AMA–40A

AMA Specifications—Passenger Car

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MANUFACTURER	BUICK MOTOR DIVISION GENERAL MOTORS CORPORATION	CAR NAME	BUICK GS "350" - GS "400"
MAILING ADDRESS	1051 E. HAMILTON AVENUE FLINT, MICHIGAN 48550	MODEL YEAR	1969
		ISSUED:	Sept. 4, 1968
		REVISED (e)	12-2-68

NOTES:
1. The General Specifications herein are those in effect at date of compilation and are subject to change without notice by the manufacturer.
2. UNLESS OTHERWISE INDICATED:
   a. Specifications apply to standard models without optional equipment. Significant deviations are noted.
   b. Nominal design dimensions are used throughout these specifications.

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BODY – TYPES AND STYLE NAMES –

Body type, style names; use manufacturer's code for series & body style.

SERIES	BODY STYLE	MODEL DESIGNATION
GS "350"	2 Door Hardtop Coupe	43437
GS "400"	2 Door Hardtop Coupe	44637
	2 Door Convertible	44667

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MAKE OF CAR BUICK MODEL YEAR 1969 DATE ISSUED 9-4-68 REVISED (•)

CAR AND BODY DIMENSIONS

See Pages 25, 26 for SAE Dimension Definitions

(All dimensions in inches unless otherwise indicated)

All dimensions to ground are for comparative purposes only. Dimensions are to be shown for: 4-Dr. Sedan, 2-Dr. H.T., 4-Dr. H.T., Convertible and Station Wagon.

MODEL		SAE Ref. No.	"350" G.S. 43437	"400" 44637	"400" 44667
WIDTH					
Track – Front		W101	59.0		59.4
Track – Rear		W102	59.0		
Maximum overall car width		W103	75.6		
Body width at No. 2 pillar		W117	----		
LENGTH					
Body "O" to front of dash		L 30			
Wheelbase		L101	112.0		
Overall car length		L103	200.7		
Overhang – front		L104	37.5		
Overhang – rear		L105	51.2		
Body upper structure length		L123			
Body "O" line to ℄ of rear wheel		L127	95.5		
Body "O" line to w/s cowl point		L130			
HEIGHT					
Passenger Distribution (front & rear)			2 - 2		
Trunk/Cargo load (lbs.)			200		
Overall height		H101	53.4	53.4	53.7
Cowl height		H114	38.3		
Deck height		H138			
Rocker panel – front	To ground	H112	8.6		
	From front wheel ℄		27.2		
Rocker panel – rear	To ground	H111	8.4		
	From rear wheel ℄		27.2		
Windshield slope angle		H122	53.1		
GROUND CLEARANCE					
Bumper to ground – front		H102	12.4		
Bumper to ground – rear		H104	11.9		
Angle of approach		H106	25.5°		
Angle of departure		H107	17.2		
Ramp breakover angle		H147	12.3		
Min. running clearance (Specify)		H156	5.5 (Front Suspension)		

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CAR AND BODY DIMENSIONS

See Pages 25, 26 for SAE Dimension Definitions

(All dimensions in inches unless otherwise indicated)

MODEL	SAE Ref. No.	G.S. "350" 43437	G.S. "400" 44637	G.S. "400" 44667
FRONT COMPARTMENT				
Effective head room	H61	37.9	37.5	38.3
Max. eff. leg room – accelerator	L34	41.6	41.7	
H Point to Heel point	H30	7.7	8.1	
H Point travel	L17	4.7	4.8	
Shoulder room	W 3	58.3		
Hip room	W 5	59.7	59.4	
Upper body opening to ground	H50	48.7		48.8
REAR COMPARTMENT				
H Point couple distance	L50	30.6		
Effective head room	H63	36.3		37.0
Min. effective leg room	L51	32.3	32.2	
H Point to Heel point	H31	10.1	10.0	
Min. knee room	L48	0.7		
Rear Compartment room	L 3	24.0		
Shoulder room	W 4	57.1		47.9
Hip room	W 6	58.3	58.0	50.7
Upper body opening to ground	H51	----------		
LUGGAGE COMPARTMENT				
Usable luggage capacity	V 1	14.6		10.7
Liftover height	H195	28.6		
Position of spare tire storage		Horizontal		
Method of holding lid open		Torsion Bar		
STATION WAGON – THIRD SEAT				
Shoulder Room	W85	No Wagons - This Series		
Hip room	W86			
Effective leg room	L86			
Effective head room	H86			
Seat facing direction				
STATION WAGON – CARGO SPACE				
Cargo length at floor – front seat	L202	No Wagons - This Series		
Cargo length at belt – front seat	L204			
Cargo width – Wheelhouse	W201			
Opening width at belt	W204			
Maximum cargo height	H201			
Rear opening height	H202			
Cargo volume index (cu. ft.) $\frac{W4 \times L204 \times H201}{1728}$	V2			

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POWER TEAMS

(Indicate whether standard or optional)

MODEL AVAILABILITY	ENGINE					TRANSMISSION	AXLE RATIO (Std. first) (Indicate A C ratio)
	Displ. cu. in.	Carburetor	Compr. Ratio	BHP RPM	Torque RPM		
GS "350"	350	1-4 bbl	10.25	280 @ 4600	375 @ 3200	Manual (3&4)	3.23 (Std) No Perf. or Economy - No S.C.O.
	350	1-4 bbl	10.25	280 @ 4600	375 @ 3200	Automatic	3.23 (Std) No Perf. or Economy - No S.C.O.
GS "400"	400	1-4 bbl	10.25	340 @ 5000	440 @ 3200	Manual (3&4)	3.42 (Std) 3.64 (Perf) 3.91 (S.C.O.)
	400	1-4 bbl	10.25	340 @ 5000	440 @ 3200	Automatic	2.93 (Std) 3.42 (Perf) 3.64 (S.C.O.) 3.91 (S.C.O.)

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MODEL	GS "350" 43437	GS "400" 44637
ENGINE – GENERAL		
Type, no. cyls., valve arr.	V8 - Valve-in-Head	
Bore and stroke (nominal)	3.800 x 3.850	4.040 x 3.900
Piston displacement, cu. in.	350	400
Bore spacing (℄ to ℄)	4.240	4.750
No. system (front to rear) L. Bank	1-3-5-7	
No. system (front to rear) R. Bank	2-4-6-8	
Firing order	1-8-4-3-6-5-7-2	
Compres. ratio (nominal)	10.25	
Cylinder Head Material	Cast Iron	
Cylinder Block Material	Cast Iron	
Cyl. Sleeve-Wet,dry,none	None	
Number of mtg. points Front	Two	
Number of mtg. points Rear	One	
Engine installation angle	4° 37'	
Taxable horsepower $\frac{Dia^2 \times No.\ Cyl.}{2.5}$	46.2	52.23
Publishing max. bhp* @ eng. RPM	280 @ 4600	340 @ 5000
Publishing max. torque * (lb. ft. @ RPM)	375 @ 3200	440 @ 3200
Recommended fuel regular – premium	Premium	
ENGINE – PISTONS		
Material	Cast Aluminum Alloy	
Description and finish	Cam Ground - Transverse Slot - Divorced Skirt	
Weight (piston only) oz.	18.192	23.152 ± .064
Clearance (limits) Top land	.027 - .036	.034 - .042
Clearance (limits) Skirt Top	.0008 - .0014	.0007 - .0013
Clearance (limits) Skirt Bottom	.0013 - .0029	.017 - .033
Ring groove depth No. 1 ring	.1930 - .1855	.2090 - .2165
Ring groove depth No. 2 ring	.1955 - .1880	.2115 - .2190
Ring groove depth No. 3 ring	.1955 - .1880	.1815 - .1890
Ring groove depth No. 4 ring	Not Used	

* Max. bhp (brake horsepower) and max. torque corrected to 60° F and 29.92 in. Hg atmospheric pressure.

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		GS	
MODEL		"350"	"400"
		43437	44637
ENGINE – RINGS			
Function (top to bottom)	No. 1, oil or comp.	Compression	
	No. 2, oil or comp.	Compression	
	No. 3, oil or comp.	Oil	
	No. 4, oil or comp.	None	
Compression	Description - material, coating, etc.	#1 - Cast Iron - Molybdenum Coated #2 - Cast Iron - Lubrited	
	Width	.077 - .078	
	Gap	.010 - .020	.013 - .023
Oil	Description - material, coating, etc.	SAE - 1070 Steel No Chrome	Chrome Plated
	Width	.0235 - .0245	.023 - .025
	Gap	.015 - .035	.015 - .055
Expanders		Hump Type	Steel Oil Ring (Abut. Type)
ENGINE – PISTON PINS			
Material		Extruded SAE - 1018	
Length		3.060	3.520
Diameter		.9394 - .9397	.9994 - .9997
Type	Locked in rod, in piston, floating, etc.	Pressed-in Rod	
	Bushing - In rod or piston	None	
	Bushing - Material	None	
Clearance	In piston	.0001 - .0004 (Selected)	
	In rod	.00075 - .00125 (Select Press)	
Direction & amount offset in piston		.040 (b)	.060 (b)
ENGINE – CONNECTING RODS			
Material		Pearlitic Malleable Iron	Forged SAE - 1141 Steel
Weight (oz.)		22.800	24.384
Length (center to center)		6.385	6.598 - 6.602
Bearing	Material & Type	(a)	
	Overall length	.737	.816 - .826
	Clearance (limits)	.0002 - .0023	
	End play	.006 - .014	.005 - .012

(a) Steel Backed - M/400 Aluminum - Removable
(b) Major Thrust Side

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			GS "350"	GS "400"
MODEL			43437	44637
ENGINE – CRANKSHAFT				
Material			Nodular Iron	
Vibration damper type			Rubber Absorption	
End thrust taken by bearing (No.)			Three	
Crankshaft end play			.004 - .008	.003 - .009
Main bearing	Material & type		(a)	
	Clearance		.0004 - .0015	.0007 - .0018
	Journal dia. and bearing overall length	No. 1	2.9995 x .864	3.250 x .865
		No. 2	2.9995 x .864	3.250 x .865
		No. 3	2.9995 x 1.057	3.250 x 1.057
		No. 4	2.9995 x .864	3.250 x .865
		No. 5	2.9995 x .864	3.250 x 1.143
		No. 6	None	
		No. 7	None	
	Dir. & amt. cyl. offset		None	
Crankpin journal diameter			2.000	2.249 - 2.250
ENGINE – CAMSHAFT				
Location			Above Crankshaft at Center of "V"	
Material			Cast Iron Alloy	
Bearings	Material		Steel Backed Babbitt	
	Number		Five	
Type of Drive	Gear or chain		Chain	
	Crankshaft gear or sprocket material		Sintered Iron	
	Camshaft gear or sprocket material		Nylon Coated Aluminum	
	Timing chain	No. of links	54	48
		Width	.875	.739
		Pitch	.375	.500
ENGINE – VALVE SYSTEM				
Hydraulic lifters (Std., opt., NA)			Standard	
Valve rotator, type (intake, exhaust)			None	
Rocker ratio			1.55	1.59
Operating tappet clearance (indicate hot or cold)	Intake		None	
	Exhaust		None	

(Continued)

(a) Steel Backed - M/400 Aluminum Except #5 is Durex M/100.

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			GS "350"	GS "400"
MODEL			43437	44637
ENGINE – VALVE SYSTEM (cont.)				
Timing (based on top of ramp points)	Intake	Opens (°BTC)	24	14
		Closes (°ABC)	78	104
		Duration - deg.	282	298
	Exhaust	Opens (°BBC)	70	88
		Closes (°ATC)	38	47
		Duration - deg.	288	315
	Valve opening overlap		62	61
Intake	Material		SAE - 1041 (c)	
	Overall length		5.024 - 4.994	5.155 - 5.125
	Actual overall head dia.		1.880 - 1.870	2.005 - 1.995
	Angle of seat & face		45°	
	Seat insert material		None	
	Stem diameter		(a)	
	Stem to guide clearance		.0015 - .0035 (.0003 Max. Taper)	
	Lift (@ zero lash)		.3766	.4187
	Outer spring press. & length	Valve closed (lb.@ in.)	75 ± 5 @ 1.727	72 ± 5 @ 1.890
		Valve open (lb.@ in.)	180 ± 7 @ 1.340	177 ± 7 @ 1.450
	Inner spring press. & length	Valve closed (lb.@ in.)	Not Used	
		Valve open (lb.@ in.)	Not Used	
Exhaust	Material		21 - 2 (c)	N82152 - (21-4N) (c)
	Overall length		5.044 - 5.014	5.175 - 5.145
	Actual overall head dia.		1.505 - 1.495	1.630 - 1.620
	Angle of seat & face		45°	
	Seat insert material		None	
	Stem diameter		(b)	
	Stem to guide clearance		.0015 - .0035 (Top) - .0025 - .0045 (Bottom)	
	Lift (@ zero lash)		.3840	.4482
	Outer spring press. & length	Valve closed (lb.@ in.)	75 ± 5 @ 1.727	72 ± 5 @ 1.890
		Valve open (lb.@ in.)	180 ± 7 @ 1.340	177 ± 7 @ 1.450
	Inner spring press. & length	Valve closed (lb.@ in.)	Not Used	
		Valve open (lb.@ in.)	Not Used	
ENGINE – LUBRICATION SYSTEM				
Type of lubrication (splash, pressure, nozzle)	Main bearings		Pressure	
	Connecting rods		Pressure	
	Piston pins		Splash	
	Camshaft bearings		Pressure	
	Tappets		Pressure	
	Timing gear or chain		Splash & Nozzle	Drip from Front Cam Bearing
	Cylinder walls		Splash & Nozzle	

(Continued)

(a) .3725 ± .0005 Max. Allowable Taper to be .003 with Smallest Dia. @ Valve Head End.

(b) .3725 ± .0005 Top --- .3715 ± .0005 Bottom. (c) Aluminized Face and Chrome Flashed Stem.

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MODEL	GS "350" 43437	GS "400" 44637

ENGINE – LUBRICATION SYSTEM (cont.)

Oil pump type	Gear	
Normal oil pressure (lb. engine rpm)	37 @ 2400	40 @ 2400
Oil press. sending unit (elect. or mech.)	Electrical	
Type oil intake (floating, stationary)	Stationary	
Oil filter system (full flow, part., other)	Full Flow	
Filter replacement (element, complete)	Element & Can	
Capacity of c case, less filter-refill (qt.)	Four	
Oil grade recommended (SAE viscosity and temperature range)	Anticipated Lowest Temp.	Use SAE Viscosity
	Above 32° F	10W-30; 20W or 20
	Below 32° F to Zero F	10W-30; 10W-40; 10W
	Below Zero F	5W-20; 5W-30; 5W
Engine Service Reqmt. (MM, MS, etc.)	Passing Car Makers Test - G.M. 6041M	

ENGINE – EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)		Dual
Muffler No. & type (reverse flow, straight thru, separate resonator)		Two Reverse Flow
Exhaust pipe dia. (O.D., wall thick.)	Branch	2.25 - .084 (Laminated Tubing)
	Main	- - - - - -
Tail pipe dia. (O.D. & wall thickness)		2.00 - .060

ENGINE – CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)		Standard	Closed Induction System
		Optional	None
Control Unit	Make and model		A.C.
	Location		Intake Manifold (Lifter Cavity) Rear
	Energy source (manifold vacuum, carburetor air stream, other)		Manifold Vacuum
	Control method (variable orifice, fixed orifice, other)		Variable Orifice
Complete system	Discharges (to intake manifold, carb. air intake, air cleaner intake, other)		Intake Manifold Normally with Additional Discharge into Air Cleaner Under Excessive Blow-By Condition
	Air inlet (breather cap, carburetor air cleaner, other)		Carburetor Air Cleaner
	Flame arrestor (screen, check valve, other)		Check Valve and Screen

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G.S.

MODEL	"350"	"400"
	43437	44637

ENGINE – EXHAUST EMISSION CONTROL

Type (Air injection, engine modifications, other)			Combustion Control	
Air Injection Pump	Type #		Not Used	
	Displacement			
	Drive ratio			
	Drive type			
	Relief valve (type)			
	Filter (describe)			
Air Injection System	Air distribution (head, manifold, etc.)			
	Point of entry			
	Injection tube I.D.			
	Check valve type			
	Backfire protection (type)			
Carburetor	Make		Rochester	
	Model		4MV	
	Barrel size		(p) 1.3750	(s) 2.250
	Idle speed	Drive	600	
		Neutral	700 (Manual Transmission)	
	Idle A/F mixture			
Distributor	Aux. Adv. Systems (type)		None	
	Make		Delco - Remy	
	Model		1111334	1111335
	Cent'fgal adv. in crank degrees @ eng. rpm	Start (rpm)	1100	
		Intermed. points deg. @ rpm	19° @ 1750	21° @ 1800
		Max. deg. @ rpm	28° @ 4600	32° @ 4600
	Vacuum adv. in crank degrees @ eng. rpm	Start (in Hg)	7"	
		Intermed. points deg. @ in. Hg	16" @ 15	
		Max. deg. @ in.	19.5 @ 25	
	Vacuum Source		Intake Manifold Ported to Atmosphere at Idle	
Timing - Crank degrees @ rpm			0° BTC @ 550 (-2-1/2 @ 700 Manual-"400")	
Cooling System				T.V.S. Switch - (Automatic Transmission Only) To Advance Timing When Coolant Becomes Hot.
Exhaust System				

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	GS	
MODEL	"350"	"400"
	43437	44637

ENGINE – FUEL SYSTEM

(See supplemental page for Details of Fuel Injection, Supercharger, etc. if used)

Induction type: Carburetor, fuel injection, supercharger.			Carburetor	
Fuel Tank	Refill capacity (U.S. gals.)		20 (Approx.)	
	Filler location		Rear	
Fuel Pump	Type (elec. or mech.)		Mechanical	
	Locations		Engine	
	Pressure range		4.25 - 5.75 at Outlet (a)	5.5 - 7.0 @ Pump Outlet (b)
Vacuum booster (std., optional, none)			None	
Fuel Filter	Type		Pleated Paper	Woven Plastic
	Locations		Carb. Inlet	Fuel Tank
Carburetor	Choke type		Remote (Manifold) - Auto	
	Intake manifold heat control (exhaust or water)		Exhaust	
	Air cleaner type	Standard	Oiled Paper Element	
		Optional	Heavy Duty Dual Stage Element	
	Idle speed (spec. neutral or drive)	Manual	700 (Neutral) - A/C Same with A/C "Off"	
		Automatic	600 (Drive) - A/C Same with A/C "Off"	
		Idle A-F mix.	14.5	14.6

CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors		No. Used and Type	Barrel Size
			Make	Model		
GS "350"	350	Manual (3)	Rochester	4 MV	1-4 bbl	Primary 1.3750 Secondary 2.250
	350	Automatic	Rochester	4 MV	1-4 bbl	Primary 1.3750 Secondary 2.250
GS "400"	400	Manual (3or4)	Rochester	4 MV	1-4 bbl	Primary 1.3750 Secondary 2.250
	400	Automatic	Rochester	4 MV	1-4 bbl	Primary 1.3750 Secondary 2.250

(a) 5.5 - 7.0 @ Outlet with V.R. Lines Blocked

(b) With Vapor Return Lines Blocked

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G.S.

MODEL	"350"	"400"
	43437	44637

ENGINE – COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)			Pressure	
Radiator cap relief valve pressure			15 psi	
Circulation thermostat	Type (choke, bypass)		Choke	
	Starts to open at (° F)		190	
Water pump	Type (centrifugal, other)		Centrifugal	
	GPM @ 1000 pump rpm		10	15
	Number of pumps		One	
	Drive (V-belt, other)		V-Belt	
	Bearing type		Double Row	
By-pass recirculation type (inter., ext.)			External	
Radiator core type (cellular, tube and fin, other)			Cross-Flow	
Cooling system capacity	With heater (qt.)		13.45	16.17(Std.)
	Without heater (qt.)		12.62	15.34
	Opt. equipment-specify (qt.)		13.52 (A.C.)	16.67 (A.C.)
Water jackets full length of cyl. (yes, no)			No	
Water all around cylinder (yes, no)			Yes	
Radiator hose	Lower	Number and type (molded, straight)	One Molded	
		Inside diameter	1.50	
	Upper	Number and type (molded, straight)	One Molded	
		Inside diameter	1.50	
	By-pass	Number and type (molded, straight)	One Molded	
		Inside diameter	.62	
Fan	Number of blades & spacing		4-(65 - 115°) 7 AC	4-(65 - 115°) 5 AC
	Diameter		18"	
	Ratio-fan to crankshaft rev.		.95 (1.15 A/C)	.92 (1.30 A/C)
	Fan cutout type		None - (Thermo - Clutch with A/C)	
	Bearing type		Single Row Ball	
*Drive belts (indicate belt used by letter)	Fan		A D (A/C)	E
	Generator or alternator		A D (A/C)	E
	Water Pump		A D (A/C)	E
	Power Steering		B	F
	Air Conditioning		C	G

* Drive Belt Dimensions	A	B	C	D	E	F	G	H	I	J	K
Angle of V	38°	38°	38°	38°	38°	38°	38°				
Nominal length (SAE)	45.5	52.5	61.50	46.0	48.9	50.96	65.00				
Width	.38	.47	.47	.38	.38	.47	.47				

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MODEL	GS "350" 43437	GS "400" 44637

ELECTRICAL – SUPPLY SYSTEM

Battery	Make and Model		Delco #R-58	Delco #R-68
	Voltage Rtg. & Total Plates		12-66	
	SAE Designation & Amp. Hr. Rtg.		9MJ3F-61	9TJ3-70
	Location		Right Front Fender Skirt	
	Terminal grounded		Negative	
Generator or Alternator	Make		Delco - Remy	
	Model		1100761 (a)	
	Type and rating		Diode Rectified Alternator (37 amp) (a)	
	Output at engine idle (neutral)		15 amp Min. (b)	
	Ratio-Gen. to Cr/s rev.		2.29 (d)	2.47 (c)
Regulator	Make		Delco - Remy	
	Model		1119515	
	Type		Voltage Control	
	Cutout relay	Closing voltage - generator rpm	None	
		Reverse current to open	None	
	Regulated	Voltage	13.6 to 14.4 @ 125°	
		Current	None	
	Voltage test conditions	Temperature	None	
		Load	Run 15 Minutes at 10 Amps (Max.)	
		Other	Battery Must Be In Circuit	

ELECTRICAL – STARTING SYSTEM

Starting Motor	Make		Delco - Remy	
	Model		1108391	1108392
	Rotation (drive end view)		Clockwise	
Motor control	Switch (solenoid, manual)		Solenoid	
	Starting procedure		Manual - Place selector lever in neutral and depress clutch pedal. Auto - Place selector lever in neutral or park. NOTE - Turn ignition switch key clockwise.	
Motor Drive	Engagement type		Solenoid with Over-Running Clutch	
	Pinion meshes (front, rear)		Front	
	Number of teeth	Pinion	9	
		Flywheel - Manual	160	166
		Flywheel - Auto.	160	166
	Flywheel tooth face width	Manual	.375	
		Auto.	.375	

(a) 1100774 with A/C (55 amp)
(b) 20 amps with A/C
(c) 2.93 with A/C
(d) 2.66 with A/C

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MODEL	GS "350" 43437	GS "400" 44637

ELECTRICAL – IGNITION SYSTEM

Type	Conventional – Std., Opt., N.A.		Standard	
	Transistorized – Std., Opt., N.A.		Not Available	
	Other (specify)		None	
Coil	Make		Delco - Remy	
	Model		1115247	
	Amps	Engine stopped	3.8 @ 12.6 V	
		Engine idling	2.3 @ 12.6 V	
Distributor	Make		Delco - Remy	
	Model		1111334	1111335
	Cent'fgal adv. in c/shaft degrees @ engine rpm (nominal)	Start (rpm)	1100	
		Intermediate points deg. @ rpm	19° @ 1750	21° @ 1800
		Max. deg. @ rpm	28° @ 4600	32° @ 4600
	Vacuum adv. in c/shaft degrees @ in. Hg. (nominal)	Start (in. Hg.)	6 - 8	
		Intermediate points, deg. @ in. Hg.	16.0 @ 15	
		Max. deg. in. Hg.	19.5 @ 25	
	Breaker gap (in.)		.013 - .019	
	Cam angle (deg.)		30 ± 1	
	Breaker arm tension (oz.)		19 - 23	
Timing	Crankshaft deg. @ rpm		0° @ 550	
	Mark location		Crankshaft Flange	Harmonic Damper
Spark Plug	Make		AC	
	Model		R 45TS	R 44TS
	Thread (mm)		14	
	Tightening torque (lb. ft.)		15	
	Gap		.030	
Cable	Conductor type		2000 ohms per foot (Resistance Cable)	
	Insulation type		Neoprene (with Inner Braid)	
	Spark plug protector			

ELECTRICAL – SUPPRESSION

Locations & type	(a)

(a) TVRS Cable - Spark Plugs and Coil to Distributor
Ground Strap - Engine to Dash
By-Pass Capacitors on Delcotron, and Regulator
Resistor Spark Plugs

AMA Specifications—Passenger Car

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MAKE OF CAR BUICK MODEL YEAR 1969 DATE ISSUED 9-4-68 REVISED (•)

MODEL	"350" GS	"400"
	43437	44637

ELECTRICAL – INSTRUMENTS AND EQUIPMENT

Speedometer	Type	Mechanical (Eddy Current)
	Trip odometer (yes,no)	No
Charge indicator – type		Indicator Light
Temperature indicator – type		"Hot" Indicator Light Only
Oil pressure indicator – type		Indicator Light - Pressure Switch
Fuel indicator – type		Electrical
Other		
Windshield wiper	Type – Standard	Electric - Dual Speed
	Type – Optional	None
Windshield washer	Type – Standard	Electric Engagement Mech. Piston Pump
	Type – Optional	None
Horn	Type	Solenoid
	Number used	Two
	Amp draw (each)	4.5/5.5

DRIVE UNITS – CLUTCH (Manual Transmission)

Make & type		Borg & Beck (Dry)	
Type pressure plate springs		Belleville	
Total spring load (lb.)		1900 - 2100	2450 - 2750
No. of clutch driven discs		One	
Clutch facing	Material	Woven	
	Outside & inside dia.	10.4 - 6.5	11.0 - 6.5
	Total eff. area (sq.in.)	103.5	123.7
	Thickness	.135	.140
	Engagement cushioning method	Springs	
Release bearing	Type & method of lubrication	Ball Sealed	
Torsional damping	Methods: springs, friction material	Springs	

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MAKE OF CAR BUICK MODEL YEAR 1969 DATE ISSUED 9-4-68 REVISED (e) 12-2-68

MODEL	GS "350" 43437	GS "400" 44637

DRIVE UNITS – TRANSMISSIONS

Manual 3-speed (std. or opt.)	Standard
Manual 4-speed (std. or opt.)	Optional
Manual with overdrive (std. or opt.)	Not Available
Automatic (std. or opt.)	Optional

DRIVE UNITS – MANUAL TRANS.

Number of forward speeds			Three (b) (c)	
Transmission ratios	In first		2.54 (a) (b)	2.42 (a)
	In second		1.50 (a) (b)	1.61 (a)
	In third		1.00 (a) (b)	1.00 (a)
	In fourth		(a)	(a)
	In reverse		2.63 (a) (b)	2.33 (a)
Synchronous meshing, specify gears			All Forward Gears	
Shift lever location			Steering Column (b) (c)	Floor
Lubricant	Capacity (pt.)		3.4	3.5
	Type recommended		Multi-Purpose Gear Lubricant (MIL-L-2105B)	
	SAE viscosity number	Summer	SAE 80	
		Winter	SAE 80	
		Extreme cold	SAE 80	

DRIVE UNITS – MANUAL TRANS. W/OVERDRIVE

(For transmission data see manual transmission section)

Type (planetary or other)			Not Available
Manual lockout (yes, no)			
Downshift accelerator control (yes, no)			
Minimum cut-in speed			
Gear ratio			
Lubricant	Capacity (pt.) (Overdrive only)		
	Separate filler (yes, no)		
	Type recommended		
	SAE viscosity number	Summer	
		Winter	
		Extreme cold	

(a) Optional 4-Speed Transmission Ratios Are:
1 - 2.20 3 - 1.28 Rev. - 2.27
2 - 1.64 4 - 1.00

(b) Heavy Duty 3-Speed Manual Transmission with Floor Shift - Optional on GS 350 - (Ratios Same as G. S. 400).

(c) 4-Speed Manual Transmission Available as Optional on GS 350 and GS 400 (Floor Shift).

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MAKE OF CAR BUICK MODEL YEAR 1969 DATE ISSUED 9-4-68 REVISED (e) 12-2-68

	GS	
MODEL	"350"	"400"
	43437	44637

DRIVE UNITS – AUTOMATIC TRANSMISSION

Trade name		Turbo Hydra-Matic "350"	Turbo Hydra-Matic "400"
Type describe		Three Speed with Torque Converter	Three Speed with Torque Converter
Selector location		Lever - Steering Column Mounted (b)	
List gear ratios Selector Pattern and indicate which are used in each selector position		Drive L2 L1 Rev. 1st 2.52 2.52 2.52 1.93 2nd 1.52 1.52 ---- ---- 3rd 1.00 ---- ---- ----	Drive L2 L1 Rev. 1st 2.48 2.48 2.48 2.08 2nd 1.48 1.48 ---- ---- 3rd 1.00 ---- ---- ----
Max. upshift speed–drive range		(c) 47 (d) 80	1-2 = 43 2-3 = 80
Max. kickdown speed–drive range		(e) 38 (f) 70	2-1 = 24 3-2 = 74
Torque convertor	Number of elements	Three	
	Max. ratio at stall	2.05	
	Type of cooling (air, liquid)	Water	
	Nominal diameter	11.75	
Lubricant	Capacity–refill (pt.)	20 Total - 6.0 Drain	23.0 Total - 7.0 Drain
	Type recommended	"DEXRON" R Automatic Transmission Fluid	
Special transmission features			

DRIVE UNITS – PROPELLER SHAFT

Number used		One	
Type (straight tube, tube-in-tube, internal-external damper, etc.)		Exposed	
Outer diam. x length* x wall thick-ness	Manual 3-speed trans.	3.00 x 56.00 x .065	
	Manual 4-speed trans.	3.25 x 60.00 x .065	
	Overdrive transmission	Not Available	
	Automatic transmission	3.00 x 56.00 x .065 (a)	3.24 x 55.10 x .065 (a)

* Center to center of universal joints, or to centerline of rear attachment.

(Continued)

(a) With Rubber Biscuit Drive
(b) Console Lever - Optional
(c) 1-2 Shift
(d) 2-3 Shift
(e) 2-1 Shift
(f) 3-2 Shift

AMA Specifications—Passenger Car

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	GS	
MODEL	"350"	"400"
	43437	44637

DRIVE UNITS – PROPELLER SHAFT (cont.)

Intermediate bearing	Type (plain, anti-friction)		None	
	Lubrication (fitting, prepack)		None	
Slip Yoke	Type		Male Slip Yoke at Transmission Where Primary Slip is Taken	
	Number of teeth		27 O.D. Fit-(Man. Trans.) 27 P.D. Fit-(Auto. Trans.)	28 O.D. Fit-(Man. Trans.) 32 P.D. Fit-(Auto. Trans.)
	Spline O.D.		1.1750 - 1.1745 (Manual 1.166 - 1.150 (Automatic)	1.373 - 1.357 (Automatic)
Universal joints	Make and Mfg. No.		Saginaw	
	Number used		Two	
	Type (ball and trunnion, cross)		Cross	
	Rear attach. (u-bolt, clamp, etc.)		U-Bolt	
	Bearing	Type (plain, anti-friction)	Needles - (Anti-Friction)	
		Lubric. (fitting, prepack)	Prepack	
Drive taken through (torque tube or arms, springs)			Arms	
Torque taken through (torque tube or arms, springs)			Arms	

DRIVE UNITS – AXLE

Type (front, rear)			Rear
Description			Salisbuty Hypoid - Semi-Floating
Limited Slip differential, type			Positive Traction (Optional)
Drive Pinion Offset			1.750
No. of differential pinions			2
Pinion adjustment (shim, other)			Shim
Pinion bearing adj. (shim, other)			Collapsible Spacer
Wheel bearing type			Roller
Lubricant	Capacity (pt.)		2.90
	Type recommended		MIL-L-2105B
	SAE viscosity number	Summer	80
		Winter	80
		Extreme cold	80

AXLE RATIO TOOTH COMBINATIONS

(See page 3 for axle ratio usage)

Axle ratio		(a) 3.23	(b) 3.42	(c) 3.64	(d) 3.91	(e) 2.93	
No. of teeth	Pinion	13	12	11	11	14	
	Ring gear	42	41	40	43	41	
Ring Gear O.D.		8.500					

(a) Std. - Manual (3) and Auto. (GS350) (b) Std. - Manual (3&4) - (GS400) - Also Perf. Ratio - Auto. Asm. (c) Perf. Ratio - Manual (3&4) (GS400)
(d) S.C.O. - Manual (3&4) and Auto. - (GS400) (e) Std. - Auto. - (GS400)

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MAKE OF CAR BUICK MODEL YEAR 1969 DATE ISSUED 9-4-68 REVISED (*)

			GS	
MODEL			"350" 43437	"400" 44637
DRIVE UNITS – WHEELS				
Type & material			Disc Steel	
Rim (size & flange type)		Std.	14 x 6.00 "JK"	
		Opt.	None	
Attachment	Type (bolt or stud)		Stud	
	Circle diameter		4.750	
	Number and size		Five - .4375 - 20	
MODEL			"350" 43437	"400" 44637
DRIVE UNITS – TIRES				
Standard	Size, ply rating, & ply		7.75 - 14 (Two-Ply with 4-Ply Rating)	7.75 - 14 Whitewall
	Type (bias, radial, etc.)		Bias Angle	
	Full rated Inflation Press.	Front	26	28
		Rear	28	28
	Rev./Mile at 50 MPH			
Optional	Size, ply rating, & ply		8.25 - 14 (Two-Ply with 4-Ply Rating) 205R-14 Radial or F70-14 Wide Oval Opt. 7.75-14 4-Ply Nylon (Export)	8.25 - 14 and F70-14 Wide Oval 7.75-14 4-Ply Nylon (Export) 205R-14 Radial
BRAKES – PARKING				
Type of control			Step-On (Hand Release)	
Location of control			Left Side at Cowl Panel	
Operates on			Rear Shoes	
If separate from service brakes	Type (internal or external)		None	
	Drum diameter		None	
	Lining size (length x width x thickness)		None	

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MAKE OF CAR BUICK MODEL YEAR 1969 DATE ISSUED 9-4-68 REVISED (e) 9-30-68

MODEL	G.S. "350" 43437	G.S. "400" 44637	G.S. "400" 44667
BRAKES – SERVICE			
Type (drum) or (disc & no. of pistons)	Drum (a)		
Self adjusting (std., opt., N.A.)	Standard		
Special Valving — Type (proportion, delay, metering, other)	None		
Power brake make & type (remote, int., etc.) — Std.	No		
Power brake make & type (remote, int., etc.) — Opt.	Delco - Moraine - (Int. Vac. Susp.)		
Effective area (sq. in.) *	152.0		
Gross lining area (sq. in.) **	158.1		
Swept area (sq. in.) ***	268.6		
Front to Rear Effectiveness Relationship	62.4 - (Fronts) - (b)		
Drum — Diameter (nominal) — Front	9.495 - 9.505		
Drum — Diameter (nominal) — Rear	9.495 - 9.505		
Drum — Type and material	Composite Cast Iron	(c)	
Rotor — Outer working diameter			
Rotor — Inner working diameter			
Rotor — Working width			
Rotor — Material & type (vented/solid)			
Wheel cylinder bore — Front	1.125		
Wheel cylinder bore — Rear	.875		
Master Cylinder — Bore	1.000		
Master Cylinder — displacement distribution — Front %	59.0		
Master Cylinder — displacement distribution — Rear %	41.0		
Pedal arc ratio	6.46 (d)		
Line pressure at 100 lb. pedal load	830 psi (e)		
Shoe Clearance — Front	.015		
Shoe Clearance — Rear	.015		
Brake lining — Bonded or riveted	Riveted		
Brake lining — Front Wheel — Material	Extruded Molded		
Brake lining — Front Wheel — Size (length x width x thickness) — Prim. or outboard	7.57 x 2.50 x .196 (Gross) - .096 (Net)		
Brake lining — Front Wheel — Size (length x width x thickness) — Second. or inboard	9.83 x 2.50 x .265 (Gross) - .165 (Net)		
Brake lining — Front Wheel — Segments per shoe	One		
Brake lining — Rear Wheel — Material	Extruded Molded		
Brake lining — Rear Wheel — Size (length x width x thickness) — Prim. or outboard	7.57 x 2.00 x .196 (Gross) - .096 (Net)		
Brake lining — Rear Wheel — Size (length x width x thickness) — Second. or inboard	9.83 x 2.00 x .265 (Gross) - .165 (Net)		
Brake lining — Rear Wheel — Segments per shoe	One		

* Excludes rivet holes, grooves, chamfers, etc. ** Includes rivet holes, grooves, chamfers, etc.
*** Total swept area for four brakes. (Widest lining contact width for each brake x its contact circumference.)

(a) Power Disc Fronts, Optional
(b) Based on Wheel Cyl. Size Only
(c) Fronts - Finned Aluminum with Cast Iron Liners. Rears - Composite C.I.
(d) 3.44 when Optional Power Brake Equipped
(e) 1130 psi with 30# Pedal Load when Power Brake Equipped.

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				G.S.	
				"350"	"400"
MODEL				43437	46637
STEERING					
Manual (std., opt., NA)				Standard	
Power (std., opt., NA)				Optional	
Adjustable steering wheel (tilt, swing, other)		Type and description		Tilt (a)	
		(std., opt., NA)		Optional (a)	Optional
Wheel diameter		Manual		16.00"	
		Power		16.00"	
Turning diameter (feet)	Outside front	Wall to wall (l. & r.)		41.55 - 42.20	
		Curb to curb (l. & r.)		38.38 - 38.96	
	Inside rear	Wall to wall (l. & r.)		21.44 - 22.48	
		Curb to curb (l. & r.)		22.12 - 23.12	
Manual	Gear	Type		Recirculating Ball Nut	
		Make		Saginaw	
		Ratios	Gear	24.0	
			Overall	28.6	
	No. wheel turns (stop to stop)			5.56	
Power	Type (coaxial, linkage, etc.)			In-Line Rotary Valve	
	Make			Saginaw	
	Gear	Type		Recirculating Ball-Nut (Integral with Power Piston)	
		Ratios	Gear	17.5	
			Overall	20.9 (b)	
	Pump driven by			Belt	
	No. wheel turns (stop to stop)			4.06	
Linkage	Type			Parallelogram	
	Location (front or rear of wheels, other)			Front of Wheels	
	Drag link (trans. or longit.)			Transverse	
	Tie rods (one or two)			Two	
Steering Axis	Inclination at camber (deg.)			8° 0' @ 1° 0'	
	Bearings (type)	Upper		Ball Joint Suspension Used	
		Lower		Ball Joint Suspension Used	
		Thrust		Ball Joint Suspension Used	
Whl. Align. (range at curb wt. & preferred)	Caster (deg.)			- 1/2° ± 30' (Curb Height)	
	Camber (deg.)			+ 1/2° ± 30' (Curb Height)	
	Toe-in (outside track inches)			.12 to .25 (Curb Height)	
Steering spindle & joint type				Ball	
Wheel Spindle	Diameter	Inner bearing		1.3748/1.3743	
		Outer bearing		.8435/ .8430	
	Thread size			.750 - 20 UNF	
	Bearing type			Tapered Roller	

(a) Not available with manual transmission with column shift,
(b) 17.9 with Optional 15-1 Gear.

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1969 DATE ISSUED 9-4-68 REVISED (e)

	GS	
MODEL	"350"	"400"
	43437	44637

SUSPENSION – GENERAL

(See Supplement page for details on Air Suspension)

Provision for car leveling		No
Provision for brake dip control		Yes
Provision for acc. squat control		Yes
Special provisions for car jacking		No
Shock absorber front & rear	Type	Direct
	Make	Delco
	Piston dia.	1.00
Other special features		None

SUSPENSION – FRONT

Type and description			Coil Springs and Ball Joint
Spring	Type		Coil
	Material		SAE - 9260 Steel
	Size (coil design height & I.D. bar length x dia.)		11.31 Design Ht. - 3.60 I.D.
		110 x .621	122 x .643
	Spring rate (lb. per in.)		410
	Rate at wheel (lb. per in.)		142
Stabilizer	Type (link, linkless, frameless)		Link
	Material & bar diameter		.970 (1070 Steel)

SUSPENSION – REAR

Type and description			Coil Springs	
Drive and torque taken through			Arms	
Spring	Type		Coil	
	Material		SAE - 9260 Steel	
	Size (length x width, coil design height & I.D.; bar length & dia.)		7.62 Design Ht. - 5.50 I.D.	
			96 x .560	98 x .540
	Spring rate (lb. per in.)		144	122
	Rate at wheel (lb. per in.)		144	122
	Mounting insulation type		Rubber	
	If leaf	No. of leaves	Not Used	
		Shackle (comp. or tens.)	Not Used	
Stabilizer	Type (link, linkless, frameless)		Linkless (Optional)	
	Material		1070 Steel .875 Dia.	
Track bar type			Not Used	

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MAKE OF CAR BUICK MODEL YEAR 1969 DATE ISSUED 9-4-68 REVISED (•)

MODEL	GS "350"	GS "400"
	43437	44637

FRAME

Type and description (Separate frame, unitized frame, partially - unitized frame) #	Perimeter (Separate Frame)

BODY – MISCELLANEOUS INFORMATION

Drs. hinged (front, rr.)	Front doors	Front	
	Rear doors	Front	
Type of finish (lacquer, enamel, other)		Acrylic Lacquer	
Hood counterbalanced (yes, no)		Yes	
Hood release control (internal, external)		External	
Vehicle Indent. No. location		Left Side of Upper Instrument Panel	
Engine No. location		Left Cylinder Block at Front Below Head	Right Cylinder Head at Rear on Boss
Theft protection - type		Ignition - Steering Integral Lock	
Vent window control method (crank, friction pivot)	Front	Crank	
	Rear	- - -	
Seat cushion type	Front	Zig - Zag	
	Rear	Zig - Zag	
	3rd seat	- - - - - -	
Seat back type	Front	Zig - Zag	
	Rear	Zig - Zag	
	3rd seat	- - - - - -	
Windshield glass type (i.e., single curved - laminated plate)		Compound Curved (Laminated Type)	
Side glass type (i.e., curved - tempered plate)		Curved (Tempered Plate)	
Backlight glass type (i.e., compound curved - tempered plate, three piece)		Single Curved (Tempered Plate)	
Windshield glass exposed surface area		1208.7	
Side glass exposed surface area		1300.2	
Backlight glass exposed surface area		895.1	
Total glass exposed surface area		3404.0	

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	G.S.	
MODEL	"350"	"400"
	43437	44637

CONVENIENCE EQUIPMENT

(Indicate whether standard, optional or NA on each series)

Power windows	Side windows	Optional
	Vent windows	Not Available
	Backlight or tailgate	Not Available
Power seats (specify type as well as availability)		Optional (4-Way tilt)
Reclining front seat back (R-L or both)		Optional (Bucket Seats)
Front seat head restrainer (R-L or both)		Standard
Radios (specify type as well as availability)		Optional (Sonomatic or AM/FM)
Rear seat speaker		Optional
Power antenna		(a) Optional (Exc. Convertible)
Clock		Optional
Air conditioner (specify type and availability)		Optional
Speed warning device		Optional (N.A. with Speed Control)
Speed control device		Optional (Except with Manual Trans.)
Ignition lock lamp		Not Available
Dome lamp		Standard
Glove compartment lamp		Optional
Luggage compartment lamp		Optional
Underhood lamp		Dealer Installed
Courtesy lamp		Standard
Map lamp		Not Available
Auto. trans. quad. lamp		On Optional Console Cars Only
Cornering light lamp		Not Available
Emergency Flasher		Standard
Ash Receiver Lamp		Optional

LAMP HEIGHT AND SPACING

Height above ground to center of bulb or marker	Headlamp	Highest *	26.47	25.96
		Lowest	----------	
	Tail	Highest	20.94	
		Lowest	----------	
	Sidemarker	Front	22.31	21.8
		Rear	25.21	24.7
Distance from C L of car to center of bulb	Headlamp	Inside	25.73	
		Outside *	32.11	
	Tail	Inside	20.78	
		Outside	27.96	
	Directional	Front	29.42	
		Rear	14.18	

* If single headlamps are used enter here.

(a) Included with AM/FM Radio

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WEIGHTS

	CURB WEIGHT * POUNDS			% PASS. WEIGHT DISTRIBUTION				LIQUID WEIGHT	
				Pass. In Front		Pass. In Rear			
	Front	Rear	Total	Front	Rear	Front	Rear	Fuel	Coolant
Model									
G.S. "350"									
43437	1882	1646	3528	52.09	47.91	19.20	80.80	122	28
G.S. "400"									
44637	2017	1654	3671	53.55	46.45	18.67	81.33	122	34
44667	2019	1697	3716	53.02	46.98	18.86	81.14	122	34

Accessories & Equipment Differential Weights				Remarks
Transmission, S.T. 350	26.96	7.06	34.02	G.S. 350
Transmission, S.T. 400	14.24	5.27	19.51	G.S. 400
Transmission, 4-Spd. Man.	-1.88	-.74	-2.62	G.S. 350
Transmission, 4-Spd. Man.	-20.40	-7.95	-28.35	G.S. 400
Power Steering	29.45	-----	29.45	
Power Brakes	9.48	-----	9.48	
Disc Brakes, Front	34.06	3.54	37.60	G.S. 350
Disc Brakes, Front	44.22	3.54	47.76	G.S. 400
Console, Full	6.50	3.96	10.46	
Consolette	3.38	4.12	7.50	
Radio, Sonomatic	6.00	2.30	8.30	
Radio, AM/FM	6.50	2.50	9.00	
Tires, Whitewall	2.43	3.64	6.07	G.S. 350
Tires, F70-14	4.74	7.11	11.85	G.S. 400
Rallye Control Package	-.64	12.84	12.20	
Air Conditioner	110.96	-2.26	108.70	G.S. 350
Air Conditioner	113.31	-2.31	111.00	G.S. 400
Power Seat, 4-Way	9.50	9.00	18.50	
Power Windows	10.54	10.96	21.50	
Tilt Steering Wheel	1.68	1.03	2.71	

*Reference – SAE Aerospace-Automotive drawing standards, Section E 1.02 (d).

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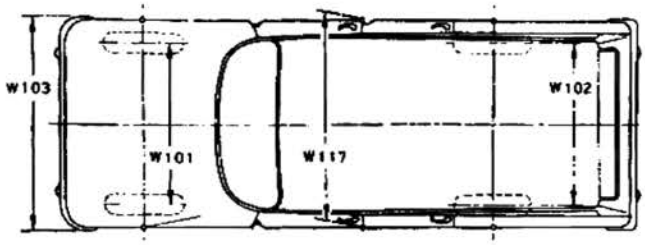
CAR AND BODY DIMENSIONS
KEY SHEET

EXTERIOR CAR AND BODY DIMENSIONS



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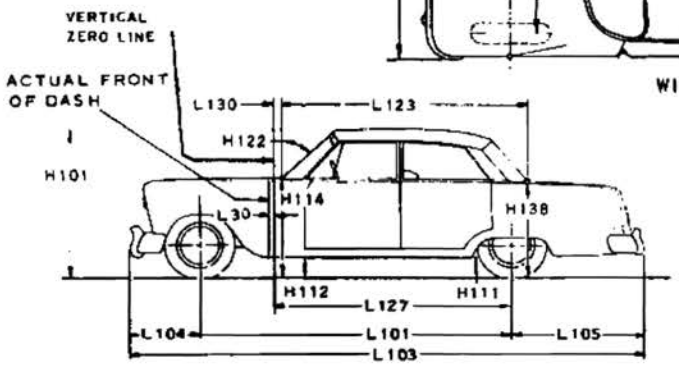

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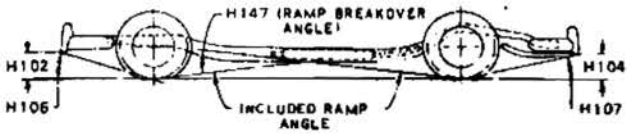
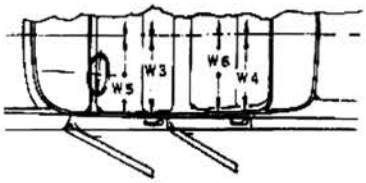
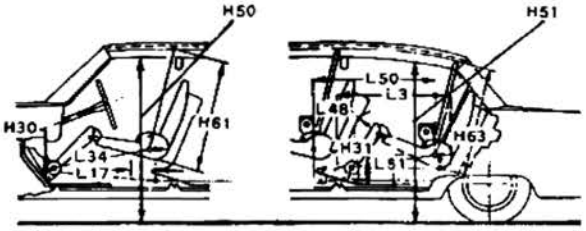


GROUND CLEARANCE

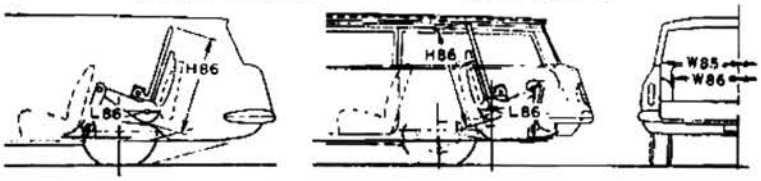
INTERIOR CAR AND BODY DIMENSIONS



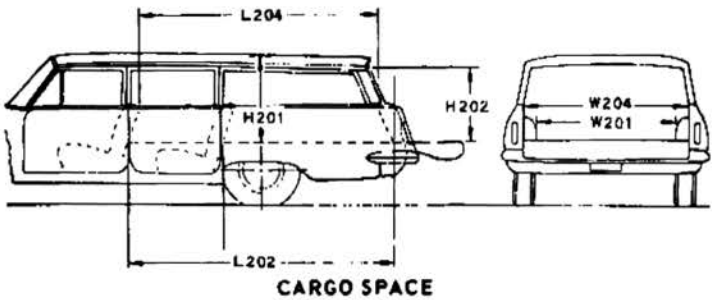
WIDTH



FRONT COMPT. REAR COMPT.



THIRD SEAT



CARGO SPACE

AMA Specifications—Passenger Car

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CAR AND BODY DIMENSIONS

KEY SHEET

DIMENSION DEFINITIONS

EXTERIOR WIDTH DIMENSIONS

W101 WHEEL TREAD – FRONT. Measured at centerline of tires, with nominal camber, at ground.

W102 WHEEL TREAD – REAR. Measured at centerline of tires at ground.

W103 MAXIMUM OVERALL CAR WIDTH. Include bumpers, moldings, or sheet metal protrusions. Measured to outside of metal.

W117 MAXIMUM BODY WIDTH AT #2 PILLAR. Measured across body at #2 pillar, excluding hardware and applied moldings.

EXTERIOR LENGTH DIMENSIONS

L 30 VERTICAL ZERO LINE TO ACTUAL FRONT OF DASH. If actual Front of Dash is to the rear of Body Zero Line, it is identified by a minus (–) sign.

L101 WHEELBASE.

L103 OVERALL LENGTH. Include bumper guards if standard equipment.

L104 OVERHANG – FRONT. Measured from C/L of front wheels to front of car, including bumper guards if standard equipment.

L105 OVERHANG – REAR. Measured from C/L of rear wheels to rear of car, including bumper guards if standard equipment.

L123 BODY UPPER STRUCTURE LENGTH AT CAR CENTERLINE. The horizontal dimension from the Cowl Point to the Deck Point.

L127 VERTICAL ZERO LINE TO CENTERLINE OF REAR WHEELS. A horizontal dimension.

L130 VERTICAL ZERO LINE TO WINDSHIELD COWL POINT. The horizontal dimension from the vertical zero line to the theoretical intersection of extended windshield glass plane and normal cowl surface.

EXTERIOR HEIGHT DIMENSIONS

H101 OVERALL HEIGHT – DESIGN. Measured with the vehicle in Manufacturer's Design Weight attitude.

H114 COWL POINT TO GROUND. Measured at vehicle centerline.

H138 DECK POINT TO GROUND. Measured at vehicle centerline.

H112 ROCKER PANEL TO GROUND – FRONT. The vertical dimension from ground to bottom of rocker panel, excluding flanges. Measured to the outside of sheet metal at foremost point of rocker panel.

H111 ROCKER PANEL TO GROUND – REAR. The vertical dimension from ground to bottom of rocker panel, excluding flanges. Measured to the outside of sheet metal at front of rear wheel opening.

H122 WINDSHIELD SLOPE ANGLE. The angle between a vertical line and the windshield surface at car centerline. On compound-curved windshields the chord of the arc is used and limited to that section of the windshield comprehended by an 18-inch chord.

GROUND CLEARANCE DIMENSIONS

H102 BUMPER TO GROUND – FRONT. Minimum dimension, includes bumper guards.

H104 BUMPER TO GROUND – REAR. Minimum dimension, includes bumper guards.

H106 ANGLE OF APPROACH. The angle between ground and a line tangent to the front tire static loaded radius arc and the first point of interference, i.e., bumper, guard, gravel deflector, fender or other component, excluding license plate. This dimension may be determined graphically for reporting purposes.

H107 ANGLE OF DEPARTURE. The angle between ground and a line tangent to the rear tire static loaded radius arc and the first point of interference, i.e., bumper, guard, gravel deflector, tail pipe, fender or other component, excluding license plate. This dimension may be determined graphically for reporting purposes.

H147 RAMP BREAKOVER ANGLE. The supplement of included ramp angle (180° minus included ramp angle) over which car can pass without interference; measured with car sitting on a level surface, using lines tangent to arcs of front and rear static loaded radii and intersecting at point on underside of car which defines the smallest angle.

H156 MINIMUM RUNNING GROUND CLEARANCE. Location of measurement on the car is to be clearly recorded.

FRONT COMPARTMENT DIMENSIONS

H 61 EFFECTIVE HEAD ROOM – FRONT. The dimension from H Point to the headlining, plus a constant of 4.0 inches, measured along a line 8° to rear of vertical.

L 34 MAXIMUM EFFECTIVE LEG ROOM – ACCELERATOR. Measured along a diagonal line from the Manikin ankle pivot center to the H Point plus a constant of 10.0 inches. For treadle type accelerator pedals, the leg room is measured with the Manikin's right foot on the accelerator pedal and the Manikin Heel Point at Accelerator Heel Point. All other types of accelerator pedals will be measured with the Manikin foot angle set at 87° and the shoe touching the pedal.

H 30 H POINT TO HEEL POINT – FRONT. The vertical dimension from the H Point to the Accelerator Heel Point.

L 17 H POINT TRAVEL. The horizontal dimension between the H Point in the most forward and rearward seat positions.

FRONT COMPARTMENT DIMENSIONS (Cont.)

W 3 SHOULDER ROOM – FRONT. The minimum lateral dimensions between the door garnish moldings or nearest interference, measured at the H Point station.

W 5 HIP ROOM – FRONT. The lateral dimension through the H Point to trimmed body surfaces. Depress loose side wall cloth to trim foundation or other obstruction if such construction exists.

H 50 UPPER BODY OPENING TO GROUND – FRONT. The vertical dimension from a point on the trimmed body opening to the ground, measured at the H Point station.

REAR COMPARTMENT DIMENSIONS

L 50 H POINT COUPLE DISTANCE. The horizontal dimension from the front seat H Point to the rear seat H Point.

H 63 EFFECTIVE HEAD ROOM – REAR. The dimension from the H Point to the headlining, plus a constant of 4.0 inches, measured along a line 8° to rear of vertical.

L 51 MINIMUM EFFECTIVE LEG ROOM – REAR. Measured along a diagonal line from the ankle pivot center to the H Point plus a constant of 10.0 inches, with the foot positioned to the nearest interference between the seat structure and toe, instep or lower leg.

H 31 H POINT TO HEEL POINT – REAR. The vertical dimension from the H Point to the Manikin Heel Point on the depressed floor covering.

L 48 MINIMUM KNEE ROOM – REAR. The minimum dimension from the Manikin knee pivot center to the back of the front seat back.

L 3 REAR COMPARTMENT ROOM. The horizontal dimension from the back of front seat to front of rear seat back at height tangent to the top of rear seat cushion.

W 4 SHOULDER ROOM – REAR. The minimum lateral dimension between the door garnish molding or nearest interference. Measured at H Point station.

W 6 HIP ROOM – REAR. The lateral dimension through H Point to trimmed body surfaces. Depress loose side wall cloth to trim foundation or other obstruction when such construction exists.

H 51 UPPER BODY OPENING TO GROUND – REAR. The vertical dimension from a point on the trimmed body opening to the ground, measured 13.0 inches forward of the H Point.

LUGGAGE COMPARTMENT DIMENSIONS

V 1 LUGGAGE CAPACITY – USABLE. The total luggage compartment luggage capacity in cubic feet with the tire and tools in place.

H195 LIFTOVER HEIGHT. Vertical dimension from the highest point on the luggage compartment lower opening to ground, excluding corner radii.

STATION WAGON – THIRD SEAT DIMENSIONS

W 85 SHOULDER ROOM – THIRD SEAT. The minimum lateral dimension between the door garnish moldings or nearest interference. Measured at H Point station.

W 86 HIP ROOM – THIRD SEAT. The lateral dimension through H Point to trimmed surfaces.

L 86 EFFECTIVE LEG ROOM – THIRD SEAT. Measured along a diagonal line from ankle pivot center to H Point plus a constant of 10.0 inches. With rear-facing third seat, foot is positioned in foot well or to nearest interference with rear end or rear closure.

H 86 EFFECTIVE HEAD ROOM – THIRD SEAT. The dimension from H Point to the headlining, plus a constant of 4.0 inches. Measured along a line 8° to rear of vertical.

STATION WAGON – CARGO SPACE DIMENSIONS

L202 CARGO LENGTH AT FLOOR – FRONT SEAT. The horizontal dimension, measured at the floor level from the rear of the front seat back to the normal inside limiting interference on the tailgate, on the car centerline.

L204 CARGO LENGTH AT BELT – FRONT SEAT. The horizontal dimension measured from the top rear of front seat back to a vertical extension line from the normal inside limiting interference at the top of the tailgate, on the car centerline.

W201 CARGO WIDTH – WHEELHOUSE. The minimum horizontal dimension, measured between wheelhousings at floor level.

W204 OPENING WIDTH AT BELT. The minimum horizontal dimension, measured between the nearest normal inside limiting interferences of the rear opening at the top of the tailgate.

H201 MAXIMUM CARGO HEIGHT. The maximum vertical dimension, measured from the top of the floor covering to the headlining, on the car centerline.

H202 REAR OPENING HEIGHT. The vertical dimension measured from the top of the floor covering to the normal inside limiting interference at the top of the rear opening, on the car centerline, with both tail-and liftgates fully open.

V 2 CARGO VOLUME INDEX BEHIND FRONT SEAT. The total volume in cubic feet above the normal load floor and behind the front seat with the liftgate and tailgate closed.

$$\frac{W4 \times L204 \times H201}{1728}$$

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