

AMA Specifications—Passenger Car

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MANUFACTURER OLDSMOBILE	CAR NAME F-85, CUTLASS, CUTLASS SUPREME	
MAILING ADDRESS LANSING, MICHIGAN 48921	MODEL YEAR 1970	ISSUED: 7-1-69
		REVISED (●) 8-1-69

NOTES:

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

CREDIT - OLDSMOBILE
HISTORY CENTER

000025248

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900 TOWNSEND ST.
LANSING, MI 48221

BODY - TYPES AND STYLE NAMES -

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

	F-85		Cutlass		Cutlass Supreme
	33100 L-6	33200 V-8	33500 L-6	33600 V-8	34200
39 Hardtop Sedan	N.A.	N.A.	X	X	X
57 Hardtop Coupe	N.A.	N.A.	N.A.	N.A.	X
67 Convertible	N.A.	N.A.	N.A.	N.A.	X
69 Pillar Sedan	N.A.	N.A.	X	X	N.A.
77 Pillar Coupe	X	X	X	X	N.A.
87 Hardtop Coupe	X	X	X	X	N.A.

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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.	Pillar Sedan	Holiday Sedan	Holiday Coupe	Convertible
WIDTH					
Track - Front	W101	59.0	59.0	59.0	59.0
Track - Rear	W102	59.0	59.0	59.0	59.0
Maximum overall car width	W103	76.8	76.8	76.2	76.2
Body width at No. 2 pillar	W117	74.1	74.1	N.A.	N.A.
LENGTH					
Body "O" to front of dash	L 30	0.0	0.0	0.0	0.0
Wheelbase	L101	116.0	116.0	112.0	112.0
Overall car length	L103	207.2	207.2	203.2	203.2
Overhang - front	L104	41.7	41.7	41.7	41.7
Overhang - rear	L105	49.5	49.5	49.5	49.5
Body upper structure length	L123	102.2	102.2	102.8	97.2
Body "O" line to $\text{\textcircled{C}}$ of rear wheel	L127	99.4	99.4	95.4	95.4
Body "O" line to w/s cowl point	L130	N.A.	N.A.	N.A.	N.A.
HEIGHT					
Passenger Distribution (front & rear)		2-3	2-3	2-3	2-3
Trunk/Cargo load (lbs.)		200	200	200	200
Overall height	H101	53.5	53.5	52.8	52.8
Cowl height	H114	37.7	37.7	37.7	37.7
Deck height	H138	N.A.	N.A.	N.A.	N.A.
Rocker panel - front	To ground	8.4	8.4	8.4	8.4
	From front wheel $\text{\textcircled{C}}$	N.A.	N.A.	N.A.	N.A.
Rocker panel - rear	To ground	7.9	7.9	7.9	7.9
	From rear wheel $\text{\textcircled{C}}$	N.A.	N.A.	N.A.	N.A.
Windshield slope angle	H122	53.1	53.1	53.1	53.1
GROUND CLEARANCE					
Bumper to ground - front	H102	11.8	11.8	11.8	11.8
Bumper to ground - rear	H104	12.8	12.8	12.8	12.8
Angle of approach	H106	21.0	21.0	21.0	21.0
Angle of departure	H107	17.5	17.5	17.5	17.5
Ramp breakover angle	H147	13.0	13.0	12.5	12.5
Min. running clearance (Specify)	H156	4.5	4.5	4.5	4.5

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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.	Pillar Sedan	Holiday Sedan	Holiday Coupe	Convertible
FRONT COMPARTMENT					
Effective head room	H61	38.5	38.5	37.9	38.5
Max. eff. leg room – accelerator	L34	41.5	41.5	41.4	41.4
H Point to Heel point	H30	7.9	7.9	8.0	8.0
H Point travel	L17	4.8	4.8	4.8	4.8
Shoulder room	W 3	58.2	48.2	58.0	58.0
Hip room	W 5	59.8	59.8	59.6	59.6
Upper body opening to ground	H50	N.A.	N.A.	N.A.	N.A.
REAR COMPARTMENT					
H Point couple distance	L50	32.8	32.8	30.7	30.7
Effective head room	H63	37.1	37.1	36.3	36.9
Min. effective leg room	L51	34.9	34.9	32.5	31.9
H Point to Heel point	H31	10.7	10.7	10.1	10.1
Min. knee room	L48	2.3	2.3	1.5	1.5
Rear Compartment room	L 3	25.8	25.8	24.0	24.0
Shoulder room	W 4	57.2	57.2	56.6	47.9
Hip room	W 6	59.0	59.0	53.0	50.4
Upper body opening to ground	H51	N.A.	N.A.	N.A.	N.A.
LUGGAGE COMPARTMENT					
Usable luggage capacity	V 1	17.0	17.0	17.0	N.A.
Liftover height	H195	N.A.			
Position of spare tire storage		Flat on Right Side of Trunk			
Method of holding lid open		Counter Balanced - Torsion Bar			
STATION WAGON – THIRD SEAT					
See Separate AMA					
Shoulder Room	W85				
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				
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.)	V2				
$\frac{W4 \times L204 \times H201}{1728}$					

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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		
33100 33500	250	1 Bbl.	8.50	155 @ 4200	240 @ 2000	3-Speed Manual Turbo HMT - 350	2.78,3.08,3.23 2.78,3.08,3.23 A/C-3.08,3.23
33200 (Std.) 33600 (Std.) 34200 (Opt.)	350	2 Bbl.	9.00	250 @ 4400	355 @ 2600	3-Speed Manual 4-Speed Manual (Wide Ratio) 4-Speed Manual (Close Ratio) Turbo HMT - 350	3.08,2.78,3.23,3.42,3.91 3.08,3.23,3.42 3.42,3.91 2.56,2.78,3.08,3.23,3.42, 3.91 A/C-2.78,2.56,3.08,3.23
34200 (Std.) 33600 (Opt.) 33200 (Opt.)	350	4 Bbl.	10.25	310 @ 4800	390 @ 3200	3-Speed Manual 4-Speed Manual (Wide Ratio) 4-Speed Manual (Close Ratio) Turbo HMT - 350	3.08,2.78,3.23,3.42,3.91 3.08,3.23,3.42 3.42,3.91 2.78,2.56,3.08,3.23,3.42, 3.91
33200 (W31) 33600 (W31)	350	4 Bbl.	10.50	325 @ 5400	360 @ 3600	3-Speed Manual 4-Speed Manual (Wide Ratio) 4-Speed Manual (Close Ratio) Turbo HMT - 350	3.91,3.42 3.91,3.42 3.42,3.91 3.42,3.91

Limited slip axle mandatory with 3.42, 3.91 and 4.33 ratios.
 4.33, 4.66 and 5.00 available as dealer options on all transmissions.
 A/C not available with 3.42, 3.91 and 4.33 axle ratios.

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 MODEL L6 250 350 L.C. 350 H.C.

ENGINE – GENERAL

Type, no. cyls., valve arr.	L6 OHV in Line	90° OHV V8	
Bore and stroke (nominal)	3.875 X 3.53	4.057 X 3.385	
Piston displacement, cu. in.	250	350	
Bore spacing (C to C)	4.40	4.625	
No. system (front to rear)	L. Bank	1-2-3-4-5-6	1-3-5-7
	R. Bank	In Line	2-4-6-8
Firing order	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Compres. ratio (nominal)	8.5:1	9.00:1	10.25:1
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'	4° 37'	
Taxable horsepower <small>Dia²xNo. Cyl. 2.5</small>	36.04	52.67	
Publishing max. bhp* @ eng. RPM	155 @ 4200	250 @ 4400	310 @ 4800
Publishing max. torque * (lb. ft. @ RPM)	240 @ 2000	355 @ 2600	390 @ 3200
Recommended fuel regulor – premium	Regular	Regular	Premium

ENGINE – PISTONS

Material	Aluminum Alloy		
Description and finish	Autothermic, Cam Grind, Tin Plate, Steel Strut		
Weight (piston only) oz.	20.28		22.61
Clearance (limits)	Top land	.0345 - .0435	
	Skirt	Top	--
		Bottom	.0005 - .0011 *
Ring groove depth	No. 1 ring	.2085 - .1995	
	No. 2 ring	.2085 - .1995	
	No. 3 ring	.2025 - .1935	
	No. 4 ring	--	

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

* Measured at 2.44 from top of piston.

** Measured at .75 below E of piston pin.

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MODEL _____ F-85 (W31)

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)	10.50:1
Cylinder Head Material	
Cylinder Block Material	
Cyl. Sleeve-Wet,dry,none	
Number of mtg. points	Front Rear
Engine installation angle	
Taxable horsepower	$\frac{\text{Dia}^2 \times \text{No. Cyl.}}{2.5}$ 2.5
Publishing max. bhp* @ eng. RPM	325 @ 5400
Publishing max. torque * (lb. ft. @ RPM)	360 @ 3600
Recommended fuel regular – premium	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° F and 29.92 in. Hg atmospheric pressure.

Otherwise same as high compression F-85 V-8 (Page 4)

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L6

MODEL _____ 250 _____ 350 L.C. _____ 350 H.C.

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 - UPPER material, coating, etc.	Cast Iron-GM-16M Chrome Plated Crowned Face	Chrome Plated O.D. Crowned Face Cast Iron SPR 228K
	LOWER	Cast Iron-GM-15M Taper Face	Cast Iron SPR 128 Taper Face
	Width	.0633 - .0628	.0775 - .0780
	Gap	.010 - .020	.010 - .020
Oil	Description - material, coating, etc.	Multi-piece(2 Rails & 1 Spacer) Rails A is 1 1070 Steel Chrome Plated O.D.	2 Rails - 1070 Spr Steel Chrome Plated - Granoseal Processed
	Width	.1885 Assembly	Rails: .0235-.0260; Spacer: .137-.139
	Gap		Rails: .015 - .055
Expanders		Spacer-Steel A is 1 201 or 301	Spacer - 601-75 Spring Steel

ENGINE – PISTON PINS

Material	AB1 5015, C1016 or C1018	Steel SAE 1019 or C1016	
Length	2.990 - 3.010	2.980	
Diameter	.9270 - .0273	.9803 - .9807	
Type	Locked in rod, in piston, floating, etc.	Pressed in Rod	
	Bush- ing In rod or piston Material	None --	
Clearance	In piston	.00015 - .00025 Loose	.0003 - .0005 Loose
	In rod	.0008 - .0016 Press	.0008 - .0018 Press
Direction & amount offset in piston	Offset .060 in Opposite Direction of Engine Rotation		

ENGINE – CONNECTING RODS

Material	Drop Forged Steel AISI-C1037 or C1038	Steel SAE #1140	
Weight (oz.)	19.97	24.72	
Length (center to center)	5.699 - 5.701	5.998 - 6.002	
Bearing	Material & Type	Copper Lead Alloy Sintered Copper Nickel Backed Babbitt St.	Moraine 100 Babbitt Steel Backed
	Overall length	.807	.821 - .831
	Clearance (limits)	.0007 - .0027	.0004 - .0033
	End play	.0085 - .0135	.002 - .013

2 Rods per Crankpin

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ENGINE – CRANKSHAFT

Material	Cast Nodular	Nodular Iron (or) ASIS #1049 Modified	
Vibration damper type	Tuned Rubber		
End thrust taken by bearing (No.)	7	3	
Crankshaft end play	.002 - .006	.004 - .008	
Main bearing	Material & type	Moraine 100 Babbitt Steel Backed	
	Clearance	.0003 - .0029 #1-2-3-4: .0005-.0021; #5:.0015-.0031	
	Journal dia. and bearing overall length	No. 1	2.2988 X .802 2.50 X .975
		No. 2	2.2988 X .802 2.50 X .975
		No. 3	2.2988 X .802 2.50 X 1.194
		No. 4	2.2988 X .802 2.50 X .975
		No. 5	2.2988 X .802 2.50 X 1.624
		No. 6	2.2988 X .802 None
No. 7		2.2988 X 1.008 None	
Dir. & amt. cyl. offset	None	*	
Crankpin journal diameter	1.999 - 2.000	2.1238 - 2.1248	

ENGINE – CAMSHAFT

Location	Above & to R. of Crk/Sh.	Center	
Material	Cast Iron Modified	GM 6016M Alloy Cast Iron	
Bearings	Material	Steel Backed Babbitt	
	Number	4 5	
Type of Drive	Gear or chain	Gear Chain	
	Crankshaft gear or sprocket material	Cast Iron Steel Hardened Steel or Sintered Iron	
	Camshaft gear or sprocket material	Bakelite & Fabric Comp. Aluminum with Nylon Teeth Steel Hub ABI B-1112 Cast Iron (Opt.)	
	Timing chain	No. of links	None 48
		Width	-- .720 - .750
		Pitch	-- .500

ENGINE – VALVE SYSTEM

Hydraulic lifters (Std., opt., NA)	Standard	
Valve rotator, type (intake, exhaust)	None	Helical Spring and Flat Washer Type
Rocker ratio	1.75:1	1.60:1
Operating tappet clearance (indicate hot or cold)	Intake	Zero
	Exhaust	Zero

(Continued)

* R.H. bank .469 to rear and L.H. bank .469 forward \bar{E} of engine.

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MODEL L6 250 350 L.C. 350 H.C.

ENGINE – VALVE SYSTEM (cont.)

Timing (based on top of ramp points)	Intake	Opens (°BTC)	16°	16°	
		Closes (°ABC)	48°	54°	
		Duration - deg.	244°	250°	
	Exhaust	Opens (°BBC)	46° 30'	64°	
		Closes (°ATC)	17° 30'	20°	
		Duration - deg.	244°	264°	
Valve opening overlap		33° 30'	36°		
Intake	Material		AISI-A3140, C-1041, C-1047	SAE 1041, 1047	
	Overall length		4.902 - 4.922	4.703	
	Actual overall head dia.		1.715 - 1.725	1.880 - 1.870	
	Angle of seat & face		46° Seat 45° Face	45° Seat 46° Face	
	Seat insert material		None		
	Stem diameter		.3410 - .3417	.3432 - .3425	
	Stem to guide clearance		.0010 - .0027		
	Lift (@ zero lash)		.388	.400	
	Outer spring press. & length	Valve closed (lb. @ in.)	56 - 64 @ 1.66	76 - 84 @ 1.670	
		Valve open (lb. @ in.)	180 - 192 @ 1.27	180 - 194 @ 1.270	
	Inner spring press. & length	Valve closed (lb. @ in.)	None	None	
		Valve open (lb. @ in.)	None	None	
	Exhaust	Material		ARMCO #21 - 4N (MS201)	21-2 Steel
		Overall length		4.913 - 4.933	4.695
		Actual overall head dia.		1.495 - 1.505	1.629 - 1.619
Angle of seat & face		46° Seat 45° Face	45° Seat 46° Face		
Seat insert material		None			
Stem diameter		.3410 - .3417	.3427 - .3420		
Stem to guide clearance		.0010 - .0027	.0015 - .0032		
Lift (@ zero lash)		.388	.400		
Outer spring press. & length		Valve closed (lb. @ in.)	56 - 64 @ 1.66	76 - 84 @ 1.670	
		Valve open (lb. @ in.)	180 - 192 @ 1.27	180 - 194 @ 1.270	
Inner spring press. & length	Valve closed (lb. @ in.)	None	None		
	Valve open (lb. @ in.)	None	None		

ENGINE – LUBRICATION SYSTEM

Type of lubrica- tion (splash, pressure, nozzle)	Main bearings	Pressure
	Connecting rods	Pressure
	Piston pins	Spray
	Camshaft bearings	Splash
	Tappets	Pressure
	Timing gear or chain	Pressure
	Cylinder walls	Nozzle
	Con Rod Bearing Throw Off	Spray

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MODEL F-85 (W31)

ENGINE – VALVE SYSTEM (cont.)

Timing (based on top of ramp points)	Intake	Opens (°BTC)	40°
		Closes (°ABC)	88°
		Duration - deg.	308°
	Exhaust	Opens (°BBC)	86°
		Closes (°ATC)	42°
		Duration - deg.	308°
Valve opening overlap		82°	
Intake	Material		
	Overall length		4.707
	Actual overall head dia.		2.000/1.990
	Angle of seat & face		
	Seat insert material		
	Stem diameter		
	Stem to guide clearance		
	Lift (@ zero lash)		.474
	Outer spring press. & length	Valve closed (lb.@in.)	
		Valve open (lb.@in.)	
	Inner spring press. & length	Valve closed (lb.@in.)	Damper
		Valve open (lb.@in.)	----
Exhaust	Material		
	Overall length		4.695
	Actual overall head dia.		1.629/1.619
	Angle of seat & face		
	Seat insert material		
	Stem diameter		
	Stem to guide clearance		
	Lift (@ zero lash)		.474
	Outer spring press. & length	Valve closed (lb.@in.)	
		Valve open (lb.@in.)	
	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	

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Otherwise same as high compression F-85 V-8 (Page 7)

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MODEL L6 250 350 L.C. 350 H.C.

ENGINE – LUBRICATION SYSTEM (cont.)

Oil pump type	Gear
Normal oil pressure (lb. @ engine rpm)	30 - 45 @ 1500
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.)	4.0
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)	Single	Single with Cross-Over	
Muffler No. & type (reverse flow, straight thru, separate resonator)	One Reverse Flow	Muffler One Reverse Flow	
Exhaust pipe dia. (O.D., wall thick.)	Branch	2.00 X .076	2.25 X .076
	Main	2.00 X .060	2.00 X .076
Tail pipe dia. (O.D. & wall thickness)	1.75 X .048	2.00 X .048	2.00 X .048

ENGINE – CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)	Standard	PCV Induction System
	Optional	None
Control Unit	Make and model	AC Vent Valve CV-273-C AC Vent Valve CV-679-C
	Location	Valve Cover
	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)	Vent Filter Located on Valve Cover
	Flame arrestor (screen, check valve, other)	Check in Vent Valve

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MODEL L6 350 L.C. 350 H.C.
250

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.)		
	Point of entry		
	Injection tube I.D.		
	Check valve type		
	Backfire protection (type)		
Carburetor	Make		
	Model	Standard	
	Barrel size		
	Idle speed	Drive Neutral	
	Idle A/F mixture		
Distributor	Aux. Adv. Systems (type)		
	Make		
	Model	Standard	
	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, carburetion adjustment, engine timing and idle settings.

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MODEL L6 250 350 L.C. 350 H.C.

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 Rear License Plate			
Fuel Pump	Type (elec. or mech.)	Mechanical			
	Locations	Lower R.F. of Engine	Right Front of Block		
	Pressure range	4 to 5 psi	6 psi		
Vacuum booster (std., optional, none)		None			
Fuel Filter	Type	Sintered Bronze & Saran	Paper & Saran		
	Locations	Fuel Tank & Carburetor			
Carburetor	Choke type	Automatic			
	Intake manifold heat control (exhaust or water)	Exhaust			
	Air cleaner type	Standard	Oil Watted Paper Element (Temp. Cont.)		
		Optional	None		
Idle speed (spec. neutral or drive)	Manual	750 RPM (Neutral)	750 RPM (Neutral)	750 RPM (Neutral)	
	Automatic	600 RPM (Drive)	575 RPM (Drive)	625 RPM (Drive)	
	Idle A/F mix.	N.A.			

CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors		No. Used and Type	Barrel Size
			Make	Model		
33100 (Standard) 33500 (Standard)	250	Fully Synch. 3-Speed (Std.) Turbo HMT-350	Rochester	1 BV	One Single Barrel	1.56
33200 (Standard) 33600 (Standard) 34200 (Optional)	350	Fully Synch. 3-Speed (Std.) 4-Speed (Opt.) Turbo HMT-350	Rochester	2GC	One - 2-Barrel	Prim. 1 11/16
34200 (Standard) 33200 (Optional) 33600 (Optional)	350	Fully Synch. 3-Speed (Std.) 4-Speed (Opt.) Turbo HMT-350	Rochester	4MC	One - 4-Barrel	Prim. 1 3/8 Sec. 2 1/4

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*) 33100 THRU 34200

MODEL F-85 (W31)

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

Induction type: Carburetor, fuel injection, supercharger.			
Fuel Tank	Refill capacity (U.S. gals.)		
	Filler location		
Fuel Pump	Type (elec. or mech.)		
	Locations		
	Pressure range		
Vacuum booster (std., optional, none)			
Fuel Filter	Type		
	Locations		
Carburetor	Choke type		
	Intake manifold heat control (exhaust or water)		
	Air cleaner type	Standard	
		Optional	
	Idle speed (spec. neutral or drive)	Manual	750 RPM in Neutral
Automatic		625 RPM in Drive	
Idle A/F mix.			

CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors		No. Used and Type	Barrel Size
			Make	Model		

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE **MODEL YEAR** 1970 **DATE ISSUED** 7-1-69 **REVISED** (8-1-69)
33100 THRU 34200
MODEL L6 250 350 L.C. 350 H.C.

ENGINE - COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)		Pressure			
Radiator cap relief valve pressure		15 psi			
Circulation thermostat	Type (choke, bypass)	By-Pass			
	Starts to open at (°F)	195° F			
Water pump	Type (centrifugal, other)	Centrifugal			
	GPM ± 1000 pump rpm	10.1	22		
	Number of pumps	One			
	Drive (V-belt, other)	V-Belt			
	Bearing type	Ball			
By-pass recirculation type (inter., ext.)		Internal	External		
Radiator core type (cellular, tube and fin, other)		Tube and Center			
Cooling system capacity	With heater (qt.)	12.2	15.2		
	Without heater (qt.)	11.5	14.5		
	Opt. equipment-specify (qt.)	12.2 - A/C	15.7 - 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)	None	One Molded	
		Inside diameter	.765 - .703		
Fan	Number of blades & spacing	4 @ 65° (Std.) 7 Random (A/C) 4 @ 76° (Std.) 6 Spaced (A/C)			
	Diameter	17.62" (Std.) 18" (A/C) 19" (Std. & A/C)			
	Ratio-fan to crankshaft rev.	.949:1 (Std.) 1.16:1 (A/C) .85 (Std.) 1.22 (A/C)			
	Fan cutout type	Clutch (A/C) Only			
	Bearing type	Ball			
* Drive belts (indicate belt used by letter)	Fan				
	Generator or alternator	A (Std.)	D (A/C)	E (A/C & P/S)	D (H/D)
	Water Pump				
	Power Steering	F (Std.)		B (A/C)	
xxxxxx A/C COMPRESSOR		C			

* Drive Belt Dimensions (L-6)	A	B	C	D	E	F	G	H	I	J	K
Angle of V	36°	36°	36°	36°	36°	36°					
Nominal length (SAE)	39.00	49.00	53.75	37.75	31.14	49.50					
Width	.380	.380	.380	.380	.380	.380					

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED _____
33100 THRU 34200

MODEL _____ F-85

ENGINE – COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)			
Radiator cap relief valve pressure			
Circulation thermostat	Type (choke, bypass)		
	Starts to open at (°F)		
Water pump	Type (centrifugal, other)		
	GPM @ 1000 pump rpm		
	Number of pumps		
	Drive (V-belt, other)		
Bearing type			
By-pass recirculation type (inter., ext.)			
Radiator core type (cellular, tube and fin, other)			
Cooling system capacity	With heater (qt.)		
	Without heater (qt.)		
	Opt. equipment-specify (qt.)		
Water jackets full length of cyl. (yes, no)			
Water all around cylinder (yes, no)			
Radiator hose	Lower	Number and type (molded, straight)	
		Inside diameter	
	Upper	Number and type (molded, straight)	
		Inside diameter	
	By-pass	Number and type (molded, straight)	
		Inside diameter	
Fan	Number of blades & spacing		6 Staggered
	Diameter		19.00
	Ratio-fan to crankshaft rev.		.85:1
	Fan cutout type		Clutch (Standard)
	Bearing type		
* Drive belts (indicate belt used by letter)	Fan		
	Generator or alternator		A (Std.) D (A/C) F (A/C & P/S) G (H/D)
	Water Pump		
	Power Steering		B (Std.) E (A/C or H/D)
	A/C Compressor A/C COMPRESSOR		C
All Belts Drive Fan & Water Pump			

* Drive Belt Dimensions	A	B	C	D	E	F	G	H	I	J	K
Angle of V (V-8)	36°	36°	36°	36°	36°	36°	36°				
Nominal length (SAE)	49.14	44.11	58.20	54.83	45.19	55.05	49.86				
Width	.380	.380	.380	.380	.380	.380	.380				

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*)
33100 THRU 34200

MODEL L6 250 350 L.C. 350 H.C.

ELECTRICAL – SUPPLY SYSTEM

Battery	Make and Model		Delco 1980032	Delco 1980030
	Voltage Rtg. & Total Plates		12V-54 Plates	12V-66 Plates
	SAE Designation & Amp. Hr. Rtg.		45 AMP Hr. @ 20 AMP Hr. Rate	61 - AMP Hr.
	Location		Right Front	Front Left Side
	Terminal grounded		Negative	Negative
Generator or Alternator	Make		Delco Remy	
	Model		1100767	*
	Type and rating		Diode Rectifying 37 AMPS	
	Output at engine idle (neutral)		9 AMPS	
	Ratio—Gen. to Cr/s rev.		2.56:1	
Regulator	Make		Delco Remy	
	Model		1119515	
	Type		Vibrating Contact	
	Cutout relay	Closing voltage @ generator rpm	None	
		Reverse current to open	None	
	Regu- lated	Voltage	13.5 - 14.4	
		Current	None - Self Regulating	
	Voltage test conditions	Temperature	120° F	
		Load	Less than 10 AMP	
		Other	Upper Contacts	

ELECTRICAL – STARTING SYSTEM

Starting Motor	Make		Delco Remy	
	Model		1108365	1108386 1108387
	Rotation (drive end view)		Clockwise	
Motor control	Switch (solenoid, manual)		Solenoid	
	Starting procedure		** 3-Speed and 4-Speed - Place gear shift lever in neutral and depress clutch to floor. Turbo HMT - Leave shift lever in park.	
Motor Drive	Engagement type		Solenoid with Overrunning Clutch	
	Pinion meshes (front, rear)		Front	
	Number of teeth	Pinion	9	
		Flywheel	Manual	153
	Auto.		153	166
	Flywheel tooth face width	Manual	.4010 - .4130	.438
Auto.		.4010 - .4130	.438	

* 1100879 (Std.), 1100777 L.C. (A/C), 1100890 H.C. (A/C).

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

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED ^(*)8-1-69
33100 THRU 34200

MODEL L6
250 350 L.C. 350 H.C.

ELECTRICAL – IGNITION SYSTEM

Type	Conventional – Std., Opt., N.A.	Standard			
	Transistorized – Std., Opt., N.A.	N.A.			
	Other (specify)				
Coil	Make	Delco Remy			
	Model	1115184	1115292		
	Amps	Engine stopped			
		Engine idling			
Distributor	Make	Delco Remy			
	Model	1110463	1111976	1111975	
	Cent'fgal adv. in c/shaft degrees @ engine rpm (nominal)	Start (rpm)	0° - 3° @ 900	0° - 0° @ 490	0° - 0° @ 486
		Intermediate points deg. @ rpm	0° - 6° @ 1000		
			4° - 10° @ 1150	0° - 4° @ 810	0° - 4° @ 814
			8.5° - 12.5° @ 1300	15.5° - 19.5° @ 2050	12° - 16° @ 1800
		19° - 23° @ 1950			
	Max. deg. @ rpm	30° - 34° @ 4200	28° - 32° @ 4000	20° - 24° @ 4000	
	Vacuum adv. in c/shaft degrees @ in. Hg. (nominal)	Start (in. Hg.)	N.A.	0° - 3° @ 9	0° - 0° @ 8
		Intermediate points, deg. @ in. Hg.	N.A.	0° - 5.8° @ 10	2° - 7° @ 11
			11.6° - 18.2° @ 15	10° - 15.5° @ 15	
			19° - 25.5° @ 18.5	16.5° - 20.0° @ 18.6	
Max. deg. in. Hg.	N.A.	22.5° - 25.5° @ 20.5	27.5° Max. @ 25 Min.		
Breaker gap (in.)	.016				
Cam angle (deg.)	31° - 34°	30°			
Breaker arm tension (oz.)	19 - 23				
Timing	Crankshaft deg. @ rpm	0° (SM) @ 750, 4° (AT) @ 600	10° @ 1100	10° @ 1100	
	Mark location	Torsional Damper	Balancer Assembly		
Spark Plug	Make	AC			
	Model	AC-R46T	AC-R46S	AC-R45S	
	Thread (mm)	14 MM			
	Tightening torque (lb. ft.)	25	30		
	Gap	.035	.030		
Cable	Conductor type	Resistance			
	Insulation type	Neoprene			
	Spark plug protector	Neoprene	Hypalon		

ELECTRICAL – SUPPRESSION

Locations & type	
------------------	--

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*) 8-1-69
33100 THRU 34200

MODEL _____ F-85 (W31)

ELECTRICAL – IGNITION SYSTEM

Type	Conventional – Std., Opt., N.A.		Dealer Installed Package	
	Transistorized – Std., Opt., N.A.			
	Other (specify)			
Coil	Make			
	Model			
	Amps	Engine stopped Engine idling		
Distributor	Make		Delco Remy	
	Model		1111975	
	Cent'fgal adv. in c/shaft degrees@ engine rpm (nominal)	Start (rpm)		0° - 2° @ 650
		Intermediate points deg. @ rpm		0° - 4° @ 814
				12° - 16° @ 1800
	Max. deg. @ rpm		20° - 24° @ 4000	
	Vacuum adv. in c/shaft degrees@ in. Hg. (nominal)	Start (in. Hg.)		0° - 0° @ 8
		Intermediate points, deg. @ in. Hg.		2° - 7° @ 11
				10° - 15.5° @ 15
				16.5° - 20.0° @ 18.6
Max. deg. in. Hg.		21.5° Max @ 23		
Breaker gap (in.)				
Cam angle (deg.)				
Breaker arm tension (oz.)				
Timing	Crankshaft deg. @ rpm		14° BTC @ 1100	
	Mark location			
Spark Plug	Make			
	Model		R435	
	Thread (mm)			
	Tightening torque (lb. ft.)			
	Gap			
Cable	Conductor type			
	Insulation type			
	Spark plug protector			

ELECTRICAL – SUPPRESSION

Locations & type _____

Otherwise same as high compression F-85 V-8 (Page 13)

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*) - -
33100 THRU 34200
 MODEL L6
250 350 L.C. 350 H.C.

ELECTRICAL – INSTRUMENTS AND EQUIPMENT

Speed-ometer	Type	AC
	Trip odometer (yes,no)	No
Charge indicator – type	Tell-Tale	Indicator Lamp
Temperature indicator – type	Tell-Tale	Indicator Lamp
Oil pressure indicator – type	Tell-Tale	Indicator Lamp
Fuel indicator – type		Electric Gage
Other		Indicator Lamp
Wind-shield wiper	Type – Standard	2-Speed Electric
	Type – Optional	None
Wind-shield washer	Type – Standard	Push Button
	Type – Optional	None
Horn	Type	Vibrator
	Number used	2
	Amp draw (each)	5.2 - 5.7

DRIVE UNITS – CLUTCH (Manual Transmission)

Make & type	Chevrolet Single Plate	Chevrolet Single Plate	
Type pressure plate springs	Belleville	Belleville	
Total spring load (lb.)	1650 - 1850 Asm	1900 - 2200 Asm.	
No. of clutch driven discs		One	
Clutch facing	Material	Woven Asbestos	
	Outside & inside dia.	9.12 X 6.12	10.4 X 6.5
	Total eff. area (sq.in.)	71.8	103.4
	Thickness		.135
	Engagement cushioning method		Flat Spring
Release bearing	Type & method of lubrication	Ball - Permanent	
Torsional damping	Methods: springs, friction material	Coil Springs - Steel Friction	

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (•) _____
33100 THRU 34200

MODEL L6 250 350 L.C. 350 H.C.

DRIVE UNITS – TRANSMISSIONS

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

DRIVE UNITS – MANUAL TRANS.

Number of forward speeds		3	3	
Transmission ratios	In first	2.85	2.54	
	In second	1.68	1.50	
	In third	1.00	1.00	
	In fourth	--	--	
	In reverse	2.95	2.63	
Synchronous meshing, specify gears		1-2-3		
Shift lever location		Column		
Lubricant	Capacity (pt.)	3.50		
	Type recommended	Multi-purpose		
	SAE viscosity number	Summer	80 or 90	
		Winter	80	
Extreme cold		80		

DRIVE UNITS – MANUAL TRANS. W/OVERDRIVE

(For transmission data see manual transmission section)

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

AMA Specifications—Passenger Car

MAKE OF CAR OLDSMOBILE MODEL YEAR 1970 DATE ISSUED 7-1-69 REVISED (*)
33100 THRU 34200

MODEL L6 250 350 L.C. 350 H.C.

DRIVE UNITS – AUTOMATIC TRANSMISSION

Trade name	Turbo Hydra-matic 350					
Type describe	3-Speed W/Fixed Stator					
Selector location	Column					
List gear ratios Selector Pattern and indicate which are used in each selector position	P Park	R Reverse	N Neutral	D Drive	S Super	L Low
	--	1.93	--	2.52	2.52	2.52
	--	--	--	1.52	1.52	--
	--	--	--	1.00	--	--
Max. upshift speed—drive range	1-2 50-55		2-3 80-85			
Max. kickdown speed—drive range	2-1 35-40		3-2 78-83			
Torque converter	Number of elements 35 - 40					
	Max. ratio of stall 2.3 Fixed Stator					
	Type of cooling (air, liquid) Water					
	Nominal diameter 12.5					
Lubricant	Capacity—refill (pt.) 6					
	Type recommended Dexron					
Special transmission features						

DRIVE UNITS – PROPELLER SHAFT

Number used	One	
Type (straight tube, tube-in-tube, internal-external damper, etc.)	Exposed	
Outer diam. x length* x wall thickness	Manual 3-speed trans.	3.25 X 60.00 X .065
	Manual 4-speed trans.	3.25 X 60.00 X .065
	Overdrive transmission	N.A.
	Automatic transmission	3.25 X 60.00 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 (•) -
33100 THRU 34200

MODEL L6 250 350 L.C. 350 H.C.

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
	Spline O.D.	1.1760
Universal joints	Make and Mfg. No.	Saginaw Steering Gear
	Number used	2
	Type (ball and trunnion, cross)	Cross
	Rear attach. (u-bolt, clamp, etc.)	U-Bolt
	Bearing	Type (plain, 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 Type - 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)		Coll. Spacer
Wheel bearing type		Ball
Capacity (pt.)		3.69
Type recommended		GM 4744 (Std.) Mobile XRP 464 BD-M (L.S.)
Lubricant	SAE viscosity number	90
	Summer	90
	Winter	90
Extreme cold		90

AXLE RATIO TOOTH COMBINATIONS

(See page 3 for axle ratio usage)

Axle ratio		2.56	2.78	3.08	3.23	3.42	3.91
No. of teeth	Pinion	16	14	13	13	12	11
	Ring gear	41	39	40	42	41	43
Ring Gear O.D.		8.560	8.568	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 (*)
33100 THRU 34200

MODEL L6 250 350 L.C. 350 H.C.

DRIVE UNITS – WHEELS

Type & material		Welded Steel
Rim (size & flange type)	Std.	14 X 6JJ
	Opt.	14 X 7JJ
Attachment	Type (bolt or stud)	Stud
	Circle diameter	4.75
	Number and size	5 X 7/16 Dia.

MODEL _____

DRIVE UNITS – TIRES

Standard	Size, ply rating, & ply	F78 X 14	G78 X 14	
	Type (bias, radial, etc.)	2 Ply 4 Ply Rate		
	Full rated Inflation Press.	Front	Bias	
		Rear	23	
	Rev./Mile at 30 MPH	24		
	45	783		
Optional	Size, ply rating, & ply	G70 X 14 2 Ply 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 (*)8-1-69
33100 THRU 34200

MODEL _____

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.	Delco Moraine Integral		
Effective area (sq. in.) *		141.8		
Gross lining area (sq. in.) **		157.8		
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	Front- Centrifugal Cast in Steel Shell	Rear- Composite Option	
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-Std.	3.34 to 1-Power	
Line pressure at 100 lb. pedal load		720-Manual	N.A.-Power	
Shoe Clearance	Front		.015	
	Rear		.015	
Bonded or riveted		Riveted		
Brake lining	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 (•) 33100 THRU 34200

MODEL _____ POWER DISC _____

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				67.7% Front	
Drum	Diameter (nominal)	Front			
		Rear			
	Type and material			9.5 Composite Rear-Option	
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				3.34 to 1	
Line pressure at 100 lb. pedal load				N.A.	
Shoe Clearance	Front			.000	
	Rear			.015	
Brake lining	Bonded or riveted			Riveted	
	Front Wheel	Material		Delco Moraine 5470	
		Size (length x width x thickness)	Prim. or out-board	5.4 X 2.37 X .465	
			Second. or in-board	Same	
		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 (•)8-1-69

MODEL _____

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.)	44.5	
		Curb to curb (l. & r.)	41.2	
	Inside rear	Wall to wall (l. & r.)	24.3	
		Curb to curb (l. & r.)	25.2	
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		
Power	Type (coaxial, linkage, etc.)	Gear		
	Make	Saginaw Steering Gear		
	Gear	Type	Gear Integral	
		Ratios	Gear	17.5:1
			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.)		Range - 1 1/4° Neg. ± 3/4°	
	Camber (deg.)		Range - 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 (*)
33100 THRU 34200

MODEL L6 250 350 L.C. 350 H.C.

SUSPENSION – GENERAL

(See Supplement page for details on Air Suspension)

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

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.		
	Spring rate (lb. per in.)	143.66 X .592	137.5 X .602	148.73 X .617
	Rate at wheel (lb. per in.)	250	280	280
Stabilizer	Type (link, linkless, frameless)	Link		
	Material & bar diameter	SAE 1070 - .812	SAE 1070 - .875	

SUSPENSION – REAR

Type and description	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.		
	Spring rate (lb. per in.)	96.0 X .520	102.0 X .530	
	Rate at wheel (lb. per in.)	106		
	Mounting insulation type	102		
	If leaf	Rubber		
Stabilizer	No. of leaves	None		
	Shackle (comp. or tens.)	None		
	Type (link, linkless, frameless)	None		
Track bar type	None			

AMA Specifications—Passenger Car

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

MODEL _____ F-85 CUTLASS CUTLASS SUPREME

FRAME

Type and description (Separate frame, unitized frame, partially - unitized frame)	"C" Section with Torque Boxes
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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 of Block				
Theft protection - type		Key Type Starting - Steering Column Lock				
Vent window control method (crank, friction pivot)	Front	Crank (Except Convertibles and Holiday Coupes)				
	Rear	None				
Seat cushion type	Front	Zig Zag				
	Rear	Zig Zag				
	3rd seat	None				
Seat back type	Front	Zig Zag				
	Rear	Zig Zag				
	3rd seat	None				
Windshield glass type (i.e., single curved - laminated plate)		All Single Curved - Laminated Plate				
Side glass type (i.e., curved - tempered plate)		All Curved - Tempered Plate				
Backlight glass type (i.e., compound curved - tempered plate, three piece)		All Compound Curved - Tempered Plate				
Windshield glass exposed surface area	1330.1	1290.4	1288.9	1330.1	1290.4	1290.4
Side glass exposed surface area	1908.7	1886.8	1890.4	1545.3	1597.0	2014.0
Backlight glass exposed surface area	1105.5	1022.4	655.7	1105.5	1481.4	1481.4
Total glass exposed surface area	4344.3	4199.6	3835.0	3980.9	4368.8	4785.8
	A	B	C	D	E	F

- A - Holiday Sedan - 39
- B - Hardtop Coupe - 57
- C - Convertible - 67
- D - Town Sedan - 69
- E - Sports Coupe - 77
- F - Hardtop Coupe - 87

AMA Specifications—Passenger Car

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

MODEL _____

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 Bench Seat-Optional on all Cars, 4-Way L.H. Bucket Only Optional Coupes & Convertibles Except 31 & 32 Series.
Reclining front seat back (R-L or both)		N.A.
Front seat head restrainer (R-L or both)		Standard
Radios (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
Hazzard Warning		Standard
Anti-Theft Buzzer		Standard
Anti-Theft Lock		Standard

LAMP HEIGHT AND SPACING

N.A.

Height above ground to center of bulb or marker	Headlamp	Highest *	
		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.

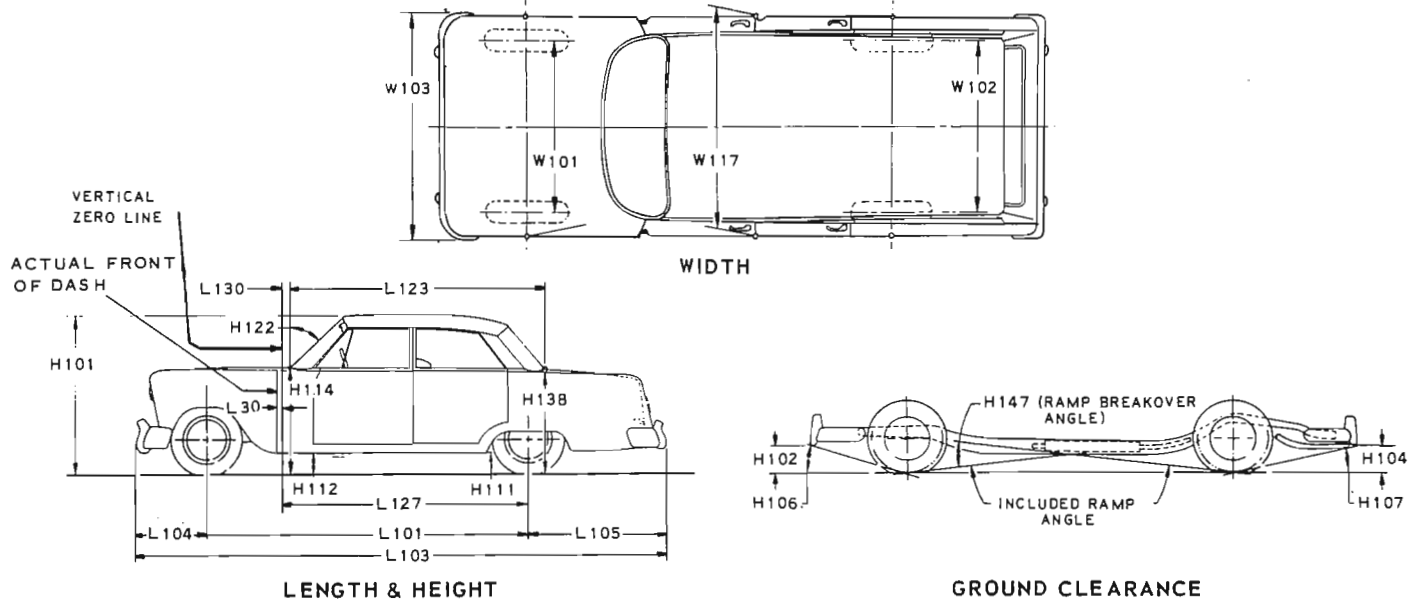
* Standard on Convertibles.

AMA Specifications—Passenger Car

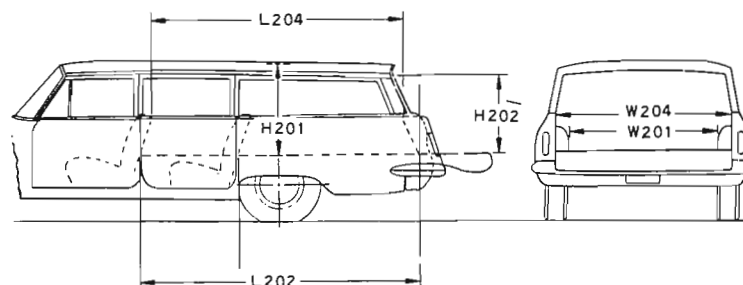
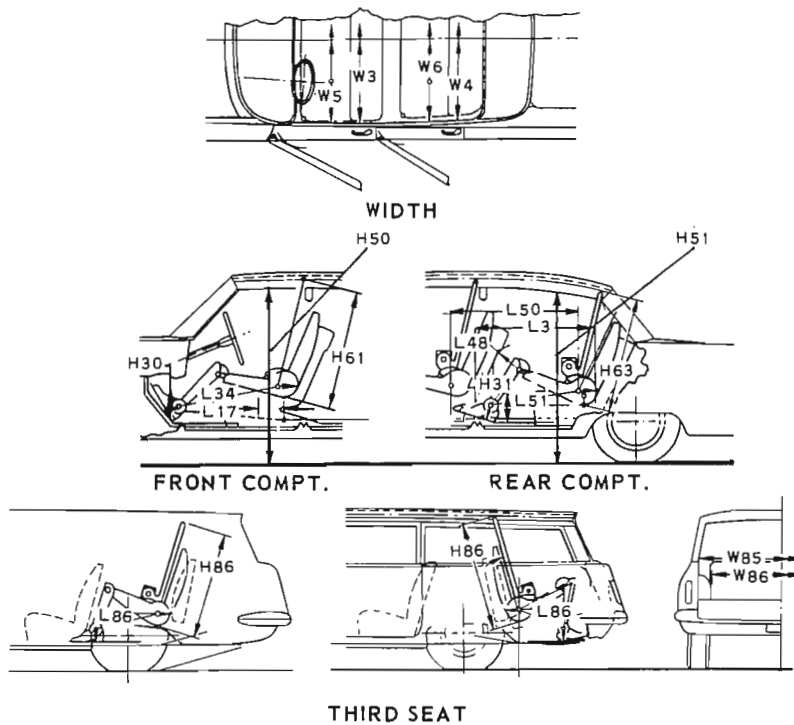
CAR AND BODY DIMENSIONS

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 Cow 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

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.

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