

AMA Specifications—Passenger Car

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MANUFACTURER OLDSMOBILE	CAR NAME 4-4-2	ISSUED: 7-1-69
MAILING ADDRESS LANSING, MICHIGAN 48921	MODEL YEAR 1970	REVISED (●) 8-1-69

NOTES:

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

CREDIT - OLDSMOBILE
HISTORY CENTER

000025249

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920 TOWNSEND ST.
LANSING, MI 48921

BODY - TYPES AND STYLE NAMES -

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

	4-4-2
	<u>34400</u>
67 Convertible	X
77 Club Coupe	X
87 Hardtop Coupe	X

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CAR AND BODY DIMENSIONS

See Pages 25, 26 for SAE Dimension Definitions

(All dimensions in inches unless otherwise indicated)

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

MODEL	SAE Ref. No.	SPORTS COUPE	HOLIDAY COUPE
WIDTH			
Track - Front	W101	59.0	
Track - Rear	W102	59.0	
Maximum overall car width	W103	76.2	
Body width at No. 2 pillar	W117	73.8	
LENGTH			
Body "O" to front of dash	L 30	0.0	
Wheelbase	L101	112.0	
Overall car length	L103	203.2	
Overhang - front	L104	41.8	
Overhang - rear	L105	49.6	
Body upper structure length	L123	102.8	
Body "O" line to C of rear wheel	L127	95.4	
Body "O" line to w/s cowl point	L130	N.A.	
HEIGHT			
Passenger Distribution (front & rear)		2 - 3	
Trunk/Cargo load (lbs.)		200	
Overall height	H101	52.8	
Cowl height	H114	37.7	
Deck height	H138	N.A.	
Rocker panel - front	To ground	8.4	
	From front wheel C	N.A.	
Rocker panel - rear	To ground	7.9	
	From rear wheel C	N.A.	
Windshield slope angle	H122	53.1	
GROUND CLEARANCE			
Bumper to ground - front	H102	11.8	
Bumper to ground - rear	H104	12.8	
Angle of approach	H106	21.0	
Angle of departure	H107	17.5	
Ramp breakover angle	H147	12.5	
Min. running clearance (Specify)	H156	4.5	

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POWER TEAMS

(Indicate whether standard or optional)

MODEL AVAILABILITY	ENGINE					TRANSMISSION	AXLE RATIO (Std. first) (Indicate A/C ratio)
	Displ. cu. in.	Carburetor	Compr. Ratio	BHP @ RPM	Torque @ RPM		
34467 34477 34487	455	4 Bbl.	10.5	365 @ 5000	500 @ 3200	3-Speed Manual 4-Speed Manual (Close Ratio) Turbo HMT - 400	3.08,3.23,3.42 3.42 3.23,2.56,2.78,3.08,3.42
34477 34487	455 (W30)	4 Bbl.	10.5	370 @ 5200	500 @ 3600	4-Speed Manual (Close Ratio) Turbo HMT - 400	3.42,3.91 3.42,3.91,3.23-A/C

Limited slip axle mandatory with 3.42, 3.91 and 4.33 ratios.
 A/C not available with 3.42, 3.91 or 4.33 ratios.
 4.33, 4.66 and 5.00 ratios available as dealer option.

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CAR AND BODY DIMENSIONS

See Pages 25, 26 for SAE Dimension Definitions
 (All dimensions in inches unless otherwise indicated)

MODEL	SAE Ref. No.		
-------	--------------	--	--

FRONT COMPARTMENT

Effective head room	H61		37.7
Max. eff. leg room — accelerator	L34		41.4
H Point to Heel point	H30	7.9	7.9
H Point travel	L17	4.8	4.8
Shoulder room	W 3		58.0
Hip room	W 5		59.6
Upper body opening to ground	H50	N.A.	N.A.

REAR COMPARTMENT

H Point couple distance	L50	30.7	30.7
Effective head room	H63		36.3
Min. effective leg room	L51		31.9
H Point to Heel point	H31	9.9	9.9
Min. knee room	L48	1.5	1.5
Rear Compartment room	L 3		24.0
Shoulder room	W 4		56.6
Hip room	W 6	58.3	53.0
Upper body opening to ground	H51	N.A.	N.A.

LUGGAGE COMPARTMENT

Usable luggage capacity	V 1	17.0	17.0
Liftover height	H195	N.A.	N.A.
Position of spare tire storage			Flat on Right Side of Trunk
Method of holding lid open			Counterbalanced — Torsion Bar

STATION WAGON — THIRD SEAT

Shoulder Room	W85		N.A.
Hip room	W86		
Effective leg room	L86		
Effective head room	H86		
Seat facing direction			

STATION WAGON — CARGO SPACE

Cargo length at floor — front seat	L202		N.A.
Cargo length at belt — front seat	L204		
Cargo width — Wheelhouse	W201		
Opening width at belt	W204		
Maximum cargo height	H201		
Rear opening height	H202		
Cargo volume index (cu. ft.) W4 x L204 x H201 1728	V2		

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MODEL 4-4-2

ENGINE - GENERAL

Type, no. cyls., valve arr.	90° OHV V-8	
Bore and stroke (nominal)	4.125 X 4.250	
Piston displacement, cu. in.	455	
Bore spacing (C to C)	4.625	
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)	10.5:1	
Cylinder Head Material	Cast Iron	
Cylinder Block Material	Cast Iron	
Cyl. Sleeve-Wet, dry, none	None	
Number of mtg. points	Front	Two
	Rear	One
Engine installation angle	4° 37'	
Taxable horsepower	Di ² xNo. Cyl. 2.5	54.45
Publishing max. bhp* @ eng. RPM	365 @ 5000	
Publishing max. torque * (lb. ft. @ RPM)	500 @ 3200	
Recommended fuel regular - premium	Premium	

ENGINE - PISTONS

Material	Aluminum Alloy		
Description and finish	Autothermic, Cam Grind, Tin Plate, Steel Strut		
Weight (piston only) oz.	24.057		
Clearance (limits)	Top land	.033 - .044	
	Skirt	Top	--
		Bottom	.00075 - .00125
Ring groove depth	No. 1 ring	.2125 - .2195	
	No. 2 ring	.2125 - .2195	
	No. 3 ring	.2025 - .2095	
	No. 4 ring	--	

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

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MODEL 4-4-2 (W30)

ENGINE – GENERAL

Type, no. cyls., valve arr.	
Bore and stroke (nominal)	
Piston displacement, cu. in.	
Bore spacing (€ to €)	
No. system (front to rear)	L. Bank R. Bank
Firing order	
Compres. ratio (nominal)	10.5:1
Cylinder Head Material	
Cylinder Block Material	
Cyl. Sleeve-Wet, dry, none	
Number of mtg. points	Front Rear
Engine installation angle	
Toxable horsepower	$\frac{\text{Dia}^2 \times \text{No. Cyl.}}{2.5}$ 2.5
Publishing max. bhp* @ eng. RPM	370 @ 5200
Publishing max. torque * (lb. ft. @ RPM)	500 @ 3600
Recommended fuel regular – premium	

ENGINE – PISTONS

Material		
Description and finish		
Weight (piston only) oz.		
Clearance (limits)	Top land	
	Skirt	Top
		Bottom
Ring groove depth	No. 1 ring	
	No. 2 ring	
	No. 3 ring	
	No. 4 ring	

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

Otherwise same as Standard 4-4-2 (Page 4).

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 MODEL 4-4-2

ENGINE - RINGS

Function (top to bottom)	No. 1, oil or comp.	Compression
	No. 2, oil or comp.	Compression
	No. 3, oil or comp.	Oil
	No. 4, oil or comp.	None
Compression	Description - material, coating, etc.	Upper Ring - Cast Iron with Crowned and Molybdenum Plated O.D. Lower Ring - Cast Iron with Taper O.D. Face
	Width	.0770 - .0780
	Gap	.013 - .023
Oil	Description - material, coating, etc.	Two Rails - Spring Steel, Black Oxide Finish with Chrome Plated O.D.
	Width	Rails: .0235 - .0252 Spacer: .1375 - .1335
	Gap	Rails: .015 - .055 Spacer: .285 ± .041
Expanders	Spacer = Cold Rolled Spacer Steel	

ENGINE - PISTON PINS

Material	SAE #1019 or #1016		
Length	2.980		
Diameter	.9803 - .9807		
Type	Locked in rod, in piston, floating, etc.	Pressed in Rod	
	Bush- ing	In rod or piston	None
		Material	None
Clearance	In piston	.0003 - .0005 Loose	
	In rod	.0008 - .0018 Press	
Direction & amount offset in piston	.060 to R.H. of Cylinder Bore Centerline		

ENGINE - CONNECTING RODS

Material	SAE #1140 Steel	
Weight (oz.)	30.33	
Length (center to center)	6.733 - 6.737	
Bearing	Material & Type	Moraine 400 (GM 3889 Aluminum) Steel Backed
	Overall length	.821 - .831
	Clearance (limits)	.0004 - .0033
	End play	.002 - .013 2 Rods per Crankpin

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MODEL 4-4-2

ENGINE - CRANKSHAFT

Material	Nodular Iron (Standard) AISI #1049 Modified (Option)		
Vibration damper type	Tuned Rubber		
End thrust taken by bearing (No.)	#3		
Crankshaft end play	.004 - .008		
Main bearing	Material & type	Moraine 400 (GM 3889-M Aluminum) Steel Backed	
	Clearance	1-2-3-4: .0005 - .0021 5: .0020 - .0034	
	Journal dia. and bearing overall length	No. 1	3.00 X .975
		No. 2	3.00 X .975
		No. 3	3.00 X 1.194
		No. 4	3.00 X .975
		No. 5	3.00 X 1.624
		No. 6	--
No. 7		--	
Dir. & amt. cyl. offset	RH Bank .469 to Rear and LH Bank .469 Forward of Engine		
Crankpin journal diameter	2.4988 - 2.4998		

ENGINE - CAMSHAFT

Location	Center		
Material	GM 6016M Alloy Cast Iron		
Bearings	Material	Moraine 100 - Steel Backed Babbit GM 4167M	
	Number	5	
Type of Drive	Gear or chain	Chain	
	Crankshaft gear or sprocket material	Sintered Iron or Hardened Steel	
	Camshaft gear or sprocket material	Die Cast Aluminum with Nylon Teeth	
	Timing chain	No. of links	48
		Width	.875 & .844
Pitch		.500	

ENGINE - VALVE SYSTEM

Hydraulic lifters (Std., opt., NA)	Standard	
Valve rotator, type (intake, exhaust)	Helical Spring and Flat Washer Type	
Rocker ratio	1.6:1	
Operating tappet clearance (indicate hot or cold)	Intake	None
	Exhaust	None

(Continued)

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MODEL _____ SM (STANDARD) 4-4-2 (EXC. W30) AT (OPTION)

ENGINE - VALVE SYSTEM (cont.)

Timing (based on top of ramp points)	Intake	Opens (°BTC)	30°	24°	
		Closes (°ABC)	84°	81°	
		Duration - deg.	294°	285°	
	Exhaust	Opens (°BBC)	78°	74°	
		Closes (°ATC)	38°	33°	
		Duration - deg.	296°	287°	
Valve opening overlap		68°	57°		
Intake	Material		SAE #1041 & 1047 Steel		
	Overall length		4.703		
	Actual overall head dia.		2.067 - 2.077		
	Angle of seat & face		30°		
	Seat insert material		None		
	Stem diameter		.3432 - .3425		
	Stem to guide clearance		.0010 - .0027		
	Lift (∅ zero lash)		.472	.472	
	Outer spring press. & length	Valve closed (lb. ∅ in.)	76 - 84 @ 1.670		
		Valve open (lb. ∅ in.)	180 - 194 @ 1.270		
	Inner spring press. & length	Valve closed (lb. ∅ in.)	Damper		
Valve open (lb. ∅ in.)		--			
Exhaust	Material		21-2 Steel		
	Overall length		4.695		
	Actual overall head dia.		1.629 - 1.619		
	Angle of seat & face		45° Seat 46° Face		
	Seat insert material		None		
	Stem diameter		.3427 - .3420		
	Stem to guide clearance		.0015 - .0032		
	Lift (∅ zero lash)		.472	.472	
	Outer spring press. & length	Valve closed (lb. ∅ in.)	76 - 84 @ 1.670		
		Valve open (lb. ∅ in.)	180 - 194 @ 1.270		
	Inner spring press. & length	Valve closed (lb. ∅ in.)	Damper		
Valve open (lb. ∅ in.)		--			

ENGINE - LUBRICATION SYSTEM

Type of lubrica- tion (splash, pressure, nozzle)	Main bearings	Pressure
	Connecting rods	Pressure
	Piston pins	Splash
	Camshaft bearings	Pressure
	Tappets	Pressure
	Timing gear or chain	Pressure
	Cylinder walls	Pressure

(Continued)

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 MODEL _____ 4-4-2
 (W30)

ENGINE – VALVE SYSTEM (cont.)

Timing (based on top of ramp points)	Intake	Opens (°BTC)	56°
		Closes (°ABC)	92°
		Duration - deg.	328°
	Exhaust	Opens (°BBC)	96°
		Closes (°ATC)	52°
		Duration - deg.	328°
Valve opening overlap		108°	
Intake	Material		
	Overall length		
	Actual overall head dia.		
	Angle of seat & face		
	Seat insert material		
	Stem diameter		
	Stem to guide clearance		
	Lift (± zero lash)		.475
	Outer spring press. & length	Valve closed (lb. @ in.)	115 - 125 @ 1.670
		Valve open (lb. @ in.)	290 - 314 @ 1.170
	Inner spring press. & length	Valve closed (lb. @ in.)	Damper
		Valve open (lb. @ in.)	----
	Exhaust	Material	
Overall length			
Actual overall head dia.			
Angle of seat & face			
Seat insert material			
Stem diameter			
Stem to guide clearance			
Lift (± zero lash)		.475	
Outer spring press. & length		Valve closed (lb. @ in.)	115 - 125 @ 1.670 (SMT)
		Valve open (lb. @ in.)	290 - 314 @ 1.170 (SMT)
Inner spring press. & length		Valve closed (lb. @ in.)	Damper
		Valve open (lb. @ in.)	----

ENGINE – LUBRICATION SYSTEM

Type of lubrica- tion (splash, pressure, nozzle)	Main bearings	
	Connecting rods	
	Piston pins	
	Camshaft bearings	
	Tappets	
	Timing gear or chain	
	Cylinder walls	

(Continued)

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MODEL 4-4-2

ENGINE – LUBRICATION SYSTEM (cont.)

Oil pump type	Gear
Normal oil pressure (lb. @ engine rpm)	35 - 50 @ 1500 RPM
Oil press. sending unit (elect. or mech.)	Electric
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part., other)	Full Flow
Filter replacement (element, complete)	Complete
Capacity of c./case, less filter-refill (qt.)	4
Oil grade recommended (SAE viscosity and temperature range)	Above 20° F - 20W, 10W30, 10W40, 20W40 0° - 60° F - 10W, 5W30, 10W30, 10W40 Below 20° F - 5W, 5W20, 5W30
Engine Service Reqmt. (MM, MS, etc.)	MS

ENGINE – EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)	Dual
Muffler No. & type (reverse flow, straight thru, separate resonator)	Two Straight Thru Mufflers
Exhaust pipe dia. (O.D., wall thick.)	Branch Main
	None 2.25 X .076
Tail pipe dia. (O.D. & wall thickness)	2.00 X .060

ENGINE – CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)	Standard Optional	Positive Crankcase Ventilation None
Control Unit	Make and model	AC Ventilation Valve CV - 679C
	Location	Intake Manifold (SMT) Valve Cover (AMT)
	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 and Air Cleaner
	Air inlet (breather cap, carburetor air cleaner, other)	Ventilation Filter Located in One Valve Cover (AMT) Ventilation Filters in Both Valve Covers (SMT)
	Flame arrestor (screen, check valve, other)	Check in Ventilation Valve

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MODEL 4-4-2 (W30)

ENGINE – LUBRICATION SYSTEM (cont.)

Oil pump type	
Normal oil pressure (lb. engine rpm)	
Oil press. sending unit (elect. or mech.)	
Type oil intake (floating, stationary)	
Oil filter system (full flow, part., other)	
Filter replacement (element, complete)	
Capacity of oil case, less filter-refill (qt.)	
Oil grade recommended (SAE viscosity and temperature range)	
Engine Service Reqmt. (MM, MS, etc.)	

ENGINE – EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)	
Muffler No. & type (reverse flow, straight thru, separate resonator)	
Exhaust pipe dia. (O.D., wall thick.)	Branch Main
Tail pipe dia. (O.D. & wall thickness)	

ENGINE – CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)	Standard Optional	
Control Unit	Make and model	
	Location	Intake Manifold
	Energy source (manifold vacuum, carburetor air stream, other)	
	Control method (variable orifice, fixed orifice, other)	
Complete system	Discharges (to intake manifold, carb. air intake, air cleaner intake, other)	
	Air inlet (breather cap, carburetor air cleaner, other)	Ventilation Filters in Both Valve Covers
	Flame arrestor (screen, check valve, other)	

Otherwise same as Standard 4-4-2 (Page 8).

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MODEL 4-4-2

ENGINE – EXHAUST EMISSION CONTROL

Type (Air injection, engine modifications, other)		Engine Modification *	
Air Injection Pump	Type	None	
	Displacement		
	Drive ratio		
	Drive type		
	Relief valve (type)		
	Filter (describe)		
Air Injection System	Air distribution (head, manifold, etc.)	None	
	Point of entry		
	Injection tube I.D.		
	Check valve type		
	Backfire protection (type)		
Carburetor	Make	Standard	
	Model		
	Barrel size		
	Idle speed	Drive Neutral	
	Idle A/F mixture		
Distributor	Aux. Adv. Systems (type)	None	
	Make	Standard	
	Model		
	Cent'fgal adv. in crank degrees @ eng. rpm	Start (rpm)	
		Intermed. points deg. @ rpm	
		Max. deg. @ rpm	
	Vacuum adv. in crank degrees @ eng. rpm	Start (in Hg)	
Intermed. points deg. @ in. Hg			
Max. deg. @ in.			
Vacuum Source	Ported		
Timing - Crank degrees @ rpm	Standard		
Cooling System	None		
Exhaust System	None		

* Exhaust emission is controlled by means of pre-heated air to carburetor, carburetor adjustment, engine timing, and idle setting.

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MODEL 4-4-2

ENGINE - FUEL SYSTEM

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

Induction type: Carburetor, fuel injection, supercharger.		Carburetor	
Fuel Tank	Refill capacity (U.S. gals.)	20	
	Filler location	Behind License Plate Rear Bumper	
Fuel Pump	Type (elec. or mech.)	Mechanical	
	Locations	R.F. on Block	
	Pressure range	6 psi	
Vacuum booster (std., optional, none)		None	
Fuel Filter	Type	Paper and Saran Type	
	Locations	Carburetor and Fuel Tank	
	Choke type	Automatic	
	Intake manifold heat control (exhaust or water)	Exhaust	
Carburetor	Air cleaner type	Standard	Oil Wetted Paper Element (Temperature Controlled)
		Optional	Same as Above Except with External Cold Air Intake (W30)
	Idle speed (spec. neutral or drive)	Manual	700 RPM in Neutral
		Automatic	650 RPM in Drive
	Idle A/F mix.	N.A.	

CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors		No. Used and Type	Barrel Size
			Make	Model		
34467 (Std.) 34477 34487	400	Fully Synch. 3-Speed Std. 4-Speed Opt. Turbo HMT - 400 Optional	Rochester	4MC	1	Prim. 1 3/8 Sec. 2 1/4

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MODEL 4-4-2

ENGINE - COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)		Pressure		
Radiator cap relief valve pressure		15 psi		
Circulation thermostat	Type (chake, bypass)	By Pass		
	Starts to open at (°F)	195°		
Water pump	Type (centrifugal, other)	Centrifugal		
	GPM @ 1000 pump rpm	22		
	Number of pumps	1		
	Drive (V-belt, other)	V-Belt		
Bearing type		Ball		
By-pass recirculation type (inter., ext.)		External		
Radiator core type (cellular, tube and fin, other)		Tube and Center		
Cooling system capacity	With heater (qt.)	16.2		
	Without heater (qt.)	15.5		
	Opt. equipment-specify (qt.)	17.2 - A/C		
Water jackets full length of cyl. (yes, no)		Yes		
Water all around cylinder (yes, no)		Yes		
Radiator hose	Lower	Number and type (molded, straight)	One Molded	
		Inside diameter	1.75	
	Upper	Number and type (molded, straight)	One Molded	
		Inside diameter	1.50	
	By-pass	Number and type (molded, straight)	One Molded	
		Inside diameter	.765 - .703	
Fan	Number of blades & spacing	4 @ 76° (Std.)	6 Spaced (A/C) (W30)	
	Diameter	19.50 (Std.)	19:00 (A/C) (W30)	
	Ratio-fan to crankshaft rev.	.85:1 (Std.)	1.22:1 (A/C) (W30)	
	Fan cutout type	Clutch (A/C Only)		
	Bearing type	Ball		
* Drive belts (indicate belt used by letter)	Fan			
	Generator or alternator	C (Std.)	E (A/C)	F (A/C & P/S) G (H/D)
	Water Pump			
	Power Steering	A (Std.)	B (A/C or H/D)	
	Other Components	D		
A/C COMPRESSOR				
All Belts Drive Fan and Water Pump				

* Drive Belt Dimensions	A	B	C	D	E	F	G	H	I	J	K
Angle of V	36°	36°	36°	36°	36°	36°	36°				
Nominal length (SAE)	44.11	45.19	51.50	60.60	57.23	57.56	52.26				
Width	.380	.380	.380	.380	.380	.380	.380				

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MODEL _____ 4-4-2

ELECTRICAL — SUPPLY SYSTEM

Battery	Make and Model		Delco Remy - 1980088
	Voltage Rtg. & Total Plates		12V-66
	SAE Designation & Amp. Hr. Rtg.		25TA - 74 Amp Hr.
	Location		Engine Compartment - Front LH Side
	Terminal grounded		Negative
Generator or Alternator	Make		Delco Remy
	Model		1100880
	Type and rating		37 Amps
	Output at engine idle (neutral)		20 Amps
Ratio—Gen. to Cr/s rev.			
Regulator	Make		Built in Alternator Eng Frame
	Model		
	Type		Solid State
	Cutout relay	Closing voltage @ generator rpm	None
		Reverse current to open	None
	Regu- lated	Voltage	N.A.
		Current	N.A.
	Voltage test conditions	Temperature	N.A.
		Load	N.A.
Other		Tested with Alternator	

ELECTRICAL — STARTING SYSTEM

Starting Motor	Make		Delco Remy
	Model		1108389
	Rotation (drive end view)		Clockwise
Motor control	Switch (solenoid, manual)		Solenoid
	Starting procedure		* 3-Speed and 4-Speed - Place gear shift lever in neutral. Turbo HMT - Leave shift lever in park.
Motor Drive	Engagement type		Solenoid Overrunning Clutch
	Pinion meshes (front, rear)		Front
	Number of teeth	Pinion	9
		Flywheel	Manual
	Auto.		166
	Flywheel tooth face width	Manual	.438
Auto.		.438	

* Initial Start - Depress gas pedal to floor to set choke. Turn ignition to start and release as soon as engine starts.

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISION (01)

MODEL

4-4-2

ELECTRICAL – IGNITION SYSTEM

Type	Conventional – Std., Opt., N.A.		Standard	
	Transistorized – Std., Opt., N.A.		Dealer Installed Package	
	Other (specify)			
Coil	Make		Delco Remy	
	Model		1115216	
	Amps	Engine stopped	4.0	
		Engine idling	2.0	
Distributor **	Make		Delco Remy	
	Model		1111982	
	Cent'fgal adv. in c/shaft degrees @ engine rpm (nominal)	Start (rpm)	0° - 0° @ 717 RPM	
		Intermediate points deg. @ rpm	0° - 4° @ RPM 10° - 14° @ 2000 RPM	
		Max. deg. @ rpm	18° - 22° @ 3600 RPM	
	Vacuum adv. in c/shaft degrees @ in. Hg. (nominal)	Start (in. Hg.)	0° - 3° @ 9 In. Hg.	
		Intermediate points, deg. @ in. Hg.	0° - 5.8° @ 10 In. Hg. 11.6° - 18.2° @ 15 In. Hg. 19° - 25.5° @ 18.5 In. Hg.	
		Max. deg. in. Hg.	22.5° - 25.5° @ 20.5 In. Hg.	
	Breaker gap (in.)		.016	
	Cam angle (deg.)		29° - 31°	
Breaker arm tension (oz.)		19 - 23		
Timing	Crankshaft deg. @ rpm		12° BTC @ 1100 RPM (SMT) 12° BTC @ 1100 RPM (AMT)	
	Mark location		Balancer Assembly	
Spark Plug	Make		AC	
	Model		AC R44S	
	Thread (mm)		14 MM	
	Tightening torque (lb. ft.)		30	
	Gap		.030	
Cable	Conductor type		Resistance	
	Insulation type		Neophrene	
	Spark plug protector		Nypolon	

ELECTRICAL – SUPPRESSION

Locations & type

*

* Resistance core spark plug leads and coil leads, by pass condensers at alternator and at regulator and coil on radio equipped cars.

** Centrifugal advance and vacuum advance figures are for standard (non-transistorized) ignition only.

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED ^(*) 8-1-69
4-4-2 (W30)
 MODEL _____ (A.T.) _____ (S.M.T.)

ELECTRICAL – IGNITION SYSTEM

Type	Conventional – Std., Opt., N.A.			
	Transistorized – Std., Opt., N.A.			
	Other (specify)			
Coil	Make			
	Model			
	Amps	Engine stopped		
		Engine idling		
Distributor	Make			
	Model		1111979	1111977
	Cent'fgal adv. in c/shaft degrees @ engine rpm (nominal)	Start (rpm)	0° - 0° @ 550 RPM	0° - 0° @ 754 RPM
		Intermediate points deg. @ rpm	0° - 7° @ 750 RPM	0° - 4° @ 955 RPM
			13.9° - 20.7° @ 1150 RPM	16° - 20° @ 1800 RPM
			17.3° - 21.3° @ 1250 RPM	
	Max. deg. @ rpm	28° - 32° @ 3000 RPM	20° - 24° @ 4000 RPM	
	Vacuum adv. in c/shaft degrees @ in. Hg. (nominal)	Start (in. Hg.)	0° - 3.5° @ 12 In. Hg.	0° - 3.4° @ 12 In. Hg.
		Intermediate points, deg. @ in. Hg.	0° - 6.3° @ 13 In. Hg.	0° - 6.3° @ 13 In. Hg.
			5.8° - 11.8° @ 15 In. Hg.	5.8° - 11.8° @ 15 In. Hg.
11.5° - 17.5° @ 17.2 In. Hg.			11.5° - 17.5° @ 17.2 In. Hg.	
Max. deg. in. Hg.	14.5° - 20.2° @ 18.5 In. Hg.	14.5° - 20.2° @ 18.5 In. Hg.		
Breaker gap (in.)				
Cam angle (deg.)				
Breaker arm tension (oz.)		19 - 23		
Timing	Crankshaft deg. @ rpm		*	
	Mark location			
Spark Plug	Make			
	Model			
	Thread (mm)			
	Tightening torque (lb. ft.)			
	Gap			
Cable	Conductor type			
	Insulation type			
	Spark plug protector			

ELECTRICAL – SUPPRESSION

Locations & type

Otherwise same as Standard 4-4-2 (Page 13).

* 10° @ 850 RPM (Super Premium Fuel)

8° @ 850 RPM (Premium Fuel)

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (4)

MODEL _____ 4-4-2

ELECTRICAL - INSTRUMENTS AND EQUIPMENT

Speed-ometer	Type	AC
	Trip odometer (yes,no)	No
Charge indicator - type		Indicator Lamp
Temperature indicator - type		Indicator Lamp
Oil pressure indicator - type		Indicator Lamp
Fuel indicator - type		Gauge
Other		Indicator Lamp
Wind-shield wiper	Type - Standard	2-Speed Electric
	Type - Optional	--
Wind-shield washer	Type - Standard	Push Button
	Type - Optional	--
Horn	Type	Vibrating
	Number used	2
	Amp draw (each)	5.2 - 5.7

DRIVE UNITS - CLUTCH (Manual Transmission)

Make & type		Chevrolet - Single Plate
Type pressure plate springs		Belleville
Total spring load (lb.)		2450 - 2750 Assemblies
No. of clutch driven discs		One
Clutch facing	Material	Woven Asbestos
	Outside & inside dia.	11.0 X 6.5
	Total eff. area (sq.in.)	123.7
	Thickness	One .135 and One .150
	Engagement cushioning method	Flat Springs
Release bearing	Type & method of lubrication	Ball Permanent
Torsional damping	Methods: springs, friction material	Coil Spring - Steel Friction

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*)

MODEL _____ 4-4-2

DRIVE UNITS – TRANSMISSIONS

Manual 3-speed (std. or opt.)	Standard
Manual 4-speed (std. or opt.)	Optional
Manual with overdrive (std. or opt.)	N.A.
Automatic (std. or opt.)	Optional

DRIVE UNITS – MANUAL TRANS.

Number of forward speeds		3	
Transmission ratios	In first	2.42	
	In second	1.58	
	In third	1.00	
	In fourth	--	
	In reverse	2.41	
Synchronous meshing, specify gears		1-2-3	
Shift lever location		Floor	
Lubricant	Capacity (pt.)	5.00	
	Type recommended	Multi-purpose	
	SAE viscosity number	Summer	80 or 90
		Winter	80 or 90
		Extreme cold	80 or 90

DRIVE UNITS – MANUAL TRANS. W/OVERDRIVE

(For transmission data see manual transmission section)

Type (planetary or other)		N.A.	
Manual lockout (yes, no)			
Downshift accelerator control (yes, no)			
Minimum cut-in speed			
Gear ratio			
Lubricant	Capacity (pt.) (Overdrive only)		
	Separate filler (yes, no)		
	Type recommended		
	SAE viscosity number	Summer	
		Winter	
Extreme cold			

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED _____

MODEL _____ 4-4-2

DRIVE UNITS – AUTOMATIC TRANSMISSION

Trade name		Turbo Hydra-matic 400					
Type describe		3-Speed Torque Converter					
Selector location		Lever - Column Mounted					
List gear ratios Selector Pattern and indicate which ore used in each selector position		P Park	R Reverse	N Neutral	D Drive	S Super	L Low
		--	2.08	--	2.48	2.48	2.48
		--	--	--	1.48	1.48	--
		--	--	--	1.00	--	--
Max. upshift speed—drive range		1-2 40-45 MPH			2-3 75-80 MPH		
Max. kickdown speed—drive range		2-1 30-35 MPH			3-2 65-70 MPH		
Torque converter	Number of elements	3					
	Max. ratio at stall	2.30 Fixed Stator					
	Type of cooling (air, liquid)	Water					
	Nominal diameter	13.6					
Lubricant	Capacity—refill (pt.)	8					
	Type recommended	Dexron					
Special transmission features		Part Throttle 3-2 Downshift up to 45 MPH to Provide Added Performance					

DRIVE UNITS – PROPELLER SHAFT

Number used		One
Type (straight tube, tube-in-tube, internal-external damper, etc.)		Exposed
Outer diam. x length* x wall thick- ness	Manual 3-speed trans.	3.00 X 56.00 X .065
	Manual 4-speed trans.	3.00 X 56.00 X .065
	Overdrive transmission	N.A.
	Automatic transmission	3.00 X 55.10 X .065

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

(Continued)

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*)

MODEL 4-4-2

DRIVE UNITS – PROPELLER SHAFT (cont.)

Inter-mediate bearing	Type (plain, anti-friction)	None	
	Lubrication (fitting, prepack)	None	
Slip Yoke	Type	Involute Spline	
	Number of teeth	27 Manual	32 Automatic
	Spline O.D.	1.1760	1.395
Universal joints	Make and Mfg. No.	Saginaw Steering Gear	
	Number used	Two	
	Type (ball and trunnion, cross)	Cross	
	Rear attach. (u-bolt, clamp, etc.)	U-Bolt	
	Bearing	Type (plain, anti-friction)	Anti-Friction
Lubric. (fitting, prepack)		Pre-Pack	
Drive taken through (torque tube or arms, springs)		Arms	
Torque taken through (torque tube or arms, springs)		Arms	

DRIVE UNITS – AXLE

Type (front, rear)		Rear	
Description		Salisbury Live Hypoid - Semi-Floating	
Limited Slip differential, type		Multiple Plate Clutch - "S" Shaped Pre-Load Spring	
Drive Pinion Offset		1.75	
No. of differential pinions		2	
Pinion adjustment (shim, other)		Shim	
Pinion bearing adj. (shim, other)		Collapsing Spacer	
Wheel bearing type		Ball	
Capacity (pt.)		3.69	
Type recommended		GM 4744M (Standard), Mobile XRP 464-BD-M (L.S.)	
Lubricant	SAE viscosity number	Summer	80 - 90
		Winter	80 - 90
		Extreme cold	80 - 90

AXLE RATIO TOOTH COMBINATIONS

(See page 3 for axle ratio usage)

Axle ratio		3.08	3.23	3.42	3.91
No. of teeth	Pinion	13	13	12	11
	Ring gear	40	42	41	43
Ring Gear O.D.		8.560	8.555	8.552	8.543

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (•)

MODEL 4-4-2

DRIVE UNITS – WHEELS

Type & material		Welded Steel
Rim (size & flange type)	Std.	14 X 7JJ
	Opt.	None
Attachment	Type (bolt or stud)	Stud
	Circle diameter	4.75
	Number and size	5 X 7/16

MODEL _____

DRIVE UNITS – TIRES

Standard	Size, ply rating, & ply	G70 X 14 2 Ply 4 Ply Rate (White Stripe)	
	Type (bias, radial, etc.)	Bias	
	Full rated Inflation Press.	Front	24
		Rear	24
	Rev./Mile at 28 45 MPH	782	
Optional	Size, ply rating, & ply	G70 X 14 - 2 Ply 4 Ply Rate (White Letters) 8.25 X 14 - 4 Ply (Nylon) 4 Ply Rate	

BRAKES – PARKING

Type of control	Suspended Pedal	
Location of control	Left Drivers Compartment	
Operates on	Rear Brake	
If separate from service brakes	Type (internal or external)	Not Separate
	Drum diameter	
	Lining size (length x width x thickness)	

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (el)

MODEL _____ STANDARD ON 4-4-2 (OPTIONAL ON W30 & W31)

BRAKES—SERVICE

Type (drum) or (disc & no. of pistons)			Drum		
Self adjusting (std., opt., N.A.)			Standard		
Special Valving	Type (proportion, delay, metering, other)				
Power brake make & type (remote, int., etc.)	Std.				
	Opt.				
Effective area (sq. in.) *			141.8		
Gross lining area (sq. in.) **			149.8		
Swept area (sq. in.) ***			268.8		
Front to Rear Effectiveness Relationship			64.4% Front		
Drum	Diameter (nominal)	Front	9.5		
		Rear	9.5		
Type and material		Centrifugal Cast in Steel Shell -Front		Composite Rear-Optional	
Rotor	Outer working diameter				
	Inner working diameter				
	Working width				
	Material & type (vented/solid)				
Wheel cylinder bore	Front		1 1/8"		
	Rear		7/8"		
Master Cylinder	Bore		1"		
	displacement distribution	Front	%	59%	
		Rear	%	41%	
Pedal arc ratio			6.23 to 1 Standard		
Line pressure at 100 lb. pedal load			720		
Shoe Clearance	Front		.015		
	Rear		.015		
Brake lining	Bonded or riveted		Riveted		
	Front Wheel	Material		Bendix H3140G Pri. H3179 Sec.	
		Size (length x width x thickness)	Prim. or out-board	7.63 X 2.50 X .190	
			Second. or in-board	9.91 X 2.50 X .270	
		Segments per shoe		1	
	Rear Wheel	Material		Bendix H3140G Pri. H3179 Sec.	
		Size (length x width x thickness)	Prim. or out-board	7.63 X 2.00 X .190	
			Second. or in-board	9.91 X 2.00 X .270	
Segments per shoe		1			

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

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (•)

4-4-2 W30 & W31
MANUAL DISC (STANDARD EQUIPMENT)

MODEL _____

BRAKES — SERVICE

		FRONT	REAR
Type (drum) or (disc & no. of pistons)		Disc	Drum
Self adjusting (std., opt., N.A.)		Standard	
Special Valving	Type (proportion, delay, metering, other)	Metering	
Power brake make & type (remote, int., etc.)	Std. Opt.	Delco Integral	
Effective area (sq. in.) *		37.88	62.1
Gross lining area (sq. in.) **		41.8	70.1
Swept area (sq. in.) ***		226.2	119.4
Front to Rear Effectiveness Relationship		67.9% Front	
Drum	Diameter (nominal)	Front	Rear
	Type and material	9.5 Composite Rear - Optional	
Rotor	Outer working diameter		10.88
	Inner working diameter		7.12
	Working width		1.035
	Material & type (vented/solid)		Vented Cast Iron
Wheel cylinder bore	Front		2 15/16"
	Rear		7/8"
Master Cylinder	Bore		1 1/8"
	displacement distribution	Front %	73
		Rear %	27
Pedal arc ratio		6.23 to 1	
Line pressure at 100 lb. pedal load		560	
Shoe Clearance	Front		.000
	Rear		.015
		Bonded or riveted	Riveted
Brake lining	Front Wheel	Material	Bendix 7131C
		Size (length x width x thickness)	5.4 X 2.37 X .465
		Prim. or out-board / Second. or in-board	Same
	Segments per shoe		1
	Rear Wheel	Material	Bendix H3140G Pri. H3179 Sec.
		Size (length x width x thickness)	7.63 X 2.00 X .190
Prim. or out-board / Second. or in-board		9.91 X 2.00 X .270	
Segments per shoe		1	

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

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISION (*)

MODEL _____ 4-4-2

STEERING

Manual (std., opt., NA)		Standard	
Power (std., opt., NA)		Optional	
Adjustable steering wheel (tilt, swing, other)	Type and description	Tilt-A-Way	
	(std., opt., NA)	Optional	
Wheel diameter	Manual	15.50	
	Power	15.50	
Turning diameter (feet)	Outside front	Wall to wall (l. & r.)	43.3
		Curb to curb (l. & r.)	40.0
	Inside rear	Wall to wall (l. & r.)	23.4
		Curb to curb (l. & r.)	24.2
Manual	Gear	Type	Ball Nut
		Make	Saginaw Steering Gear
	Ratios	Gear	24.0:1
		Overall	28.3:1
	No. wheel turns (stop to stop)		5.56 Lock to Lock
Power	Type (coaxial, linkage, etc.)		Integral Gear
	Make		Saginaw Steering Gear
	Gear	Type	Ball Nut
		Ratios	Gear
	Overall		20.7:1
Pump driven by		Belt from Crank	
No. wheel turns (stop to stop)		3 Lock to Lock	
Linkage	Type		Parallelogram
	Location (front or rear of wheels, other)		Front
	Drag link (trans. or longit.)		Transverse
	Tie rods (one or two)		Two
Steering Axis	Inclination at camber (deg.)		9° at +1° Camber
	Bearings (type)	Upper	Ball Joint
		Lower	Ball Joint
		Thrust	Ball Joint
Whl. Align. (range at curb wt. & preferred)	Caster (deg.)		1 1/4° Neg. ± 3/4°
	Camber (deg.)		1/8° Pos. ± 3/8°
	Toe-in (outside track inches)		1/8 to 1/4
Steering spindle & joint type		Ball Joint	
Wheel Spindle	Diameter	Inner bearing	1.2497 - 1.2492
		Outer bearing	.7496 - .7491
	Thread size		3/4 - 20
	Bearing type		Tapered Roller

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*)

MODEL 4-4-2

SUSPENSION – GENERAL

(See Supplement page for details on Air Suspension)

Provision for car leveling		None
Provision for brake dip control		Counter Dive of Suspension
Provision for acc. squat control		Rear Suspension Upper Control Arm
Special provisions for car jacking		None
Shock absorber front & rear	Type	Direct Acting
	Make	Delco
	Piston dia.	1.00
Other special features		

SUSPENSION – FRONT

Type and description		Independent Coil Spring
Spring	Type	Coil
	Material	SAE 9260
	Size (coil design height & I.D.; bar length x dia.)	11.3 Design Height 3.60 I.D. 114.37 Long X .639 Dia.
	Spring rate (lb. per in.)	435
	Rate at wheel (lb. per in.)	154
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	SAE 1070 .937 Dia.

SUSPENSION – REAR

Type and description		Link Coil Spring
Drive and torque taken through		Arms
Spring	Type	Coil
	Material	SAE 9260
	Size (length x width, coil design height & I.D.; bar length & dia.)	7.62 Design Height - 5.50 I.D. 85.8 Long X .560 Dia.
	Spring rate (lb. per in.)	160.0
	Rate at wheel (lb. per in.)	150.0
	Mounting insulation type	Rubber
	If leaf	No. of leaves Shackle (comp. or tens.)
Stabilizer	Type (link, linkless, frameless)	Linkless
	Material	SAE 1070 .875 Dia.
Track bar type		None

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*)

MODEL _____ 4-4-2

FRAME

Type and description (Separate frame, unitized frame, partially - unitized frame)	Channel Section Side Rail 4 Cross Bar
---	--

BODY - MISCELLANEOUS INFORMATION

Drs. hinged (front, rr.)	Front doors	Front	
	Rear doors	Front	
Type of finish (lacquer, enamel, other)		Lacquer	
Hood counterbalanced (yes, no)		Yes	
Hood release control (internal, external)		External	
Vehicle Ident. No. location		Instrument Panel (L.H.)	
Engine No. location		Left Front Engine Block	
Theft protection - type		Key Type Starting - Steering Column Lock	
Vent window control method (crank, friction pivot)	Front	None	
	Rear	None	
Seat cushion type	Front	Zig Zag	
	Rear	Zig Zag	
	3rd seat	--	
Seat back type	Front	Zig Zag	
	Rear	Zig Zag	
	3rd seat	--	
Windshield glass type (i.e., single curved - laminated plate)		Single Curved - Laminated Plate	
Side glass type (i.e., curved - tempered plate)		Curved - Tempered Plate	
Backlight glass type (i.e., compound curved - tempered plate, three piece)		Compound Curved - Tempered Plate	
Windshield glass exposed surface area	1288.9	1290.4	1290.4
Side glass exposed surface area	1890.4	1597.0	2014.0
Backlight glass exposed surface area	655.7	1481.4	1481.4
Total glass exposed surface area	3835.0	4368.8	4785.8
	-A-	-B-	-C-

- A - Convertible - 67
- B - Pillar Coupe - 77
- C - Hardtop Coupe - 87

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*)

MODEL 4-4-2

CONVENIENCE EQUIPMENT

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

Power windows	Side windows	Optional
	Vent windows	N.A.
	Backlight or tailgate	N.A.
Power seats (specify type as well as availability)		4-Way - Optional 6-Way - Optional L.H. Bucket Only
Reclining front seat back (R-L or both)		N.A.
Front seat head restrainer (R-L or both)		Standard
Radies (specify type as well as availability)		Deluxe, AM-FM Stereo, Tape Optional
Rear seat speaker		Optional
Power antenna		N.A.
Clock		Optional
Air conditioner (specify type and availability)		Optional
Speed warning device		Optional
Speed control device		Optional
Ignition lock lamp		N.A.
Dome lamp		Standard
Glove compartment lamp		Optional
Luggage compartment lamp		Optional
Underhood lamp		Optional
Courtesy lamp		Optional
Map lamp		Optional
Auto. trans. quad. lamp		Optional
Cornering light lamp		N.A.
DUAL BRAKE WARNING		Standard
HAZARD WARNING		Standard
ANTI-THEFT BUZZER		Standard
ANTI-THEFT LOCK		Standard

LAMP HEIGHT AND SPACING

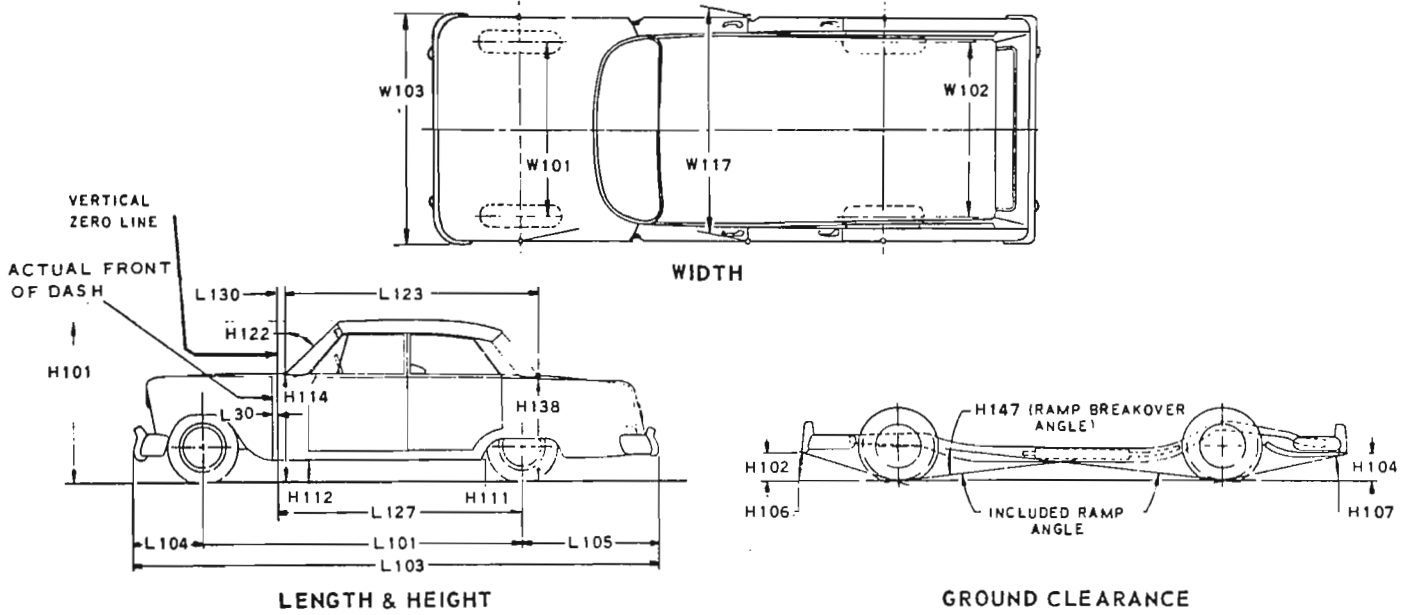
Height above ground to center of bulb or marker	Headlamp	Highest *	N.A.
		Lowest	
	Tail	Highest	
		Lowest	
Sidemarker	Front		
	Rear		
Distance from C/L of car to center of bulb	Headlamp	Inside	
		Outside *	
	Tail	Inside	
		Outside	
	Directional	Front	
		Rear	

* If single headlamps are used enter here.

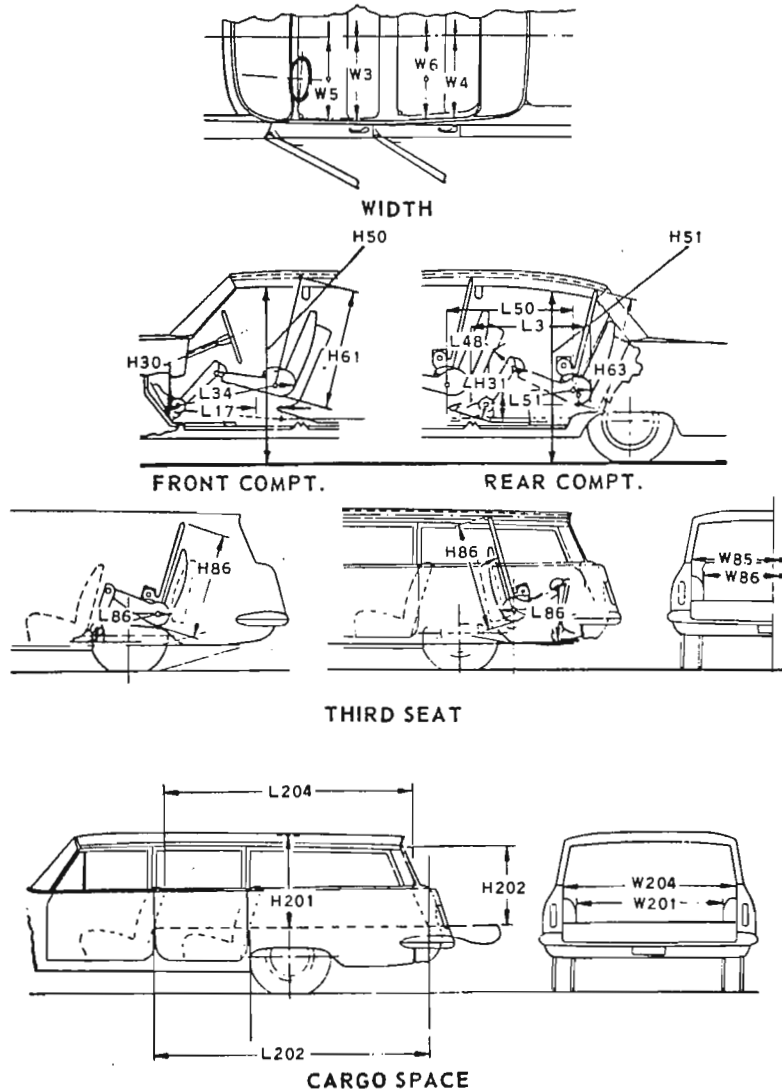
CAR AND BODY DIMENSIONS

KEY SHEET

EXTERIOR CAR AND BODY DIMENSIONS



INTERIOR CAR AND BODY DIMENSIONS



CAR AND BODY DIMENSIONS

KEY SHEET

DIMENSION DEFINITIONS

EXTERIOR WIDTH DIMENSIONS

- W101 WHEEL TREAD - FRONT. Measured at centerline of tires, with nominal camber, at ground.
- W102 WHEEL TREAD - REAR. Measured at centerline of tires at ground.
- W103 MAXIMUM OVERALL CAR WIDTH. Include bumpers, moldings, or sheet metal protrusions. Measured to outside of metal.
- W117 MAXIMUM BODY WIDTH AT #2 PILLAR. Measured across body at #2 pillar, excluding hardware and applied moldings.

EXTERIOR LENGTH DIMENSIONS

- L 30 VERTICAL ZERO LINE TO ACTUAL FRONT OF DASH. If actual Front of Dash is to the rear of Body Zero Line, it is identified by a minus (-) sign.
- L101 WHEELBASE.
- L103 OVERALL LENGTH. Include bumper guards if standard equipment.
- L104 OVERHANG - FRONT. Measured from C/L of front wheels to front of car, including bumper guards if standard equipment.
- L105 OVERHANG - REAR. Measured from C/L of rear wheels to rear of car, including bumper guards if standard equipment.
- L123 BODY UPPER STRUCTURE LENGTH AT CAR CENTERLINE. The horizontal dimension from the Cowl Point to the Deck Point.
- L127 VERTICAL ZERO LINE TO CENTERLINE OF REAR WHEELS. A horizontal dimension.
- L130 VERTICAL ZERO LINE TO WINDSHIELD COWL POINT. The horizontal dimension from the vertical zero line to the theoretical intersection of extended windshield glass plane and normal cowl surface.

EXTERIOR HEIGHT DIMENSIONS

- H101 OVERALL HEIGHT - DESIGN. Measured with the vehicle in Manufacturer's Design Weight attitude.
- H114 COWL POINT TO GROUND. Measured at vehicle centerline.
- H138 DECK POINT TO GROUND. Measured at vehicle centerline.
- H112 ROCKER PANEL TO GROUND - FRONT. The vertical dimension from ground to bottom of rocker panel, excluding flanges. Measured to the outside of sheet metal at foremost point of rocker panel.
- H111 ROCKER PANEL TO GROUND - REAR. The vertical dimension from ground to bottom of rocker panel, excluding flanges. Measured to the outside of sheet metal at front of rear wheel opening.
- H122 WINDSHIELD SLOPE ANGLE. The angle between a vertical line and the windshield surface at car centerline. On compound-curved windshields the chord of the arc is used and limited to that section of the windshield comprehended by an 18-inch chord.

GROUND CLEARANCE DIMENSIONS

- H102 BUMPER TO GROUND - FRONT. Minimum dimension, includes bumper guards.
- H104 BUMPER TO GROUND - REAR. Minimum dimension, includes bumper guards.
- H106 ANGLE OF APPROACH. The angle between ground and a line tangent to the front tire static loaded radius arc and the first point of interference, i.e., bumper, guard, gravel deflector, fender or other component, excluding license plate. This dimension may be determined graphically for reporting purposes.
- H107 ANGLE OF DEPARTURE. The angle between ground and a line tangent to the rear tire static loaded radius arc and the first point of interference, i.e., bumper, guard, gravel deflector, tail pipe, fender or other component, excluding license plate. This dimension may be determined graphically for reporting purposes.
- H147 RAMP BREAKOVER ANGLE. The supplement of included ramp angle (180° minus included ramp angle) over which car can pass without interference; measured with car sitting on a level surface, using lines tangent to arcs of front and rear static loaded radii and intersecting at point on underside of car which defines the smallest angle.
- H156 MINIMUM RUNNING GROUND CLEARANCE. Location of measurement on the car is to be clearly recorded.

FRONT COMPARTMENT DIMENSIONS

- H 61 EFFECTIVE HEAD ROOM - FRONT. The dimension from H Point to the headlining, plus a constant of 4.0 inches, measured along a line 8° to rear of vertical.
- L 34 MAXIMUM EFFECTIVE LEG ROOM - ACCELERATOR. Measured along a diagonal line from the Manikin ankle pivot center to the H Point plus a constant of 10.0 inches. For treadle type accelerator pedals, the leg room is measured with the Manikin's right foot on the accelerator pedal and the Manikin Heel Point at Accelerator Heel Point. All other types of accelerator pedals will be measured with the Manikin foot angle set at 87° and the shoe touching the pedal.
- H 30 H POINT TO HEEL POINT - FRONT. The vertical dimension from the H Point to the Accelerator Heel Point.
- L 17 H POINT TRAVEL. The horizontal dimension between the H Point in the most forward and rearward seat positions.

FRONT COMPARTMENT DIMENSIONS (Cont.)

- W 3 SHOULDER ROOM - FRONT. The minimum lateral dimensions between the door garnish moldings or nearest interference, measured at the H Point station.
- W 5 HIP ROOM - FRONT. The lateral dimension through the H Point to trimmed body surfaces. Depress loose side wall cloth to trim foundation or other obstruction if such construction exists.
- H 50 UPPER BODY OPENING TO GROUND - FRONT. The vertical dimension from a point on the trimmed body opening to the ground, measured at the H Point station.

REAR COMPARTMENT DIMENSIONS

- L 50 H POINT COUPLE DISTANCE. The horizontal dimension from the front seat H Point to the rear seat H Point.
- H 63 EFFECTIVE HEAD ROOM - REAR. The dimension from the H Point to the headlining, plus a constant of 4.0 inches, measured along a line 8° to rear of vertical.
- L 51 MINIMUM EFFECTIVE LEG ROOM - REAR. Measured along a diagonal line from the ankle pivot center to the H Point plus a constant of 10.0 inches, with the foot positioned to the nearest interference between the seat structure and toe, instep or lower leg.
- H 31 H POINT TO HEEL POINT - REAR. The vertical dimension from the H Point to the Manikin Heel Point on the depressed floor covering.
- L 48 MINIMUM KNEE ROOM - REAR. The minimum dimension from the Manikin knee pivot center to the back of the front seat back.
- L 3 REAR COMPARTMENT ROOM. The horizontal dimension from the back of front seat to front of rear seat back at height tangent to the top of rear seat cushion.
- W 4 SHOULDER ROOM - REAR. The minimum lateral dimension between the door garnish molding or nearest interference. Measured at H Point station.
- W 6 HIP ROOM - REAR. The lateral dimension through H Point to trimmed body surfaces. Depress loose side wall cloth to trim foundation or other obstruction when such construction exists.
- H 51 UPPER BODY OPENING TO GROUND - REAR. The vertical dimension from a point on the trimmed body opening to the ground, measured 13.0 inches forward of the H Point.

LUGGAGE COMPARTMENT DIMENSIONS

- V 1 LUGGAGE CAPACITY - USABLE. The total luggage compartment luggage capacity in cubic feet with the tire and tools in place.
- H195 LIFTOVER HEIGHT. Vertical dimension from the highest point on the luggage compartment lower opening to ground, excluding corner radii.

STATION WAGON - THIRD SEAT DIMENSIONS

- W 85 SHOULDER ROOM - THIRD SEAT. The minimum lateral dimension between the door garnish moldings or nearest interference. Measured at H Point station.
- W 86 HIP ROOM - THIRD SEAT. The lateral dimension through H Point to trimmed surfaces.
- L 86 EFFECTIVE LEG ROOM - THIRD SEAT. Measured along a diagonal line from ankle pivot center to H Point plus a constant of 10.0 inches. With rear-facing third seat, foot is positioned in foot well or to nearest interference with rear end or rear closure.
- H 86 EFFECTIVE HEAD ROOM - THIRD SEAT. The dimension from H Point to the headlining, plus a constant of 4.0 inches. Measured along a line 8° to rear of vertical.

STATION WAGON - CARGO SPACE DIMENSIONS

- L202 CARGO LENGTH AT FLOOR - FRONT SEAT. The horizontal dimension, measured at the floor level from the rear of the front seat back to the normal inside limiting interference on the tailgate, on the car centerline.
- L204 CARGO LENGTH AT BELT - FRONT SEAT. The horizontal dimension measured from the top rear of front seat back to a vertical extension line from the normal inside limiting interference at the top of the tailgate, on the car centerline.
- W201 CARGO WIDTH - WHEELHOUSE. The minimum horizontal dimension, measured between wheelhousings at floor level.
- W204 OPENING WIDTH AT BELT. The minimum horizontal dimension, measured between the nearest normal inside limiting interferences of the rear opening at the top of the tailgate.
- H201 MAXIMUM CARGO HEIGHT. The maximum vertical dimension, measured from the top of the floor covering to the headlining, on the car centerline.
- H202 REAR OPENING HEIGHT. The vertical dimension measured from the top of the floor covering to the normal inside limiting interference at the top of the rear opening, on the car centerline, with both tail-and liftgates fully open.
- V 2 CARGO VOLUME INDEX BEHIND FRONT SEAT. The total volume in cubic feet above the normal load floor and behind the front seat with the liftgate and tailgate closed.

W4xL204xH201

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