

## AMA Specifications – Passenger Car

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<b>MANUFACTURER</b> STUDEBAKER CORPORATION	<b>CAR NAME</b> HAWK	
<b>MAILING ADDRESS</b> 635 South Main Street South Bend 27, Indiana	<b>MODEL YEAR</b> 1963	<b>ISSUED:</b> August 1962 <b>REVISED (a)</b>

**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.

2 Door Custom Hardtop - 5 Pass. - 63V-K

# AMA Specifications – Passenger Car

MAKE OF CAR STUDEBAKER MODEL YEAR 1963 DATE ISSUED 8-1962 REVISED(\*)

## GENERAL SPECIFICATIONS

(All dimensions in inches unless otherwise indicated)

MODEL	Additional Information Page No.:	63V-K - HAWK	
Wheelbase (L101)	23	120.5"	
Tread	Front (W101)	22	57-3/8"
	Rear (W102)	22	56-9/16"
Maximum Overall Dimensions	Length (L103)	23	204.00"
	Width (W103)	22	71"
	Height (H101)	24	54-21/32"
Transmission— (Specify trade name - opt., not available)	Manual	15	3 Speed-Standard - 4 Speed-Optional
	Overdrive	16	Optional
	Automatic	16	Optional - Flightomatic
Axle ratio	Manual	17	3.31:1
	Overdrive	17	3.73:1
	Automatic	17	3.31:1
Tire size	18	6.70x15-4	
Engine	Type, no. cyl., valve arr.	2	V8 - OHV
	Fuel system (Carb., other)	8	Carburetor
	Bore and stroke	2	3-9/16" x 3-5/8"
	Piston displ., cu.in.	2	289
	Std. compression ratio	2	8.5:1
	Max. bhp at engine rpm	2	210 @ 4500
	Max. torque at rpm	2	300 @ 2800

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<b>MAKE OF CAR</b>	Studebaker	<b>MODEL YEAR</b>	1963	<b>DATE ISSUED</b>	9-1962	<b>REVISED</b> (a)
<b>MODEL</b>	Thunderbolt II	Jet-Thrust	Super Jet-Thrust			

## ENGINE—GENERAL

Type, no. cyls., valve arr.		90° V - 8 Cylinder OHV		
Bore and stroke (nominal)		3-9/16" x 3-5/8"		
Piston displacement, c.u. in.		289		
Bore spacing (C/L to C/L)		4.5		
No. system (front to rear)	L. Bank	1-3-5-7		
	R. Bank	2-4-6-8		
Firing order		1-8-4-3-6-5-7-2		
Compres. ratio (nominal)		8.5:1	10.25:1	9.0:1
Cylinder Head Material		Cast Iron		
Cylinder Block Material		Cast Iron		
Cylinder Sleeve—Wet, dry, none		None		
Number of mounting points	Front	2		
	Rear			
Engine installation angle		6°-35'		5°-49'
Taxable horsepower <small>Dis.<sup>2</sup> x No. Cyl. 2.5</small>		40.6		
Published max. bhp* @ eng. RPM		210 @ 4500		
Published max. torque* (lb. ft. @ RPM)		300 @ 2800		
Recommended fuel regular - premium		Regular	Premium	
Idle speed (spec. neutral or drive)	Manual	550 Neutral	650	
	Automatic	550 Neutral	650	

## ENGINE—PISTONS

Material		F-132 Aluminum		
Description and finish		Autothermic Controlled Expansion	Autothermic - Tin Plated	
Weight (piston only) oz.		16.6	16.6	
Clearance (limits)	Top land	.0225-.0305		.0225-.0305
	Skirt	Top	Selective Fit	
		Bottom	Selective Fit	
Ring groove depth	No. 1 ring	.1845-.1925		.1845-.1925
	No. 2 ring	.1845-.1925		.1845-.1925
	No. 3 ring	.1845-.1925		.1845-.1925
	No. 4 ring	---		---

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

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## POWER TEAMS

(Indicate whether standard or optional)

MODEL AVAILABILITY	ENGINE					TRANSMISSION	AXLE RATIO (Std. first)
	Displ. cu. in.	Carburetor	Compr. Ratio	BHP @ RPM	Torque @ RPM		
63V-K  Standard	289	2 Bbl.	8.5	210 @ 4500	300 @ 2800	Std. - 3-Speed Opt. - Overdrive Opt. - Automatic Opt. - 4-Speed	3.31 - 3.73 3.73 - 3.31 3.37 - 3.07 3.31 - 3.07
Optional		4 Bbl.		225 @ 4500	305 @ 3000		
Opt. - Jet-Thrust	289		10.25	N.A.	N.A.	Same as above	for 289
Opt. - Super Jet-Thrust	289		9.0	N.A.	N.A.	Available with 4-Speed and Automatic only	Same as above for 289

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MAKE OF CAR	Studebaker	MODEL YEAR	1963	DATE ISSUED	9-1962	REVISED (a)
MODEL	Thunderbolt II	Jet-Thrust	Super Jet-Thrust			

## 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.		---
Compression	Description - material, type, coating, etc.	Cast Iron - Granoseal 2nd-Ferrox Opt.	Top Cast Iron Chrome Plated - 2nd Cast Iron Granoseal
	Width		.078"
	Gap	.008 - .016	.012" - .020" - Top .008" - .016 - 2nd
Oil	Description - material, type, coating, etc.	Chrome Plated Steel Rail	
	Width		.187"
	Gap		.015" - .055"
Expanders		Behind Oil Ring Only	

## ENGINE—PISTON PINS

Material	C.D. Steel-SAE 1118	C.D. Steel - SAE 5120 (SAE 8620-Opt.)	
Length	3-1/16"	2-7/8"	
Diameter		.875"	
Type	Locked in rod, in piston, floating, etc.	Clamped In Rod	
	Bushing	In rod or piston	None
		Material	---
Clearance	In piston	.0001" - .0003" - Selective Fit	
	In rod	None	
Direction & amount offset in piston	None	1/16" Toward Thrust Side	

## ENGINE—CONNECTING RODS

Material	Special D. F. Steel C-1141	
Weight (oz.)	23.73	23.71
Length (center to center)		6.625
Bearing	Material & Type	Steel Back - Aluminum Lined W/Babbitt Overlay
	Overall length	.838" - .848"
	Clearance (limits)	.00025" - .00275"
	End play	.008" - .013"
		Steel Back - Trimetal Aluminum Steel Back - Trimetal Copperlead
		13/16"

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<b>MAKE OF CAR</b>	Studebaker	<b>MODEL YEAR</b>	1963
		<b>DATE ISSUED</b>	9-1962
		<b>REVISED</b>	(6)
<b>MODEL</b>	Thunderbolt II	Jet-Thrust	Super Jet-Thrust

## ENGINE—CRANKSHAFT

<b>Material</b>		D.F. Steel (SAE 1046) Type 07		
<b>Vibration damper type</b>		Rubber Mounted Disc	Rubber Mounted Inertia Member	
<b>End thrust taken by bearing (No.)</b>		1		
<b>Crankshaft end play</b>		.003" to .006"		
<b>Main bearing</b>	<b>Material &amp; type</b>	Steel Back Babbitt Lined	Front & Rear—Steel Back Babbitt Lined #2, 3 & 4—Steel Back Trimetal Aluminum	
	<b>Clearance</b>	.0006" - .0027"	.0008" - .0033"	
	<b>Journal dia. and bearing overall length</b>	No. 1	2.500" - 1.309"	2.500" - 1.3125"
		No. 2	2.500" - .906"	2.500" - 1.125"
		No. 3	2.500" - .906"	2.500" - 1.125"
		No. 4	2.500" - .906"	2.500" - 1.125"
		No. 5	2.500" - 1.546"	2.500" - 1.78125"
		No. 6	---	---
No. 7		---	---	
<b>Dir. &amp; amt. cyl. offset</b>		None		
<b>Crankpin journal diameter</b>		1.99925" - 2.00025"		

## ENGINE—CAMSHAFT

<b>Location</b>		Cylinder Block - Center	
<b>Material</b>		Alloy - Cast Iron	
<b>Bearings</b>	<b>Material</b>	Steel Back - Babbitt Lined	
	<b>Number</b>	5	
<b>Type of Drive</b>	<b>Gear or chain</b>	Gear	
	<b>Crankshaft gear or sprocket material</b>	Cast Iron	
	<b>Camshaft gear or sprocket material</b>	Celeron With Steel Hub	Alcoa Aluminum
	<b>Timing chain</b>	No. of links	None
Width		None	
Pitch		None	

## ENGINE—VALVE SYSTEM

<b>Hydraulic lifters (Std, opt, NA)</b>		N.A.	
<b>Valve rotator, type (intake, exhaust)</b>		None	
<b>Rocker ratio</b>		1.5:1	
<b>Operating tappet clearance (indicate hot or cold)</b>	Intake	.023" - .025" - Hot .025" - .027" - Cold	.025" - .027" - Hot
	Exhaust	.023" - .025" - Hot .025" - .027" - Cold	.025" - .027" - Hot
<b>Timing marks on flywheel, damper, other</b>		Damper	

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MODEL Thunderbolt II Jet-Thrust Super Jet-Thrust

## ENGINE—VALVE SYSTEM (cont.)

Timing	Intake	Opens (°BTC)	11°	17°
		Closes (°ABC)	54° - 36'	63°
		Duration - deg.	245° - 36'	260°
	Exhaust	Opens (°BBC)	51° - 36'	56°
		Closes (°ATC)	14°	24°
		Duration - deg.	245° - 36'	260°
Valve opening overlap		25°	41°	
Intake	Material		N.A.	S11. #1 Steel
	Overall length		5-5/32"	
	Actual overall head dia.		1-21/32"	
	Angle of seat & face		45°	
	Seat insert material		None	
	Stem diameter		11/32"	
	Stem to guide clearance		.0015" - .0035"	
	Lift (@ zero lash)		.375"	
	Outer spring press. and length	Valve closed (lb. @ in.)	45 to 55 @ 2.031"	67 to 75 @ 2.031"
		Valve open (lb. @ in.)	105 to 115 @ 1.671"	148 to 160 @ 1.631"
	Inner spring press. and length	Valve closed (lb. @ in.)	None	
		Valve open (lb. @ in.)	None	
	Exhaust	Material		N.A.
Overall length		5-5/32"		
Actual overall head dia.		1-17/32"		
Angle of seat & face		45°		
Seat insert material		None		
Stem diameter		11/32"		
Stem to guide clearance		.0015" - .0035"		
Lift (@ zero lash)		.375"	.400"	
Outer spring press. and length		Valve closed (lb. @ in.)	45 to 55 @ 2.031"	65 to 75 @ 2.031"
		Valve open (lb. @ in.)	105 to 115 @ 1.671"	148 to 160 @ 1.671"
Inner spring press. and length	Valve closed (lb. @ in.)	None		
	Valve open (lb. @ in.)	None		

## 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	Directed Jet
	Cylinder walls	Directed Jet

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<b>MODEL</b>	Thunderbolt II	Jet-Thrust	Super Jet-Thrust				

## ENGINE—LUBRICATION SYSTEM (cont.)

Oil pump type	Spur Gear
Normal oil pressure (lb. @ engine rpm)	Min. 30 at 2000
Oil pressure sending unit (elect. or mech.)	Mechanical
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, partial, other)	Full Flow *
Filter replacement (element, complete)	Complete
Capacity of crankcase, less filter-refill (qt.)	5
Oil grade recommended (SAE viscosity and temperature range)	Above +32°F - SAE 30 - or - 10W30 Above +10°F - SAE 20 - or - 10W30 Above -10°F - SAE 10W - or - 10W30 Under -10°F - SAE 5W - or - 5W20 (20W-30 For Severe Service)
Engine Service Requirement (MM, MS, etc.)	

## ENGINE—EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)	Dual		
Muffler No. & type (reverse flow, straight thru, separate resonator)	Dual Reverse Flow	2 Straight Thru - Glass Wool Pack	
Exhaust pipe dia. (O.D. & wall thickness)	Branch	1.875" x .059"	---
	Main	2.000" x .059"	2"
Tail pipe diameter (O.D. & wall thickness)	1.750" x .0478"	2"	

## ENGINE—CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)	Standard	Induction System		
	Optional		---	
Control unit	Make and model	Carter C-3558S	Studebaker	
	Location	Carburetor	---	
	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	Intake Manifold and Air Cleaner Intake	Intake Manifold and Carb. Air Intake
	Air Inlet (breather cap, carburetor air cleaner, other)	Breather Cap		
	Flame arrestor (screen, check valve, other)	Check Valve		

\* F4 Oil Filter Optional



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MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED <sup>(\*)</sup>

MODEL	Thunderbolt II	63V-K - Hawk Jet-Thrust	Super Jet-Thrust
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## ENGINE—FUEL SYSTEM

(See Supplement to Page 8 for Details of Fuel Injection, Supercharger, etc. If used)

Induction type: Carburetor, fuel injection, supercharger.		Carburetor	Carburetor Supercharged
Fuel Tank	Capacity (gals.)	18	
	Filler location	Left Rear Fender	
Fuel Pump	Type (elec. or mech.)	Mechanical	
	Locations	Left Front Of Engine	
	Pressure range	4-5-1/2 PSI	5-1/2 to 7 PSI @ 1000 rpm
Vacuum booster (std., optional, none)		None	
Fuel Filter	Type	Ceramic	Pleated Paper
	Locations	In Fuel Pump	Line Between Pump & Carburetor
Carburetor	Choke type	Automatic	
	Intake manifold heat control (exhaust or water)	Exhaust	
	Air clnr. type	Standard	Plasticized Paper
	Optional	Oil Bath	None

## CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors		No. Used and Type	Barrel Size
			Make	Model		
Standard On Thunderbolt II	289	Std-3-Speed Opt-Overdrive Opt-Automatic Opt-4-Speed	Stromberg	WW6-130	1 Dual Down Draft	1.44
Optional With Thunderbolt II	289	Std-3-Speed Opt-Overdrive Opt-Automatic Opt-4-Speed	Carter	AFB-3540S	4 Bbl. Down Draft	1.44 Prim. 1.69 Sec.
Jet-Thrust	289	Std-3-Speed Opt-Overdrive Opt-Automatic Opt-4-Speed	Carter	AFB-3506S	4 Bbl. Down Draft	1-7/16 Prim. 1-11/16 Sec.
Super Jet-Thrust	289		Carter	AFB-3507S	4 Bbl. Down Draft	1-7/16 Prim. 1-11/16 Sec.

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MODEL	Thunderbolt II	Jet-Thrust	Super Jet-Thrust			

## ENGINE—COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)		Pressure - Atmospheric Vented			
Radiator cap relief valve pressure		13 lbs.			
Circulation thermostat	Type (choke, bypass)	Choke			
	Starts to open at (°F)	170°			
Water pump	Type (centrifugal, other)	Centrifugal			
	GPM @ 1000 pump rpm	15			
	Number of pumps	One			
	Drive (V-belt, other)	V-Belt			
Bearing type		Sealed Double Row Ball			
By-pass recirculation type (internal, external)		Internal			
Radiator core type (cellular, tube and fin, other)		Cellular - Tubular			
Cooling system capacity	With heater (qt.)	18			
	Without heater (qt.)	17			
	Opt. equipment-specify (qt.)	None			
Water jackets full length of cylinder (yes, no)		Yes			
Water all around cylinder (yes, no)		Yes			
Radiator hose	Lower	Number and type (molded, straight)	One - Molded		
		Inside diameter	1.500"		
	Upper	Number and type (molded, straight)	One - Molded		
		Inside diameter	1.500"		
	By-pass	Number and type (molded, straight)	None		
		Inside diameter	None		
Fan	Number of blades & Spacing		4 - 76° & 104°	5 - 65°, 65°, 92°, 46°, 92°	
	Diameter		18.250"	17"	
	Ratio-fan to crankshaft rev.		.87:1	1.20	
	Fan cutout type		None	2.500 (Viscous Drive)	
	Bearing type		Sealed Double Row Ball		
*Drive belts (indicate belt used by letter)	Fan		D		
	Generator		D		
	Water Pump		D		
	Power Steering		E		
	Air Conditioning		F		

* Drive Belt Dimensions	D	E	F
Angle of V	38°	38°	38°
Nominal length (SAE)	56-1/2"	37-1/2"	53-1/4"
Width	.380"	15/32"	.500"

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MODEL	Thunderbolt II		Jet-Thrust			Super Jet-Thrust	

## ELECTRICAL—SUPPLY SYSTEM

Battery	Make and Model	Willard HQ-11-50						
	Voltage Rtg. & Total Plates	12 - 9 Plates Per Cell						
	SAE Designation & Amp Hr. Rtg	50 Amp. Hour						
	Location	Under Hood - Left Fender						
	Terminal grounded	Negative						
Generator	Make	Prestolite						
	Model	ALK-500					ALE-5003	
	Type	Diode Rectification - Self-Limiting						
	Ratio—Gen. to Cr/s rev.	2.53:1					2.452	
	Gen. cut-in (hot) —engine rpm	375						
Regulator	Make	Prestolite						
	Model	VBT-6201A						
	Type	Single Unit - Vibrating						
	Cutout relay	Closing voltage @ generator rpm	None					
		Reverse current to open	---					
	Regu-lated	Voltage	14.2					14.0 - 14.4 Upper Contact
		Current	None - Self Limiting					
	Voltage test con-ditions	Temperature	70°					
Load		10 Amp						
Other		20 Min @ 2000 Alternator Rpm						

## ELECTRICAL—STARTING SYSTEM

Starting motor	Make	Autolite						
	Model	MDU-7025 - Std. MDU-7026 - Auto.						
	Rotation (drive end view)	Clockwise						
	Engine cranking speed	160						
	Test conditions	Normal Engine Operating Temp.						
	Lock test	Amps	425					
		Volts	6.0					
		Torque (lb. ft.)	11					
	No load test	Amps	55					
		Volts	10					
RPM (min.)		5200						
Motor control	Switch (solenoid, manual)	Solenoid						
	Starting procedure	<ol style="list-style-type: none"> <li>1. Rotate ignition key clockwise to the starting position.</li> <li>2. When the engine starts, permit the key to return to ignition 'On' position.</li> </ol>						

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MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (\*)

MODEL Thunderbolt II | Jet-Thrust | Super Jet-Thrust

## ELECTRICAL—STARTING SYSTEM (cont.)

Motor Drive	Engagement type		Bendix Folo-Thru
	Pinion meshes (front, rear)		Front
	Number of teeth	Pinion	9
		Flywheel	162
Flywheel tooth face width		.375"	

## ELECTRICAL—IGNITION SYSTEM

Coil	Make		Autolite		
	Model		200567	200674	
	Amps	Engine stopped	N.A.		
Engine idling		3.8	4		
Distributor	Make		Autolite		
	Model		IBP-4108	IBS-4012	IBS-4012A
	Cent'fgal adv. in crankshaft degrees @ engine rpm (nominal)	Start (rpm)	600	730-870	530-660
		Intermediate points deg. @ rpm	6° @ 800 18° @ 1700	14° to 18° @ 1350	10° @ 960
		Max deg. @ rpm	26° @ 2300	22° @ 2000	20° @ 1200
	Vacuum adv. in crankshaft degrees @ in. Hg. (nominal)	Start (in Hg)	7"	7" to 9"	
		Intermediate points, deg @ in Hg	10° @ 11"	7° to 12° @ 11"	
		Max. deg. in Hg.	18° @ 13"		
	Breaker gap (in.)		.014" - .019"		
	Cam angle (deg.)		27° - 31°	39° - ±3°	
Breaker arm tension (oz.)		17 - 22	27-31		
Timing	Crankshaft deg. @ rpm.		4° @ 550	4° @ 650	24° @ 1600
	Mark location		Vibration Damper		
	Cylinder numbering system (see page 2)		Left Bank - 1-3-5-7 Right Bank - 2-4-6-8		
	Firing order (see page 2)		1-8-4-3-6-5-7-2		
Spark Plug	Make and model		Champion H-14Y	Champion J-12Y	
	Thread (mm)		14		
	Tightening torque (lb. ft.)		25 - 30		
	Gap		.033" - .038"		
Cable	Conductor type		Radio Suppression - 5000 OHM Per Ft. - Nominal		
	Insulation type		Neoprene		
	Spark plug protector		Applied or Molded Terminal Cover		

## ELECTRICAL—SUPPRESSION

Locations & type	<p>.5 MFD Condensers at Ignition Coil, Generator, Armature and Voltage Regulator, with Radio Only.</p> <p>10,000 OHM - In Distributor Rotor - Ground at Oil Pipe</p>
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63V-K Hawk

MODEL \_\_\_\_\_

## ELECTRICAL—INSTRUMENTS AND SWITCHES

Speed-ometer	Make	Stewart-Warner
	Trip odometer (yes, no)	No
Charge indicator—type		Direct Reading
Temperature indicator—type		Electric Gage
Oil pressure indicator—type		Direct Reading
Fuel Indicator—type		Electric Gage
Other		---
Ignition switch	Identify positions in order and circuits controlled	Center - Off 1st Position Right - All circuits 'ON' except starter. 2nd Position Right - All circuits 'OFF' except ignition & starter. 1st Position Left - Instruments and accessories.
	Provision for illumination	Yes
	Location	Instrument Board - Left of Steering Column
Main light-ing switch	Identify positions and lamps controlled	Toggle Type Switch Down for Parking and Taillights Up for Headlights and Taillights
Other light switches	Locations and lamps controlled	Toggle Type Instrument Light Switch Down for Dim and Ignition Switch Light Up for Bright and Ignition Switch Light Dome Light Controlled by Door Switches - Manual Switch in Lamp Body
Other switches	Locations and devices controlled	Climatizer and Defroster Fan Motor Switch Located Right of Steering Column on Instrument Board  Windshield Wiper, Toggle Type Switch, Located Right of Steering Column on the Instrument Board
Windshield wiper	Make	Autolite or Bosch
	Type	Two Speed - Electric
	Vacuum booster provision	None
	Washer provision	Yes
Horn	Type	Solenoid
	Number used	Two
	Amp draw (each)	10 Amps. at 14 Volts

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MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (\*) \_\_\_\_\_

MODEL 63V-K Hawk

## ELECTRICAL—LAMP BULBS

Give quantity used and trade number, e.g., Headlamp 2-5400 S, dual headlight 2-4001, 2-4002. Indicate accessories which are not standard equipment by an asterisk following the numbers.

Headlamps & arrangement		2 - 6012
Headlamp beam indicator		1 - 1445
Parking		2 - 1034 (a)
Tail		2 - 1034 (b)
Stop		Same as (b)
Direction signal	Front	Same as (a)
	Rear	Same as (b)
	Indicator	2 - 1445
License plate		1 - 67
Instrument		3 - 57
Ignition lock		1 - 1445
Back up		2 - 1141
Dome		1 - 1004
Clock		1 - 57
Radio		1 - 1892
Glove compartment		1 - 57
Automatic Trans. Indicator		1 - 1445
Cigar Lighter Light		1 - 1445
Trunk		1 - 67
Tachometer		2 - 1816







# AMA Specifications – Passenger Car

<b>MAKE OF CAR</b>	Studebaker	<b>MODEL YEAR</b>	1963	<b>DATE ISSUED</b>	9-1962	<b>REVISED</b>	(*)
<b>MODEL</b>	Thunderbolt II	Jet-Thrust	Super Jet-Thrust	All Engines	4-Speed Tran.		

## DRIVE UNITS—CLUTCH (Manual Transmission)

<b>Make &amp; type</b>	Borg & Beck Single Disc-Dry	Borg & Beck Semi-Centrifugal	
<b>Type pressure plate springs</b>		Coil	
<b>Effective plate pressure (lb.)</b>	1640	1465	1784   1465 *
<b>No. of clutch driven discs</b>		One	
<b>Clutch facing</b>	<b>Material</b>	Molded Asbestos	Woven Molded
	<b>Outside &amp; inside dia.</b>	10.5 - 6.5	10.5 - 6.5
	<b>Total eff. area (sq.in.)</b>		106.8   99.1
	<b>Thickness</b>		140
	<b>Engagement cushioning method</b>	Plate Cushion Springs	
<b>Release bearing</b>	<b>Type &amp; method of lubrication</b>	Single Row Ball - Pre-Lubricated	
<b>Torsional damping</b>	<b>Methods: springs, friction material</b>	Coil Springs and Steel Washers	

## DRIVE UNITS—TRANSMISSIONS

<b>Manual (std. or opt.)</b>	3-Speed - Std.    4-Speed - Opt.
<b>Manual with overdrive (std. or opt.)</b>	Optional
<b>Automatic (std. or opt.)</b>	Optional

## DRIVE UNITS—MANUAL TRANSMISSION

<b>Number of forward speeds</b>	3	4		
<b>Transmission ratios</b>	<b>In first</b>	2.57:1	2.54:1	
	<b>In second</b>	1.55:1	1.92:1	
	<b>In third</b>	1.00:1	1.51:1	
	<b>In fourth</b>	None	1.00:1	
	<b>In reverse</b>	3.489:1	2.61:1	
<b>Synchronous meshing, specify gears</b>	2nd & 3rd	1-2-3-4		
<b>Shift lever location</b>	Steering Column	Floor		
<b>Lubricant</b>	<b>Capacity (pt.)</b>	3.8	2.5	
	<b>Type recommended</b>	Mineral Oil Gear Lubricant	Multi-Purpose Gear Lub.	
	<b>SAE viscosity number</b>	<b>Summer</b>	SAE 80	
		<b>Winter</b>	SAE 80	
<b>Extreme cold</b>		SAE 80		

# AMA Specifications – Passenger Car

**MAKE OF CAR** Studebaker      **MODEL YEAR** 1963      **DATE ISSUED** 9-1962      **REVISED** (\*)

**MODEL** 63V-K Hawk

## DRIVE UNITS—MANUAL TRANSMISSION WITH OVERDRIVE

For transmission data see manual transmission section

Overdrive	Type (planetary or other)		Planetary
	Manual lockout (yes, no)		Yes
	Downshift accelerator control (yes, no)		Yes
	Minimum cut-in speed		Approx. 27 Mph
	Gear ratio		.70:1
Lu- bri- cant	Capacity (pt.) (Overdrive only)		0.26
	Separate filler (yes, no)		Yes
	Type recommended		Mineral Oil Gear Lubricant
	SAE vis- cosity number	Summer	SAE 80
		Winter	SAE 80
Ext. cold		SAE 80	

## DRIVE UNITS—AUTOMATIC TRANSMISSION

Trade name	Flightomatic	
Type describe	Torque Converter and Compound Planetary Gear Set	
Method of Selection (Lever, Push Button or other)	Lever	
Selector Pattern	P-N-D-L-R	
List gear ratios Selector Pattern and indicate which are used in each selector position	Drive & Low, 1st - Torque Converter x 2.40:1 Drive & Low, 2nd - Torque Converter x 1.47:1 Drive, 3rd - Torque Converter x 1.00:1 Reverse - Torque Converter x 2.00:1 (Starts in low (Drive Range) only at full throttle starts)	
Max. upshift speeds—drive range	1-2, 34 - 42      2-3, 63 - 73	
Max. kickdown speeds—drive range	2-1, 20 - 26      3-2, 60 - 70	
Torque converter	Number of elements	3
	Max. ratio at stall	2.15 @ 1600
	Type of cooling (air, water)	Forced Air
Lubricant	Capacity—refill (pt.)	18
	Type recommended	Type "A" Automatic Transmission Fluid
Special transmission features	Transmission can be locked in second gear in the "low" range providing car speed is above approx. 15-20 Mph, and transmission has upshifted to second or third.	

## DRIVE UNITS—PROPELLER SHAFT

Number used	One	
Type (exposed, torque tube)	Exposed-Tubular	
Outer diameter x length* x wall thickness	Manual transmission	2-3/4 x 51-13/32 x .065
	Overdrive transmission	2-3/4 x 51-13/32 x .065
	** Automatic transmission	2-3/4 x 51-29/32 x .065

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

(Continued)

\*\* 4-Speed Trans. - 3-1/2 x 57-5/8 x .065

# AMA Specifications – Passenger Car

**MAKE OF CAR** Studebaker    **MODEL YEAR** 1963    **DATE ISSUED** 9-1962    **REVISED** (\*)

**MODEL** 63V-K Hawk

## DRIVE UNITS—PROPELLER SHAFT (cont.)

Inter-mediate bearing	Type (plain, anti-friction)	None
	Lubrication (fitting, prepack)	None
Universal joints	Make	Spicer-or-Mechanics
	Number used	Two
	Type (ball and trunnion, cross, other)	Cross
	Bearing	Type (plain, anti-friction)
Lubric. (fitting, prepack)		Pre-Packed
Drive taken through (torque tube or arms, springs)		Rear Springs
Torque taken through (torque tube or arms, springs)		Rear Springs

## DRIVE UNITS—REAR AXLE

Description (see instructions)	Standard - Hypoid Semi-Floating - Model 44 Optional - Twin-Traction - Model 44		
Limited Slip differential, type	Twin-Traction - Optional		
Drive Pinion Offset	1"		
No. of differential pinions	4		
Gear ratios (Std. equip.)	Manual transmission	3.31 - (3.73 Opt.)	
	Overdrive transmission	3.73 - (3.31 Opt.)	
	Automatic transmission	3.54, 3.31 - (3.07 Opt.)	
Ring gear O.D. (std. ratio)			
Pinion adjustment (shim, other)	Shim		
Pinion bearing adj. (shim, other)	Shim		
Wheel bearing type	Tapered Roller		
Lubricant	Capacity (pt.)	3	
	Type recommended	Hypoid Lubricant)	
	SAE viscosity number	Summer	SAE 90
		Winter	SAE 90
Extreme cold		SAE 80	
		) For Twin-Traction ) Special Studebaker ) Lubricant	

## REAR AXLE RATIO TOOTH COMBINATIONS

(See page 3 for axle ratio usage)

Axle ratio	N.A.	
No. of teeth	Pinion	N.A.
	Ring gear	N.A.

# AMA Specifications – Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED <sup>(a)</sup> \_\_\_\_\_

MODEL \_\_\_\_\_ 63V-K Hawk

## DRIVE UNITS—WHEELS

Type & material		Disc - H. R. Steel
Rim (size and flange type)	Std.	15 x 4.5K, Drop Center, Safety Rim
	Opt.	None
Attachment	Type (bolt or stud)	Stud
	Circle diameter	4.5
	Number and size	5 - 1/2"

## DRIVE UNITS—TIRES

Standard (List option below)	Size & ply	2 Ply - 6.70x15 - 4 Ply Rating
	Type - Nylon, etc.	Rayon
Rev/mile at 50 mph.		753
Inflation press.(cold)	Front	24 *
	Rear	20 *
Optional tires - size and ply		6.70x15 - 4 or 6 Ply

## BRAKES—SERVICE

Type (duo-servo, disc, balanced, etc.)		Hydraulic - Self-Centering - Self-Energizing	
Self adjusting (std., opt., N.A.)		Standard	
Hydraulic system type (single, dual, etc.)		Single	
Power brake make & type (remote, integral, etc.)		Standard W/Disc Type	
Effective area (sq. in.)*		172.8	105
Gross lining area (sq. in.)**		172.8	105
Swept drum area (sq. in.)***		281.6	377
Percent brake effectiveness—front		62	62
Drum	Diameter	Front 11 Rear 10	11-1/2" O.D. Disc 11 x 2
	Type and material	Budd - Composite	Frnt. - Grey Iron Disc *
Wheel cylinder bore	Front	1.062	2-1/8"
	Rear	.875	3/4"
Master cylinder bore		1.000	1-1/8"
Available pedal travel		6	6-3/8"
Line pressure at 100 lb. pedal load		890 PSI	1300
Shoe clearance adjustment		.006" - .008"	Frnt. D.N.A. - Rear .006"-.008"

\* Excludes rivet holes, grooves, chamfers, etc.  
 \*\* Includes rivet holes, grooves, chamfers, etc.  
 \*\*\* Total swept areas for four brakes:  
 Widest lining contact width for each brake x its drum circumference.

(Continued)

\* Rear - Composite-Finned

\* Where 4 or more passengers is normal 26 lbs. front and rear is recommended with 4 ply tires.  
 For sustained high speed driving, 30 lbs. front and rear.  
 For special order 6 ply tires and extreme heavy loads 30 lbs. front and rear is permissible.

# AMA Specifications—Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (a)

MODEL 63V-K Hawk

## BRAKES—SERVICE (cont.)

Brake lining *	Bonded or riveted			Bonded
	Front Shoe	Material	Size (length x width x thickness)	Front wheel
Rear wheel				9-21/64 x 2-1/4 x 3/16
		Rear wheel	8-15/32 x 2 x 3/16	
		Segments per shoe	One	
Rear Shoe	Material	Size (length x width x thickness)	Front wheel	Marshall - Eclipse
			Rear wheel	11-57/64 x 2-1/4 x 7/32
			Rear wheel	10-27/32 x 2 x 3/16
			Segments per shoe	One

## BRAKES—PARKING

Type of control	T-Handle - Full Type	
Location of control	Right of Steering Column	
Operates on	Rear Wheel Brakes	
If separate from service brakes	Type (internal or external)	None
	Drum diameter	None
	Lining size (length x width x thickness)	None

## FRAME or UNITIZED CONSTRUCTION

Type and description Box Section, Double Drop, Ladder Type

## SUSPENSION—GENERAL (See Supplemental page 19 for details on Air Suspension)\*

Provision for car leveling	None	
Provision for brake dip control	Yes - Asymmetric Rear Springs	
Provision for acc. squat control	Yes - Asymmetric Rear Springs	
Special provisions for car jacking	No	
Shock absorber front & rear	Type	Direct Acting Hydraulic
	Make	Gabriel
	Piston dia.	1"
Other special features	None	

## SUSPENSION—FRONT

Type and description Independent Coil Springs

\* Air Suspension: Normal operating pressures (Continued)  
 Air spring type spring rates  
 Compressor data leveling data  
 type  
 make  
 drive ratio

\* On Disc Type—Material—Front - Mintex 33M  
 -Rear - Marshall-Eclipse M2112C  
 -Size - Front - 2 x 2 x .416 Usable (inner and outer) Form Rev. 3-62  
 - Rear - Front Shoe-12.2 x 2 x .180  
 Rear Shoe-10 x 2 x .180

# AMA Specifications – Passenger Cars

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED(\*)

MODEL 63V-K Hawk

## SUSPENSION FRONT (cont.)

Spring	Type	Coil
	Material	SAE 5160 or 9260
	Size (coil design height & I.D.; bar length x dia.)	10.50" x 4.187"
	Spring rate (lb. per in.)	180 (Nominal)
	Rate at wheel (lb. per in.)	78
	Design load (lb. @ design height)	1290 @ 10.50
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	SAE 1065 - .750"

## STEERING

Mechanical (std., opt., NA)		Standard	
Power (std., opt., NA)		Optional	
Wheel diameter		17	
Turning diameter	Outside front	Wall to wall (l. & r.)	45' - 4"
		Curb to curb (l. & r.)	42' - 6"
	Inside rear	Wall to wall (l. & r.)	27' - 3"
		Curb to curb (l. & r.)	28' - 1"
Outside wheel angle with inside wheel at 20°		17° to 18°	

Mechanical	Gear	Type		Cam and Single Lever Roller Stud
		Make		Ross
		Ratios	Gear	20 - 22 - 20
			Overall	27.5 - 24.5 - 27.5
	No. wheel turns		4.6	
Power	Type (coaxial, linkage, etc.)		Hydraulic - Linkage	
	Make		Bendix - Eaton	
	Trade name		----	
	Gear	Type		Cam and Single Lever Roller Stud
		Ratios	Gear	20 - 22 - 20
			Overall	27.5 - 24.5 - 27.5
	Pump driven by		V-Belt	
	Number wheel turns		4.6	
	Linkage	Type		Center Point Steering with Equal Length Tie-Rods
		Location (front or rear of wheels, other)		Rear
Drag link (trans. or longit.)		Longitudinal		
Tie rods (one or two)		Two		

(Continued)



# AMA Specifications – Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (•)  
 MODEL 63V-K Hawk

## STEERING (cont)

Steering Axis	Inclination at camber (deg.)		6° at 0° Camber
	Bearings (type)	Upper	Bushings
		Lower	Needle
	Thrust	Ball	
Wheel alignment (range and preferred)	Caster (deg.)		+3/4° to -3/4° (0° Preferred) *
	Camber (deg.)		0 to +1° (1/2° Greater Camber Favored on Driver's Side)
	Toe-in (outside tread-inches)		3/16"-1/4" - With Manual Steering ** 1/16"-1/8" - With Power Steering
Steering spindle & joint type			Reverse Elliott
Wheel spindle	Diameter	Inner bearing	1.250"
		Outer bearing	.750"
	Thread size		3/4" x 16"
	Bearing type		Tapered Roller

## SUSPENSION—REAR

Type and description			Semi-Elliptic - Asymmetric	
Drive and torq. taken through (see page 17)			Rear Springs	
Spring	Type		Semi-Elliptic - Leaf	
	Material		SAE 5160 or 9260	
	Size (length x width, coil design height and I.D.; bar length & dia.)		54" x 2-1/2"	
	Spring rate (lb. per in.)		90	
	Rate at wheel (lb. per in.)		100	
	Design load (lb. at design height)		700	
	Mounting insulation type		Rubber Bushings	
	If leaf	No. of leaves		5
		Inserts	Type and size	Button Type
			Material	Polyethylene with Graphite
	Shackle (comp. or tens.)		Compression	
Stabilizer	Type (link, linkless, frameless)		None	
	Material		None	
Track bar type			None	

\* SERVICE SPECIFICATION - +1/4° to -1-1/4° (with -1/2° preferred).  
 -1° at normal curb load - maximum variation between wheels should not exceed 1/2°

\*\* For Service - If normal load is 5 pass. - then 5/16" toe-in is permissible.



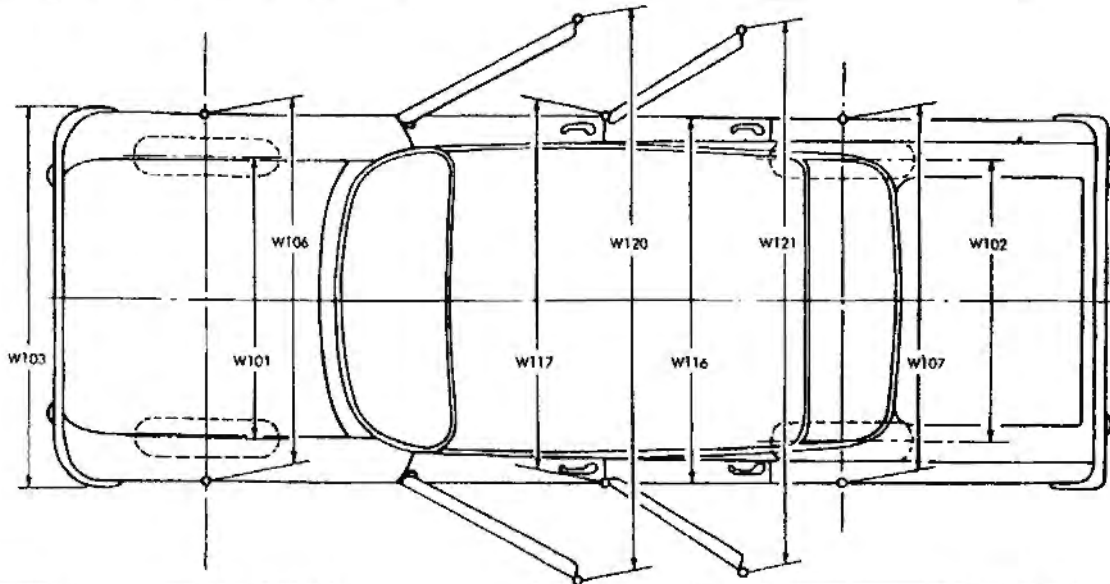
MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (\*)

## CAR AND BODY DIMENSIONS—GENERAL

NOTE: Included in the dimension definitions listed on pages 34-36 are those which have been adopted by SAE. These are indicated by a number following the type of dimension, e.g., L3. Additional dimensions have been added by the AMA Specifications Review Committee. These are shown by an additional letter, e.g., H67a. The symbol "a" has been added as a suffix to denote a dimension adopted by the AMA and submitted to the SAE for approval. The dimensions are developed from the following basic points:

1. Body dimensions are for all body styles.
2. All interior dimensions are taken with manikin 15.0 inches outboard of car centerline unless otherwise stated.
3. All interior dimensions are measured with the front seat in the lowest and rearmost position.
4. Unless otherwise specified, all exterior height dimensions are taken with a full design load which consists of 5 passengers, 300 lbs. front, 450 lbs. rear; includes spare wheel, tire and tools, and full complement of gas, oil, water and tires to recommended pressure, etc.
5. The SAE manikin with 90th percentile leg length will be used for recording purposes.
6. The H Point is the pivot center of the manikin's torso and thigh.
7. The Torso Line is a line parallel to the small of manikin's back and extending through the H Point.

## EXTERIOR WIDTH DIMENSIONS

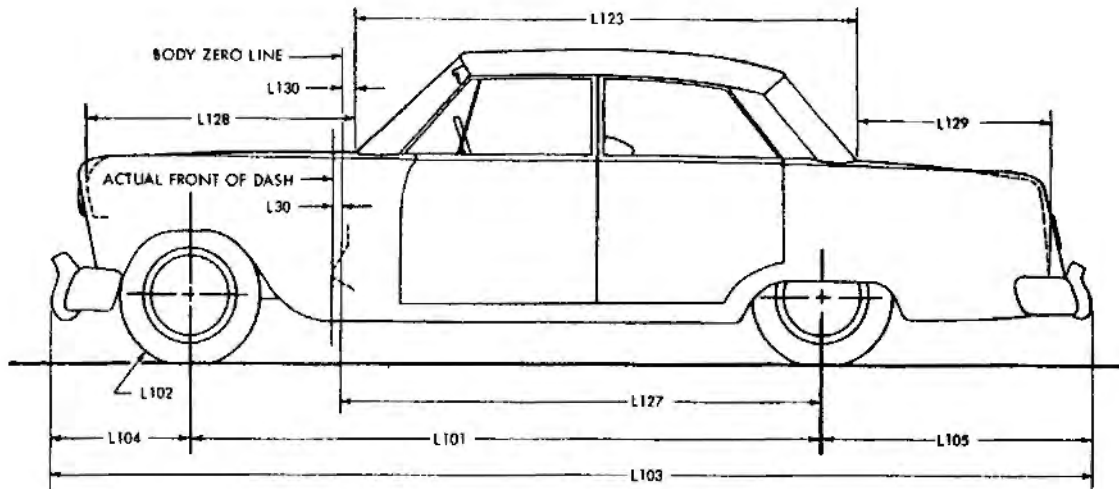


MODEL	Ref. No.	63V-K
Tread - front	W101	57.375
Tread - rear	W102	56.562
Maximum overall car width	W103	71.0 At Front Wheel Opening
Maximum overall body width	W116	71.0 At Front Wheel Opening
Maximum body width at #2 pillar	W117	69.75
Front fender overall width	W106	71.0
Rear fender overall width	W107	69.75
Maximum overall car width - front doors open	W120a	150.00
Maximum overall car width - rear doors open	W121a	None

# AMA Specifications – Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED(•)

## EXTERIOR LENGTH DIMENSIONS

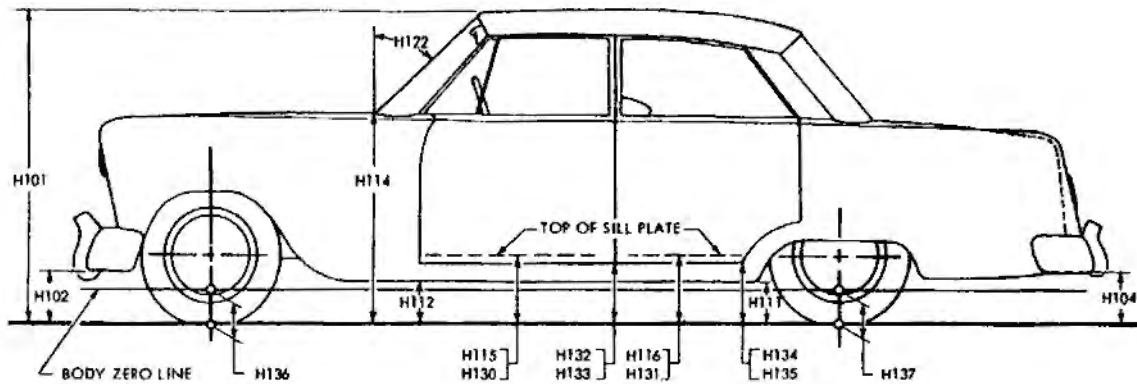


MODEL	Ref. No.	63V-K
Body zero line to actual front of dash	L30	---
Wheelbase	L101	120.5
Overhang - front	L104	34.875
Overhang - rear	L105	48.565
Overall length	L103	204
Hood length at car centerline	L128a	64.75
Body upper structure length at car centerline	L123	85.5
Deck length at car centerline	L129a	45
Body zero line to centerline of rear wheels	L127	100.00
Body zero line to windshield cowl point	L130a	15.20
Tire size	L102	6.70x15

# AMA Specifications— Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (a)

## EXTERIOR HEIGHT DIMENSIONS

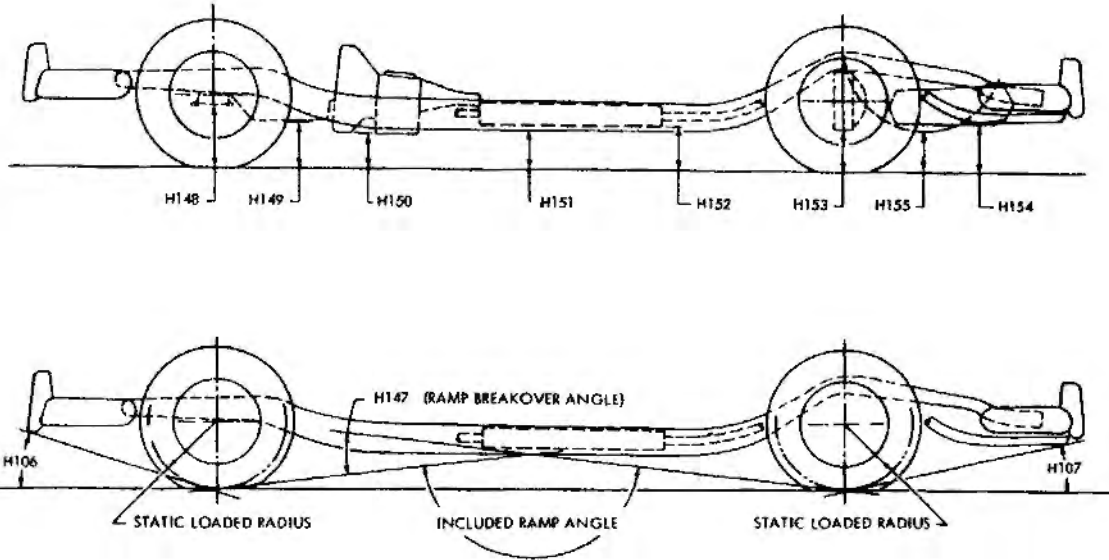


MODEL	Ref. No.	63V-K
Overall height	H101	54.656
Hood at rear to ground	H114	38.78
Rocker panel to ground - front	H112a	8.09
Rocker panel to ground - rear	H111	8.09
Step height - front (design load)	H115	11.21
Step height - rear (design load)	H116	None
Step height - front (curb load)	H130	N.A.
Step height - rear (curb load)	H131	None
Bottom of door to ground, open - front	H132	12.12
Bottom of door to ground, closed - front	H133	9.97
Bottom of door to ground, open - rear	H134	None
Bottom of door to ground, closed - rear	H135	None
Front bumper to ground	H102	13.75
Rear bumper to ground	H104	15.25
Windshield slope angle	H122	51° - 30'
Body zero to ground - front	H136a	10.75
Body zero to ground - rear	H137a	10.75

# AMA Specifications—Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED(•)

## GROUND CLEARANCE DIMENSIONS

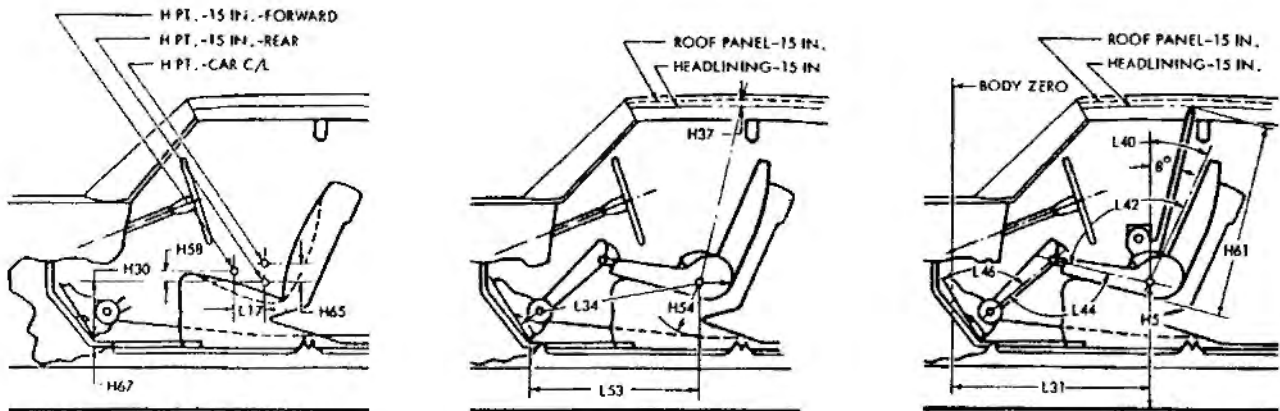


MODEL	Ref. No.	63V-K
Angle of approach	H106	20°
Angle of departure	H107	17°
Ramp breakover angle	H147	14°
Front suspension to ground	H148	8-1/8"
Oil pan to ground	H149	7-3/16"
Flywheel housing to ground	H150	8
Frame structure to ground	H151	7-5/8"
Exhaust system to ground	H152	6-1/2"
Rear axle differential to ground	H153	8-5/16"
Fuel tank to ground	H154	9
Spare tire well to ground	H155	None
Minimum running ground clearance	H106	6-1/2"

# AMA Specifications—Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (\*)

## FRONT COMPARTMENT DIMENSIONS

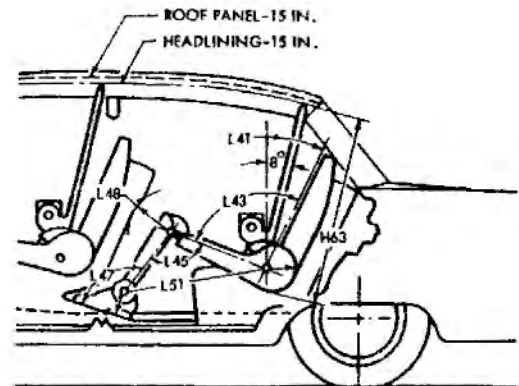
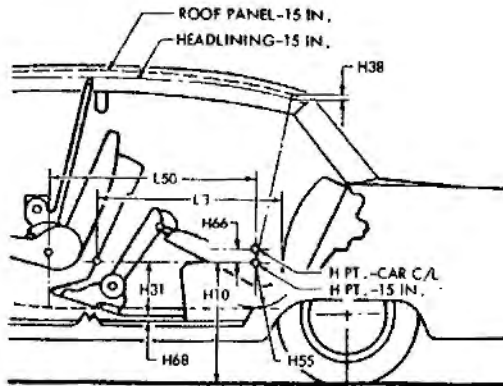


MODEL	Ref. No.		63V-K
H Point to body zero line	L31a		43.0
H Point to ground	H5a		21.18
Effective head room	H61a	At 9° To Miss Roof - Bow	41.5
Headlining to roof height	H37		.25
Maximum effective leg room - accelerator	L34a		42.62
H Point to heel point	H30a		9.43
Depressed floor covering thickness	H67a		.18
Back angle	L40a		28°
Hip angle	L42a		97°
Knee angle	L44a		135°
Foot angle	L46a		105°
H Point differential, side to center	H65a		N.A.
H Point to tunnel	H54a		7.43
H Point to accelerator floor point	L53a		33.62
H Point travel	L17a		5.88
H Point rise	H58a		1.31

# AMA Specifications – Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED(α)

## REAR COMPARTMENT DIMENSIONS

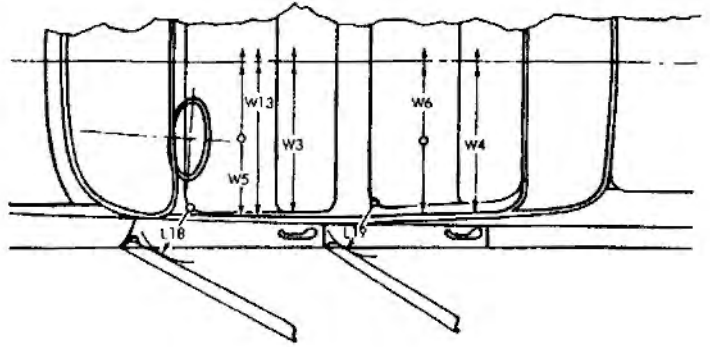
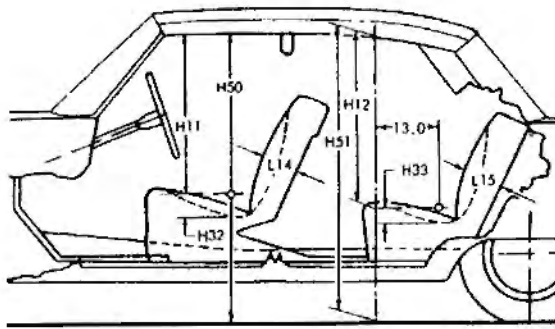


MODEL	Ref. No.	63V-K
H Point couple distance	L50a	31.5
H Point to ground	H10a	20.18
Effective head room	H63a	41.3
Headlining to roof height	H38	.25
Minimum effective leg room	L51a	22.12
H Point to heel point	H31a	8.5
Depressed floor covering thickness	H68a	.18
Minimum knee room	L48a	3.5
Rear compartment room	L3	27.5
Back angle	L41a	27°
Hip angle	L43a	78°
Knee angle	L45a	77° 0 30'
Foot angle	L47a	123°
H Point differential, side to center	H66a	N.A.
H Point to tunnel	H55a	5.75

# AMA Specifications – Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED \_\_\_\_\_ REVISED(•) \_\_\_\_\_

## SEAT AND ENTRANCE DIMENSIONS



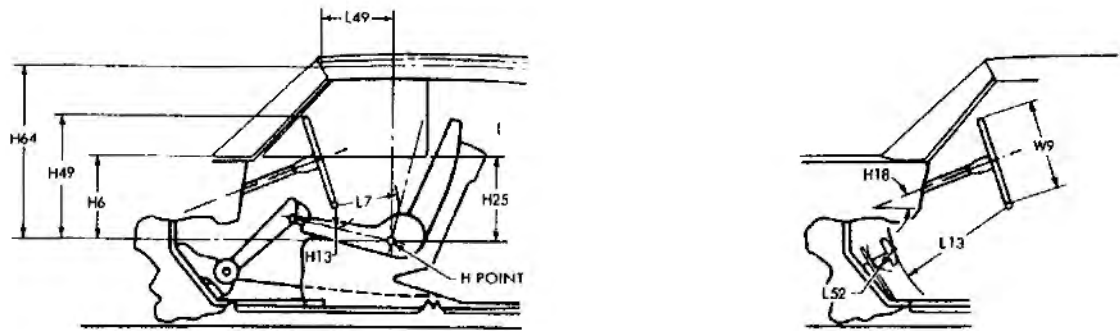
MODEL	Ref. No.	63V-K
Shoulder room - front	W3a	55.0
Hip room - front	W5a	21.875 Each - (Individual Bucket Seats)
Seat width - front	W16a	52.25 - Bucket Seats With Cablo
Upper body opening to ground - front	H50a	51.1875
Entrance height - front	H11a	30.343
Entrance foot clearance - front	L18	13.5
Seat cushion deflection - front	H32a	2.75
Seat back thickness - front	L14	4.87
Shoulder room - rear	W4a	52.375
Hip room - rear	W6a	58.00
Upper body opening to ground - rear	H51a	None
Entrance height - rear	H12a	None
Entrance foot clearance - rear	L19	12.00
Seat cushion deflection - rear	H33a	2.75
Seat back thickness - rear	L15	7.12



# AMA Specifications – Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED(•) \_\_\_\_\_

## VISION AND CONTROL DIMENSIONS



MODEL	Ref. No.	63V-K
H Point to windshield bottom DLO	H6a	19.69
H Point to windshield upper DLO	H64a	30.56
H Point to windshield upper DLO	L49a	13.12
Belt height - front	H25a	14.00
Steering wheel center to centerline of car	W7	14.00
Steering wheel maximum outside diameter	W9	17.00
Steering column angle - horizontal	H18	28°
H Point to top of steering wheel	H49a	21.87
Steering wheel torso clearance	L7a	12.38
Steering wheel thigh clearance	H13a	4.68
Brake pedal knee clearance	L13	23.75
Brake pedal to accelerator	L52a	3.87
Tumble-home	W122a	12°

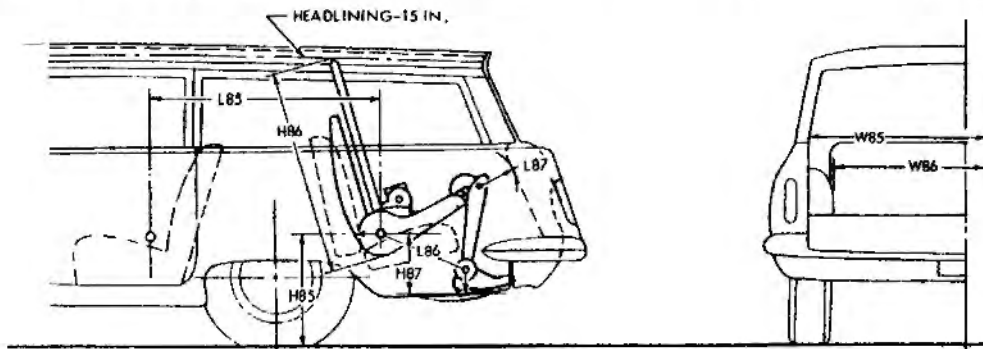
# AMA Specifications – Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED(\*)

## LUGGAGE COMPARTMENT

<b>MODEL</b>	Ref. No.	63V-K
Usable luggage capacity (See instructions)		11.153
Liftover height *	H301a	20.8125
Position of spare tire storage		Vertical Position
Method of holding lid open		Coil Springs

## THIRD SEAT DIMENSIONS



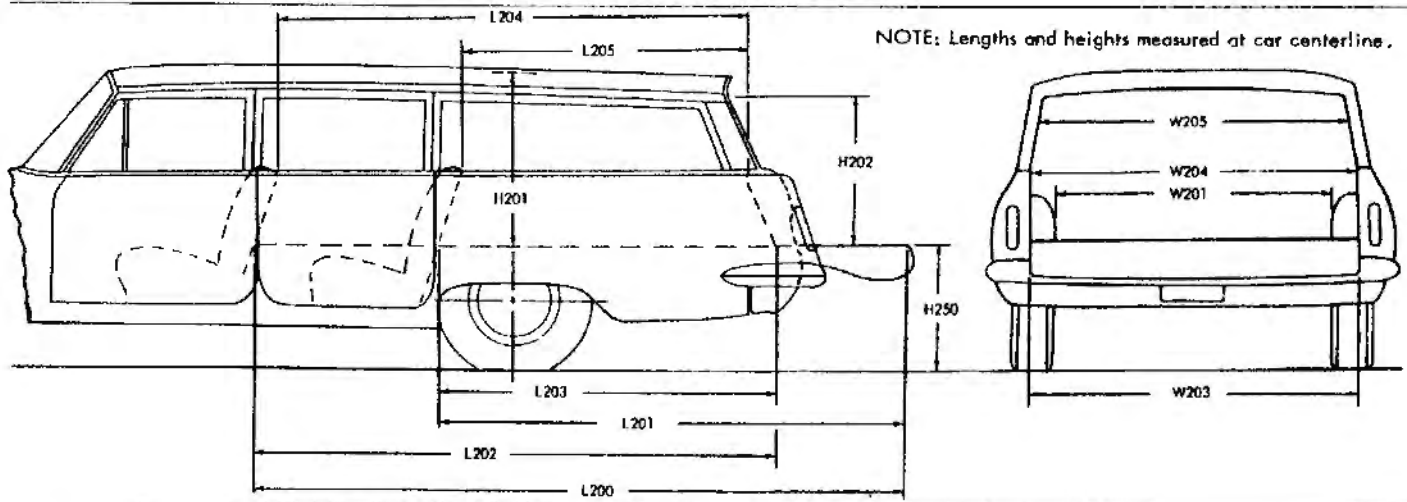
<b>MODEL</b>	Ref. No.	
Seat facing direction		
Shoulder room	W85a	
Hip room	W86a	
H Point couple distance	L85a	
H Point to ground	H85a	DOES NOT
Effective head room	H86a	APPLY
Effective leg room	L86a	TO HAWK
H Point to heel point	H87a	
Knee room	L87a	
Back angle	L88a	
Hip angle	L89a	
Knee angle	L90a	
Foot angle	L91a	

\* Vertical dimension from luggage compartment lower opening to ground.

# AMA Specifications—Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (\*)

## STATION WAGON—CARGO SPACE DIMENSIONS



MODEL	Ref. No.	
Floor length from back of front seat at floor level to end of lowered tail gate or floor	L200	
Floor length from back of second seat at floor level to end of lowered tail gate or floor	L201	
Floor length from back of front seat at floor level to inside of closed tail gate	L202	
Floor length from back of second seat at floor level to inside of closed tail gate	L203	DOES NOT
Minimum horizontal distance from top rear of front seat back to inside of tail gate at belt	L204	APPLY
Minimum horizontal distance from top rear of second seat back to inside of tail gate at belt	L205	TO HAWK
Maximum width of cargo space at floor - specify location	W200a	
Minimum distance between wheel houses at floor level	W201	
Rear end opening width at floor	W203	
Rear end opening width at belt	W204	
Maximum width of rear opening above belt	W205	
Maximum height - floor covering to headlining at centerline of rear axle	H201	
Maximum height of rear opening - tail and lift gates open	H202	
Platform height from ground to top of tail gate floor covering at rear most edge of tail gate - curb weight	H250	
Rear end closure (e.g., one piece door, hinged left - sliding glass, drop tail gate)		
Cargo volume index (cu. ft.) W4 x L204 x H201		

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# AMA Specifications – Passenger Car

MAKE OF CAR Studebaker MODEL YEAR 1963 DATE ISSUED 9-1962 REVISED (a)

MODEL 63V - Hawk

## BODY—MISCELLANEOUS INFORMATION

Drs. hinged (front, rear)	Front doors	Front
	Rear doors	None
Type of finish (lacquer, enamel, other)		Enamel
Hood hinge location (front, rear)		Rear
Hood counterbalanced (yes, no)		No
Hood release control (internal, external)		External
Vehicle (Serial) No. Location		Left Front Hinge Pillar
Engine No. Location		Left Front Top Of Block
Theft protection - type		Lock & Keys At Doors, Ignition & Trunk
Vent window control method (crank, friction pivot)	Front	Friction Pivot
	Rear	None
Seat cushion type	Front	Cone - Coil
	Rear	Cone - Coil
Seat back type	Front	Cone - Coil
	Rear	Cone - Coil
Windshield type (single curved, compound curved, other)		One Piece - Curved
Rear window type (flat, curved, one piece, three piece)		Curved
Side glass type (curved, flat)		Flat
Side glass exposed surface area		1147.08
Windshield glass exposed surface area		858
Backlight glass exposed surface area		775
Total glass exposed surface area		2780.08



## DIMENSION DEFINITIONS

- W3a** SHOULDER ROOM - FRONT. The minimum lateral dimension between the door garnish moldings or nearest interference. Measured at H Point station.
- W4a** SHOULDER ROOM - REAR. Measured in the same manner as W3a.
- W5a** HIP ROOM - FRONT. The lateral dimension through H Point to trimmed surfaces.
- W6a** HIP ROOM - REAR. Measured in the same manner as W5a.
- W7** STEERING WHEEL CENTER TO CENTERLINE OF CAR. Measured horizontally from steering wheel center to centerline of car. The point at steering wheel center is located in the surface plane of wheel.
- W9** STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. Define if other than round.
- W16a** SEAT WIDTH - FRONT. The maximum trimmed width of front seat cushion.
- WB5a** SHOULDER ROOM - THIRD SEAT. Measured in the same manner as W3a.
- WB6a** HIP ROOM - THIRD SEAT. Measured in the same manner as W5a.
- W101** TREAD - FRONT. Measured at centerline of tires, with nominal camber, at ground.
- W102** TREAD - REAR. Measured at centerline of tires at ground.
- W103** MAXIMUM OVERALL CAR WIDTH. Include bumpers, moldings, or sheet metal protrusions.
- W106** FRONT FENDER OVERALL WIDTH. Measured at centerline of front wheels, excluding moldings.
- W107** REAR FENDER OVERALL WIDTH. Measured at centerline of rear wheels, excluding moldings.
- W116** MAXIMUM OVERALL BODY WIDTH. Measured across body, excluding hardware and applied moldings, but including fenders when integral with body.
- W117** MAXIMUM BODY WIDTH AT #2 PILLAR. Measured across body at #2 pillar, excluding hardware and applied moldings.
- W120a** MAXIMUM OVERALL CAR WIDTH, FRONT DOORS OPEN. Measured with front doors in maximum hold-open position.
- W121a** MAXIMUM OVERALL CAR WIDTH, REAR DOORS OPEN. Measured in same manner as W120a.
- W122a** TUMBLE-HOME. The angle from vertical to the front door glass outer surface or the chord of a curved door glass, measured at the front H Point station.
- L3** REAR COMPARTMENT ROOM. The horizontal dimension from the back of front seat to front of rear seat back at a height tangent to the top of rear seat cushion.
- L7a** STEERING WHEEL TORSO CLEARANCE. The minimum distance from the back edge of steering wheel, in straight-ahead position, to the Torso Line.
- L13** BRAKE PEDAL KNEE CLEARANCE. The minimum dimension from the lower edge of the steering wheel to the brake pedal face centerline.
- L14** SEAT BACK THICKNESS - FRONT. The maximum thickness of the seat back, excluding bolsters.
- L15** SEAT BACK THICKNESS - REAR. Measured in the same manner as L14.
- L17a** H POINT TRAVEL. The horizontal dimension between the H Point in the most forward and rearward seat positions.
- L18** ENTRANCE FOOT CLEARANCE - FRONT. The minimum horizontal dimension between seat and normal line of door or pillar at a height between the sill plate bead and 4.0 inches above the bead. Door should be in the maximum hold-open position.
- L19** ENTRANCE FOOT CLEARANCE - REAR. Measured in the same manner as L18 on four-door models. On two-door styles, the minimum dimension between rear corner of front seat, with front seat back tilted forward, and trimmed lock pillar, built-in quarter armrest panel, or rear seat cushion at a height between the sill plate bead and 4.0 inches above the bead.
- L30** BODY 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.
- L31a** H POINT TO BODY ZERO LINE - FRONT. Horizontal dimension.
- L34a** MAXIMUM EFFECTIVE LEG ROOM - ACCELERATOR. Measured along a diagonal line from ankle pivot center to H Point plus a constant of 10.0 inches. Measured with the right foot on accelerator pedal.
- L40a** BACK ANGLE - FRONT. The angle between a vertical line through the H Point and the Torso Line.
- L41a** BACK ANGLE - REAR. Measured in the same manner as L40a.
- L42a** HIP ANGLE - FRONT. The angle between Torso Line and a line extending from knee pivot center to H Point.
- L43a** HIP ANGLE - REAR. Measured in the same manner as L42a.
- L44a** KNEE ANGLE - FRONT. The angle between a line from H Point to knee pivot center and a line from the knee pivot center to the ankle pivot center.
- L45a** KNEE ANGLE - REAR. Measured in the same manner as L44a.
- L46a** FOOT ANGLE - FRONT. The angle between a line extended from the knee pivot center through the ankle pivot center and a line tangent to the sole and heel of manikin bare foot.
- L47a** FOOT ANGLE - REAR. Measured in the same manner as L46a.
- L48a** MINIMUM KNEE ROOM - REAR. The minimum dimension from the knee pivot center to the back of front seat back.
- L49a** H POINT TO WINDSHIELD UPPER DLO. The horizontal dimension from H Point to the point of tangency of horizontal line of vision (described in dimension H64a) with body upper structure.



## DIMENSION DEFINITIONS (cont.)

- L50a H POINT COUPLE DISTANCE. The horizontal dimension from the front seat H Point to the rear seat H Point.
- L51a MINIMUM EFFECTIVE LEG ROOM - REAR. Measured along a diagonal line from ankle pivot center to H Point plus a constant of 10.0 inches. Measured with the foot positioned to nearest interference between seat structure and toe, instep or lower leg.
- L52a BRAKE PEDAL TO ACCELERATOR. The minimum dimension from center of brake pedal face to accelerator. Measured in the side view.
- L53a H POINT TO ACCELERATOR FLOOR POINT. The horizontal dimension from intersection of accelerator and depressed floor covering to the H Point.
- L85a H POINT COUPLE DISTANCE - THIRD SEAT. The horizontal dimension from the second seat H Point to the third seat H Point.
- L86a EFFECTIVE LEG ROOM - THIRD SEAT. Measured in the same manner as L51a. With rear-facing third seat, foot is positioned in foot well or to nearest interference with rear end or rear closure.
- L87a KNEE ROOM - THIRD SEAT. Measured in the same manner as L48a. With rear-facing third seat, dimension is measured to rear closure.
- L88a BACK ANGLE - THIRD SEAT. Measured in the same manner as L40a.
- L89a HIP ANGLE - THIRD SEAT. Measured in the same manner as L42a.
- L90a KNEE ANGLE - THIRD SEAT. Measured in the same manner as L44a.
- L91a FOOT ANGLE - THIRD SEAT. Measured in the same manner as L46a.
- L101 WHEELBASE.
- L102 TIRE SIZE.
- 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 theoretical intersection of extended windshield glass plane and normal cowl surface to the theoretical intersection of extended back window glass plane and normal deck surface; or in the case of a Fastback roof or Station Wagon, to back glass lower reveal molding, or rubber when molding is not used.
- L127 BODY ZERO LINE TO CENTERLINE OF REAR WHEELS. A horizontal dimension.
- L128a HOOD LENGTH AT CAR CENTERLINE. The horizontal dimension from the foremost point on sheet metal hood surface, excluding series identification or ornamentation, to the theoretical intersection of extended windshield glass plane and normal cowl surface.
- L129a DECK LENGTH AT CAR CENTERLINE. The horizontal dimension from the rearmost point of the body sheet metal (visible above bumper), excluding series identification or ornamentation, to the theoretical intersection of extended back window glass plane and normal deck surface.
- L130a BODY ZERO LINE TO WINDSHIELD COWL POINT. The horizontal dimension from body zero line to the theoretical intersection of extended windshield glass plane and normal cowl surface.
- H5a H POINT TO GROUND - FRONT. Vertical dimension.
- H6a H POINT TO WINDSHIELD BOTTOM DLO. Vertical dimension.
- H10a H POINT TO GROUND - REAR. Vertical dimension.
- H11a ENTRANCE HEIGHT - FRONT. The vertical dimension from H Point to upper trimmed body opening.
- H12a ENTRANCE HEIGHT - REAR. The vertical dimension from H Point to the upper trimmed body opening at a section 13.0 inches forward of the H Point.
- H13a STEERING WHEEL THIGH CLEARANCE. The minimum dimension from the bottom of steering wheel, in straight-ahead position, to centerline of thigh.
- H18 STEERING COLUMN ANGLE - HORIZONTAL. The angle the centerline of steering column makes with the horizontal.
- H25a BELT HEIGHT - FRONT. The vertical dimension from H Point to bottom of side window DLO.
- H30a H POINT TO HEEL POINT - FRONT. The vertical dimension from the H Point to the manikin accelerator heel point on the depressed floor covering.
- H31a H POINT TO HEEL POINT - REAR. The vertical dimension from the H Point to the manikin heel point on the depressed floor covering.
- H32a SEAT CUSHION DEFLECTION - FRONT. The vertical dimension from a point on the undeformed seat cushion to the depressed seat cushion. Measured at the H Point station.
- H33a SEAT CUSHION DEFLECTION - REAR. Measured in the same manner as H32a.
- H37 HEADLINING TO ROOF HEIGHT - FRONT. The dimension from the intersection of the headlining and the extended effective head room line to the roof panel. Measured perpendicularly to the roof panel.
- H38 HEADLINING TO ROOF HEIGHT - REAR. Measured in the same manner as H37.
- H49a H POINT TO TOP OF STEERING WHEEL. The vertical dimension from the H Point to top of steering wheel, in straight-ahead position.
- H50a 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.



## DIMENSION DEFINITIONS (cont.)

- H51a 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.
- H54a H POINT TO TUNNEL - FRONT. The minimum dimension from the H Point, at car centerline, to top of tunnel.
- H55a H POINT TO TUNNEL - REAR. Measured in the same manner as H54a.
- H58a H POINT RISE. The vertical dimension between the H Point in the most forward and rearward seat positions.
- H61a 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.
- H63a EFFECTIVE HEAD ROOM - REAR. Measured in the same manner as H61a.
- H64a H POINT TO WINDSHIELD UPPER DLO. Vertical dimension from H Point to highest horizontal line of vision through windshield at 15 inch section.
- H65a H POINT DIFFERENTIAL, SIDE TO CENTER - FRONT. The vertical dimension from side occupant H Point to center occupant H Point.
- H66a H POINT DIFFERENTIAL, SIDE TO CENTER - REAR. Measured in the same manner as H65a.
- H67a DEPRESSED FLOOR COVERING THICKNESS - FRONT. The vertical dimension from manikin accelerator heel point normally to underbody sheet metal immediately below heel point.
- H68a DEPRESSED FLOOR COVERING THICKNESS - REAR. Measured same as H67a.
- H85a H POINT TO GROUND - THIRD SEAT. Vertical dimension.
- H86a EFFECTIVE HEAD ROOM - THIRD SEAT. Measured in the same manner as H61a.
- H87a H POINT TO HEEL POINT - THIRD SEAT. Measured in the same manner as H31a.
- H101 OVERALL HEIGHT. Measured with full design load.
- H102 FRONT BUMPER TO GROUND. Minimum dimension.
- H104 REAR BUMPER TO GROUND. Minimum dimension.
- H106 ANGLE OF APPROACH. Minimum angle between ground and a line tangent to arc of front tire static loaded radius and touching the limiting point of interference on front bumper, bumper guard, or gravel deflector.
- H107 ANGLE OF DEPARTURE. Minimum angle between ground and a line tangent to arc of rear tire static loaded radius and touching the limiting point of interference on rear bumper, bumper guard, gravel deflector, tail pipe, fender or other interfering structure.
- H111 ROCKER PANEL TO GROUND - REAR. The vertical dimension from ground to bottom of rocker panel, excluding flanges. Measured at front of rear wheel opening.
- H112a ROCKER PANEL TO GROUND - FRONT. The vertical dimension from ground to bottom of rocker panel, excluding flanges. Measured at foremost point of rocker panel.
- H114 HOOD AT REAR TO GROUND. Measured from hood opening line on shroud, exclusive of moldings.
- H115 STEP HEIGHT - FRONT (DESIGN LOAD). The vertical dimension from top of sill plate bead, at C/L of front door sill plate, to ground.
- H116 STEP HEIGHT - REAR (DESIGN LOAD). Measured in same manner as dimension H115.
- 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.
- H130 STEP HEIGHT - FRONT (CURB LOAD). The vertical dimension from top of sill plate, at C/L of front door sill plate, to ground.
- H131 STEP HEIGHT - REAR (CURB LOAD). Measured in same manner as H130.
- H132 BOTTOM OF DOOR TO GROUND, OPEN - FRONT. Measured from bottom outside corner of door with door in maximum hold-open position.
- H133 BOTTOM OF DOOR TO GROUND, CLOSED - FRONT. Same point on door as H132 dimension, with door closed.
- H134 BOTTOM OF DOOR TO GROUND, OPEN - REAR. Measured in same manner as H132.
- H135 BOTTOM OF DOOR TO GROUND, CLOSED - REAR. Measured in same manner as H133.
- H136a BODY ZERO TO GROUND - FRONT. A vertical dimension measured at front wheel centerline.
- H137a BODY ZERO TO GROUND - REAR. A vertical dimension measured at rear wheel centerline.
- H147 RAMP BREAKOVER ANGLE. 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.
- H148 FRONT SUSPENSION TO GROUND. Minimum clearance measured from lower control arm inner shaft or lowest point on the car centerline.
- H149 OIL PAN TO GROUND. Minimum clearance measured from sheet metal or drain plug.
- H150 FLYWHEEL/CONVERTER HOUSING AND TRANSMISSION ASSEMBLY TO GROUND. Minimum clearance.
- H151 FRAME STRUCTURE TO GROUND. Minimum clearance measured approximately midway between front and rear axles. In this measurement, cross bars and X-members shall be considered part of frame.
- H152 EXHAUST SYSTEM TO GROUND. Minimum clearance. Specify location.
- H153 REAR AXLE DIFFERENTIAL SYSTEM TO GROUND. Minimum clearance.
- H154 FUEL TANK TO GROUND. Minimum clearance measured from sheet metal or drain plug, but excluding supports or straps.
- H155 SPARE TIRE WELL TO GROUND. Minimum clearance.
- H156 MINIMUM RUNNING GROUND CLEARANCE. Location of measurement on the car is to be clearly recorded.

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