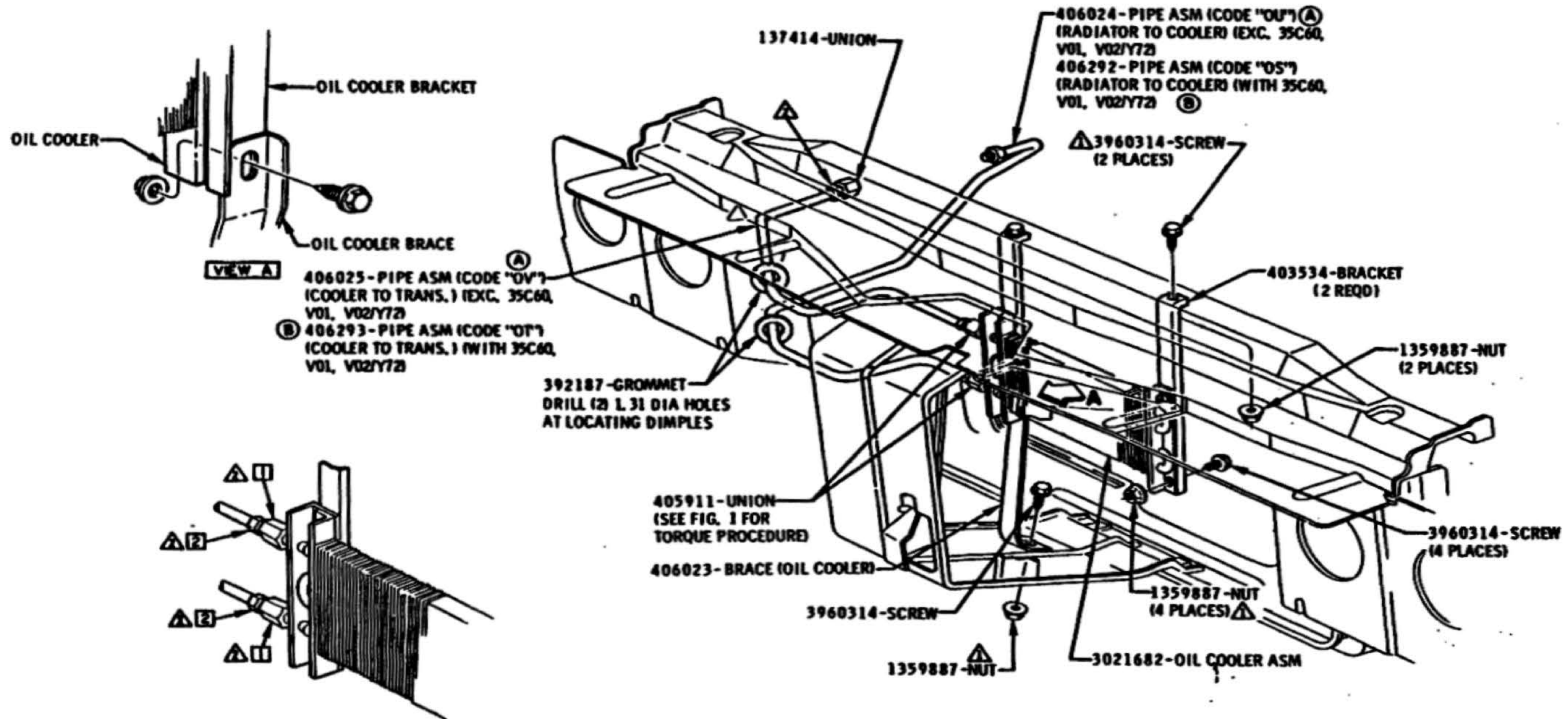
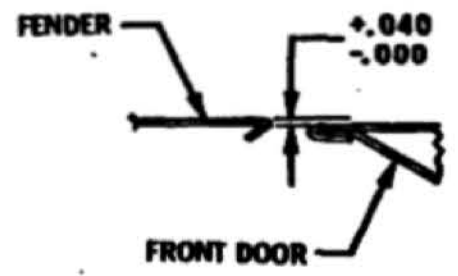
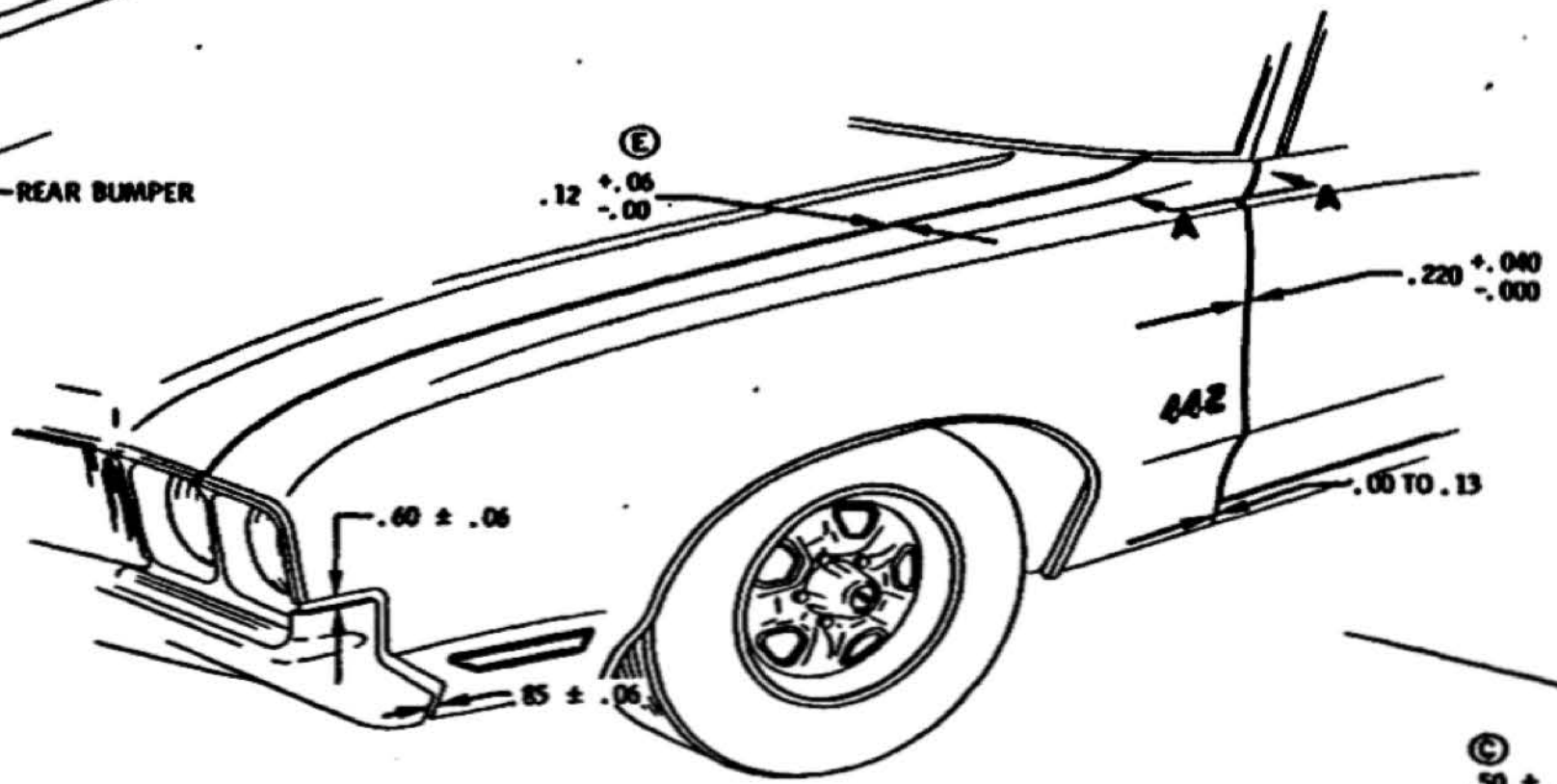
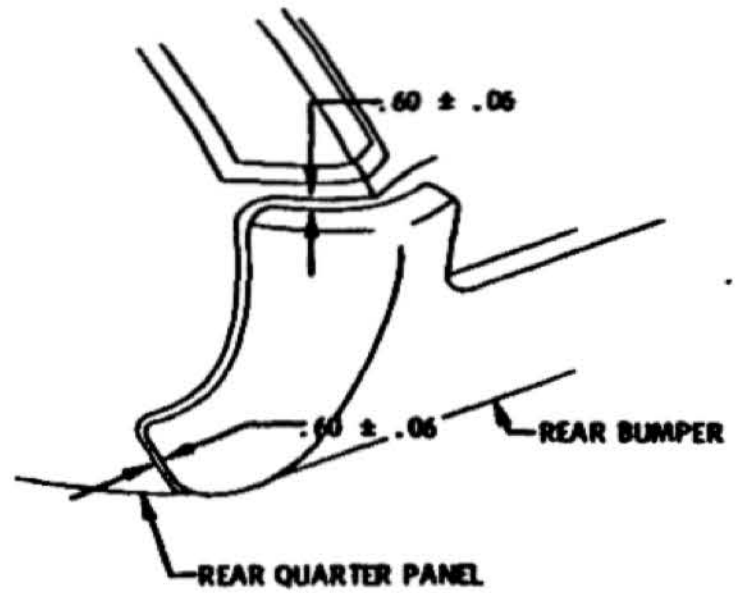


FIGURE 1

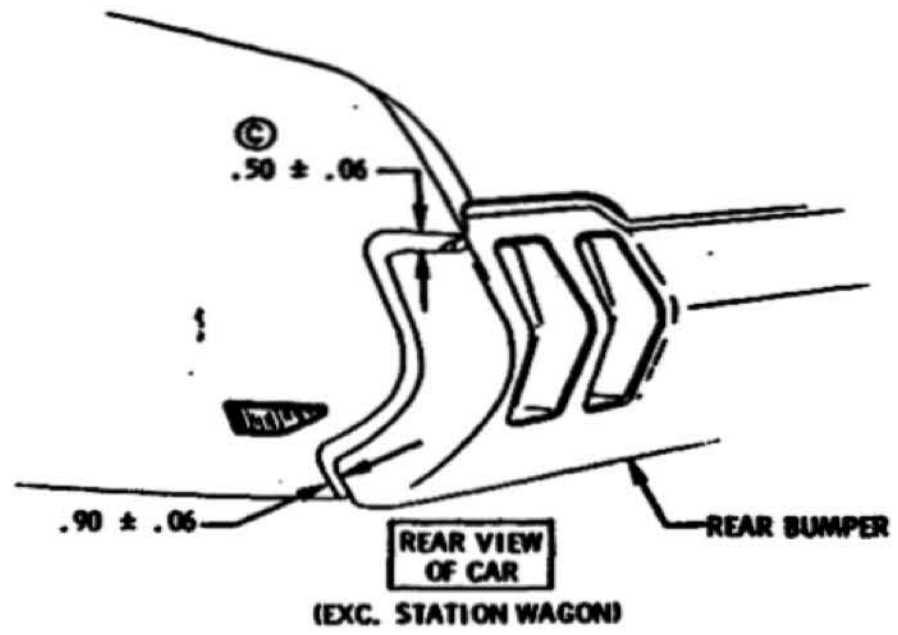
- 1 HOLD NUTS ON COOLER AND TIGHTEN UNIONS
- 2 TIGHTEN THESE NUTS AFTER UNIONS

- ▲ 15 - 25 LB. FT. ©
- ▲ 15 - 22 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		BY	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
9-20-68		C	TORQUE REVISED	PLT			V8 AUXILIARY OIL COOLER-AUTOMATIC TRANSMISSION	1970		11	114
3-20-69		B	PART NOS. ADDED	PLT							
3-14-69		A2	CODES ADDED	PLT				35M55	A		404411



SECTION "A"- "A" (D)



REV.	DATE	BY	REVISION	PLT	PTS	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
B-4-69		E	WAS $\pm .06$	PLT	PTS	SHEET METAL CLEARANCES				
7-29-69		D	SECTION A-A ADDED	PLT	PTS	DATE: FEBRUARY 12, 1969	1970		11	180
6-28-69		C	WAS .60	PLT	PTS	DR. BY P. LOCATELLI				
6-28-69		B	WAS $\pm .040$	PLT	PTS	CHECKED: P. BARNHART				
3-31-69		A	DIMENSIONS REMOVED	PLT	PTS	APPR. J.W. AT				

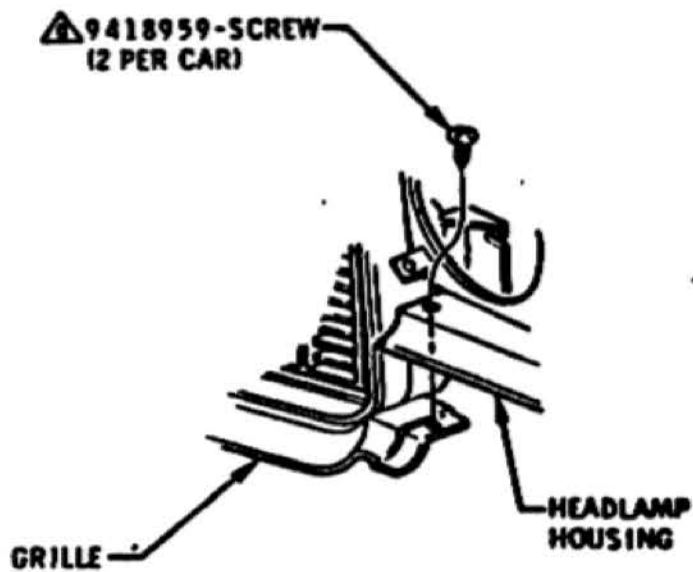
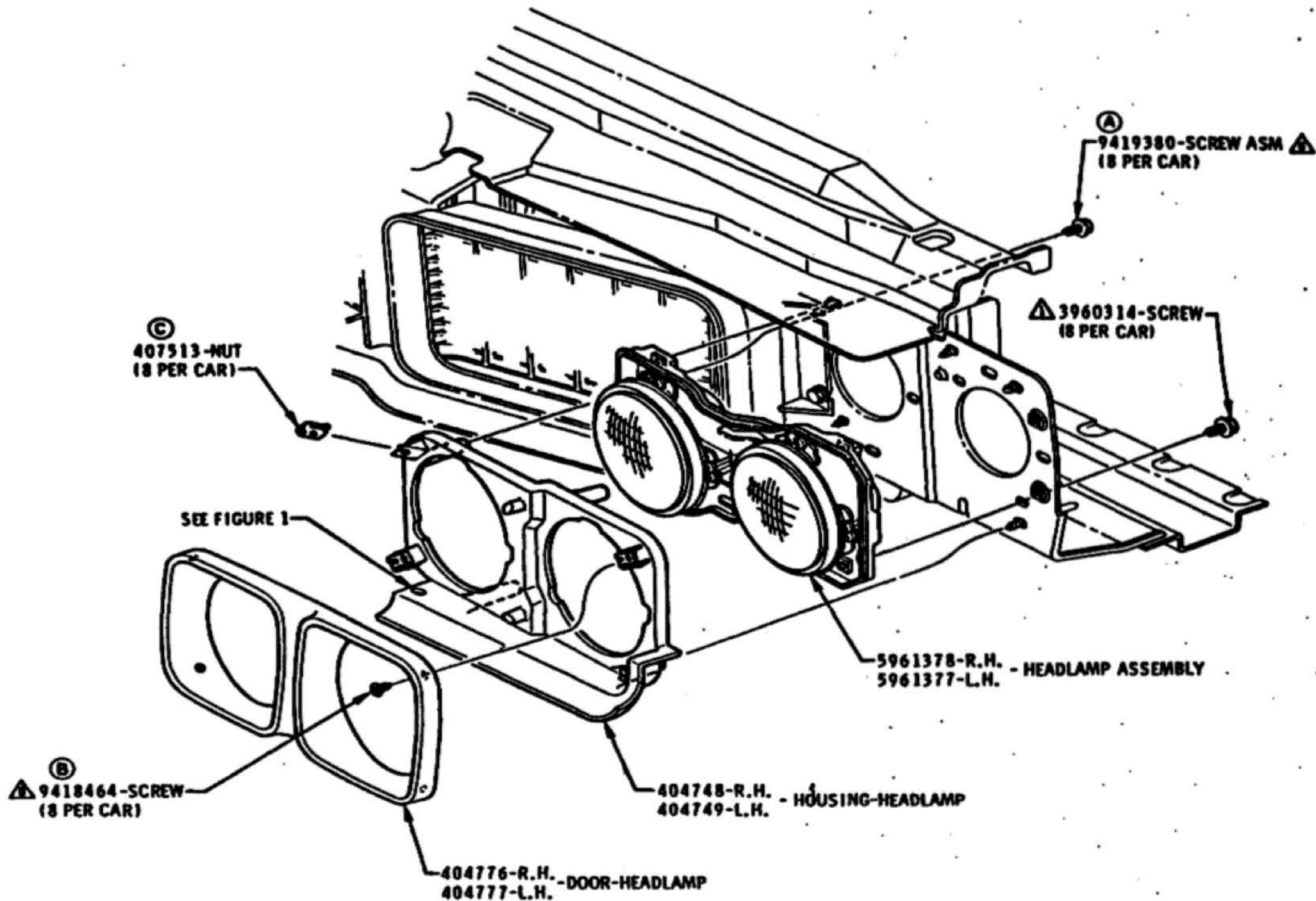
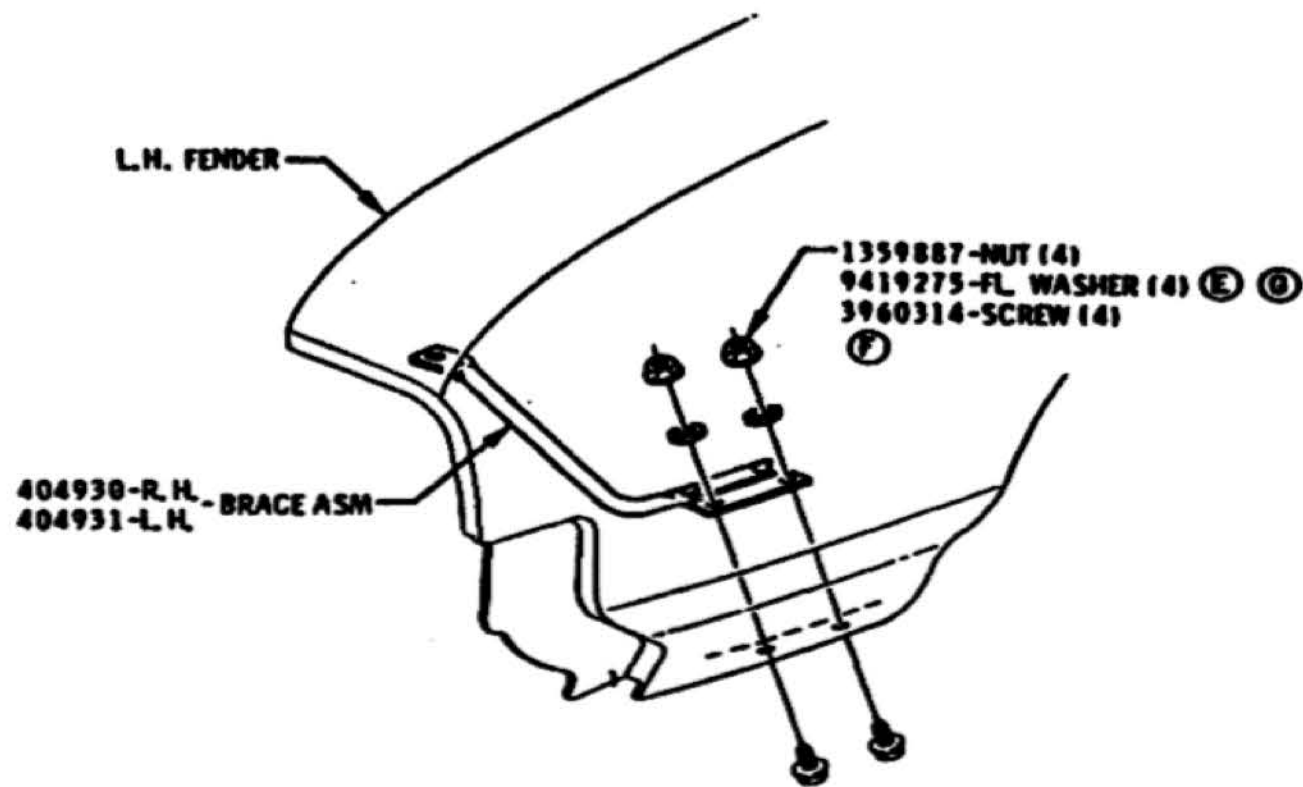


FIGURE 1

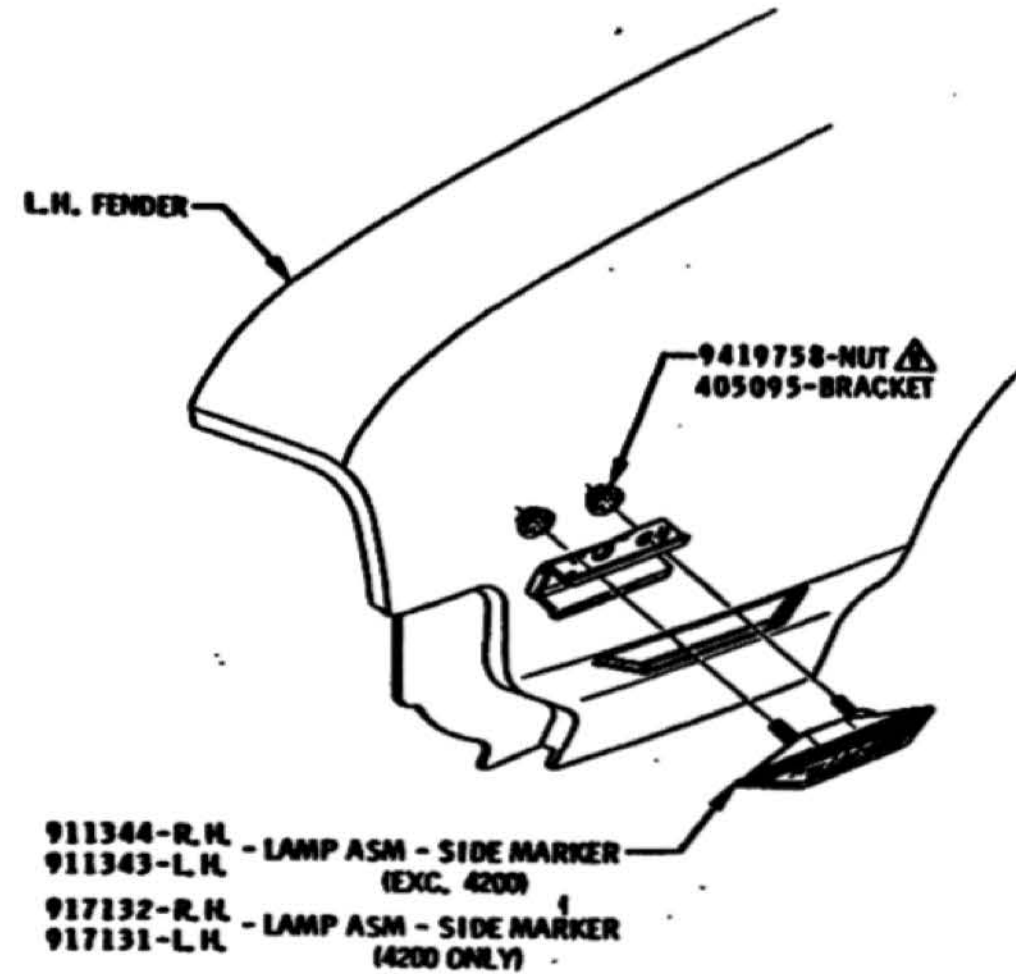


▲▲▲  
15-22 LB. FT.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE		SYM	REVISION	DR.	CK.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
10-1-69		C	WAS 404756-NUT	JV	DT	HEADLAMP ASSEMBLY, HOUSING AND DOORS	1970		11	118
9-30-69		B	WAS 9414752-SCREW	JV	DT					
4-21-69		A	WAS 9427411-SCREW ASM	JV	DT					
						APPR. TWF	REF. 12C 13C	SERIES A	PART NO. 404411	



FENDER BRACE  
INSTALLATION



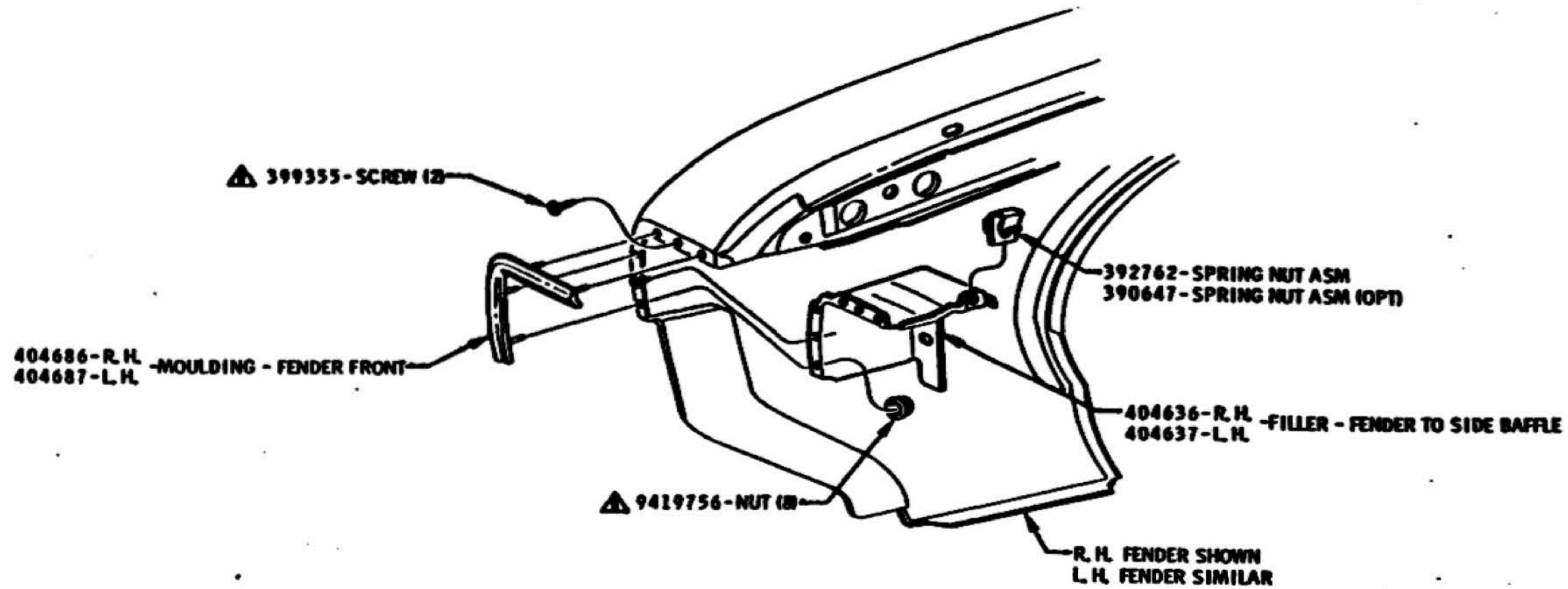
SIDE MARKER  
LAMP INSTALLATION

L.H. FENDER SHOWN  
R.H. FENDER SIMILAR

▲  
▲  
▲  
4-7 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

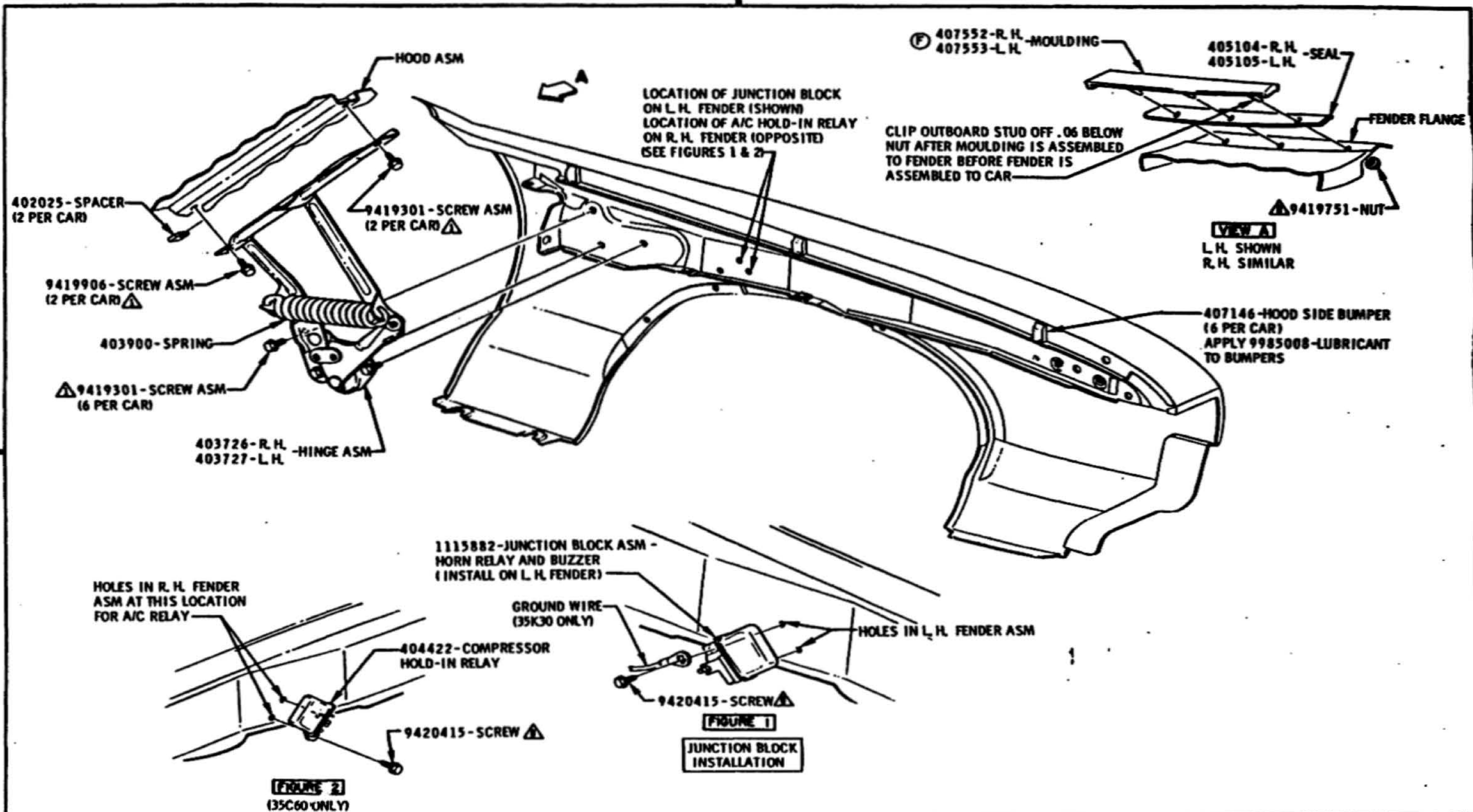
DATE		SYN	REVISION	DR	CK	DATE	SYN	REVISION	DR	CK	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE	PART NO.
												SIDE MARKER LAMP & FENDER BRACE	1970		11	124	
5-8-70		G	QUANTITY WAS (8)			4-25-69	B	TORQUE ADDED				DATE JANUARY 3, 1969					
5-8-70		F	WAS 402539-SCREW			3-11-69	A	REDRAWN & REVISED				DR. BY P. LOCATELLI					
												CHECKED BY J. B. BARNHART	NO. 11E				
												APPR. J. L. F.	12C		A		404411





				TITLE		FENDER FILLER & FRONT MOULDING			
				DATE	NOVEMBER 26, 1968	FIRST USE	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO. 11 126
				DR. BY	P. LOCATELLI	CHKD. BY	M. Barnhart		
				APPR.	IME	REV. NO.	116		
DATE	BY	REVISION	DR. CKL.						
								A	404411

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

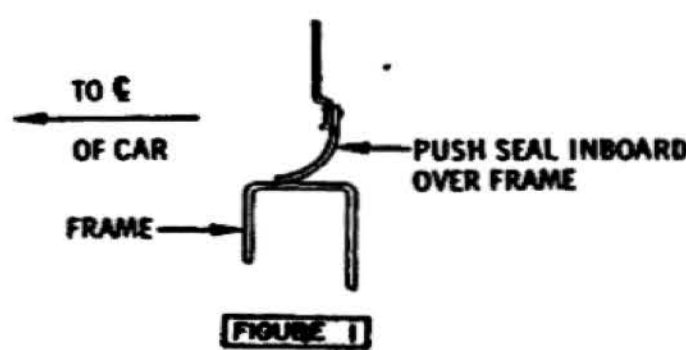
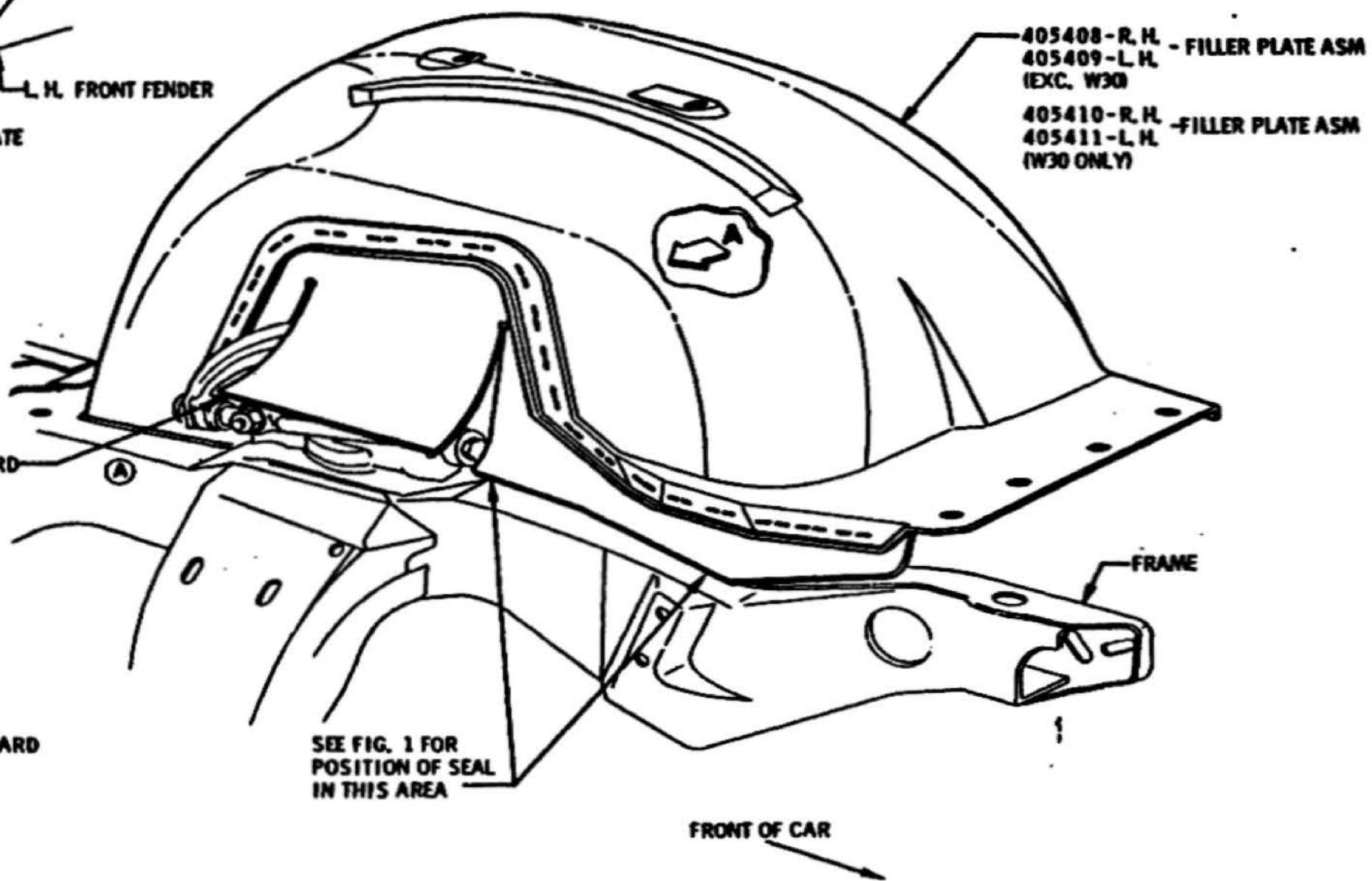
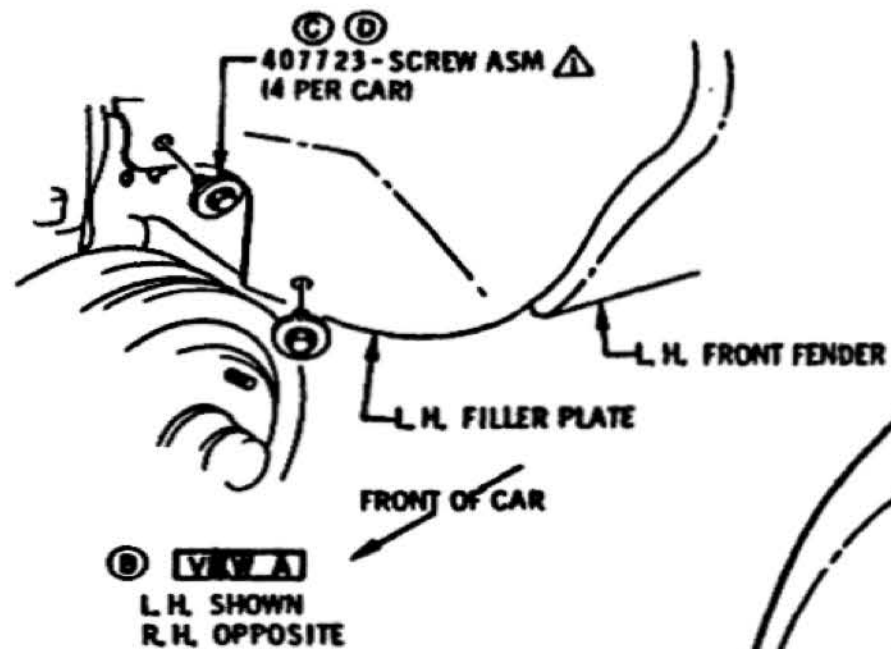


⚠ 20 - 30 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

**FIGURE 2**  
(35C60 ONLY)  
**HOLD-IN RELAY  
INSTALLATION**

**FIGURE 1**  
**JUNCTION BLOCK  
INSTALLATION**

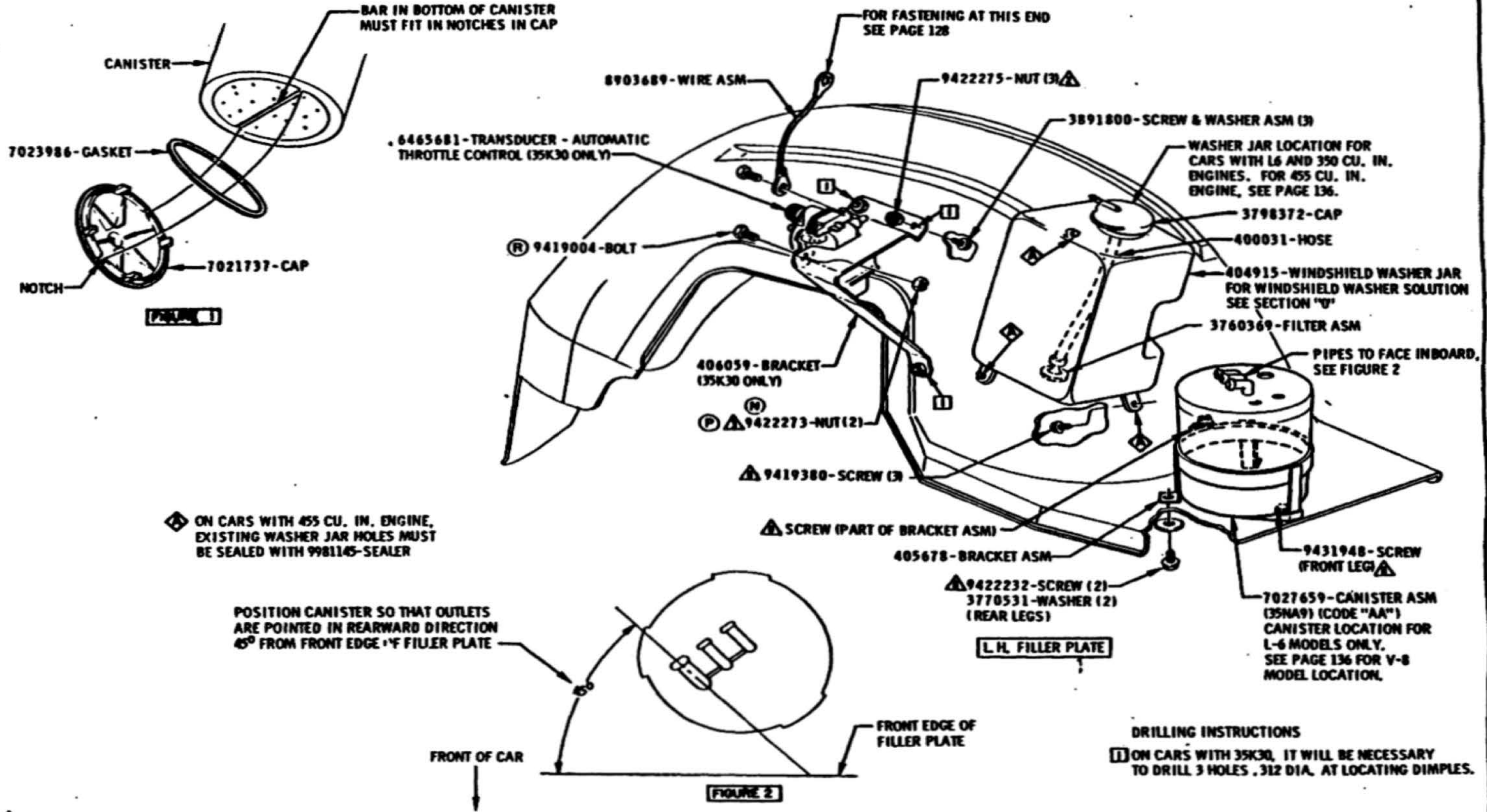
				TITLE FRONT FENDER COMPONENTS			
DATE NOVEMBER 23, 1968				FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	
DR. BY P. LOCATELLI				NO. 110 118		MANUAL NO. 11 128	
CHECKED BY [Signature]				SERIES A		PART NO. 404411	
APPR. [Signature]				12H 35C60			
DATE	SYM	REVISION	DR	CK	APPR.		



SEE FIG. 1 FOR POSITION OF SEAL IN THIS AREA

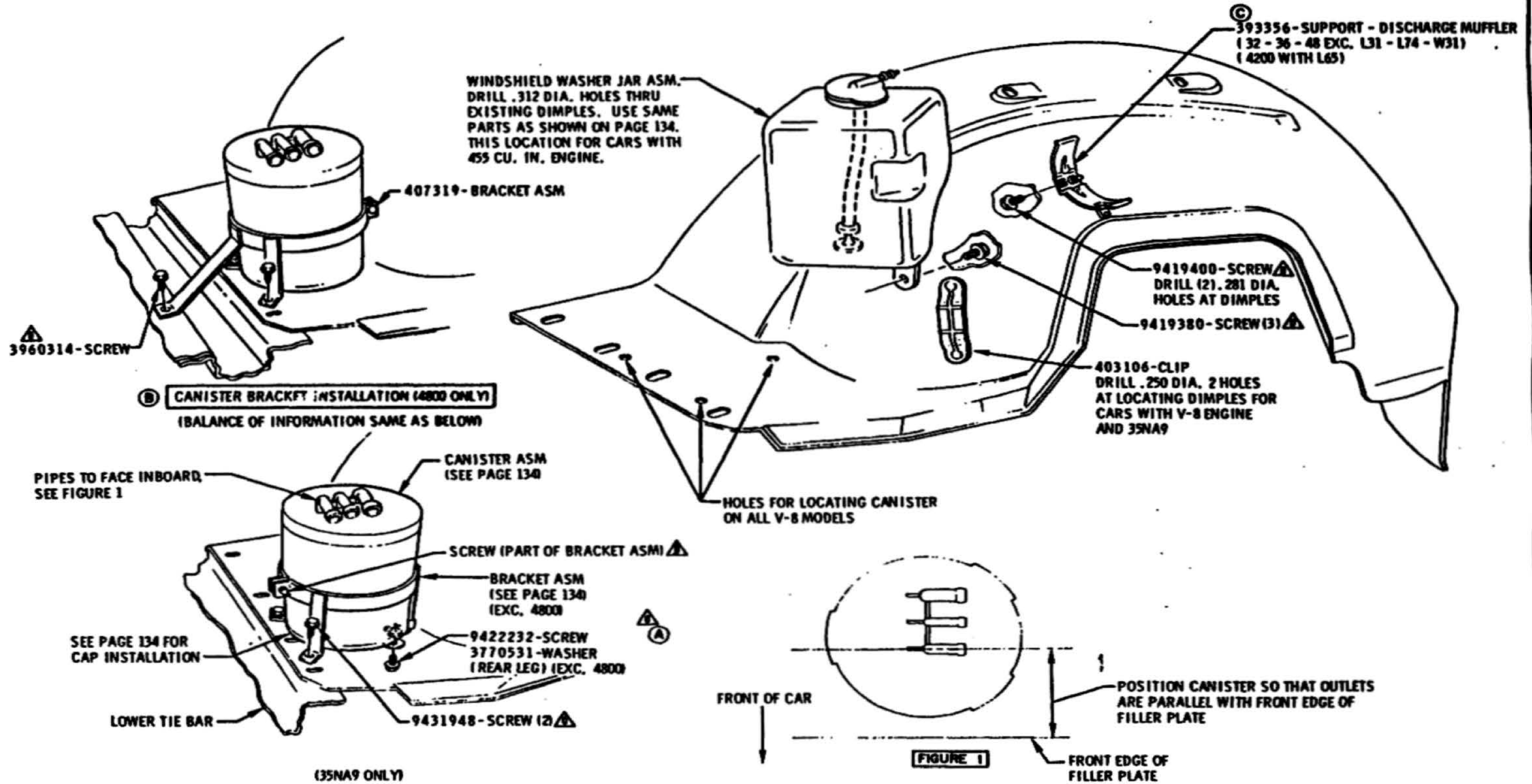
▲▲▲▲▲  
84-120 LB. IN.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

REVISIONS				TITLE		FILLER PLATE ASSEMBLY		MANUAL SEC. PAGE	
4-13-70	D	TORQUE ADDED	PLD	DATE	NOVEMBER 19, 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	11 132
4-21-68	C	WAS SCREW + WASHER	PLD	DR BY	P. LOCATELLI	REV.	11E	SERIES	A
5-8-69	B	VIEW A ADDED	PLD	CHECKED	M. BARNHART	PART NO.	404411		
5-8-69	A	BAFFLE REMOVED	PLD	APPR.	TJE				
DATE	SYM	REVISION	DR.	CK.	APPR.				



- ▲ 30 - 40 LB. IN. (P)
- ▲ 72 - 120 LB. IN.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

REV.	DATE	BY	DESCRIPTION	DR.	CHK.	APPL.	TITLE	FIG. USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
226-R		R	WAS 9418566-BOLT	1/6	DT		L.H. FILLER PLATE COMPONENTS				
121-R		P	TORQUE REVISED	1/6	DT			1970		11	134
121-R		N	WAS 9419143-NUT	1/6	DT						
121-R		M	WAS 7028078-CANISTER	1/6	DT						
9-15-69		L	WAS 7027659-CANISTER	1/6	DT						



ⓑ CANISTER BRACKET INSTALLATION (4800 ONLY)  
(BALANCE OF INFORMATION SAME AS BELOW)

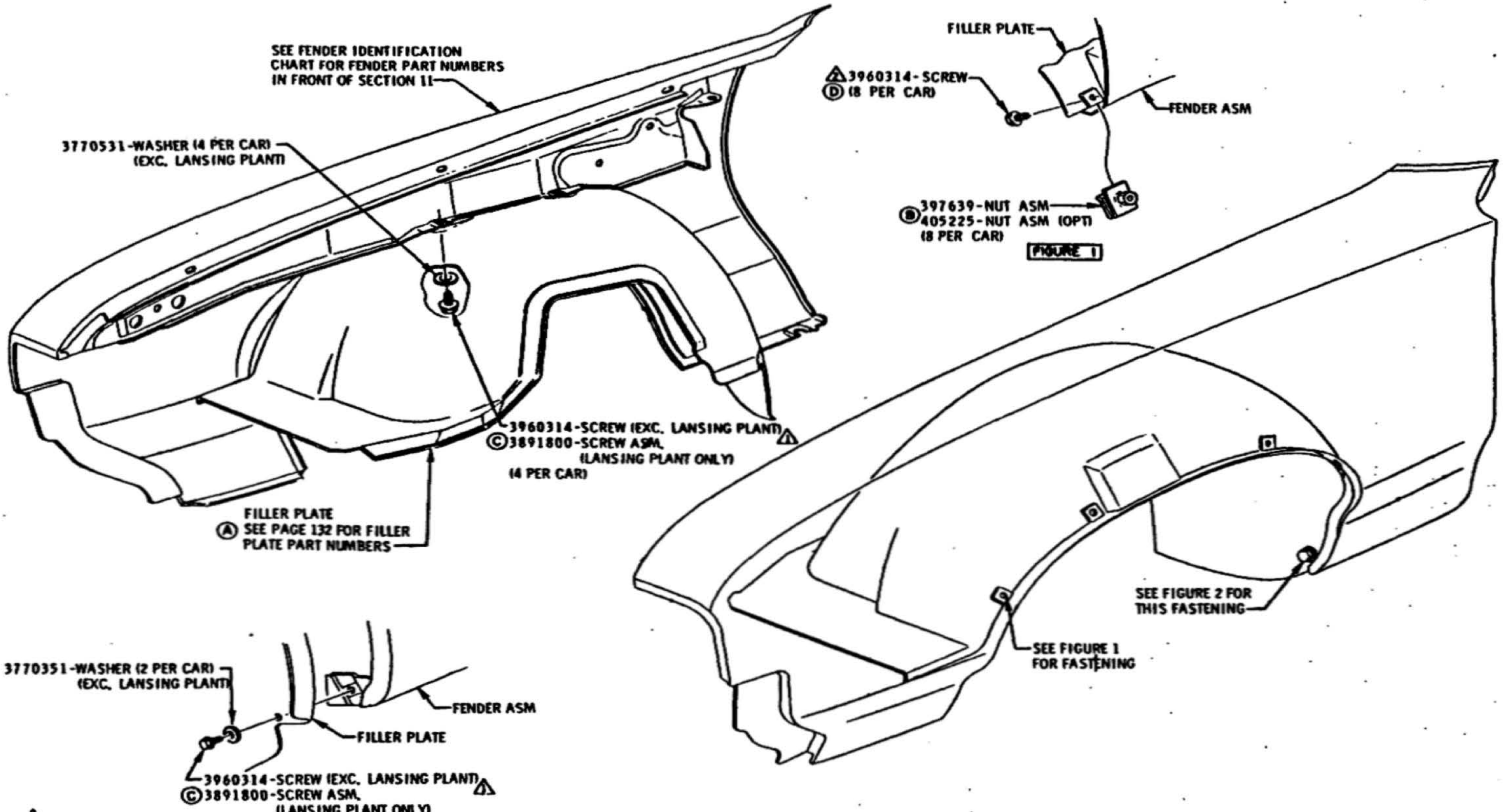
ⓐ CANISTER INSTALLATION  
(V8 ONLY)

▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE	SYM	REVISION	DR	CK	APPR	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
10-27-69	C	393356 - SUPPORT ADDED				R. H. FILLER PLATE COMPONENTS	1970		11	136
9-16-69	B	VIEW ADDED								
8-20-69	A	3770531								

A

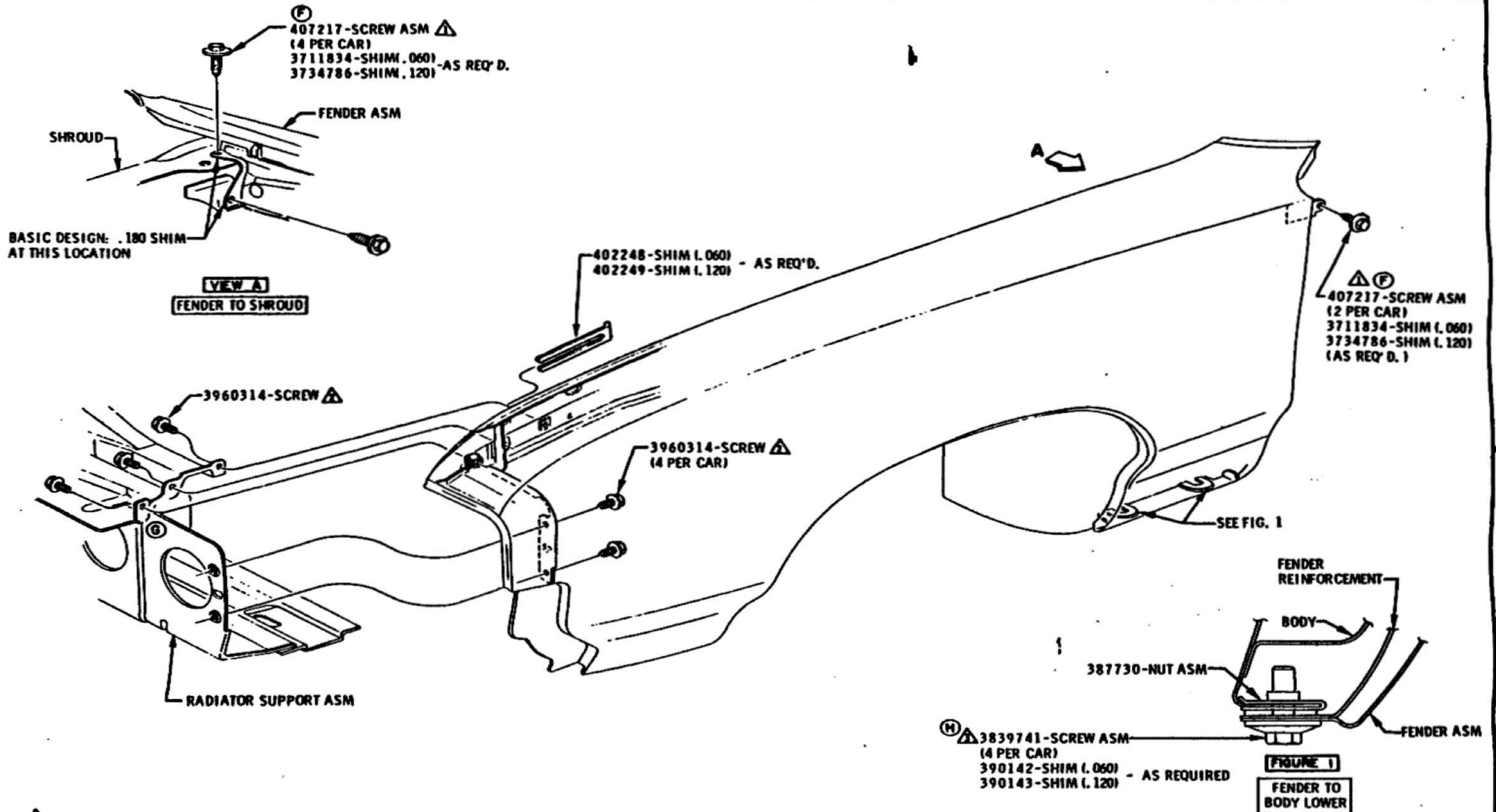
404411



- ▲ 10-22 LB. FT. (D)
- ▲ 15-22 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

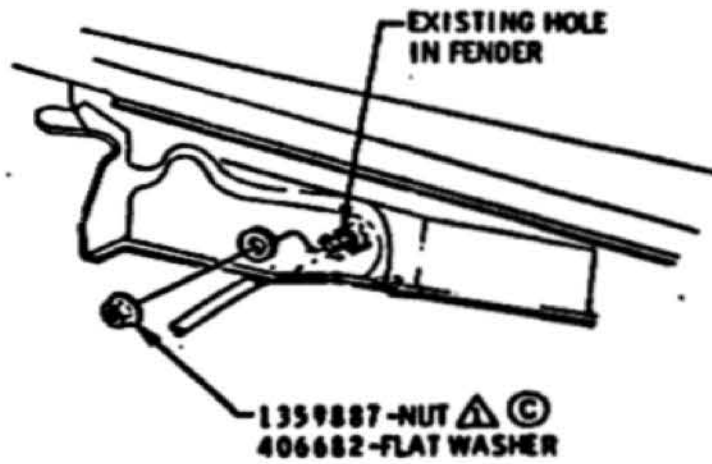
DATE	SYN	REVISION	DR	CL	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
12-18-69	D2	TORQUE REVISED				FILLER PLATE TO FENDER	1970		11	138
11-11-69	C	3891800-SCREW ASM ADDED								
6-11-69	B	OPTIONAL NUT ADDED								
3-27-69	A	NOTE ADDED								

PART NO. 404411

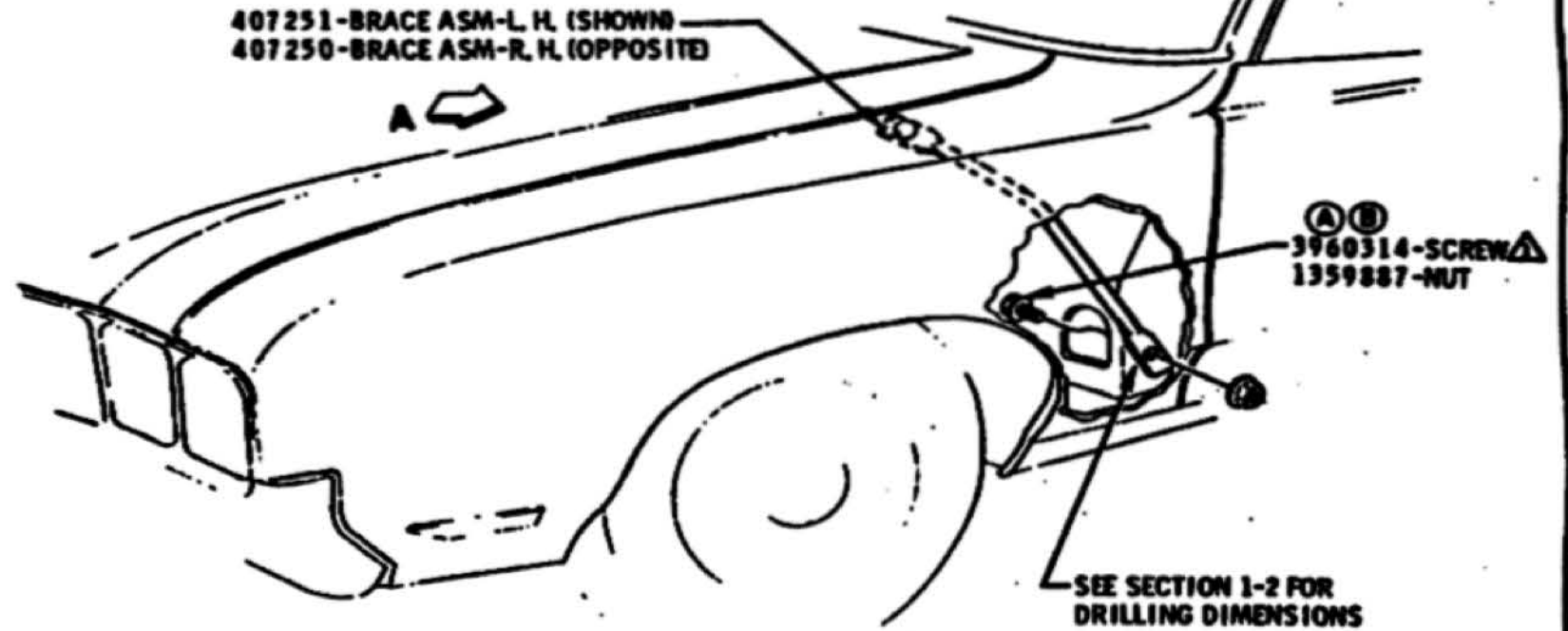


- ▲ 20-30 LB. FT.
- ▲ 15-22 LB. FT.
- ▲ 30-40 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

		5-20-69	F.	PART NOS. REVISED	PLTS	TITLE	FENDER TO BODY & RADIATOR SUPPORT	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
		4-23-69	D	BACKGROUND REVISED	PLTS	DATE DECEMBER 17, 1968	1970			11	140
9-11-69	H			TORQUE REVISED	PLTS	OR BY P. LOCATELLI					
9-9-69	G			BRACKET REVISED	PLTS	CHECKED P. J. S. ambart					
8-19-69	F			WAS 94159... SHIM REVISED	PLTS	APPR. JWF	REV. 11A	SERIES A			404A11
		4-11-69	C	WAS 20-30 LB. FT.	PLTS						
		4-4-69	B	VIEW B REMOVED	PLTS						
		3-10-69	A	VIEW B ADDED	PLTS						



**VIEW A**  
**BRACE ASSEMBLY TO FENDER ASSEMBLY**

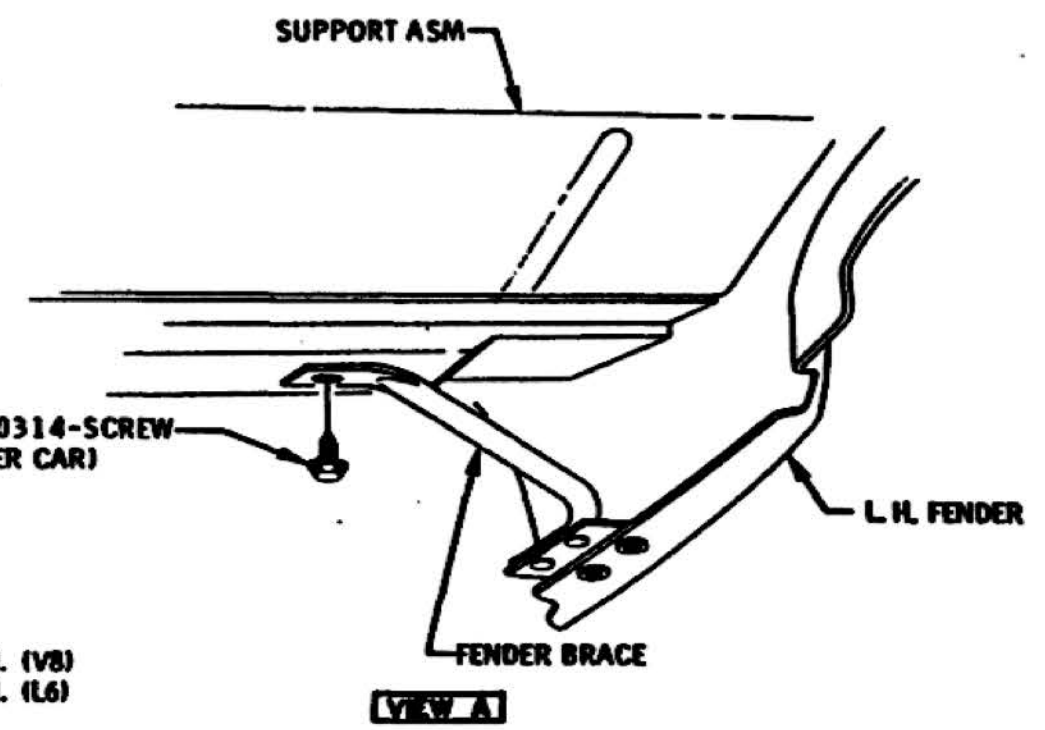
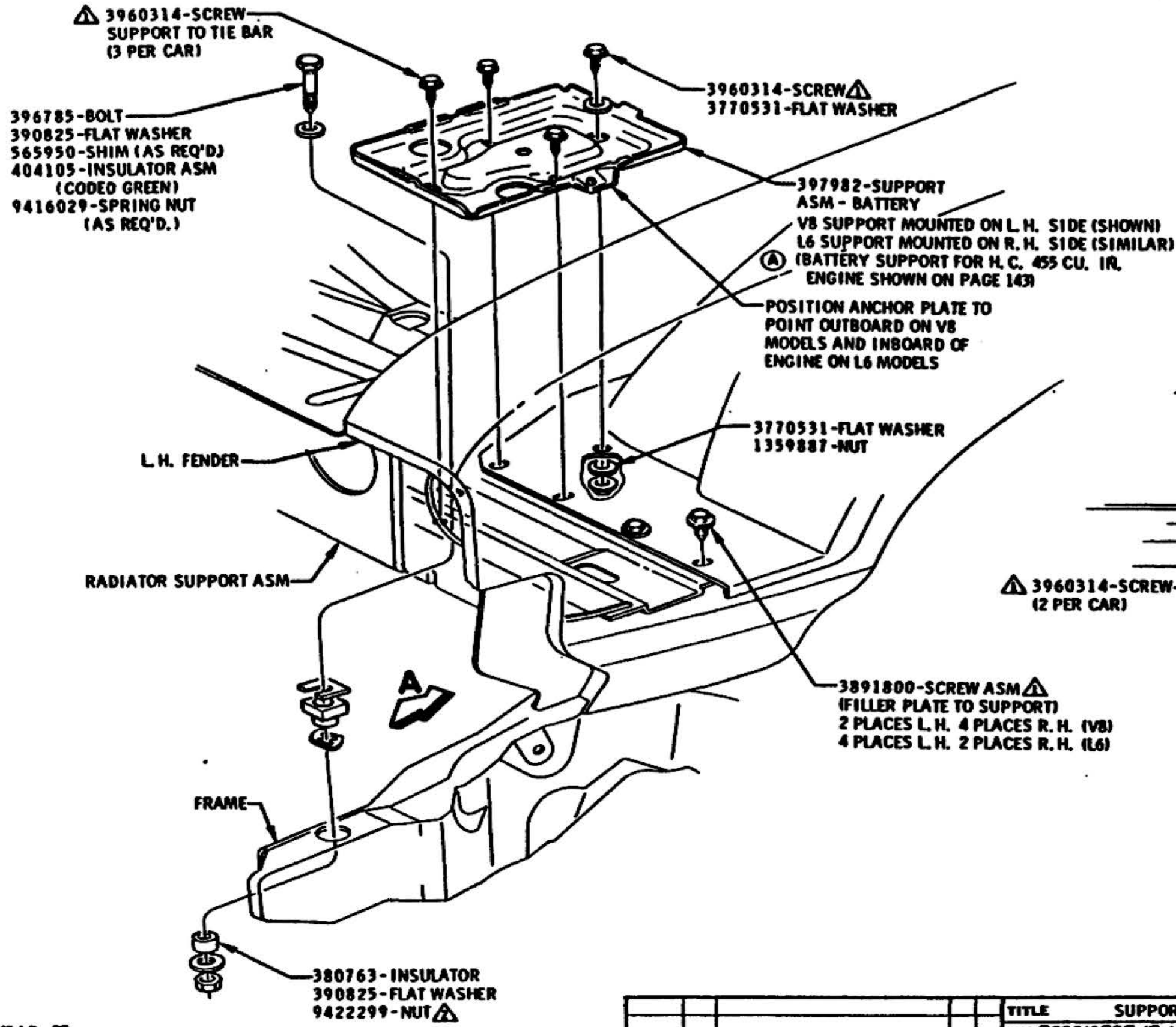


$\Delta$   
 $\Delta$   
 $\Delta$   
 $\Delta$   
15 - 22 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

(455 CU. IN. ENGINE COUPES ONLY)

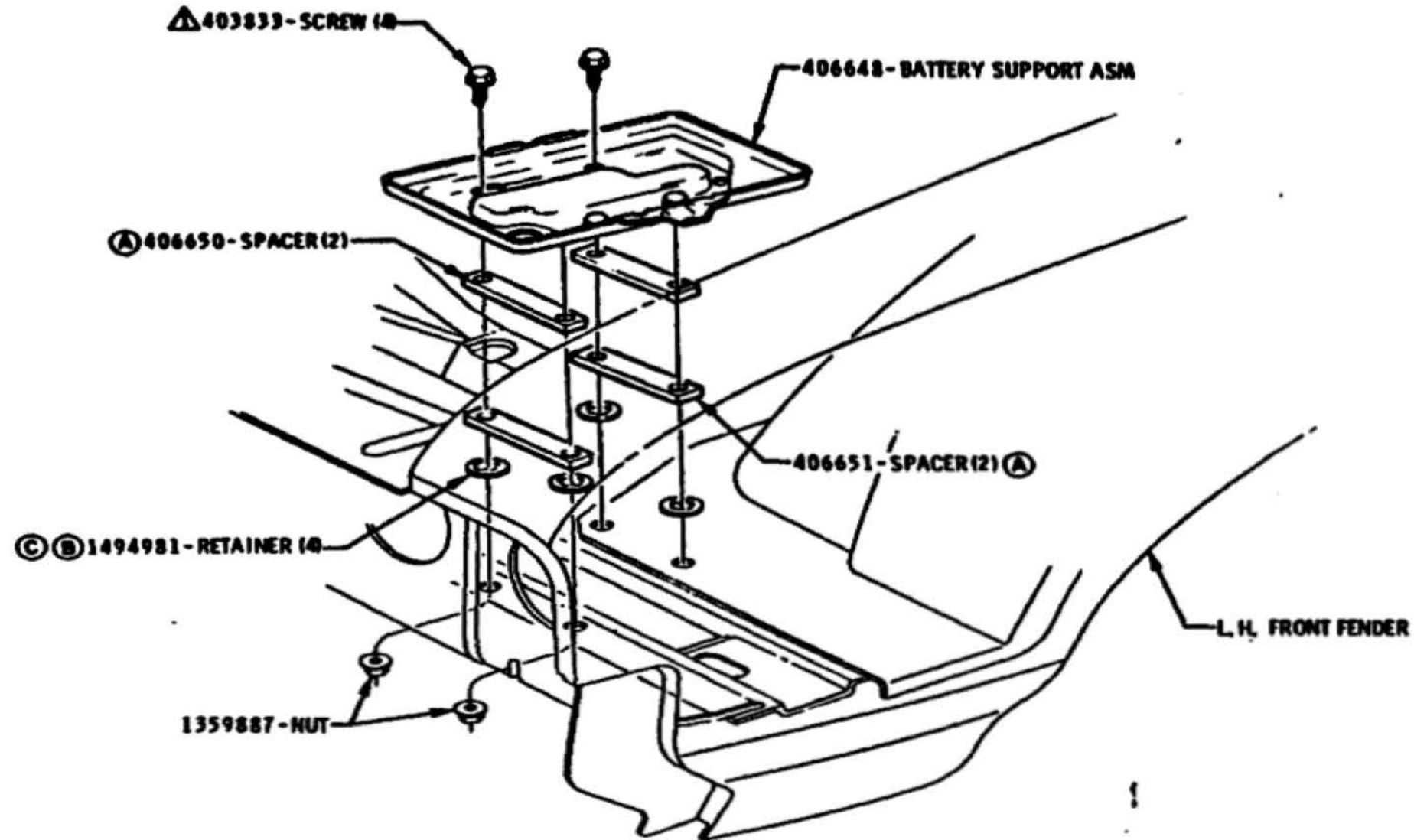
DATE		BY	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
11/15/69		C	FASTENING REVERSE				BRACE-FENDER TO BODY	1970		11	141
11/10/69		B	WAS 9418918-SCREW								
3/26/69		A	WAS 3960314-SCREW								
								11E 15L33		A	404411





- ▲ 30 - 45 LB. FT.
- ▲ 15 - 22 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

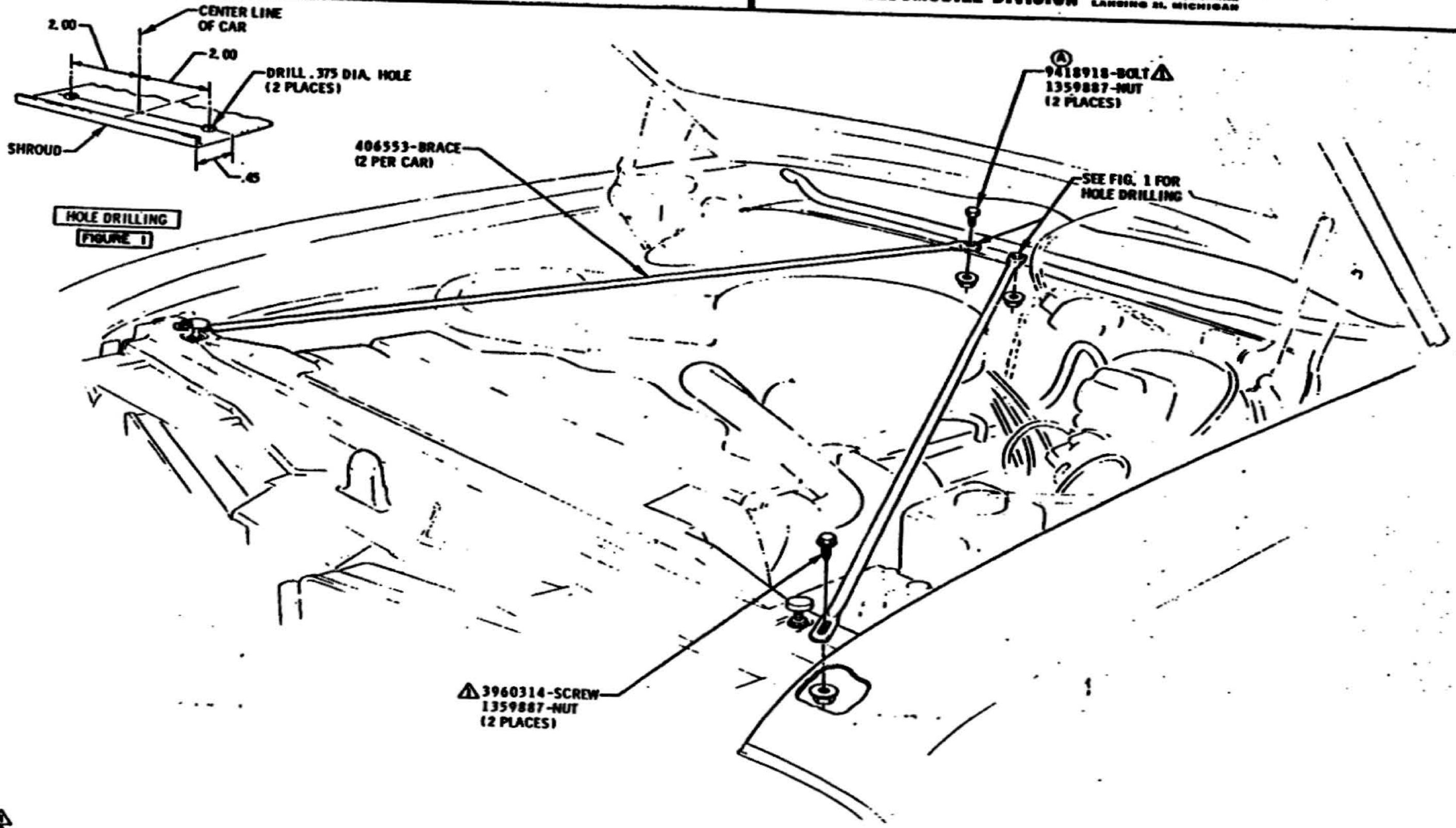
TITLE		SUPPORT ASM TO FRAME AND BATTERY SUPPORT MOUNTING			
DATE	DECEMBER 17, 1968	FIRST USED	1970	MANUAL NO.	11 142
DR.	P. LOCATELLI	CHECKED	<i>[Signature]</i>	REV.	11E 12A
5-1-69	A NOTE ADDED	PLP	APPR.	SERIES	A
				PART NO.	404411



455 CU. IN. ENGINES

▲  
▲  
▲ 15 - 22 LB. FT.  
▲ FULLY DRIVEN, SEATED

REVISION		TITLE		DATE		PART USED		MANUAL NO.		PAGE	
8-11-69	C	WAS 1196285 - NUT	PLD	MAY 1, 1969	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	11	143			
6-24-69	B	NUTS ADDED	PLD	DR. BY PETE LOCATELLI							
6-24-69	A	SPACERS REVISED	PLD	CHECKED <i>[Signature]</i>					A		404411



▲ 3960314-SCREW  
1359887-NUT  
(2 PLACES)

▲ 9418918-BOLT  
1359887-NUT  
(12 PLACES)

HOLE DRILLING  
FIGURE 1

SEE FIG. 1 FOR  
HOLE DRILLING

406553-BRACE  
(2 PER CAR)

2.00  
CENTER LINE  
OF CAR  
2.00  
DRILL .375 DIA. HOLE  
(2 PLACES)  
SHROUD

▲  
▲  
▲  
15-22 LB. FT.  
FULLY DRIVER SEATED  
AND NOT STRIPPED

				TITLE		SHROUD TO TIE BAR BRACE (4800 ONLY)			
				DATE		FIRST USED			
				JUNE 10, 1969		1970			
				DR. BY JOSEPH V. GALL		OLDSMOBILE PRODUCT		MANUAL SEC. PAGE	
				CHECKED P. Barnhart		INFORMATION MANUAL		11 144	
10-10-69	A	WAS 3960314-SCREW	W. G. BY	APPR.	TWE	11E	A	PART NO. 404411	
DATE	SYM.	REVISION	DR.	CL.	APPR.				

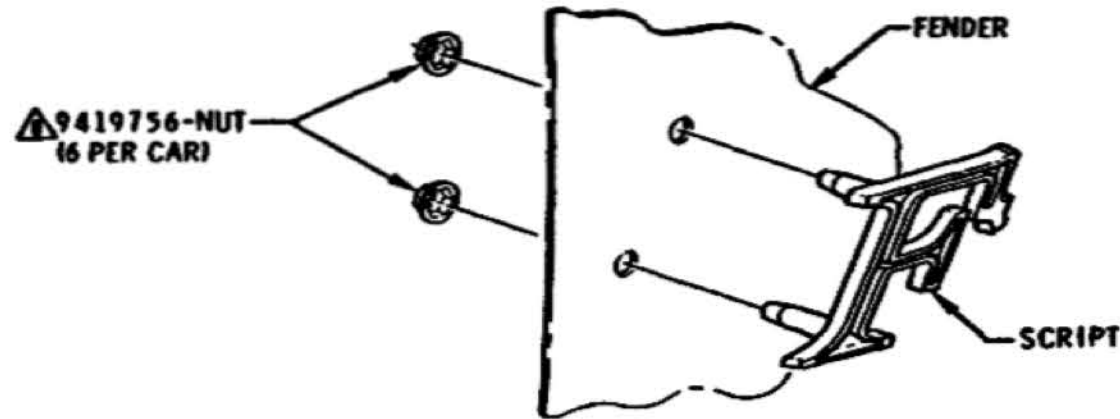
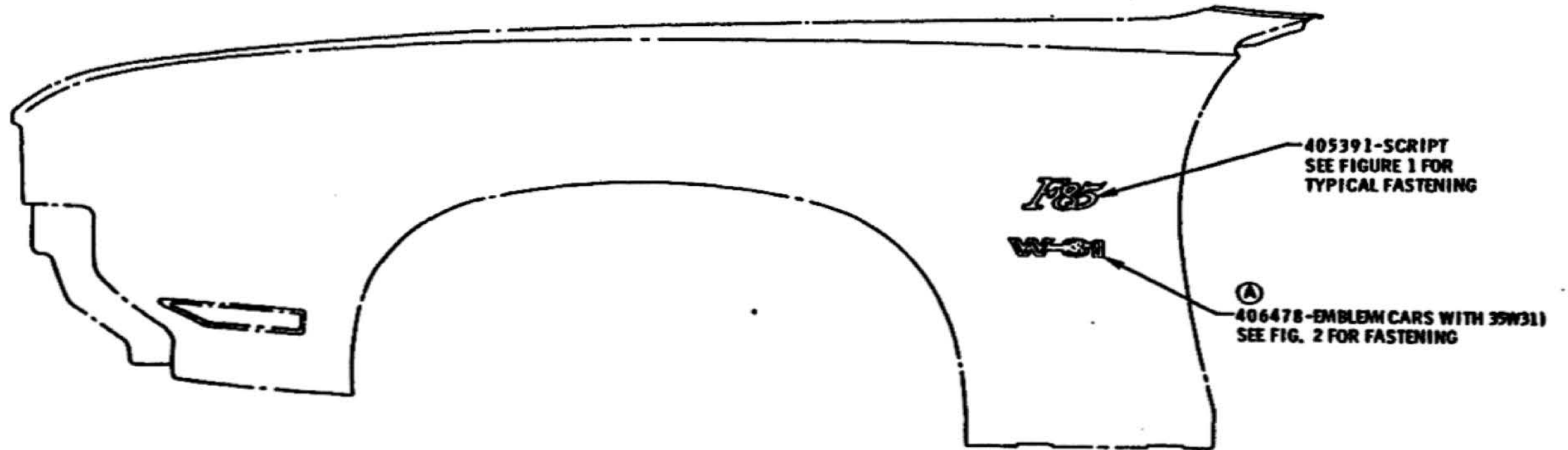


FIGURE 1



FIGURE 2



FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE		FRONT FENDER ORNAMENTATION (3100 - 3200)	
				DATE	FEBRUARY 21, 1969	FIRST USED	1970
				DR BY	GMP J.V. GALL	OLDSMOBILE PRODUCT INFORMATION MANUAL	
				CHECKER	J.P. Banchart	MANUAL SEC.	11
				APPR.	5/26	PAGE	150
5-15-69	A	35W31 EMBLEM ADDED	J.V. G	DR. CL.	REF.	SERIES	PART NO.
DATE	SYM	REVISION	DR.	CL.	11G	A	404411

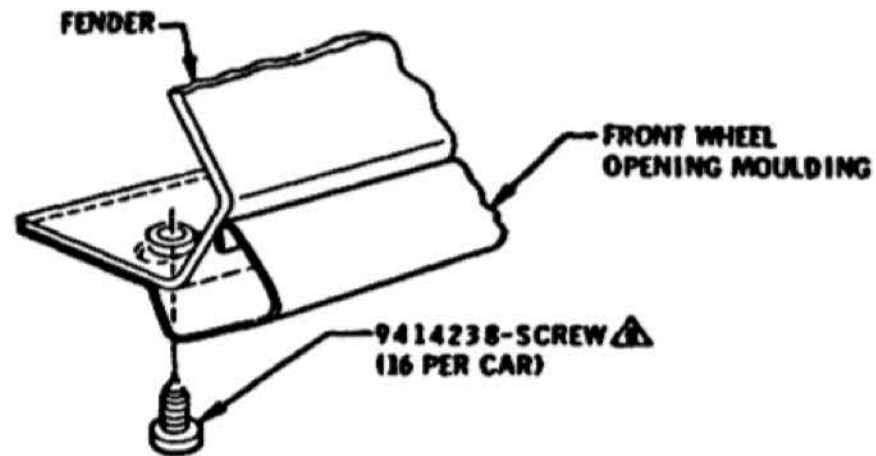
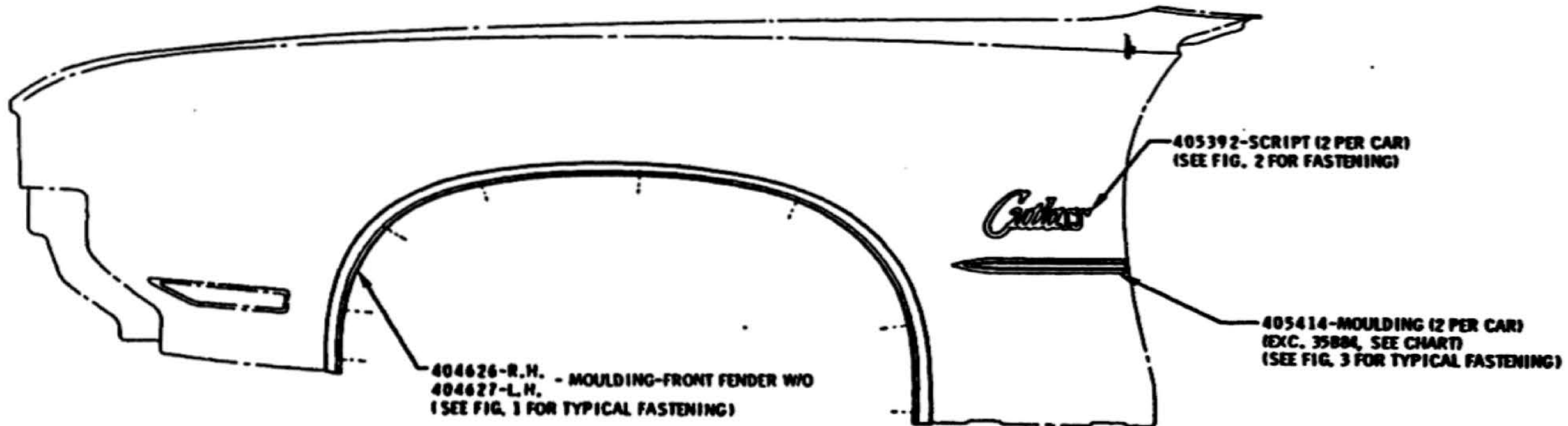


FIGURE 1

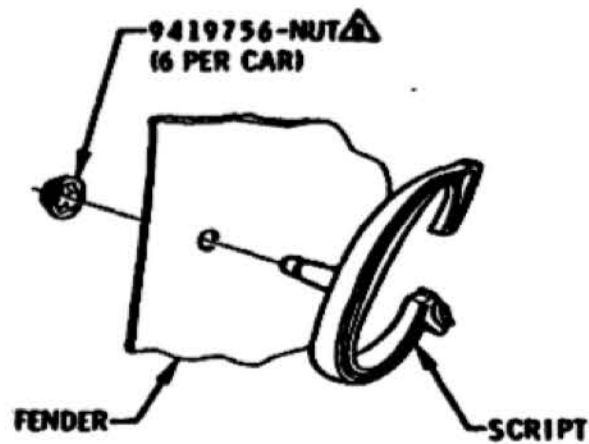


FIGURE 2

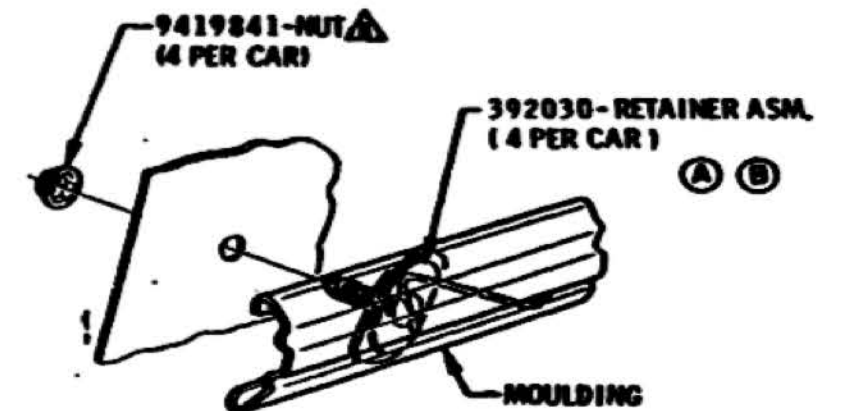


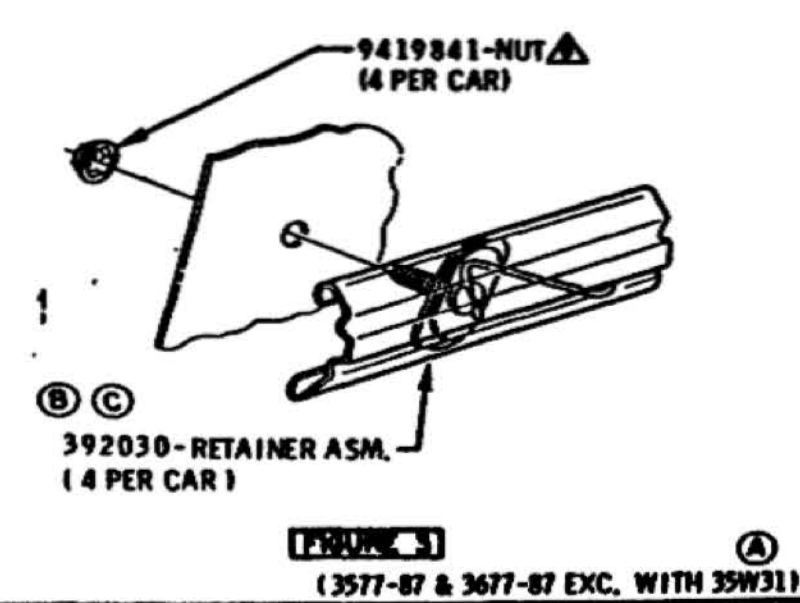
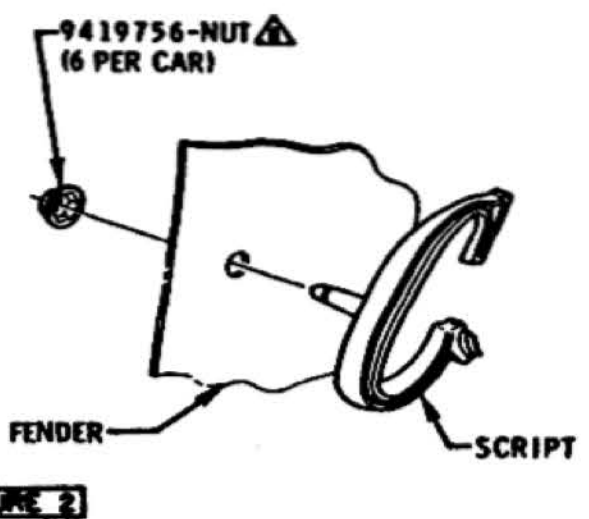
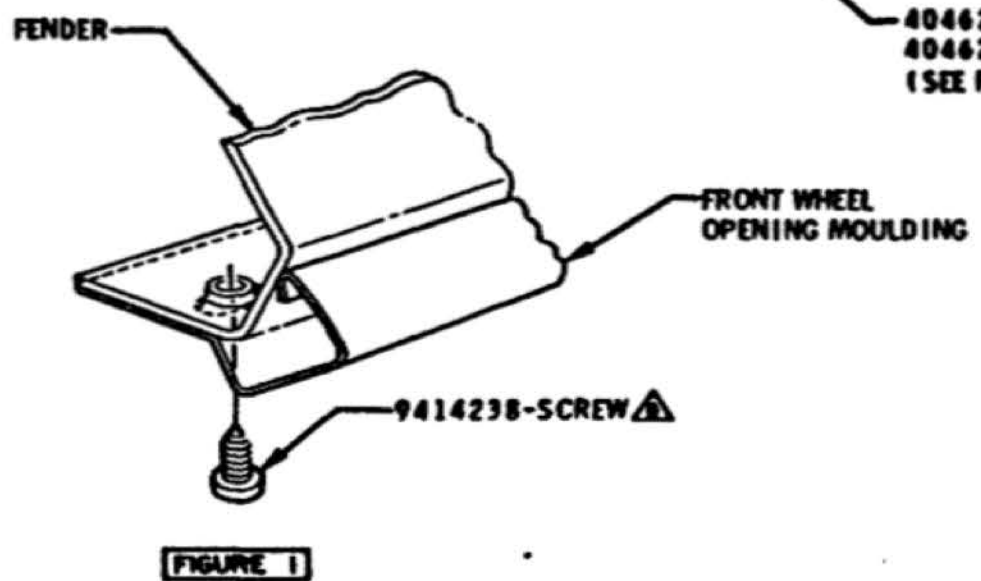
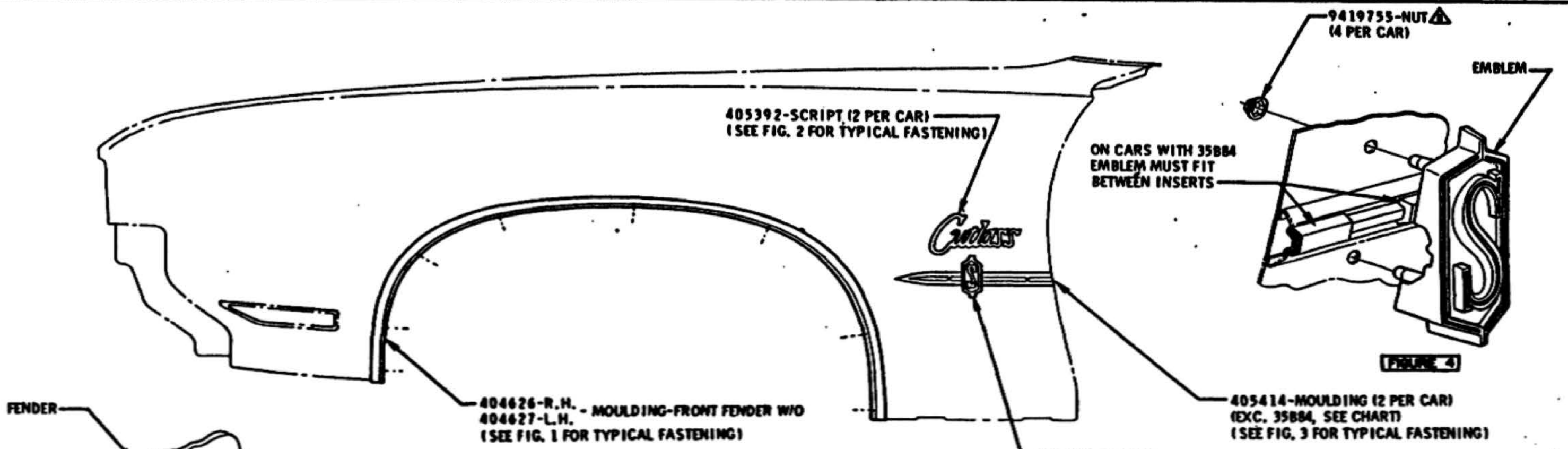
FIGURE 3

MOULDING USAGE CHART WITH 35884 OPTION	
405421-MOULDING ASM (BLACK)	
405422-MOULDING ASM (DK. BLUE)	
405423-MOULDING ASM (DK. GREEN)	
405424-MOULDING ASM (DK. GOLD)	
405425-MOULDING ASM (LT. SADDLE)	

$\Delta$   
 $\Delta$   
 $\Delta$   
 $\Delta$   
 $\Delta$   
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

(3535-39-09 & 3635-39-09)

DATE		BY	REVISION	DR.	CL.	APPR.	TITLE	YEAR USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
3-11-69							EXTERIOR MOULDINGS AND ORNAMENTATION	1970		11	152
6-11-69	A		OPTIONAL RETAINER ADD.					116 35884	A		404411



MOULDING USAGE CHART WITH 35884	
405415-MOULDING ASM (BLACK)	
405416-MOULDING ASM (DK. BLUE)	
405417-MOULDING ASM (DK. GREEN)	
405418-MOULDING ASM (DK. GOLD)	
405419-MOULDING ASM (LT. SADDLE)	

DATE		BY	REVISION	DR.	CK.	APPR.	TITLE	CHG. NO.	DATE	REV.	APP.	MANUAL SEC.	PAGE
3-18-69							EXTERIOR MOULDINGS AND ORNAMENTATION.						
6-11-69	B		OPTIONAL RETAINER ADD.						MARCH 11, 1969	1970		11	154
5-15-69	A		NOTE REVISED							116			
										35884		A	40441

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

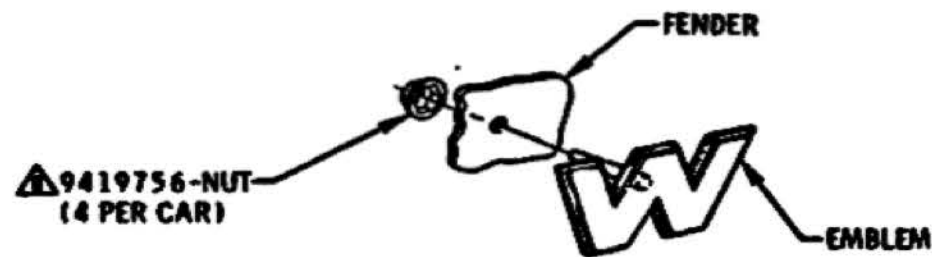
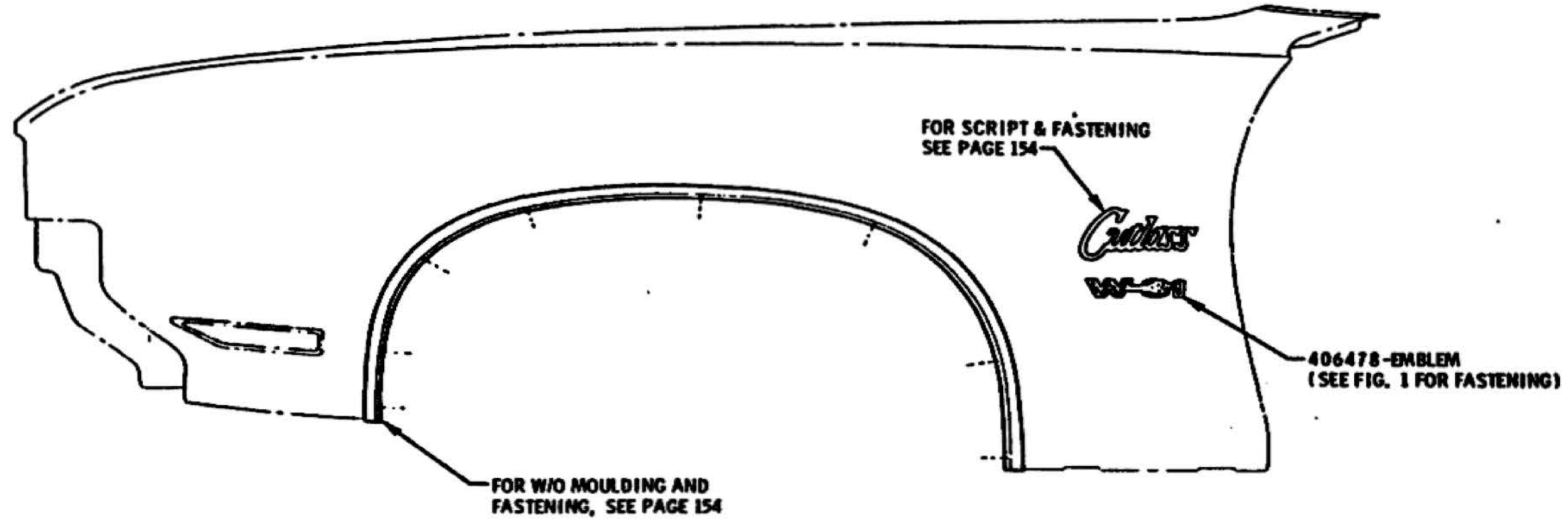


FIGURE 1

(3677-3687 WITH 35W31)

TITLE				EXTERIOR MOULDINGS AND ORNAMENTATION			
DATE	SYM	REVISION	DR. CK.	DATE	PART USE	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
				MAY 15, 1969	1970		11 155
				DR. BY JOSEPH V. GALL			
				CHECKED <i>MBambart</i>	REF. 35W 31	SERIES A	PART NO. 404411
				APPR. <i>JLF</i>			

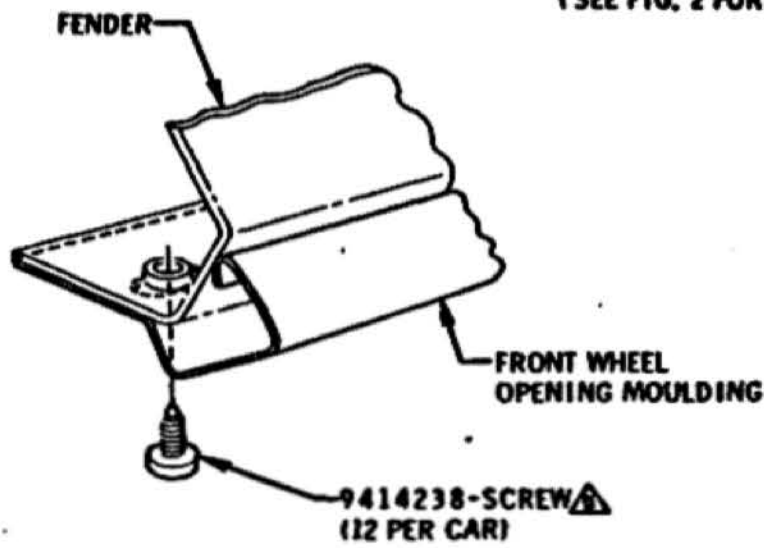
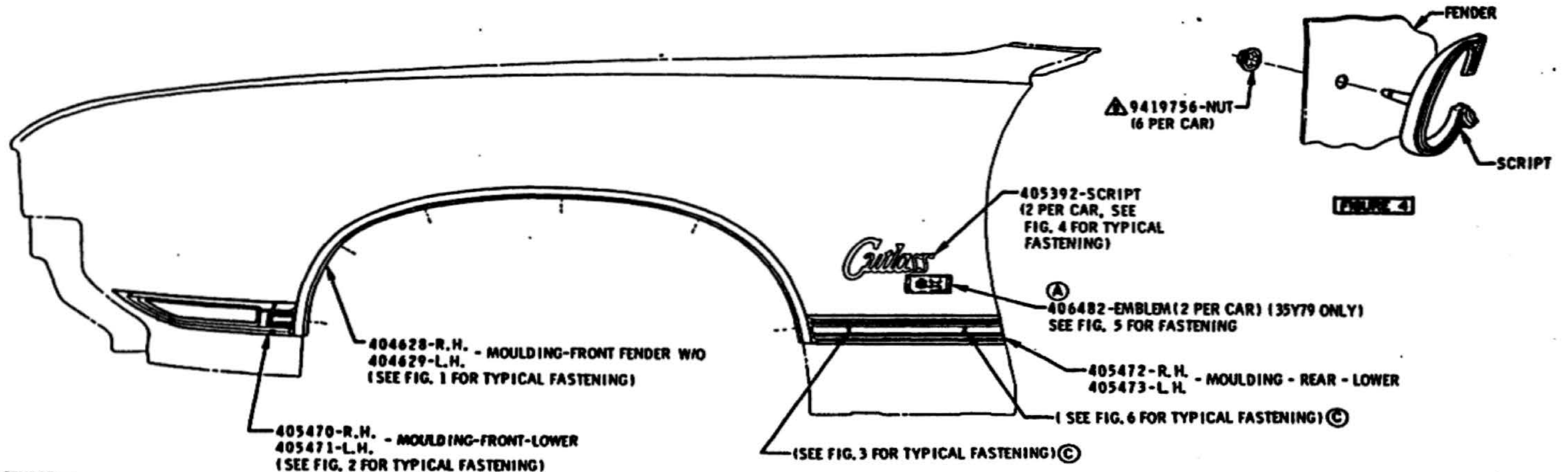


FIGURE 1

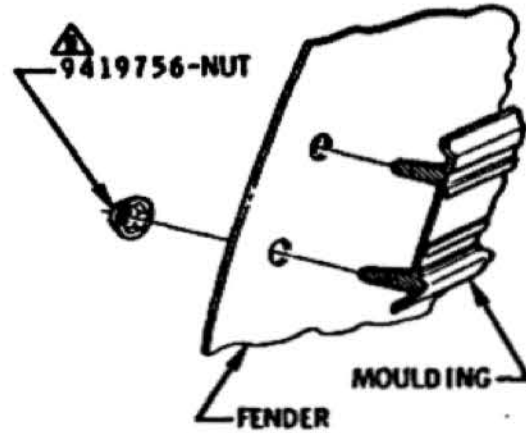


FIGURE 2

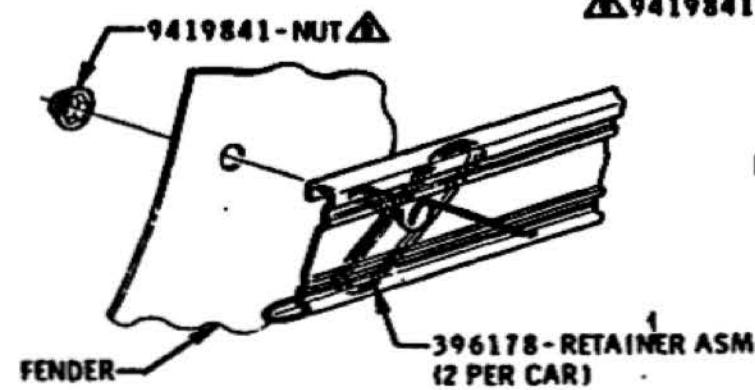


FIGURE 3

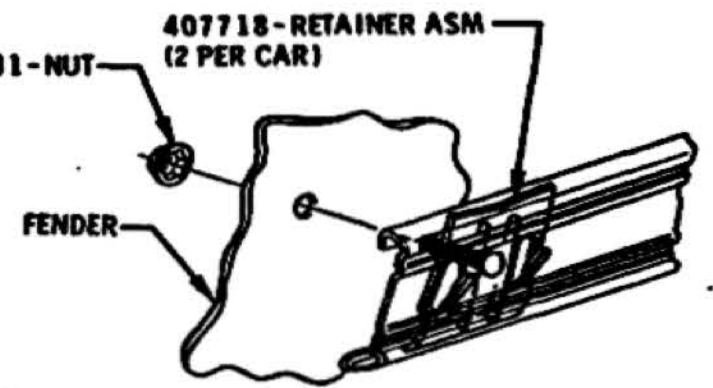


FIGURE 6

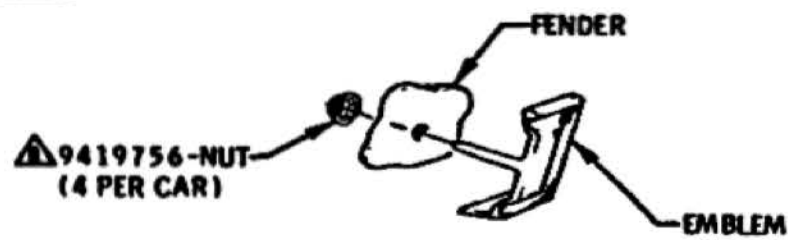


FIGURE 5

▲▲▲▲▲  
FULLY DRIVEN, SEATED AND NOT STRIPPED

(4200)

TITLE					EXTERIOR MOULDINGS AND ORNAMENTATION				
DATE	BY	CHKD	APPL	REV	DATE	BY	CHKD	APPL	REV
12-22-69	G				MARCH 11, 1969	J.V. GALL			
10-22-69	B				1970				
4-12-69	A				116				
DATE	SYM	REVISION	DR.	CHK.	APPL.				

MANUAL NO.	PAGE	MANUAL NO.	PAGE
11	156	11	156
SERIES		PART NO.	
A		404411	







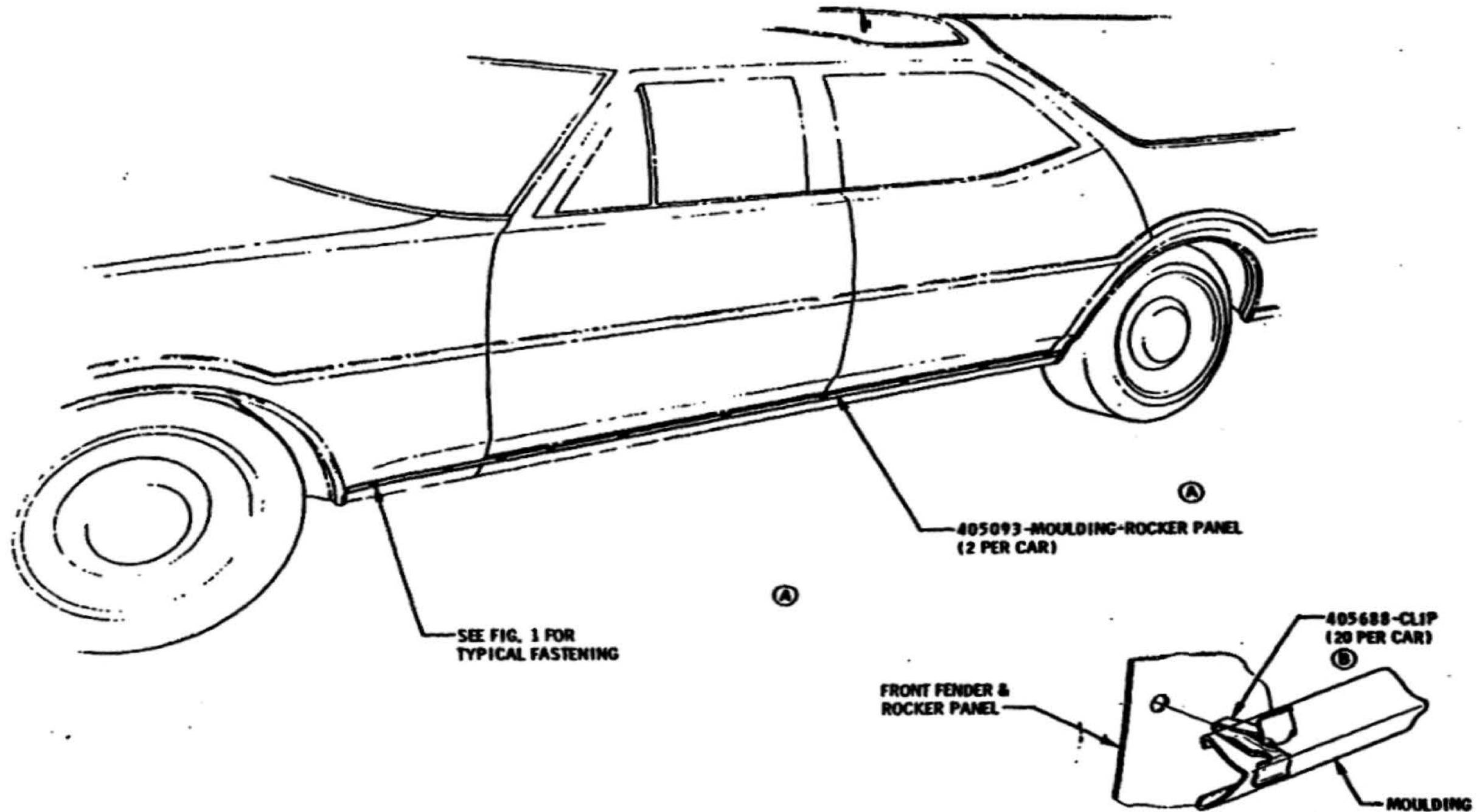


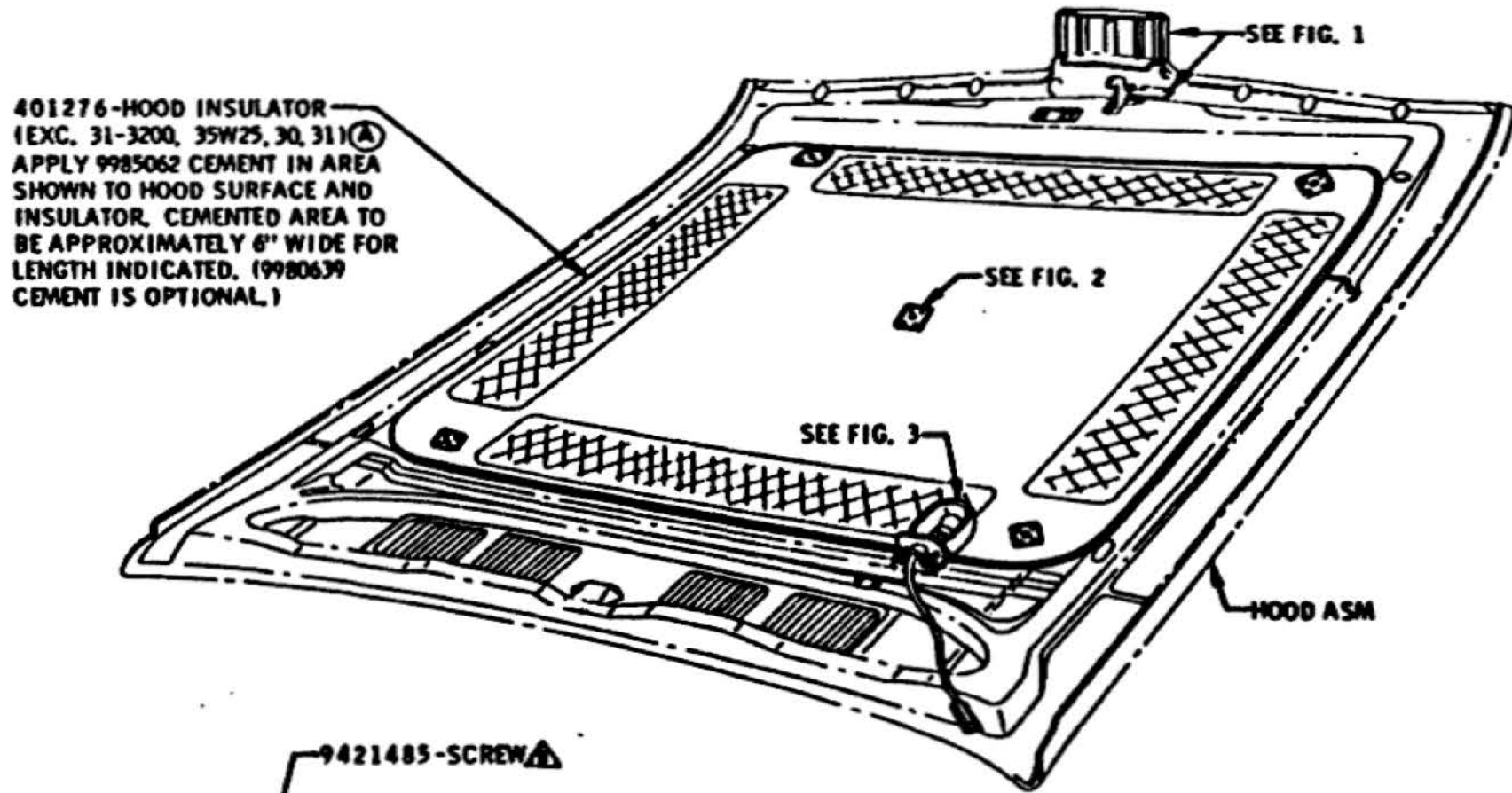
FIGURE 1

(4800)

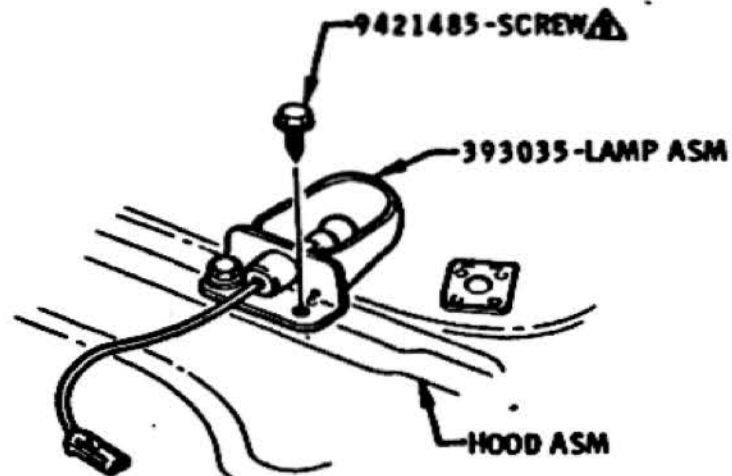
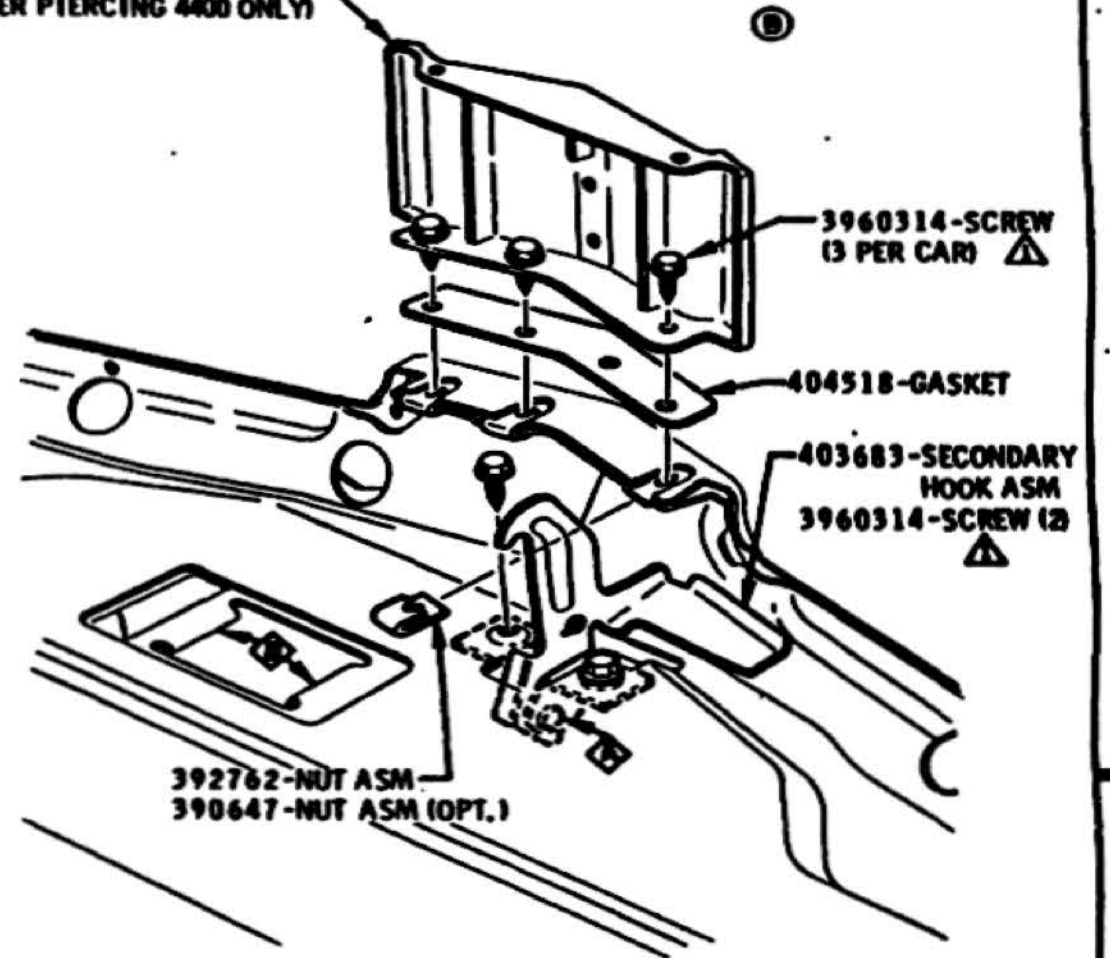


Ⓐ

DATE		SYN	REVISION	DR.	CR.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE
							EXTERIOR MOULDING	1970		11	162
9-20-69			B WAS "16" PER CAR				DR. BY JOSEPH V. GALL				
9-20-69			NOTES / FIG. REMOVED				CHECKED <i>[Signature]</i>	1972			
										A	404411



404924-HOOD EXTENSION (EXC. 4400)  
404926-HOOD EXTENSION  
(AFTER PIERCING 4400 ONLY)



389809-RETAINER (5)  
403868-CLIP (5) (OPT.)

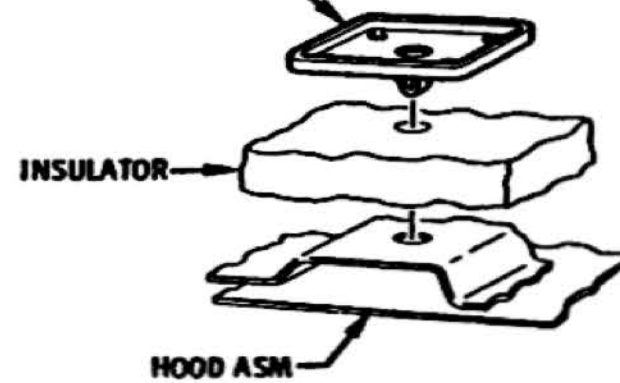


FIGURE 1

FIGURE 2

(B) LUBRICATE CONTACT SURFACES OF HOOD LATCH REINFORCEMENT WITH 9985164-LUBRICANT

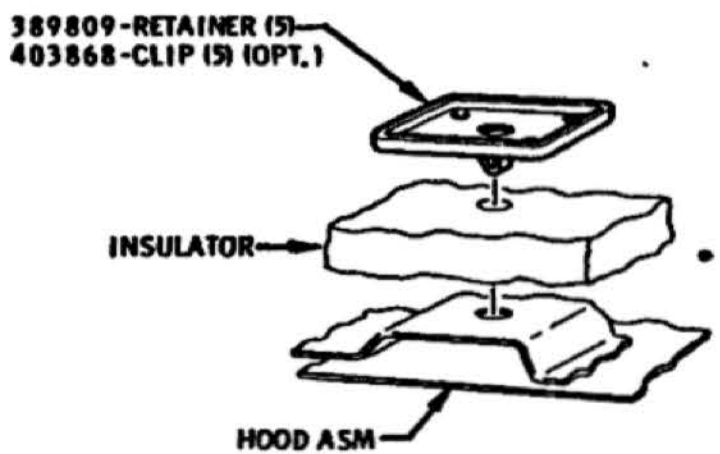
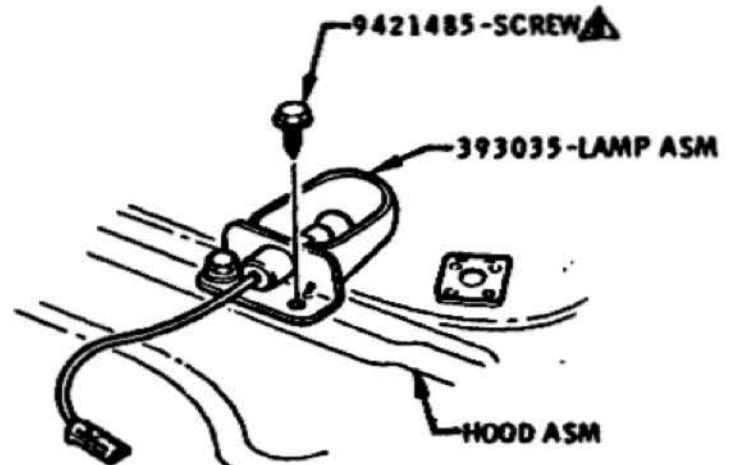
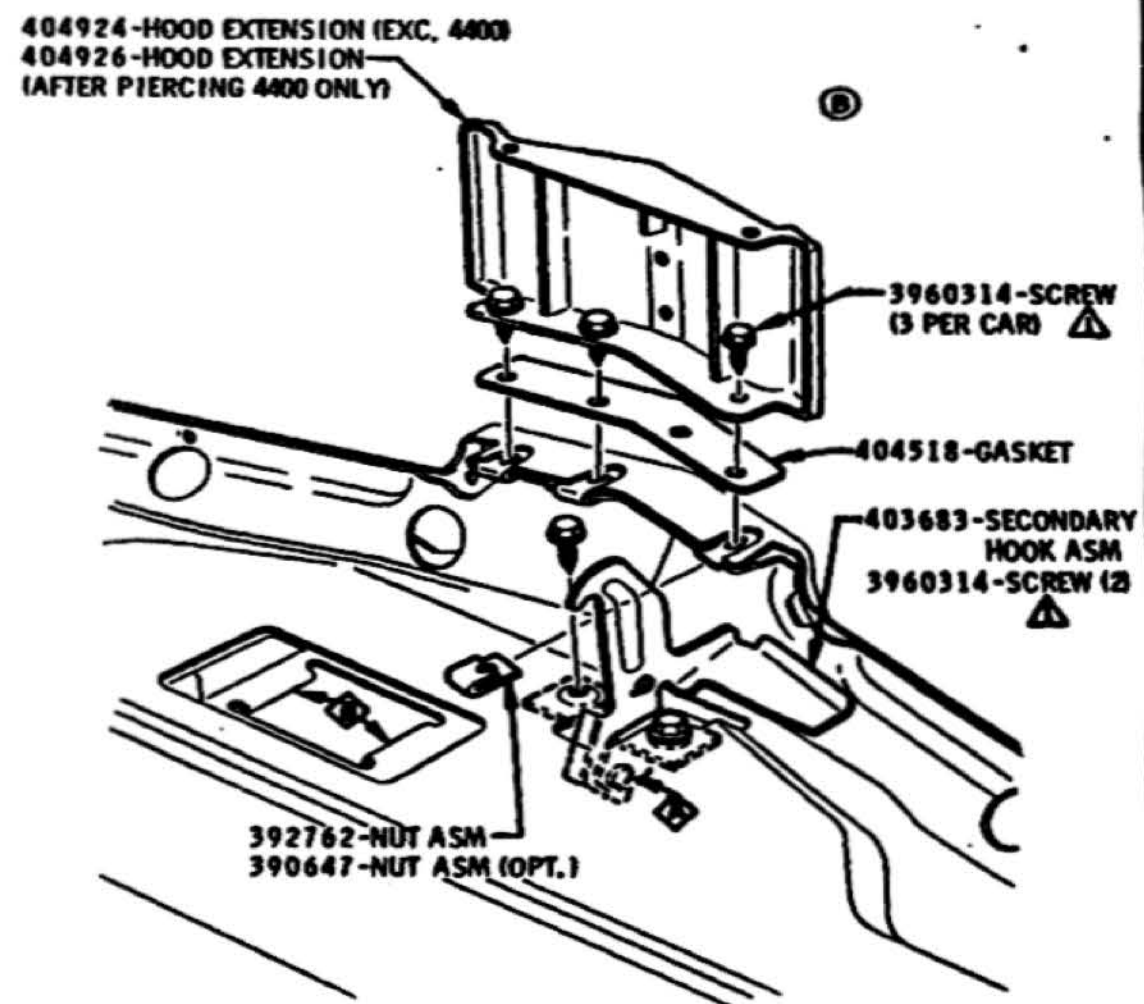
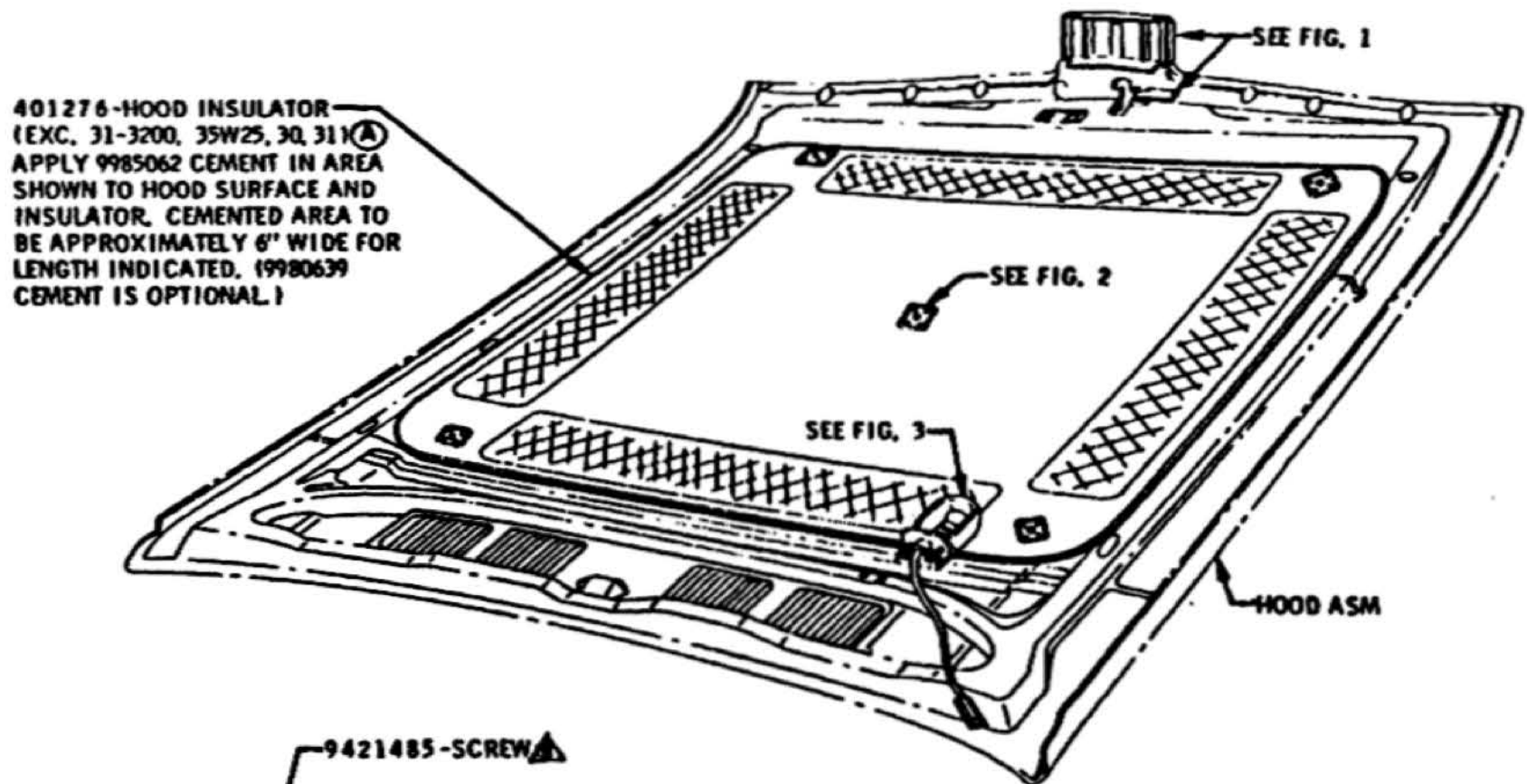
(C) (A) 404753-LUBRICANT  
404754-LUBRICANT (OPT.)  
(APPLY AFTER ASSEMBLY)

▲▲▲ 15 - 22 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

REVISIONS				HOOD COMPONENTS			
DATE	BY	REVISION	DR.	CL.	APPR.	TITLE	DATE
2-12-70	C	NOTE REVISED	JT			HOOD COMPONENTS	FEBRUARY 25, 1969
7-24-69	B	390305-DUMPER REMOVED	JT				DR. BY JOSEPH V. GALL
4-20-69	A	NOTE REVISED	JT				CHECKED BY T. J. BARNETT
							APPR. BY J. M. 2/26/70

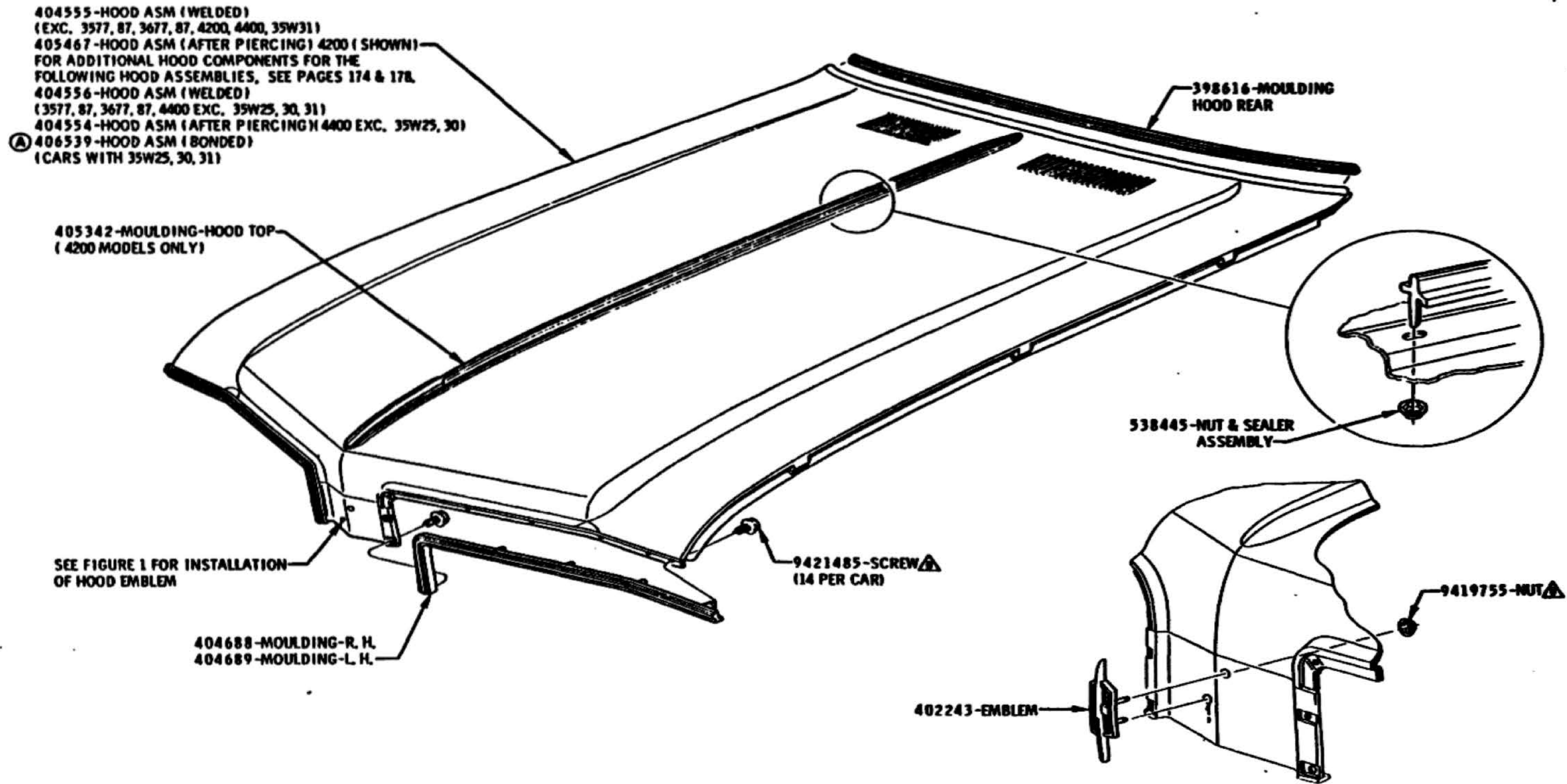
FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	11	PAGE	170
REV.	110	GROUP	A	PART NO.	404411	
35460						



- ▲ LUBRICATE CONTACT SURFACES OF HOOD LATCH REINFORCEMENT WITH 9985164-LUBRICANT
- ▲ LUBRICATE SECONDARY HOOK RIVET WITH 9985164-LUBRICANT AT ASM AND 9985002-LUBRICANT AFTER ASM

▲ 15 - 22 LB. FT.  
▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

REVISION				TITLE				HOOD COMPONENTS	
DATE	SYM	REVISION	DR. CK.	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	
7-24-69	B	390905-BUMPER REMOVED	JM/PT	FEBRUARY 25, 1969	1970		11	170	
8-28-69	A	NOTE REVISED	JM/PT	CHECKED BY JOSEPH V. GALL	NO. 110				
				APPR. <i>JM</i> 2/26	35160		A	404411	



SEE FIGURE 1 FOR INSTALLATION OF HOOD EMBLEM

**FIGURE 1**  
(EXC. 3577, 87, 3677, 87 & 4400  
(SEE PAGE 174, FIGURES 1 & 2 FOR THESE MODELS)

▲  
▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE		SYM		REVISION		DR. CL.		TITLE		HOOD ORNAMENTATION		MANUAL SEC. PAGE	
4-25-69		A		406539-HOOD ASM. ADD		1/6, 1/7, 1/8		DATE FEBRUARY 25, 1969 DR. BY JOE E. GALL		FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	
								CHECKED BY <i>PTJ</i>		NO. 116		11 172	
								APPR. <i>Sm</i> 2/26		SERIES A		PART NO. 404411	
								APPR.		116			

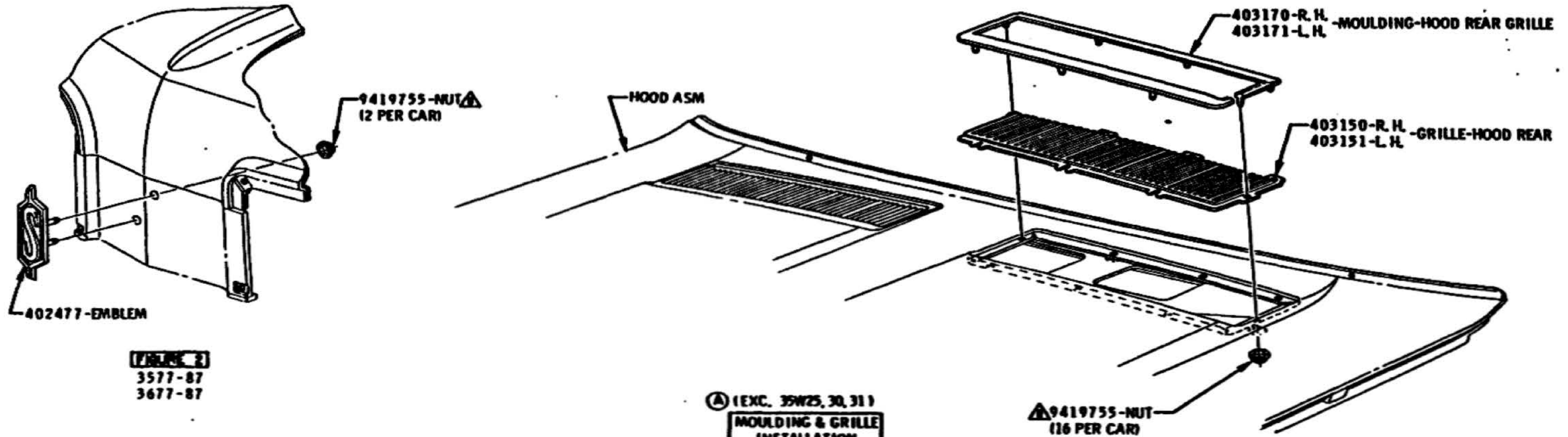


FIGURE 2  
3577-87  
3677-87

(A) (EXC. 35W25, 30, 31)  
MOULDING & GRILLE  
INSTALLATION  
3577 - 87  
3677 - 87  
4400

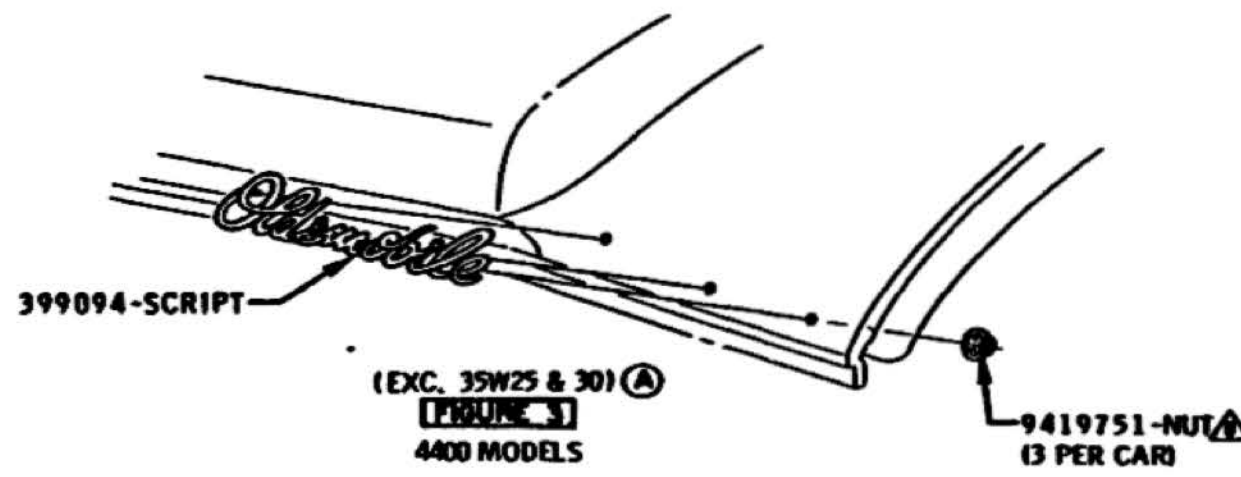


FIGURE 3  
4400 MODELS

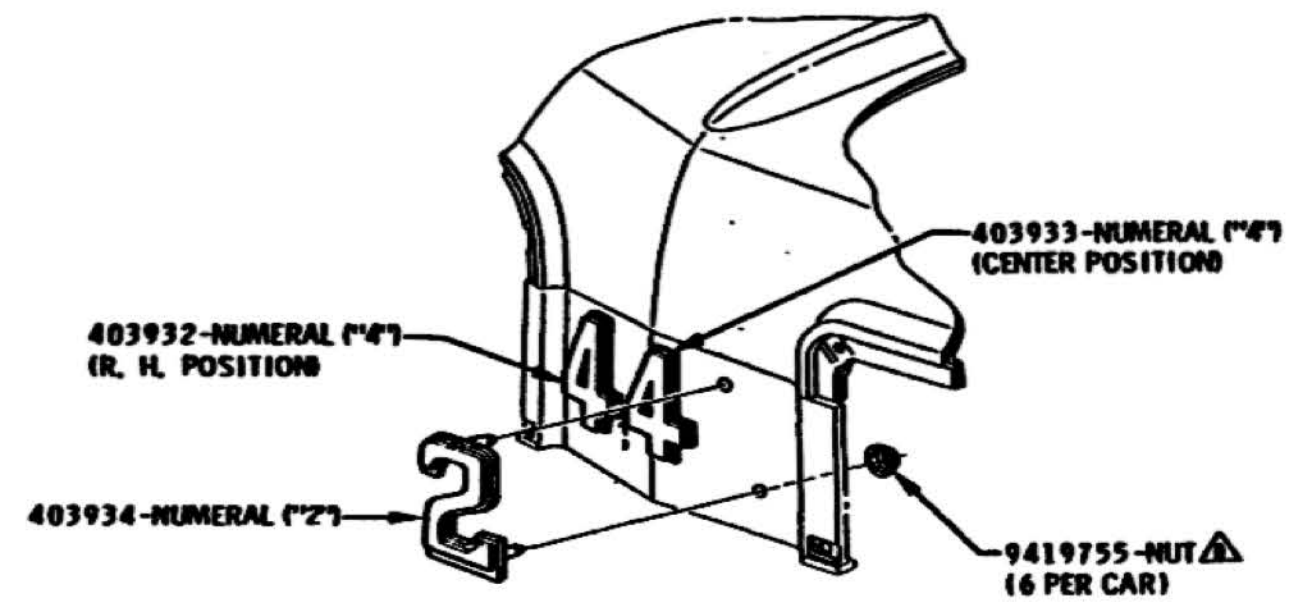


FIGURE 1  
4400

▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE HOOD ORNAMENTATION				
				DATE FEBRUARY 25, 1969	FIRST USED 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL DOC. 11	PAGE 174
				DR BY JOSEPH V. GALL	REV. 1A2C	REVISION A	PART NO. 404411	
4-25-89	A2	NOTES ADDED	1/4	APPR. <i>[Signature]</i>	11G			
DATE	SYM	REVISION	DR.	CL.	APP.			

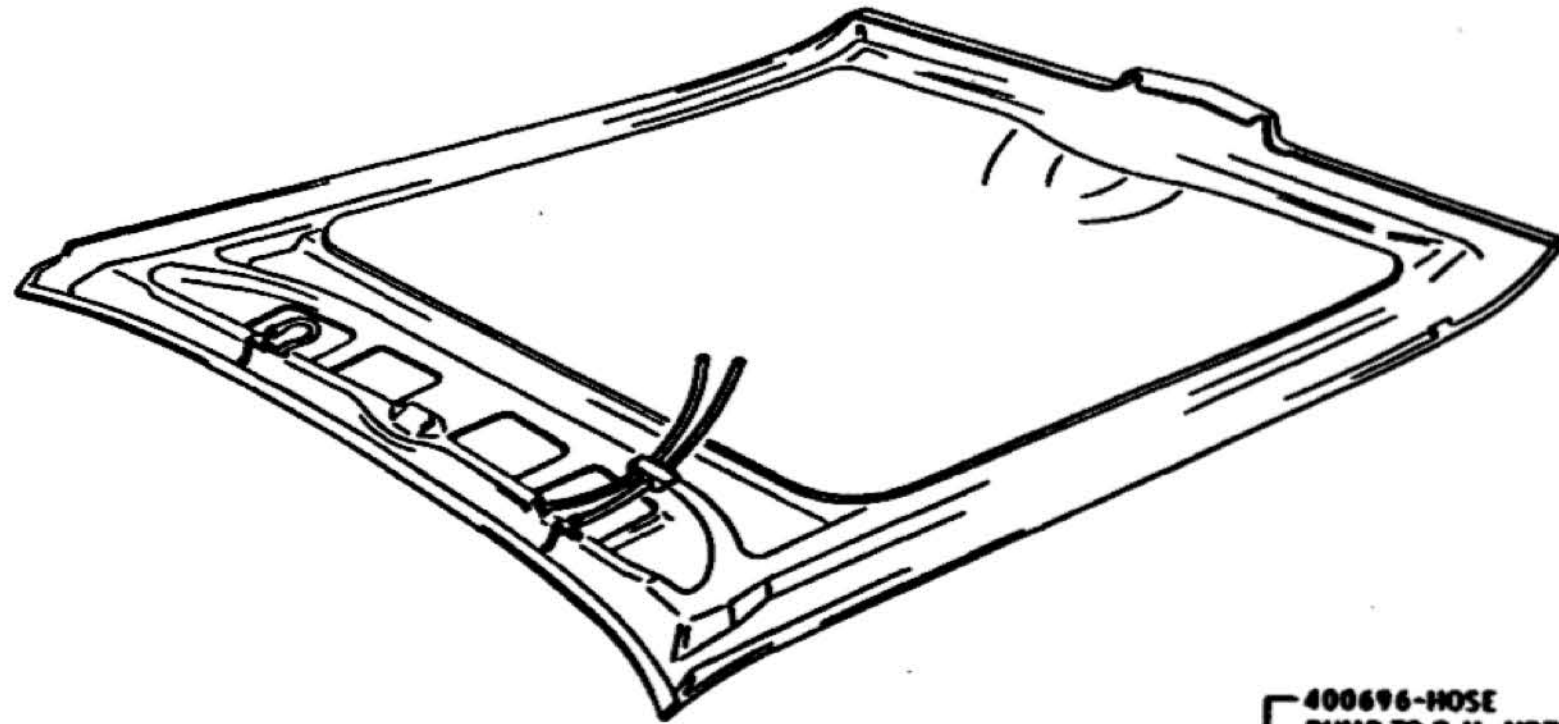
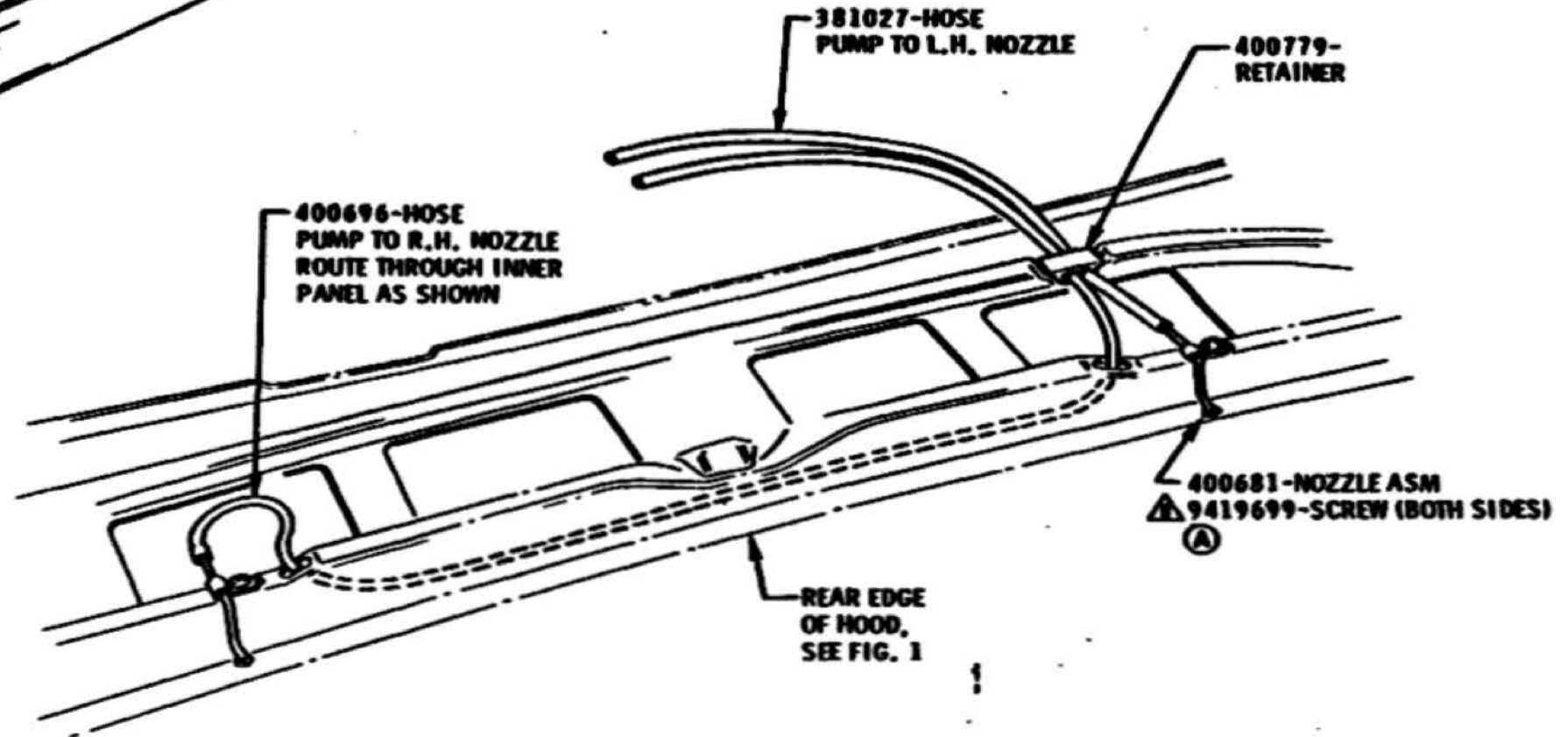


FIGURE 1  
UNDER SIDE  
OF HOOD



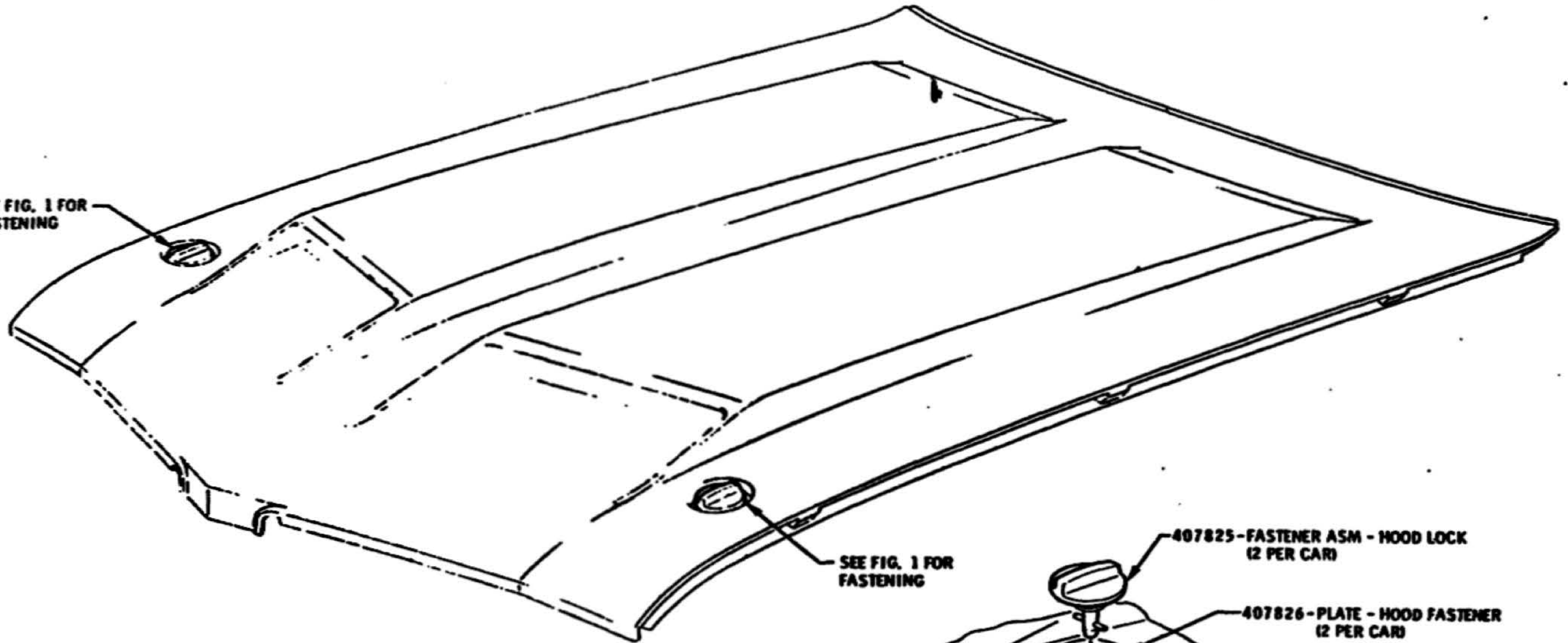
ADJUST NOZZLES SO  
WATER WILL STRIKE  
GLASS NEAR TOP  
OF WINDSHIELD

⚠ MUST BE FULLY DRIVEN, SEATED AND NOT STRIPPED.

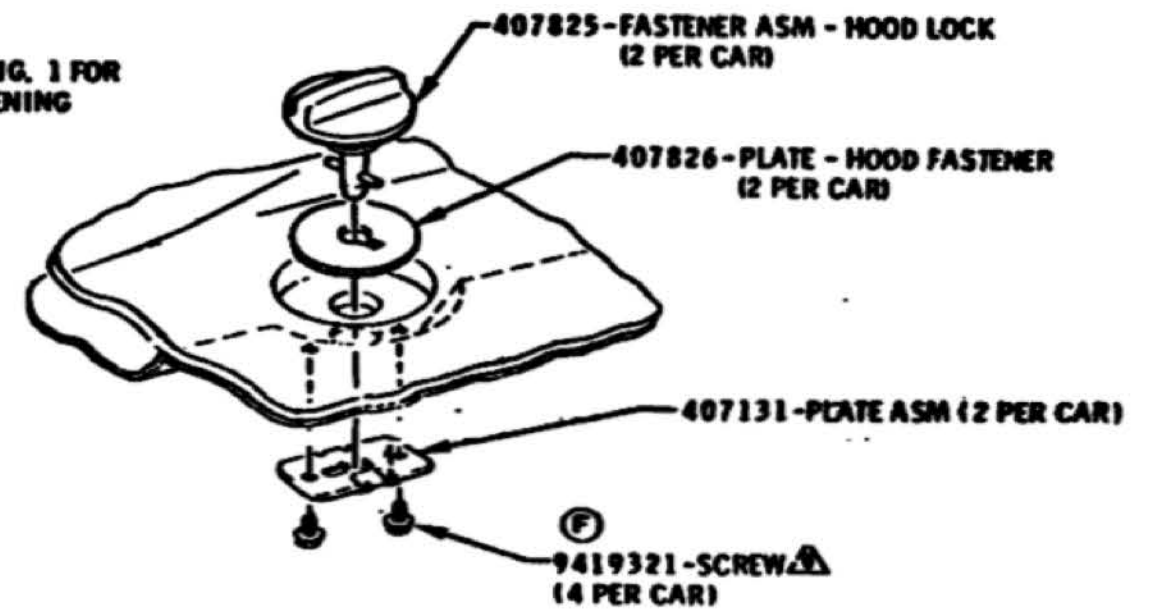
		TITLE		WINDSHIELD WASHER HOSE ROUTING (HOOD)			
		DATE		NOVEMBER 19, 1968		PAGE USED	
		DR. BY		BEAUDOIN		1970	
		CHECKED		P. J. BARNHART		OLDSMOBILE PRODUCT INFORMATION MANUAL	
2-11-69		A		WMS 9423520-SCREW		MANUAL SEC. 11	
		APPR.		TWT		PAGE 176	
				REV. 1A20		SERIES A	
						PART NO. 404411	



SEE FIG. 1 FOR FASTENING



SEE FIG. 1 FOR FASTENING



407825-FASTENER ASM - HOOD LOCK  
(2 PER CAR)

407826-PLATE - HOOD FASTENER  
(2 PER CAR)

407131-PLATE ASM (2 PER CAR)

9419321-SCREW  
(4 PER CAR)

FIGURE 1

FOR ADDITIONAL HOOD COMPONENTS SEE  
 PAGES 170, 172 & 174



FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

		TITLE		HOOD COMPONENTS (35W25, 30, 31)		MANUAL SEC.		PAGE	
		DATE APRIL 24, 1969		FIRST USED		11		178	
		DR BY GMP - J.V. GALL		1970		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
		CHECKED P. J. BARNHART		REV. 35W 30-31		SERIES		PART NO.	
1970	F	WAS 9419321-SCREW	DR. CK	APP. T.H.P.	35W 25	A		404411	
DATE	SYN	REVISION	DR.	CK	APP.				

## HEADLAMP AIMING SPECIFICATION (INCLUDING EXPORT)

1. HEADLAMP AIM TO BE SET WITH MECHANICAL AIMER THAT CONFORMS TO SAE J602.
2. AIMERS MUST BE CALIBRATED TO READ 0° UPD AND 0° R/L WHEN AIMING PLANES ARE IN TRUE VERTICAL AND HORIZONTAL ALIGNMENT.
3. VEHICLE TO BE CURB WEIGHT LESS 1/2 TANK OF GASOLINE OR EQUIVALENT.

PRODUCTION SETTING

<u>HEADLAMP TYPE</u>	<u>VERTICAL AIM</u>	<u>HORIZONTAL AIM</u>
#1 AND #2	(A) 0.75" UP ★	0° R/L

★ VERTICAL AIM SPECIFICATION TO BE MODIFIED AS REQUIRED TO COMPENSATE TO ONE-HALF FUEL TANK LOAD AND OTHER BUILD CONDITIONS.

CHECKING LIMITS

<u>HEADLAMP TYPE</u>	<u>VERTICAL AIM</u>	<u>HORIZONTAL AIM</u>
#1 AND #2	(B) 3.0" UP TO 1.5" DOWN	0° R/L ± 4.0°

SERVICE SETTING

CHECK AND SET TO SAE J599A, STATE OR LOCAL SPECIFICATIONS AS REQUIRED.

		TITLE		CHART - HEADLAMP AIM					
		DATE		MARCH 3, 1969		FIRST USED		1970	
		DR BY		C. SPITZLEY		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
		CHECKED		JOHN [Signature]		REVISION		12	
		APPR		[Signature]		LINES		A-B-C-E	
		DATE		SYM		REVISION		PART NO.	
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								PAGE	
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# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

U. S. PATENT OFFICE

SWITCH	LOCATION	ACTIVATED BY	RESULT OF ACTIVATING SWITCH	SWITCH IS DEACTIVATED BY	QUALIFYING CONDITIONS	NOTE
UNDERHOOD LAMP SWITCH	INTEGRAL WITH LAMP UNDER HOOD	RAISING HOOD	UNDERHOOD LAMP COMES ON	CLOSING HOOD	HEADLAMP SWITCH MUST BE PULLED TO EITHER DETENT	
BRAKE WARNING SWITCH	TOP OF L.H. FRAME SIDE RAIL NEAR MASTER CYLINDER	A PRESSURE DIFFERENTIAL BETWEEN THE FRONT AND REAR BRAKE SYSTEMS	BRAKE WARNING LIGHT IN INSTRUMENT PANEL COMES ON	EQUALIZING PRESSURE IN BOTH BRAKE SYSTEMS	IGNITION SWITCH MUST BE IN "ON" OR "START" POSITION	
ENGINE OIL PRESSURE SWITCH	FRONT OF ENGINE BLOCK L.H. SIDE	4 P.S.I. OF ENGINE OIL PRESSURE	OIL WARNING LIGHT IN INSTRUMENT PANEL GOES "OFF"	ENGINE OIL PRESSURE OF LESS THAN 4 P.S.I.	IGNITION SWITCH MUST BE IN "ON" OR "START" POSITION	
ENGINE COOLANT TEMPERATURE SWITCH	TOP FRONT OF INTAKE MANIFOLD R.H. SIDE	240° F. TEMP. OF ENGINE COOLANT	HOT (RED) WARNING LIGHT IN INSTRUMENT CLUSTER GOES "ON"	ENGINE COOLANT TEMP. OF LESS THAN 240° F.	IGNITION SWITCH MUST BE IN "ON" OR "START" POSITION	
LIGHT SWITCH	L.H. SIDE OF INSTRUMENT PANEL CONTROL PANEL	PULLING KNOB OUT TO FIRST DETENT POSITION	THE FOLLOWING LAMPS COME ON: 1. PARK LAMPS 2. SIDE MARKER LAMPS ( ALL ) (A) 3. CLUSTER LAMPS 4. CLOCK LAMP 5. ASH TRAY LAMPS 6. I/P FLOODLIGHTS 7. TAIL LAMPS 8. LICENSE LAMPS 9. LIGHT SWITCH LIGHT	PUSHING SWITCH KNOB IN UNTIL IT STOPS	NONE	
		PULLING KNOB OUT TO SECOND DETENT POSITION (ALL THE WAY OUT)	ALL OF THE LIGHTS THAT ARE ON WHEN SWITCH IS IN FIRST DETENT POSITION STAY ON PLUS THE FOLLOWING COME ON: 1. HEADLAMPS (HIGH OR LOW BEAM)			
		TURNING KNOB CLOCKWISE	1. INTENSITY OF INSTRUMENT PANEL LIGHTS DECREASES 2. DOME LAMPS SHUT OFF. (IF KNOB WAS TURNED COMPLETELY COUNTER-CLOCKWISE TO START.)			
		TURNING KNOB COUNTERCLOCK-WISE	1. INTENSITY OF INSTRUMENT PANEL LIGHTS INCREASES 2. DOME LAMPS COME ON. (AT EXTREME END OF TRAVEL)			
WINDSHIELD WIPER SWITCH	INBOARD OF INSTRUMENT PANEL LIGHT SWITCH	SLIDING KNOB TO FIRST DETENT (UP)	WINDSHIELD WIPERS OPERATE AT LOW SPEED	SLIDING KNOB DOWN UNTIL IT STOPS	IGNITION SWITCH MUST BE IN THE "ON" OR "ACCESSORY" POSITION	
		SLIDING KNOB TO SECOND DETENT (UP)	WINDSHIELD WIPERS OPERATE AT HIGH SPEED			
CRUISE CONTROL "ON"-"OFF"	VERTICAL SURFACE OF CONTROL PANEL ADJACENT TO WIPER SWITCH	POSITIONING SWITCH TO "ON" (B) POSITION - PUSH TOP OF SWITCH FOR "ON"	CRUISE CONTROL ACTUATING BUTTON MAY BE ENERGIZED	POSITIONING SWITCH TO "OFF" POSITION	IGNITION SWITCH MUST BE IN THE "ON" OR "ACCESSORY" POSITION	TELL TALE LIGHT WILL BE "ON" WHEN CIRCUIT IS ENGAGED
WINDSHIELD WASHER SWITCH	PART OF WINDSHIELD WIPER SWITCH	PUSHING WIPER SWITCH KNOB	WINDSHIELD WASHERS OPERATE	CYCLE IS PREDETERMINED AND WASHERS SHUT OFF AUTOMATICALLY	IGNITION SWITCH MUST BE IN THE "ON" OR "ACCESSORY" POSITION	
TURN SIGNAL SWITCH	TOP OF STEERING COLUMN (LEVER ON L.H. SIDE)	POSITIONING SWITCH LEVER UP (CLOCKWISE)	R.H. FRONT AND REAR TURN SIGNAL LAMPS AND R.H. TELL TALE LAMP IN INSTRUMENT PANEL COME ON AND FLASH	SWITCH SHUTS OFF WHEN STEERING WHEEL RETURNS FROM TURNED POSITION	IGNITION SWITCH MUST BE IN THE "ON" OR "ACCESSORY" POSITION	
		POSITIONING SWITCH LEVER DOWN (COUNTERCLOCKWISE)	L.H. FRONT AND REAR TURN SIGNAL LAMPS AND L.H. TELL TALE LAMP IN INSTRUMENT PANEL COME ON AND FLASH			

SHEET 1 OF 4

TITLE										CHART - ELECTRICAL SWITCH OPERATION									
DATE FEB 28, 1969										FIRST USED									
DR. BY C. GORDON										1970									
7169 B NOTE REVISED										OLDSMOBILE PRODUCT									
7169 A WAS (ALL 9)										INFORMATION MANUAL									
REVISOR J. L. LY										MANUAL SEC. PAGE									
APPR. J. L. LY										12 60									
DATE										SERIES									
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REVISION										PART NO.									
										406286									

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

CRUISE CONTROL ENGAGE SWITCH	IN END OF TURN SIGNAL LEVER	PUSHING BUTTON IN	CAR MAINTAINS SPEED AT WHICH IT WAS OPERATING WHEN BUTTON WAS PUSHED	SEE CRUISE CONTROL DISENGAGE SWITCH INFORMATION	1. IGNITION SWITCH MUST BE IN THE "ON" POSITION 2. CRUISE CONTROL "OFF"-"ON" SWITCH MUST BE "ON" (SEE PAGE 1) 3. ENGINE MUST BE RUNNING	FOR ADDITIONAL INFORMATION, SEE P. I. M. PAGE Q. 14
HAZARD WARNING SWITCH	TOP OF STEERING COLUMN (BUTTON ON R.H. SIDE)	POSITIONING BUTTON IN TOWARD CENTERLINE OF COLUMN	TURN SIGNAL LAMPS ON BOTH SIDES, FRONT AND REAR FLASH	PULLING KNOB OUT	NONE	ALL FOUR LIGHTS STOP FLASHING WHEN BRAKE PEDAL IS PUSHED. (LIGHTS STAY ON).
NEUTRAL START SWITCH	ON TRANSMISSION (A. T. ONLY)	MOVING SHIFT LEVER TO NEUTRAL OR PARK DETENT	STARTING CIRCUIT CAN BE ENERGIZED	MOVING SHIFT LEVER TO ANY POSITION BUT NEUTRAL AND PARK DETENT	NONE	MUST BE ADJUSTED BY ASSEMBLY PLANTS
BACK-UP LAMP SWITCH	S. M. T. - ON STEERING COLUMN UNDER INSTRUMENT PANEL (SEPARATE SWITCH) A. T. - INTEGRAL WITH NEUTRAL START SWITCH (ON TRANS.)	MOVING SHIFT LEVER TO THE REVERSE POSITION	BACK-UP LAMPS COME ON	MOVING SHIFT LEVER TO ANY POSITION OTHER THAN REVERSE	IGNITION SWITCH MUST BE IN THE "ON" POSITION.	A. T. CAR SWITCHES ARE ADJUSTED WHEN NEUTRAL START SWITCH IS ADJUSTED
HORN BUTTON (EXCEPT RIM BLOWER)	IN HUB (STANDARD) ACROSS CENTER OF WHEEL (N30) 3 IN SPOKES (N34)	PUSHING BUTTON IN	HORNS BLOW	BUTTON MUST BE HELD IN. SPRING PRESSURE RELEASES.	NONE	
HORN BUTTON (RIM BLOWER STEERING WHEEL)	AROUND ENTIRE RIM OF STEERING WHEEL	PUSHING BUTTON IN	HORNS BLOW	BUTTON MUST BE HELD IN. SPRING PRESSURE RELEASES.	NONE	
IGNITION SWITCH	ON RIGHT HAND SIDE OF STEERING COLUMN	INSERTING KEY AND TURNING CLOCKWISE TO "OFF" POSITION	STEERING WHEEL WILL TURN AND SHIFT BOWL CAN BE MOVED	TURNING KEY COUNTERCLOCKWISE TO "LOCK" POSITION	NONE	1. KEY CAN BE REMOVED ONLY WHEN SWITCH IS IN "LOCK" POSITION 2. SHIFT LEVER MUST BE IN PARK (A. T.) OR REVERSE (S. M. T.) BEFORE SWITCH WILL GO INTO "LOCK" POSITION 3. A WARNING SYSTEM OPERATES OFF THE IGNITION SWITCH AND LEFT FRONT DOOR JAMB SWITCH. WHENEVER THE KEY IS FULLY ENGAGED IN THE LOCK AND THE IGNITION SWITCH IS IN THE "ACCESSORY", "LOCK" AND "OFF" POSITION, A WARNING BUZZER SOUNDS WHEN THE LEFT FRONT DOOR IS OPENED.
		INSERTING KEY AND TURNING CLOCKWISE TO "ON" POSITION	1. IGNITION CIRCUIT IS ENERGIZED 2. GENERATOR WARNING LIGHT ON INSTRUMENT PANEL COMES ON 3. CIRCUITS MENTIONED IN "QUALIFYING CONDITIONS" COLUMN ARE ENERGIZED 4. OIL PRESSURE LIGHT COMES ON (B)			
		INSERTING KEY AND TURNING CLOCKWISE TO "START" POSITION	1. STARTING CIRCUIT IS ENERGIZED 2. GENERATOR WARNING LIGHT ON INSTRUMENT PANEL COMES ON 3. ENGINE TEMP. "HOT" (RED) WARNING LIGHT COMES ON 4. OIL PRESSURE LIGHT COMES ON (B)	RELEASING KEY. SPRING PRESSURE TURNS SWITCH COUNTERCLOCKWISE TO "ON" POSITION		
		INSERTING KEY, PUSHING SWITCH FORWARD (IN) AND TURNING COUNTERCLOCKWISE TO "ACCESSORY" POSITION	1. CIRCUITS MENTIONED IN "QUALIFYING CONDITIONS" COLUMN ARE ENERGIZED	TURNING KEY CLOCKWISE TO "LOCK" OR "OFF" POSITION		

(A)

SHEET 2

DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	SERIES	PART NO.
																CHART - ELECTRICAL SWITCH OPERATION	1970		12	61	A	406286
																DATE FEB 27 1969 DR. BY DJ SCOTT CHECKED John Arnold APPR. N. N.						
																74-65 B COLD LIGHT REMOVED						
																71-69 A POWER ANTENNA SWITCH REMOVED						

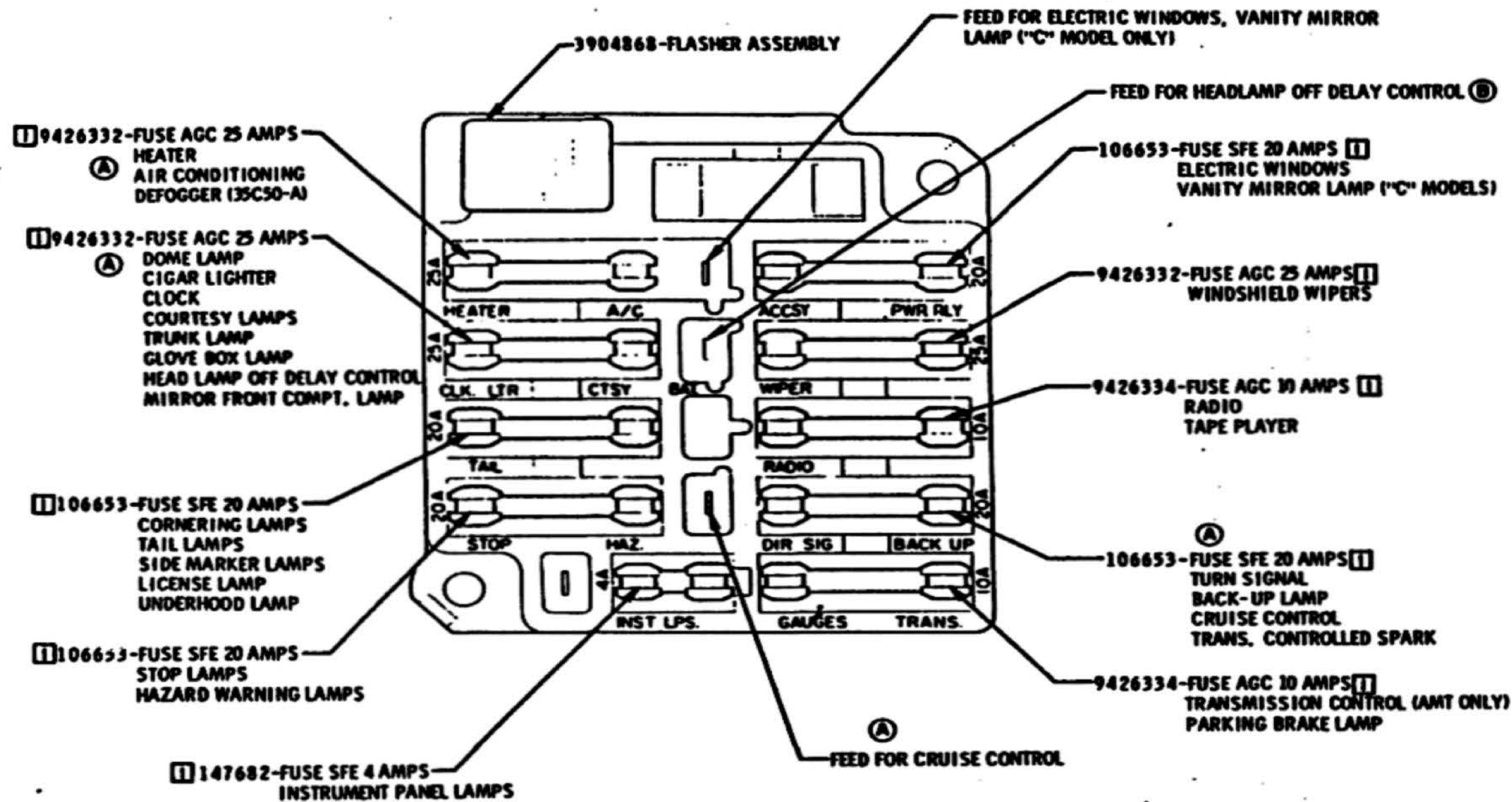


**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

BLOWER MOTOR SWITCH - HEATER	ON CONTROL	POSITIONING KNOB TO DIFFERENT DETENTS	BLOWER SPEED CHANGES. THREE SPEEDS AVAILABLE - LOW, MEDIUM AND HI		IGNITION SWITCH MUST BE IN THE "ON" POSITION AND MASTER SWITCH ENGAGED	
FRONT DOOR JAMB SWITCHES	BOTH FRONT DOOR HINGE PILLARS	OPENING EITHER FRONT DOOR	(B) COURTESY LAMPS, MAP LAMP AND DOME LAMPS COME ON. ELECTRIC SEAT BACK LOCKS DISENGAGE WHEN PRESENT.	CLOSING ONE FRONT DOOR (WHEN OTHER DOOR IS CLOSED)	NONE	DOME LAMP CAN BE TURNED ON BY TURNING HEADLAMP SWITCH. IF THIS CONDITION EXISTS, DOOR JAMB SWITCH WILL NOT SHUT OFF DOME LAMPS.
REAR DOOR JAMB SWITCHES	BOTH REAR DOOR HINGE PILLARS	OPENING EITHER REAR DOOR	DOME LAMPS COME ON	CLOSING ONE REAR DOOR (WHEN OTHER DOOR IS CLOSED)	NONE	
RADIO SWITCH	L.H. KNOB OF RADIO (CENTER OF INSTRUMENT PANEL)	TURNING KNOB CLOCKWISE	RADIO COMES ON	TURNING KNOB TO FULL COUNTERCLOCKWISE POSITION	1. IGNITION SWITCH MUST BE IN THE "ON" OR "ACCESSORY" POSITION. 2. STEREO TAPE MUST NOT BE ENGAGED IN TAPE PLAYER (IF SO EQUIPPED.)	
STEREO TAPE PLAYER SWITCH	INTEGRAL WITH TAPE PLAYER	PUSHING TAPE INTO PLACE IN TAPE PLAYER	TAPE PLAYER COMES ON	PULLING TAPE REARWARD UNTIL IT DISENGAGES PLAYER	IGNITION SWITCH MUST BE IN THE "ON" OR "ACCESSORY" POSITION	
WINDOW REGULATOR SWITCHES	IN DOOR TRIM PADS (A) IN L.F. DOOR, (B) IN EACH OTHER DOOR.	PUSHING BUTTON UP PUSHING BUTTON DOWN	WINDOWS GO UP (CLOSE) WINDOWS GO DOWN (OPEN)	RELEASING BUTTON. SPRING PRESSURE RETURNS BUTTON TO NEUTRAL POSITION AND WINDOW STOPS MOVING.	IGNITION SWITCH MUST BE IN "ON" OR "ACCESSORY" POSITION	SWITCHES IN L.H. FRONT DOOR CONTROL ALL WINDOWS. THE REAR SWITCH OF THE CLUSTER OF (A) IN THE TRIM PAD OPERATES THE LEFT FRONT WINDOW.
4-WAY POWER SEAT	LEFT SIDE OF LEFT FRONT SEAT IN SIDE TRIM PANEL	PUSHING BUTTON FORWARD	L.F. SEAT MOVES FORWARD	RELEASING BUTTON. SPRING PRESSURE RETURNS BUTTON TO NEUTRAL POSITION AND SEAT STOPS MOVING.	NONE	
		PUSHING BUTTON REARWARD	L.F. SEAT MOVES REARWARD			
		PUSHING BUTTON UP	L.F. SEAT MOVES UP			
		PUSHING BUTTON DOWN	L.F. SEAT MOVES DOWN			
TRUNK LAMP SWITCH	INTEGRAL WITH TRUNK LAMP	RAISING DECK LID	TRUNK LAMP COMES ON	CLOSING DECK LID	NONE	
(E)						
MAP LAMP SWITCH (UF-1)	ON INSIDE REAR VIEW MIRROR	POSITIONING SWITCH TO "ON" POSITION	MAP LAMP IN MIRROR COMES ON	MOVING SWITCH TO "OFF" POSITION	NONE (B)	
BLOWER SWITCH	ON DASH CONTROL	POSITIONING KNOB TO DIFFERENT DETENTS	BLOWER SPEED CHANGES - 4 SPEEDS AVAILABLE - LOW, M <sub>1</sub> , M <sub>2</sub> AND HI	POSITIONING SWITCH TO "OFF" POSITION	IGNITION SWITCH MUST BE IN "ON" POSITION AND MASTER SWITCH ENGAGED	
COMPRESSOR CLUTCH SWITCH	ON DASH CONTROL	POSITIONING CONTROL LEVER TO "NORMAL OR MAXIMUM"	COMPRESSOR CLUTCH COMES ON	POSITIONING SWITCH TO OTHER SELECTIVE POSITION AND TURNING IGNITION TO "OFF"	IGNITION SWITCH MUST BE IN THE "ON" POSITION AND MASTER SWITCH ENGAGED	HOLD IN RELAY MAINTAINS CONTACT ONCE ACTIVATED UNTIL CAR IS TURNED OFF
DOOR LOCK SWITCH (C)	FRONT DOOR TRIM PANELS OR ARM RESTS	PUSHING TOGGLE TOWARD WORD "LOCK" PUSHING TOGGLE AWAY FROM WORD "LOCK"	DOORS LOCK DOORS UNLOCK	SPRING LOADING BRINGS SWITCH TO NEUTRAL POSITION	NONE	
TRUNK RELEASE SWITCH (D)	LEFT SIDE OF GLOVE BOX OPENING	PUSHING BUTTON FORWARD (IN)	TRUNK LID UNLATCHES	SPRING LOADING BRINGS SWITCH TO NEUTRAL POSITION	NONE	

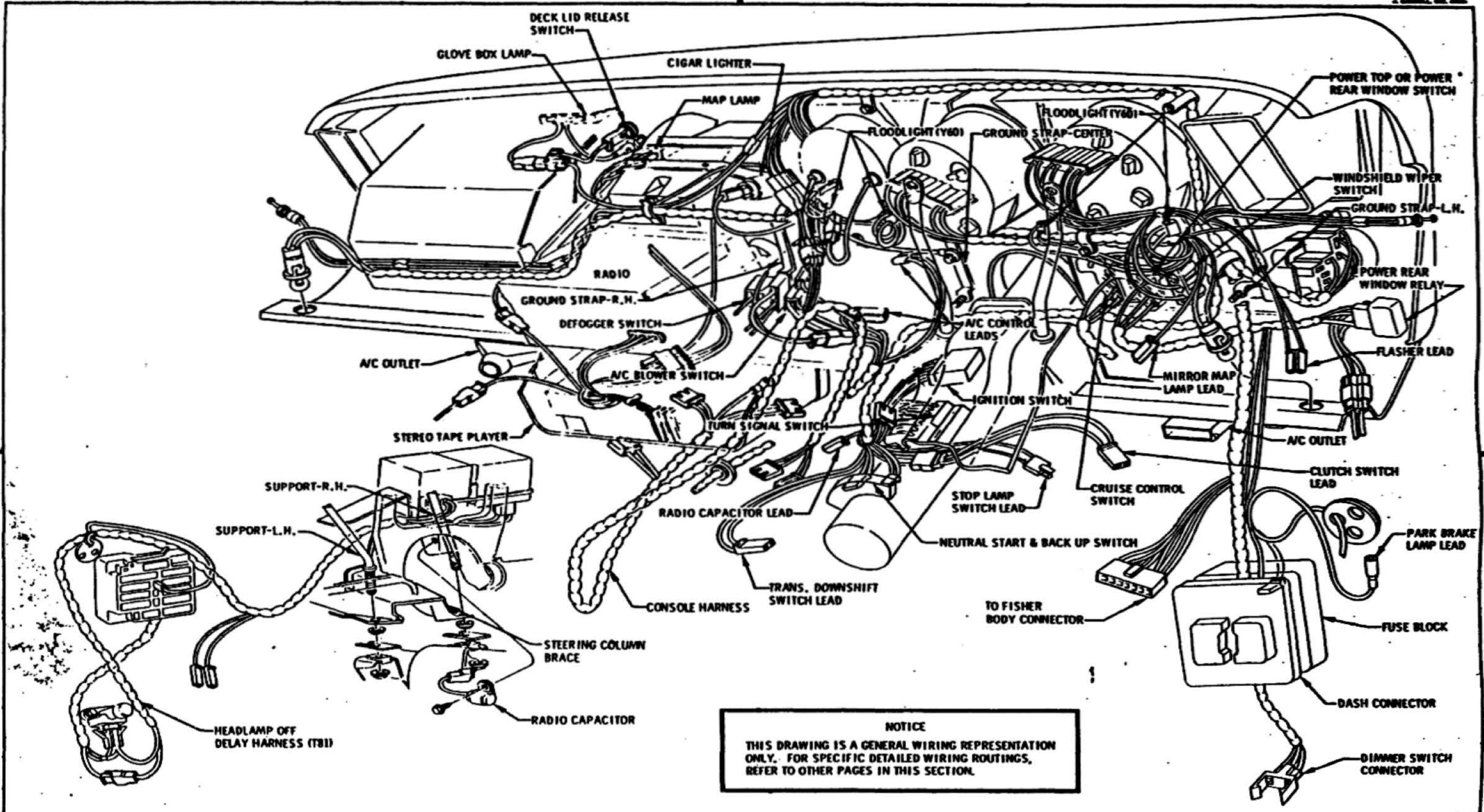
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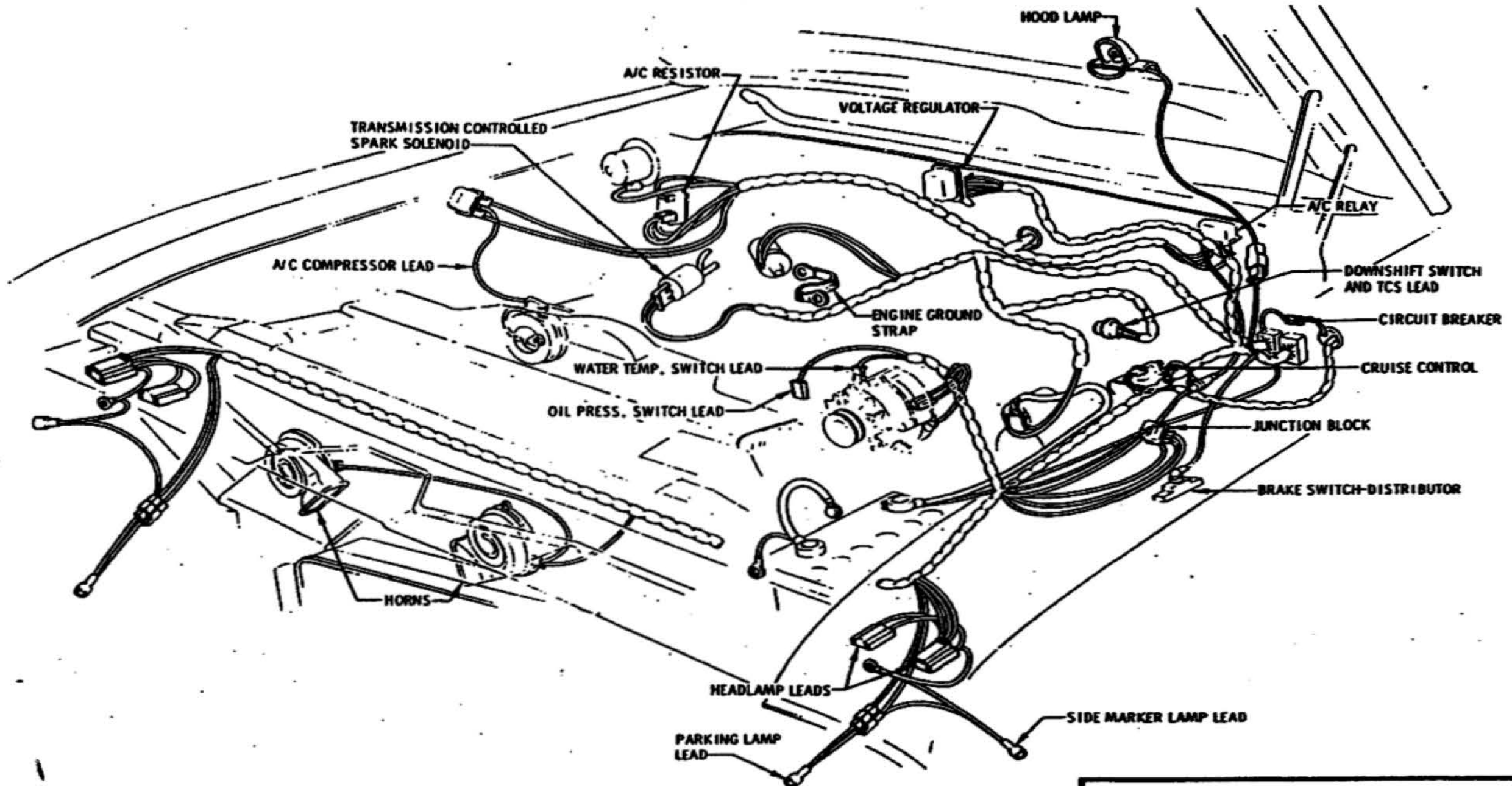
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DATE	SYM	REVISION	DR.	CK.	APPR.						
						REV. 12 H	SERIES	PART NO.			
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REVISION										TITLE				INSTRUMENT PANEL WIRING						
DATE	SYM	REVISION	DR	CR	DATE	SYM	REVISION	DR	CR	DATE	SYM	REVISION	DR	CR	APPR.	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
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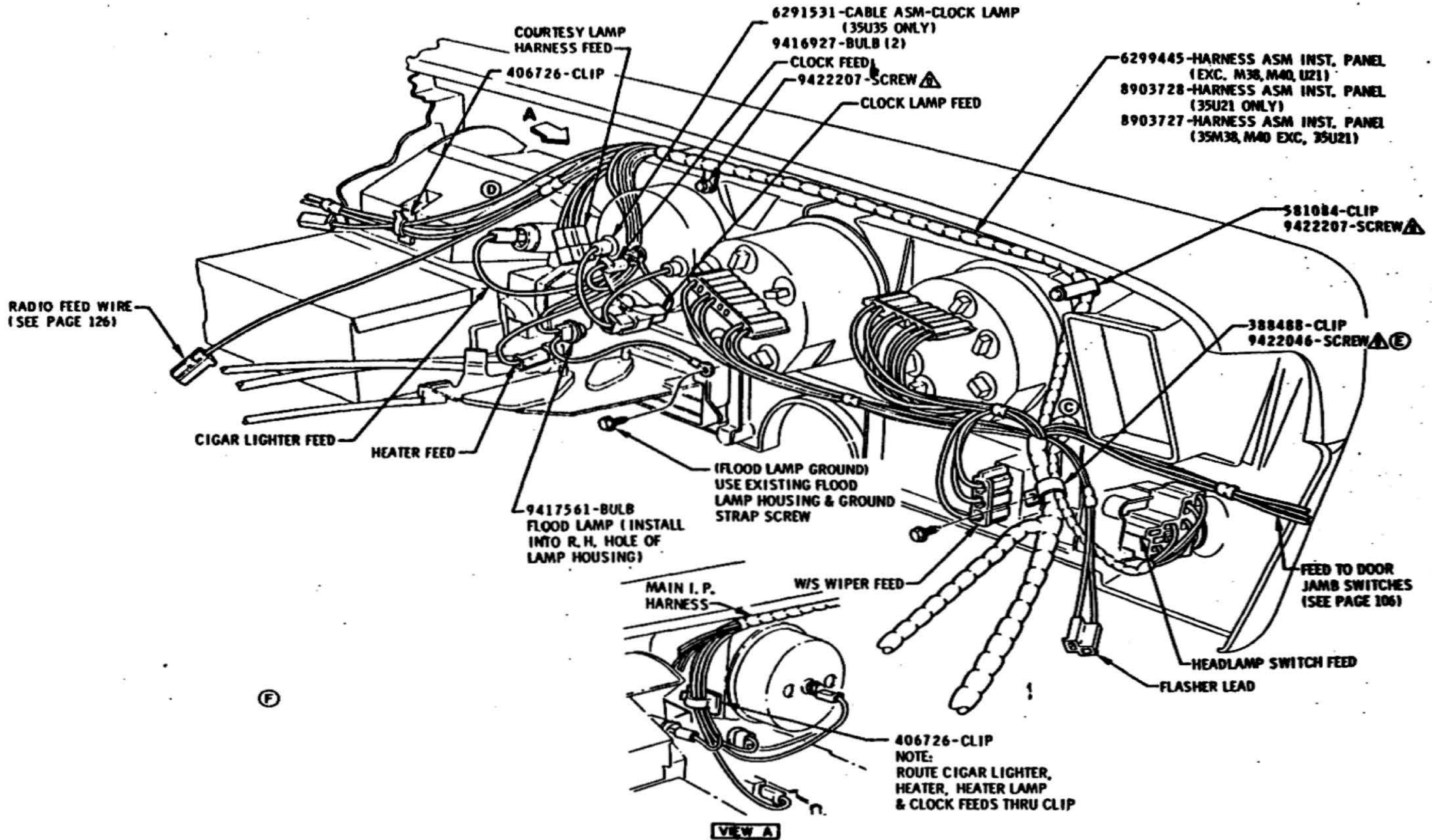




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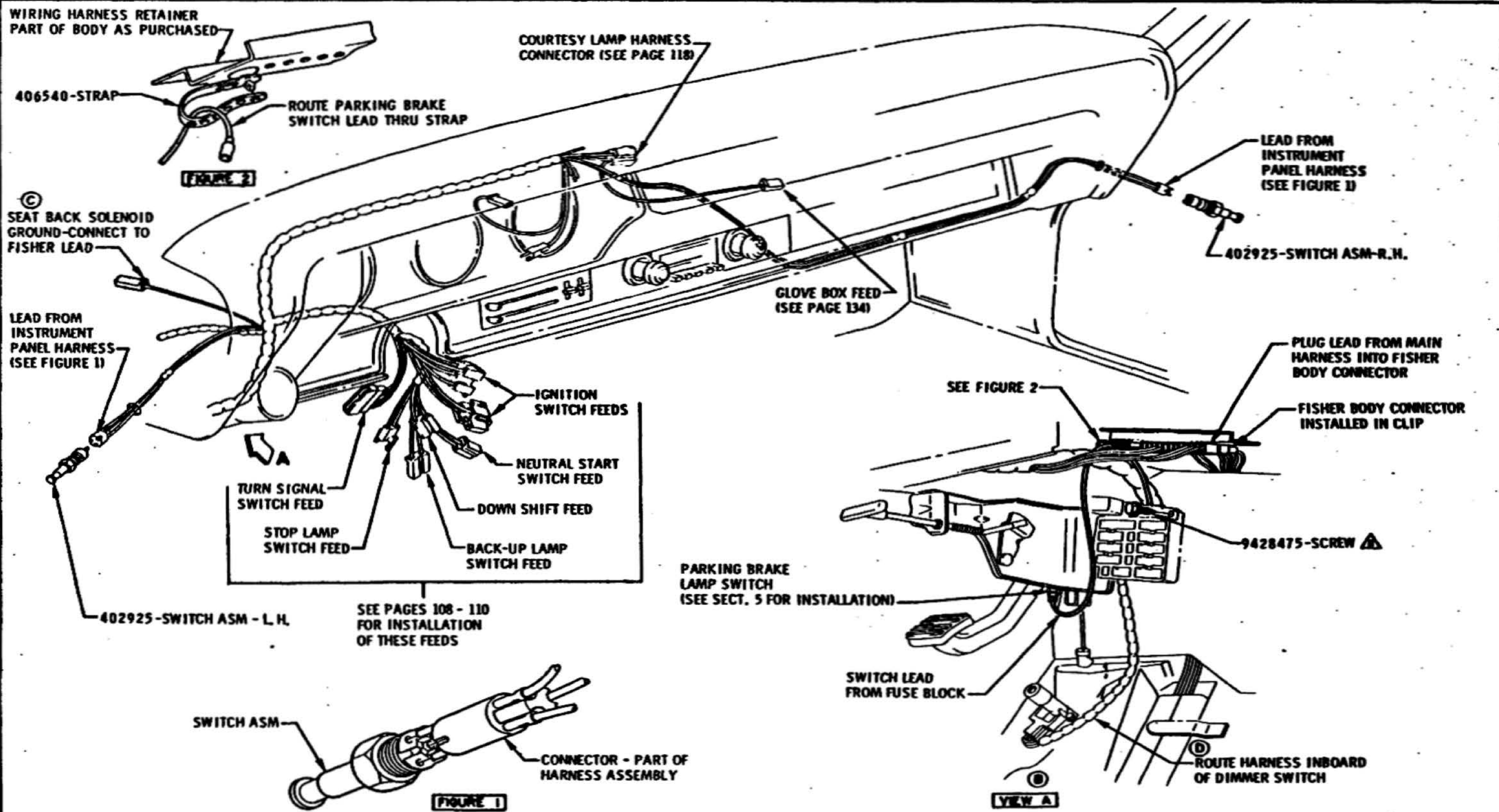
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										DR.	P. LOCATELLI		REF.	SERIES		A	PART NO.	404411
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				INSTRUMENT PANEL WIRING (REAR VIEW)			
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION
					12-26-69	F	VIEW MOVED TO PAGE 158
					8-28-68	B	VIEW REVISED
					8-28-68	C	HARNES REROUTED
					10-10-68	D	ROUTING REVISED
					10-24-68	E	WAS EXISTING SCREW

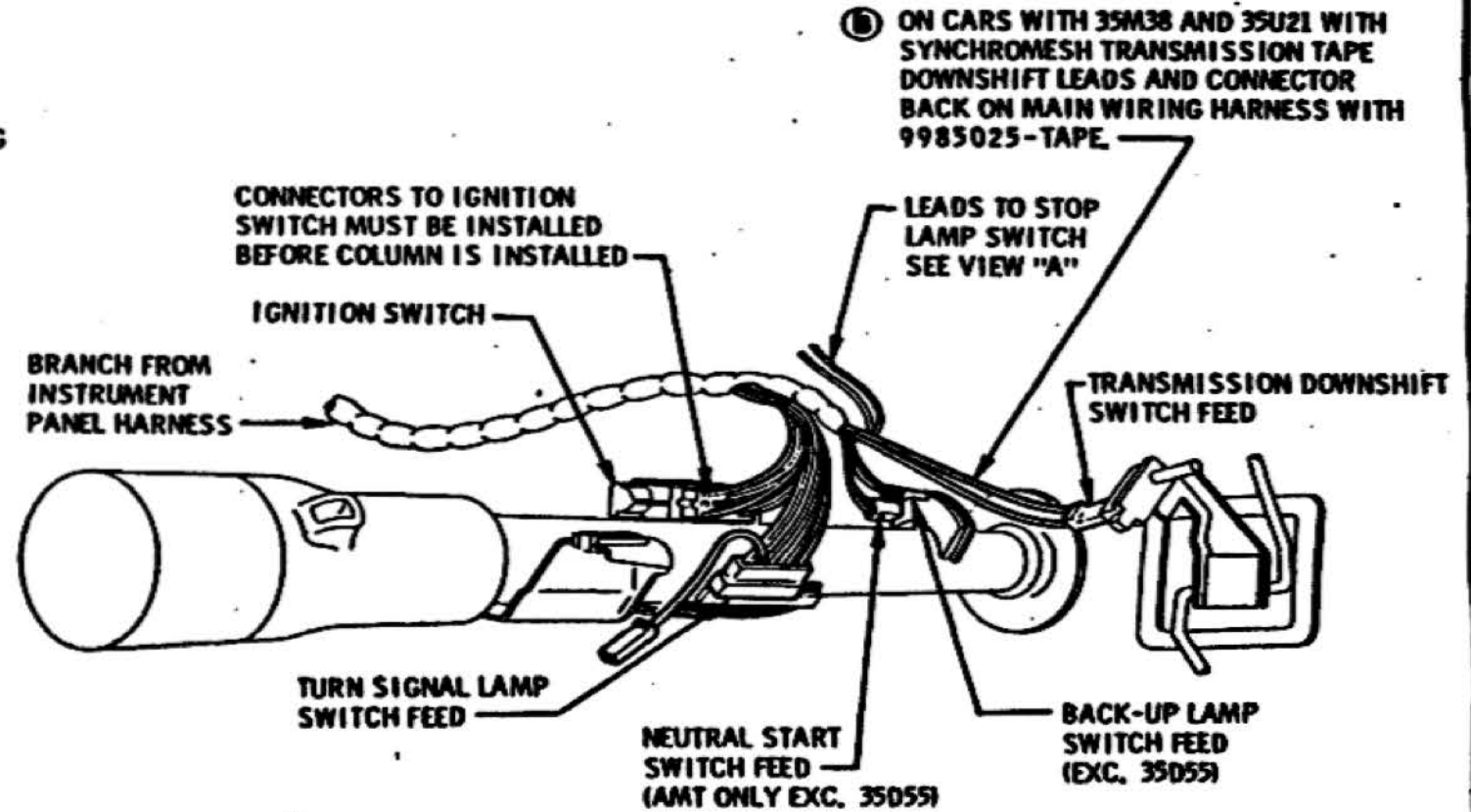
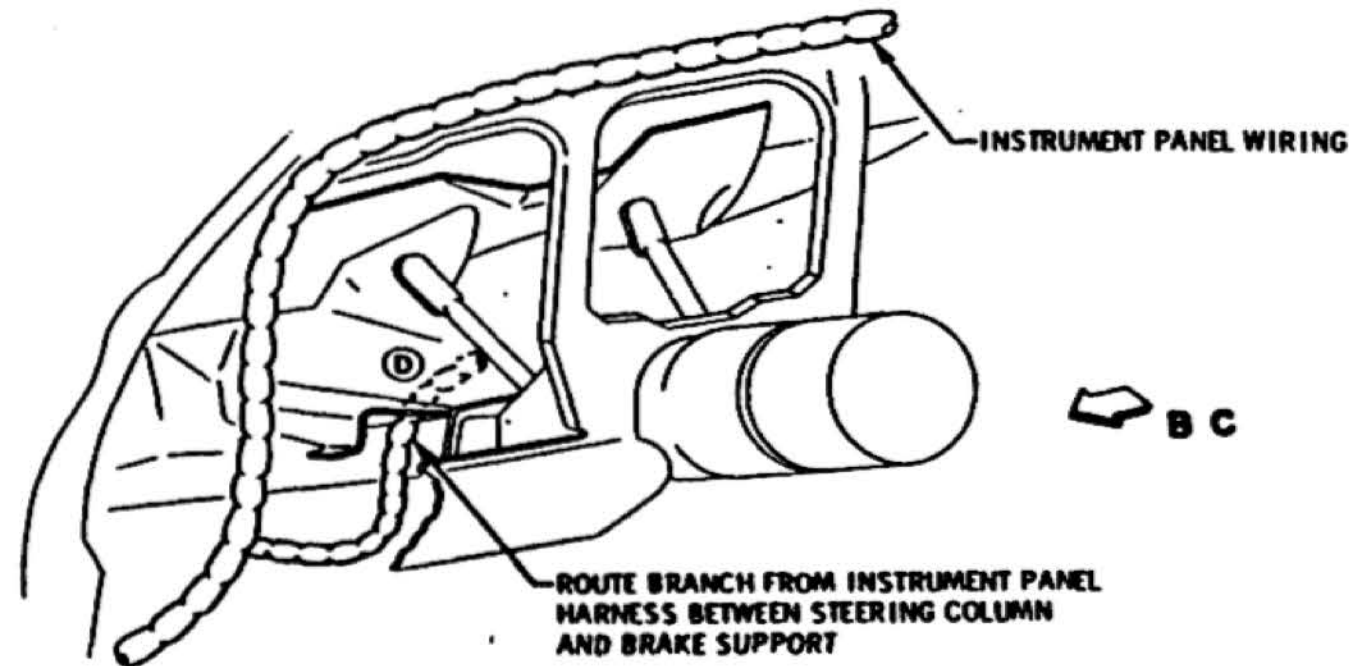
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PART NO.	404411

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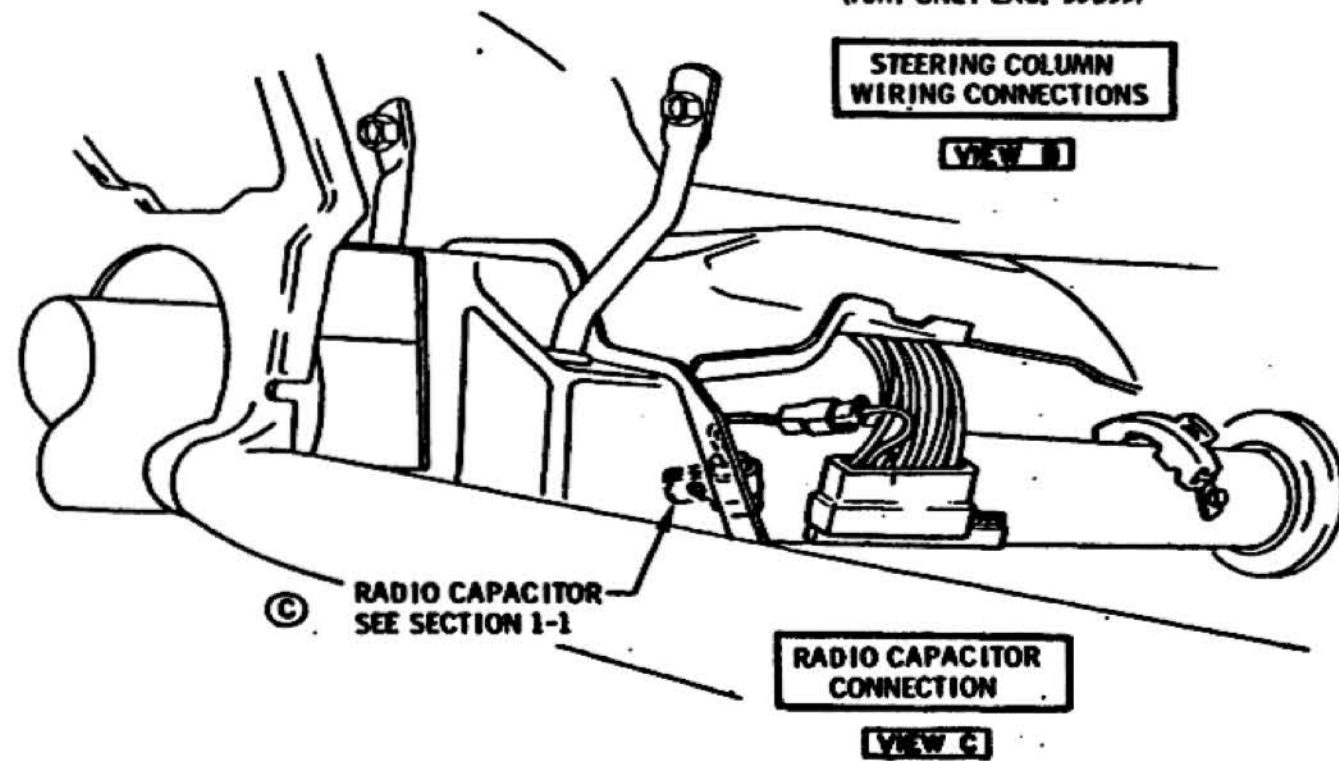
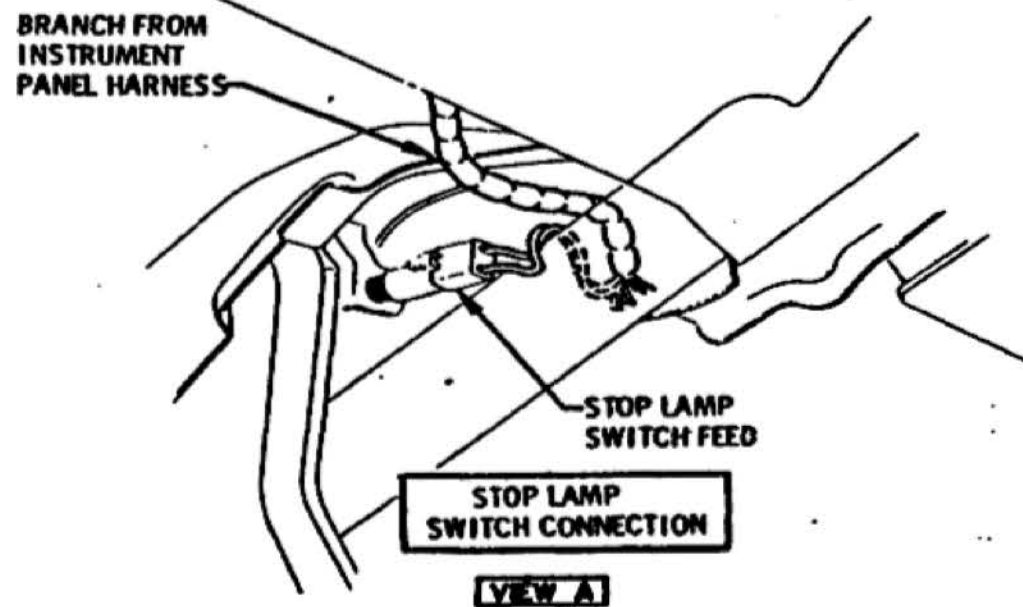


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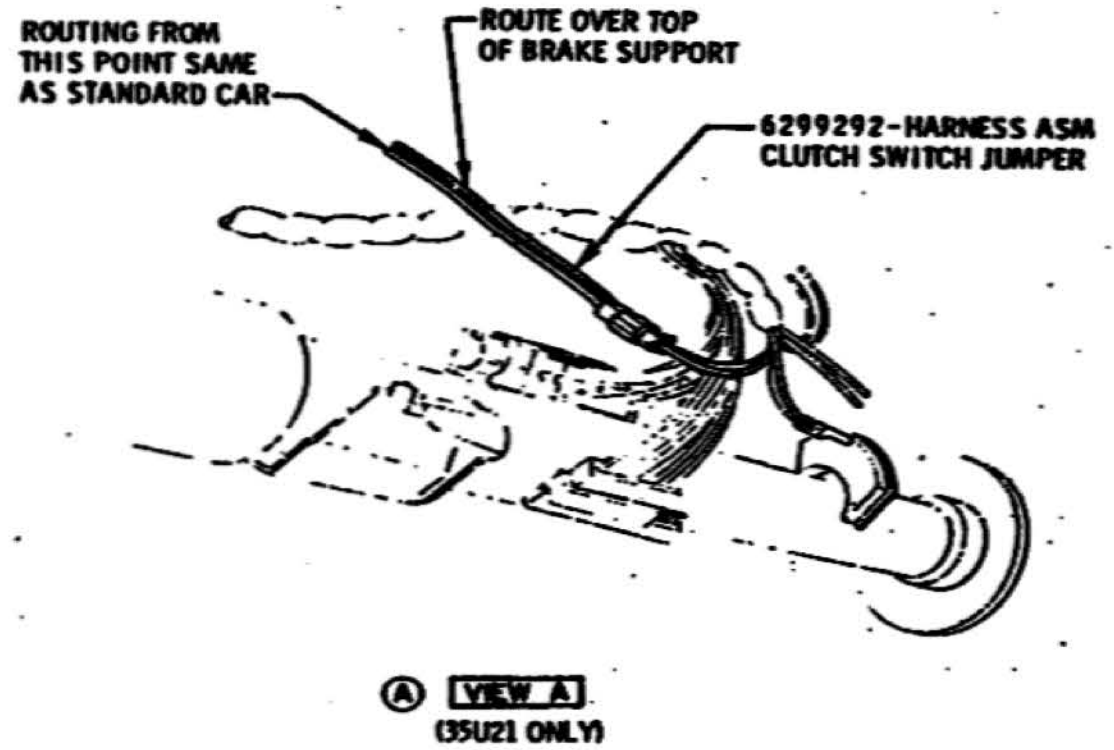
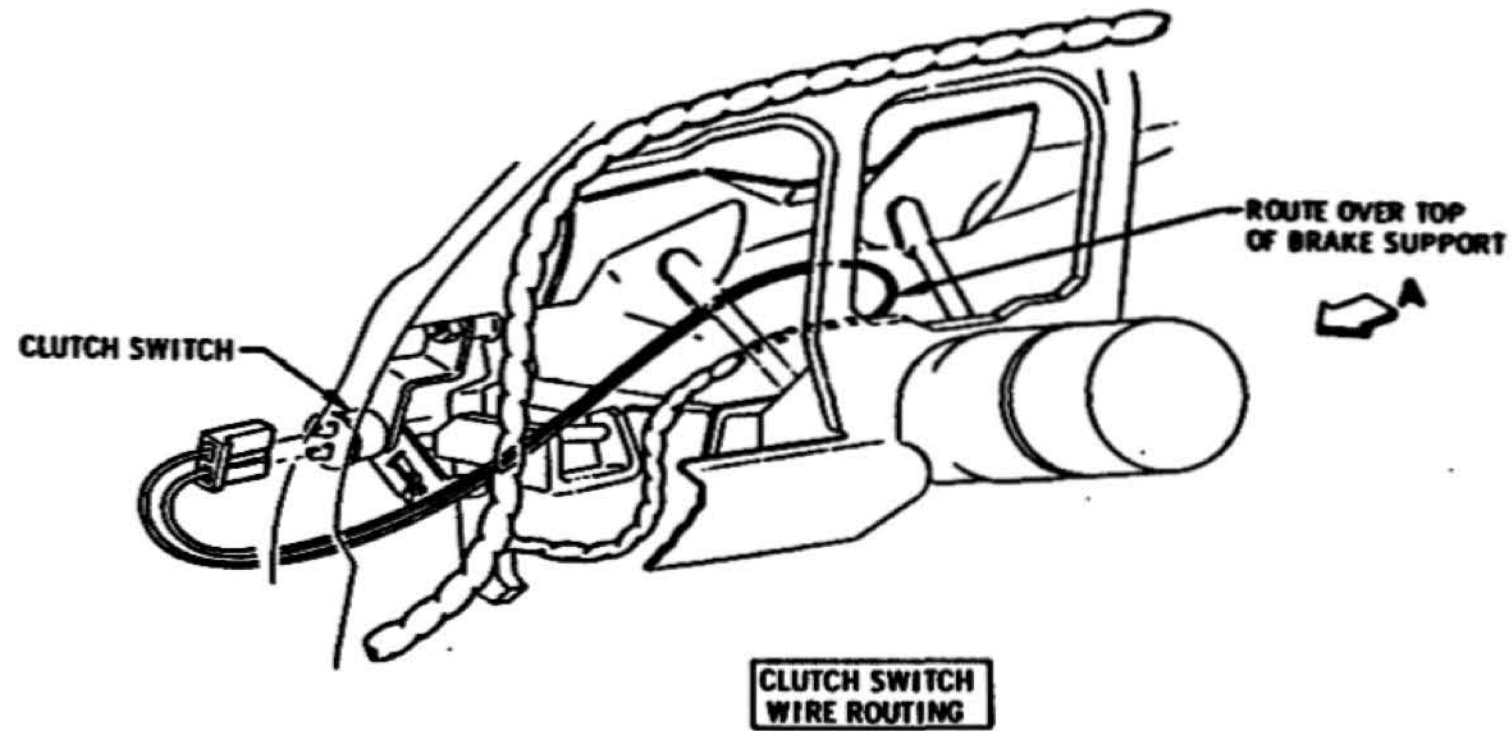
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8-29-69	D	ROUTING REVISED	CR/DJ							
8-2-69	C	NOTE ADDED	CR/DJ							
8-2-69	B	VIEW REVISED	CR/DJ							
8-2-69	A	VIEW ADDED	CR/DJ							



ON CARS WITH 35M38 AND 35U21 WITH SYNCHROMESH TRANSMISSION TAPE DOWNSHIFT LEADS AND CONNECTOR BACK ON MAIN WIRING HARNESS WITH 9985025-TAPE.

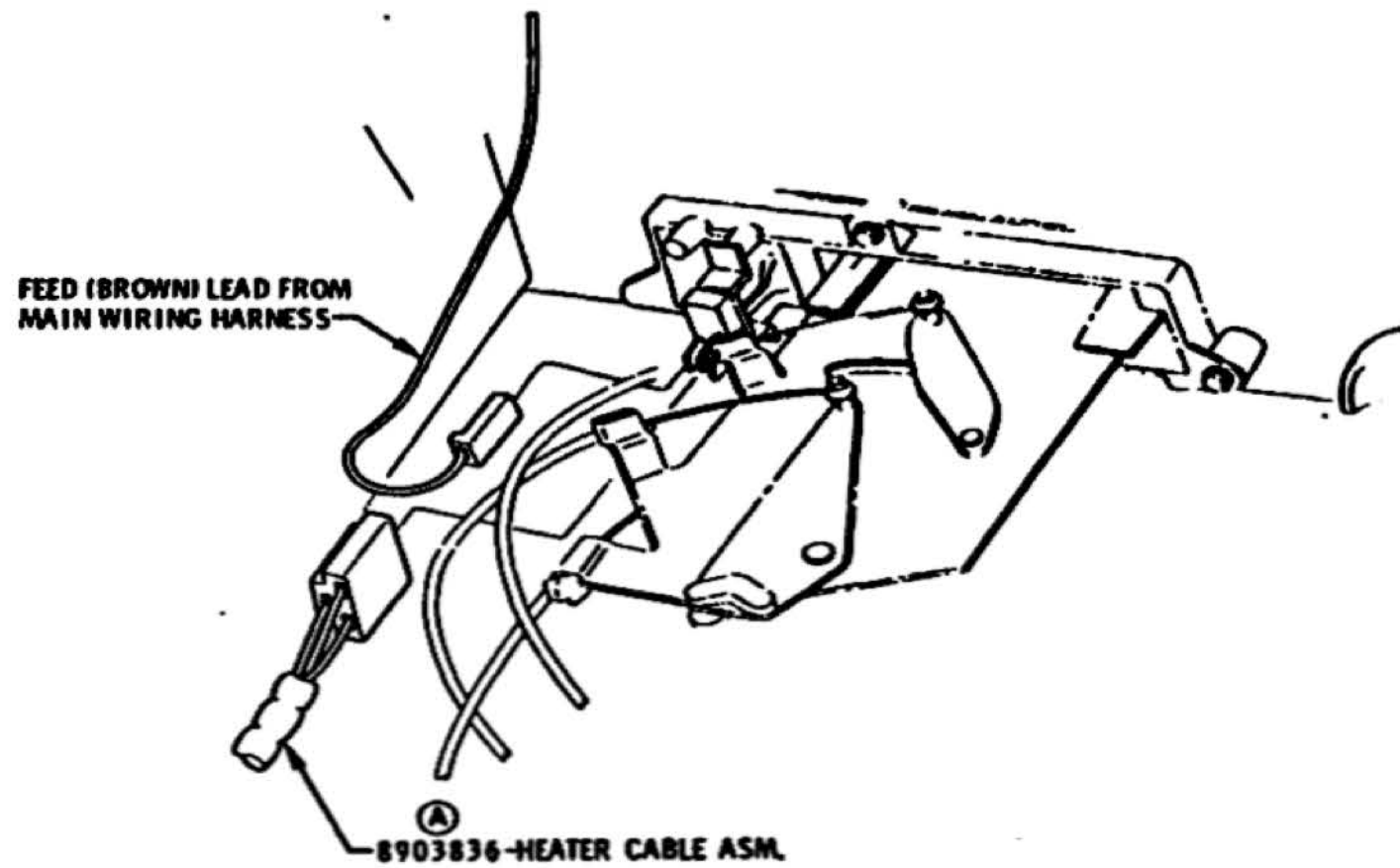


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10-26-69	D		ROUTING REVISED	PL	DT		INSTRUMENT PANEL WIRING	1970		12	108
7-29-69	C		VIEW ADDED	B	PS		DR. BY R.J. MCKESSY				
7-29-69	B		NOTE REVISED	DR	PS		CHECKED				
6-26-69	A		DATE RELEASED	DR	PS		APPR. <i>[Signature]</i>				
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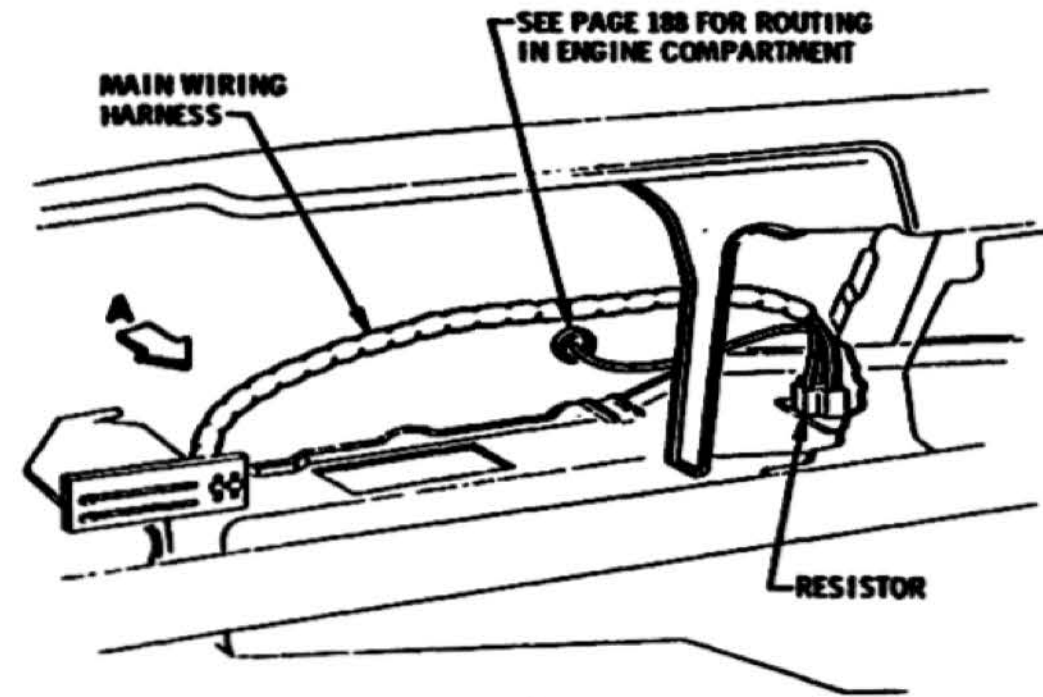


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		DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
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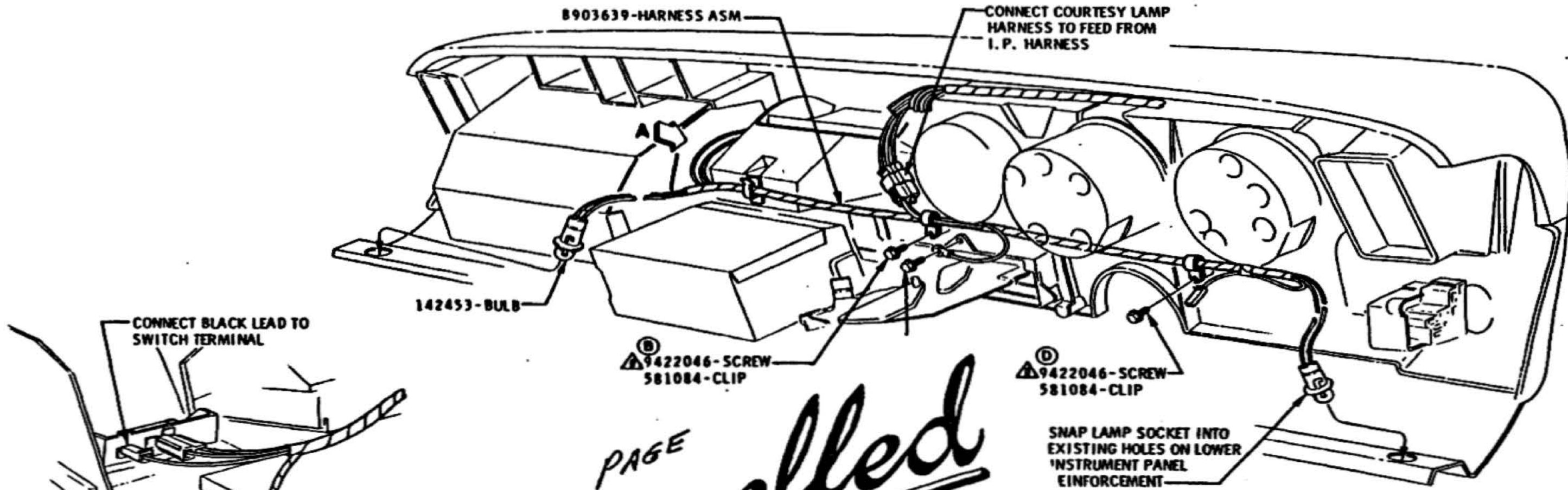


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				DATE		FIRST USED		OLDSMOBILE PRODUCT		MANUAL SEC. PAGE	
				MAY 25 1969		1970		INFORMATION MANUAL		12 112	
				DR. BY P. J. McKESSY							
				CHECKED		REV. 1A2C		GRADE		PART NO.	
				J. J. J.		A				404411	
9-5-69		A		MRS 6025406 CABLE		C-1 DV					
DATE	SYM	REVISION	DR.	CL.	APP.						









**Cancelled**

PER RELEASE P-RAL & P-BMY  
(CONVERTIBLES NOW GET SAME INSTALLATION  
AS OTHER MODELS).  
Signed D. TITUS Date 10-30-69



▲ FULLY DRIVEN SEATED  
AND NOT STRIPPED

REVISION		TITLE		COURTESY LAMPS (CONVERTIBLES ONLY) (EXC. 35Y60)	
7-29-69	D	PART NOS ADDED	DATE	FIRST USED	MANUAL SECT. PAGE
7-29-69	C	9985025-TAPE ADDED	MAY 18 1969	1970	12 119
7-29-69	B	WAS 9420046-SCREW	DR BY D. TITUS		
7-29-69	A	CLIPS REVERSED	CHECKED		
			APPR. [Signature]	SERIES	PART NO.
				A	404411

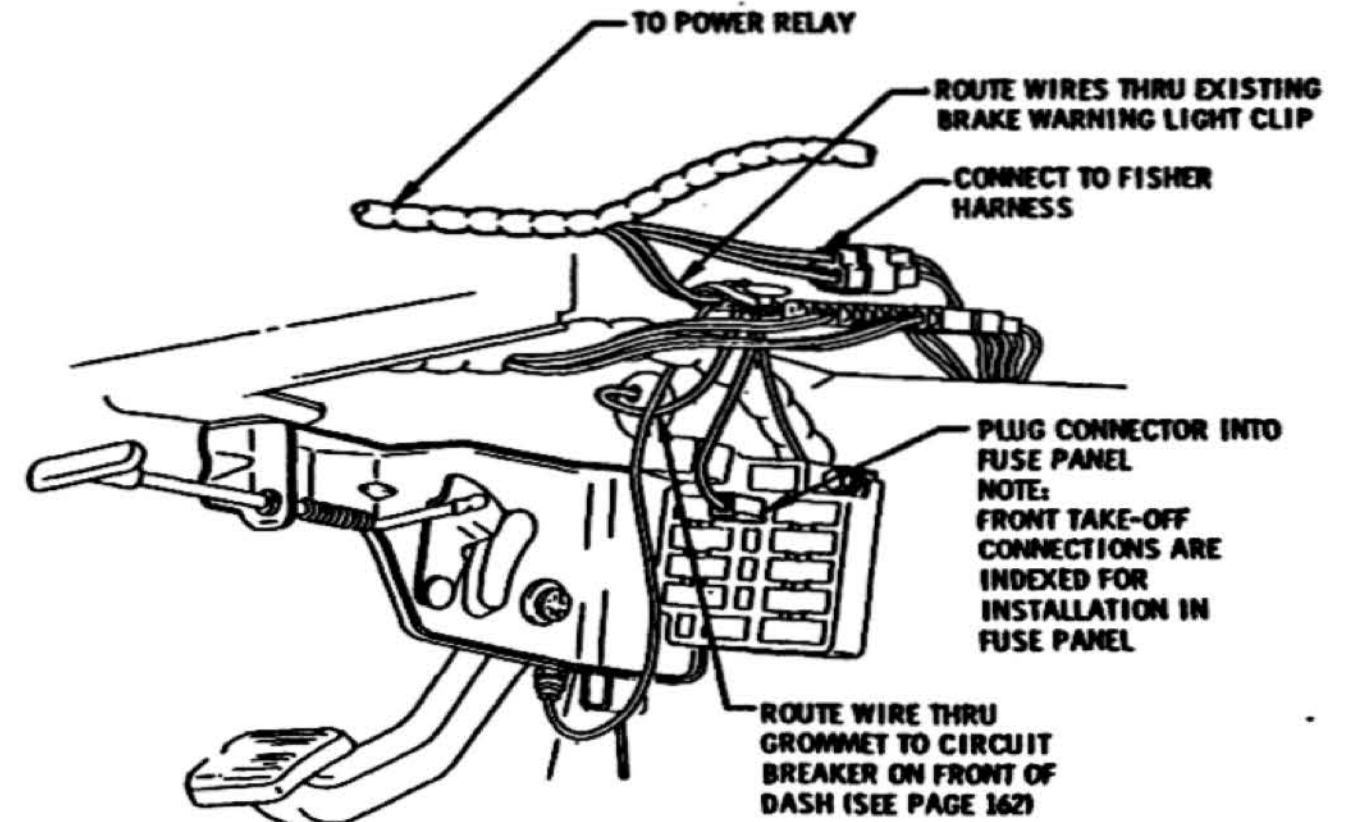
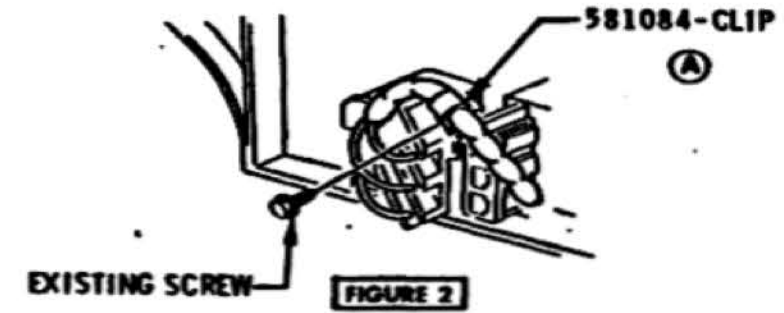
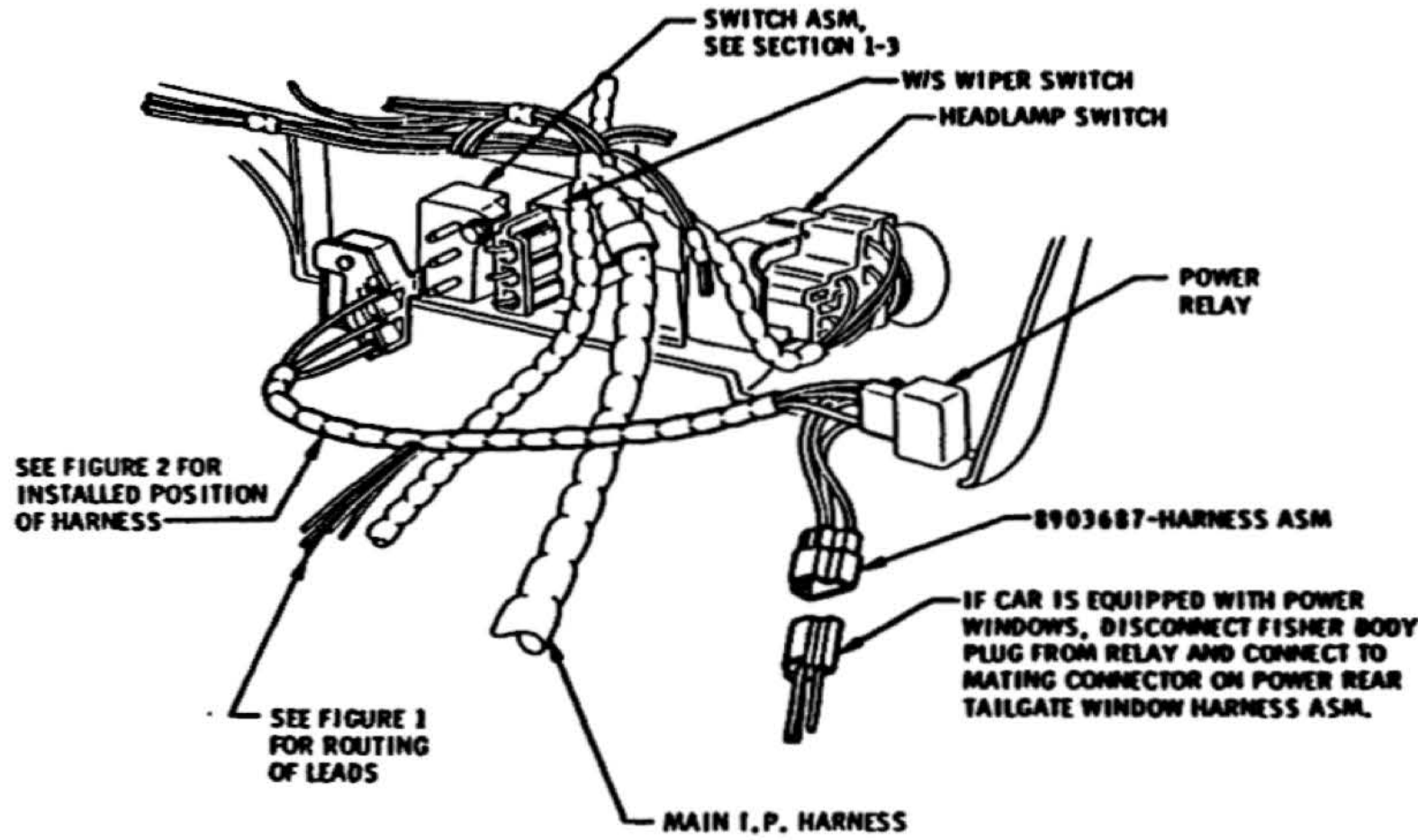
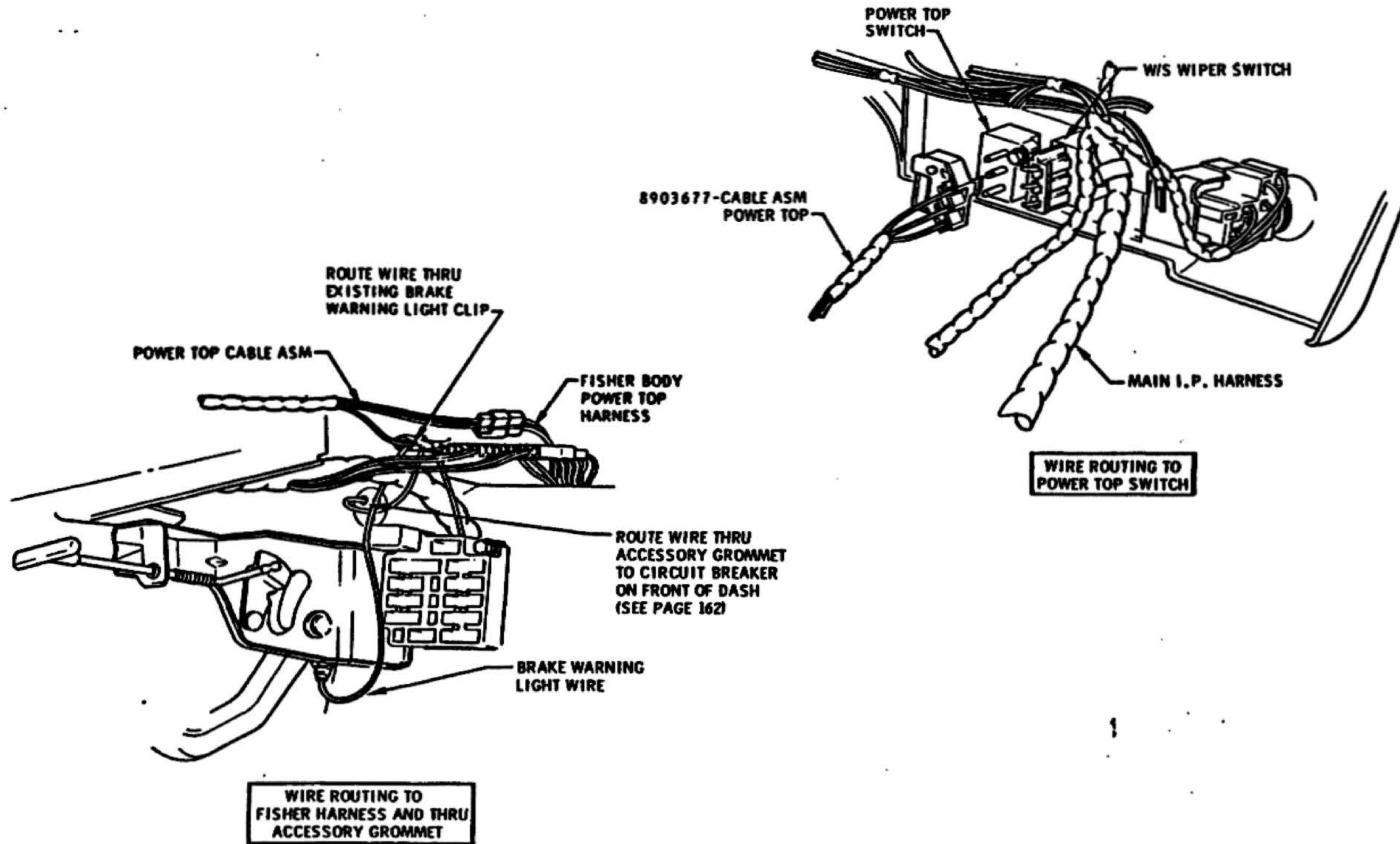
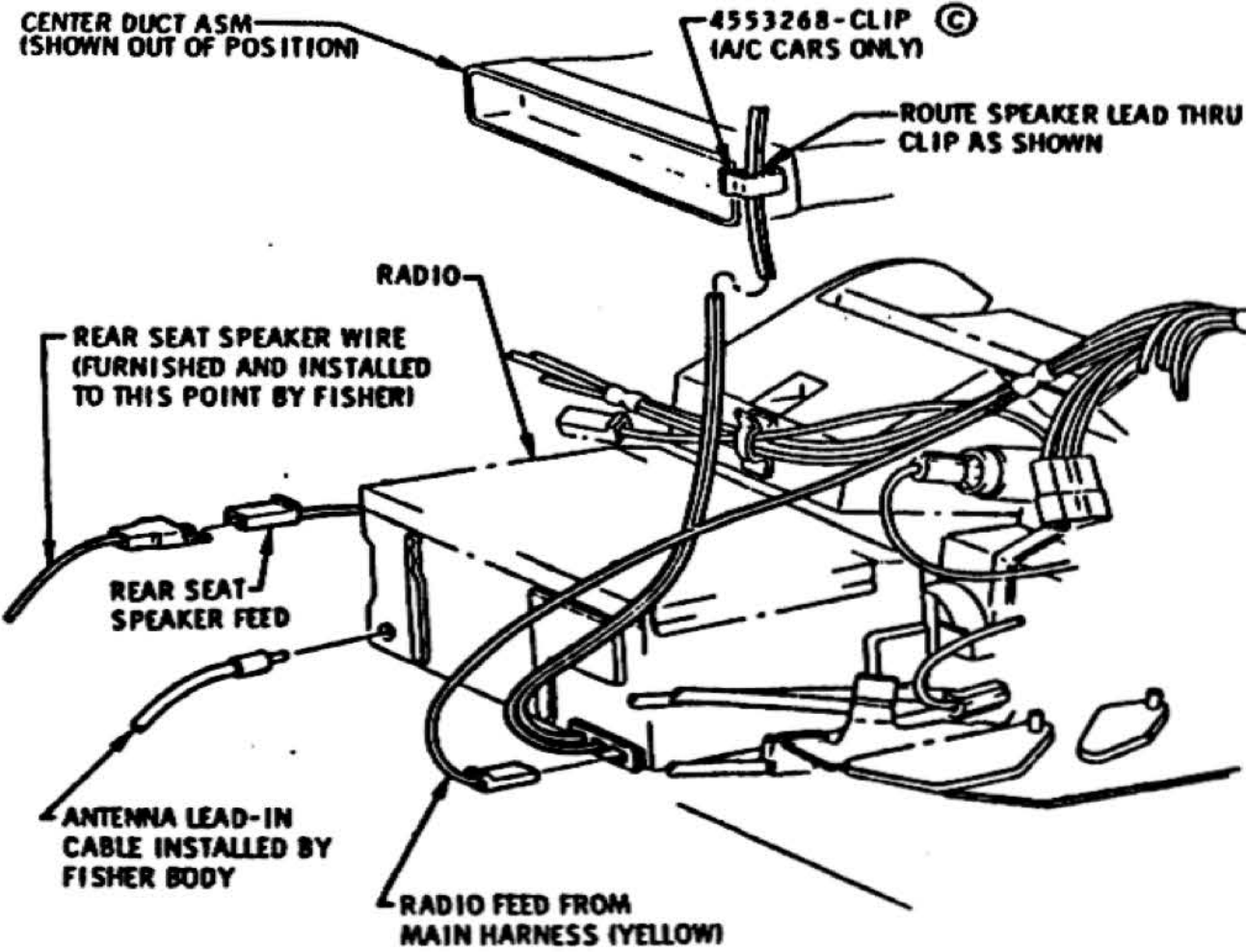


FIGURE 1

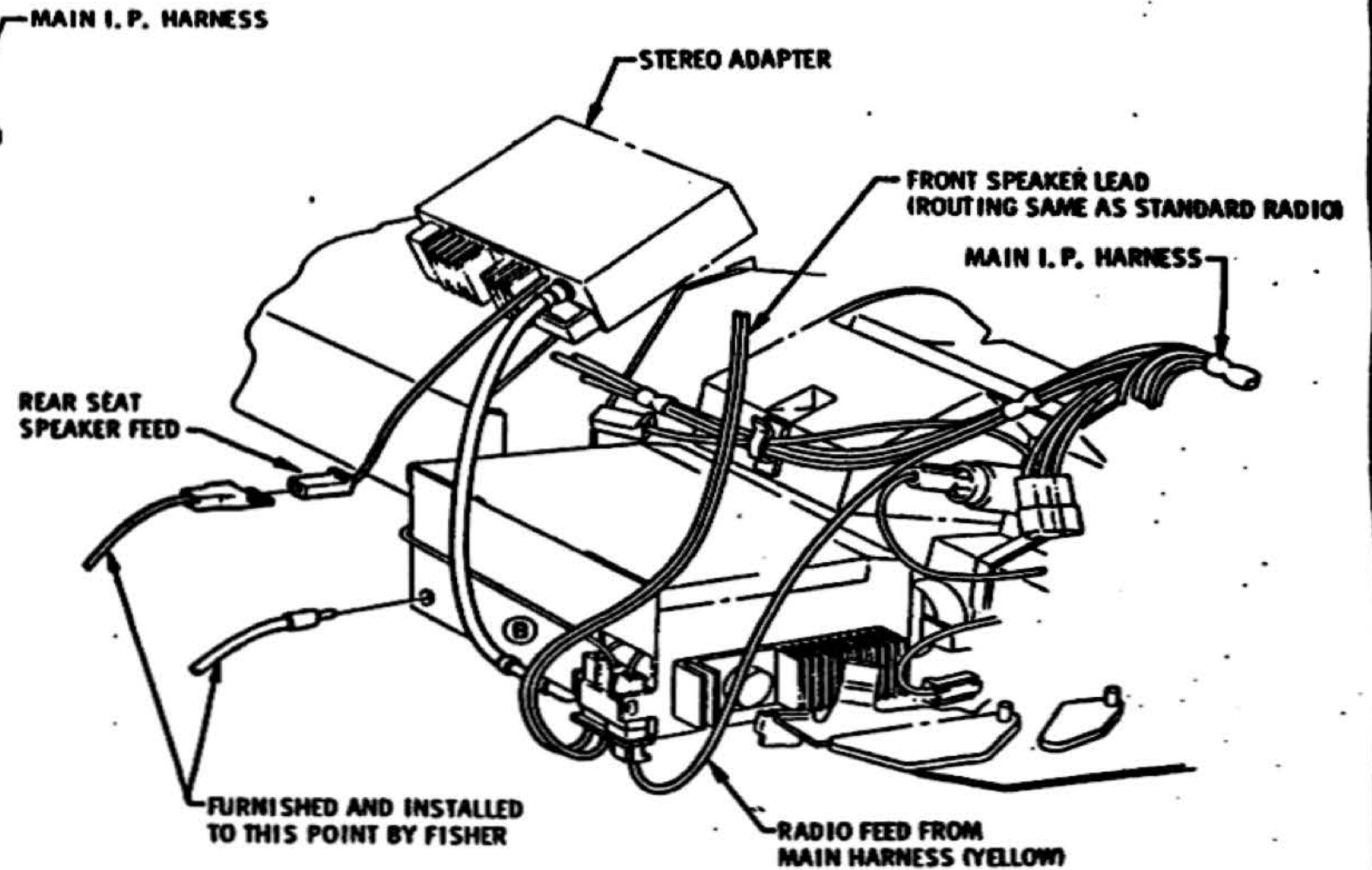
				TITLE				ELECTRIC TAILGATE WINDOW							
				DATE	APR 22 1969		FIRST USED	1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	12	PAGE	120	
				DR BY	CJET M307		REV.								
				CHECKED	T. J. ...		REV.								
				APPR.	R. B. ...		REV.								
2-22-70	A	CLIP ADDED		PL	DT			REV.							
DATE	SYM	REVISION		DR.	CL.			REV.							
											REV.	A		PART NO.	404411



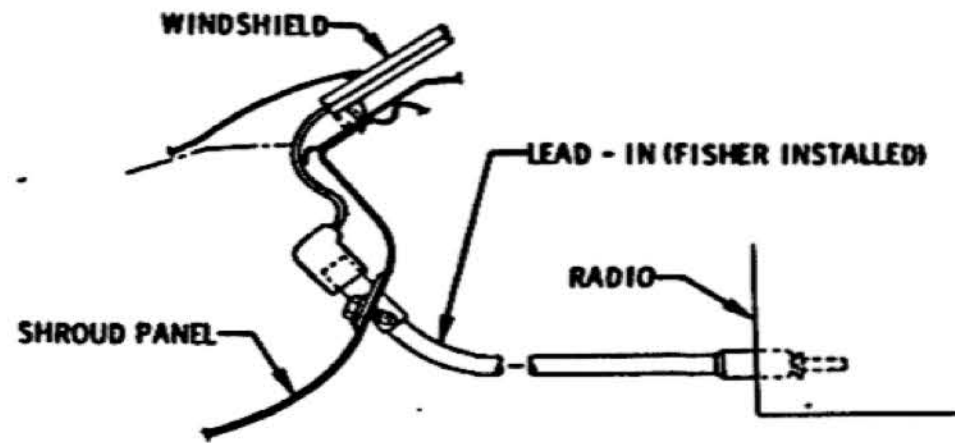
				TITLE POWER TOP WIRING			
DATE APR. 28, 1968				FIRST USED 1970		MANUAL SEC. 12	
DR BY CURT MAY						PAGE 122	
CHECKED [Signature]				REV. 12		SERIES A	
APPR. [Signature]						PART NO. 404411	



STANDARD RADIO WIRING



STEREO RADIO WIRING

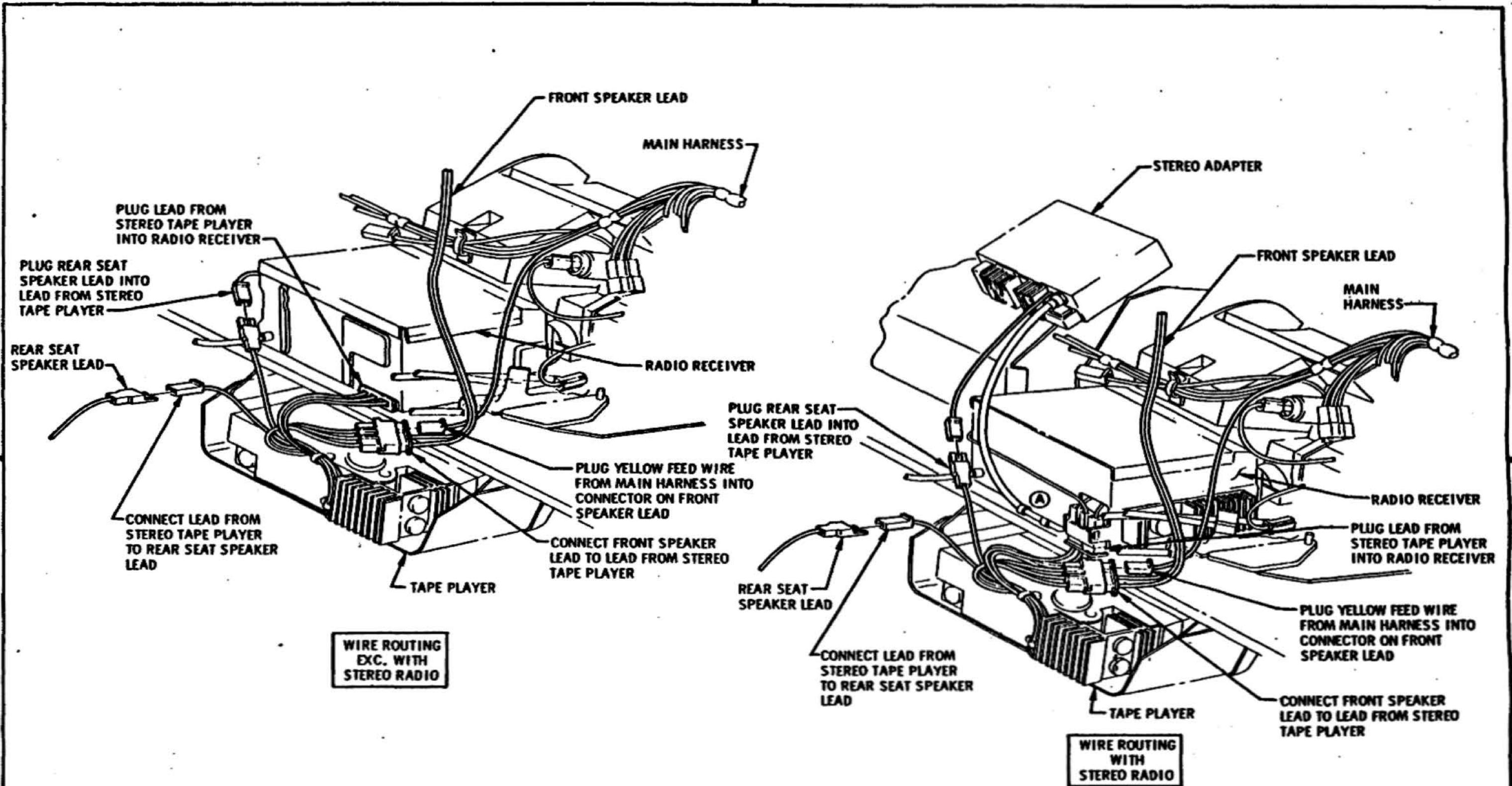


TYPICAL SECTION SHOWING ANTENNA LEAD-IN TO RADIO

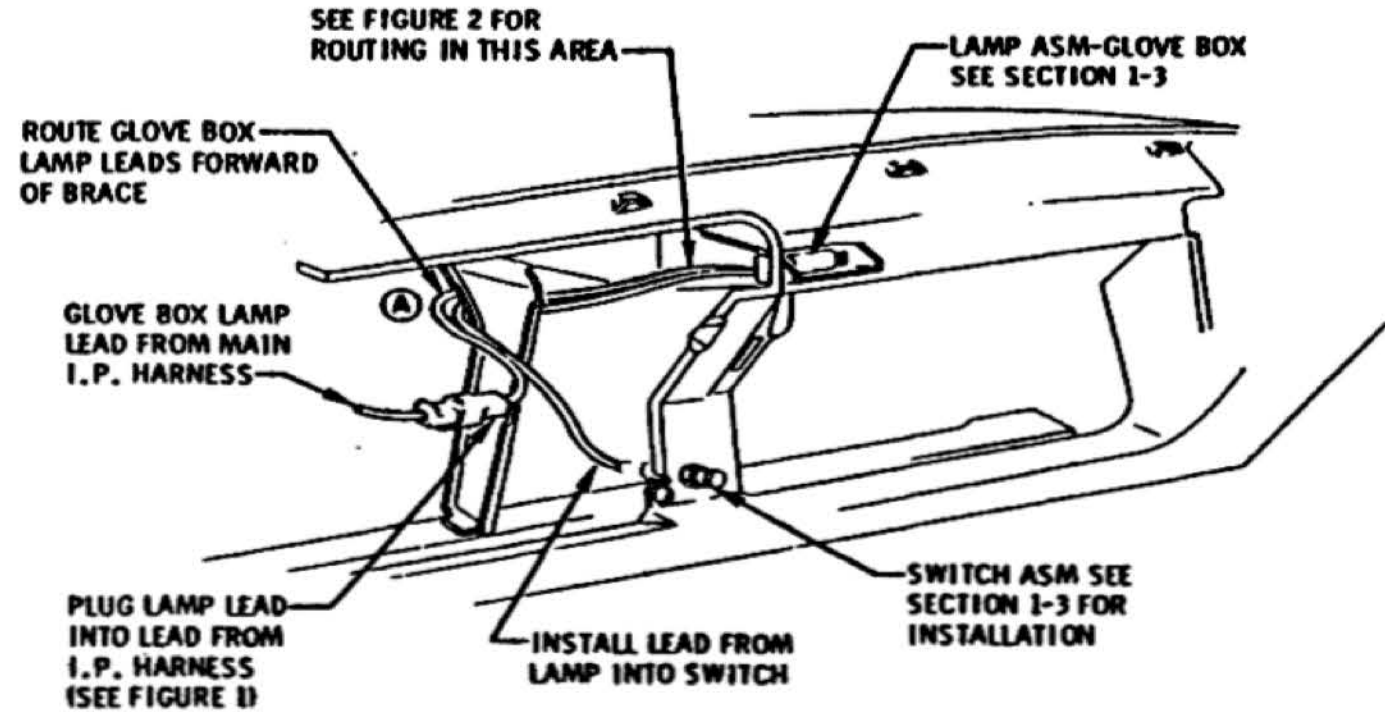


FULLY DRIVEN, SEATED AND NOT STRIPPED

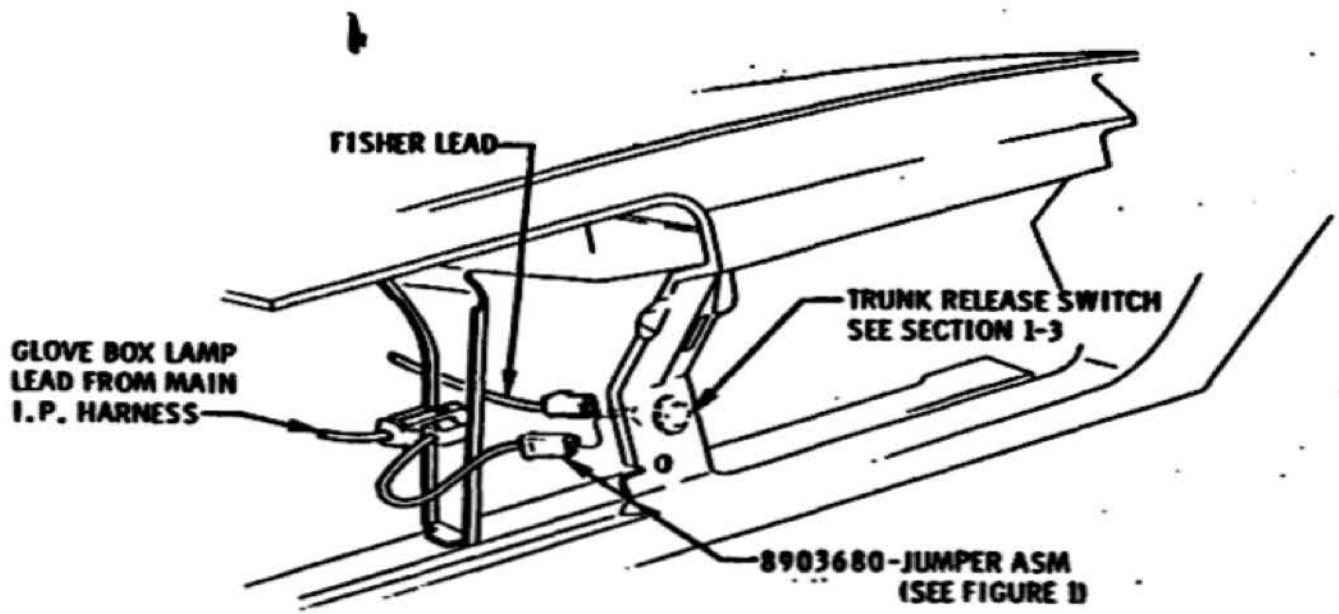
				TITLE		STANDARD & STEREO RADIO WIRING		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		ORIGINAL DES. PAGE	
12-9-69	C	4553268 CLIP ADDED	PL	DR	DATE	APR 22 1969	1970	12	126				
8-8-69	B	CABLE RE-ROUTED	PL	DR	DR BY	CURT MRY							
6-18-69	A	VIEW ADDED	PL	DR	CHECKED								
DATE	BY	REVISION	DR.	CK.	APPR.								
								A		PART NO.		404411	



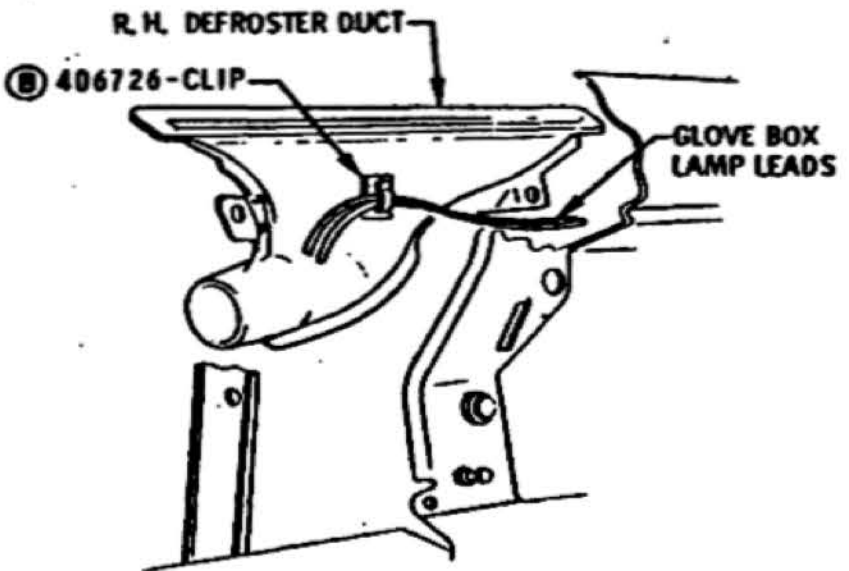
TITLE		STEREO TAPE PLAYER WIRE ROUTING			
DATE	APR. 24 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO. PAGE
DR. BY	CLAY MAY				12 130
CHECKED					
APPR.					
REV. NO.	A	SERIES	A	PART NO.	404411



INSTALLATION OF GLOVE BOX LAMP WIRING

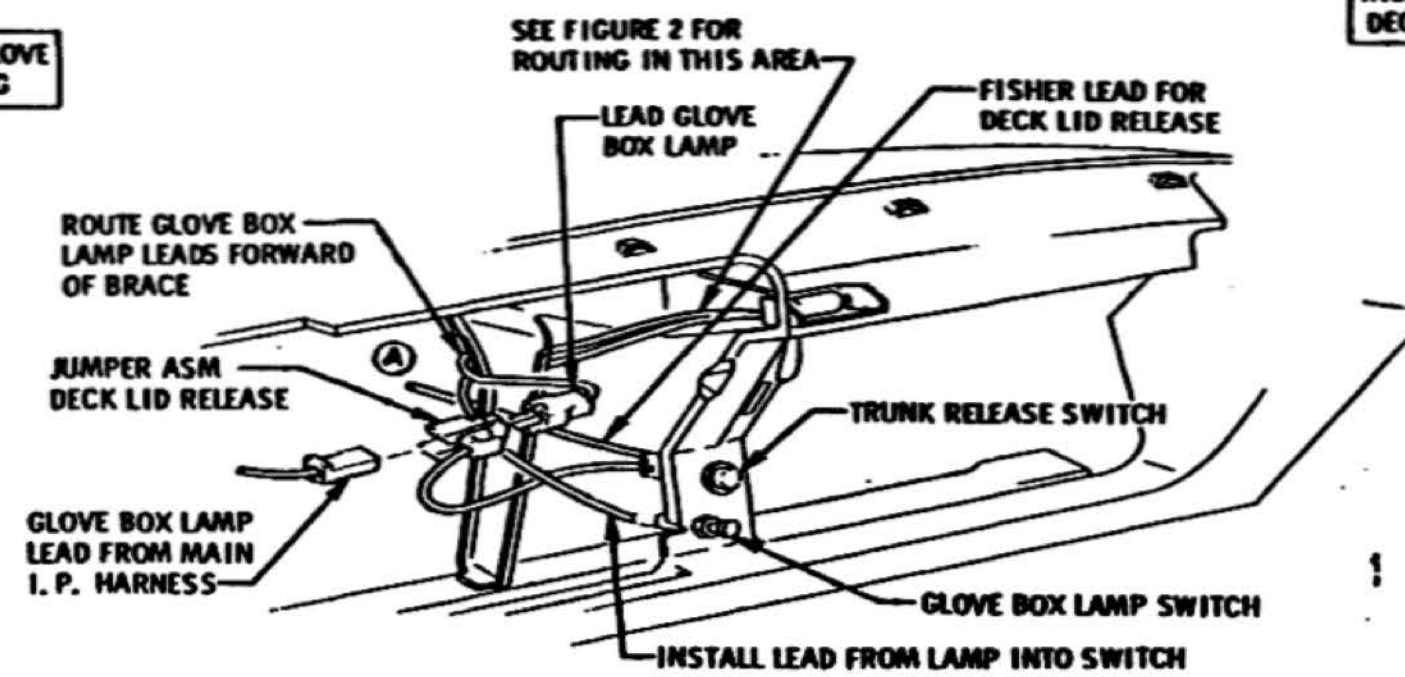


INSTALLATION OF ELECTRIC DECK LID SWITCH WIRING



GLOVE BOX LAMP WIRE ROUTING

FIGURE 2



INSTALLATION OF WIRING GLOVE BOX LAMP WITH DECK LID RELEASE

FIGURE 1

				TITLE GLOVE BOX LAMP & DECK LID RELEASE WIRING			
DATE	SYM	REVISION	DR. CK. APPR.	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. FIG#
12-15-69	B	CLIP ADDED	PL	DEC. 24, 1969	1970		12 134
02-27-69	AC	WIRE REROUTED	PL				
						A	404411

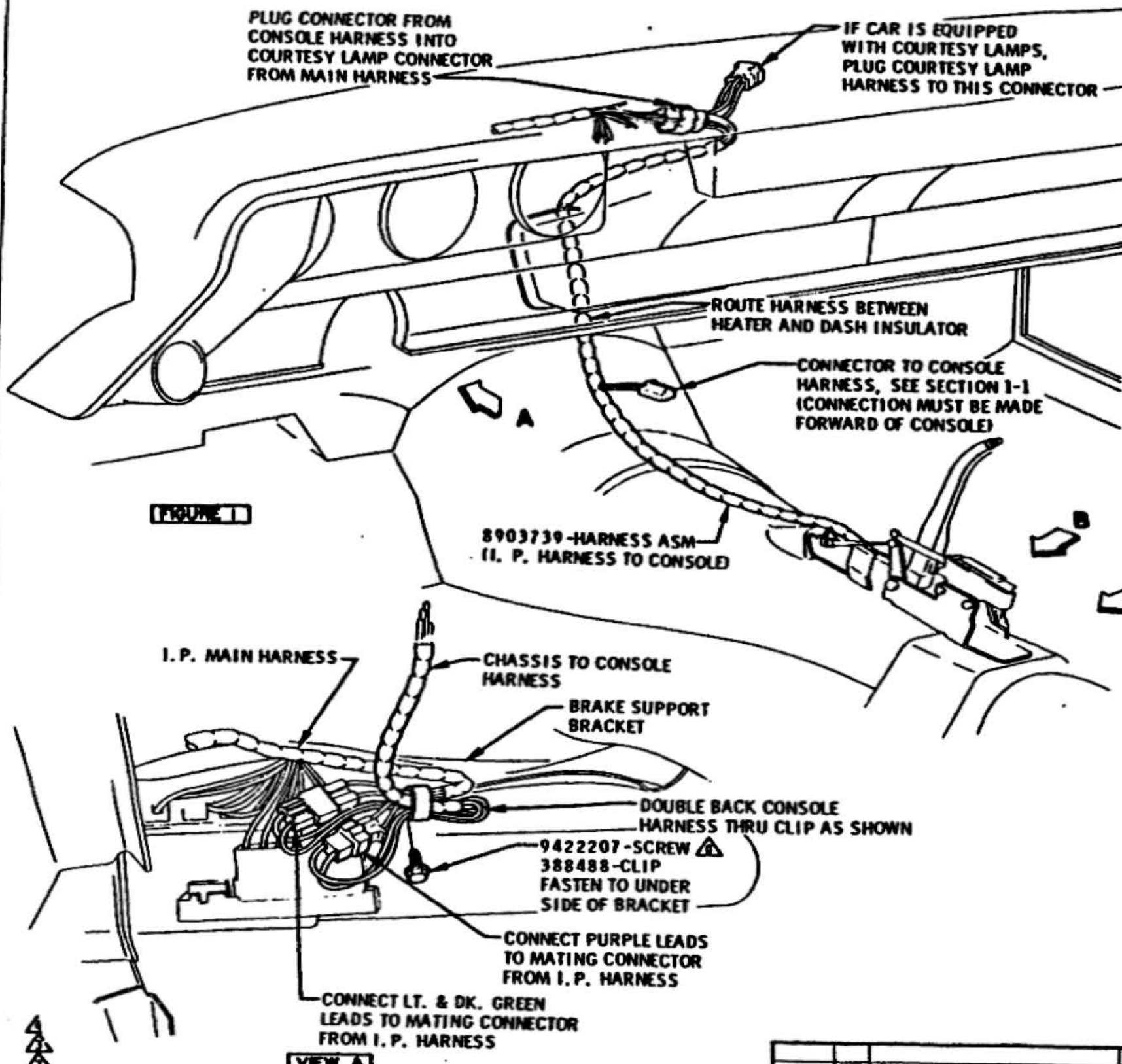
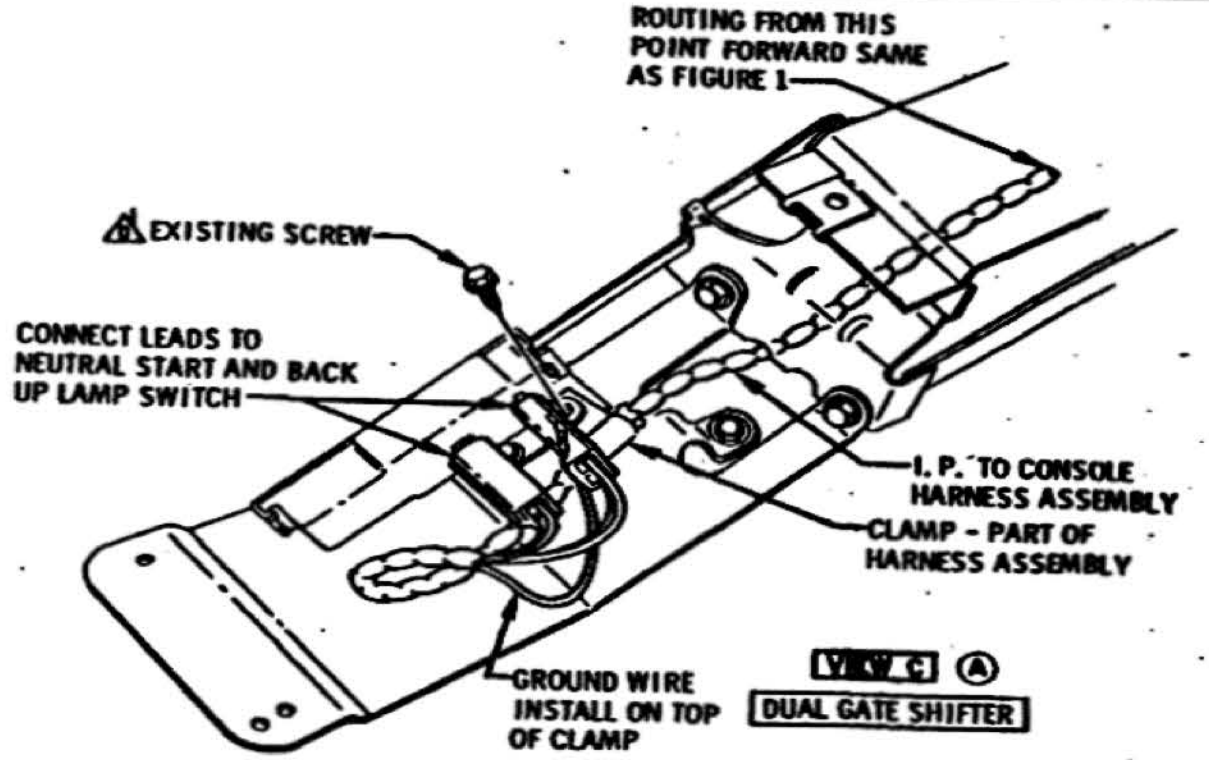
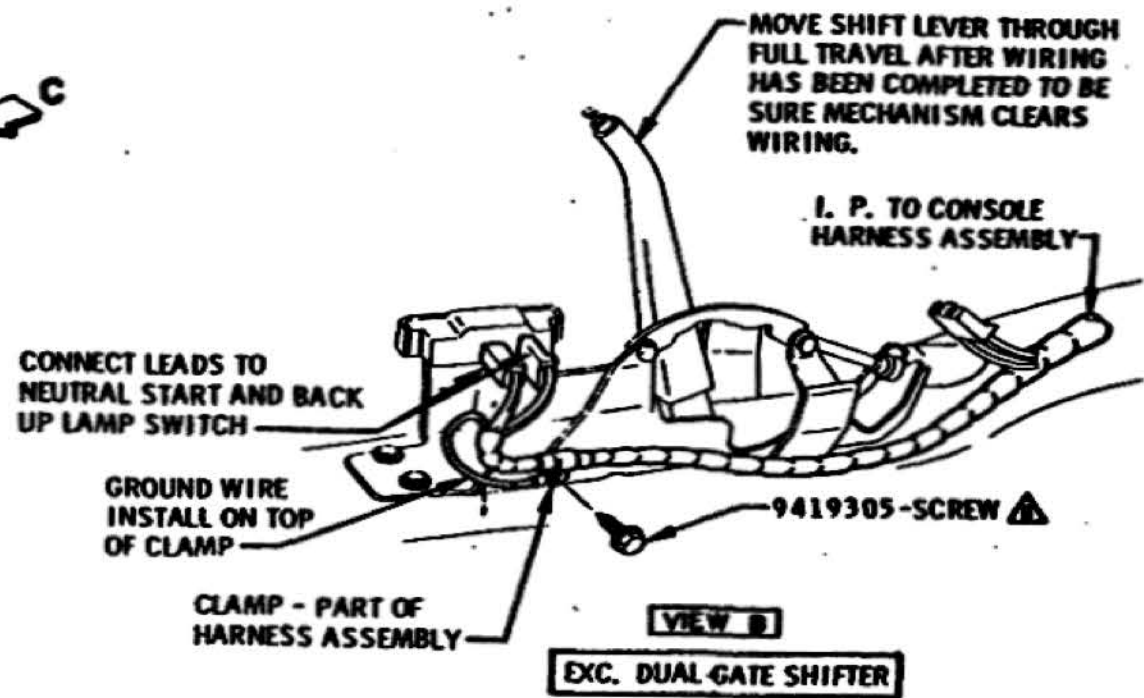


FIGURE 1

VIEW A



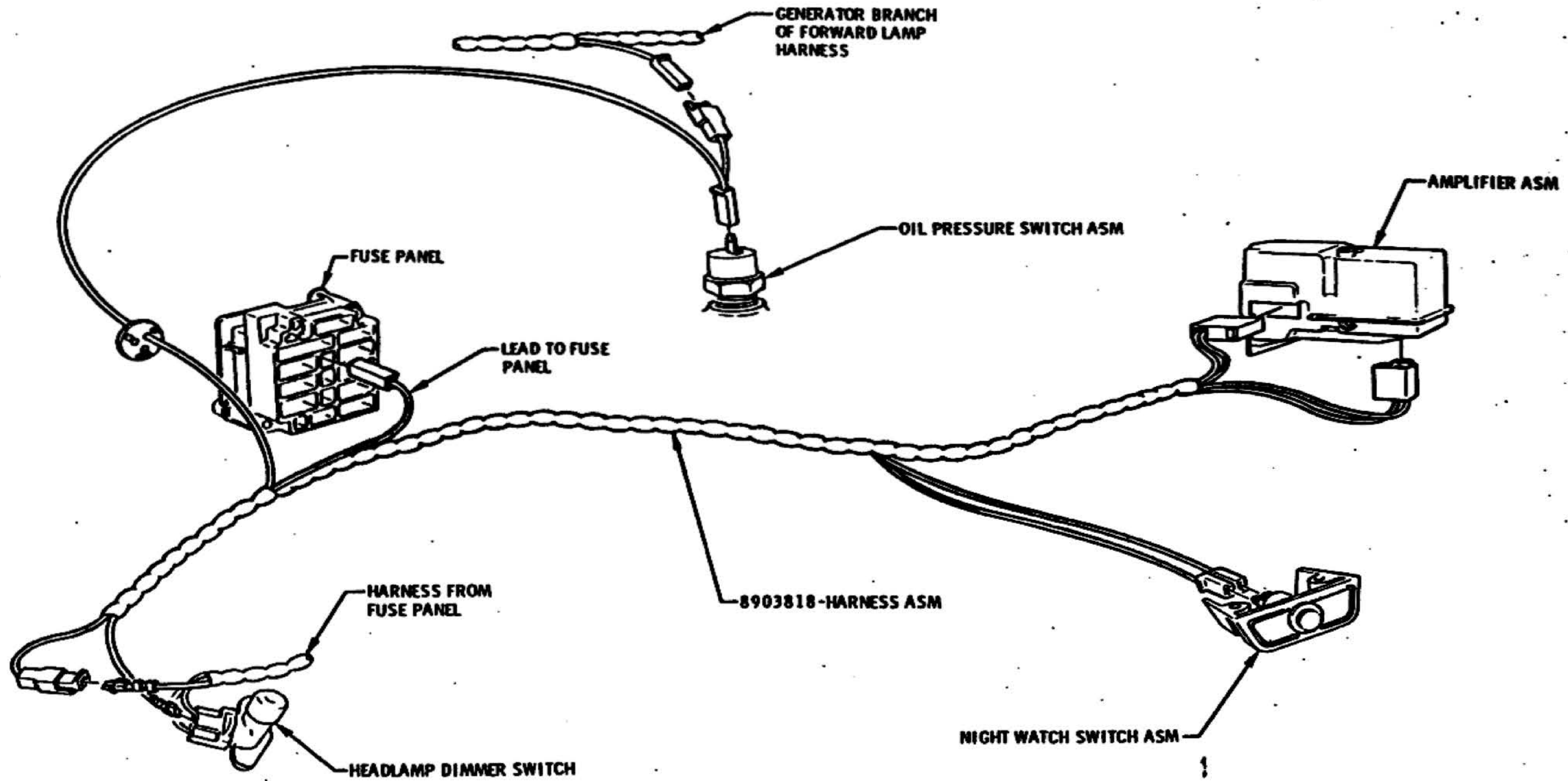
VIEW C  
DUAL GATE SHIFTER



VIEW B  
EXC. DUAL GATE SHIFTER

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE		TITLE		FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL NO.		PAGE	
MAY 2 1968		CONSOLE WIRE ROUTING		1970				12		136	
DR. BY CUET MAY		CHECKED JEM		REV. 5/68		SERIES		A		PART NO. 404411	
APR 65	A	VIEW C ADDED	PL 37	APPR. GLL							
DATE	SYM	REVISION	DR.	CK.	APPR.						



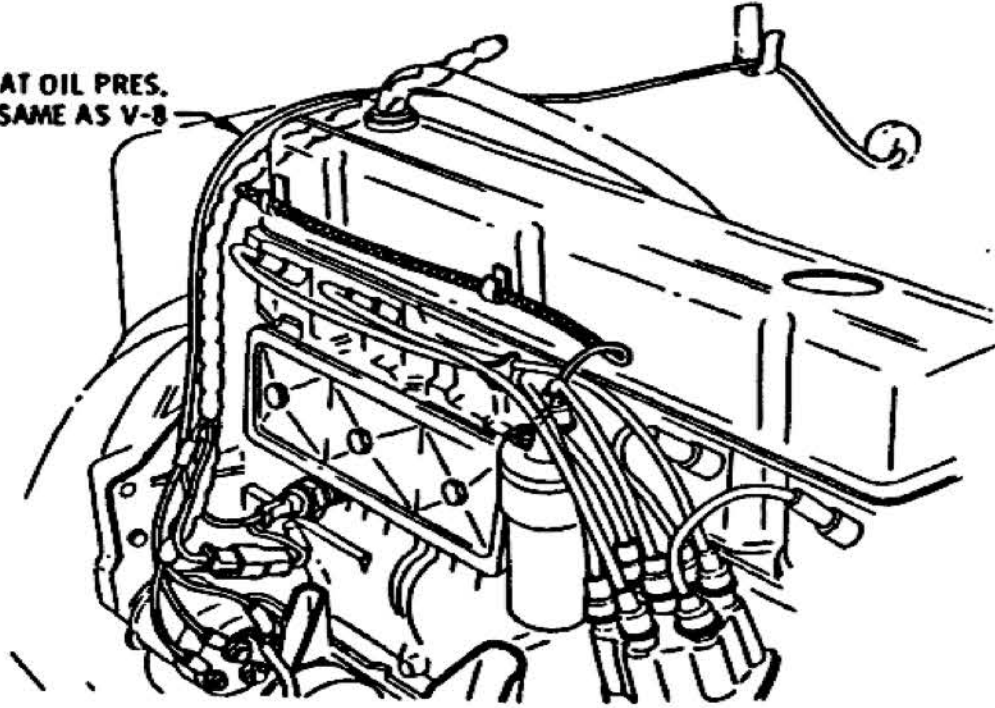
NOTE:

FOR WIRING ROUTING,  
SEE PAGE 141

				TITLE HEADLAMP OFF-DELAY CONTROL WIRING DIAGRAM			
DATE		SEPT. 29, 1969		FIRST USED		1970	
DR.		E.T.C. WIMBOLD		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
CHECKED		T.H.		REV.		B5TB	
APPR.		C. J. ...		SERIES		A	
DATE		SYM		REVISION		DR. CC. APPR.	
				PART NO.		404411	
				MANUAL NO.		12 140	



HOOKUP AT OIL PRES.  
SWITCH SAME AS V-8



L6 MODELS (1)

9428102-NUT (SPRING)  
(TO BRACKET)

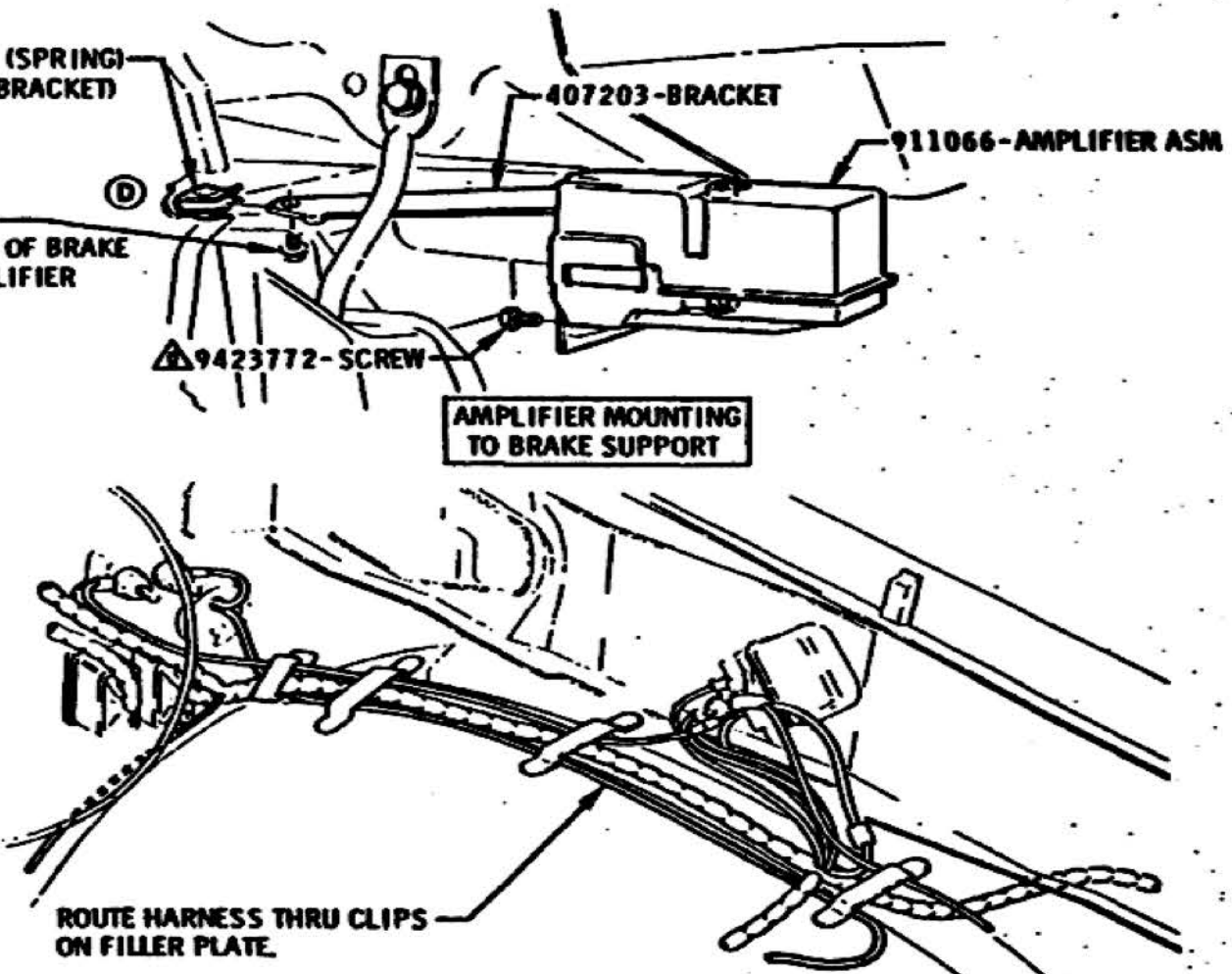
9422046-SCREW  
(THRU UNDERSIDE OF BRAKE  
SUPPORT TO AMPLIFIER  
BRACKET)

9423772-SCREW

407203-BRACKET

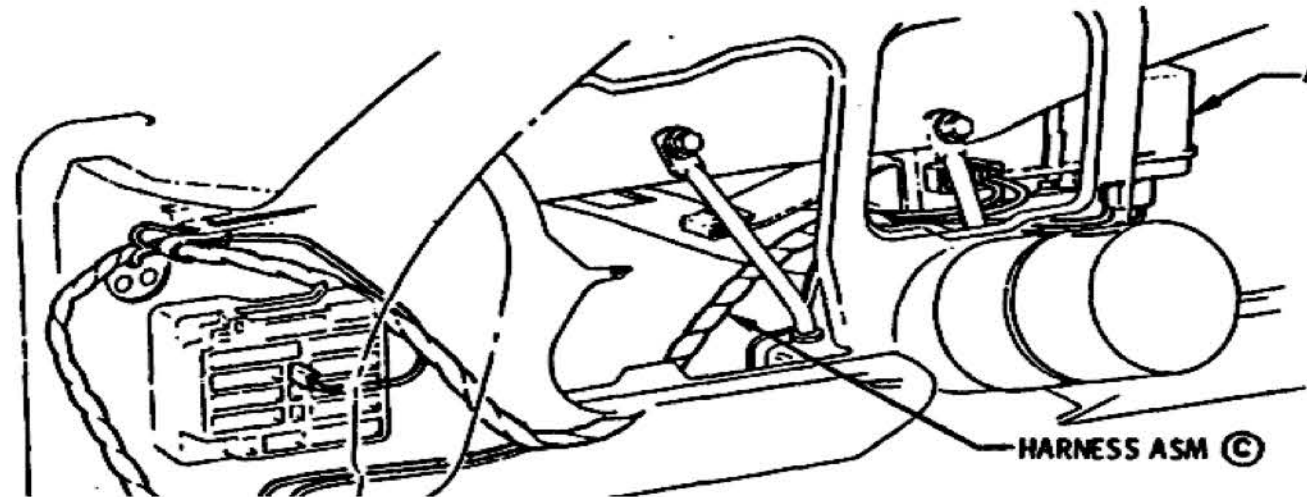
911066-AMPLIFIER ASM

AMPLIFIER MOUNTING  
TO BRAKE SUPPORT



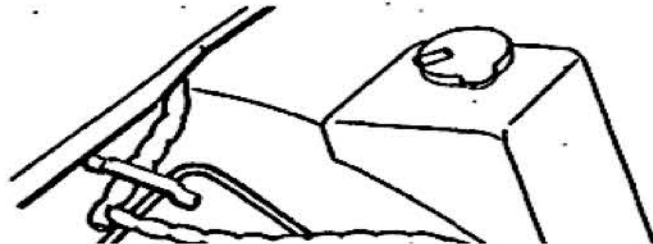
ROUTE HARNESS THRU CLIPS  
ON FILLER PLATE.

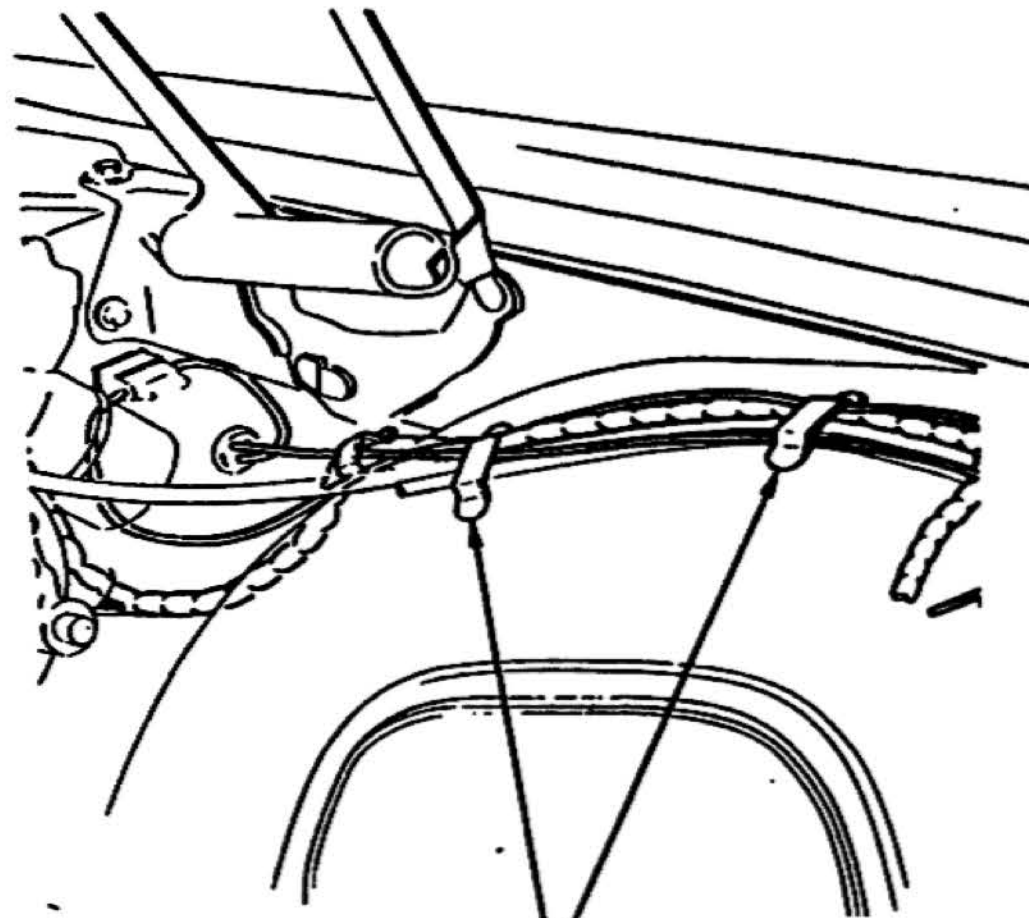
REMOVE BLUE LEAD FROM OIL PRESSURE  
SWITCH & PLUG INTO HARNESS PIGTAIL.  
CONNECT HARNESS TO OIL PRESSURE  
SWITCH.



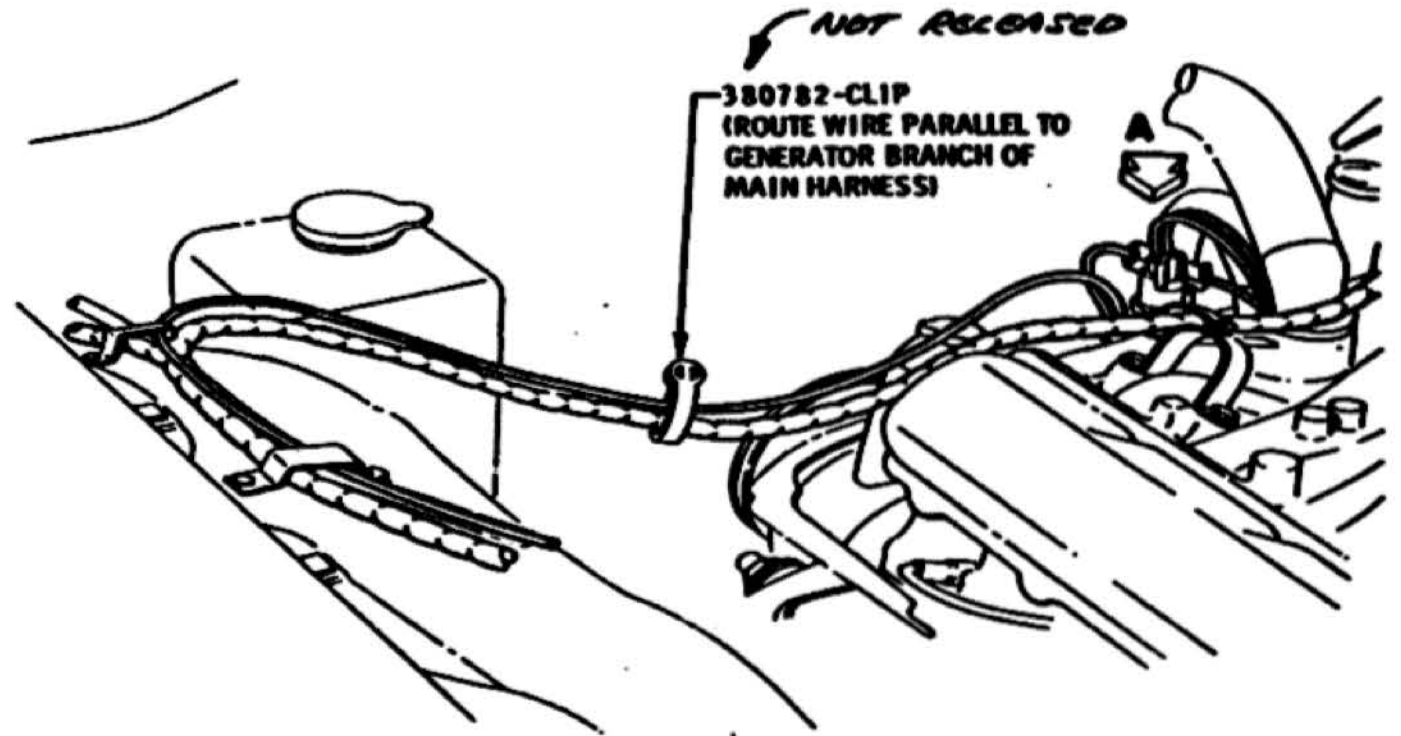
AMPLIFIER ASM

HARNESS ASM (2)





ROUTE HARNESS THRU CLIPS ON FILLER PLATE



NOT RELEASED  
380782-CLIP  
(ROUTE WIRE PARALLEL TO GENERATOR BRANCH OF MAIN HARNESS)

REMOVE FROM  
F-85 MANUAL

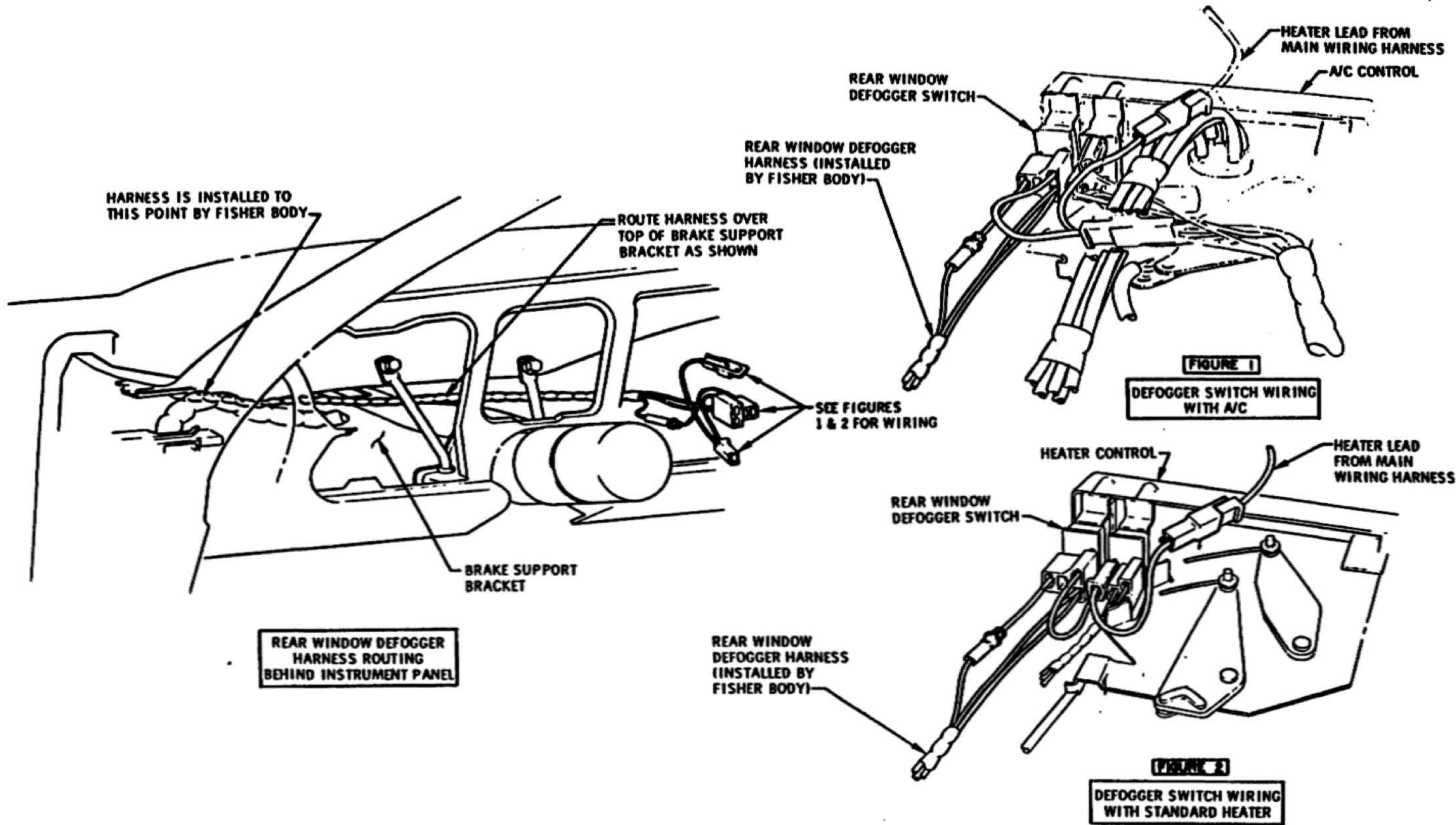


ON OIL PRESSURE HARNESS LEAD, OIL PRESSURE

SWITCH

(VIA)

TITLE		HEADLAMP OFF DELAY CONTROL (ENGINE COMPARTMENT)	
DATE	AUG 6, 1969	FIRST USED	1970
BY	BYD LAMER/JEL	OLDSMOBILE PRODUCT	INFORMATIONAL MANUAL
CHECKED	JEL	MANUAL NO.	12 142
APPROVED	JEL	FILE NO.	404412
		B-C	

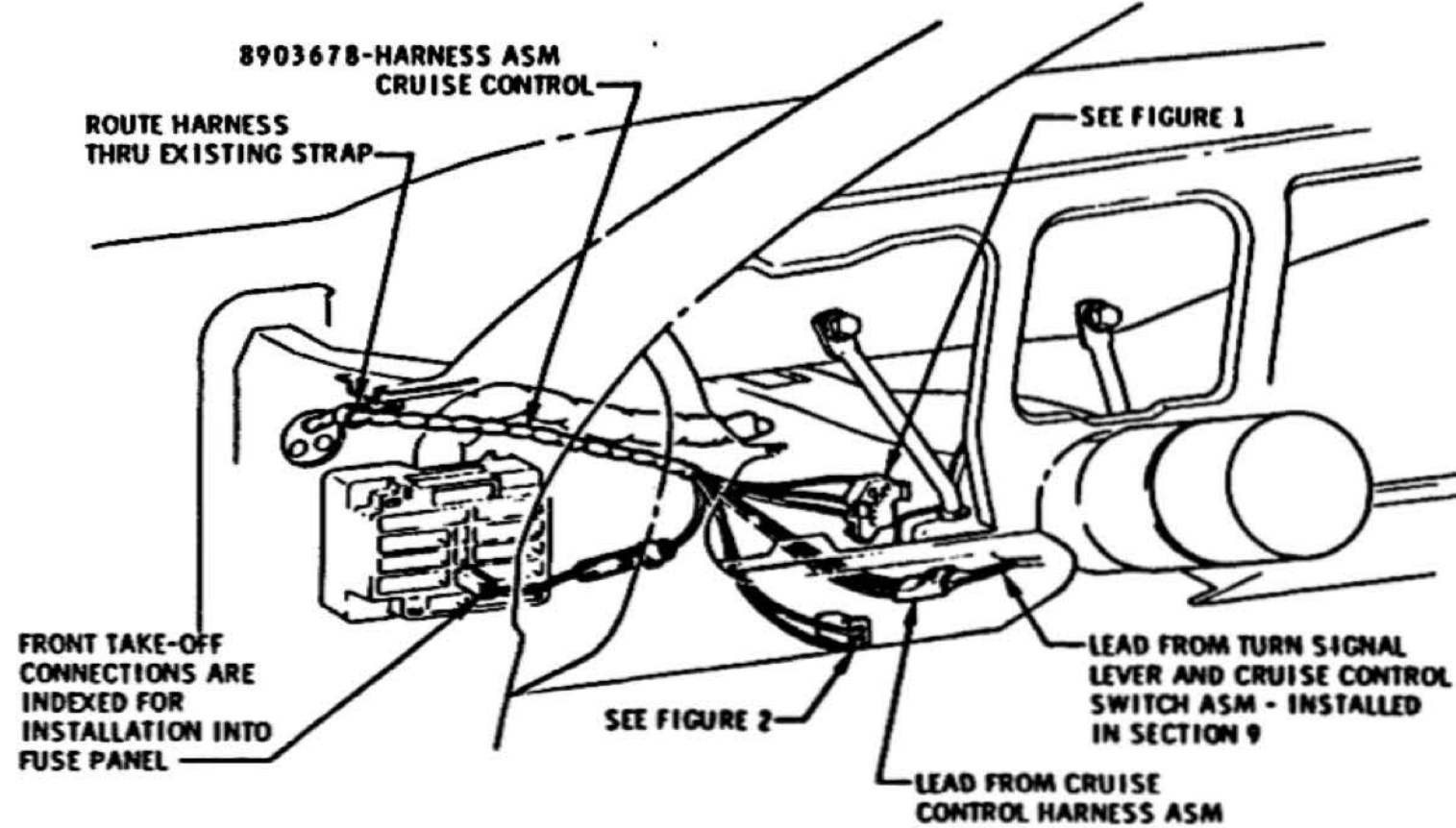


**FIGURE 1**  
 DEFOGGER SWITCH WIRING  
 WITH A/C

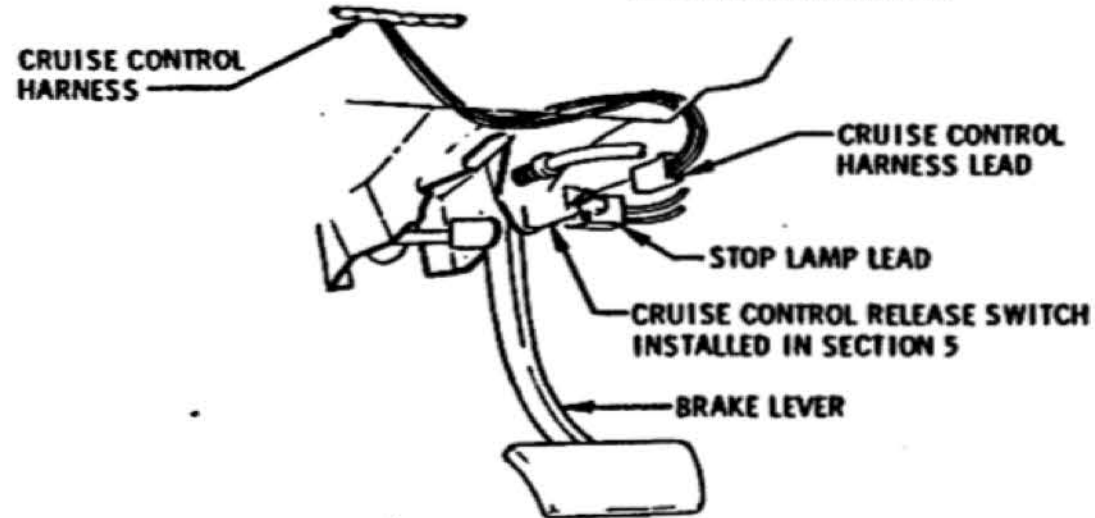
**FIGURE 2**  
 DEFOGGER SWITCH WIRING  
 WITH STANDARD HEATER

REAR WINDOW DEFOGGER  
 HARNESS ROUTING  
 BEHIND INSTRUMENT PANEL

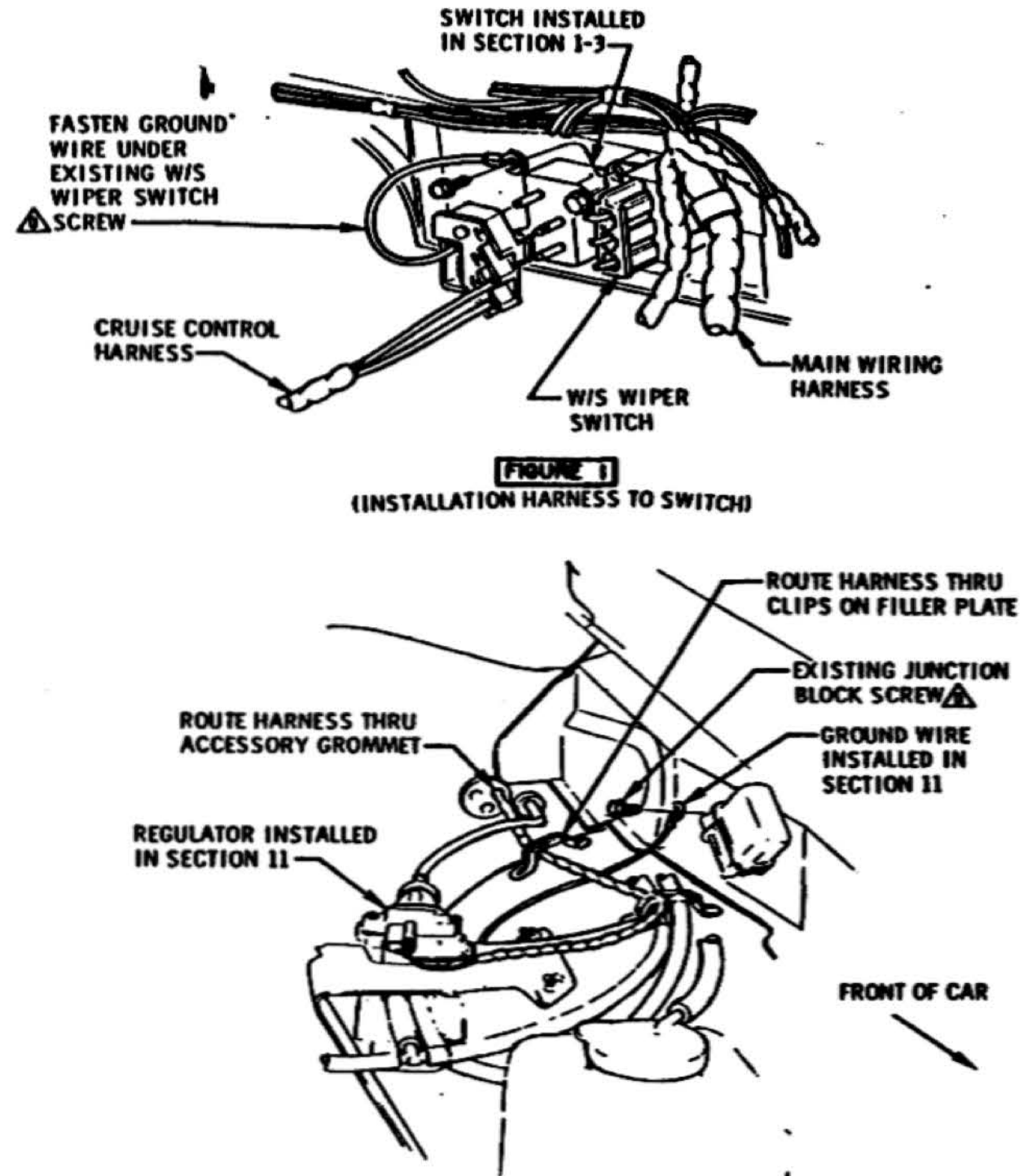
				TITLE REAR WINDOW DEFOGGER SWITCH WIRING			
DATE		MAY 6, 1969		FIRST USED		1970	
DR. BY		CJET/MAY		OLDSMOBILE PRODUCT		INFORMATION MANUAL	
CHECKED		TOM		MANUAL SEC.		PAGE	
APPR. 1, 1969				REF. C50		SERIES A	
APPR.				PART NO.		404411	
DATE	SYM	REVISION	DR.	CK.			



**FIGURE 1**  
(INSTALLATION HARNESS TO SWITCH)



**FIGURE 2**  
(INSTALLATION OF WIRING TO RELEASE SWITCH)



NOTE:  
CRUISE CONTROL VACUUM HOSES AND SPEEDO CABLE INSTALLED IN SECTION 1-5

▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED AND NOT STRIPPED

TITLE				CRUISE CONTROL WIRING				
DATE	APR 29 1968	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	12	PAGE	148
DR. BY	QUET MAY	CHECKED	APPR. L. W. G.	NO. 55K30	SERIES	A	PART NO.	404411
DATE	SYM	REVISION	DR. CK.	APPR.				

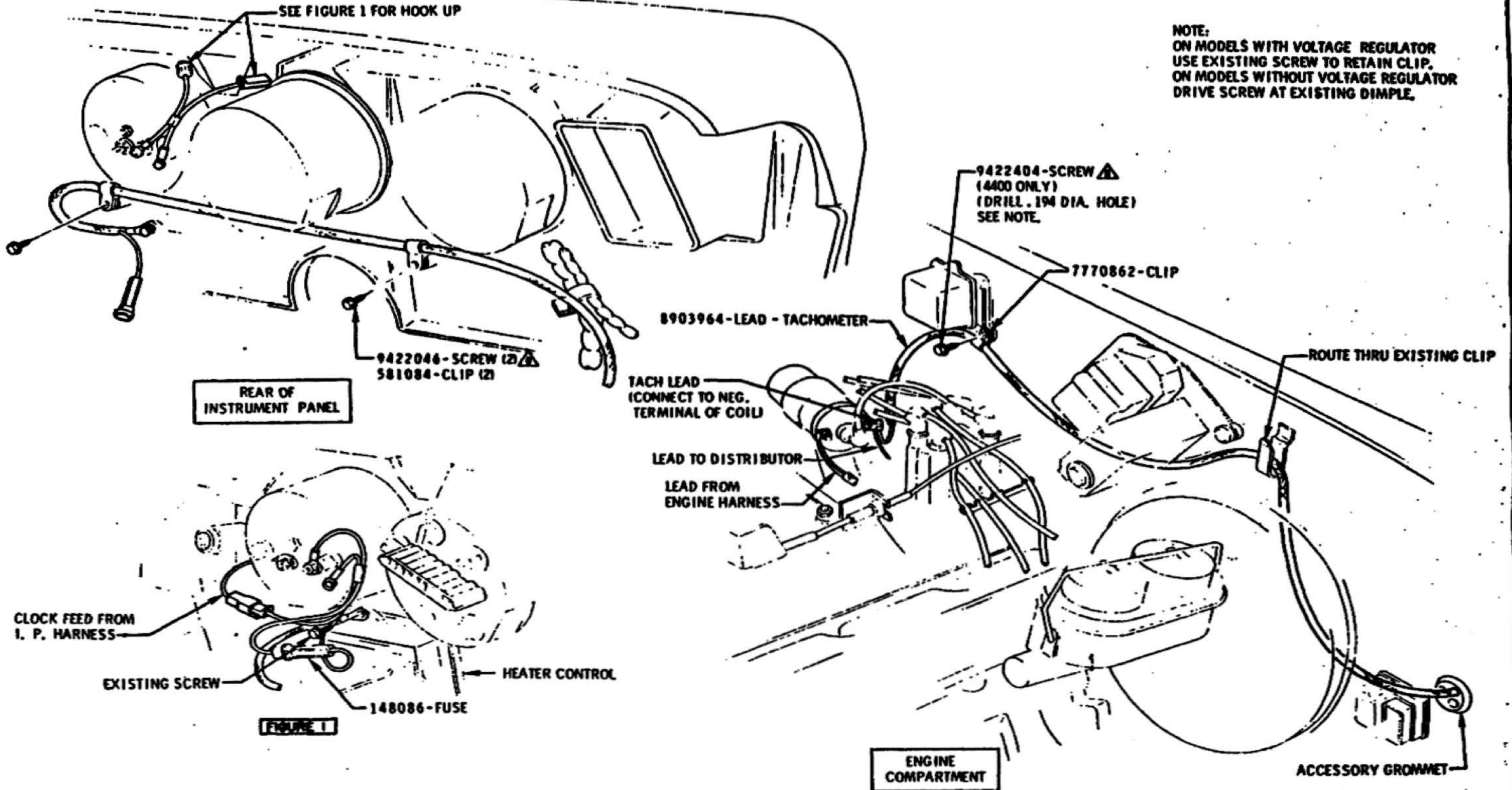
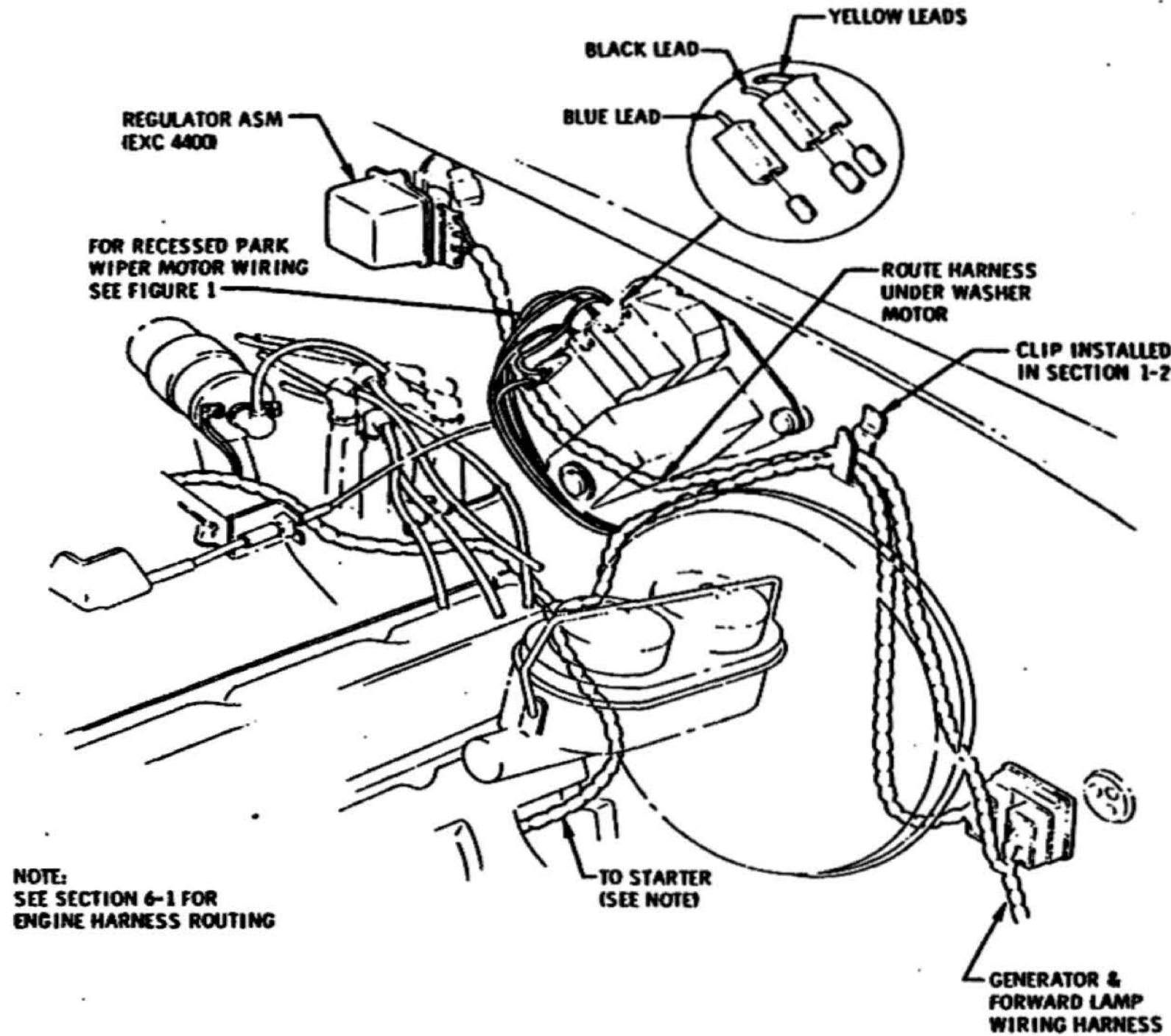


FIGURE 1

▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE										TACHOMETER LEAD ROUTING					
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APP.	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
												1970		12	158
												REF. 35021	SERIES A	PART NO.	404411



NOTE:  
SEE SECTION 6-1 FOR  
ENGINE HARNESS ROUTING

(A)

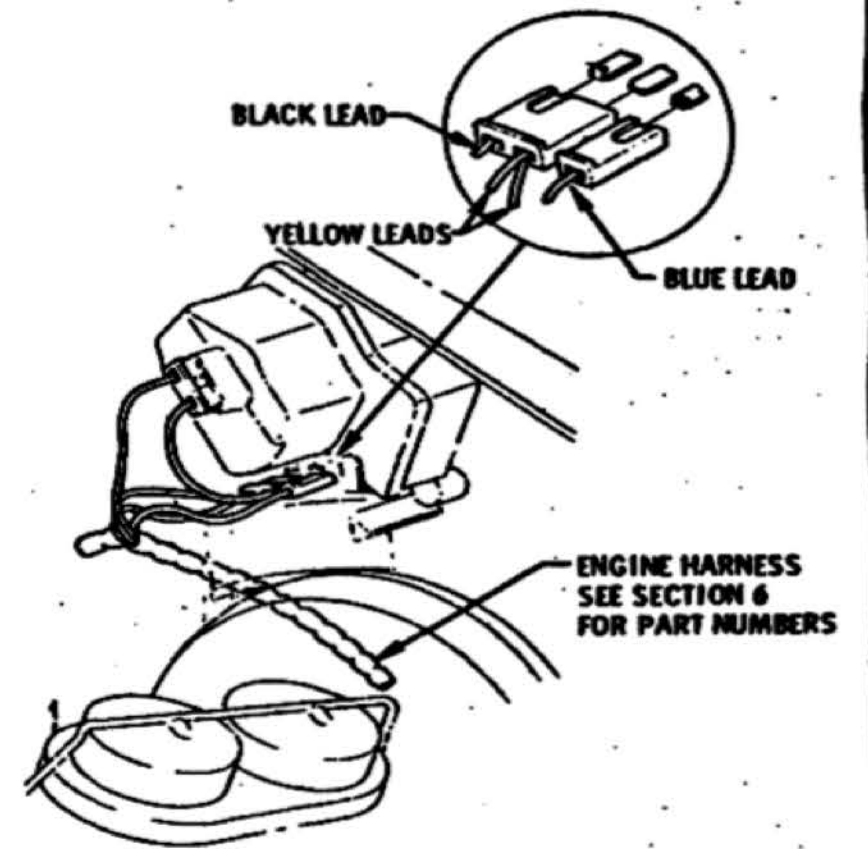
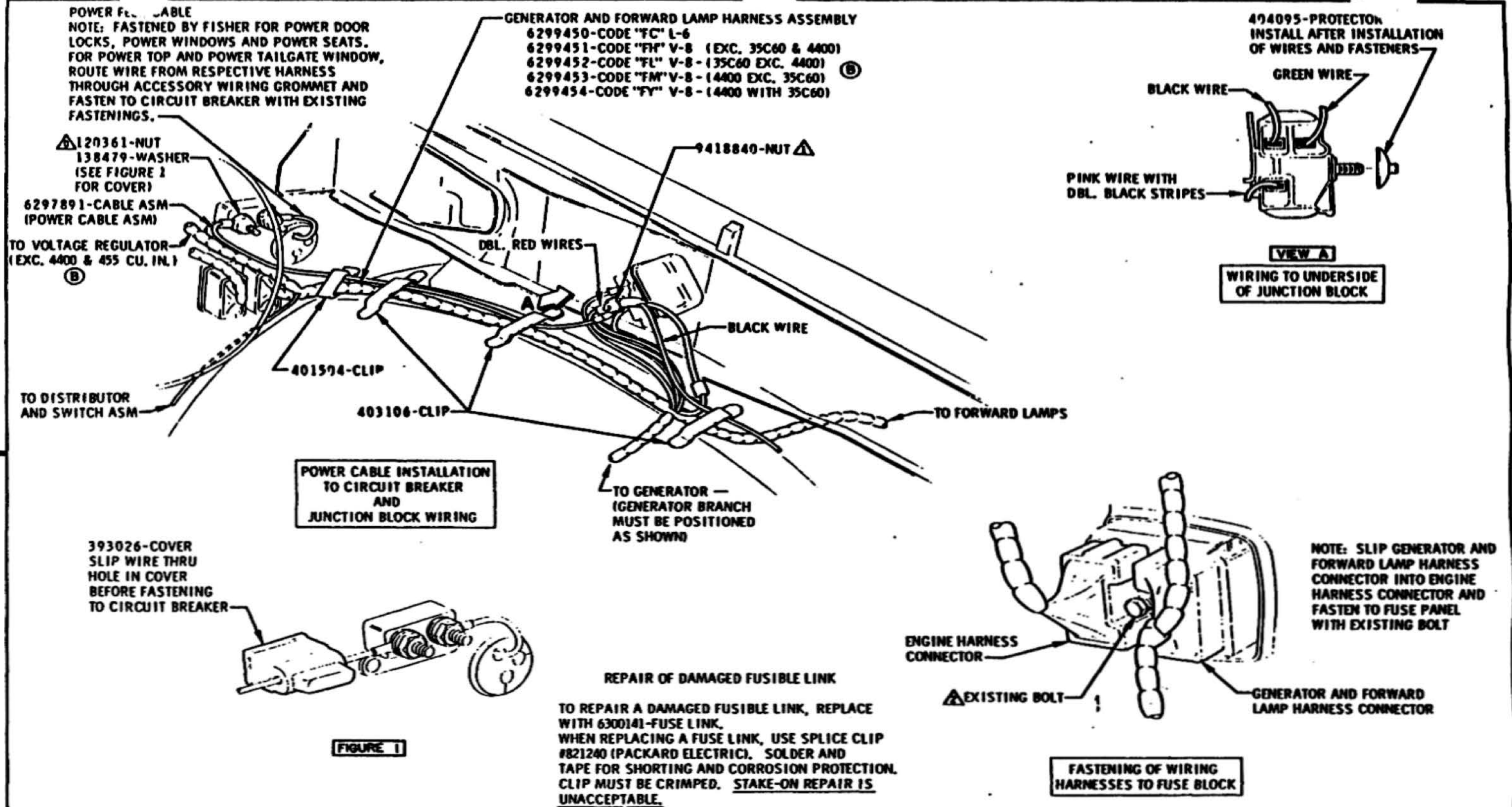


FIGURE 1  
(RECESSED PARK WIPER WIRING)

				TITLE		DASH PANEL WIRING (V8)	
				DATE	APR. 24, 1969	FIRST USED	1970
				OR BY	CURT MAY	OLDSMOBILE PRODUCT	MANUAL REC. PAGE
				CHECKED	JDM	INFORMATION MANUAL	12 160
12-2-69	A	INFO. MOVED TO ENGINE/PL DT	DR. CL.	APPR.	1.0.1.1	REV. 12H	SERIES
DATE	SYM	REVISION	DR. CL.	APPR.			PART NO.
							A
							404411



120361-NUT  
138479-WASHER  
(SEE FIGURE 1 FOR COVER)  
6297891-CABLE ASM  
(POWER CABLE ASM)  
TO VOLTAGE REGULATOR  
(EXC. 4400 & 455 CU. IN.) <sup>(B)</sup>

TO DISTRIBUTOR AND SWITCH ASM

POWER CABLE INSTALLATION TO CIRCUIT BREAKER AND JUNCTION BLOCK WIRING

393026-COVER  
SLIP WIRE THRU HOLE IN COVER BEFORE FASTENING TO CIRCUIT BREAKER

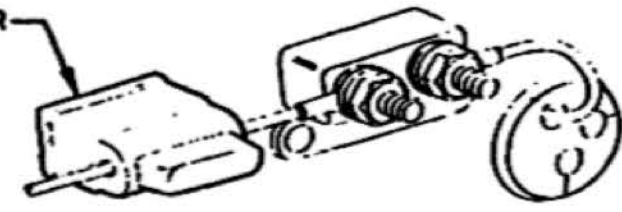


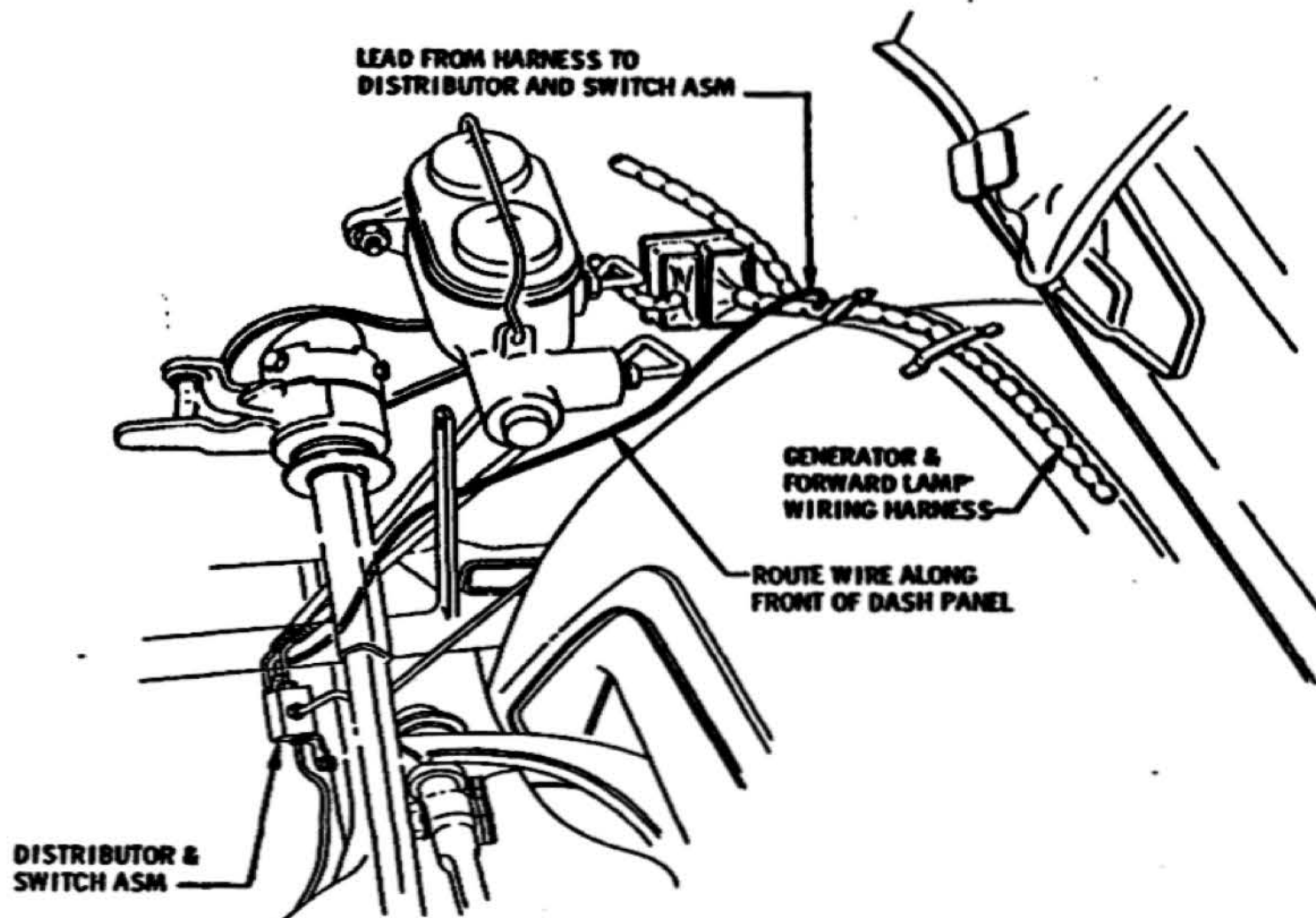
FIGURE 1

**REPAIR OF DAMAGED FUSIBLE LINK**  
TO REPAIR A DAMAGED FUSIBLE LINK, REPLACE WITH 6300141-FUSE LINK. WHEN REPLACING A FUSE LINK, USE SPLICE CLIP #821240 (PACKARD ELECTRIC). SOLDER AND TAPE FOR SHORTING AND CORROSION PROTECTION. CLIP MUST BE CRIMPED. STAKE-ON REPAIR IS UNACCEPTABLE.

FASTENING OF WIRING HARNESS TO FUSE BLOCK

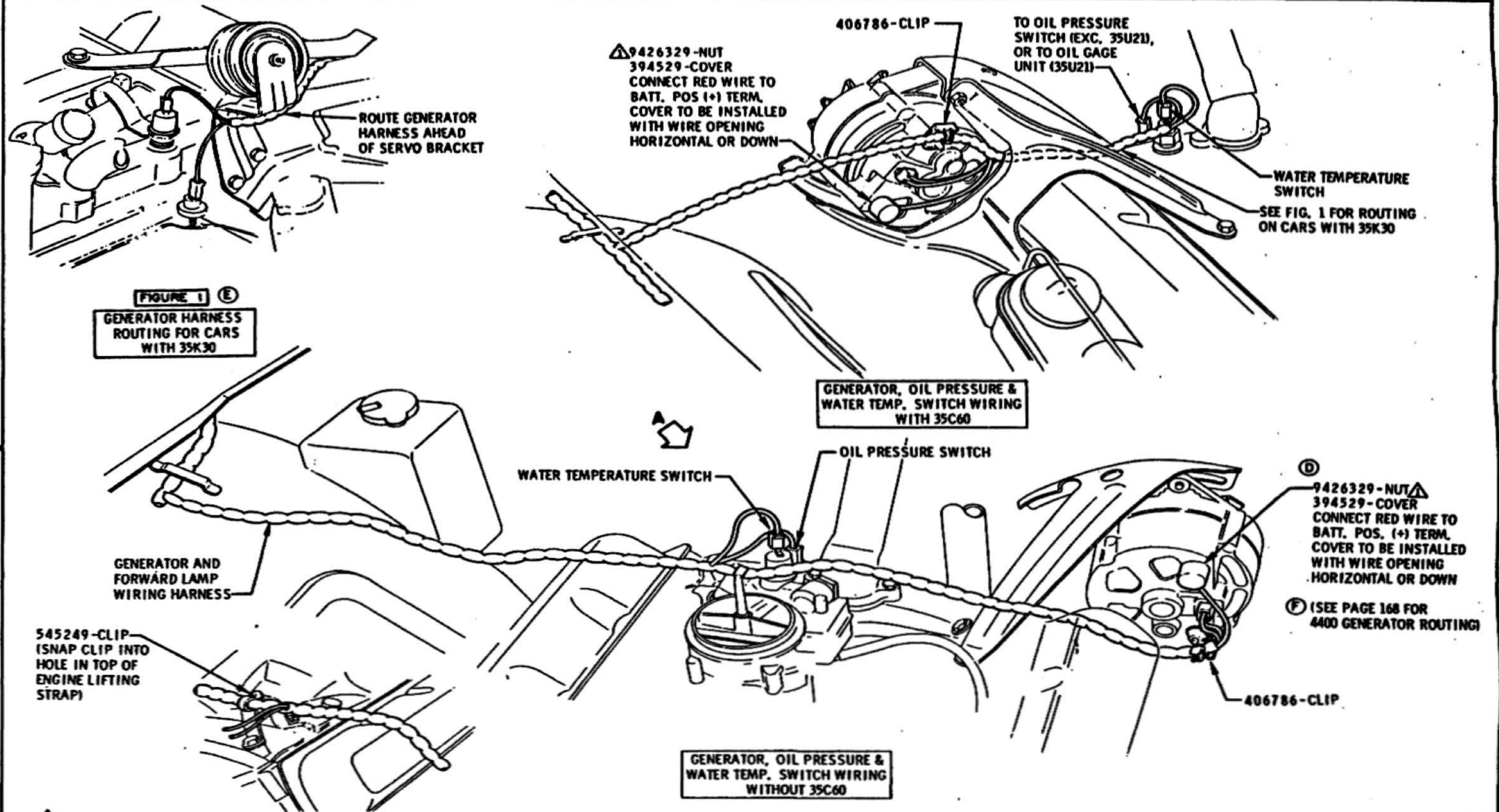
- 50 - 70 LB. IN.
- 37 - 48 LB. IN.
- FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE <b>CIRCUIT BREAKER WIRING, FUSE PANEL CONN AND JUNCTION BLOCK WIRING</b>			
				DATE <b>APR 29 1969</b>		FIRST USED <b>1970</b>	
				DR. BY <b>CUET MAY</b>		OLDSMOBILE PRODUCT INFORMATION MANUAL	
				CHECKED <b>JPM</b>		MANUAL SEC. <b>12</b> PAGE <b>162</b>	
				APPR. <b>LRL</b>		SERIES <b>A</b>	
				DATE <b>1296A</b>		PART NO. <b>404411</b>	
DATE	SYM	REVISION	DR.	CL.	APPR.		



				TITLE <b>BRAKE LINE DISTRIBUTOR &amp; SWITCH ASM WIRING</b>			
				DATE <b>MAR. 11 1968</b>	YEAR <b>1970</b>	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO. <b>12</b> PAGE <b>164</b>
				DR. BY <b>P.J. McKESSY</b>			
				CHECKED <b>[Signature]</b>			
				APPR. <b>[Signature]</b>			
DATE	BY	REVISION	DR. CK.	APPR.		<b>A</b>	FILE NO. <b>4044II</b>

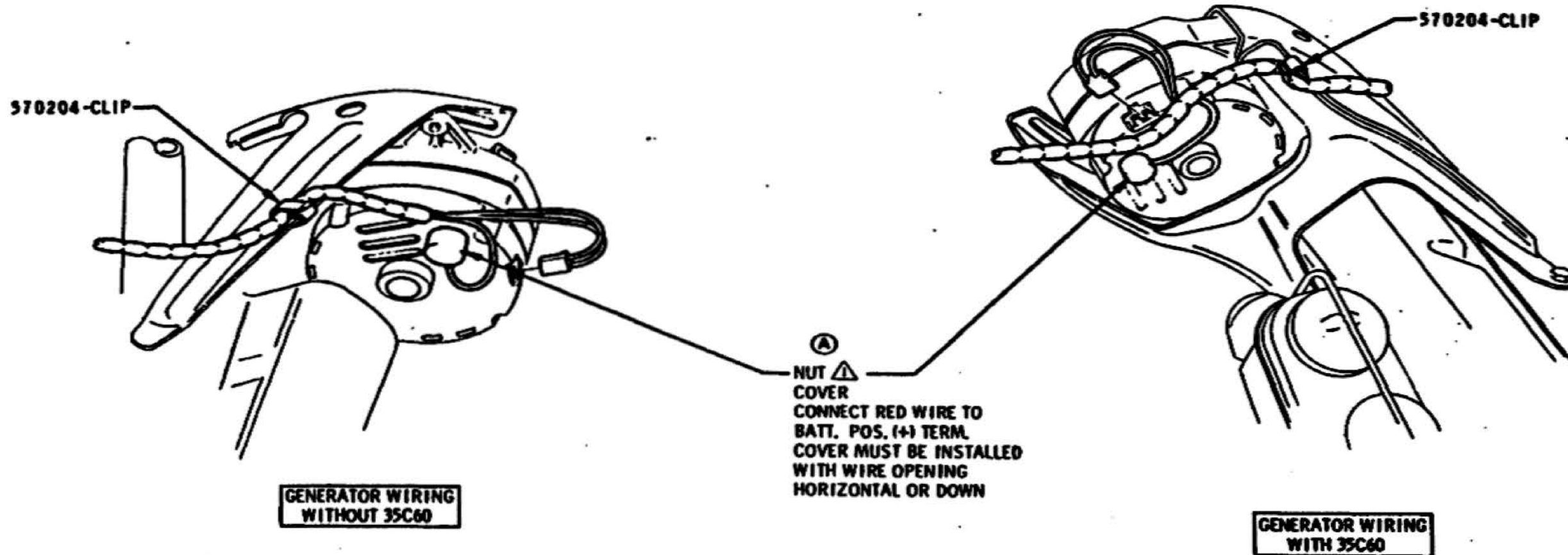




▲  
▲  
▲  
30 - 40 LB. IN.  
▲ FULLY DRIVEN, SEATED

VIEW A

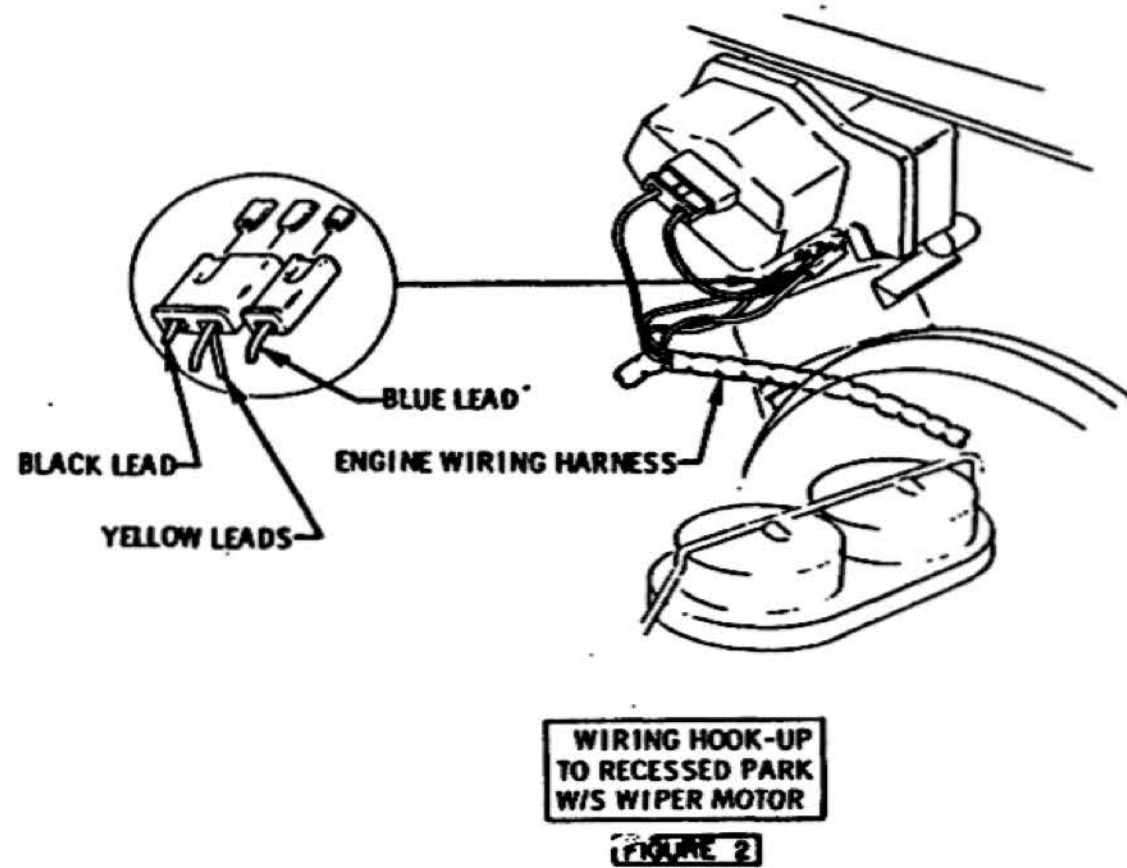
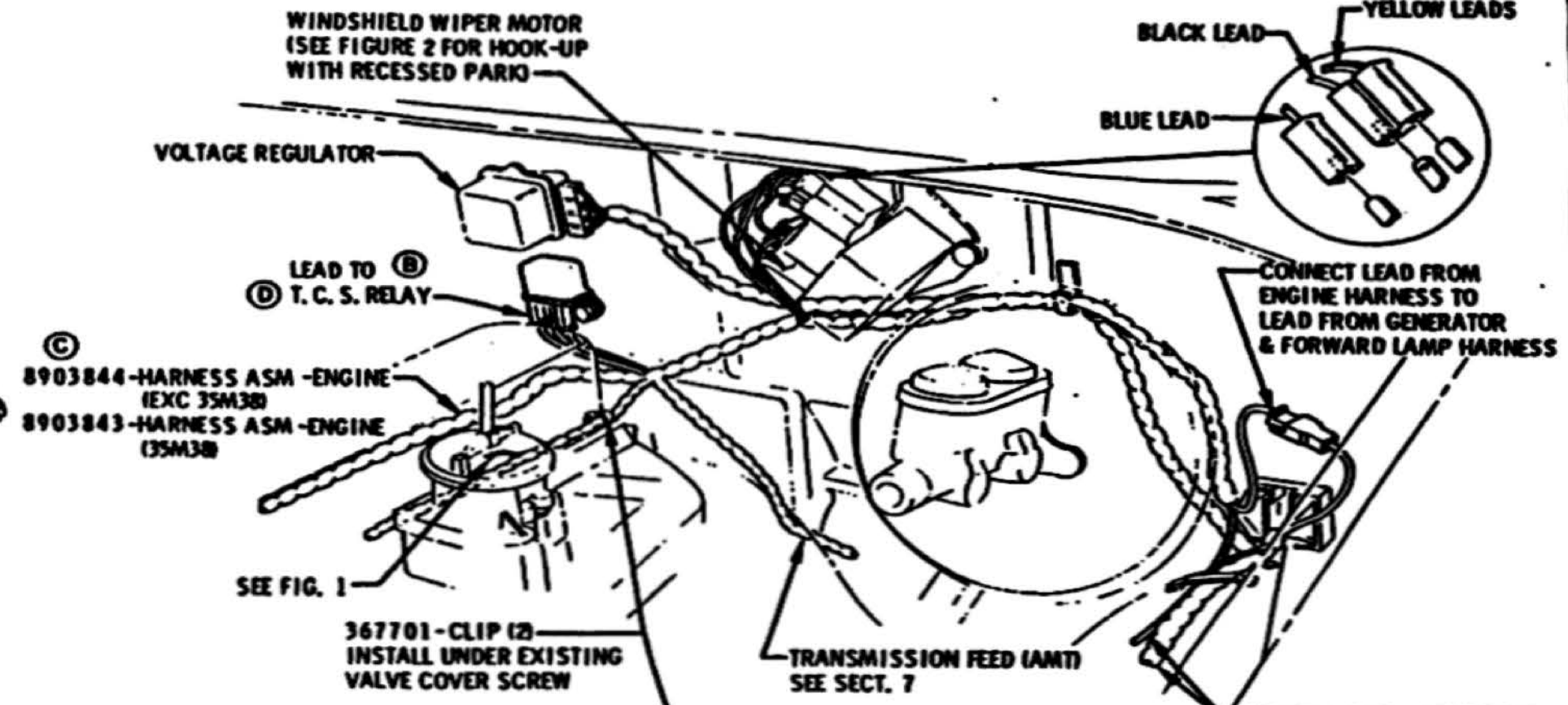
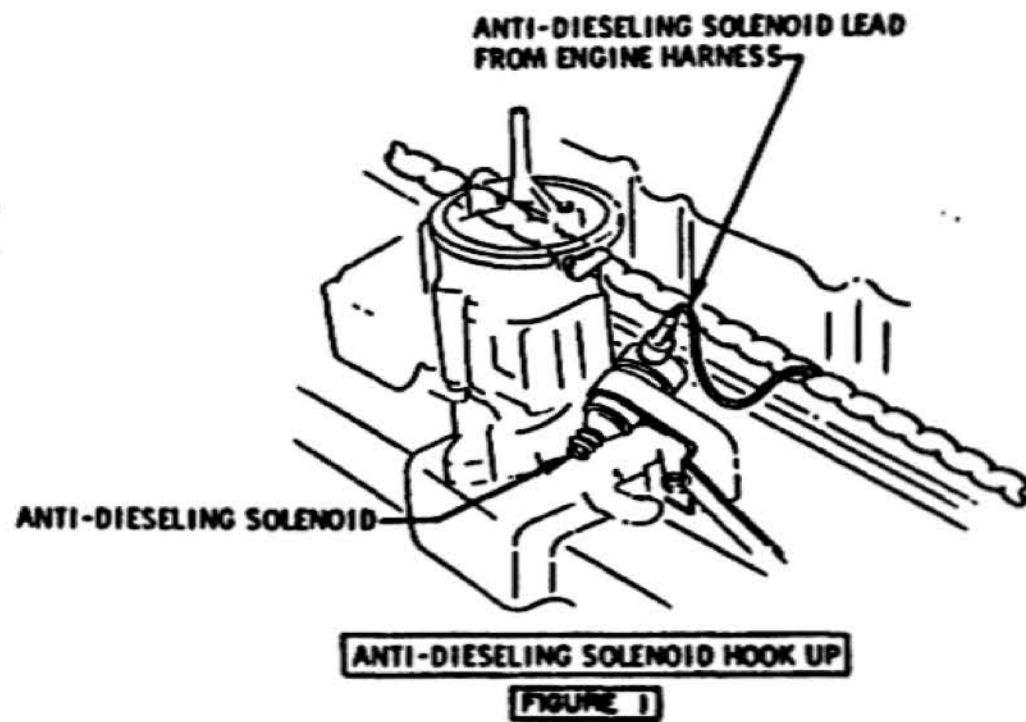
9-9-69	E	FIG. 1 A: UEG	6	DT	TITLE	GENERATOR, OIL & TEMP. SWITCH WIRING - V8	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	12	PAGE	166
8-6-69	D	WAS 121743 NUT	6	DT	DATE	MAR. 11, 1969							
7-31-69	C	LOCK WASHER 2072	2	DT	DR. BY	P. J. McKESSY							
7-29-69	B	WAS 545249-CLIP	1	DT	CHECKED	J. L. ...							
9-9-69	F	NOTE RELOCATED	1	DT	APPR.	11/1/69	REV. 12H		SERIES	A	PART NO.	404411	



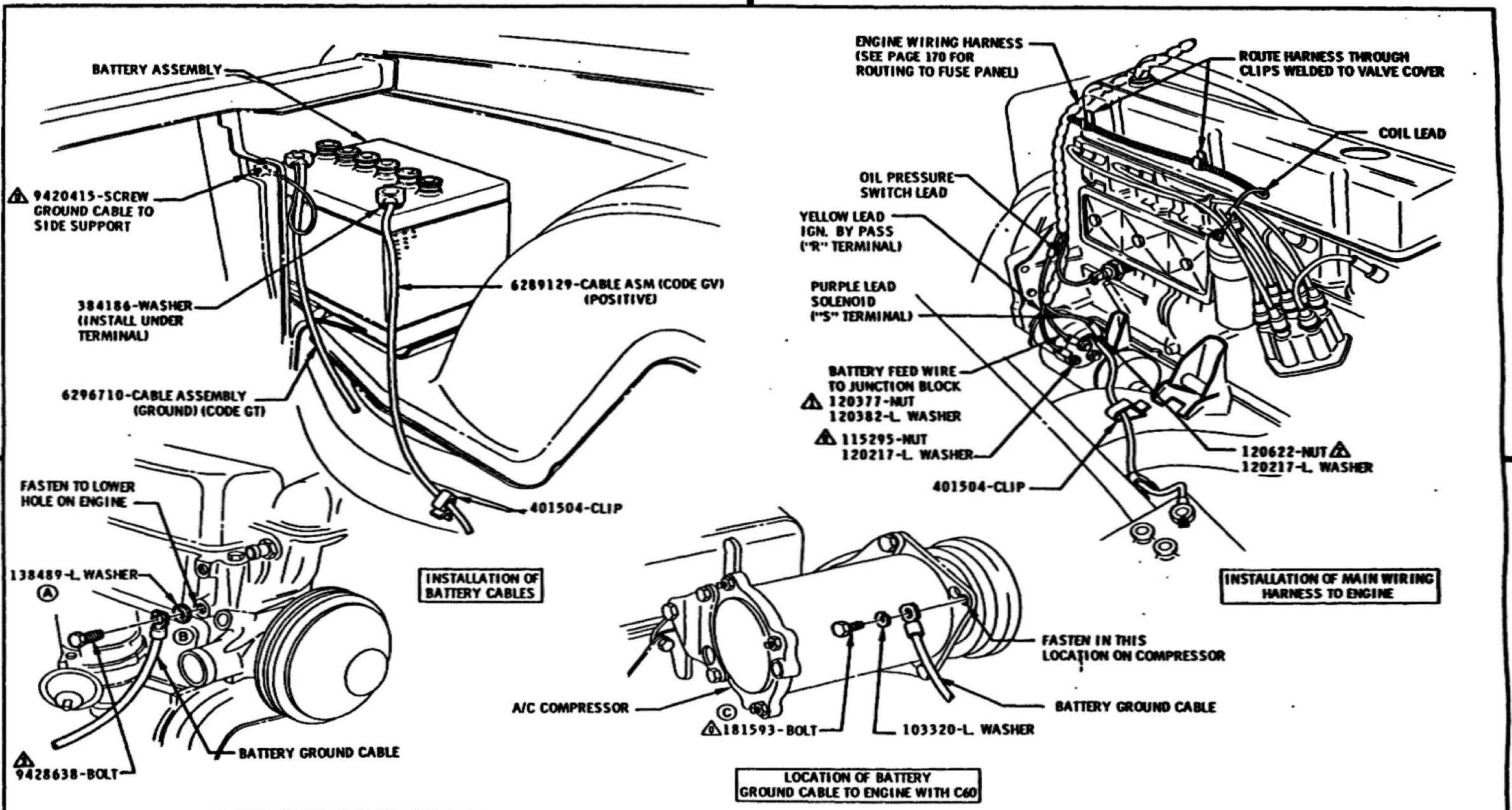
SEE PAGE 166 FOR PART NUMBERS  
AND WIRE ROUTING FROM FILLER  
PLATE & TO OIL PRESSURE &  
WATER TEMP. SWITCHES

▲  
▲  
▲ 30-40 LB. IN.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE		GENERATOR WIRING - V8 (4000)			
				DATE		MAY 11 1969			
				DR BY		P.J. McKESSY			
				CHECKED		J. [Signature]			
195-69				A		L. WASHER		NOT RECD	
DATE	SYM	REVISION	DR	CK	APPR.	REV.	12H	6Y	
								OLDSMOBILE PRODUCT INFORMATION MANUAL	
								12 168	
								A	
								PART NO. 404411	



		TITLE		FILLER PLATE AND DASH PANEL WIRING - L-6			
8-5-68	D	PART NUMBER REMOVED	DATE	APR 12 1969	FIRST USED	1970	MANUAL SEC. PAGE
8-5-68	C	WAS 629546-7 HARNESS	DR BY	P. J. McKESSY	OLDSMOBILE PRODUCT INFORMATION MANUAL	12	170
1-31-67	E	3061573-RELAY ADDED	CHECKED		REP. 12H	A	PART NO. 404411
7-31-67	A	WATERTEMP LEAD ADDED	APPR.	R. V. L.			



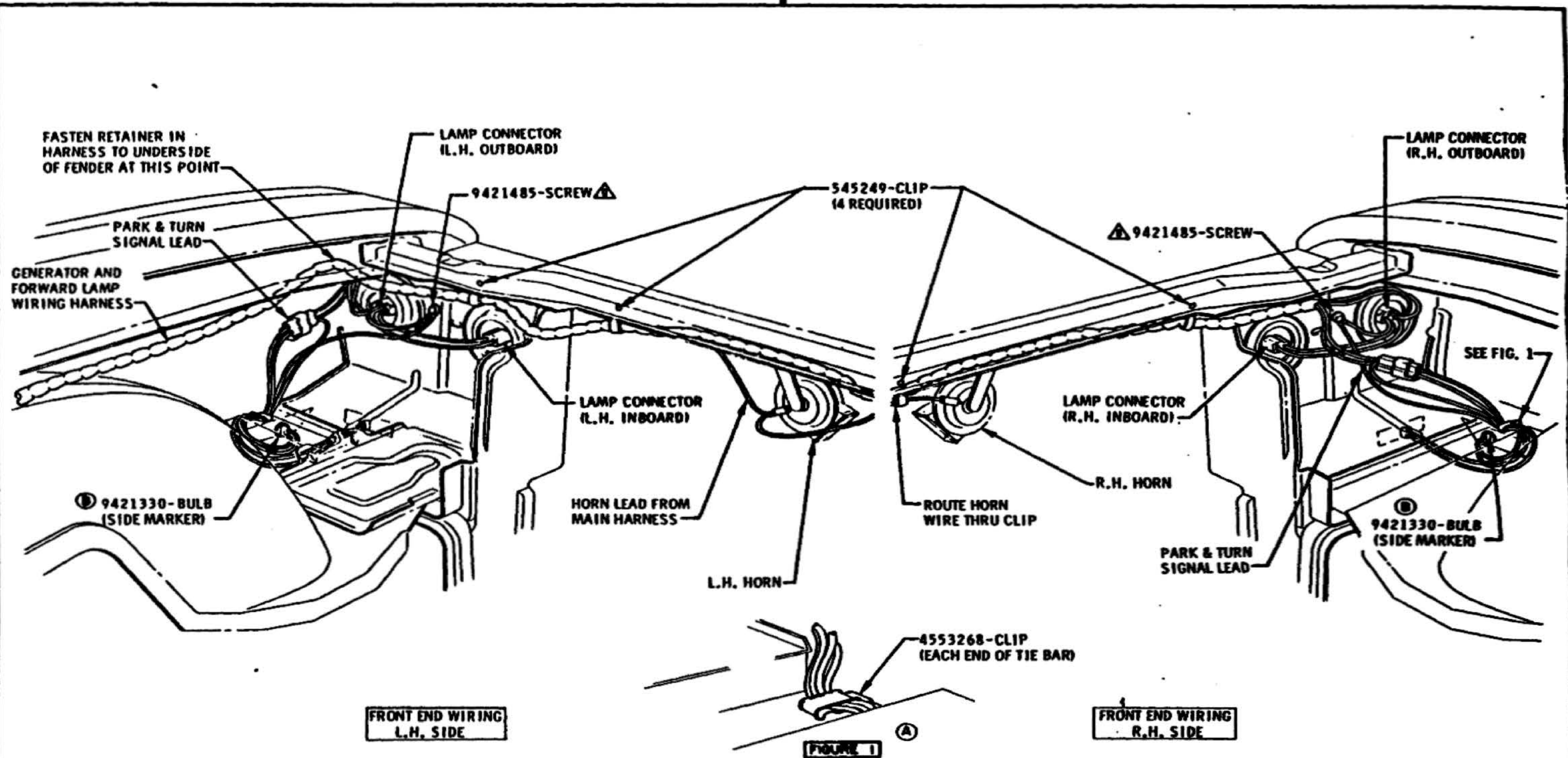
- ▲ 25-35 LB. FT.
- ▲ 14-21 LB. IN.
- ▲ 60-120 LB. IN.
- ▲ FULLY DRIVEN, SEATED

		TITLE		BATTERY CABLES AND ENGINE WIRING - L-6	
DATE	REV	DATE	BY	FIRST USED	MANUAL SEC. PAGE
12-18-69	C	11-19-69	P. J. McKESSY	1970	12 172
12-18-69	B				
12-18-69	A				
REV	BY	REVISION	DR	CK	APP

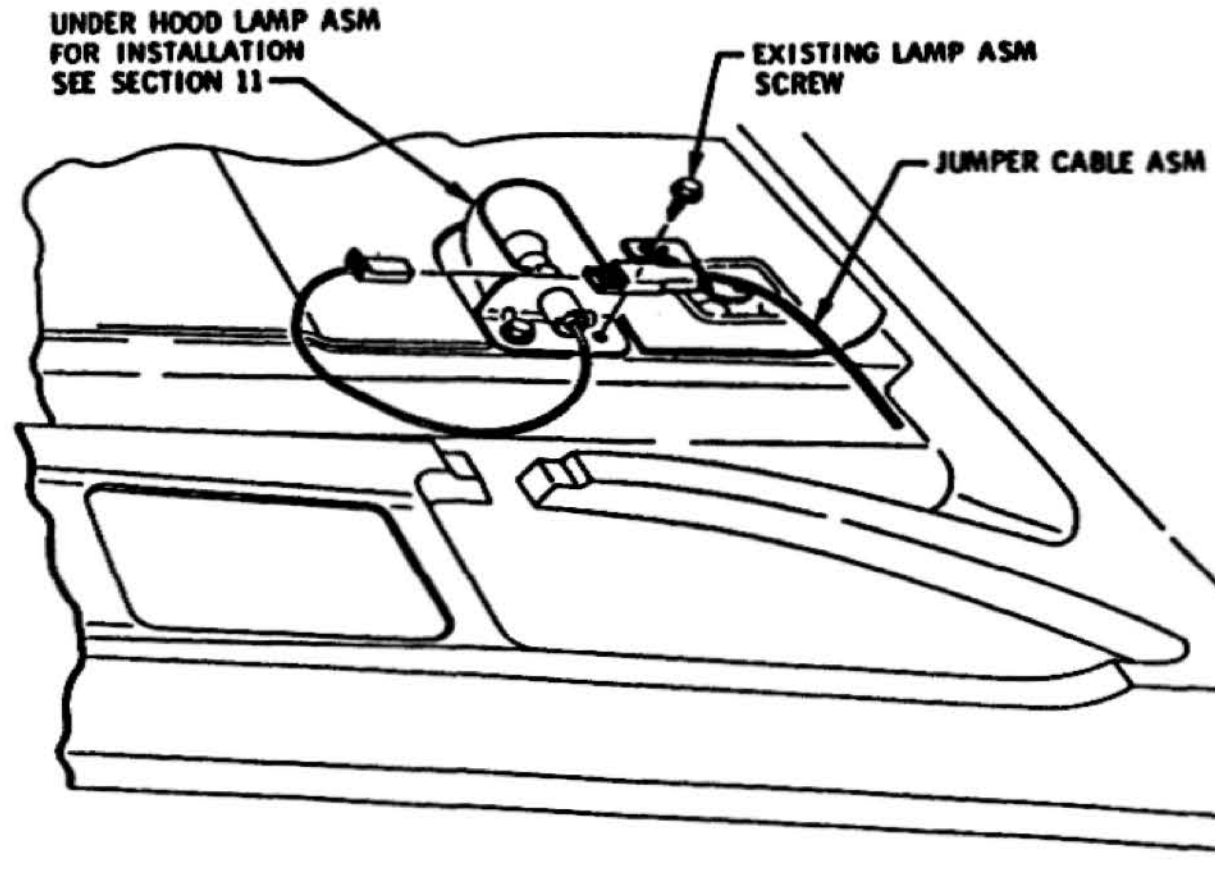
OLDSDMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE	12 172
REV. 12A	GEN. NO.	A
GY2	PART NO.	404411
3-6-60		



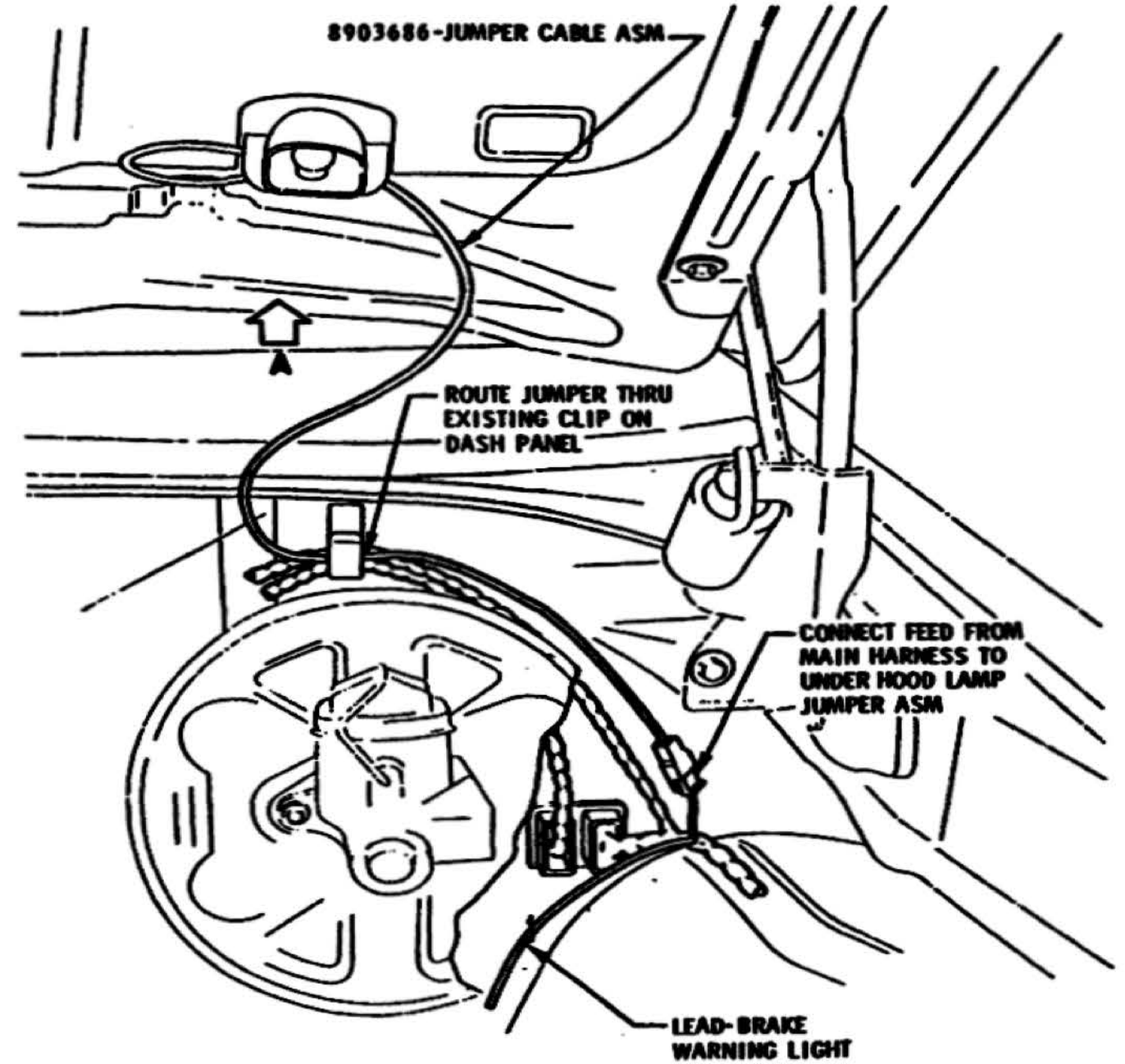


▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

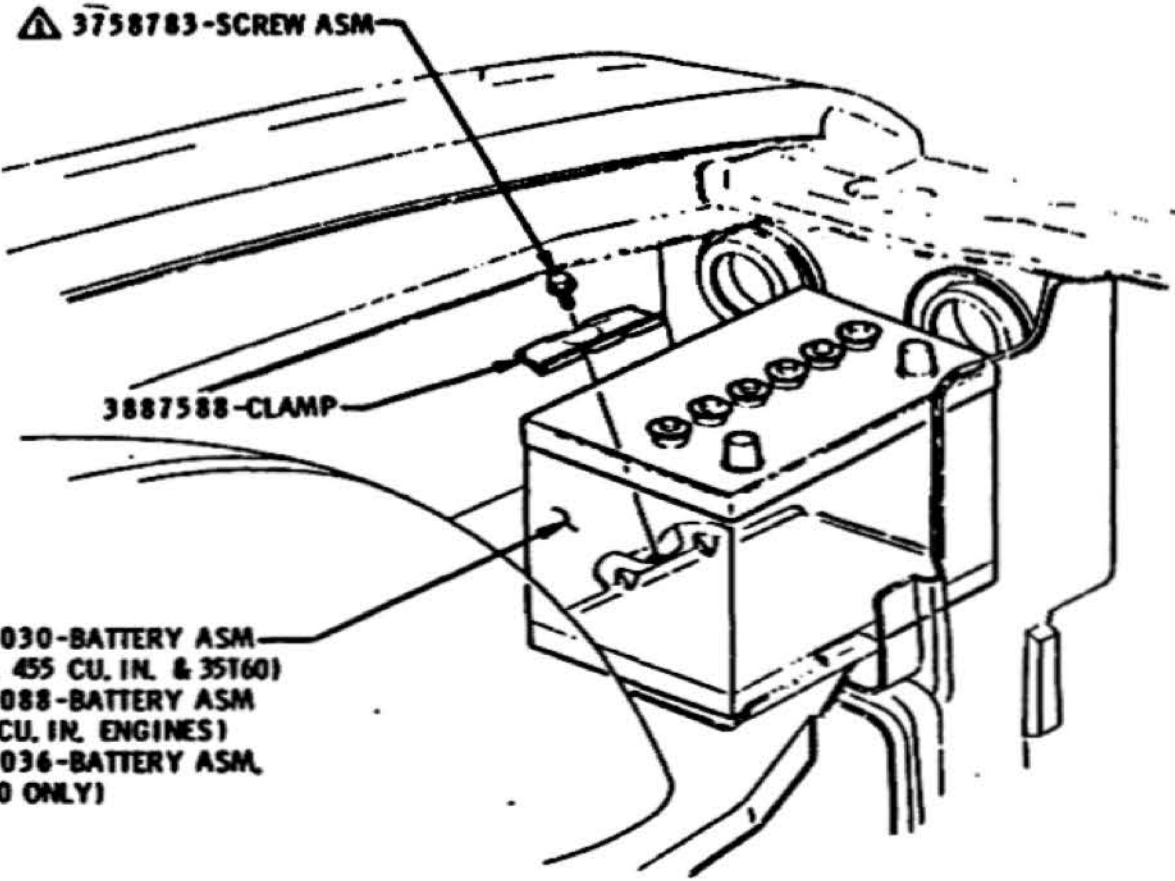
TITLE HEADLAMP, HORN, TURN SIGNAL AND SIDE MARKER LAMP WIRING				FIRST USED 1970		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. 12	PAGE 176
DATE	SYN	REVISION	DR.	CHK.	APPR.	REV. 12C	SERIES A	PART NO. 404411	
7-28-69	B1	WAS 9427942 - BULB							
5-7-69	A	4553268 CLIP ADDED							



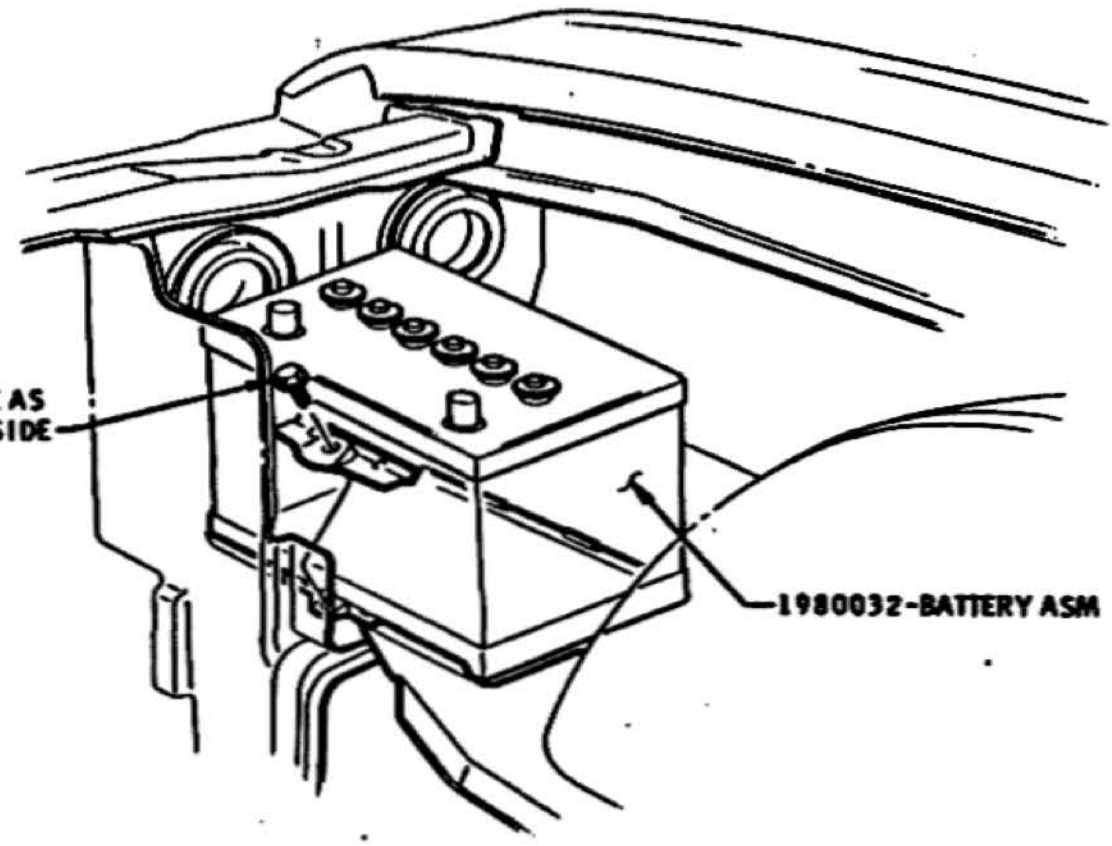
VIEW A



TITLE				UNDER HOOD LAMP WIRING		
DATE	BY	CHKD	APPD	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
				1970		12 178
DATE	SYM	REVISION	DR. CL.	REV.	FIG. NO.	
				A	404411	



L. H. SIDE FASTENING  
V8 ONLY



R. H. SIDE FASTENING  
L6 ONLY

FASTENINGS SAME AS SHOWN FOR L. H. SIDE

MINIMUM SPECIFIC GRAVITY WHEN CAR IS SHIPPED:  
L 230 AT 80°F. (NOV. THRU MAR.)  
L 220 AT 80°F. (APR. THRU OCT.)

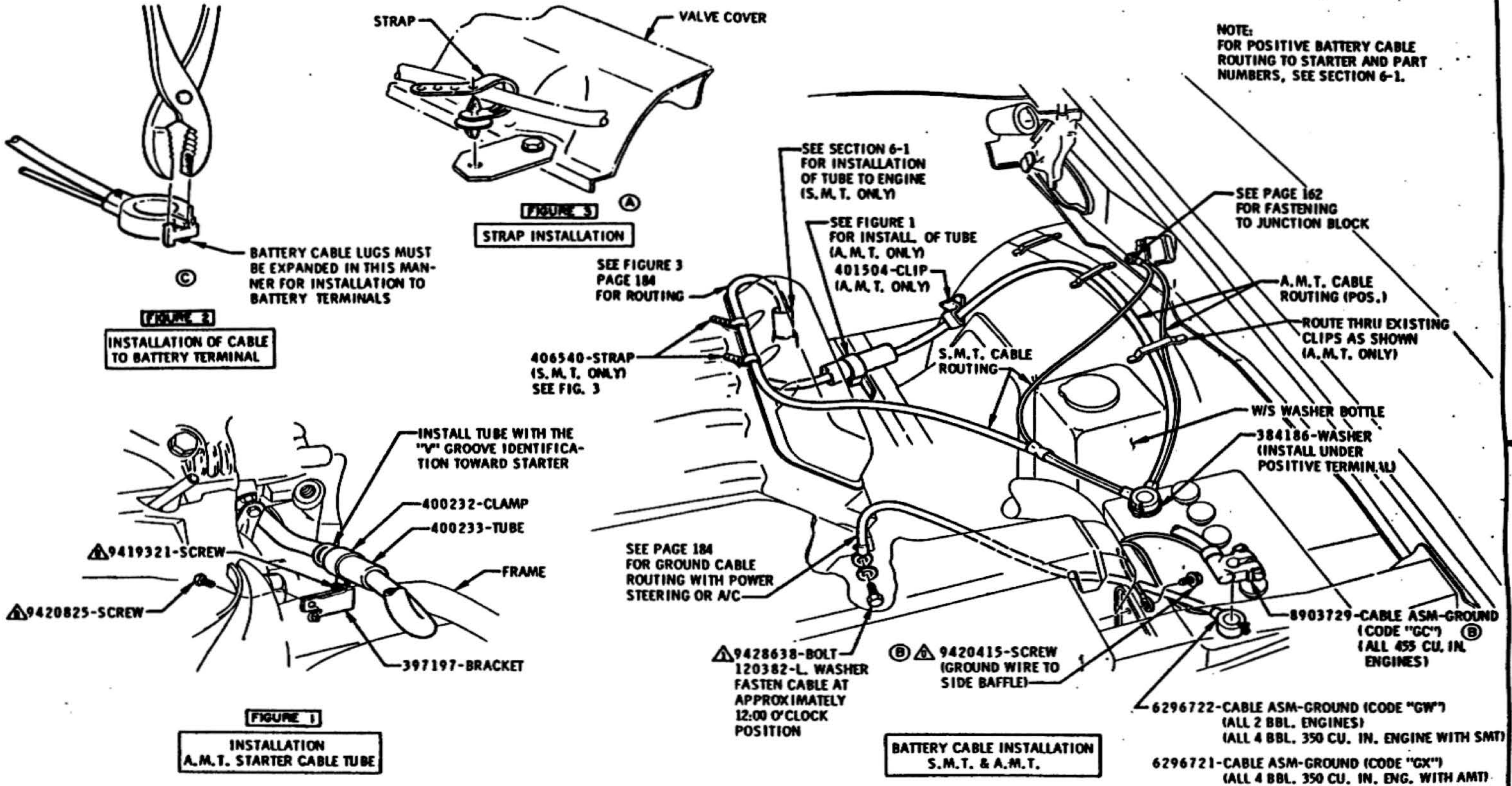
- 1980030-BATTERY ASM (EXC. 455 CU. IN. & 35T60)
- Ⓐ 1980088-BATTERY ASM (455 CU. IN. ENGINES)
- Ⓑ 1980036-BATTERY ASM (35T60 ONLY)

▲ 60 - 80 LB. IN.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED

DATE				TITLE				FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC.	PAGE
				BATTERY HOLD-DOWN				1970				12	180
DATE				DR. BY P. J. McKESSY				REV. 12A		SERIES		PART NO.	
7-11-69				7-11-69				35T60		A		404411	
DATE	BY	REVISION	DR.	CHK.	APP.	APP.							



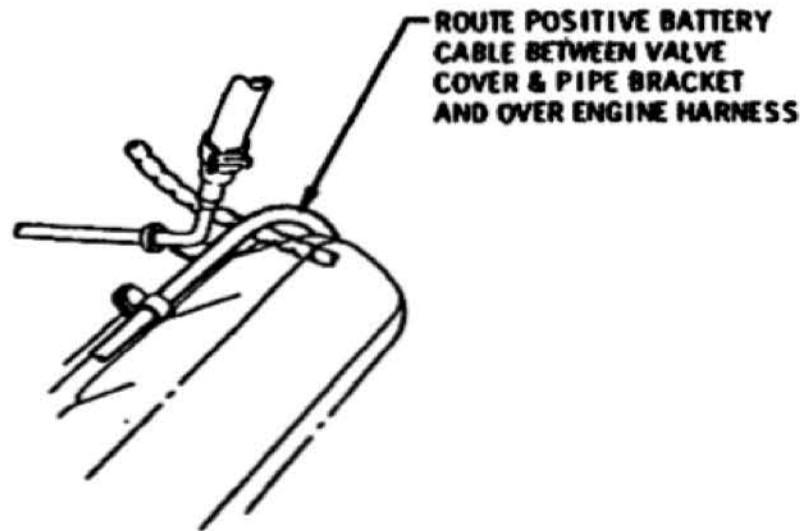
NOTE:  
 FOR POSITIVE BATTERY CABLE  
 ROUTING TO STARTER AND PART  
 NUMBERS, SEE SECTION 6-1.



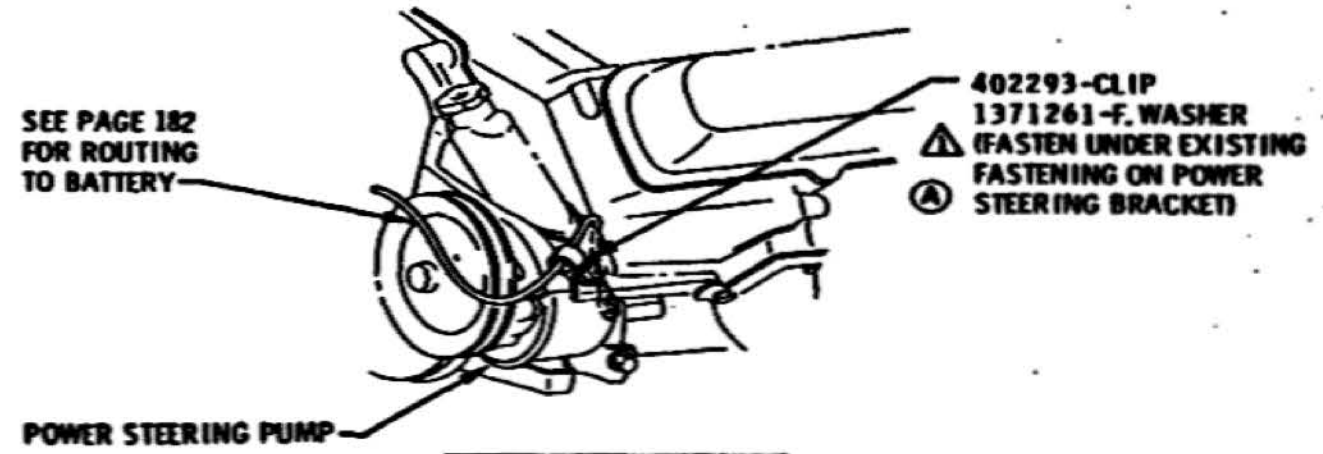
▲  
 ▲  
 ▲  
 ▲  
 25 - 35 LB. FT.  
 FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

TITLE				V8 BATTERY CABLE ROUTING - ALL CARS						
DATE	BY	REVISION	DR.	CL.	APP.	REV.	SERIES	PART NO.	MANUAL SECT.	PAGE
12-10-69	C	VIEW REVISED								
12-10-69	B	CODE & TORQUE ADDED								
7-27-69	A	FIGURE 3 ADDED								

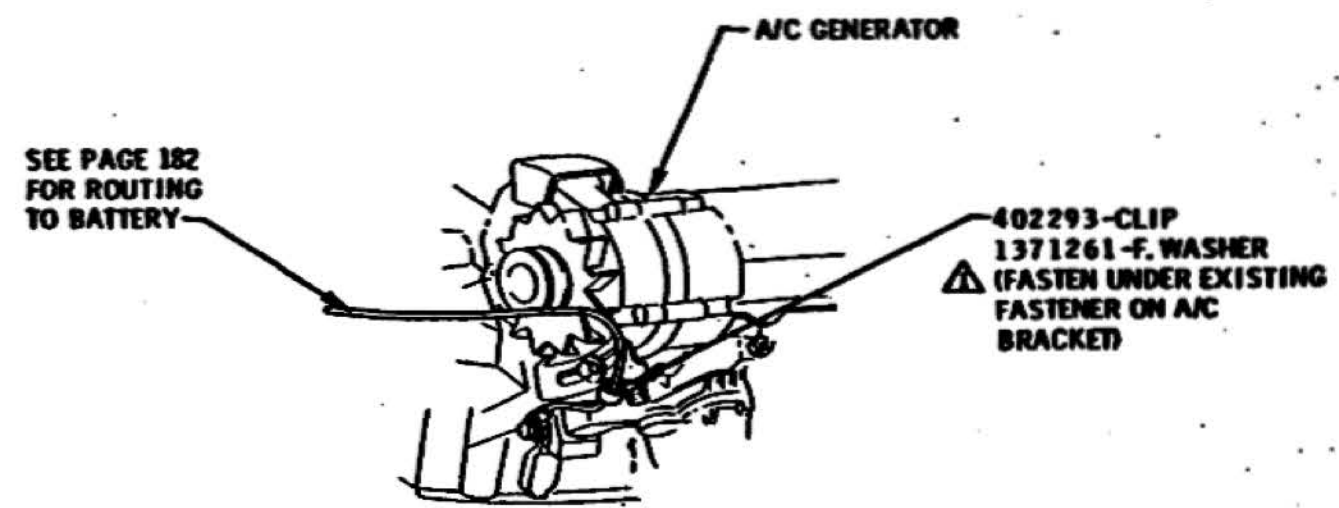
DATE	DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SECT.	PAGE
	MAY 7 1969	1970		12	182
				A	404411



**FIGURE 3**  
POSITIVE CABLE ROUTING  
CARS WITH POWER BRAKES  
(S, M, T ONLY)



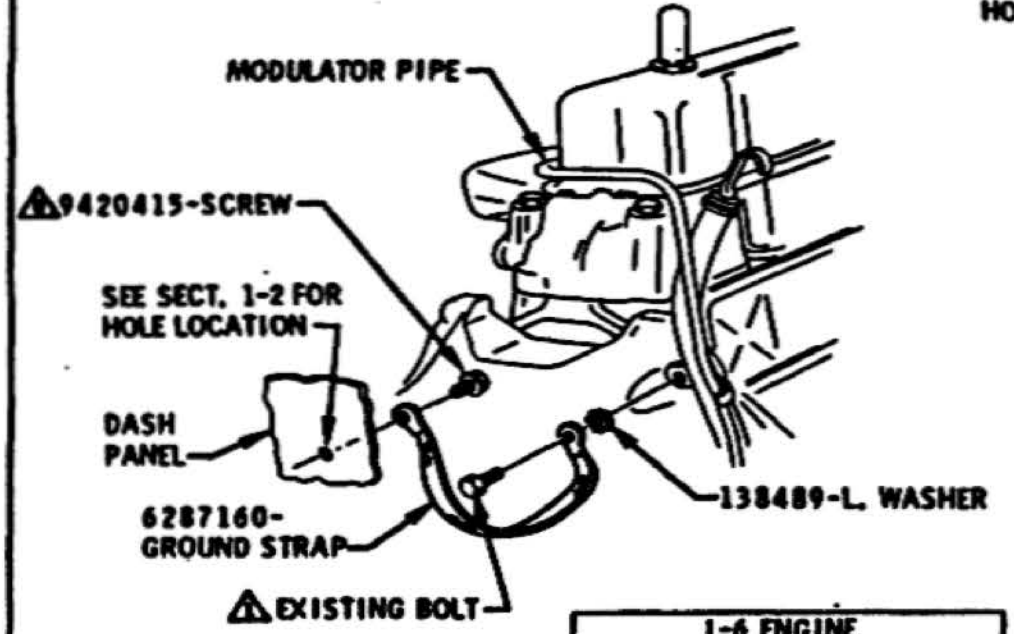
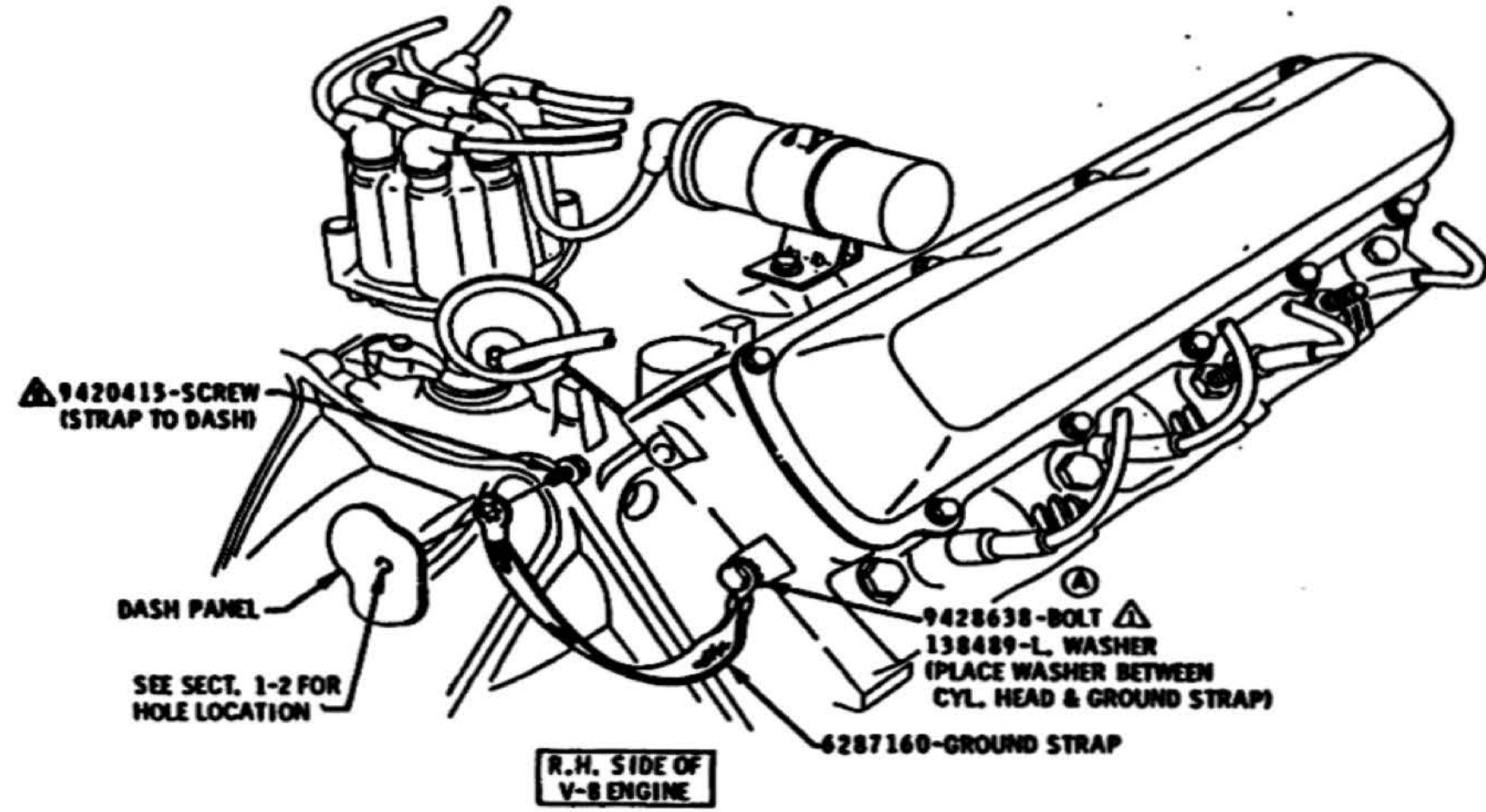
**GROUND CABLE ROUTING WITH POWER STEERING (EXC. WITH A/C)**



**BATTERY GROUND CABLE ROUTING TO ENGINE WITH A/C**

▲  
▲  
▲  
▲  
▲  
20 - 25 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

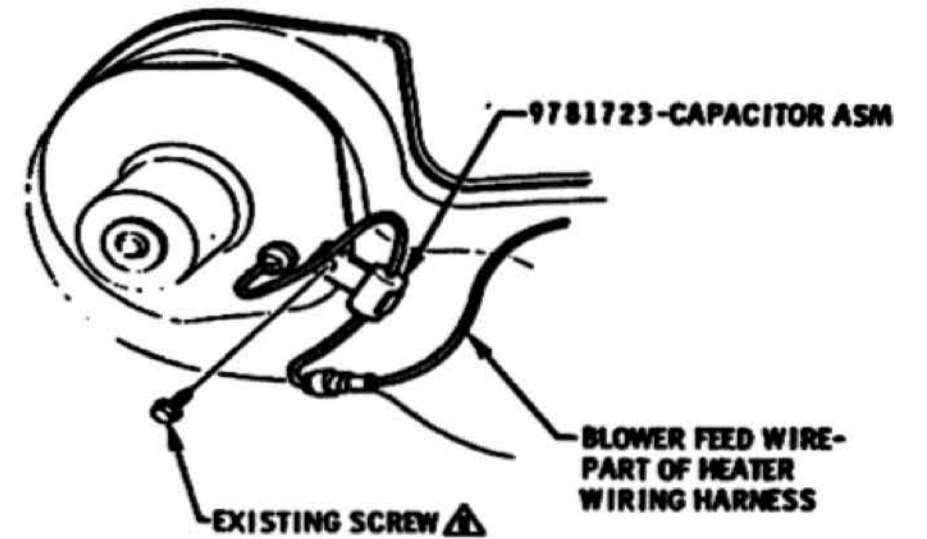
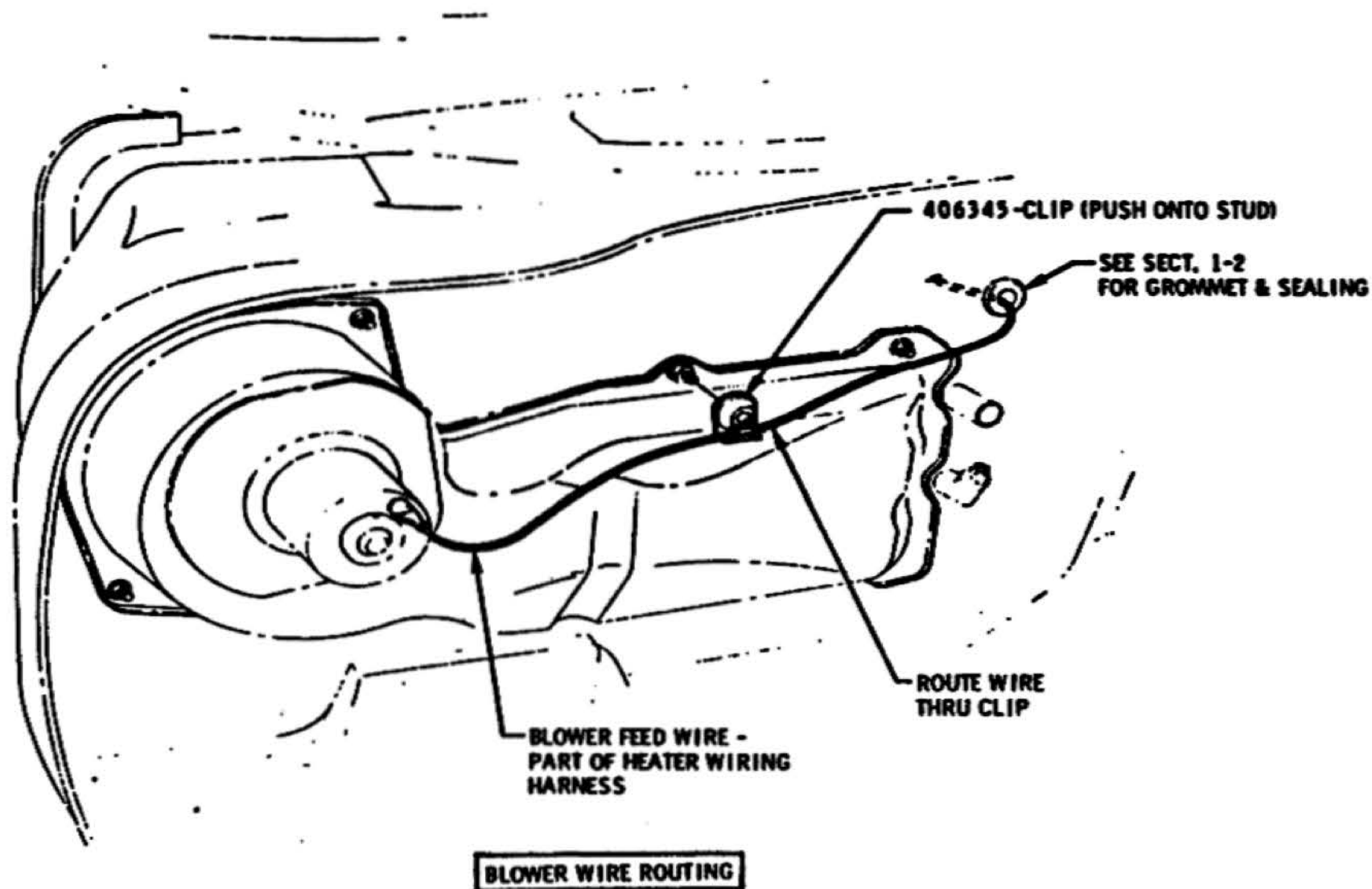
				TITLE		BATTERY CABLE ROUTING (GROUND CABLE) (V8)			
		DATE		MAY 6 1969		FIRST USED		1970	
		DR BY		CLET MAY		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE	
		CHECKED		JTB		SERIES		A	
		DATE		27		PART NO.		404411	
		REVISION		APP. 10/2/69					
		DATE		BY		APP.			
		SYN		REV		CL		APP.	



**L-6 ENGINE  
 GROUND STRAP INSTALLATION**  
 (AMT SHOWN, LOCATION  
 SAME FOR SMT)

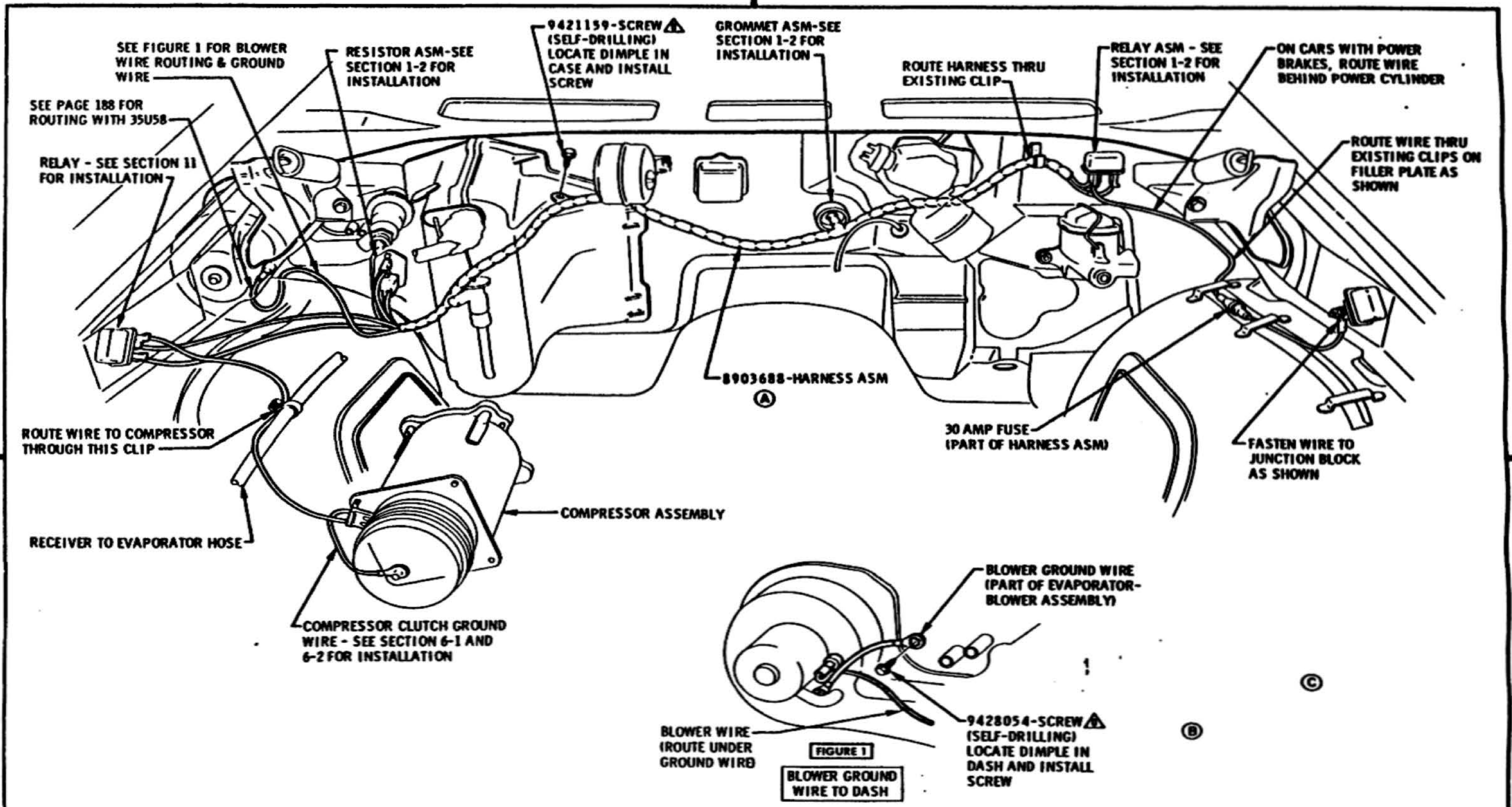
▲  
 ▲  
 ▲  
 20 - 30 LB. FT.  
 FULLY DRIVEN, SEATED  
 AND NOT STRIPPED

		TITLE		V-8 AND L-6 GROUND STRAP INSTALLATION		ENGINE NO.		YEAR	
		DATE	11-18-1969	FIRST USE	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL		12	186
		DR. BY	P. J. McKESSY	CHECKED	JRM	REP. GYA	A		404411
DATE	BY	REVISION	DR. CL.	APPR.					
11-18-69	A	WAS 122104-BOLT							



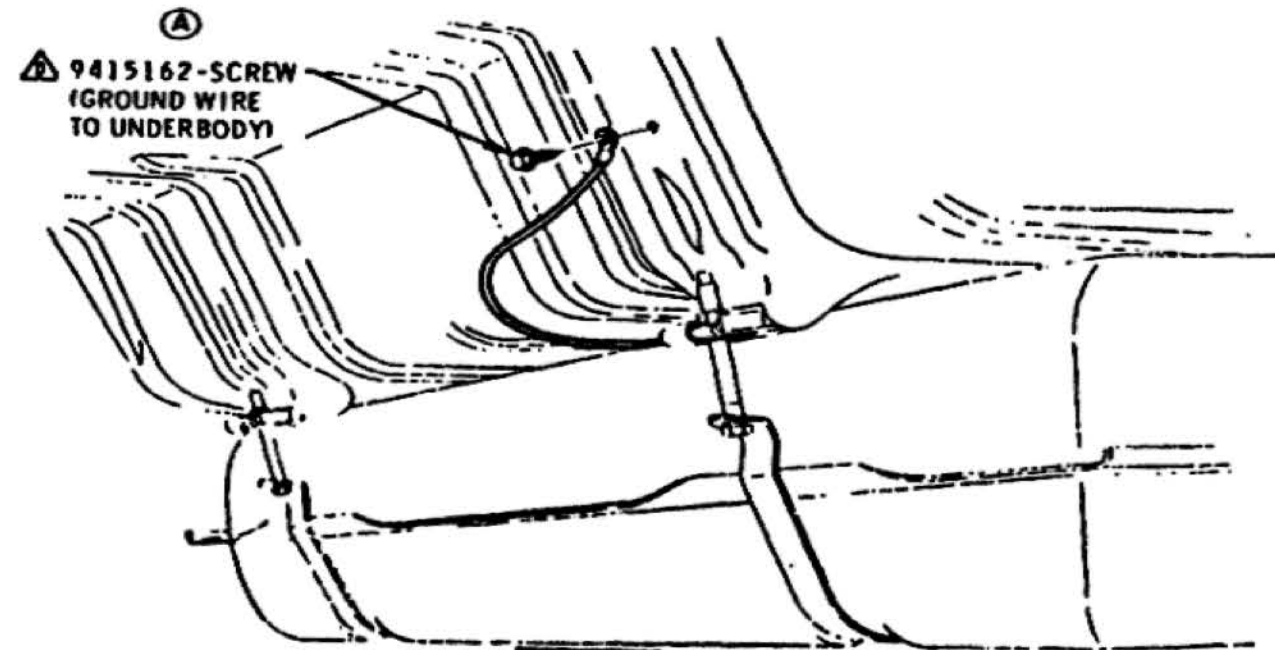
  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE				TITLE				
				BLOWER FEED WIRE				
				DATE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE	
				MAR. 11 1969	1970		12 188	
				DR. BY P. J. McKESSY	REV. 1A2C	SERIES A	PART NO. 404411	
				CHECKED Jim				
				APPR. S. CHATEAUBERT				
DATE	SYM	REVISION	DR. CK.	APPR.				

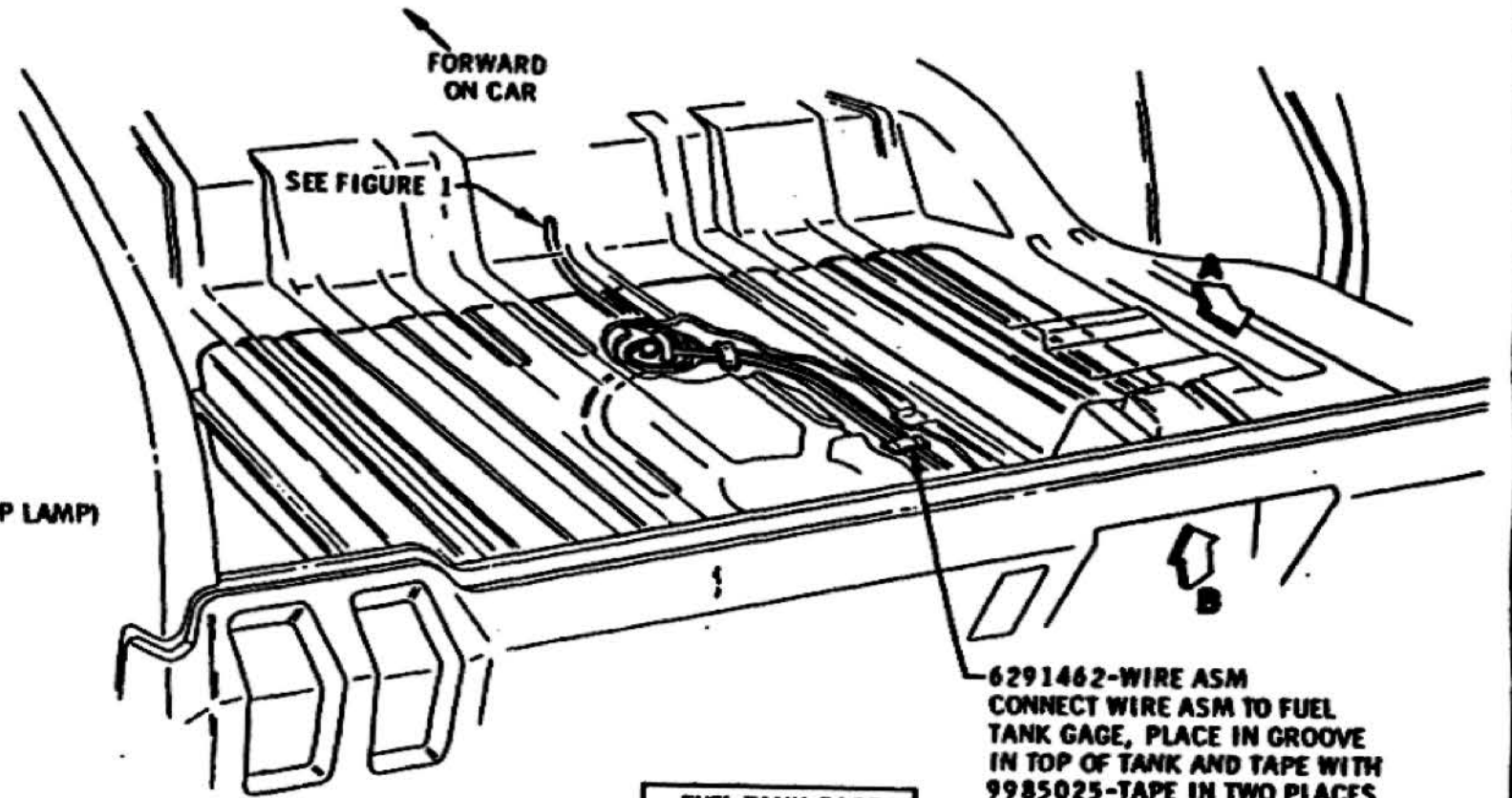
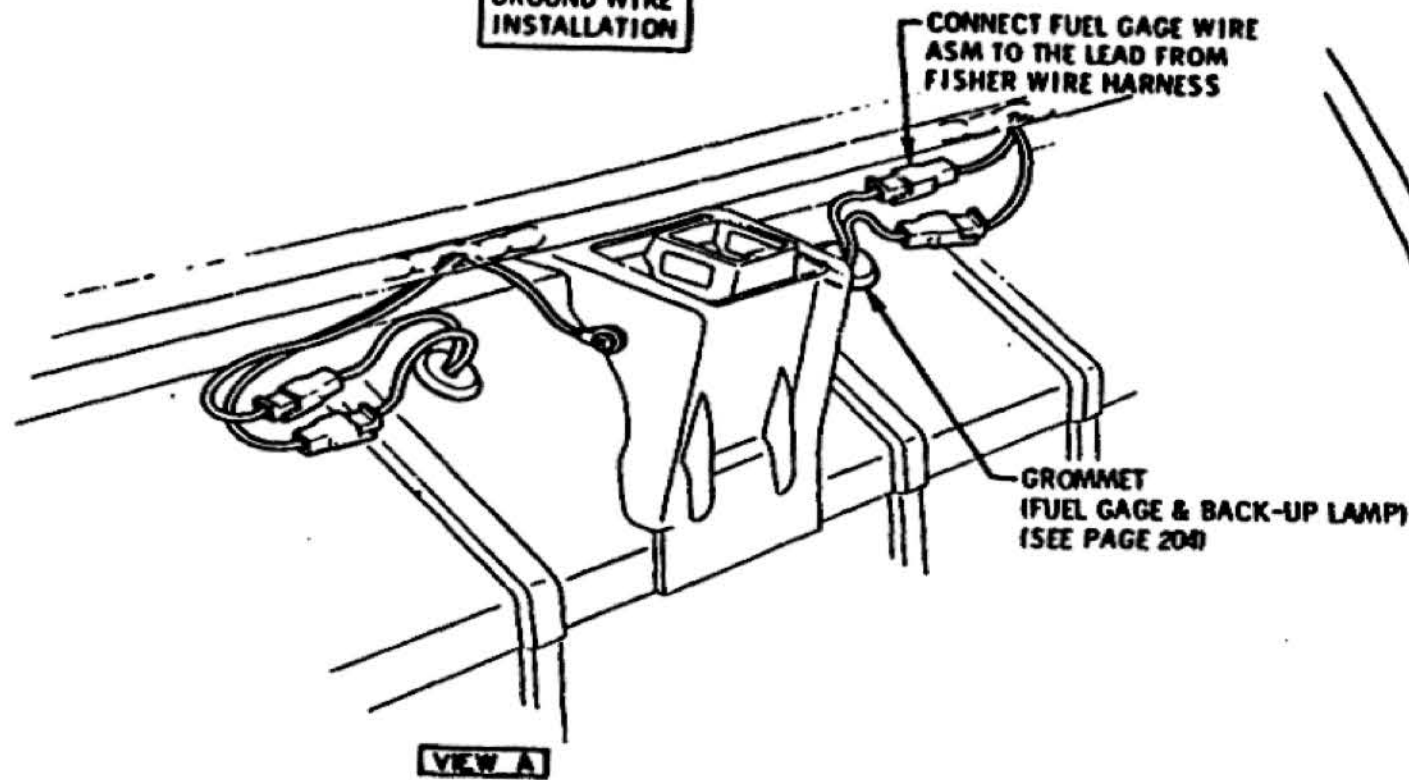
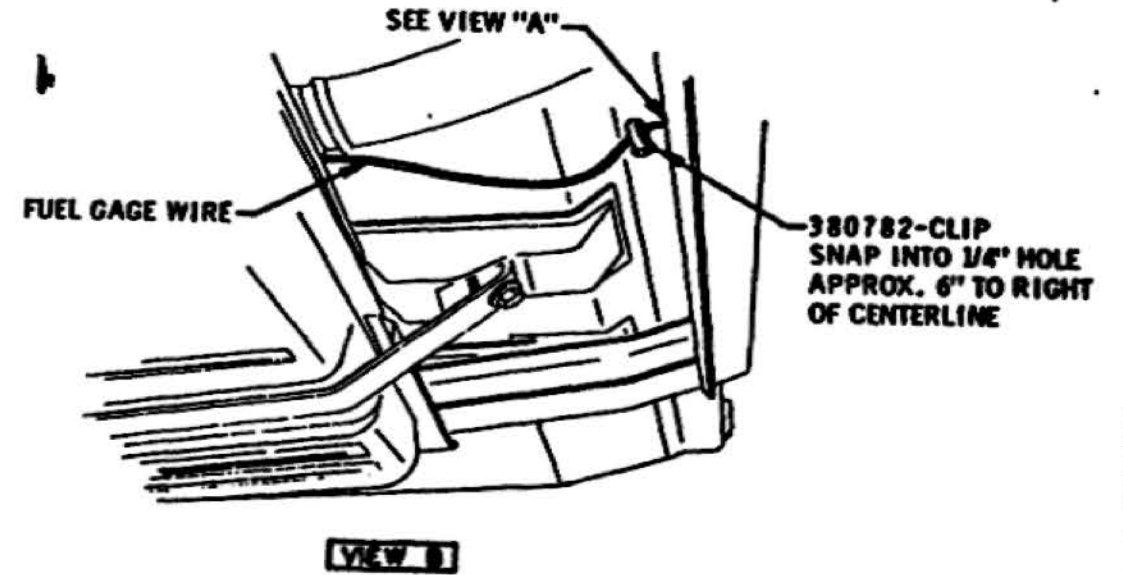


▲ FULLY DRIVER SEATED AND NOT STRIPPED

DATE		SYN	REVISION	DR.	CL.	APP.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	
5-6-70		C	VIEW REMOVED	P.J.	DR.	BY	35C60 WIRE ROUTING (ENGINE COMPARTMENT)	1970		12	190	
1-13-70		B	VIEW ADDED	P.J.	DR.	BY						
1-24-60		A	AMT. NO. RELEASED	R.E.	DR.	BY						
								REV. 35C60	SERIES	A	PART NO.	404411



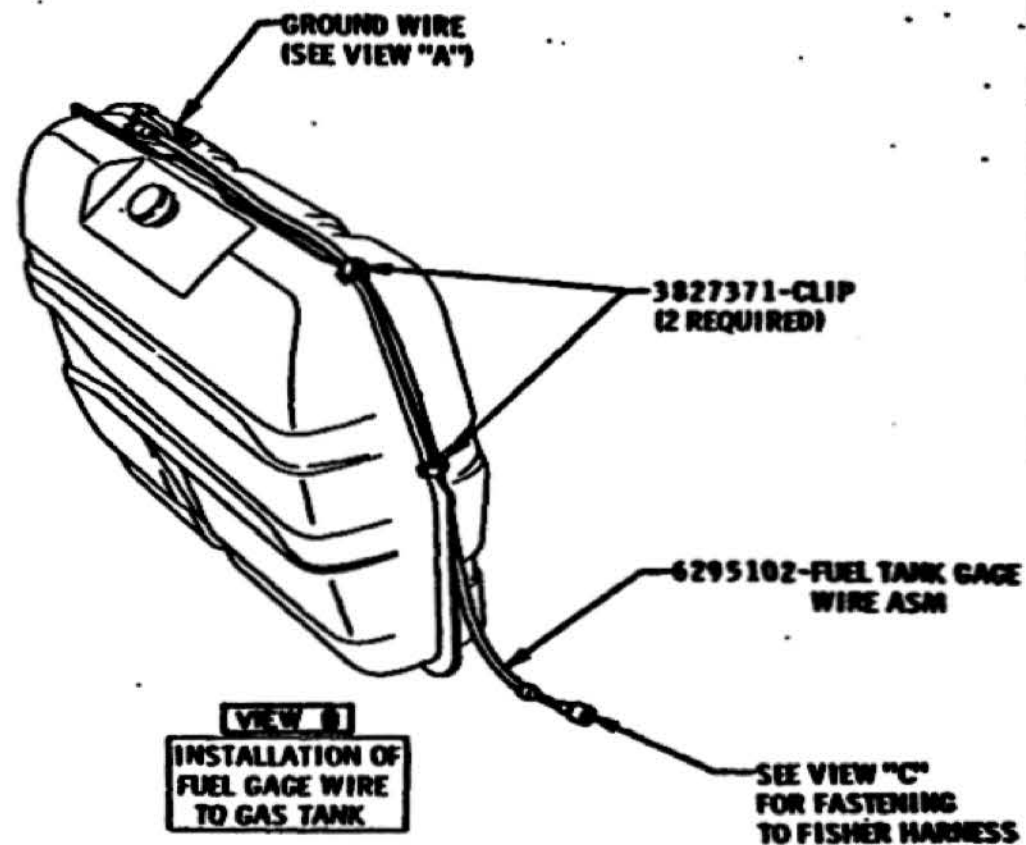
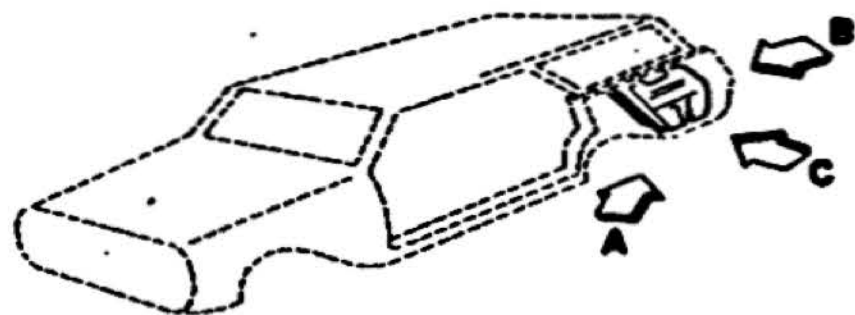
**FIGURE 1**  
**GROUND WIRE  
INSTALLATION**



**FUEL TANK GAGE  
WIRE INSTALLATION**

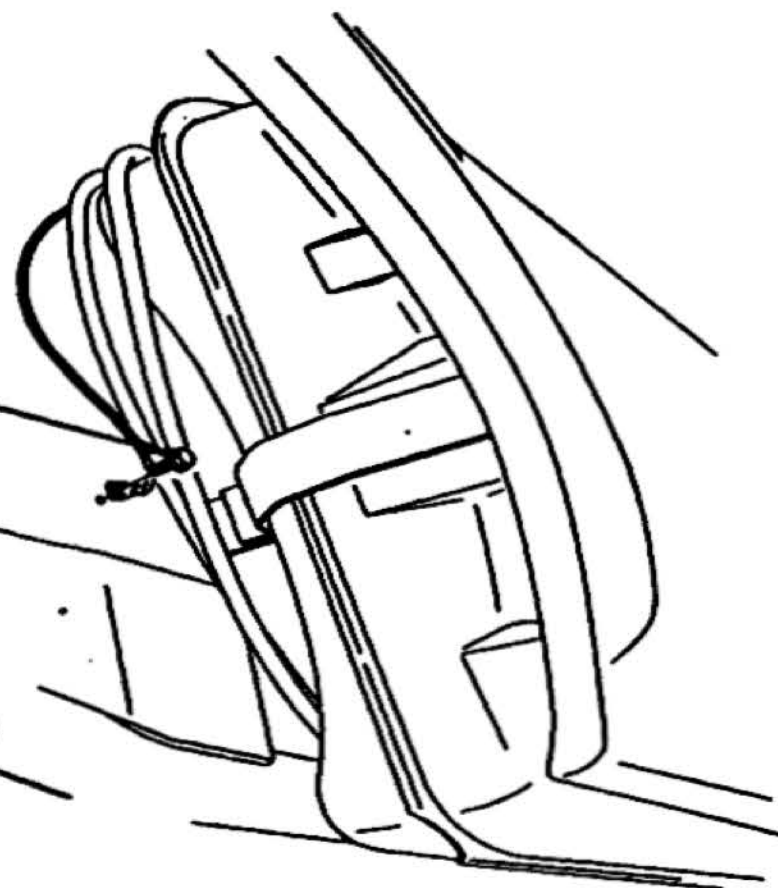
▲▲▲  
FULLY DRIVEN, STATED  
AND NOT STRIPPED

DATE		TITLE		FIRST USED		OLDSMOBILE PRODUCT		MANUAL REC. PAGE	
MAY 18 1968		FUEL TANK WIRING (EXC. STATION WAGON)		1970		INFORMATION MANUAL		12 200	
DR. BY P. J. McKESSY		CHECKED		REV. 12J		SERIES		PART NO.	
DATE		REVISION		8A		A		404411	



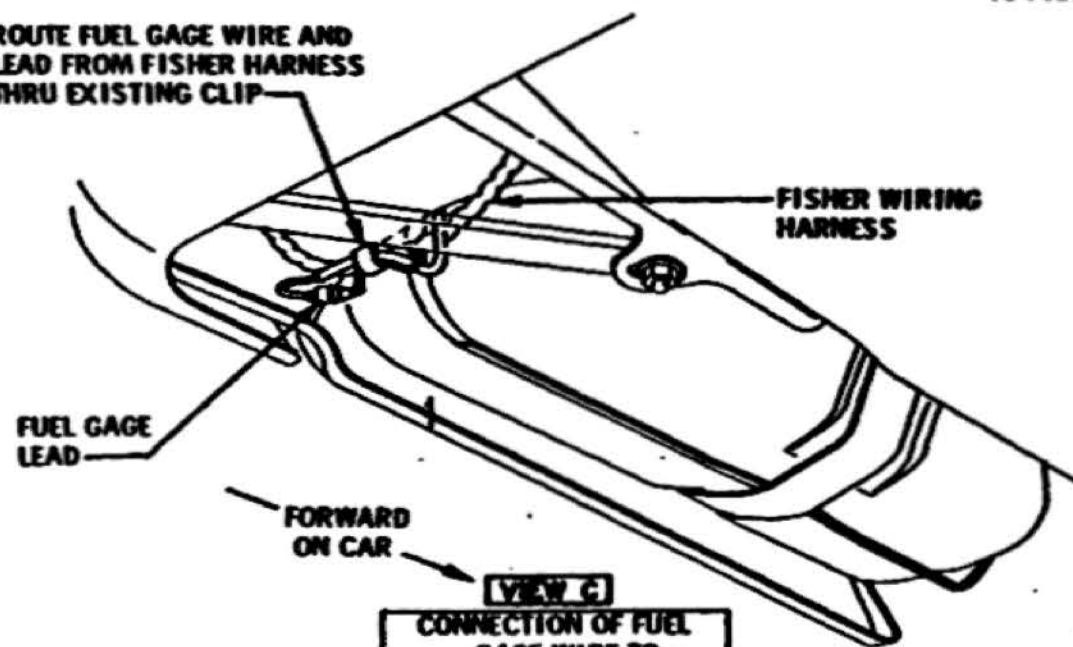
**VIEW B**  
INSTALLATION OF FUEL GAGE WIRE TO GAS TANK

**A**  
9415162-SCREW (GROUND WIRE TO UNDERBODY)



**VIEW A**  
GROUND WIRE INSTALLATION

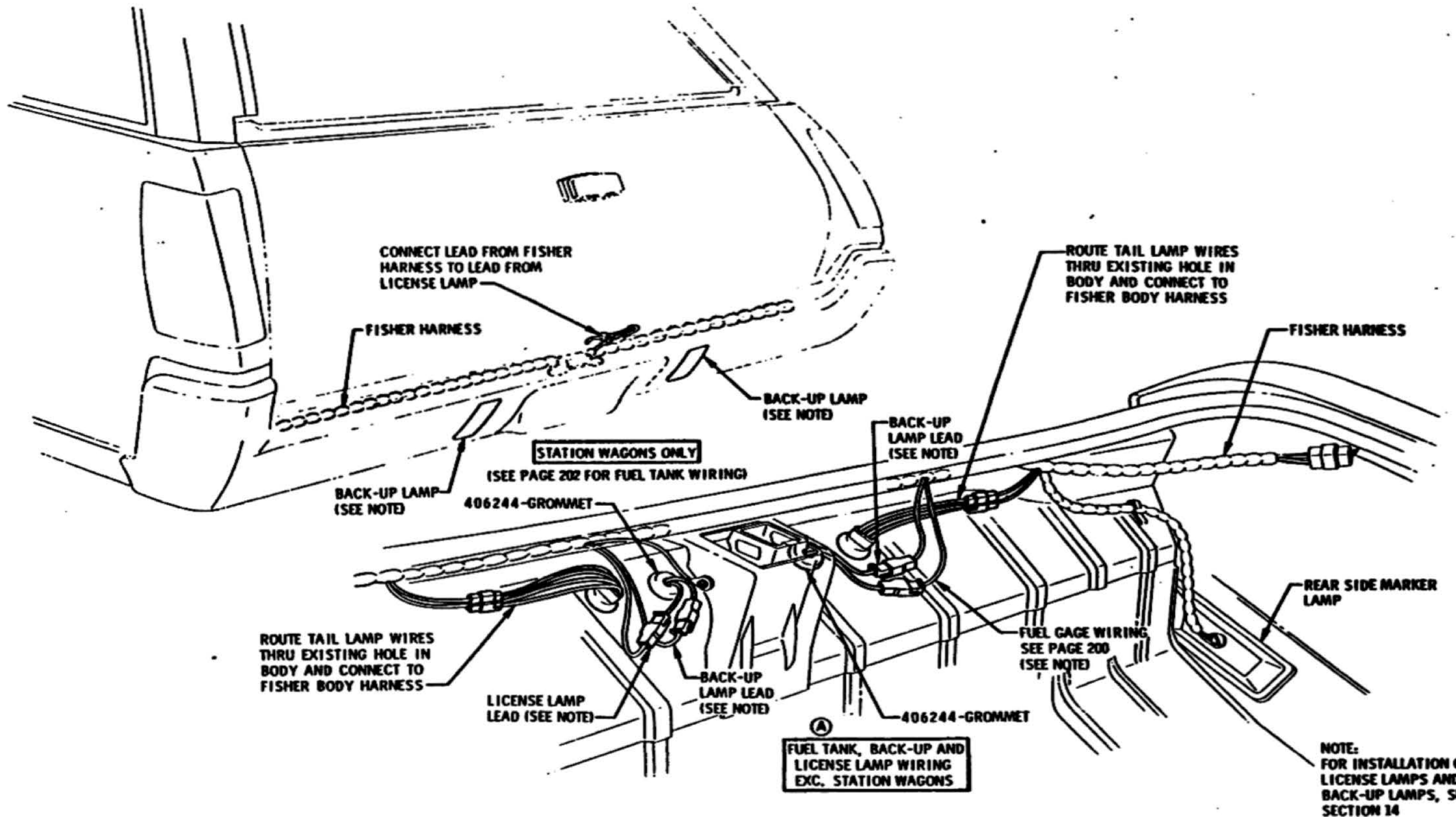
ROUTE FUEL GAGE WIRE AND LEAD FROM FISHER HARNESS THRU EXISTING CLIP



**VIEW C**  
CONNECTION OF FUEL GAGE WIRE TO FISHER WIRING HARNESS

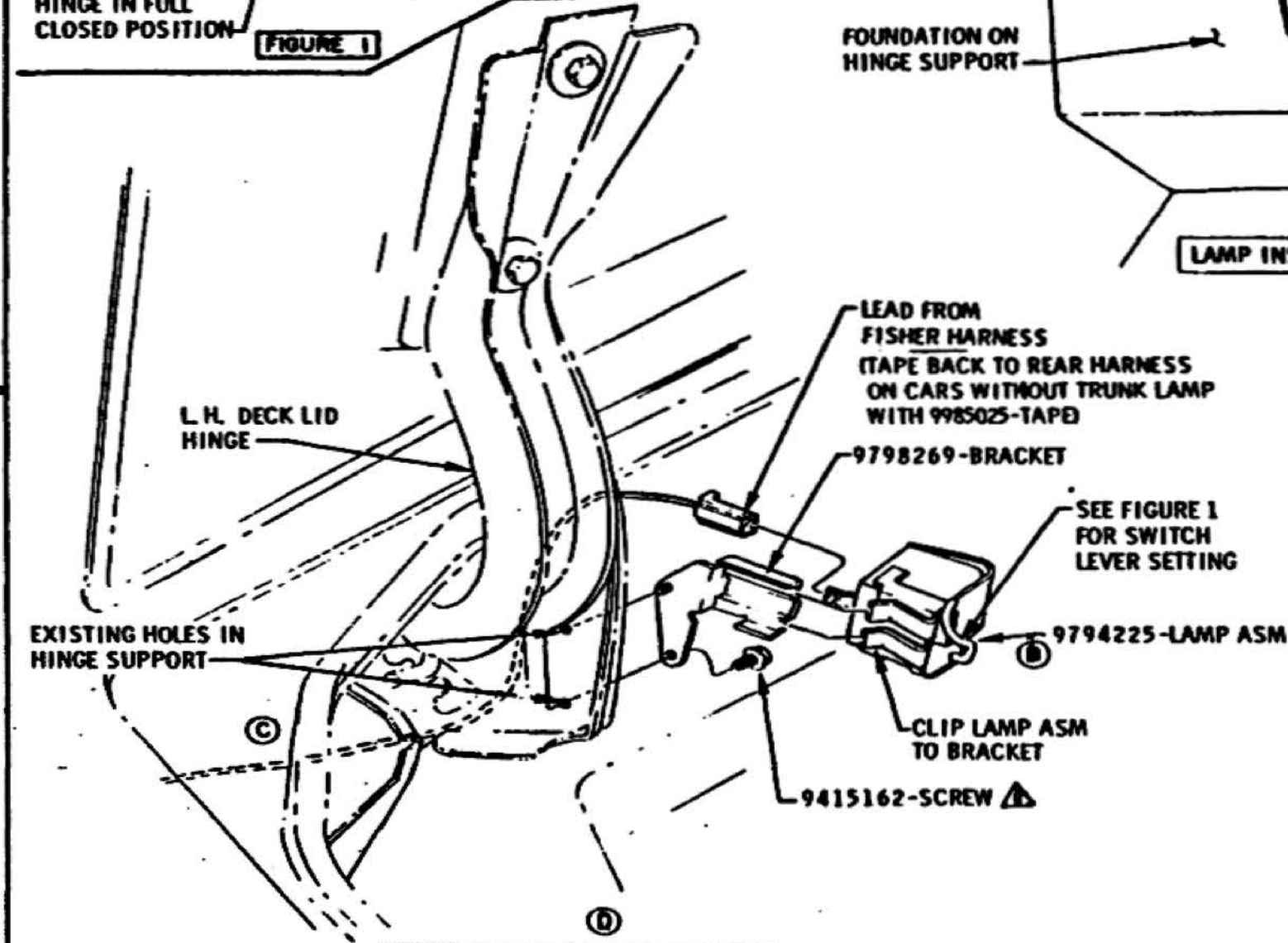
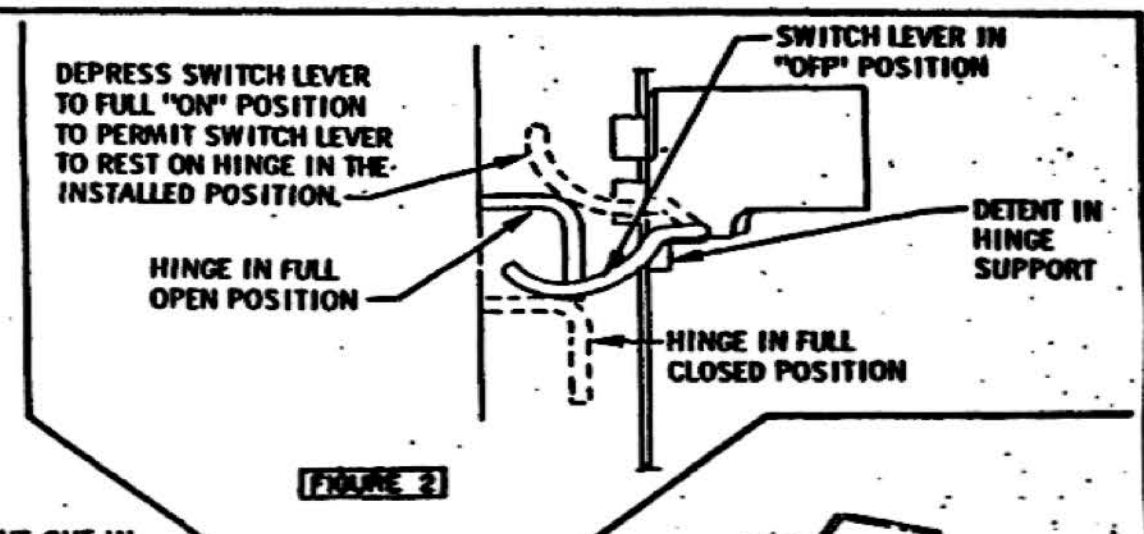
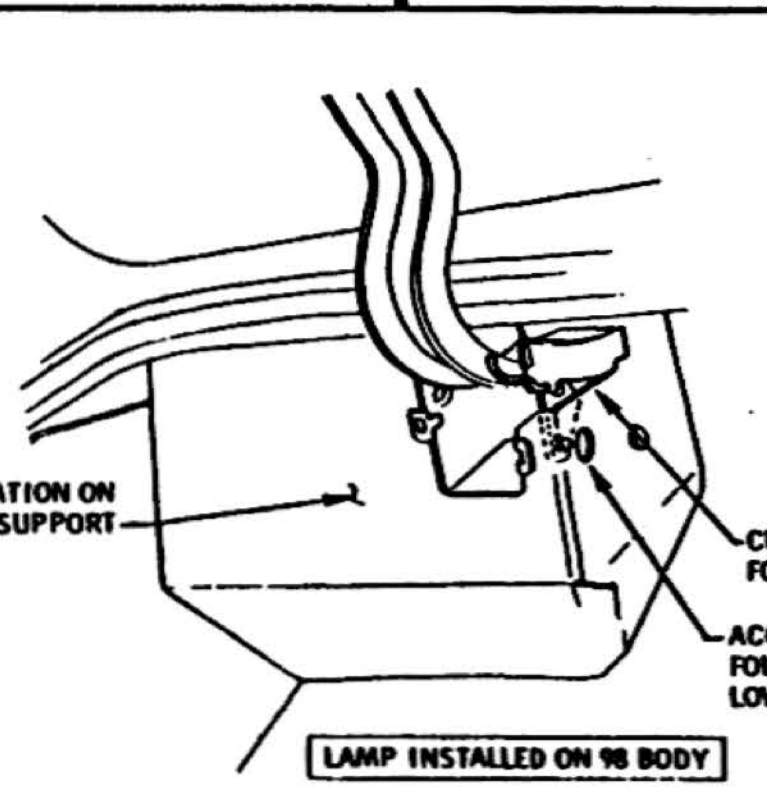
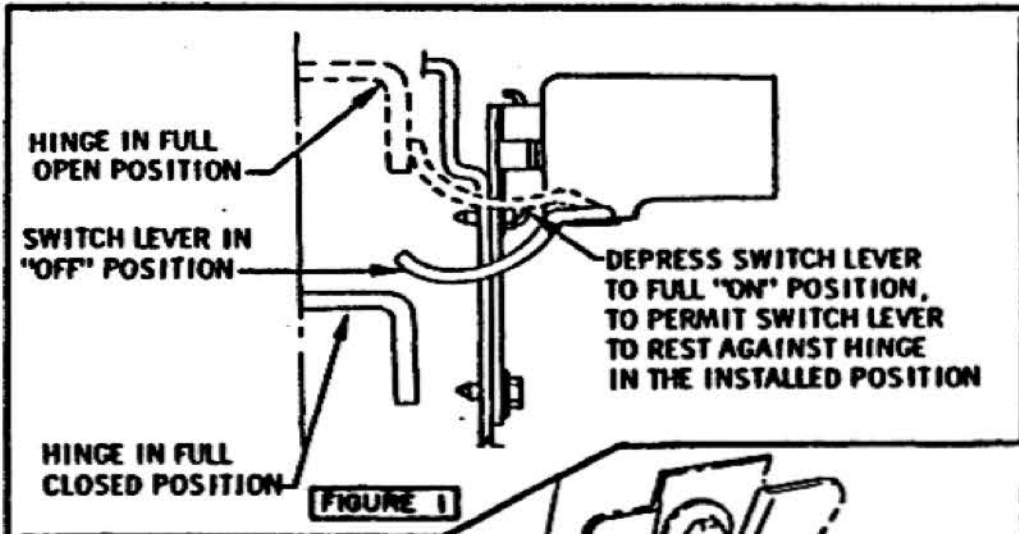
▲▲▲ FULLY DRIVER SEATED AND NOT STRIPPED

				TITLE FUEL TANK WIRING (STATION WAGON ONLY)				PART USES		12 202	
				DATE MAR. 11 1968		1970		OLDSMOBILE PRODUCT INFORMATION MANUAL			
				DR. BY P. J. McKESSY		REV. 12J		A		404411	
J-107-A WAS 3857950-304				APPR. P. J. McKESSY		BA					
DATE	BY	REVISION	DR.	CL.	APPR.						

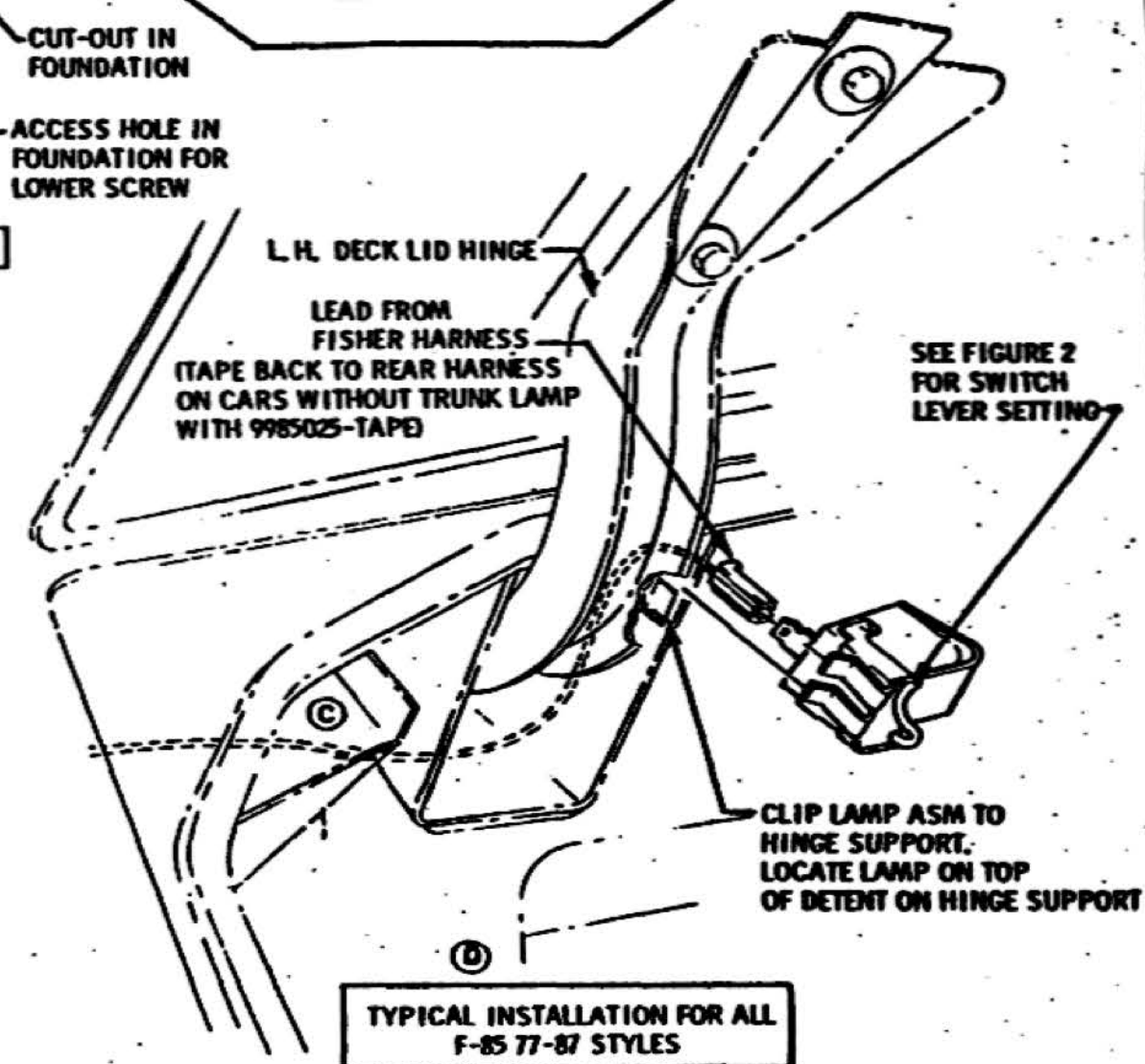


TITLE				FUEL TANK, BACK-UP AND LICENSE LAMP WIRING				
DATE	APR. 28 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	12	PAGE	204
DR. BY	CLAY MAY	CHECKED	JIM	REF. 12	GROUP	A	PART NO.	404411
APPR.	John	DATE						
DATE	SYN	REVISION	DR. CK.	APPR.				





TYPICAL INSTALLATION FOR F-85 SERIES (EXC. 77-87 STYLES) AND FOR 88 AND 98 SERIES

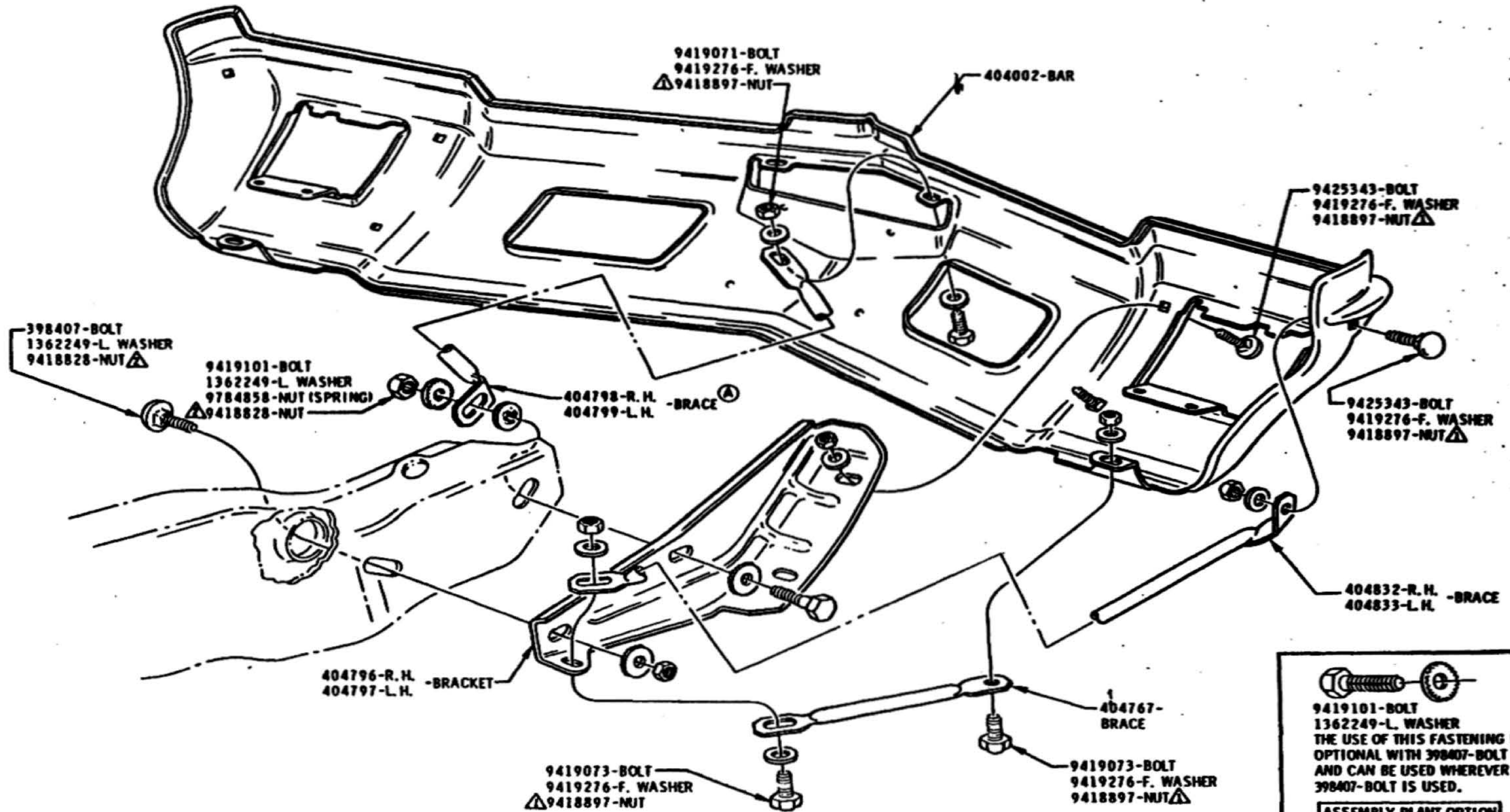


TYPICAL INSTALLATION FOR ALL F-85 77-87 STYLES

(EXCEPT STATION WAGON)

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

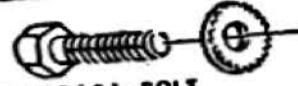
REVISION				TITLE		TRUNK LAMP		MANUAL NO. PAGE	
1/22/70	D2	INSTALLATION USAGE REV	BP/DJ	DATE	JULY 23, 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	12 206
11/18/69	C1	LEAD ROUTING REV	BP/DJ	DR. BY	B. PARKER	REV. 25% 0			
11/18/69	B	193125 BULB REMOVED	BP/DJ	CHECKED	E. GOODWIN	30-938% 4			
11/18/69	A2	TAPE NOTE ADDED	BP/DJ	APPR.		30-938% A	SERIES	A-B-C	PART NO. 404411-2
DATE	SYM	REVISION	DR. CL.	APPR.					



9419101-BOLT  
1362249-L. WASHER  
THE USE OF THIS FASTENING IS  
OPTIONAL WITH 398407-BOLT  
AND CAN BE USED WHEREVER  
398407-BOLT IS USED.  
**ASSEMBLY PLANT OPTION**

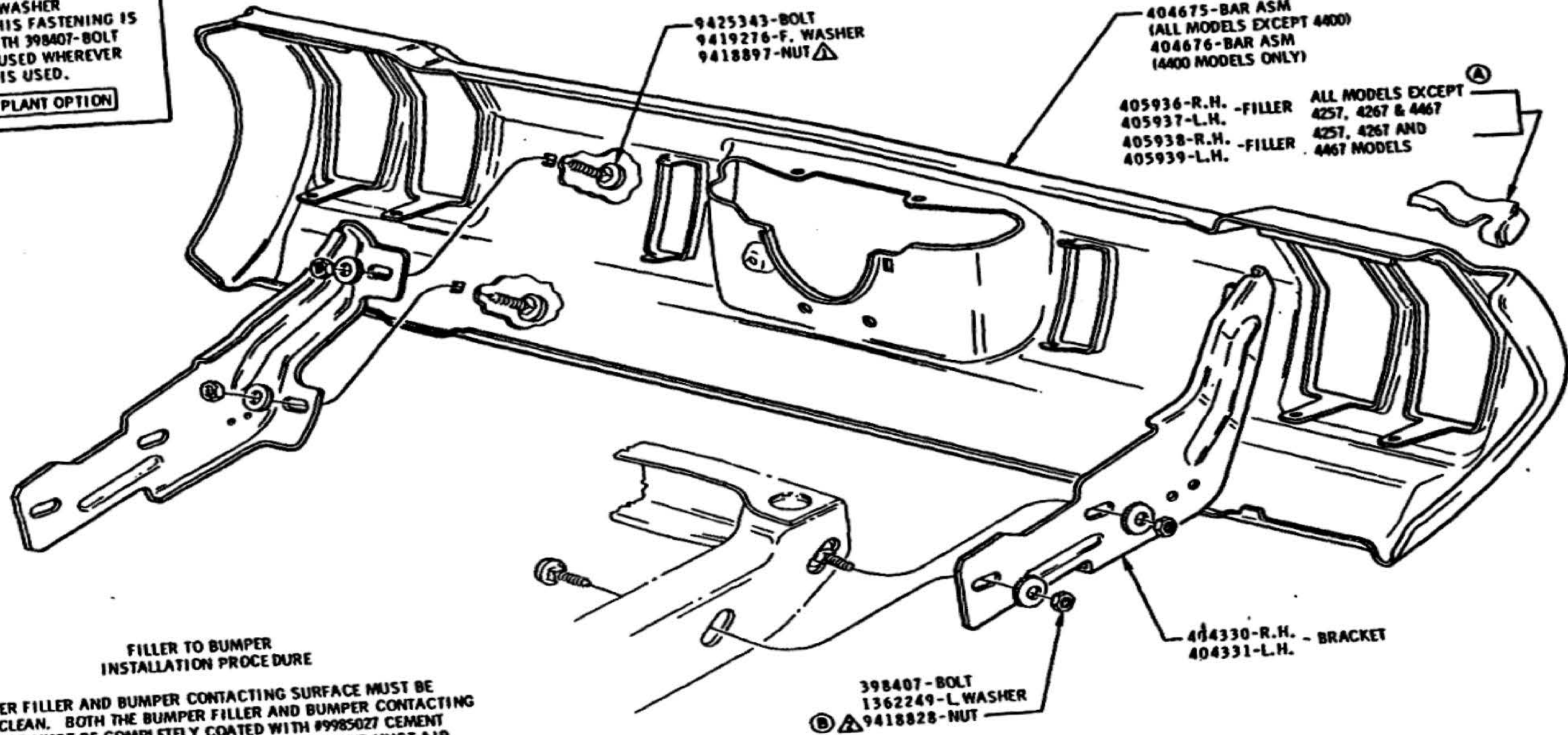
▲ 55 - 80 LB. FT.  
▲ 20 - 30 LB. FT.  
▲ FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE		FRONT BUMPER			
				DATE	MAR. 12, 1969		FIRST USED	1970	
				DR. BY	BEAUDOIN		OLDSMOBILE PRODUCT		MANUAL SEC. PAGE
				CHECKED	T. J. ...		INFORMATION MANUAL		14 100
				APPR.	Y. ...		REF.	REWER	PART NO.
9.30.69	A	BRACE REVISED						A	404411
DATE	SYM	REVISION	DR.	CK.	APPR.				



9419101-BOLT  
1362249-L. WASHER  
THE USE OF THIS FASTENING IS  
OPTIONAL WITH 398407-BOLT  
AND CAN BE USED WHEREVER  
398407-BOLT IS USED.

ASSEMBLY PLANT OPTION



9425343-BOLT  
9419276-F. WASHER  
9418897-NUT

404675-BAR ASM  
(ALL MODELS EXCEPT 4400)  
404676-BAR ASM  
(4400 MODELS ONLY)

405936-R.H. -FILLER  
405937-L.H.  
405938-R.H. -FILLER  
405939-L.H. ALL MODELS EXCEPT  
4257, 4267 & 4467  
4257, 4267 AND  
4467 MODELS

404330-R.H. - BRACKET  
404331-L.H.

398407-BOLT  
1362249-L WASHER  
9418828-NUT

FILLER TO BUMPER  
INSTALLATION PROCEDURE

BUMPER FILLER AND BUMPER CONTACTING SURFACE MUST BE KEPT CLEAN. BOTH THE BUMPER FILLER AND BUMPER CONTACTING SURFACE MUST BE COMPLETELY COATED WITH #9985027 CEMENT PRIOR TO ASSEMBLING FILLER IN BUMPER. CEMENT MUST AIR DRY 2 TO 25 MINUTES BEFORE ASSEMBLING FILLER TO BUMPER. SEPARATION OF THE FILLER FROM THE BUMPER MUST SHOW ADHERENCE OF CEMENT TO ENTIRE RUBBER SURFACE.

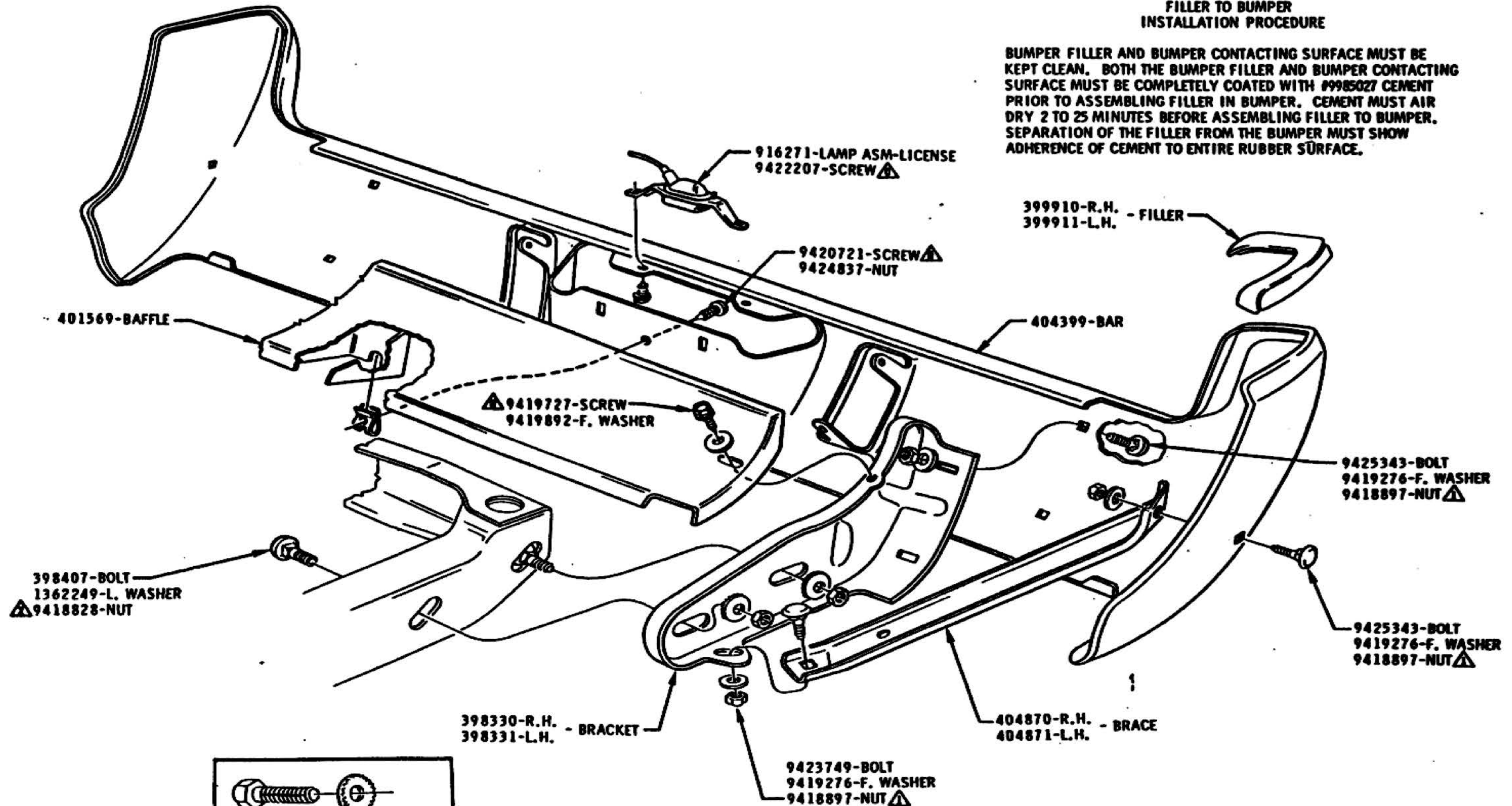
ALL MODELS EXCEPT STATION WAGONS

- ▲ 55 - 80 LB. FT.
- ▲ 20 - 30 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

REAR BUMPER				FIRST USED		OLDSMOBILE PRODUCT INFORMATION MANUAL		MANUAL SEC. PAGE	
TITLE				1970		A		14 102	
DATE MAR 12 1969				REV 14 A 2		PART NO.		404411	
DR. BY BEAUDOIN				SERIES		A			
CHECKED [Signature]				APPR. [Signature]					
DATE SYN				REVISION					
B WAS 3796202-NUT				C 27					
A MID-LEVEL REVISED				D 27					

FILLER TO BUMPER  
INSTALLATION PROCEDURE

BUMPER FILLER AND BUMPER CONTACTING SURFACE MUST BE KEPT CLEAN. BOTH THE BUMPER FILLER AND BUMPER CONTACTING SURFACE MUST BE COMPLETELY COATED WITH #9985027 CEMENT PRIOR TO ASSEMBLING FILLER IN BUMPER. CEMENT MUST AIR DRY 2 TO 25 MINUTES BEFORE ASSEMBLING FILLER TO BUMPER. SEPARATION OF THE FILLER FROM THE BUMPER MUST SHOW ADHERENCE OF CEMENT TO ENTIRE RUBBER SURFACE.

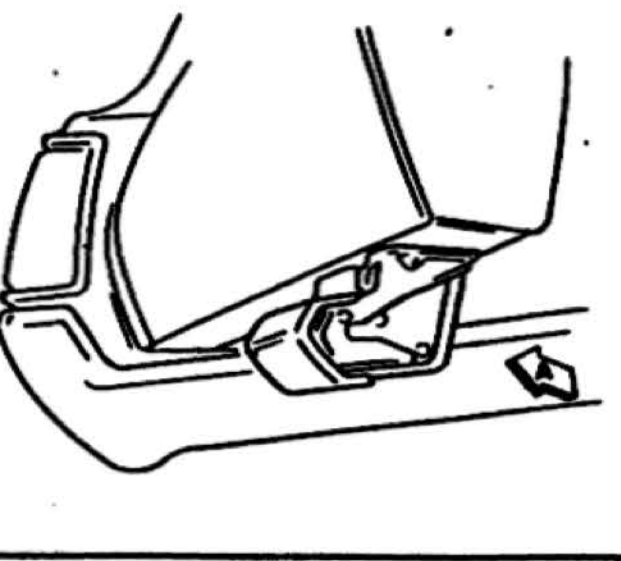
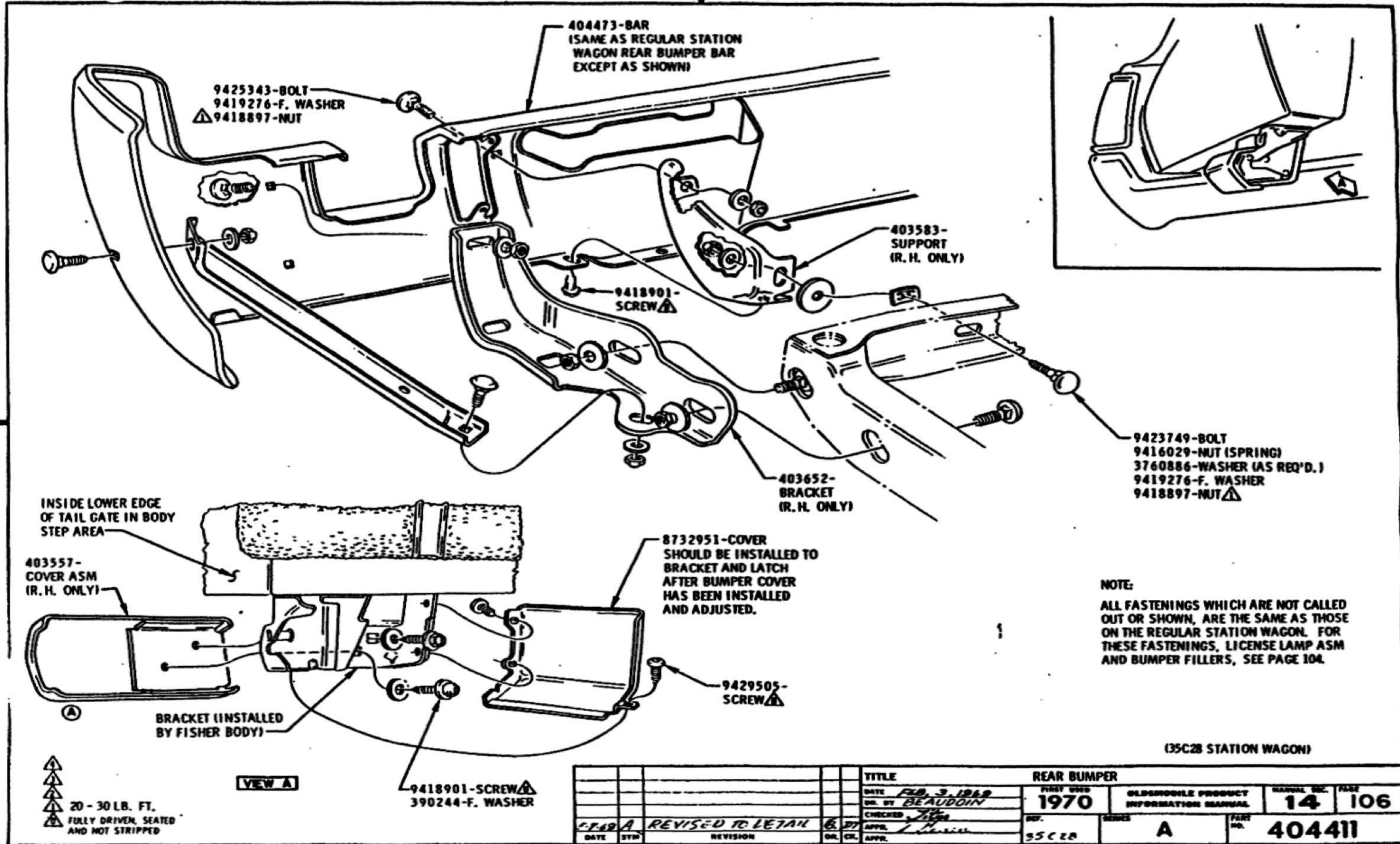


(STATION WAGON ONLY EXC. 35C28)

- ▲ 55 - 80 LB. FT.
- ▲ 20 - 30 LB. FT.
- ▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

9419101-BOLT  
1362249-L. WASHER  
THE USE OF THIS FASTENING IS OPTIONAL WITH 398407-BOLT AND CAN BE USED WHEREVER 398407-BOLT IS USED.  
**ASSEMBLY PLANT OPTION**

REAR BUMPER			
DATE	SYM	REVISION	DR. CK.
TITLE		FIRST USED	MANUAL SEC. PAGE
DATE <i>FEB. 3, 1969</i>		1970	14 104
DR. BY <i>BEAUDOIN</i>		OLDSMOBILE PRODUCT INFORMATION MANUAL	PART NO.
CHECKED <i>Tidger</i>		NET. 14-A2	404411
APPR. <i>J. Damm</i>		97-19 12-E	SERIES A



NOTE:  
ALL FASTENINGS WHICH ARE NOT CALLED OUT OR SHOWN, ARE THE SAME AS THOSE ON THE REGULAR STATION WAGON. FOR THESE FASTENINGS, LICENSE LAMP ASM AND BUMPER FILLERS, SEE PAGE 104.

(35C28 STATION WAGON)

▲  
▲  
▲  
20 - 30 LB. FT.  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

VIEW A

				TITLE		REAR BUMPER				
				DATE	FEB. 3. 1969	FIRST USED	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO. 14	FILE 106
				DR. BY	BEAUDOIN	NO.				
				CHECKED	Ziga	SERIES	A			
				APPR.	L. H. H. H.	PART NO.	404411			
DATE	SYM	REVISION	DR.	CL.	APPR.	35C28				

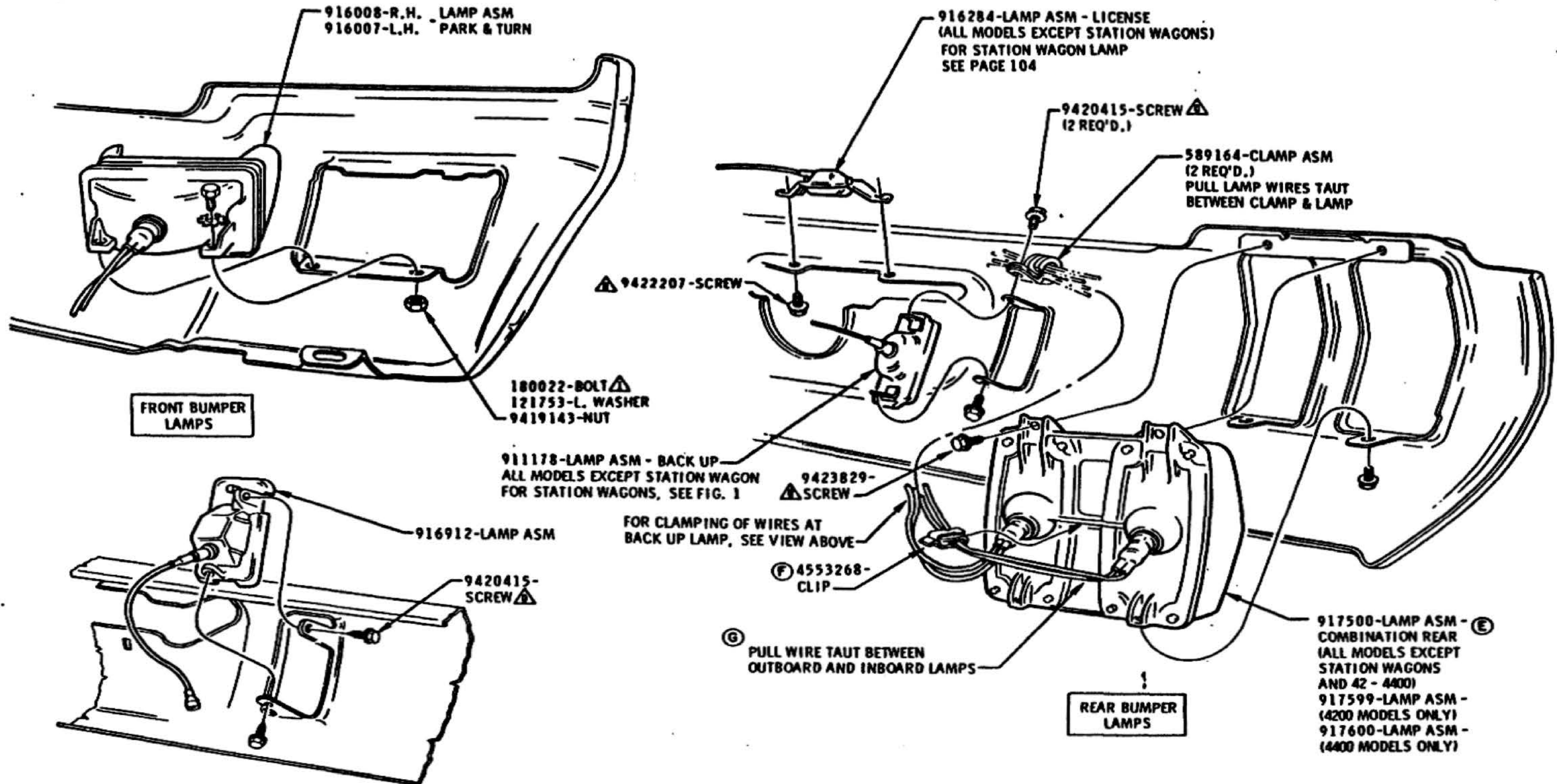


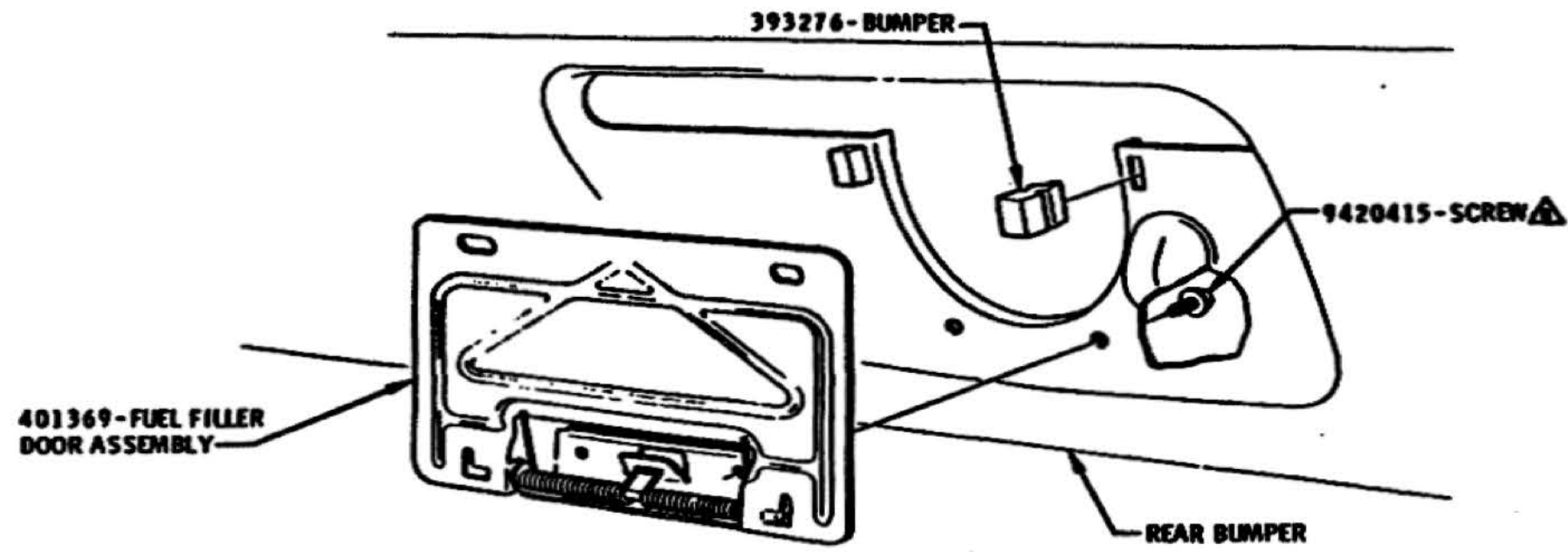
FIGURE 1  
STATION WAGON ONLY

▲ 60 - 90 LB. IN.  
▲ FULLY DRIVEN, SEATED  
▲ AND NOT STRIPPED

DATE	SYM	REVISION	DR.	CL.	DATE	SYM	REVISION	DR.	CL.	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE
					11-8-69	E	LAMP N'S REVISED	B	DT						
					9-1-69	D	FASTENING REVISED	B	DT						
					8-9-69	C	CLAMP ASM INFO ADDED	B	DT						
3-14-70	G	NOTE ADDED	FR	DT	2-21-69	B	FAST. DIRECTION REVISED	B	DT						
2-24-70	F	4553268 CLIP ADDED	B	DT	9-21-69	A	NOTE REVISED	B	DT						

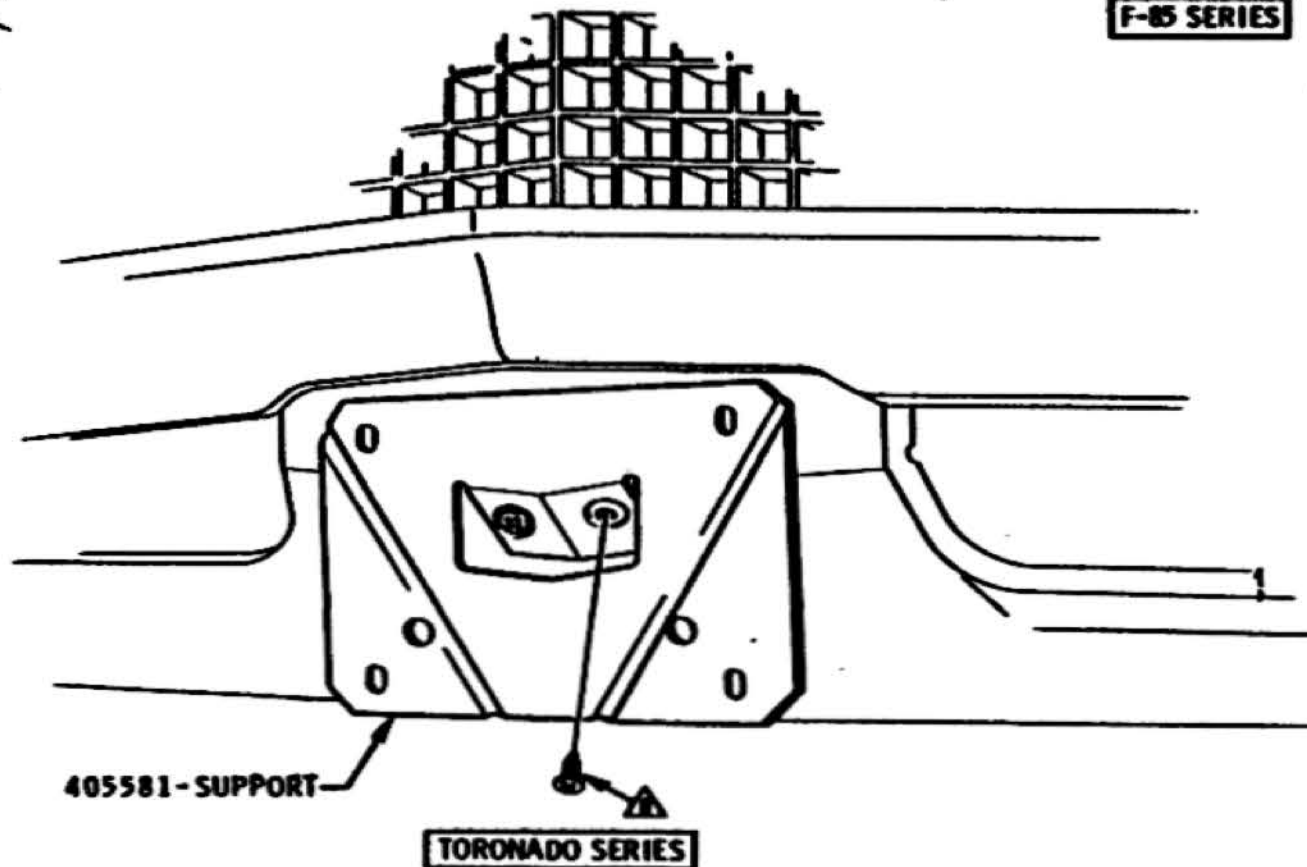
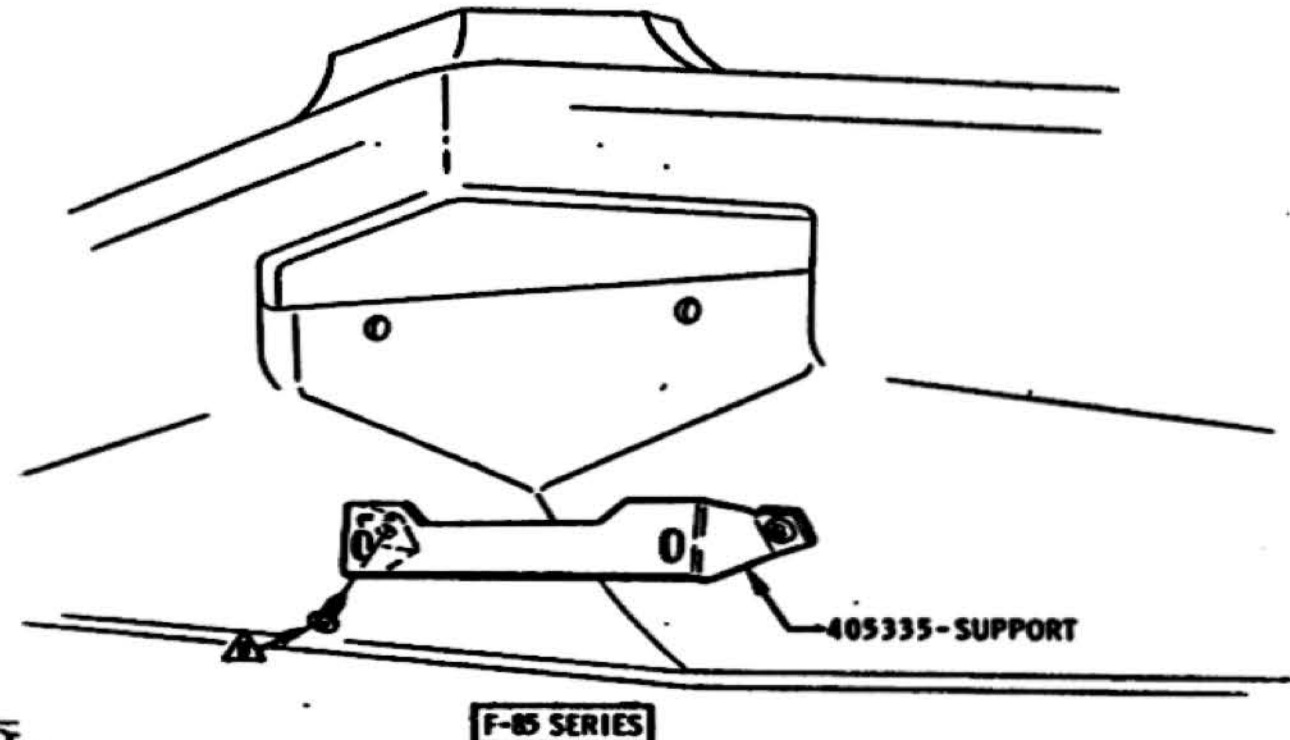
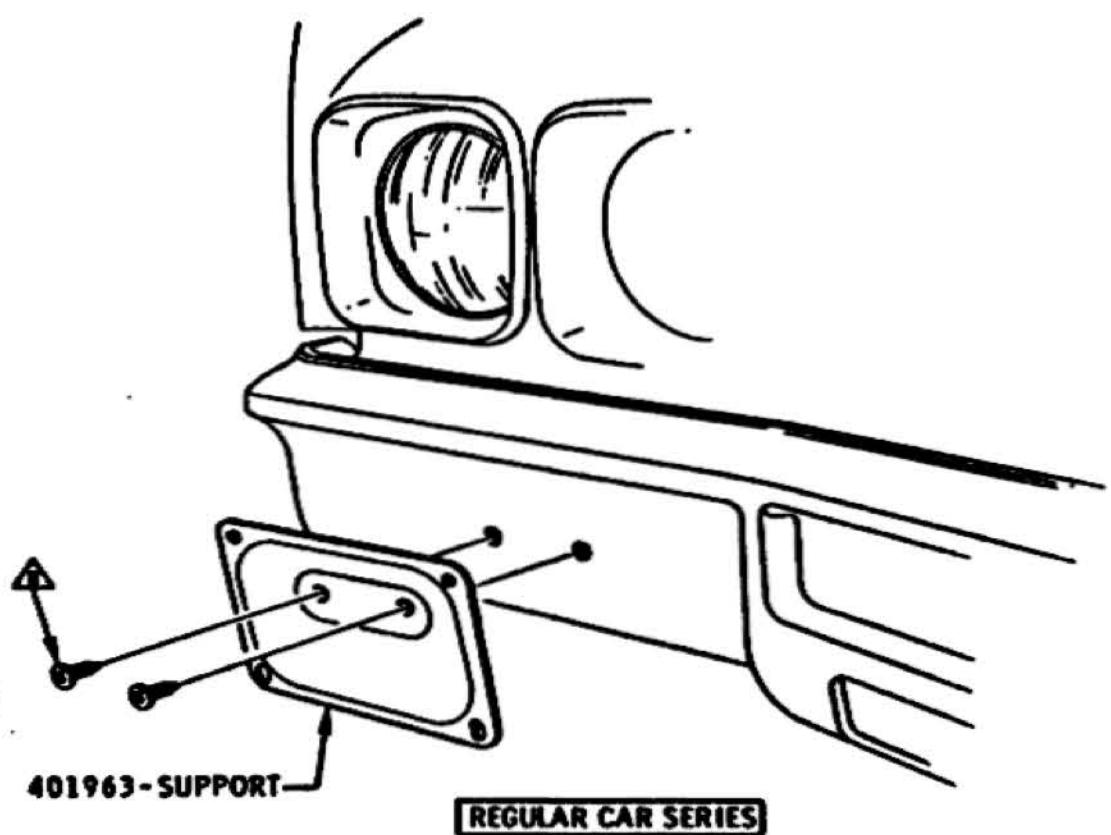
  

BUMPER LAMPS		MANUAL SEC.	PAGE
REF. 12-C	SERIES	14	110
12-E	A	404411	



▲  
▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

		TITLE		FUEL FILLER DOOR			
		DATE	FEB. 17 1969	YEAR	1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO. 14
		DR. BY	P. LOCATELLI				PAGE 112
		CHECKED	J. [Signature]				
		APPV.	L. [Signature]				
						A B-C	PART NO. 404411-2



INSTRUCTIONS

LOCATE AND DRILL 13/64" DIA. HOLES THROUGH LOCATING DIMPLES IN FRONT BUMPER FOR FASTENING OF SUPPORT AND LICENSE PLATE.

FASTEN SUPPORT TO BUMPER USING 584429-SCREWS.

THESE FASTENINGS WILL BE FOUND IN THE PAPER ENVELOPE IN GLOVE BOX.

NOTE: ASSEMBLY PLANTS PLACE LICENSE SUPPORT IN THE TRUNK DO NOT INSTALL ON CAR THIS DRAWING FOR DEALER USE ONLY

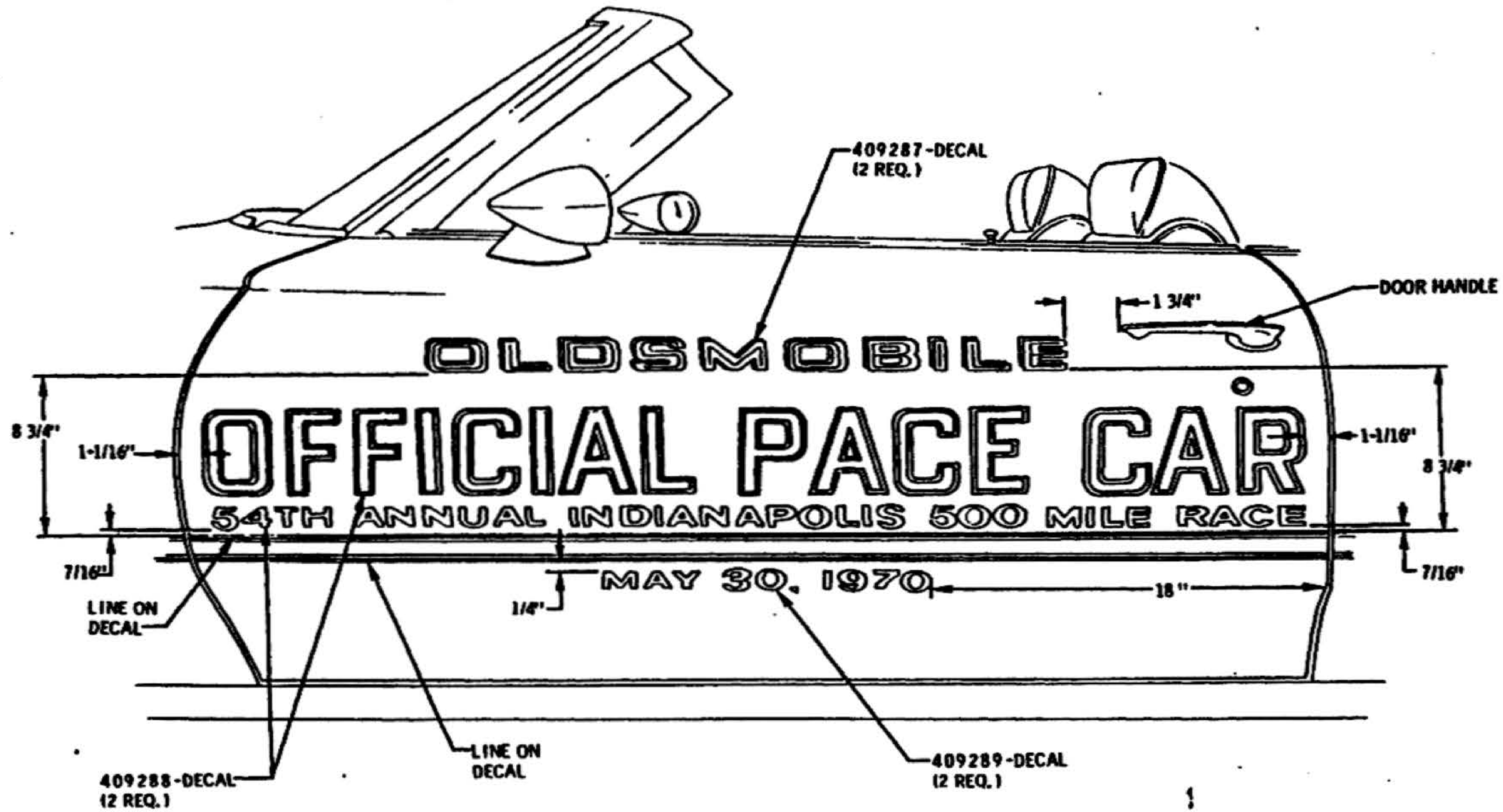
(DRAWING RELEASED IN GROUP 'O')

▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

				TITLE				INSTALLATION- FRONT LICENSE SUPPORT					
				DATE		FEB. 12 1969		FIRST USED		1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	
				DR. BY		R. LOCATELLI		MANUAL NO.		14		PAGE 115	
				CHECKED		T. J. ...		REV.		14C		PART NO.	
				APPR.		V. ...		SERIES		A B-C E		406195	
DATE	SYM	REVISION	DR.	CL.	APPR.								



NOTE:  
DECALS ARE PART OF  
DECAL KIT-409286



TYPICAL APPLICATION OF DECALS  
TO DOORS  
(L. H. SHOWN R. H. SIMILAR)

▲  
▲  
▲  
▲  
FULLY DRIVEN, SEATED  
AND NOT STRIPPED

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO.	PAGE	PART NO.	
											INDIANAPOLIS PACE CAR-DOOR LETTERING DECALS	1970		35Y74	108	404411	
											DATE: MAR 17 1970 DR BY: G. PARKER CHECKED: [Signature] APPR: Red [Signature]						

## PARTS TO BE INSTALLED ON THE 35W45 (RALLYE 350) CAR

THE CHART BELOW ITEMIZES PARTS TO BE INSTALLED (AND DELETED), FOR WHICH THERE ARE NO SPECIFIC PICTORIAL ILLUSTRATIONS. THESE PARTS ARE TO BE INSTALLED IN A MANNER SIMILAR TO THE REGULAR PRODUCTION PARTS, AND MANUAL REFERENCES ARE GIVEN FOR THEIR INSTALLATION.

35W45 PART NO.	NAME OR DESCRIPTION	REPLACES PART NO.	INSTALL SIMILAR TO	
			MAN. SEC.	PAGE
406218	PIPE ASSEMBLY-EXHAUST-R. H.	399546	8	140
406219	PIPE ASSEMBLY-EXHAUST-L. H.	403413	8	140
406216	MUFFLER ASSEMBLY-EXHAUST-R. H.	1382346-7 1384456	8	140
406217	MUFFLER ASSEMBLY-EXHAUST-L. H.	402619	8	140
568917	"U" BOLT-EXHAUST PIPE TO MUFFLER, (R. H. & L. H. SIDES)	569206	8	150, FIG. 1
568916	CLAMP-EXHAUST PIPE TO MUFFLER (R. H. & L. H. SIDES)	567783	8	150, FIG. 1
404664	PIPE ASSEMBLY-TAIL-R. H.	404724	8	140
404665	PIPE ASSEMBLY-TAIL-L. H.	404725	8	140
406350	SUPPORT ASSEMBLY-TAIL PIPE-R. H.	406600	8	150, FIG. 3
406351	SUPPORT ASSEMBLY-TAIL PIPE-L. H.	406601	8	150, FIG. 3

35W45 PART NO.	NAME OR DESCRIPTION	REPLACES PART NO.	INSTALL SIMILAR TO	
			MAN. SEC.	PAGE
9423284	SCREW-SUPPORT ASSEMBLY TO BUMPER BRACKET (R. H. & L. H.)		8	150, FIG. 3
1367399	CLAMP-TAIL PIPE TO SUPPORT (R. H. & L. H.)		8	150, FIG. 3
1363900	SCREW-TAIL PIPE TO SUPPORT (R. H. & L. H.)		8	150, FIG. 3
408071	WHEEL ASSEMBLY	3928297 9791450	10	95
402926	ORNAMENT ASSEMBLY-HUB	406211	10	112
9420065	SCREW-ORNAMENT TO WHEEL		10	112
404025	BEZEL-WHEEL		10	112
399683	NUT-WHEEL TO HUB	385501	10	100
480583	TIRE UNIT ASSEMBLY-UNIROYAL	3970222	10	90
480581	TIRE UNIT ASSEMBLY-FIRESTONE	3970220	10	90
480582	TIRE UNIT ASSEMBLY-GOODRICH	3970226	10	90
9787359	TIRE UNIT ASSEMBLY-GOODYEAR	3970224	10	90

CHART CONTINUED ON PAGE 102.



FULLY DRIVEN, SEATED  
AND NOT STRIPPED

				TITLE				35W45 OPTION						
				DATE				FIRST USED						
				1970				1970						
				DR BY				OLDSMOBILE PRODUCT						
				CHECKED				INFORMATION MANUAL						
				APPROVED				MANUAL SEC. PAGE						
								35W45 100						
								SERIES						
								A						
								PART NO.						
								404411						
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK

**OLDSMOBILE DIVISION** GENERAL MOTORS CORPORATION  
LANSING 21, MICHIGAN

35W45 PART NO.	NAME OR DESCRIPTION	REPLACES PART NO.	INSTALL SIMILAR TO MAN. SEC.	PAGE
408056-R. H. 408057-L. H.	FENDER ASSEMBLY (AFTER PIERCING) (FOR 3277)	405730-R. H. 405731-L. H.	11	75
408054-R. H. 408055-L. H.	FENDER ASSEMBLY (AFTER PIERCING) (FOR 3677-87)	405734-R. H. 405735-L. H.	11	76
408060-R. H. 408061-L. H.	FILLER-FENDER TO SIDE BAFFLE	404636-R. H. 404637-L. H.	11	126
405392	SCRIPT-FRONT FENDER (CUTLASS) (FOR 3277)	405391	11	154
399943	EMBLEM (3677-87)	405449	11	154
9419756	NUT (3677-87)	9419755	11	154
408062-R. H. 408063-L. H.	DOOR-HEADLAMP	404776-R. H. 404777-L. H.	11	118
408064-R. H. 408065-L. H.	HEADLAMP HOUSING	404748-R. H. 404749-L. H.	11	118

35W45 PART NO.	NAME OR DESCRIPTION	REPLACES PART NO.	INSTALL SIMILAR TO MAN. SEC.	PAGE
408066-R. H. 408067-L. H.	GRILLE-RADIATOR	404690-R. H. 404691-L. H.	11	116
9422037	SCREW-L. H. GRILLE TO R. H. GRILLE	9418959	11	116
408068	BAR-FRONT BUMPER (PAINTED)	404002	14	100
408069	BOLT-(PAINTED) UPPER BRACE AND BRACKET TO FRONT BUMPER	9425343	14	100
408070	BAR ASSEMBLY-REAR BUMPER (PAINTED)	404675	14	102
408069	BOLT-(PAINTED) BRACKET TO REAR BUMPER	9425343	14	102
911519	LAMP ASSEMBLY-COMBINATION REAR	917500	14	110

**THE FOLLOWING REGULAR OPTIONS ARE MANDATORY:**

- 35D35 - OUTSIDE SPORT MIRRORS (FURNISHED BY OLDS - INSTALLED BY FISHER).
- 35FE2 - 4-4-2 SUSPENSION SYSTEM (EXCEPT WHEELS).
- 35L74 - 350 CU. IN. 4-BARREL H. C. ENGINE.
- 35N34 - CUSTOM SPORT STEERING WHEEL.
- 35W25 - FORCED AIR INDUCTION SYSTEM.
- 35JL2 - FRONT DISC POWER BRAKES (MANDATORY ONLY WHEN 35W27 IS ORDERED).
- 35N10 - DUAL EXHAUST - SEE CHART ON PAGE 100.

FOR MANDATORY AXLE RATIO, SEE CHART 404524.

FOR BALANCE OF ORNAMENTATION, INSTALL DECALS AS SHOWN ON PAGES 104 AND 106.

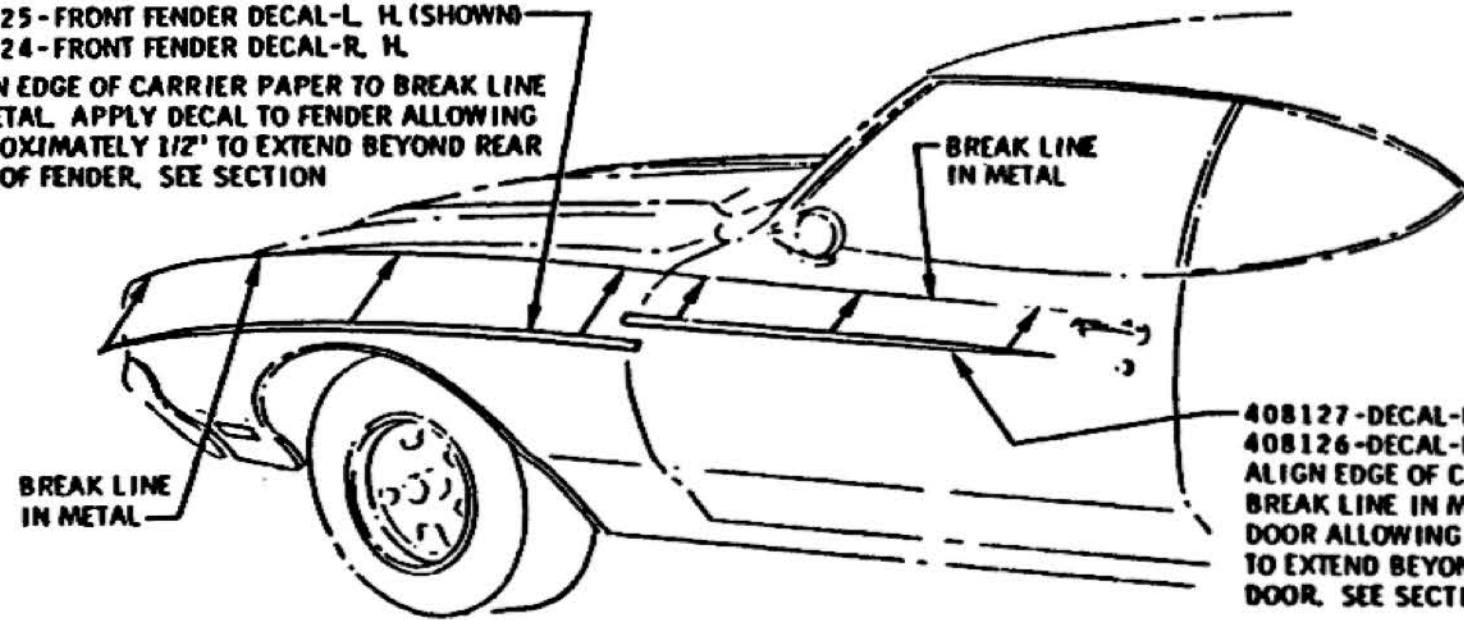
Ⓐ FOR REAR BUMPER LAMP GROUNDING SEE PAGE 108



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AND NOT STRIPPED

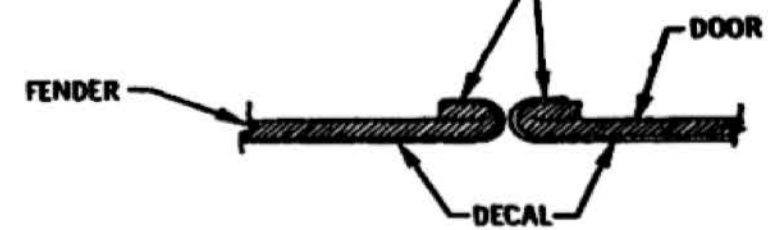
				TITLE				35W45 OPTION			
				DATE				FIRST USED			
				OR BY				1970			
				CHECKED				OLDSMOBILE PRODUCT INFORMATION MANUAL			
				DATE				MANUAL SEC. PAGE			
				2-17-70				35W45 102			
				A NOTE ADDED				SERIES			
				OR. CK.				A			
				DATE				PART NO.			
				2-17-70				404411			

408125-FRONT FENDER DECAL-L. H. (SHOWN)  
408124-FRONT FENDER DECAL-R. H.  
ALIGN EDGE OF CARRIER PAPER TO BREAK LINE  
IN METAL. APPLY DECAL TO FENDER ALLOWING  
APPROXIMATELY 1/2" TO EXTEND BEYOND REAR  
EDGE OF FENDER. SEE SECTION



408127-DECAL-DOOR-L. H. (SHOWN)  
408126-DECAL-DOOR-R. H.  
ALIGN EDGE OF CARRIER PAPER TO  
BREAK LINE IN METAL. APPLY DECAL TO  
DOOR ALLOWING APPROXIMATELY 1/2"  
TO EXTEND BEYOND LEADING EDGE OF  
DOOR. SEE SECTION

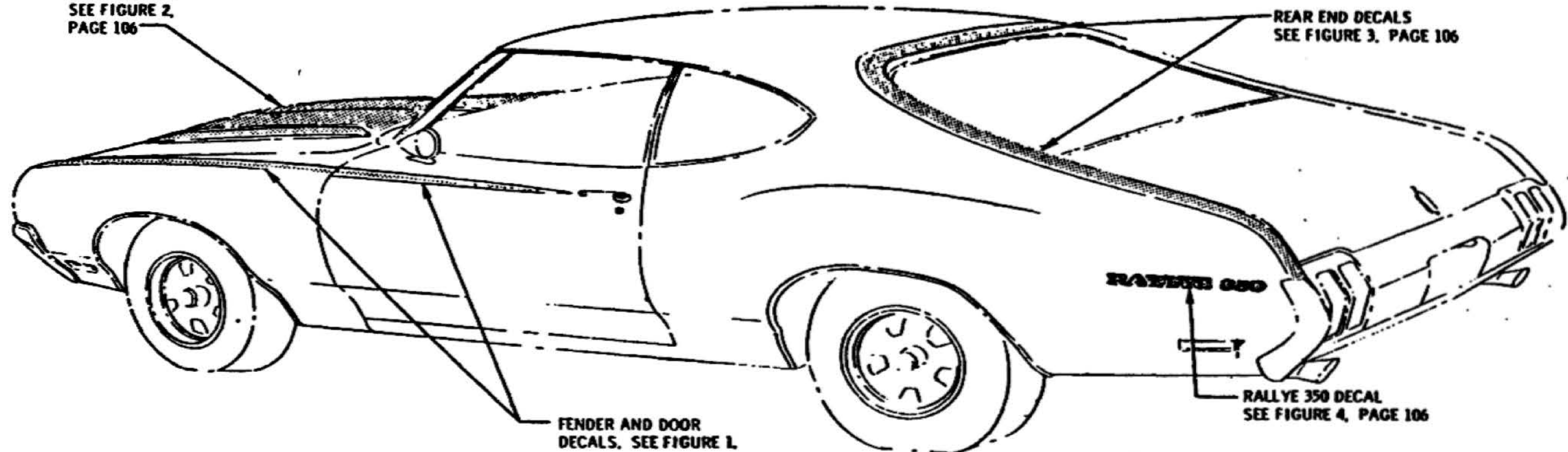
WRAP ENDS OF DECALS AROUND  
LEADING EDGE OF DOOR AND  
REAR EDGE OF FENDER.



TYPICAL SECTION THROUGH  
FENDER AND DOOR

FIGURE 1

HOOD DECALS  
SEE FIGURE 2,  
PAGE 106



TYPICAL APPLICATION OF  
RALLYE 350 DECAL

(ALL DECALS ARE PART  
OF KIT 408111)

(3277-3677-3687)



FULLY DRIVEN, SEATED  
AND NOT STRIPPED

TITLE										35W45 OPTION		
DATE										FIRST USED		
OR BY										1970		
CHECKED										OLDSMOBILE PRODUCT INFORMATION MANUAL		
APPL.										MANUAL SEC. PAGE		
										35W45 104		
										SERIES		
										A		
										PART NO.		
										404411		
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPL.		

NOTE:  
ALIGN EDGE OF CARRIER PAPER TO LEADING EDGE OF HOOD PANEL (SEE ARROWS).  
TO CENTER DECAL ON HOOD PANEL ALIGN EDGE OF CARRIER PAPER TO BREAK LINE IN METAL AT EDGE OF HOOD PANEL (SEE ARROWS)

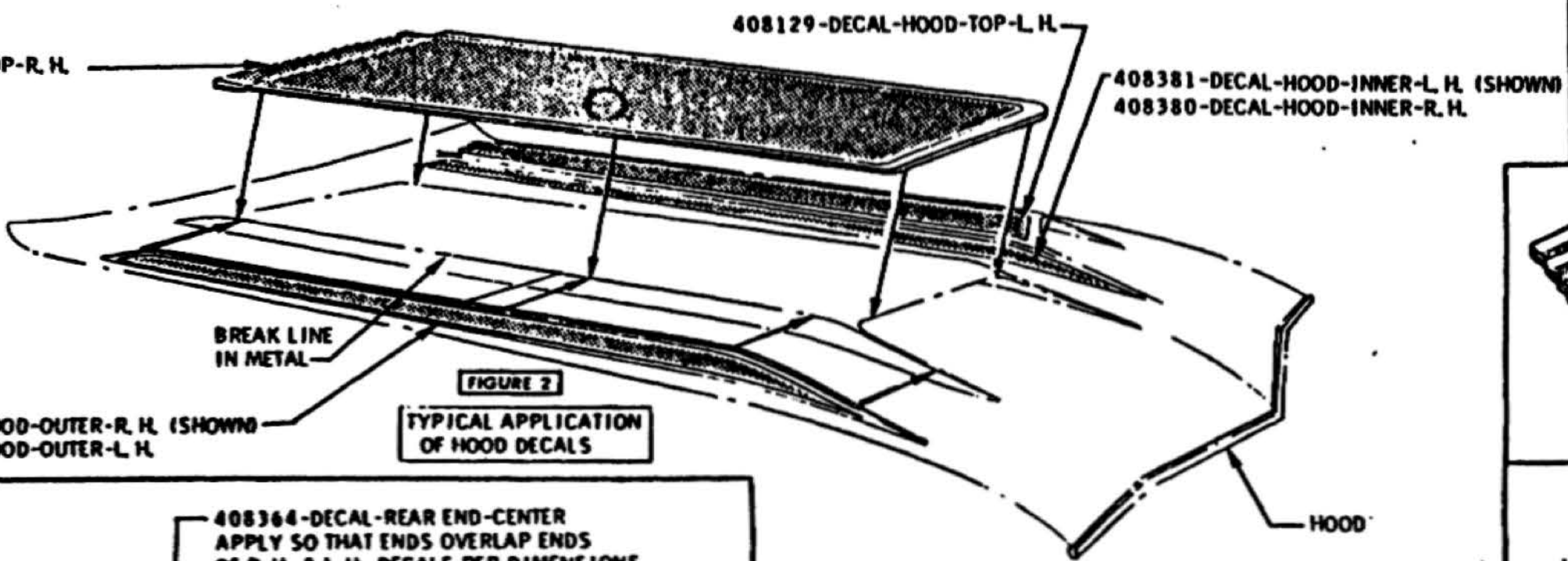
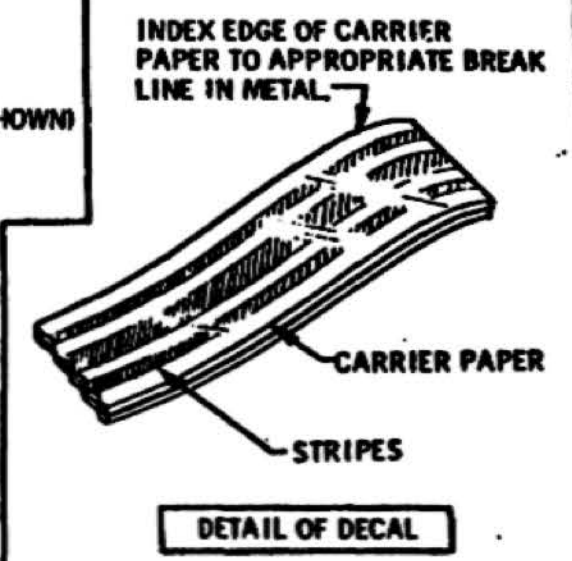


FIGURE 2  
TYPICAL APPLICATION OF HOOD DECALS



DETAIL OF DECAL

408364-DECAL-REAR END-CENTER  
APPLY SO THAT ENDS OVERLAP ENDS OF R. H. & L. H. DECALS PER DIMENSIONS SHOWN. STRIPES MUST MATCH EXACTLY THE STRIPES ON R. H. & L. H. DECALS.

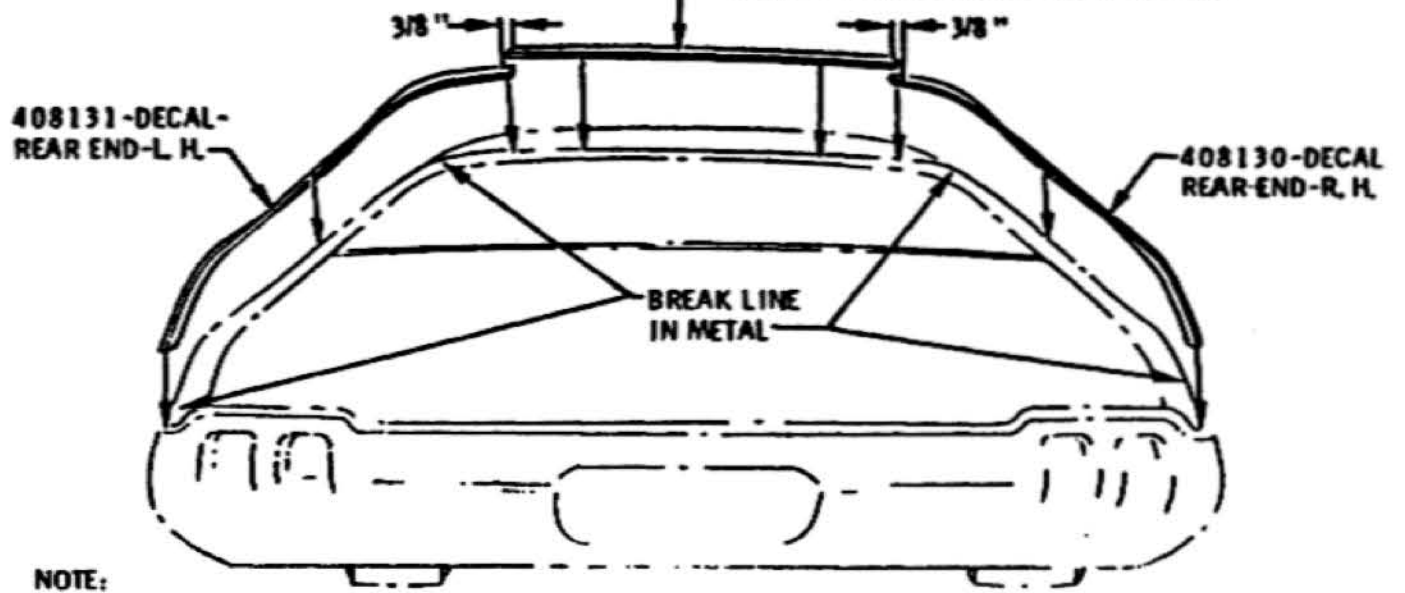


FIGURE 3

RALLYE 350 DECALS

408132-DECAL  
USE ON RIGHT HAND AND LEFT HAND SIDE OF CAR.

APPLY DECAL WITH LETTERS PARALLEL TO GROUND

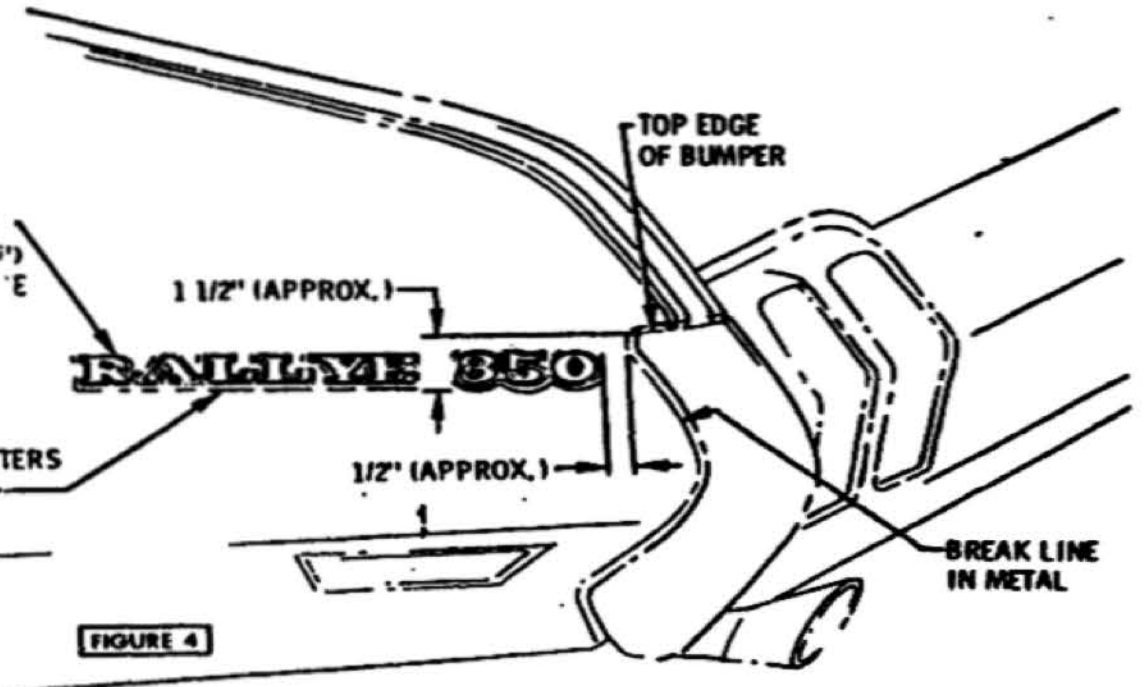


FIGURE 4

(ALL DECALS ARE PART OF KIT 408111)

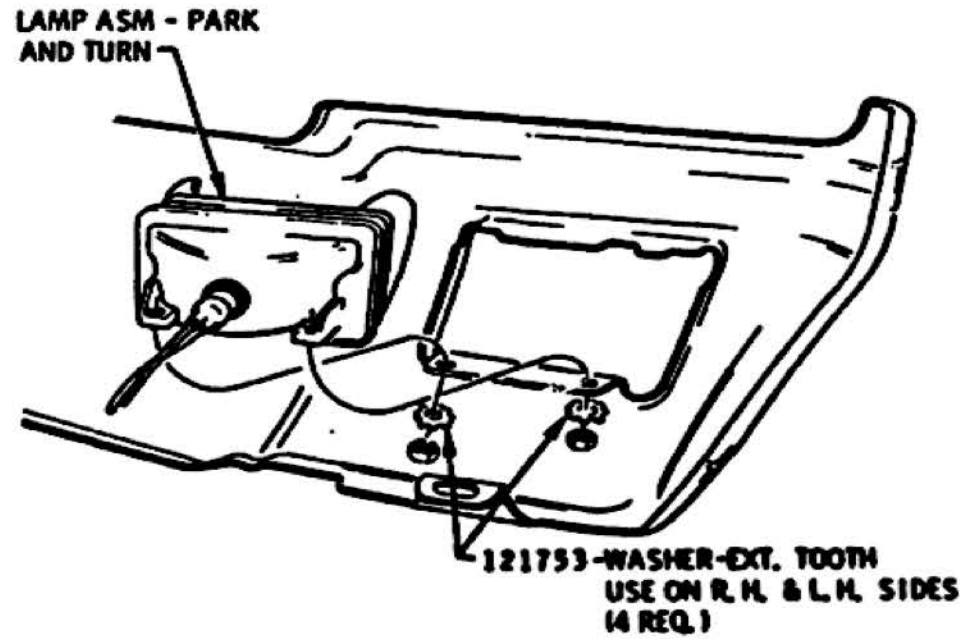
(3277-3677-3687)

NOTE:  
LOCATE DECALS BY ALIGNING EDGES OF CARRIER PAPER TO BREAK LINE IN METAL ON REAR QUARTERS AND OVER BACK LIGHT.

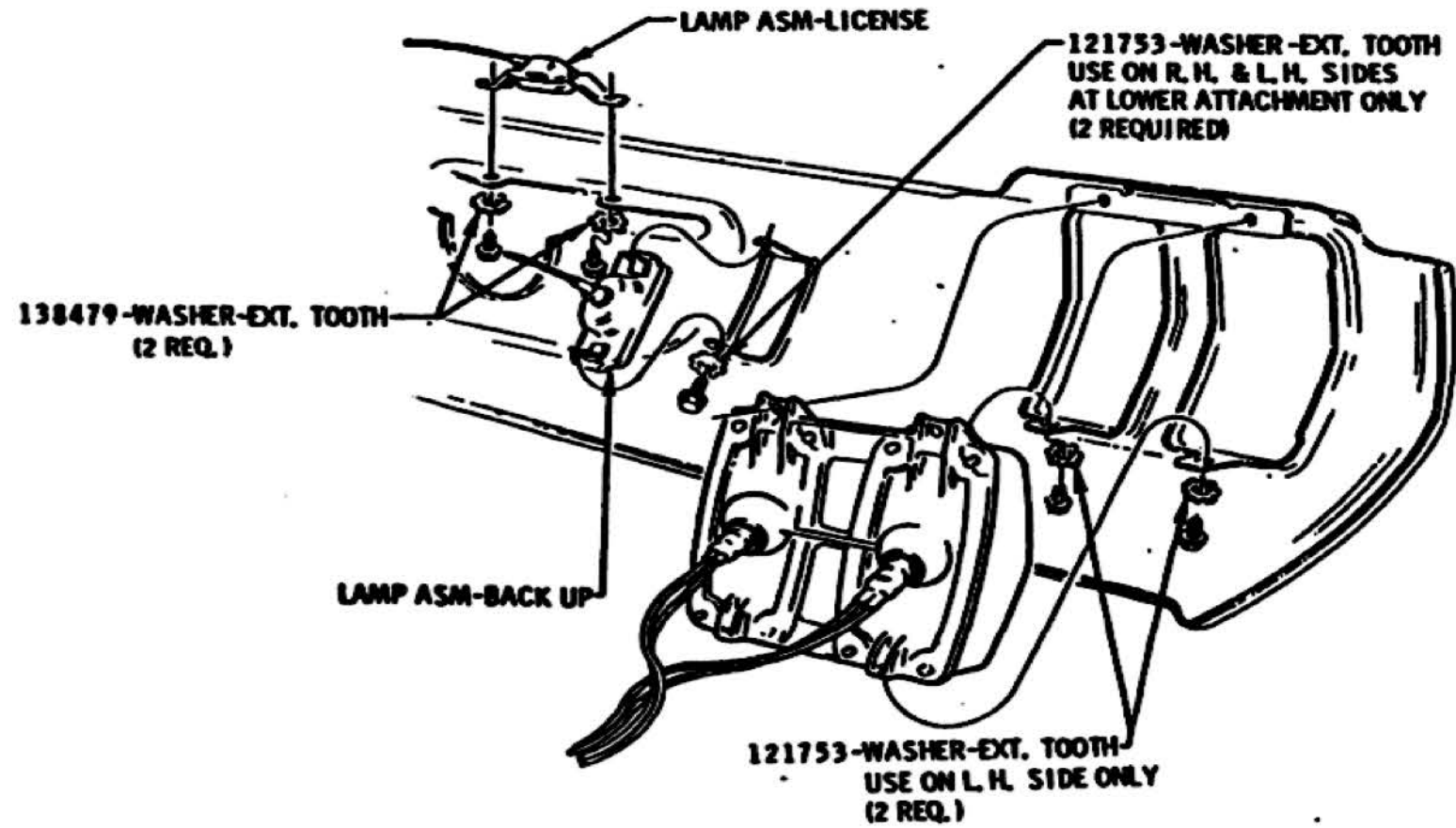
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FULLY DRIVEN, SEATED AND NOT STRIPPED

DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION

TITLE		35W45 OPTION	
DATE	JAN. 2, 1970	FIRST USED	1970
DR BY	B. PARKER	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC. PAGE
CHECKED	JTB		35W45 106
APPR.	T. H. HARRIS	REF.	SERIES
APPR.			A
		PART NO.	404411



FRONT BUMPER LAMPS



REAR BUMPER LAMPS

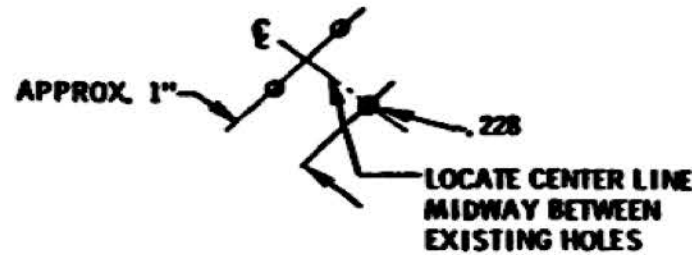
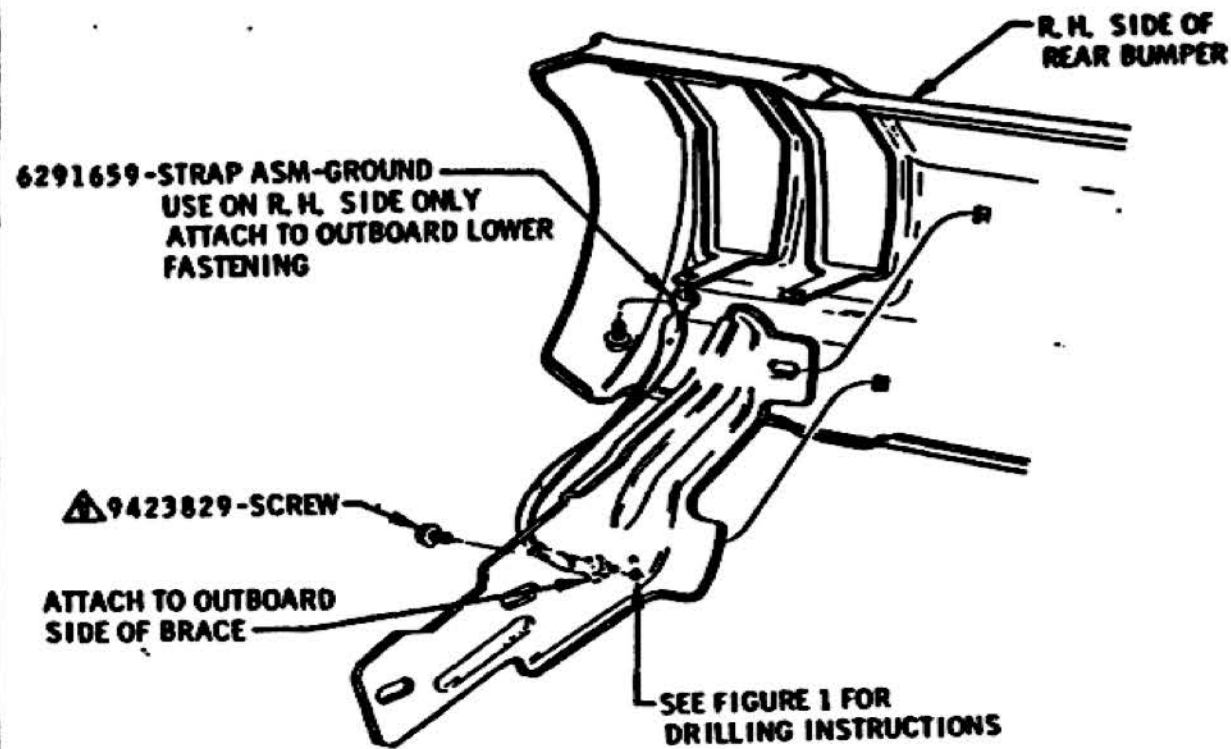


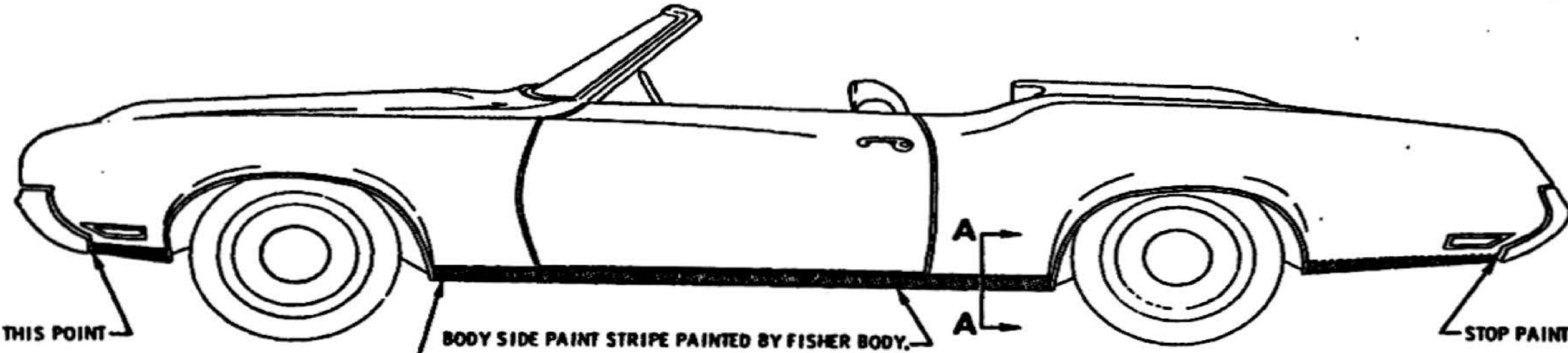
FIGURE 1

BALANCE OF FASTENINGS SAME AS STANDARD CAR



DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	TITLE	FIRST USED	MANUAL SEC.	PAGE
											35W45 OPTION (LAMP GROUNDING)	1970	35W45	108
											DATE FEB 1970 DR. BY B. PARKER CHECKED APPR.		OLDSMOBILE PRODUCT INFORMATION MANUAL	
													A	PART NO. 404411

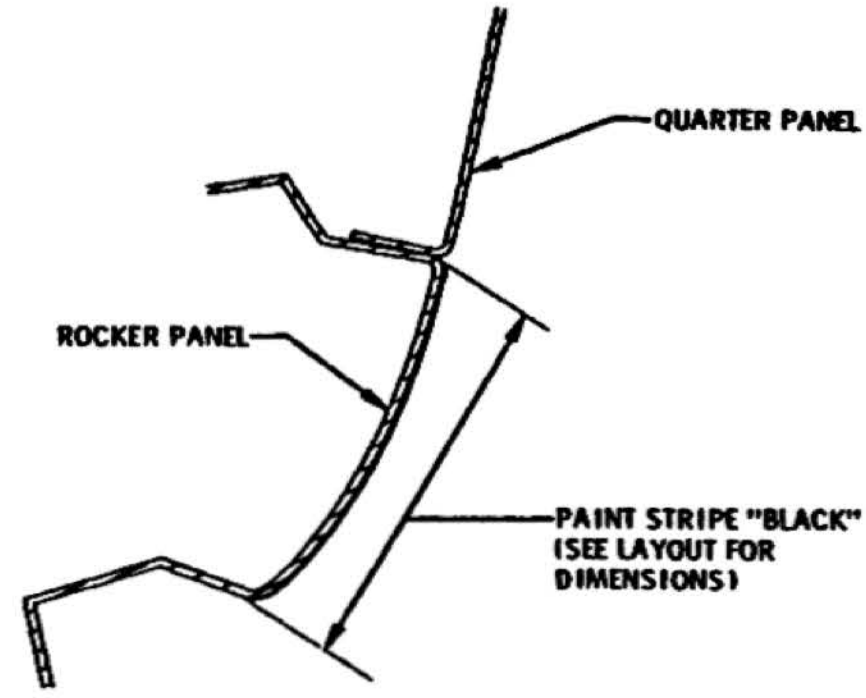




STOP PAINT STRIPE AT THIS POINT

BODY SIDE PAINT STRIPE PAINTED BY FISHER BODY.  
 FRONT FENDER SIDE PAINT STRIPE PAINTED BY OLDSMOBILE.

STOP PAINT STRIPE AT THIS POINT



SECTION "A - A"  
 (TYPICAL)

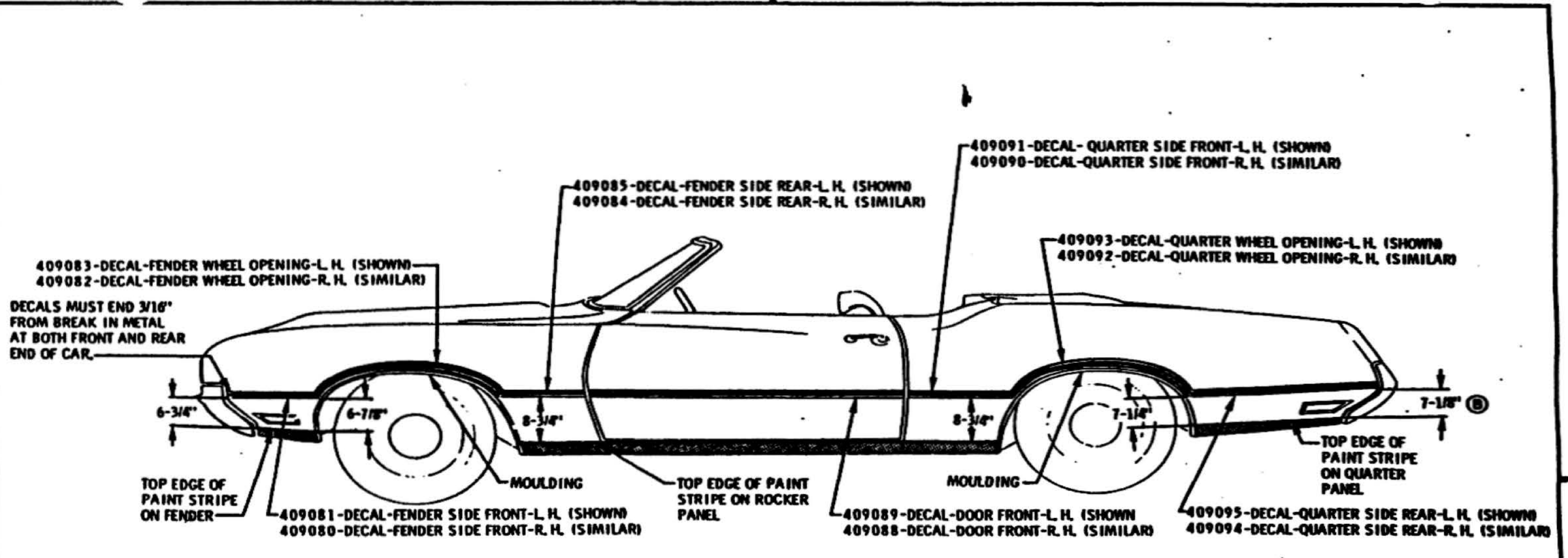
(REF) LAYOUT NO. 409067 & BR-45188

(SERIES 4267 & 4467)

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 AND NOT STRIPPED

										TITLE		INDIANAPOLIS PACE CAR - PAINT STRIPE		MANUAL SEC. PAGE				
										DATE	MARCH 1970		FIRST USED	1970		OLDSMOBILE PRODUCT INFORMATION MANUAL	35Y74	102
										DR BY	A. F. PALTELKY		CHECKED	[Signature]		REF.	35Y74	
										APPR.	[Signature]		APPR.	[Signature]		SERIES	A	
DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	DATE	SYM	REVISION	DR	CK.	PART NO.	404411		





WRAP DECAL AROUND EDGES OF DOOR, FENDER AND QUARTER PANEL.



TYPICAL SECTION AT DOOR OPENINGS

**TYPICAL INSTALLATION OF FENDER AND BODY DECALS**

NOTE:  
FENDER DECALS ARE PART OF KIT 409077  
BODY DECALS ARE PART OF KIT 409086

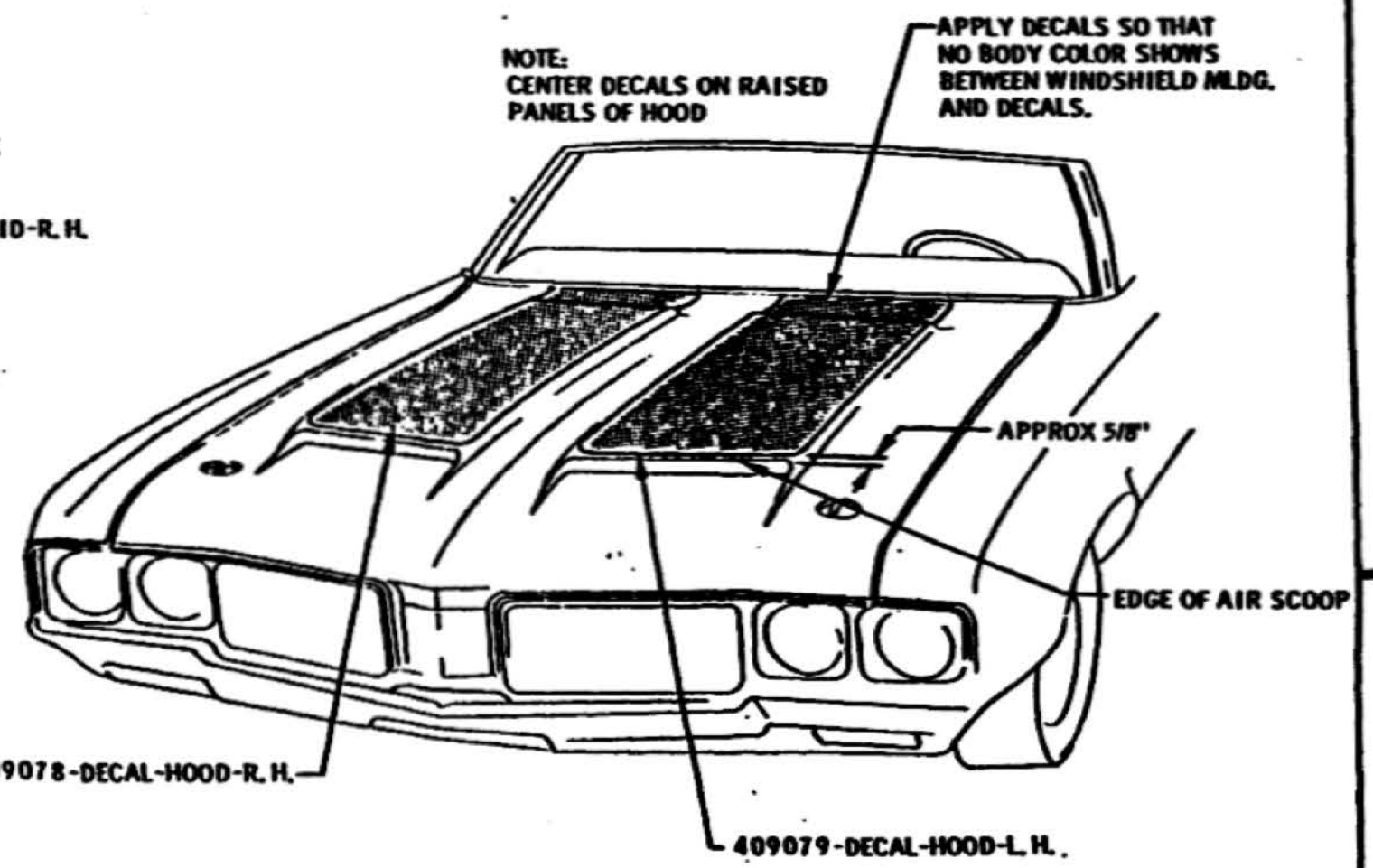
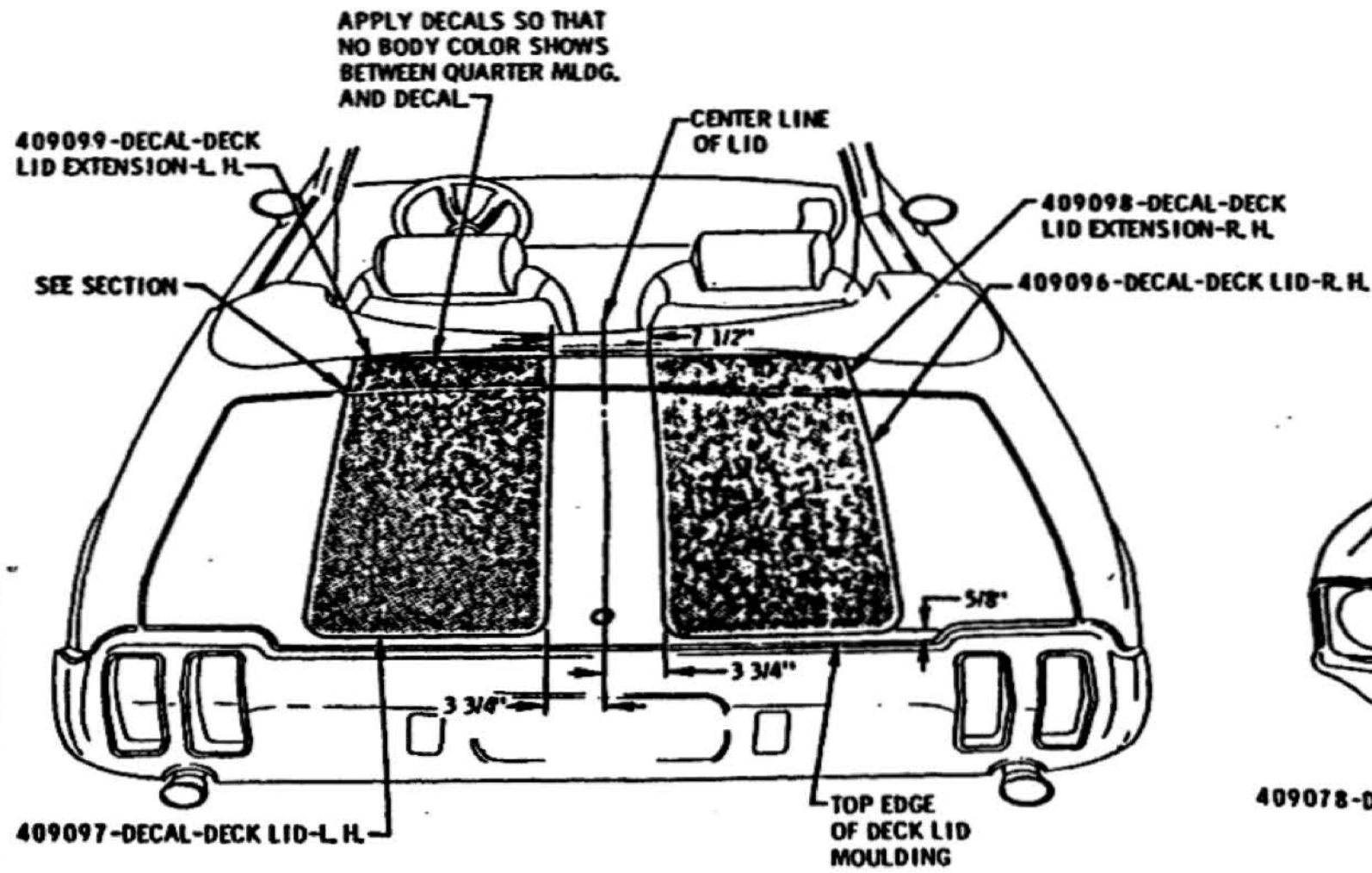
**NOTE:**

- 1. MAINTAIN A  $\frac{3}{4}$ " CONSTANT SPACE BETWEEN WHEEL HOUSING DECALS AND MOULDINGS (FRONT AND REAR)
- 2. WHEEL HOUSING DECALS MUST MATCH EXACTLY WITH ADJOINING DECALS AT POINTS OF INTERSECTION.
- 3. DOOR DECALS MUST ALIGN EXACTLY WITH ADJOINING DECALS.

(4267-4467)

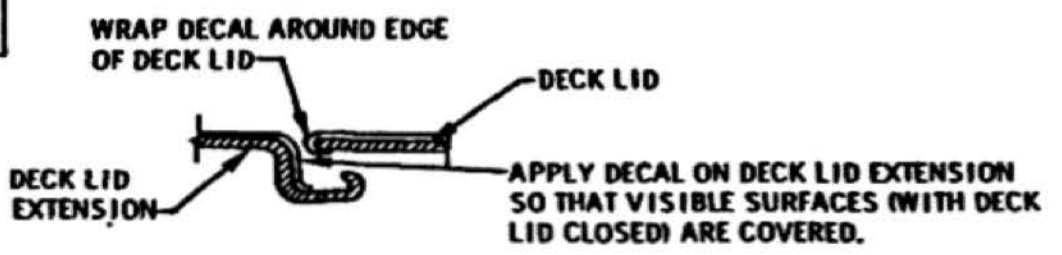


DATE		SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.	TITLE	FIRST USED	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	PAGE	PART NO.
												INDIANAPOLIS PACE CAR - BODY SIDE DECALS	1970		35Y74	104	404411
						3-23-70	A	DIMENSIONS REVISED	DR	BY							
						3-10-70	A	DIMENSION REVISED	DR	BY							



**TYPICAL APPLICATION OF DECK DECALS**

NOTE: DECK LID DECALS ARE PART OF KIT 409086



**TYPICAL SECTION THROUGH DECK LID AND DECK LID EXTENSION**

**TYPICAL APPLICATION OF HOOD DECALS**

NOTE: HOOD DECALS ARE PART OF KIT 409077

▲▲▲ FULLY DRIVEN, SEATED AND NOT STRIPPED

										TITLE INDIANAPOLIS PACE CAR - HOOD & DECK-LID DECALS					
										DATE MAR 6 1970	PRINT YEAR 1970	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL NO. 35Y74	PAGE 106	
										CHECKED BY B. PARKER		SERIES A		PART NO. 404411	
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	APPR.					

(4267-4467)