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7 Los Angeles 59, California

PSM

STUDEBAKER AUTOMOTIVE SALES CORPORATION SUBSIDIARY OF

STUDEBAKER CORPORATION

SOUTH BEND 27, INDIANA January 7, 1963

To Recipients of Studebaker AMA Specifications:

The attached are revised pages to the Studebaker - Special Equipment Specifications covering Model R-3 304.5 Cu. In. supercharged engine.

Yours truly

H. J. Symon, Manager Service Publications

HJS/dh

Attachment

AMA Specifications - Passenger Car

The information contained herein is prepared, distributed by, and is solely the responsibility of the automobile manufacturing company to whose products it relates. Questions concerning these specifications should be directed to the manufacturer whose address is shown below. This uniform specification form was developed by the automobile manufacturing companies under the auspices of the Automobile Manufacturers Association.

MANUFACTURER	STUDEBAKER AUTOMOTIVE SALES CORPORATION	CAR NAME STUDEBAKER Special Equipment Specifications			ns		
MAILING ADDRESS	635 S. MAIN STREET SOUTH BEND 27, INDIANA	MODEL YEAR	063	ISSUED: REVISED (•			

NOTES:

- 1. The 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, number of passenger & style names; use manufacturer's code for series & body style.

SUPPLEMENTARY INFORMATION COVERING SPECIAL MODEL R-3, 304.5 CU. IN. SUPERCHARGED ENGINE AND OTHER COMPONENTS AVAILABLE AS SPECIAL ORDER OPTIONS ON LARK, HAWK, CRUISER AND AVANTI MODELS.

(SUPPLEMENTS 1963 AMA SPECIFICATIONS)

			R-3 ENGINE			
MODEL_						
EI	NGINE	-GENERAL				
Type, no. cyl	s., valve o	orr.	V8 - Valve in Head			
Bore and stro	oke (namin	nal)	3-21/32 x 3-5/8			
Piston displac	ement,c u	, in,	304.5			
Bore spacing	fore spacing (C/L to C/L)		4.5"			
No. system	L. B	ank	1-3-5-7			
(front to rear	R. B	ank .	2-4-6-8			
Firing order	13.3%		1-8-4-3-6-5-7-2			
Compres. rati	o (nomina	1)	9.75 Will Vary According to Tolerance			
Cylinder Hed	d Materia	əl	Cast Iron			
Cylinder Blo	Cylinder Block Material		Cast Iron			
Cylinder Sleeve-Wet, dry, none		ry, none	None			
Number of	Fron	+	2			
nounting points Rear			1			
Engine installation angle		gle	5° - 49'			
Taxable <u>Dia.² x No. Cyl.</u> horsepower 2.5		o. Cyl.	42.5			
Published max. bhp* @ eng. RPM			305 @ 5200 RPM and 6 lbs. Manifold Pressure			
Published ma (lb. ft. @ RF	x.torque* M)		320 @ 4000 RFM			
Recommende regular - pro			Premium			
Idle speed (s	pec. Man	ual	N.A.			
neutral or dr	ve) Auto	omatic	N.A.			
E	NGINE	-PISTONS				
Material			Aluminum - 2018T6			
Description and finish			(Tru-Forged) Tin-Plated			
Weight (piston only) oz.			17.60			
	Top land		.038040			
Clearance		Тор	Selective Fit			
limits)	Skirt	Bottom	Selective Fit			
	No, 1 rii		N.A.			
	No. 2 ri	~	N.A.			
Ring groove	No. 3 rie		N.A.			
		ng	11 6 12 6			

^{*} Max. bhp (brake horsepower) and max. torque corrected as defined by SAE Engine Test Code.

^{1.} Combustion chambers and valve port openings are hand polished and controlled.

^{2.} Combustion chamber volumes are hand matched to each other and are 61 ± 3 cc. 3. Piston deck heights are .023 \pm .011.

MAKE OF CAR____

STUDEBAKER

MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (*) 11-15-62

POWER TEAMS
(Indicate whether standard or optional)

MODEL AVAILABILITY		E	NGINE	7	nc-	TRANSMISSION	AXLE RATIO (Std. first)
AVAILABILITY	Displ. cu. in.	Carburetor	Compr. Ratio	BHP @ RPM	Torque @ RPM		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Optional On Larks, Cruisen Hawk & Avanti Supercharged	304.5	One 4 Bbl.	9.75	305 @ 5200 RPM & 6 lbs Man. Press	320 @ 4000	T-10C and T-10D 4-Speed Manual and Automatic Transmission	2.53 2.76 2.87 3.07 3.31 3.54 3.73 3.92 4.09 4.27 4.55 4.89 5.38
						9	

	a 1/1				
NODEL_		R-3 EINGINE			
	GINE—RINGS				
		Compression			
Function	No. 1, oil or comp. No. 2, oil or comp.	Compression			
(top to	No. 3, oil or comp.	Oil			
bottom)	No. 4, oil or comp.				
Compression	Description - material, type, coating, etc.	Top-Cast Iron Chrome Plated 2nd-Cast Iron Granoseal			
	Width	.078"			
Service and the service	Gap	.030" Top030" - 2nd			
Oil	Description - material, type, coating, etc.	Chrome Plated Steel Rail			
	Width	.187"			
	Gap	.015 to .055			
Expanders		Behind Oil Ring Only			
EN	GINE-PISTON PINS				
Material		C. D. Steel - SAE 8620			
Length		3-1/16"			
Diameter		.875"			
	Locked in rod, in piston, floating, etc.	Shrink Fit In Rod			
Туре	In rad or piston	None			
	Bushing Material				
Clearance	In piston	.0001"0003" - Selective Fit			
	In rod	None			
Direction &	amount offset in piston	1/16" Toward Thrust Side			
EN	GINE—CONNECTING RO	DS			
Material Weight (oz.)		Special D. F. Steel - C-1141			
		23.71 oz. (Clamped In Rod)			
Length (center to center)		6.625"			
	Material & Type	Steel Back - Trimetal Aluminum (Steel Back - Trimetal Copper-Lead)			
Bearing	Overall length	13/16"			
ocuring.	Clearance (limits)	.0012500375			
112	End play	.008"013"			

AODEL		R-3 ENGINE			
EN	GINE-RINGS				
	No. 1, oil or comp.	Compression			
Function	No. 2, all or comp.	Compression			
top to oottom)	No. 3, oil or comp.	Oil Oil			
	No. 4, all or comp.	AR, 44			
Compression	Description - material, type, couting, etc.	Top-Cast Iron Chrome Plated 2nd-Cast Iron Granoseal			
Complession	Width	.078"			
	Gap	.030" Top030" - 2nd			
Oil	Description - material, type, coating, etc.	Chrome Plated Steel Rail			
	Width	.187"			
Gap		.015 to .055			
xpanders		Behind Oil Ring Only			
ENC	SINE-PISTON PINS				
Materia!		C. D. Steel - SAE 8620			
ength		3-1/16"			
Plameter		.875"			
Гуре	Locked in rod, in piston, floating, etc.	Shrink Fit In Rod (Clamped In Rod - Opt.)			
ype	Bushing In rad or piston	None			
	Material Material				
legrance	In piston	.0001"0003" - Selective Fit			
14rsherenes	In rod	None			
	amount offset in piston	1/16" Toward Thrust Side			
ENG	INE_CONNECTING R	ODS			
Material		Special D. F. Steel - C-1141			
Weight (oz.)		23.71 oz. (Clamped In Pin)			
ength (cente	er to center)	6,625"			
2.50	Material & Type	Steel Back - Trimetal Aluminum (Steel Back - Trimetal Copper-Lead)			
earing	Overall length	13/16"			
	Clearance (fimits)	.0012500375			
	End play	.008"013"			

ODEL			R-3 ENGINE		
	NGINE-	-CRANKSHAFT			
Material			D.F. Steel - SAE 1045		
Vibration damper type			Rubber Mounted Inertia Member		
Fod thrust	taken hy he	gring (No.)	#1		
End thrust taken by bearing (No.) Crankshaft end play		uring (140.)	.003" to .006"		
	Material & type		Front & Rear - Steel Back Babbitt Lined #2-3 & 4 - Steel Back Trimetal Aluminum *		
	Clearance		.00180043		
		No. 1	2.500" - 1.309"		
	100	No. 2	2.500"906"		
Main cearing	Journal dia. and	No. 3	2.500"906"		
9	bearing	No. 4	2.500"906"		
	overall length	No. 5	2.500" - 1.546"		
	ichigh.	No. 6	TMOUSE TO THE PROPERTY OF THE		
		No. 7			
	Dir. & an	nt. cyl. offset	None		
Crankpin	journal dian	neter	1.99825" - 1.99925"		
	NGINE-	-CAMSHAFT	O. 12 v. J. Plank Combon		
Location			Cylinder Block - Center		
Material			Alloy - Cast Iron		
D t	Material	371	Steel Back - Babbitt Lined		
Bearings	Number		5		
	Gear or	chain	Gear		
	Crankshaf spracket	t gear or material	Cast Iron		
Type of Drive	Camshaft sprocket		Aluminum		
Dilve		No. of links	None		
1	Timing chain	Width	None		
		Pitch	None		
E	NGINE-	-VALVE SYSTE	V		
**************************************	NGINE-		N.A.		
Hydraulic Valve rote	lifters (Std				
**************************************	lifters (Std ntor, type xhaust)		N.A. None		
Hydraulic Valve rote (intoke, e Rocker rat Operating clearance	lifters (Std ntor, type xhaust) io tappet Into	, opt, NA)	N.A. None 1.5 to 1 .023"025" Hot		
Hydraulic Valve rote (intoke, e Rocker rat Operating	lifters (Std ator, type xhoust) io tappet Into	, opt, NA)	N.A. None 1.5 to 1		

^{*} Steel Back Type Trimetal Copper-Leak, Optional

(Continued)

AODEL			R-3 ENGINE		
-	NGINE	-VALVE SYSTEM	(cont.)	21 II 8 Marti	
		Opens (OBTC)	28°		
hr	ntake	Closes (°ABC)	800		
		Duration - deg.	2880-	Additional Camshaft	
iming —		Opens (OBBC)	800	Timings Optional	
E	xhaust	Closes (OATC)	· 28°		
(27)	2028-0-03-07	Duration - deg.	288°		
v	/alve oper	ning overlap	56°	(F) = 10 = 10 = 10 = 10 = 10 = 10 = 10 = 1	
	Aaterial		Sil. XBE - (HNV6	3)	
C	Overall le	ngth	5-5/32"		
	Actual overall head dia.		1-7/8"		
Ā	Angle of seat & face		450		
S	eat insert	material	None		
S	Stem diameter		11/32"		
S	Stem to guide clearance		.0015"0035"		
Intake L	Lift (@ zero lash)		•400"		
	Outer pring	Valve closed (lb, @ in.)	67-75 @ 2.031"		
	press. and length	Valve open (lb. @ in.)	148-160 @ 1.631"	- PERMITS - PERM	
	Inner spring press, and length	Valve closed (lb. @ in.)	None		
		Valve open (lb. @ in.)	None		
٨	Material		SAE EV8 (21-4N) - (Stellite Faced)		
C	Overall le	ngth	5-5/32"		
	Actual overall head dia.		1-5/8"		
Δ	Angle of seat & face		45°		
S	Seat insert material		None		
<u>s</u>	Stem diameter		11/32"		
-		ide clearance	.0015"0035"		
Exhaust L	Lift (@ ze		.400"		
s	Outer pring	Valve closed (ib, @ in.)	67-75 @ 2.031"		
	ength	Valve open (lb. @ in.)	148-160 @ 1.631"	N .	
s	nner pring press. and	Valve closed (lb. @ in.)	None	*	
	ength	Valve open (lb. @ in.)	None		
EI	NGIN	E-LUBRICATION	SYSTEM		
٨	Main beari	ings	Full Pressure		
	Connecting	g rods	Full Pressure		
Type of plubrication	Piston pins		Splash		
(splash, C	Camshaft b	pearings	Full Pressure	4	
pressure, T	Tappets		Full Pressure		
T	liming geo	ar or chain	Full Pressure		
10	Cylinder w	ralls	Directed Jet		

ODEL			R-3 ENGINE		
	NGINE	-VALVE SYSTEM	A (cont.)		
		Opens (OBTC)	280	7	
10	ntake	Closes (OABC)	80°		
		Duration - deg.	288 ⁰	Additional Camshaft	
iming		Opens (OBBC)	800	Timings Optional	
E	xhaust	Closes (OATC)	280		
		Duration - deg.	288 ⁰		
	/alve oper	ning overlap	56°)	
٨	Material		Sil. XBE - (HNV6)		
C	Overall le	ngth	5-5/32"		
A	Actual ove	rall head dia.	1-7/8"		
A	Angle of s	eat & face	450		
S	eat Insert	material	None		
S	item diame	eter	11/32"		
-		ide clearance	.0015"0035"		
Intake 1	Lifi (@ ze	ro lash)	13/32"		
	Outer spring press, and length	Valve closed (lb. @ in.)	67-83 @ 2.031		
		Valve open (lb. @ in.)	150-172 @ 1.631	1"	
	Inner spring press, and length	Valve closed (lb. @ in.)	None		
		Valve open (lb. @ in.)	None		
1	Material		SAE EV8 (21-4N) - (Stellite Faced)		
	Overall le	ngth	5-5/32"		
1	Actual overall head dia.		1-5/8"		
4	Angle of	seat & face	45°		
_3	Seat Insert material		None		
1.5	Stem diameter		11/32"	The second secon	
		ide clearance	.0015"0035"		
Exhaust L	Lift (@ ze		13/32"		
1	Outer spring	Valve closed (lb. @ in.)	67-83 @ 2.031'	"	
	oress, and length	Valve open (lb. @ in.)	150-172 @ 1.633	1"	
	Inner pring press. and	Valve closed (lb. @ in.)	None		
	length	Valve open (lb. @ in.)	None	9	
E	NGIN	E-LUBRICATION	SYSTEM		
1	Main bear	ings	Full Pressure	9	
	Connecting	g rods	Full Pressure		
Type of Jubrication	Piston pins		Splash		
(splash,	Camshaft k	pearings	Full Pressure	e	
	Tappets		Full Pressure		
1	Timing geo	ar or chain	Full Pressure		
	Cylinder w	valls	Directed Jet		

Oil pump ty lormal oil p Oil pressure type oil into Oil filter sys liter replace apacity of a	GINE—LUBRICATION ressure (lb. @ engine rpm) rending unit (elect. or mech.) rem (floating, stationary) rem (full flow, partial, other) rement (element, complete) rankcase, less filter-refill (qt.) commended (SAE viscosity ure range)		Spur Gear 30 @ 2000 Mechanical Stationary Full Flow Complete (7-10 Optional) -10° - SAE 10W	
oil pump ty lormal oil p oil pressure type oil into oil filter sys liter replace apacity of a	ressure (lb. @ engine rpm) sending unit (elect, or mech.) ke (floating, stationary) rem (full flow, partial, other) rement (element, complete) rrankcase, less filter-refill (qt.) commended (SAE viscosity ure range)	6 Std. +32° - SAE 40	30 @ 2000 Mechanical Stationary Full Flow Complete (7-10 Optional)	
Jormal oil p Dil pressure Type oil into Dil filter sys The replace Tapacity of o	ressure (lb. @ engine rpm) sending unit (elect, or mech.) ke (floating, stationary) tem (full flow, partial, other) sement (element, complete) crankcase, less filter-refill (qt.) commended (SAE viscosity ure range)	6 Std. +32° - SAE 40	30 @ 2000 Mechanical Stationary Full Flow Complete (7-10 Optional)	
ype oil into oil filter sys ilter replace apacity of a	ke (floating, stationary) tem (full flow, partial, other) tement (element, complete) trankcase, less filter-refill (qt.) commended (SAE viscosity ure range)	6 Std. +32° - SAE 40	Stationary Full Flow Complete (7-10 Optional)	
Dil filter sys ilter replace apacity of a	rem (full flow, partial, other) sment (element, complete) srankcase, less filter-refill (qt.) commended (SAE viscosity ure range)	6 Std. +32° - SAE 40	Full Flow Complete (7-10 Optional)	
iter replace apacity of a	crankcase, less filter-refill (qt.) commended (SAE viscosity ure range)	6 Std. +32° - SAE 40	Complete (7-10 Optional)	
apacity of o	commended (SAE viscosity ure range)	+32° - SAE 40	(7-10 Optional)	
Oil grade re	commended (SAE viscosity ure range)	+32° - SAE 40		
	ure range)		-10° - SAE 10W	
na rempera		1200 042 00	20	
		+10 - SAE 20	Below -10° - SAE 5W	
naine Servi	ce Requirement (MM, MS, etc.)	MS alone or in co	MS alone or in combination with MM, ML, DG	
	GINE-EXHAUST SYST			
ype (single, single with cross-over, dual, other)		A STATE OF THE STA	Dual	
Auffler No. & type (reverse flow, traight thru, separate resonator)		2 - Straight	2 - Straight Thru - Glass Wool Pack	
xhaust pipe	dia. (O.D. Branch			
vall thickne	ss) Main	2"		
ail pipe dia	meter (O.D. & wall thickness)		2"	
EN	GINE-CRANKCASE V	ENTILATION SYSTEM		
Type (ventil	ates to atmos., Standard	, I	Atmosphere	
	ion system, other) Optional			
	Make and model	4.2. K =	None	
	Location			
Control	Energy source (manifold vacuum, carburetor air stream, other)		>	
unit	Control method (variable orifice, fixed orifice, other)			
	Discharges (to Intake manifold, carb. air Intake, air cleaner intake, other	1	Atmosphere	
Complete system	Air inlet (breather cap, carburetor air cleaner, other)	В	reather Caps	
	Flame arrestor (screen, check valve, other)			

			R-	-3 ENGINE		
MODEL_						
EN	GINE-LUBR	ICATION SY	STEM (cont.) *			
Oil pump ty	pe			our Gear		
	ressure (lb. @ engine	All Dispersion		0 @ 2000_		
Lo Charlette	sending unit (elect, o			echanical		
Type oil intake (floating, stationary)			Stationary Full Flow			
Oil filter system (full flow, partial, other) Filter replacement (element, complete)				omplete		
Capacity of crankcase, less filter-refill (qt.)				(7-10 Optional)		
Oil grade recommended (SAE viscosity and temperature range)			+32° - SAE 40	-10° - SAE 10W		
			+10° - SAE 20	Below -10° - SAE 5W		
Engine Servi	cé Requirement (MM	, MS, etc.)	MS alone or in combination with MM, ML, DG			
EN	GINE-EXHA	UST SYSTEM				
Type (single, single with cross-over, dual, other)		er, dual, other)	Dual			
Muffler No. & type (reverse flow, straight thru, separate resonator)			2 - Straight Thru - Glass Wool Pack			
Exhaust pipe	dia. (O.D. Branch					
wall thickne	ess) Main		2"			
Tail pipe dic	meter (O.D. & wall	thickness)	50.3	2"		
EN	GINE-CRAP	IKCASE VEN	ITILATION SYSTEM			
Type (ventil	ates to atmos.,	Standard ·	Atmosphere			
	tion system, other)	Optional				
	Make and model			None		
	Location		100			
Control	Energy source (mani- vacuum, carburetor stream, other)	fold air	3:			
unit	Control method (variation orifice, fixed orifice other)			2		
	Discharges (to Intake manifold, carb. air intake, air cleaner intake, other		At	mosphere		
Complete system	Air inlet (breather carburetor air clear other)		Bre	eather Caps		
	Flame arrestor (scre check valve, other	V 33 VA		18		

^{*} Oil Cooler - Optional

MAKE OF CAR STUDEBAKER		STUDEBAKER	MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (•)11-15-62		
MODEL -	MODELENGINE_FUEL SYSTEM		R-3 ENGINE		
			(See Supplement to Page 8 for Details of Fuel Injection, Supercharger, etc. if used)		
Induction to			Carburetor - Supercharged		
Fuel	Capacity	(gals.)	21 Gal Std. 26.5 Gal Optional **		
Tank	Filler loc	ation	Left Side - Rear Quarter Panel		
	Type (elec. or mech.)		Mechanical *		
Fuel Pump	Locations		Left Front of Engine		
, omp	Pressure range		N.A.		
Vacuum boo	ster (std., c	optional, none)	None		
Fuel	Туре		Pleated Paper		
Filter	Locations		In Line Between Pump & Carburetor		
	Choke typ	oe .	Automatic		
Carburetor	Intake manifold heat control (exhaust or water)		Exhaust		
	Air clnr.	Standard	Plasticized Paper		
	type	Optional	None		

CARBURETOR SUPPLEMENTARY INFORMATION

- Veed Weephoo	Engine	EN EVILLE	Carburetors		No. Used	Barrel	
Model Usage	Displ.	Transmission	Transmission Make		and Type	Size	
R3 Engine	304.5	4-Speed and Automatic	Carter	AFB	One 4 Bb1.	1-7/16 Pri 1-11/16 Sec	
			-				
					x		

^{*} Booster Electric Fuel Pump - Optional - Mounts Under Gas Tank

^{**} On Avanti Only - 18 Gal. on Lark, Cruiser, and Hawk

MAKE U	KE OF CAR STUDEBAK		MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (•) 11-15-				
				R-3 ENGI	ENE		
ODEL =	•						
EN	IGINE-	-COOLING SY	STEM				
ype system tmospheric	(pressure, p ;, other)	pressure vented,	Pressure - Atmospheric Vented				
adiator ca	p relief valv	ve pressure		12 - 15 P.S.I	3. M. 1947 - A. J 20. J. M. M. 1957 - M. 19		
irculation	2000		Choke				
nermostat	Starts to open at (OF)		170° F.				
		trifugal, other)	i Sio	Centrifugal	67		
	100	000 pump rpm					
ater Imp	Number of		*****	V-Belt			
""E"		beit, other)		Sealed Double Row	Do11		
note tac	Bearing ty	/pe (internal, external)		Internal	-Ball		
diator co		/pe (iliterior, exterior,			NAME OF THE PARTY		
ellular, tu	ube and fin,			Cellular - Tubular -	Cross-Flow		
ooling	With heat			18 Qts.			
stem apacity	Without he	THE RESERVE OF THE RE	_	17 Qts.	CAR CAPITAL		
		oment-specify (qt.)		None			
		th of cylinder (yes, no)		Yes			
ater all a	round cyline I	1		Yes			
	Lower	Number and type (molded, straight)		One - Moulde	ed		
	LOWE	Inside diameter		1-3/4"			
adiator	Upper	Number and type (molded, straight)		One - Moulde	ed		
ose	Оррс	Inside diameter		1-3/4"	8		
	By-pass	Number and type (molded, straight)					
	Бу-раз	Inside diameter					
	Number of	f blades & Spacing		5 Blades - (65° - 65° -			
	Diameter	8 8 80	14" Std 17" Opt.				
an		to crankshaft rev.	Various				
	Fan cutout		2500 - (Viscous Drive)				
	Bearing ty	pe	21	Double Row - Ba	111		
Drive	Fan Generator			D D	No.		
belts	Water Pum			D			
ndicate	Power Stee		D B				
elt used : y letter)	Air Condi			50 15 W. 50 TO			
W I I	Supercl		- W-10	E			
* Drive Bel	It Dimension	s	В	D D	E		
Angle of	v	3	.go	38°	38°		
Nominal	length (SAE						
Width		1:	/32"	15/32"	15/32"		

MODEL			R-3 ENGINE		
27.0	ELECTR	ICAL—SUPPLY	SYSTEM		
	Make and	Model	Willard - HDD-3EE		
		g. & Total Plates	12V.		
C 107		nation & Amp Hr. Rtg	60 Amp. Hr.		
attery	Location		Under Hood - Left Fender		
	Terminal g	rounded	Negative		
lter-	Make		Electric Auto-Lite Co.		
ator	Model	15	ALE-5003		
EXEMPLY AND THE	Туре		DC - Diode Rectification		
	Ratio-Ge	en, to Cr/s rev.	Various		
	Gen, cut-	in (hot)—engine rpm	900 Alternator RFM		
	Make		Electric Auto-Lite Co.		
	Model		VBV 6221A		
	Туре		Vibrating		
	Cutout	Closing voltage @ generator rpm	N.A.		
Regulator	relay	Reverse current to open	None		
	Regu- lated	Voltage	14.0-14.4 Upper Contacts		
		Current	None		
	Voltage	Temperature	70°		
	test con-	Load	10 Amps. 20 Min. @ 2000 Alternator RPM		
	ditions	Other	W S =		
	ELECTR	ICAL—STARTI	70 10 10 10 10 10 10 10 10 10 10 10 10 10		
	Make		Electric Auto-Lite Co.		
	Model		MDU-7025		
	Rotation (drive end view)		Clockwise		
	Engine cre	anking speed	160		
Starting motor	Test condi	tions	Normal Engine Operating Temp.		
	Total	Amps	435		
	Lock test	Volts	60		
	gala siki iyi	Torque (lb. ft.)	11		
	No	Amps	55		
	load	Volts	10		
	test	RPM (min.)	5200		
	1	olenoid, manual)	Solenoid		
Motor control	Starting procedure		1. Rotate ignition key clockwise to starting position		

			R-3 ENGINE
AODEL_			N-) ENGINE
ELI	CTRIC	AL-STARTIN	IG SYSTEM (cont.)
	Engageme	nt type	Bendix - Folo-thru
		eshes (front, rear)	Front
Motor Drive	Number	Pinion	9
- 100 110 110	of teeth	Flywheel	162
	Flywheel	tooth face width	.375"
ELI	CTRIC	AL-IGNITIO	N SYSTEM - Prestolite Transigniter Model 201
	Make		Prestolite
ce coc	Model		200826
Coil		Engine stopped	10
	Amps	Engine idling	4.5 - 5.0
	Make		Electric Auto-Lite - Dual Breaker
ě	Model		IBB 4110
	Cent'fgal	Start (rpm)	
	adv. in crankshaf degrees@ engine rpi	t Intermediate points deg.@rpm	
	(nominal)	Max deg. @ rpm	
Distributor	324	Start (in Hg)	
	Vacuum adv. in crankshaf degrees@ in. Hg.	Intermediate	None
	(nominal)	Max. deg. in. Hg.	
	Breaker g	gap (in.)	.011"016"
	Cam ang	le (deg.)	390 _ +30
	Breaker a	rm tension (oz.)	21 - 25 oz.
	Cranksha	ft deg. @ rpm.	26° @ 4000 RPM
	Mark location		On Damper Flywheel
Timing	Cylinder numbering system (see page 2)		L. Bank-1-3-5-7 R. Bank-2-4-6-8
	Firing or	der (see page 2)	1-8-4-3-6-5-7-2
	Make an	d model	Normal Use Champion J-61Y or J-79 - Competition
Spark Plug	Thread (r	nm)	14
riug		g torque (lb. ft.)	24-30
	Gap		.033"038"
	Conducto	r type	Stainless Steel
Cable	Insulation type		Silicon
VE-	Spark plu	g protector	Applied or Molded Terminal Cover
E	LECTRI	CAL—SUPPRE	SSION
			.5 MFD Condensers at Ignition Coil, Generator Armature and Voltage Regulator, with Radio Only.
Locations & type		-	10,000 OHM - In Distributor Rotor - Ground at Oil Pipe.

AMA Specifications - Passenger Car

Page	4	2	4	A
rage	1	Z	-7	4

MAKE OF CAR	STUDEBAKER	MODEL YEAR 1963	DATE ISSUED_7-23-62_REVISED_(-)11-15-62
			R-3 ENGINE
MODEL		200	

Pages 12-14 were related to electrical bulbs and were not included in this submission

AMA Specifications – Passenger Car

MAKE OF	CAR	STUDEBAKER	MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (•) 11-15-				
AODEL	ODEL		R-3 ENGINE COMPONENTS				
DR	DRIVE UNITS-CLUTCH		(Manual Transmission)				
Make & typ	•		Borg & Beck Semi-Centrifugal				
Type pressure	plate spring	JS .	Coil				
ffective pla	te pressure	(lb.)	2217				
No. of clutc	h driven disc	s	1				
e l	Material		Woven - Molded				
	Outside &	inside dia.	10-1/2 x 6-1/2				
Clutch	Total eff. a		106.8				
facing	Thickness	778-0	•135				
	Engagement	t cushion-	Plate Cushion Springs				
Release bearing	Type & met of lubricati		Single Row Ball - Prelubricated				
Torsional damping	Methods: friction me	springs, aterial	Coil Springs & Steel Washers				
DR	IVE UN	ITS-TRANSMISS	ions				
Manual (ste	d. or opt.)	Commence of the second	4-Speed - Std.				
		(std. or opt.)	N.A.				
Automatic (s	td, or opt.)		N.A.				
DR	IVE UN	ITS-MANUAL TI	RANSMISSION				
Number of f	orward speed		4-Speed - Warner AS6-T10D				
TAGINDOL OF 1	In first		2.54:1				
	In second		1.89:1				
Transmission ratios	In third		1.51:1				
idilos	In fourth	SCHOOL HEAVEN	1.00:1				
	In reverse		2.61:1				
Synchronous meshing, specify gears		cify gears	lst, 2nd, 3rd, 4th				
Shift lever location			Floor				
	Capacity (pt.)	2.5				
	Туре гесоп	nmended	Mineral Gear Lubricant				
Lubricant		Summer	SAE 80				
Lubricant	SAE VIS-						
Lubricant	SAE vis- cosity number	Winter	SAE 80				

	l l					
MODEL_		R-3 ENGINE COMPONENTS				
DI	RIVE UNITS—CLUT	CH (Manual Transmission)				
Make & typ	oe .	Borg & Beck Semi-Ce	ntrifugal			
Type pressur	e plate springs	Coil				
	ate pressure (lb.)	2217				
No. of clute	ch driven discs	, 1	37-791-0-1-1			
-	Material	Woven - Mold	ed			
	Outside & inside dia.	10-1/2 x 6-1	/2			
Clutch	Total eff. area (sq.in.)	106.8	too.			
facing	Thickness	•135				
	Engagement cushion- ing method	Plate Cushion Springs				
Release bearing	Type & method of lubrication	Single Row Ball - Prelubricated				
Torsional damping	Methods: springs, friction material	Coil Springs & Steel Washers				
DI	RIVE UNITS—TRAI	ISMISSIONS				
Manual (st	d, or opt.)	4-Speed T10D - Std 4-Speed T10C - Opt.				
Manual w	ith overdrive (std. or opt.)	N.A.				
Automatic (std. or opt.)		Optional				
Automatic (ird. of opt.)	Optional				
1 ATT C	CONTRACT OF PART	UAL TRANSMISSION Standard	Optional			
DR	RIVE UNITS-MAN	UAL TRANSMISSION Standard	22 SAS IN 1990 SAS SAS SAS SAS SAS SAS SAS SAS SAS SA			
DR	CONTRACT OF PART	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D	Warner AS17-T100			
DF Number of 1	RIVE UNITS—MAN	UAL TRANSMISSION Standard	Warner AS17-T100 2.20:1			
DR Number of f	RIVE UNITS—MAN	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D 2.54:1 1.89:1	Warner AS17-T100 2.20:1 1.66:1			
DR Number of 1	orward speeds In first In second	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D 2.54:1 1.89:1 1.51:1	Warner AS17-T100 2.20:1 1.66:1 1.31:1			
DR Number of 1	rorward speeds In first In second In third	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D 2.54:1 1.89:1	Warner AS17-T100 2.20:1 1.66:1			
DR Number of f Transmission atlos	orward speeds In first In second In third In fourth	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D 2.54:1 1.89:1 1.51:1 1.00:1	Warner AS17-T100 2.20:1 1.66:1 1.31:1 1.00:1 2.26:1			
DR Number of 1 Transmission ratios	orward speeds In first In second In third In fourth In reverse meshing, specify gears	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D 2.54:1 1.89:1 1.51:1 1.00:1 2.61:1	Warner AS17-T100 2.20:1 1.66:1 1.31:1 1.00:1 2.26:1			
DR Number of 1 transmission ratios	orward speeds In first In second In third In fourth In reverse meshing, specify gears	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D 2.54:1 1.89:1 1.51:1 1.00:1 2.61:1 1st, 2nd, 3rd Floor	Warner AS17-T100 2.20:1 1.66:1 1.31:1 1.00:1 2.26:1			
Number of fi Transmission ratios Synchronous Shift lever	orward speeds In first In second In third In fourth In reverse meshing, specify gears	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D 2.54:1 1.89:1 1.51:1 1.00:1 2.61:1 1st, 2nd, 3rd	Warner AS17-T100 2.20:1 1.66:1 1.31:1 1.00:1 2.26:1			
Number of f Transmission ratios Synchronous Shift lever	orward speeds In first In second In third In fourth In reverse meshing, specify gears location Capacity (pt.)	UAL TRANSMISSION Standard 4-Speed - Warner AS6-TIOD 2.54:1 1.89:1 1.51:1 1.00:1 2.61:1 1st, 2nd, 3rd Floor 2.5	Warner AS17-T100 2.20:1 1.66:1 1.31:1 1.00:1 2.26:1			
Number of f Transmission ratios	In second In fourth In reverse meshing, specify gears location Copacity (pt.) Type recommended	UAL TRANSMISSION Standard 4-Speed - Warner AS6-T10D 2.54:1 1.89:1 1.51:1 1.00:1 2.61:1 1st, 2nd, 3rd Floor 2.5 Mineral Gear Luk	Warner AS17-T100 2.20:1 1.66:1 1.31:1 1.00:1 2.26:1			

MAKE OF	~A	5 TE	STUDEBAKER	MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (4)11-15		
MODEL_				R-3 ENGINE COMPONENTS		
3						
			—MANUAL TR. nual transmission section	ANSMISSION WITH OVERDRIVE		
	Туре	(planetary	or other)			
1	Manu	al lockout	(yes, no)	2		
A	Down	shift acele	rator control (yes, no)			
	Minimum cut-in speed Gear ratio					
				3300		
		Capacity	(pt.) (Overdrive only)	3073		
	[Separate	filler (yes, no)			
1	Lu-	Type reco	ommended	100 C C C C C C C C C C C C C C C C C C		
	bri- cant	SAE vis-	Summer			
	807E-1161	cosity	Winter			
		number	Ext. cold	W .		
DI	RIVE	UNITS	-AUTOMATIC	TRANSMISSION		
rade name				Warner AS2-10		
Type describ	e		^	Torque Converter and Compound Planetary		
Method of S Lever, Push				Floor - Lever		
ielector Pat	tern			P-R-N-D-2-1		
indicate wh selector pos		osea in e	such	1 - 1st gear - Torque Converter x 2.40:1 2 and D - 2nd gear - Torque Converter x 1.47:1 D - 3rd gear - Torque Converter x 1.00:1 R - Reverse - Torque Converter x 2.00:1		
Many mark 16	D (2000)	la defense a		82 with 3.31 axle; 72 with 3.73 axle		
Max. upshif				The state of the s		
Max. kickd	•			73 with 3.31 axle; 64 with 3.73 axle		
Torque		Number of elements Max. ratio at stall				
convertor			g (air, water)	2.25:1 @ 2200 RPM Forced Air Plus Water		
	-			18		
Lubricant	122.1	recommen	77.77	Type "A" Automatic Transmission Lubricant		
Canadal Ass			ioed	Type "A" Automatic Transmission Eubricant		
Special tra- features	1511113510	an		Manual selection of 1st and 2nd gear, inhibited on downshift: starts in 2nd gear with automatic upshift to 3rd in 'D'		
	DRI	VE UN	ITS—PROPELLE	R SHAFT		
Number use	d					
Type (expo	ed, tor	que tube)				
Outer	Manual transmission		sion	*		
diameter x length* x wall thickness	Over	drive trans	mission			
THE PERSON NAMED IN STREET	Auto	matic trans	mission			
	100 CHES		joints, or to centerline o	If rear attachment. (Continued) Form Rev. 3		

CAR_	STUDEBAKER	MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (*) 11-15-62
		R-3 ENGINE COMPONENTS
DDIVE	IINITS_PRO	PELLER SHAFT (cont.)
Type (plair	0,	
mediate bearing Lubrication (fitting		
Make		
Number	ad	
0.00		
cross, othe	r)	
Bearing	Type (plain, anti-friction)	
	Lubric. (fitting, prepack)	
	rque tube	
	orque tube	
DRIVE	UNITS-REA	R AXLE
(see instruc	ctions)	Hypoid - Semi-Floating - Model 44-1
differentia	il, type	Twin-Traction Limited Slip - Model 44-1 Opt.
n Offset		1.5
erential pir	nions	2 - Std. Axle - 4 on Twin-Traction
Manual tr. 4-Spe	ansmission Od	See Page Three
Ourseleius kommeniusies		None
Automatic	transmission	None
		8–1/2
		Shim
	m, other)	Shim
	(-)	Ball or Tapered Roller
		Hypoid Lubricant
	Y	SAE 90) For Twin-Traction use
		SAE 90 Studebaker
number	Extreme cold	SAE 80 Special Lubricant
	RE	AR AXLE RATIO TOOTH COMBINATIONS (See page 3 for axle ratio usage)
	gear	
	Type (plain anti-friction anti-friction continue) Make Number us Type (ball cross, other continue) Bearing through (to mass) DRIVE (see instruction offset erential pire continue) Automatic continue cont	Type (plain, anti-friction) Lubrication (fitting, prepack) Make Number used Type (ball and trunnion, cross, other) Bearing Type (plain, anti-friction) Lubric. (fitting, prepack) through (torque tube ings) Through (torque tube ings) DRIVE UNITS—REA (see instructions) differential, type n Offset erential pinions Manual transmission ADDEED Overdrive transmission Automatic transmission D.D. (std. ratio) stment (shim, other) ing adj. (shim, other) ing type Capacity (pt.) Type recommended SAE vis—cosity number Extreme cold

AMA Specifications - Passenger Cars

MAKE OF CAR	STUDEBAKER	MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (a) 11-15-62
		R-3 ENGINE COMPONENTS
MODEL		- Mains contoning

Pages 18-19 were related to Wheels, Tires & Brakes and were not included in this submission

MAKE OF	CAR_	S	TUDEBAKER	MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (a) 11-15-62
				R-3 ENGINE COMPONENTS
MODEL_		ION E	ONT /sees	The second secon
- 30	SPERS	ION FI	RONT (cont.	
	Туре			Independent Coil Springs
Spring	Material			SAE 9260 or 5160 Steel
	Size (coi bar lengt	l design hei h x dia.	ght & I.D.;	$8-7/8 \times 4.1875 \times 136.0 \times .650$
7	Spring rat	e (lb. per i	n.)	280
		heel (lb. pe		130 (Including Support Arm Bushings)
	Design lo	ad (lb. @ d	esign height)	1565 @ 8-7/8
Stabilizer	Type (link frameless)	c, linkless,		Link
	Material & bar diameter		neter	SAE 1065750"
ST	EERING	3		
Mechanical	(std., opt.,	NA)		
Power (std.,	opt., NA)			
Wheel diam	eter		7	
	Outside	Wall to w	all (l. & r.)	
Turning	front	Curb to co	urb (1. & r.)	
diameter	Inside	Wall to w	all (l. & r.)	
	rear Curb to curb (I. &		urb (1. & r.)	
Outside whe	el angle w	ith inside w	heel at 20°	
51	Туре			
Mechanical	Gear	Make		VI SU
Mechanica	Gedi	Ratios	Gear	
		Karios	Overall	
	No, wheel turns			
5	Type (cox	cial, linkage	e, etc.)	
	Make	2		
	Trade na	me		
1200.01		Туре		
Power	Gear	Ratios	Gear	
		Karios	Overall	
	Pump driv	ren by		
	Number v	vheel turns		
	Туре			×
Linkoge	Location of wheels	(front or red , other)	ar	
	Drag link (trans. or longit.) Tie rods (one or two)		ongit.)	

(Continued)

CAR_	S	TUDEBAKE	R MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (4) 12-28-62
			R-3 ENGINE COMPONENTS
SPENS	ION FE	RONT (co	ont.)
			Independent Coil Springs
Material			SAE 9260 or 5160 Steel
Size (coil design height & I.D.; bar length x dia.			8-7/8 x 4.1875 x 134.0 x .650
Spring rate (lb. per in.)			325
Rate at wheel (lb. per in.)			130 (Including Support Arm Bushings)
Design load (ib. @ design height)			1565 @ 8-7/8
Type (link, linkless, frameless)			Link
Material & bar diameter			SAE 1065750"
EERING	3	11 9A*	
Mechanical (std., opt., NA)			
Power (std., opt., NA)			
eter			
Outside	Wall to we	all (l. & r.)	COMPANION SERVICE SERVICE CONTROL OF THE SERVICE SERVI
tront	Curb to curb (1. & r.)		
Inside	Wall to wall (I. & r.)		
rear Curb to curb (I. & r.)		orb (1. & r.)	
el angle w	ith inside w	heel at 20°	N N N N N N N N N N N N N N N N N N N
	Туре		
Geor	Make		
Gear	Ratios	Gear	
		Overall	
No. wheel turns			
Type (coxial, linkage, etc.)			AND THE PROPERTY OF THE PROPER
Make	65		
Trade na	0000		
Gear	Туре		
	Ratios	Gear	
		Overall	
Number wheel turns			*
Туре			
Location (front or rear of wheels, other)			
Drag link (trans. or longit.) Tie rods (one or two)			
	Type Material Size (coi bar lengt Spring rat Rate at w Design lo Type (liniframeless) Material EERING (std., opt., opt., NA) eter Outside front Inside rear real angle w Gear No. whee Type (co) Make Trade na Geor Pump drin Number v Type Location of wheels	Type Material Size (coil design hei bar length x dia. Spring rate (lb. per in Rate at wheel say link (std., opt., NA) peter Outside (std., opt., NA) opt., NA opt.,	SPENSION FRONT (co Type Material Size (coil design height & I.D.; bar length x dia. Spring rate (lb. per in.) Rate at wheel (lb. per in.) Design load (lb. @ design height) Type (link, linkless, frameless) Material & bar diameter EERING (std., opt., NA) opt., NA) eter Outside front

(Continued)

MAKE OF	CAR		STUDEBAKER	MODEL YEAR 1963 DATE ISSUED 7-23-62 REVISED (6) 11-15-62		
MODEL_				R-3 ENGINE COMPONENTS		
	ERINC	(conf	r)			
Inclination at camber (deg.)						
Steering – Axis	Upper					
	Bearings (type)	Lower		R R		
		Thrust		-		
Wheel alignment (range and preferred)	Caster (deg.)					
	Camber (deg.)					
	Toe-in (autside tread- inches)					
Steering spi	indle & join	nt type				
Wheel spindle	Diameter	Inner bearing				
		Outer bearing				
	Thread size					
Ī	Bearing type			financia de la companya de la compa		
SU	SPENS	ION-	REAR			
Type and de	escription			Semi-Elliptic Rear Springs - Asymmetric		
Drive and torq. taken through (see page 17)				Rear Springs and Radius Rods		
Туре				Semi-Elliptic - Leaf		
Spring	Material			SAE 5160 or 9260		
	Size (length x width, coil design height and I.D.; bar length & dia.)			51" x 2-1/2"		
	Spring rate (lb. per in.)			135		
	Rate at wheel (lb. per in.)			170		
	Design load (lb. at design height)			700 @ 2-1/2" Negative Camber		
	Mounting insulation type			Rubber Bushings		
1	Ī	No. of leaves		6		
	If leaf	Type and size		Button Type - 2.38 x .080 Hexagon		
		Inserts	Material	Polyethlene with Graphite		
		Shackle	(comp. or tens.)	Compression		
Stabilizer	Type (link, linkless, frameless)			Link		
Materiai			5 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1	SAE 1065		
Track bar type			5	None		