1979 MVMA Specifications Form Passenger Car

Manufacturer	Car Line	
PONTIAC MOTOR DIVISION GENERAL MOTORS CORPORATION	FIREBIRD	
Mailing Address	**Model Year**	**Issued**
ONE PONTIAC PLAZA PONTIAC, MICHIGAN 48053	1979	9-1-78 **Revised (•)**

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The General Specifications herein are those in effect at date of compilation and are subject to change without notice by the manufacturer.

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NOTE:

1. This form uses both SI metric units and U.S. Customary units. The Metric unit of measurement is presented first, and the U.S. Customary unit follows in parentheses.
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.
   c. All linear dimensions are in millimetres (inches), and all mass (weight) specifications are in kilograms (pounds).
3. The General Specifications herein are those in effect at date of completion and are subject to change without notice by the manufacturer.
4. A printed or computer tape supplement containing additional Car and Body Dimensions and/or drawings (based in part on SAE J1100a "Motor Vehicle Dimensions") may be available from the manufacturer.

Car Models

Model Description (Include Line Drawings of Vehicles, if Desired)	Make, Car line, Series, Body Type (Mfgr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load— Kilograms (Pounds)
2-DOOR HARDTOP COUPE			
	FIREBIRD		
	2FS87	4(2/2)	200
	FIREBIRD ESPRIT		
	2FT87	4(2/2)	200
	FIREBIRD FORMULA		
	2FU87	4(2/2)	200
	FIREBIRD TRANS AM		
	2FW87	4(2/2)	200

Power Teams (Indicate whether standard or optional)

SAE Net bhp (brake horsepower) and net torque corrected to 85° F and 29.38 in. Hg atmospheric pressure.

SERIES AVAILABILITY	ENGINE						TRANSMISSION	AXLE RATIO (Std. first) (Indicate A/C ratio)
	Displ. litres (in³)	Carb.	Compr. Ratio	SAE Net at RPM kW (bhp)	SAE Net at RPM Torque N-m (lb. ft.)	Exhaust System*		
STANDARD: FIREBIRD & ESPRIT	LD5 231	2	8.0	115@ 3800	185@ 2000	S	3-SPEED MANUAL AUTOMATIC	3.08 F 2.56, 3.23 F 2.56 C
OPTIONAL: FIREBIRD & ESPRIT	L27 301	2	8.1	135@ 3800	240@ 1600	S	AUTOMATIC	2.41 F
	L37	4	8.1	150@ 4000	240@ 2400 MT 1600 AT	SD	4-SPEED MANUAL AUTOMATIC	3.08 F 2.73 F
	LG3 305	2	8.4	125@ 3200	345@ 2000	S	AUTOMATIC	2.41 C
	LM1 350	4	8.2	165@ 3800	260@ 2400	S	AUTOMATIC	3.08 A
STANDARD: FORMULA	L27 301	4	8.1	135@ 3800	240@ 1600	S	AUTOMATIC	2.41 F
OPTIONAL: FORMULA	L37 301	4	8.1	150@ 4000	240@ 2400 MT 1600 AT	SD	4-SPEED MANUAL AUTOMATIC	3.08 F 2.73 F
	LG3 305	2	8.4	125@ 3200	245@ 2000	S	AUTOMATIC	2.41 C
	LM1 350	4	8.2	165@ 3800	260@ 2400	S	AUTOMATIC	3.08 A
	L78 (W72) 400	4	8.1	220@ 4000	320@ 2800	D	4-SPEED MANUAL	3.23 F
	L80 403	4	7.9	185@ 3600	315@ 2000	D	AUTOMATIC	2.41, 3.23 F 2.41, 3.08 A 2.41, 3.23 C
STANDARD: TRANS AM	L80 403	4	7.9	185@ 3600	315@ 2000	D	AUTOMATIC	2.41, 3.23 F 2.41, 3.08 A 2.41, 3.23 C
OPTIONAL: TRANS AM	L37 301	4	8.1	150@ 4000	240@ 2400 MT 1600 AT	SD	4-SPEED MANUAL AUTOMATIC	3.08 F 2.73 F
	L78 (W72) 400	4	8.1	220@ 4000	320@ 2800	D	4-SPEED MANUAL	3.23 F

FED/HIGH ALT ENG/AXLE COMBINATIONS AVAIL ALL STATES EXC CAL. HIGH ALT. ENG/AXLE COMBINATIONS NOT RECOMMENDED FOR LOW ALTITUDE).

*S—Single D—Dual

Engine Description/Carb.	231/LD5	305/LG3	350/LM1
Engine — General			
Total dressed engine mass (wt) dry*	197.6	251.4	230.4
Type (inline, V, Flat)	V8 90° OHV		
No. of cylinders	6	8	
Bore	3.80	3.736	4.00
Stroke	3.40	3.48	
Piston Displacement cm^3 (in^3)	231	305	350
Bore Spacing (C/L to C/L)	4.24	4.4	
Cyl. No. system (front to rear) — L Bank	1-3-5	1-3-5-7	
Cyl. No. system (front to rear) — R Bank	2-4-6	2-4-6-8	
Firing Order	1-6-5-4-3-2	1-8-4-3-6-5-7-2	
Cylinder Head Material	CAST IRON ALLOY		
Cylinder Block Material	CAST IRON ALLOY		
Cylinder block deck height	9.56	9.03	
Number of mtg points — Front	TWO		
Number of mtg points — Rear	ONE		
Engine installation angle	3.45	4.30	
Recommended fuel Leaded, unleaded	UNLEADED - 91 (OR HIGHER) RESEARCH OCTANE		
Fuel antiknock index $\frac{(R + M)}{2}$			
Cylinder Head Volume — cm^3	2.94	3.69	4.61
Head Gasket Thickness (Compressed)	.021	.021	
Head Gasket Volume — cm^3	.24	.243	.28
Deck clearance (minimum) above or below block)	.075 (BELOW)	0.025 (BELOW)	
Minimum Combustion Chamber Volume — cm^3	5.35	3.63	4.56
Engine — Pistons			
Material	CAST ALUMINUM ALLOY		
Description and finish	CAM GROUND TRANSVERSE SLOT DIVORCED SKIRT	SUMP HEAD; CLOSED, SLIPPER SKIRT	
Mass, g (weight, oz.)—Piston Only	1.116	17.9	21.3
Clearance (limits) — Top land	.046 - .056	.0245 - .0335	.0235 - .0235
Clearance (limits) — Skirt, Top	.0008 - .0020	.0017 - .0042(a)	.0007 - .0017 (a
Clearance (limits) — Skirt, Bottom	.0013 - .0035	--	--
Ring groove diameter — No. 1 ring	3.400 - 3.385	3.320 - 3.335	3.541 - 3.556
Ring groove diameter — No. 2 ring	3.400 - 3.385	3.320 - 3.335	3.541 - 3.556
Ring groove diameter — No. 3 ring	3.396 - 3.383	3.300 - 3.315	3.577 - 3.592

*Dressed engine mass (weight) includes the following:

(a) MEASURED 1.56 FROM TOP OF PISTON

Engine Description/Carb.	400/L78 (W72)	403/L80

Engine — General

Total dressed engine mass (wt) dry*		296.0 AT (652.56 AT)	
Type (inline, V, Flat)		V8 90" OHV	
No. of cylinders		8	
Bore		4.1212	4.351
Stroke		3.750	3.385
Piston Displacement cm³ (in³)		400	403
Bore Spacing (C/L to C/L)		4.62	4.625
Cyl. 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	
Cylinder Head Material		CAST IRON ALLOY	
Cylinder Block Material		CAST IRON ALLOY	
Cylinder block deck height			
Number of mtg. points	Front	TWO	
	Rear	ONE	
Engine installation angle		2.333°	4.30
Recommended fuel Leaded, unleaded		UNLEADED - 91 (OR HIGHER) RESEARCH OCTANE	
Fuel antiknock index (R + M) / 2			
Cylinder Head Volume — cm³		93.74	82.99
Head Gasket Thickness (Compressed)		.0512	.040 - .044
Head Gasket Volume — cm³		11.62	10.48
Deck clearance (minimum) (above or below block)		.0038 (ABOVE)	.0130 (MIN. BELO
Minimum Combustion Chamber Volume — cm³		113.9	113.80

Engine — Pistons

Material			ALUMINUM ALLOY	
Description and finish			CAM-GROUND SLIPPER-TYPE TIN PLATED	AUTO THERMEC, CAM GROUND, TIN PLATE, STEEL STRUT
Mass, g (weight, oz.)—Piston Only			620.6 (21.89)	22.61
Clearance (limits)	Top land			.032 - .043
	Skirt	Top	.0025 - .0033(a)	--
		Bottom	.0017 - .0040	.00075 - .00175(
Ring groove diameter	No. 1 ring		3.677 - 3.667	3.597 - 3.607
	No. 2 ring		3.667 - 3.667	3.597 - 3.607
	No. 3 ring		3.712 - 3.702	3.617 - 3.627

*Dressed engine mass (weight) includes the following:

(a) MEASURED 1.11 FROM TOP OF PISTON

(b) MEASURED .75 BELOW PISTON PIN CENTERLINE

Engine Description/Carb.	301/L27, L37

Engine — General

Total dressed engine mass (wt) dry*		103.5 AT
Type (inline, V, Flat)		V8 90° OHV
No. of cylinders		8
Bore		4.00
Stroke		3.00
Piston Displacement cm^3 (in^3)		4900 (301)
Bore Spacing (C/L to C/L)		4.40
Cyl. 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
Cylinder Head Material		CAST ALLOY IRON
Cylinder Block Material		CAST ALLOY IRON
Cylinder block deck height		
Number of mtg. points	Front	TWO
	Rear	ONE
Engine installation angle		3.75°
Recommended fuel Leaded, unleaded		UNLEADED - 91 (OR HIGHER OCTANE RATING)
Fuel antiknock index $\frac{(R + M)}{2}$		
Cylinder Head Volume — cm^3		70.998
Head Gasket Thickness (Compressed)		1.168
Head Gasket Volume — cm^3		10.09
Deck clearance (minimum) (above or below block)		.673 BELOW .469 ABOVE
Minimum Combustion Chamber Volume — cm^3		83.22

Engine — Pistons

Material			CAST ALUMINUM ALLOY
Description and finish			CAM GROUND - SLIPPER TYPE-TIN PLATED
Mass, g (weight, oz.)—Piston Only			564.0 (19.89)
Clearance (limits)	Top land		.635 - .787
	Skirt	Top	.064 - .084
		Bottom	.043 - .104
Ring groove diameter	No. 1 ring		90.75 - 90.50
	No. 2 ring		90.75 - 90.50
	No. 3 ring		90.19 - 90.93

*Dressed engine mass (weight) includes the following:

Engine Description/Carb.			231/LD5	305/LG3	350/LM1

Engine — Piston Rings

Function (top to bottom)	No. 1. oil or comp.	COMPRESSION		
	No. 2. oil or comp.	COMPRESSION		
	No. 3. oil or comp.	OIL		
Compression	Description—Material, coating, etc.	(f)	UPPER-CAST ALLOY IRON, RADIUS FACE, CHROME LOWER - CAST ALLOY IRON, REVERSE TWIST, TAP FACE, LUBRITED	
	Width	.168 - .178	(a)	(b)
	Gap	.013 - .023	(c)	(d)
Oil	Description—material, coating, etc.	(e)		
	Width	.135 - .142	.1859 - .1879	.1850 - .1870
	Gap	.015 - .035	.010 - .035	.015 - .055
Expanders		ABUTTMENT TYPE	IN OIL RING ASSEMBLY	

Engine — Piston Pins

Material			SAE 1018	CHROMIUM STEEL
Length			2.90	2.990 - 3.010
Diameter			.9391 - .9394	.9270 - .9273
Type	Locked in rod, in piston, floating, etc.		PRESSED IN ROD	LOCKED IN ROD
	Bushing	In rod or piston	NONE	
		Material	NONE	
Clearance	In piston		.0004-.0007(SEL)	.00025 - .00035
	In rod		.00075-.00125 (PRESSED)	--
Direction & amount offset in piston			RIGHT .040	MAJOR THRUST SIDE - .060

Engine — Connecting Rods

Material			PEARLITIC MALLEABLE IRON	DROP FORGED STEEL
Mass, g (weight, oz.)			23.3	13.70
Length (center to center)			5.960	5.695 - 5.705
Bearing	Material & Type		M400 ALUMINUM STEEL BACKED-REM.	PREMIUM ALUMINUM
	Overall length		.654	0.797
	Clearance (limits)		.0005 - .0026	.0013 - .0035
	End Play		.006 - .023	.006 - .016

(a) UPPER - .0770 - .0780 LOWER - .0770 - .0775
(b) UPPER - .0775 - .0780 LOWER - .0770 - .0775
(c) UPPER - .010 - .020 LOWER - .010 - .025
(d) UPPER - .013 - .025 LOWER - .010 - .025
(e) MULTI-PIECE, 2 RAILS AND 1 SPACER (EXPANDER)
RAILS - STEEL, CHROME PLATED OD: EXPANDER-STAINLESS STEEL (NO CHROME ON 231 CID ENGINE OIL RINGS .(SAE 1070 STEEL)
(f) CAST IRON - #1 - MOLYBDENUM COATED
#2 - LUBRITED

Engine Description/Carb.	400/L78 (W72)	403/L80

Engine — Piston Rings

Function (top to bottom)	No. 1, oil or comp.	COMPRESSION	
	No. 2, oil or comp.	COMPRESSION	
	No. 3, oil or comp.	OIL	
Compression	Description—Material, coating, etc.	(a)	(c)
	Width	.0778	.077 x .078
	Gap	#1 - .019, #2 - .015	.010 x .020
Oil	Description—material, coating, etc.	(d)	(c) (L80 ONLY) EXP. SPRING STEEL
	Width	.186	.0235 x .0260
	Gap	.035	.015 x .055
Expanders		STAINLESS STEEL	

Engine — Piston Pins

Material		SAE 1016	SAE 1016 (1019)
Length		3.25	2.980
Diameter		.9802	.9803 - .9807
Type	Locked in rod, in piston, floating, etc.	LOCKED IN ROD	PRESSED IN ROD
	Bushing: In rod or piston	NONE	
	Bushing: Material	NONE	
Clearance	In piston	.0003 - .0005	
	In rod	PRESS FIT	
Direction & amount offset in piston		TO RIGHT .063	TO RIGHT .060

Engine — Connecting Rods

Material		ARMA STEEL	SAE 1140
Mass, g (weight, oz.)		898.7 (31.7)	26.23
Length (center to center)		6.625	5.998 - 6.002
Bearing	Material & Type	M400 ALUMINUM STEEL BACKED-REMOVABLE	M390 ALUMINUM STEEL BACKED-REMOVABLE
	Overall length	.88	.821 - .831
	Clearance (limits)	.0005 - .0026	.0005 - .0026
	End Play	.012 - .017 (b)	.006 - .020

(a) CAST IRON, REVERSE TWIST, #1 - BARREL FACE - MOLY CHANNEL
#2 - TAPER FACE, TIN PLATED (MOLY FILLED ON 400/L7

(b) TOTAL FOR TWO
(c) RAILS GRANO SEAL PROCESS
(d) MULTI-PIECE, 2 RAILS & 1 SPACER (EXPANDER); RAILS: STEEL WITH CHROME PLATED
EXPANDER: STAINLESS STEEL

Engine Description/Carb.	301/L27, L37

Engine — Piston Rings

Function (top to bottom)	No. 1, oil or comp.	COMPRESSION
	No. 2, oil or comp.	COMPRESSION
	No. 3, oil or comp.	OIL
Compression	Description—Material, coating, etc.	(a)
	Width	1.98
	Gap	.36 - .58
Oil	Description—material, coating, etc.	(b)
	Width	4.72
	Gap	.38 - .89
Expanders		IN OIL RING ASSEMBLY

Engine — Piston Pins

Material			SAE 1016
Length			76.20
Diameter			23.93 - 23.83
Type	Locked in rod, in piston, floating, etc.		LOCKED IN ROD
	Bushing	In rod or piston	NONE
		Material	NONE
Clearance	In piston		.005 - .010
	In rod		PRESS FIT
Direction & amount offset in piston			RIGHT 1.60

Engine — Connecting Rods

Material		ARMA STEEL
Mass, g (weight, oz.)		0.62 (17.577)
Length (center to center)		153.67
Bearing	Material & Type	M400 STEEL BACKED-REMOVABLE
	Overall length	18.72
	Clearance (limits)	.013 - .066
	End Play	.15 - .56

(a) CAST IRON, REVERSE TWIST
#1 BARREL FACE,MOLYCHAN
#2 TAPER FACE, TIN PLATED

(b) MULTI-PIECE (2 RAILS & 1 EXPANDER - SPACER)
RAILS: STEEL WITH CHROME PLATED OD
EXPANDER: STAINLESS STEEL

Engine Description/Carb.	231/LD5	305/LG3	350/LM1

Engine — Crankshaft

Material			NODULAR IRON	
Vibration damper type			RUBBER ABSORBTION	RUBBER MOUNTED INERTIA
End thrust taken by bearing (No.)			2	5
Crankshaft end play			.003 - .009	.002 - .007
Main bearing	Material & type		ALUMINUM-STEEL BACKED-REM.(a)	PREMIUM ALUMINUM (b)
	Clearance		.004 - .0018	(c)
	Journal dia. and bearing overal length	No. 1	2.4995 - 0.864	2.4502 x .752
		No. 2	2.4995 - 1.057	2.4502 x .752
		No. 3	2.4995 - 0.864	2.4502 x .752
		No. 4	2.4995 - 0.864	2.4502 x .752
		No. 5	NONE	2.4508 x 1.180
		No. 6	NONE	
		No. 7	NONE	
	Dir. & amt. cyl. offset		NONE	
	No. bolts/main brg. cap		2	
Crankpin journal diameter			2.2487-2.2495	2.009 - 2.100

Engine — Camshaft

Location			BETWEEN CYLINDER BANKS	
Material			CAST ALLOY IRON	
Bearings	Material		STEEL BACKED BABBITT	
	Number		4	5
Type of Drive	Gear, chain or belt		CHAIN	
	Crankshaft gear or sprocket material		SINTERED IRON	
	Camshaft gear or sprocket material		ALUMINUM-NYLON COATED	NYLON TEETH WITH ALUMINUM HEAD
	Timing chain	No. of links	54	46
			--	--
	Chain or Belt	Width	.875	.625
		Pitch	.375	.500

(a) #1 UPPER - M400, LOWER - M100
#2 & 4 UPPER AND LOWER - M100
#3 UPPER AND LOWER - M400

(b) LG3 - #1 UPPER AND LOWER - G66 CONELL
LG3 & LM1 - #5 UPPER-STEEL BACKED INSERT WITH COPPER LEAD ALLOY

(c) #1 - 0.0008 - .0020
#2 - 0.0011 - .0023
#5 - 0.0017 - .0033

Engine Description/Carb.	400/L78 (W72)	403/L80

Engine — Crankshaft

Material			NODULAR IRON	
Vibration damper type			RUBBER FLOATED WEIGHT	TUNED RUBBER
End thrust taken by bearing (No.)			4	3
Crankshaft end play				
Main bearing	Material & type		M400 ALUMINUM STEEL BACKED REMOVABLE	(a)
	Clearance		.0002 - .0017	2.50 x 0.975
	Journal dia. and bearing overal length	No. 1	3.00 x .94	2.50 x 0.975
		No. 2	3.00 x .94	2.50 x 1.194
		No. 3	3.00 x .94	2.50 x 0.975
		No. 4	3.00 x 1.13	2.50 x 1.624
		No. 5	3.00 x 1.59	
		No. 6	NONE	
		No. 7	NONE	
	Dir. & amt. cyl. offset		R.B. LEADS .94	L.B. LEADS .938
	No. bolts/main brg. cap		TWO	
Crankpin journal diameter			2.25	2.1238 - 2.1248

Engine — Camshaft

Location			BETWEEN CYLINDER BANKS	
Material			HARDENED ALLOY CAST IRON	CAST IRON GM-6016M
Bearings	Material		BABBITT ON STEEL	
	Number		5	
Type of Drive	Gear, chain or belt		CHAIN	
	Crankshaft gear or sprocket material		HARDENED SINTERED IRON	STEEL
	Camshaft gear or sprocket material		HEAT TREATED CAST IRON	CAST IRON (AL. WITH NYLON TEETH C
	Timing chain	No. of links	60	48
			--	--
	Chain or Belt	Width	.88	.720 - .750
		Pitch	.375	.500

(a) #1,2,3,4,5 - UPPER & #5 LOWER-M100 STEEL BACKED
#1,2,3,4,5 - LOWER - M400 STEEL BACKED

Engine Description/Carb.	301/L27, L37

Engine — Crankshaft

Material			NODULAR IRON
Vibration damper type			RUBBER FLOATED WEIGHT
End thrust taken by bearing (No.)			4
Crankshaft end play			.089 - .216
Main bearing	Material & type		(a)
	Clearance		.005 - .051
	Journal dia. and bearing overal length	No. 1	76.20 x 20.32
		No. 2	76.20 x 20.32
		No. 3	76.20 x 20.32
		No. 4	76.20 x 26.92
		No. 5	76.20 x 40.39
		No. 6	NONE
		No. 7	NONE
	Dir & amt. cyl. offset		R.B. LEADS 23.88
	No. bolts/main brg. cap		2
Crankpin journal diameter			57.15

Engine — Camshaft

Location			BETWEEN CYLINDER BANKS
Material			HARDENED ALLOY CAST IRON
Bearings	Material		STEEL-BACKED BABBITT
	Number		5
Type of Drive	Gear, chain or belt		CHAIN
	Crankshaft gear or sprocket material		HARDENED SINTERED IRON
	Camshaft gear or sprocket material		HEAT-TREATED CAST IRON
	Timing chain	No. of links	60
			--
	Chain or Belt	Width	19.05
		Pitch	9.53

(a) M400 ALUMINUM STEEL BACKED, REMOVABLE, PRECISION BEARINGS

Engine Description/Carb.	231/LD5	305/LG3	350/LM1

Engine — Valve System

Hydraulic lifters (Std., opt., NA)			STANDARD		
Valve rotator, type (intake, exhaust)			NONE	EXHAUST	
Push rods (dia., length, material)			.3125x8.697(b)	.3125x7.7241 - WELDED STEEL TUBING	
Rocker ratio			1.55:1	1.50:1	
Operating tappet clearance (indicate hot or cold	Intake		NONE	ZERO	
	Exhaust		NONE	ZERO	
Timing (based on top of ramp points)	Intake	Opens (°BTC)	16°	28	
		Closes (°ABC)	63°	64°	72°
		Duration (deg.)	259°	272°	280°
	Exhaust	Opens (°BBC)	68°	78°	78°
		Closes (°ATC)	29°	30°	30°
		Duration (deg.)	277°	288°	288°
	Valve open overlap (deg.)		45°	58°	58° STL
Intake Valve	Material		1041 STEEL(c)	ALLOY STL SAE1541(c)	ALLOY STEEL-SAE 1541
	Overall length		4.728-4.698	4.902 - 4.922	4.870 - 4.889
	Actual overall head dia.		1.710	1.715 - 1.725	1.935 - 1.945
	Angle of seat & face (deg.)		45°	46° SEAT; 45° FACE	
	Seat insert material			NONE	
	Stem diameter		.3402 - .3412	.3410 - .3417	
	Stem to guide clearance		.0015-.0035(.0003 max taper	.0010 - .0027	
	Lift (at zero lash)		.357	.3727	.3900
	Outer spring press. & length	Valve closed—N at mm (lb. at in.)	284.7±22.2 @ 43.87 (64 ± 5 @ 1.727)	76 - 84 @ 1.70	
		Valve open—N at mm (lb. at in)	809.6±35.6 @ 34.04 (182 ± 8 @ 1.340)	174 - 186 @ 1.25	
	Inner spring press. & length	Valve closed—N at mm (lb. at in.)	NONE	SPRING DAMPENER	
		Valve open—N at mm (lb. at in.)	NONE	SPRING DAMPENER	
Exhaust Valve	Material		21-2 STEEL (d)	HIGH ALLOY STEEL (21-2N)	ALUMINIZED HE
	Overall length		4.733 - 4.703	4.913-4.933	4.910 - 4.930
	Actual overall head dia.		1.500	1.495 - 1.505	
	Angle of seat & face (deg.)		45°	46° SEAT; 45° FACE	
	Seat insert material			NONE	
	Stem diameter		.3405 - .3412	.3410 - .3417	
	Stem to guide clearance		.0015 - .0032	.0010 - .0027	
	Lift (at zero lash)		.366	.4100	
	Outer spring press. & length	Valve closed—N at mm (lb. at in.)	284.7 ±22.2 @ 43.87 (64 ± 5 @ 1.727(e)	76 - 84 @ 1.61	
		Valve open—N at mm (lb. at in.)	809.6±35.6 @ 34.04 (182 ± 8 @ 1.340)(e)	184 - 196 @ 1.16	
	Inner spring press. & length	Valve closed—N at mm (lb. at in)	IN ASSEMBLY	SPRING DAMPENER	
		Valve open—N at mm (lb. at in.)	IN ASSEMBLY	SPRING DAMPENER	

(a) CHROME FLASH STEM (c) CHROME FLASHED STEM (d) NICKEL PLATED FACE & FLASH
(b) SAE 1009 STEEL TUBING (.060 WALL) WELDED ON SAE 1013 STEEL BALLS (e) SPRING & DAMPENER ASM.

Engine Description/Carb.	400/L78 (W72)	403/L80

Engine — Valve System

Hydraulic lifters (Std., opt., NA)			STANDARD	
Valve rotator, type (intake, exhaust)			NONE	HELICAL SPRING & FLAT WASHER
Push rods (dia., length, material)			.3125, 9.170, (a)	.312 x 8.265 (a)
Rocker ratio			1.5:1	1.6:1
Operating tappet clearance (indicate hot or cold	Intake		ZERO	
	Exhaust		ZERO	
Timing (based on top of ramp points)	Intake	Opens (°BTC)	16°	16°
		Closes (°ABC)	78°	54°
		Duration (deg.)	274°	250°
	Exhaust	Opens (°BBC)	79°	64°
		Closes (°ATC)	39°	20°
		Duration (deg.)	298°	264°
	Valve open overlap (deg.)		55°	36°
Intake Valve	Material		GM 8440 (b)	1541 or 1547 (c)
	Overall length		4.8645	4.667
	Actual overall head dia.		2.113 - 2.107	1.880 - 1.850
	Angle of seat & face (deg.)		30° SEAT;29° FACE	45° SEAT; 46° FACE
	Seat insert material		NOT USED	
	Stem diameter		.3419 - .3412	.3432 - .3425
	Stem to guide clearance		.0016 - .0033	.0010 - .0027
	Lift (at zero lash)		.364	.400
	Outer spring press. & length	Valve closed—N at mm (lb. at in.)	324.7 - 280.2 @ 39.34 (73 - 63 @ 1.549)	76-84 @ 1.670
		Valve open—N at mm (lb. at in.)	604.9 - 560.5 @ 30.10 (136 - 126 @ 1.185)	180-194 @ 1.270
	Inner spring press. & length	Valve closed—N at mm (lb. at in.)	200.2 - 155.7 @ 38.33 (45 - 35 @ 1.509)	--
		Valve open—N at mm (lb. at in.)	453.7 - 409.2 @ 29.08 (102 - 92 @ 1.145)	--
Exhaust Valve	Material		STEEL 21-2 (b)	
	Overall length		4.8645	4.675
	Actual overall head dia.		1.663 - 1.657	1.627 - 1.617
	Angle of seat & face (deg.)		45° SEAT; 44° FACE	59° SEAT; 60° FACE
	Seat insert material		NOT USED	
	Stem diameter		.3414 - .3407	.3427 - .3420
	Stem to guide clearance		.0021 - .0038	.0015 - .0032
	Lift (at zero lash)		.364	.400
	Outer spring press. & length	Valve closed—N at mm (lb. at in.)	324.7-280.2 @ 39.34 (73 - 63 @ 1.549)	76-84 @ 1.670
		Valve open—N at mm (lb. at in.)	604.9 - 560.5 @ 30.10 (136 - 126 @ 1.185)	180-194 @ 1.270
	Inner spring press. & length	Valve closed—N at mm (lb. at in.)	200.2 - 155.7 @ 38.33 (45 - 35 @ 1.509)	--
		Valve open—N at mm (lb. at in.)	453.7 - 409.2 @ 29.08 (102 - 92 @ 1.145)	--

(a) STEEL (b) ALUMINIZED FACE & FLASH CHROME PLATED STEM
(c) ALUMINIZED SEAT

Engine Description/Carb.	301/L27	301/L37

Engine — Valve System

Hydraulic lifters (Std., opt., NA)			STANDARD			
Valve rotator, type (intake, exhaust)			NONE			
Push rods (dia., length, material)			7.94, 206.2, STEEL			
Rocker ratio			1.5:1			
Operating tappet clearance (indicate hot or cold	Intake		NONE			
	Exhaust		NONE			
Timing (based on top of ramp points)			A3	A3	M3	
	Intake	Opens (°BTC)	16	16	27	
		Closes (°ABC)	54	54	67	
		Duration (deg.)	250	250	274	
	Exhaust	Opens (°BBC)	48	48	62	
		Closes (°ATC)	22	22	32	
		Duration (deg.)	250	250	274	
	Valve open overlap (deg.)		38	38	59	
Intake Valve	Material		SAE 1541 (a)			
	Overall length		129.0			
	Actual overall head dia.		43.69			
	Angle of seat & face (deg.)		46° SEAT; 45° FACE			
	Seat insert material		NONE			
	Stem diameter		8.700 - 8.682			
	Stem to guide clearance		.025 - .069			
	Lift (at zero lash)		9.25			
	Outer spring press. & length	Valve closed—N at mm (lb. at in.)	347 - 382 @ 42.16 (78 - 86 @ 1.66)			
		Valve open—N at mm (lb. at in)	720 - 755 @ 32.92 (162 - 170 @ 1.296)			
	Inner spring press. & length	Valve closed—N at mm (lb. at in.)	NONE			
		Valve open—N at mm (lb. at in.)	NONE			
Exhaust Valve	Material		(b)			
	Overall length		129.0			
	Actual overall head dia.		38.1			
	Angle of seat & face (deg.)		46° SEAT; 45° FACE			
	Seat insert material		NONE			
	Stem diameter		8.700 - 8.682			
	Stem to guide clearance		.260 - .069			
	Lift (at zero lash)		9.25			
	Outer spring press. & length	Valve closed—N at mm (lb. at in.)	347 - 382 @ 42.16 (78-86 @ 1.66)			
		Valve open—N at mm (lb. at in.)	720 - 755 @ 32.92 (162 - 170 @ 1.296			
	Inner spring press. & length	Valve closed—N at mm (lb. at in)	NONE			
		Valve open—N at mm (lb. at in.)	NONE			

(a) ALUMINIZED FACE & FLASH-CHROME PLATED STEM
(b) 21-2 STEEL ALUMINIZED FACE & FLASH-CHROME PLATED STEM

Engine Description/Carb.	231/LD5	301/L27/L37 305/LG3	350/LM1

Engine — Lubrication System

Type of lubrication (splash, pressure, nozzle)	Main bearings	PRESSURE	
	Connecting rods	PRESSURE	
	Piston pins	SPLASH	
	Camshaft bearings	PRESSURE	
	Tappets	PRESSURE	
	Timing gear or chain	NOZZLE AND SPLASH	CENTRIFUGALLY OILED-FROM CAMSHAFT BEARI
	Cylinder walls	SPLASH	PRESSURE JET CROSS SPRAYED
Oil pump type		GEAR	
Normal oil pressure-kPa (lb.) at engine rpm		37 @ 2400	32 - 40 @ 2000
Type oil intake (floating, stationary)		STATIONARY	
Oil filter system (full flow, part, other)		FULL FLOW	
Capacity of c/case, less filter-refill-L (qt.)		4	
Oil grade recommended (SAE viscosity and temperature range)		(a)	(b)
Engine service reqmt. (SD, SE, etc.)		SE	

Engine — Exhaust System

Type (single, single with cross-over, dual, other)		SINGLE WITH CROSSOVER AND CONVERTER		
Muffler No. & Type (reverse flow, straight thru, separate resonator)		ONE,REVERSE FLOW		
Resonator No. & type		NONE	NONE	
Exhaust Pipe	Branch O.D., wall thickness	2.00 x 0.06	2.0 x 0.040	
	Main O.D., wall thickness	2.50 x 0.07	2.25 x .068	2.50 x .068
	Material	STAINLESS STEEL/COLD ROLLED STEEL		
Intermediate Pipe	O.D. & wall thickness	2.00 x .06	2.25 x 0.68	2.5 x 0.68
	Material	CRS	COLD ROLLED STAINLESS STEEL TUBING	
Tail Pipe	O.D. & wall thickness	2.00 x 0.060	2.0 x.055	2.25 x.071
	Material	ALUMINIZED COLD ROLLED STEEL TUBING		

(a) ABOVE -18°C: 10W30, 20W20, 20
-18° TO 16°C: 10W30, 10W40
BELOW 16°C: 10W30, 10W

(b) 20°F & ABOVE - 20W20, 10W30, 10W40, 20W40, 20W50
0-60°F - 10W, 5W30, 10W40, 10W30
20°F & BELOW - 5W20, 10W30

Model Year 1979 Issued 9-1-78 Revised (•)

Engine Description/Carb.	400/L78 (W72)	403/L80

Engine — Lubrication System

Type of lubrication (splash, pressure, nozzle)	Main bearings	PRESSURE	
	Connecting rods	PRESSURE	
	Piston pins	SPLASH	
	Camshaft bearings	PRESSURE	
	Tappets	PRESSURE	
	Timing gear or chain	METERED JET	SPRAY
	Cylinder walls	METERED JET	SPRAY
Oil pump type		GEAR	
Normal oil pressure-kPa (lb.) at engine rpm		55-60 @ 2600	30-45 @ 1500
Type oil intake (floating, stationary)		STATIONARY	
Oil filter system (full flow, part, other)		FULL FLOW	
Capacity of c/case, less filter-refill-L (qt.)		5	4
Oil grade recommended (SAE viscosity and temperature range)		(a)	
Engine service reqmt. (SD, SE, etc.)		SE	

Engine — Exhaust System

Type (single, single with cross-over, dual, other)		SINGLE WITH CROSSOVER, CONVERTER, AND DUAL TAILPIPES
Muffler No. & Type (reverse flow, straight thru, separate resonator)		NONE
Resonator No. & type		TWO-REVERSE FLOW
Exhaust Pipe	Branch O.D., wall thickness	2.00 x .072
	Main O.D., wall thickness	2.50 x .072
	Material	LAMINATED STAINLESS STEEL/COLD ROLLED STEEL
Intermediate Pipe	O.D. & wall thickness	(b)
	Material	CRS
Tail Pipe	O.D. & wall thickness	2.25 x .056 MIN.
	Material	ALUMINIZED STEEL

(a) 20°F AND ABOVE 20W-20, 10W-30, 10W-40, 20W-40, 20W-50
0° TO 60°F 10W, 5W-30, 10W-30, 10W-40
BELOW 20°F 5W-20, 5W-30

(b) 2.5 PIPE OUT OF CONV. SPLITTING INTO 2.25 DUAL PIPES TO DUAL RESONATORS AND 2.25 TAILPIPES

Engine Description/Carb.	231/LD5	305/LG3	350/LM1	400/L78 (W72)	403/L80

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—L (U.S. gals.)	20.8				
	Filler location	CENTER REAR				
Fuel Pump	Type (elec. or mech.)	MECHANICAL				
	Locations	FRT	R FRT		L FRT	R FRT
	Pressure range—kPa (psi)	(c)	51.7 - 62.1 (7.5 - 9.0)			37.9-44.8(5
Fuel Filter	Type	FINE MESH PLASTIC STRAINER IN TANK; PLEATED PAPER				
	Locations	ELEMENT WITH INTEGRAL CHECK VALVE IN CARBURETOR INLET				
Carburetor	Choke type					
	Intake manifold heat control (exhaust or water)					
	Air cleaner type — Standard					
	Air cleaner type — Optional					
	Idle spd.-rpm (spec. neutral or drive) — Manual	800 (N)	700 (N)	600(N)	775 (N)	NA
	Idle spd.-rpm (spec. neutral or drive) — Automatic	600 (D)	*500 (D)(a)	*500 (D)(b)	*600(D)	*550 (D)(b)
	Idle A/F mix.	PRESET BY MANUFACTURER				

(a) 600 WITH CALIFORNIA OR ALTITUDE EMISSIONS
(b) 600 WITH ALTITUDE
(c) 29.3-39.6(42.5-5.75)
*IDLE SPEED MODIFIED WITH SOL
WHEN A/C IS ON WITH A/C EQU

Carburetor Supplementary Information

Model Usage	Piston Displ. —L (in.³)	Transmission	Carburetors Make	Carburetors Model	VEHICLES No. Used and Type	Barrel Size
STANDARD FS87 FT87	LD5 231	3-SPEED MAN. AUTOMATIC	ROCHESTER	2GE	1-2 BBL	1.093
STANDARD FU87 OPTIONAL FS87-FT87	LG3 305	4-SPEED MAN AUTOMATIC	ROCHESTER	2GC	1-2 BBL	1.188
OPTIONAL FS87 FT87 FU87	LM1 350	4-SPEED MAN AUTOMATIC	ROCHESTER	M4MC	1-4 BBL	1.093 PF 2.250 SE
STANDARD FW87 OPTIONAL FU87	L78 400	AUTOMATIC	ROCHESTER	M4MC	1-4 BBL	1.218 PF 2.250 SE
OPTIONAL FU87 FW87	L80 403	AUTOMATIC	ROCHESTER	M4MC	1-4 BBL	1.218 PF 2.250 SE

Engine Description/Carb.	231/LD5	305/LG3	350/LM1

Engine — Cooling System

Coolant recovery system (std., opt., none)			STANDARD		
Radiator cap relief valve pressure—kPa (psi)			15 PSI		
Circulation thermostat	Type (choke, bypass)		CHOKE		
	Starts to open at °C (°F)		195° F		
Water pump	Type (centrifugal, other)		CENTRIFUGAL		
	GPM 1000 pump rpm		10	22.7	
	Number of pumps		ONE		
	Drive (V-belt, other)		V-BELT		
	Bearing type		SEALED DOUBLE ROW BALL		
By-pass recirculation type (inter., ext.)			EXTERNAL	INTERNAL	
Radiator core type (cross-flow, vertical, cellular, tube and fin, other)			CROSS FLOW, TUBE AND CENTER		
Cooling System Capacity	With heater—L (qt.)		13.3	17.5	
	Without heater—L (qt.)		HEATER STANDARD		
	Opt. equipment-specify—L (qt.)		NOT AVAILABLE		
Water jackets full length of cyl. (yes, no)			NO	YES	
Water all around cylinder (yes, no)			YES		
Radiator hose	Lower	Number and type (molded, straight)	ONE, MOLDED		
		Inside diameter	1.50	1.50 RADIATOR, 1.75 PUMP	
	Upper	Number and type (molded, straight)	ONE, MOLDED		
		Inside diameter	1.50		
	By-pass	Number and type (molded, straight)	ONE, MOLDED	NONE	
		Inside diameter	1.50	--	
Radiator	Standard	Width	20.80	27.50	27.50
		Height	16.97	16.97	16.97
		Thickness	1.24	1.24	1.24
	A/C	Width	20.80	27.50	27.50
		Height	16.97	16.97	16.97
		Thickness	1.24	1.24	1.24
	Heavy duty	Width	20.80	27.50	25.70
		Height	16.97	16.97	16.97
		Thickness	1.24	1.96	1.96
Fan (Standard)	Number of blades & spacing			5	
	Diameter		20.0	18.8	
	Ratio—fan to crankshaft rev.		1.13:1	.949:1	
	Fan cutout type		NONE		
Fan (optional)	No. of blades and spacing		7 WITH A/C	7 WITH A/C	
	Diameter		20.0	19.0	
	Ratio—fan to crankshaft rev.		1.30:1	1.25:1	
	Fan cut-out type		THERMOSTATICALLY CONTROLLED CLUTCH WITH A/C		

(a) BLADE SPACING STAGGERED

Engine Description/Carb.	400/L78 (W72)	403/L80

Engine — Cooling System

Coolant recovery system (std., opt., none)			STANDARD	
Radiator cap relief valve pressure—kPa (psi)			14-17 PSI	
Circulation thermostat	Type (choke, bypass)		CHOKE	
	Starts to open at °C (°F)		195°	
Water pump	Type (centrifugal, other)		CENTRIFUGALLY	
	GPM 1000 pump rpm		12	22
	Number of pumps		ONE	
	Drive (V-belt, other)		V-BELT	
	Bearing type		BALL	
By-pass recirculation type (inter., ext.)			INTERNAL	
Radiator core type (cross-flow, vertical, cellular, tube and fin, other)			CROSS FLOW, TUBE & CENTER	
Cooling System Capacity	With heater—L (qt.)		18.4	20.4
	Without heater—L (qt.)		HEATER STANDARD	
	Opt. equipment-specify—L (qt.)		N.A.	
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	1.50 RADIATOR 1.75 PUMP	1.56 RADIATOR 1.81 PUMP
	Upper	Number and type (molded, straight)	ONE, MOLDED	
		Inside diameter	1.50	
	By-pass	Number and type (molded, straight)	NONE	ONE, STRAIGHT
		Inside diameter	--	.76 - .70
Radiator	Standard	Width	27.50	27.50
		Height	16.97	16.97
		Thickness	1.24	1.24
	A/C	Width	27.50	27.50
		Height	16.97	16.97
		Thickness	1.96	1.96
	Heavy duty	Width	27.50	27.50
		Height	16.97	16.97
		Thickness	2.68	2.68
Fan (Standard)	Number of blades & spacing		5	
	Diameter		18.8	
	Ratio—fan to crankshaft rev.		.91:1	.85:1
	Fan cutout type		NONE	
Fan (optional)	No. of blades and spacing		7	
	Diameter		19.0	
	Ratio—fan to crankshaft rev.		1.25:1	1.40:1
	Fan cut-out type		THERMOSTATICALLY CONTROLLED CLUTCH WITH A/C	

(a) BLADE SPACING STAGGERED

Model Year 1979 Issued 9-1-78 Revised (•)

Engine Description/Carb.	301/L37 301/L27 350/LM1 FEDERAL	403/L80 ALTITUDE

Vehicle Emission Control

	Type (Air injection, engine modifications, other)		OXIDIZING CONVERTER WITH EXHAUST GAS RECIRCULATION AND EARLY FUEL EVAPORATION
	Air Injection Pump	Type	
		Displacement—cm³ (in³)	
		Drive ratio	
		Drive type	
		Relief valve (type)	
		Filter (describe)	
	Air Injection System	Air distribution (head, manifold, etc.)	NOT USED
		Point of entry	
		Injection tube i.d.	
		Check valve type	
		Backfire protection (type)	
Exhaust Emission Control	Exhaust Gas Recirculation System	Type (controlled flow, open orifice, other)	CONTRLLED FLOW
		Valve type	VADUUM MODULATED SHUT OFF AND METERING
		Valve location	INTAKE MANIFOLD, L. REAR ON V6; R. REAR ON V8
		Control energy source	CARBURETOR VACUUM, EXHAUST PRESSURE MODULATED
		Exhaust source	EXHAUST CROSSOVER IN INTAKE MANIFOLD
		Exhaust cooler type	NONE
		Orifice no. and size	--
		Point of exhaust injection (spacer, carburetor, manifold, other)	INTAKE MANIFOLD
	Catalytic Converter System	Catalyst — Type	PLATINUM-PALLADIUM
		Catalyst — Volume—L (in³)	260 CU. IN.
		Substrate type	ALUMINA
		Container location	BENEATH RIGHT FRONT UNDERBODY
	Other	HEATED AIR TO CARBURETOR	THERMOSTATICALLY CONTROLLED AIR CLEANER REGULATOR MIXI HEATED AIR WITH INCOMING COLD AIR TO REDUCE HYDROCARB EMISSION
		THERMAL CONTROL OF EFE HEAT	EARLY FUEL EVAPORATION INSURED BY DIVERTED EXHAUST GA AT COOLANT TEMPERATURES ABOVE 120° FOR 400 L78, 120° 90° AT FEDERAL - 120° AT CALIFORNIA FOR 231 LD5, 180° 305 LG3 and 350 LM1

Engine Description/Carb.	231/LD5 CALIFORNIA	305/LG3 CALIFORNIA	403/L80 CALIFORNIA

Vehicle Emission Control

	Type (Air injection, engine modifications, other)		(a)		(b)
	Air Injection Pump	Type	POSITIVE DISPLACEMENT-VANE TYPE		
		Displacement—cm³ (in³)	19.2 CU. IN.		
		Drive ratio	1.25:1	1.31:1(AC) 1.32:1(HTR)	1.25:1
		Drive type	BELT		
		Relief valve (type)	SPRING LOADED BALL		
		Filter (describe)	CENTRIFUGAL AIR CLEANER		
	Air Injection System	Air distribution (head, manifold, etc.)	HEAD	MANIFOLD	
		Point of entry	EXHAUST PORTS		
		Injection tube i.d.	NONE	.258	NONE
		Check valve type	VITON DISC		
		Backfire protection (type)	BY PASS VALVE	DIVERTER VALVE	
Exhaust Emission Control	Exhaust Gas Recirculation System	Type (controlled flow, open orifice, other)	CONTROLLED FLOW		
		Valve type	VACUUM MODULATED SHUT OFF AND METERING		
		Valve location	INTAKE MANIFOLD LEFT REAR V6, RIGHT REAR V8		
		Control energy source	CARBURETOR VACUUM EXHAUST PRESSURE MODULATED		
		Exhaust source	EXHAUST CROSSOVER IN INTAKE MANIFOLD		
		Exhaust cooler type	NONE		
		Orifice no. and size	--		
		Point of exhaust injection (spacer, carburetor, manifold, other)	INTAKE MANIFOLD		
	Catalytic Converter System	Catalyst — Type	PLATINUM-PALLADIUM		
		Catalyst — Volume—L (in³)	260 CU. IN.		
		Substrate type	ALUMINA		
		Container location	BENEATH RIGHT FRONT UNDERBODY		
	Other	HEATED AIR TO CARBURETOR	THERMOSTATICALLY CONTROLLED AIR CLEANER REGULATOR MIXES HEATED AIR WITH INCOMING COLD AIR TO REDUCE HYDROCARBON EMISSION		
	Other	THERMAL CONTROL OF EFE VALVE	EARLY FUEL EVAPORATION INSURED BY DIVERTED EXHAUST GAS AT COOLANT TEMPERATURES BELOW 120° FOR 231 LD5 180° FOR 305 LG3 AND 350/LM1. NOT USED ON 403/L80		

(a) OXIDIZING CONVERTER WITH EXHAUST GAS RECIRCULATION AND EARLY FUEL EVAPORAT PLUS AIR INJECTION

(b) OXIDIZING CONVERTER, WITH EXHAUST GAS RECIRCULATION AND AIR INJECTION.

Engine Description/Carb.

ALL

Vehicle Emission Control (Continued)

Crankcase Emission Control	Type (ventilates to atmos., induction system, other)		Standard	CLOSED-VENTILATED TO INDUCTION SYSTEM
			Optional	--
	Control Unit	Make and model		--
		Location		--
		Energy source (manifold vacuum, carburetor, other)		MANIFOLD VACUUM
		Control method (variable orifice, fixed orifice, other)		VARIABLE ORIFICE
	Complete System	Discharges (to intake manifold, other)		INTAKE MANIFOLD
		Air inlet (breather cap, other)		FILTER IN CARBURETOR AIR CLEANER
		Flame arrestor (screen, other)		CHECK VALVE AND/OR SCREEN
Evaporative Emission Control	Fuel Tank	Thermal expansion volume—dm^3 (ft^3)		.47
		Relief Pressure kPa (psi) and location		9.2 - 12.4 KPa
		Vacuum relief kPa (psi) and location		3.0 - 6.8 KPa
		Vapor-liquid separator type		DOME IN TOP OF GAS TANK
		Vapor vented to (crankcase, canister, other)		CANISTER
				--
	Carburetor	Vapor vented to (crankcase, canister, other)		CANISTER
				--
	Vapor Storage	Storage provision (crankcase, canister, other)		CANISTER
				--
		Volume—dm^3 (ft^3) or capacity (grams)		.053 (58 GRAMS MIN. CAPACITY, MEDIUM WORKING
		Control valve type		VACUUM DIAPHRAGM

Engine Description/Carb.	231/LD5	305/LG3	350/LM1	400/L78(W72)	403/L80	301/ L27/L37

Electrical — Supply System

Battery	Make and Model	Y85-4(a,b)	R85-5 (b)		R87-5 (b)		R85-5(b)
	Voltage Rtg.—V— & Total Plates	12-36	12-48		12-60		12-48
	SAE Designation No. and/or capacity	2500 WATTS	3200 WATTS		3500 WATTS		3200 WAT
	Location	UNDERHOOD - RH SIDE			UNDERHOOD - LH SIDE		
Generator or Alternator	Make	DELCO REMY					
	Model	(c,h,f)	(c,h,f)		(g,d,f)		(g,d,f)
	Type and rating (e)	42 (c,g); 63 (h,f,d)					
	Output at engine idle (neutral) A						
	Ratio—Gen. to Crks rev.						
Regulator	Make						
	Model						
	Type	INTEGRAL WITH ALTERNATOR					
	Regulated — Voltage						
	Regulated — Current A						
	Voltage test conditions — Temperature—°C (°F)						
	Voltage test conditions — Load A						
	Voltage test conditions — Other						

Electrical — Starting System

Starting Motor	Make	DELCO REMY						
	Model	1109061	1109064	1109065	1108759	1109072	1109523
Motor Drive	Engagement Type	POSITIVE SHIFT SOLENOID					
	Pinion engages from (front, rear)	FRONT					
	Number of teeth — Pinion	9					
	Number of teeth — Flywheel — Manual	160	166	--	166	--	166
	Number of teeth — Flywheel — Auto	160	166	160	166	160	166

(a) R85-5 WITH A/C AND/OR HEATED BACKLIGHT
(b) R89-5 WITH HEAVY DUTY OPTION
(c) 1103033 STANDARD V6 OR CHEVROLET V8
(d) 1102908 WITH A/C AND/OR HEATED BACKLIGHT
(e) DIODE RECTIFIED ALTERNATOR
(f) 1102910 WITH HIGH OUTPUT OPTION
(g) 1102389 STANDARD PONTIAC OR OLDS V8
(h) 1102844 WITH A/C AND/OR HEATED BACKLIGHT

Engine Description/Carb.	231/LD5	305/LG3	350/LM1	400/L78 (W72)	403/L80

Electrical — Ignition System — Distributor

Distributor	Manual	1110770	--	1103337	1103315	--
	Automatic	1110766	1103285	1103285	--	1103347 ALT 1103325 CAL
Timing	Manual	15° @ 600		6° @ 700	18° @ 775	--
	Automatic	15° @ 600	4° @ 500 CAL	8° @ 500	--	18° @ 1100

Distributor Model	CENTRIFUGAL ADVANCE Crankshaft Degrees at Engine RPM			VACUUM ADVANCE Crankshaft Deg. at kPa (in. of Hg.)	
	Start	Intermediate	Maximum	Start	Maximum
1110770	0° @ 1680	-	15° @ 3600	0° @ 3"	20° @ 9"
1110766	0° @ 1680	-	15° @ 3600	0° @ 3"	24° @ 36.7"
1103337	0° @ 1100	12° @ 1600	16° @ 2400	0° @ 4"	24° @ 10"
1103285	0° @ 1200	12° @ 2000	22° @ 4200	0° @ 4"	10° @ 8"
1103315	0° @ 1000	8° @ 1400	20° @ 4400	0° @ 5"	25° @ 11"
1103347	0° @ 1000	-	13° @ 3600	0° @ 6"	24° @ 13"
1103325	0° @ 1000	-	13° @ 3600	0° @ 5"	16° @ 11"

Engine Description/Carb.	231/LD5	305/LG3	350/LM1	400/L78 (W72)	403/L80	301/L27,L37

Electrical — Ignition System

Type	Conventional —Std., Opt., N.A.		NOT AVAILABLE				
	Transistorized—Std., Opt., N.A.		STANDARD				
	Other (specify)		--				
Coil	Make		DELCO REMY				
	Model		INTEGRAL WITH DISTRIBUTOR				
	Current	Engine stopped—A	--				
		Engine idling—A	--				
Spark Plug	Make		AC				
	Model		R46TSX(a)			R45TSX	R46SZ
	Thread (mm)		14				
	Tightening torque—N·m (lb. ft.)		15-25			15	40
	Gap		.060			.060	.080

(a) R45TSX FOR CALIFORNIA AND ALTITUDE

Electrical — Suppression

Locations & type ON ALL CARS:	INTERNAL ALTERNATOR CAPACITOR, NON-METALLIC HIGH TENSION CABL RESISTOR SPARK PLUGS, IGNITION COIL BY-PASS CAPACITOR, INTERN A/C BLOWER MOTOR BY-PASS CAPACITOR & A/C COMPRESSOR DIODE.
ON CARS W/RADIOS OR RADIO PROVISIONS:	HOOD GROUNDING CLIP, ENGINE TO DASH GROUND STRAP, FUSE BLOCK CAPACITOR AND ON "HEATER ONLY" BLOWER MOTORS A COAX CAPACITOR

Electrical — Instruments and Equipment

Speedometer	Type	DIAL WITH POINTER
	Trip odometer (std., opt., N.A.)	NOT AVAILABLE
EGR maintenance indicator		NONE
Charge Indicator	Type	TELLTALE LAMP (c)
	Warning device	INHERENT
Temperature Indicator	Type	TELLTALE LAMP (c)
	Warning device	INHERENT
Oil pressure Indicator	Type	TELLTALE LAMP (c)
	Warning device	INHERENT
Fuel Indicator	Type	ELECTRIC GAUGE
	Warning device	NONE
Windshield Wiper	Type—standard	TWO SPEED ELECTRIC DEPRESSED PARK
	Type—optional	CONTROLLED CYCLE
	Blade length	18.0
	Swept area—cm^2 ($in.^2$)	-
Windshield Washer	Type—standard	ELECTRIC: PUMP MOUNTED ON FLUID CONTAINER
	Type—optional	NONE
	Fluid level indicator	NONE
Horn	Type	VIBRATOR
	Number used	TWO
	Current draw (A) per horn	5.0
Other		TELLTALE LAMP FOR BRAKE FAILURE & PARKING BRAKE RESTRAINT SY WARNING LAMP & BUZZER -STANDARD;TACHOMETER & HEADLAMP "ON" WARNING BUZZER-OPTIONAL.

(c) REPLACED BY GAUGE WITH GAUGE OPTION

Engine Description/Carb.	231/LD5	350/LM1	400/L78 (W72)	305/LG3

Drive Units — Clutch (Manual Transmission)

Make & type		BORG AND BECK-DRY DISC			
Type pressure plate springs		DISC STEEL			
Total spring load—N (lb.)		2050	2200	2600	2050
No. of clutch driven discs		ONE			
Clutch facing	Material	WOVEN MOLDED ASBESTOS			
	Manufacturer	BORG AND BECK			
	Part Number (a)	458629	458629	482034	458629
	Rivets/Plate				
	Rivet size				
	Outside & inside dia.	10.34 x 6.50	10.34 x 6.50	11.0 x 6.50	10.34x6.50
	Total eff. area- cm² (in.²)	101.56	101.56	123.80	101.56
	Thickness	.305	.305	.315	.305
	Engagement cushion-method	DRIVEN PLATE WAVE SPOKE SPRINGS			
Release bearing	Type & method of lubrication	BALL THRUST-PREPACKED AND SEALED			
Torsional damping	Methods: springs, friction material	COIL SPRINGS AND METAL TO METAL FRICTION			

Drive Units —Transmissions

Manual 3-speed (std., opt., N.A.)	STANDARD	NOT AVAILABLE	NOT AVAILABLE	NOT AVAIL
Manual 4-speed (std., opt., N.A.)	NOT AVAILABLE	STANDARD	STANDARD	STANDARD
Manual 5-speed (std., opt., N.A.)	NOT AVAILABLE			
Manual overdrive (std., opt., N.A.)	NOT AVAILABLE			
Automatic (std., opt., N.A.)	OPTIONAL			

Drive Units — Manual Transmissions

Number of forward speeds		THREE	FOUR	FOUR	FOUR
Transmission ratios	In first	3.11	2.85	2.43	2.85
	In second	1.84	2.02	1.61	2.02
	In third	1.00	1.35	1.23	1.35
	In fourth	--	1.00	1.00	1.00
	In fifth	--	--	--	--
	In reverse	3.22	2.85	2.35	2.85
Synchronous meshing, specify gears		ALL FORWARD			
Shift lever location					
Lubricant	Capacity—L (pt.)	3.5			
	Type recommended	GL5 GEAR LUBE			
	SAE viscosity number — Summer	80W or 80W-90			
	SAE viscosity number — Winter	80W or 80W-90			
	SAE viscosity number — Extreme cold	80W or 80W-90			

Engine Description/Carb.	231/LD5	305/LG3	350/LM1	400/L78 (W72)	403/L80

Drive Units—Automatic Transmission

Trade name		TURBO HYDRAMATIC			
Type (describe)		3-SPEED TORQUE CONVERTER			
Selector location		STEERING COLUMN-FLOOR WITH CONSOLE			
Gear Ratios	P	PARK			
	R	1.92			
	N	NEUTRAL			
	D	2.52, 1.52, 1.00			
	L2	2.52, 1.52			
	L1	2.52			
Max. upshift speed—drive range—km/h (mph)		85		83 (c)	
Max. kickdown speed—drive range—km/h (mph)		82		80 (d)	
Torque Converter	Number of elements	THREE			
	Max. ratio at stall	2.25	2.00	2.00 (a)	
	Type of cooling (air, liquid)	LIQUID			
	Nominal diameter	11.75		12.2 (b)	
Lubricant	Capacity—refill—L (pt.)	6.0 (d)			
	Type recommended	GM DEXRON II			
Special transmission features					

Drive Units—Axle

Type (front, rear)		REAR			
Description		SEMI-FLOATING HYPOID			
Limited Slip differential, type		SPRING LOADED CLUTCH - OPTIONAL			
Drive Pinion Offset		1.75			
No. of differential pinions		TWO			
Pinion adjustment (shim, other)		SHIM			
Pinion bearing adj. (shim, other)		COLLAPSIBLE SPACER			
Wheel bearing type		ROLLER BEARING			
Lubricant	Capacity—L (pt.)	4.25			
	Type recommended	GL5 GEAR LUBE			
	SAE viscosity number: Summer	80W or 80W-90			
	SAE viscosity number: Winter	80W or 80W-90			
	SAE viscosity number: Extreme cold	80W or 80W-90			

Axle Ratio Tooth Combinations (See "Power Teams" for axle ratio usage.)

Axle Ratio		2.56	3.23	2.41	3.08	NA with	2.41 3.08
No. of teeth	Pinion	16	13	17	13	AUTOMATIC	17 13
	Ring gear	41	42	41	40	TRANSMISSION	41 40
Ring Gear O.D.		8.5"		8.5"	8.5"		8.5"

(a) 2.5 ON TRANS AM 400 V8
(b) 11.75 ON TRANS AM 400 V8
(c) 77 and 74 on TRANS AM 400 V8
(d) 7.5 WITH 12.2 CONVERTER

Engine Description/Carb.	231/LD5	ALL V8'S

Drive Units—Propeller Shaft

Number used			ONE	
Type (straight tube, tube-in-tube, internal-external damper, etc.)			STRAIGHT TUBE	
Outer diam. x length* x wall thickness	Manual 3-speed trans.		2.75 x 49.55 x .065	NOT AVAILABLE
	Manual 4-speed trans.		NOT AVAILABLE	2.75 x 48.55 x .065 (ALL V8 EXC. 40 2.75 x 48.00 x .065 (400 V8 ONLY)
	Manual 5-speed trans.			
	Overdrive			
	Automatic transmission		2.75 x 49.55 x .065	2.75 x 48.55 x .065
Intermediate bearing	Type (plain, anti-friction)		NOT USED	
	Lubrication (fitting, prepack)		NOT USED	
Slip Yoke	Type		SPLINED	
	Number of teeth		27 (32 WITH 400 V8 4-SPEED MANUAL)	
	Spline O. D.		1.175 (1.372 WITH 400 V8 4-SPEED MANUAL)	
Universal joints	Make and Mfg. No.		SAGINAW - SIZE 44	
	Number used		TWO	
	Type (ball and trunnion, cross)		CROSS	
	Rear attach (u-bolt, clamp, etc.)		STRAP AND BOLT	
	Bearing	Type (plain, anti-friction)	ANTI-FRICTION	
		Lubric. (fitting, prepack)	PREPACKED	
Drive taken through (torque tube or arms, springs)			SPRINGS	
Torque taken through (torque tube or arms, springs)			SPRINGS	

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

Engine Description/Carb.	FIREBIRD	FIREBIRD ESPRIT	FIREBIRD FORMULA	FIREBIRD TRANS AM	SPECIAL PERFORMANC TRANS AM

Drive Units—Tires And Wheels (Standard)

TIRES	Size, load range, ply	FR 78 x 15B		P225/70R15	P255/70R15
	Type (bias, radial, etc.)	STEEL BELTED RADIAL			
	Inflation pressure (cold) for recommended max. vehicle load — Front—kPa (psi)	28		30	30
	Inflation pressure (cold) for recommended max. vehicle load — Rear—kPa (psi)	30			
	Rev./mile—at 70 km/h (45 mph)	779		763	
WHEELS	Type & material	DISC, STEEL			CAST ALUM
	Rim (size & flange type)	15 x 6JJ		15 x 7JJ	15 x 8JJ
	Wheel offset	.50		.34	ZERO
	Attachment — Type (bolt or stud)	STUD			
	Attachment — Circle diameter	4.75			
	Attachment — Number & size	5-7/16-20			
	Spare wheel (same or other)	STOWAWAY OPTIONAL		14x6 STOWAWAY SPARE STANDARD	

Drive Units—Tires And Wheels (Optional)

Size, load range, ply		
Type (bias, radial, etc.)		
Wheel type & material		
Rim (size, flange type, and offset)		
Size, load range, ply	F78x14B	AVAILABLE AS SPACE SAVER
Type (bias, radial, etc.)	BIAS	SPARE TIRE OPTION ON
Wheel type & material	DISC, STEEL	FIREBIRD AND ESPRIT
Rim (size, flange type, and offset)	14x5x.20	
Size, load range, ply	G78x14B	BASE STOWAWAY ON FORMULA,
Type (bias, radial, etc.)	BIAS	TRANS AM AND PERFORMANCE
Wheel type & material	DISC, STEEL	TRANS AM
Rim (size, flange type, and offset)	14 x 6 x .50	
Size, load range, ply		
Type (bias, radial, etc.)		
Wheel type & material		
Rim (size, flange type, and offset)		
Size, load range, ply		
Type (bias, radial, etc.)		
Wheel type & material	CAST ALUMINUM	
Rim (size, flange type, and offset)	15x7JJx.34	

Brakes—Parking

Type of control		FOOT LEVER APPLICATION - HAND PULL RELEASE
Location of control		BELOW INSTRUMENT PANEL AT LEFT OF STEERING COLUMN
Operates on		REAR SERVICE BRAKES
If separate from service brakes	Type (internal or external)	NOT SEPARATE
	Drum diameter	NOT SEPARATE
	Lining size (length x width x thickness)	NOT SEPARATE

	Body Type And/Or Engine Displacement
	ALL

Brakes—Service

Brake Type (std., Opt., N.A.)	Drum	Front		NOT AVAILABLE
		Rear		STANDARD
	Disc	Front		STANDARD
		Rear		OPTIONAL
Self-adjusting (std., opt., N.A.)				STANDARD
Special Valving	Type (proportion, delay, metering, other)			METERING AND PROPORTIONING
Power Brake (std., opt., N.A.)				STANDARD WITH V8 ENGINES - OPTIONAL WITH V6 ENGINE
Booster Type (remote, integral, vac., hyd., etc.)				INTEGRAL
Anti-skid device type (std., opt., N.A.)				
Effective area—cm² (in.²)*				112.0
Gross lining area—cm² (in.²)**				115.6
Swept area—cm² (in.²)***				
Rotor	Outer working diameter		F	11.0
			R	
	Thickness		F	1.03
			R	
	Material & type (vented/solid)		F	CAST IRON-VENTED
			R	
Drum	Diameter (nominal)	REAR		9.5
	Type and material			COMPOSITE, FINNED, CAST IRON-STEEL WEB
Wheel cylinder bore	Front			2.9375
	Rear			.938
Master Cylinder	Bore			1.00 (MANUAL) - 1.125 (POWER)
	Stroke			
Pedal arc ratio				6.22:1 (MANUAL) - 3.58:1 (POWER) 3.00:1 (OP
Line pressure at 445 N (100 lb.) pedal load—MPa (psi)				
Lining Clearance Per Shoe	Front			SELF ADJUSTING
	Rear			SELF ADJUSTING
Brake lining	Front Wheel	Bonded or riveted, rivets/seg.		RIVETED
		Rivet size		.210 x .379
		Manufacturer		DELCO MORAINE
		Lining Code		
		Material		MOLDED ASBESTOS
		**** Size	Prim. or out-board	5.40 x 1.92 x 0.465
			Second or in-board	5.40 x 1.92 x 0.465
		Shoe thickness (no lining)		.540
	Rear Wheel	Bonded or riveted, rivets/seg.		RIVETED
		Manufacturer		DELCO MORAINE
		Lining Code		
		Material		MOLDED ASBESTOS
		**** Size	Prim. or out-board	7.30 x 2.0 x 0.23
			Second or in-board	9.46 x 2.0 x 0.23
		Shoe thickness (no lining)		PRIMARY .275; SECONDARY .305

*Excludes rivet holes, grooves, chamfers, etc.
**Includes rivet holes, grooves, chamfers, etc.
***Total swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact circumference.) (Disc brake: Square of Outer V Dia. minus Square of Inner Working Dia. multiplied by π/2 for each brake.)
****Size for drum brakes includes length x width x thickness.

Steering

				ALL
Manual (std., opt., N.A.)				NOT AVAILABLE
Power (std., opt., N.A.)				STANDARD
Adjustable steering wheel (tilt, swing, other)		Type and description		STEERING SHAFT TILTS VERTICALLY AT BASE OF STEERING WHEEL
		Std., opt., N.A.)		OPTIONAL
Wheel diameter		Manual		NOT AVAILABLE
		Power		15.25 x 14.75 (VERTICAL); 14.25 DIAMETER-OPTIONAL
Turning diameter m(feet)	Outside front	Wall to wall (l. & r.)		41.3
		Curb to curb (l. to r.)		38.9
	Inside rear	Wall to wall (l. to r.)		
		Curb to curb (l. to r.)		
Manual	Gear	Type		NOT AVAILABLE
		Make		
		Ratios	Gear	
			Overall	
	No. wheel turns (stop to stop)			
Power	Type (coaxial, linkage, etc.)			COAXIAL
	Make			SAGINAW
	Gear	Type		RECIRCULATING BALL BEARING
		Ratios	Gear	15.0 - 13.0:1 (b)
			Overall	16.5 - 14.3:1
	Pump driven by			BELT FROM CRANKSHAFT
	No. wheel turns (stop to stop)			2.41
Linkage	Type			LINK PARALLELOGRAM
	Location (front or rear of wheels, other)			FRONT
	Drag links (trans. or longit.)			TRANSVERSE ROD CONNECTS TIE RODS, PITMAN AND IDLER A
	Tie rods (one or two)			TWO
Steering Axis	Inclination at camber (deg.)			10.35° @ 1°
	Bearings (type)	Upper		BALL JOINT
		Lower		BALL JOINT
		Thrust		BALL JOINT
Steering spindle & joint type				REVERSE ELLIOTT -BALL JOINT
Wheel Spindle	Diameter	Inner bearing		1.2493 - 1.2498
		Outer bearing		0.7492 - 0.7498
	Thread size			3/4 - 20
	Bearing type			TAPER ROLLER
Wheel Align at curb mass (wt.)	Service checking	Caster (deg.)		+1° ± 1°
		Camber (deg.)		+1° ± .8°
		Toe-in [outside track-mm (in.)]		+.06° ± .12° PER WHEEL
	Service reset	Caster		+1° ± .5°
		Camber		+1° ± .5°
		Toe-in		+.06° ± .06° PER WHEEL
	Periodic M.V. Inspection	Caster		+1° ± 1°
		Camber		+1° ± .8°
		Toe-in		+.06° ± .12° PER WHEEL

(a) STANDARD ON TRANS AM

(b) 14:1 WITH SPECIAL PERFORMANCE TRANS AM

	Body Type And/Or Engine Displacement
	ALL

Suspension — General

(See Supplement page for details on Air Suspension)

Provision for car leveling		SPRINGS
Provision for brake dip control		FRONT SUSPENSION GEOMETRY
Provision for acc. squat control		REAR SUSPENSION GEOMETRY
Special provisions for car jacking		JACK LOCATING PROVISIONS ON FRONT AND REAR BUMPERS
Shock absorber front & rear	Type	DIRECT, DOUBLE-ACTING HYDRAULIC
	Make	DELCO
	Piston dia.	1.00
Other special features		

Suspension — Front

Type and description		INDEPENDENT SLA TYPE WITH COIL SPRINGS
Travel	Full jounce	3.00
	Full Rebound	3.75
Spring	Type (coil, leaf, other)	COIL
	Material	ALLOY STEEL
	Size (coil design height & I.D., bar length x dia.)	11.0 x 4.05; 116.10 x 0.617 (a)
	Spring rate — N/mm (lb./in.)	330 (a)
	Rate at wheel — N/mm (lb./in.)	82 (a)
Stabilizer	Type (link, linkless, frameless)	LINK
	Material & bar diameter	STEEL: 1.00 (b), 1.25 (c)(d)

Suspension — Rear

Type and description			SALISBURY AXLE WITH MULTIPLE LEAF SPRINGS
Drive and torque taken through			REAR SPRINGS
Travel	Full Jounce		3.80
	Full Rebound		3.73
Spring	Type (coil, leaf, other)		MULTIPLE LEAF
	Material		ALLOY STEEL
	Size (length x width, coil design height & I.D., bar length & dia.)		56.0 x 2.50 (a)
	Spring rate—N/m (lb./in.)		89 (a)
	Rate at wheel—N/m (lb./in.)		89 (a)
	Mounting insulation type		RUBBER BUSHED AT SHACKLE AND HANGER
	If leaf	No. of leaves	4,5 (a)
		Shackle (comp. or tens.)	COMPRESSION
Stabilizer	Type (link, linkless, frameless)		LINK
	Material & bar diameter		STEEL: .750 (d) .625 (c)
Track bar type			NONE

(a) FOR BASE EQUIPPED MODEL. SPRINGS FOR ALL MODELS ARE COMPUTER SELECTED F SIZE & RATE ACCORDING TO VEHICLE WEIGHT INCLUDING OPTIONAL EQUIPMENT.

(b) EXCEPT FORMULA AND TRANS AM

(c) FORMULA

(d) TRANS AM PLUS WS6

Body Type
ALL

Body — Miscellaneous Information

Type of finish (lacquer, enamel, other)		
Hood counterbalanced (yes, no)		YES
Hood release control (internal, external)		EXTERNAL
Vehicle Ident. No. Location		TOP LH SIDE OF INSTRUMENT PANEL - VISIBLE THRU WINDSHIELD
Vent window control method (crank, friction pivot, power)	Front	NONE
	Rear	NONE
Seat cushion type	Front	MOLDED FOAM PAD
	Rear	MOLDED FOAM PAD
	3rd Seat	--
Seat back type	Front	MOLDED FOAM PAD
	Rear	MOLDED FOAM PAD
	3rd seat	--
Method of holding luggage compart. lid open		TORSION RODS
Position of spare tire storage		

Frame

Type and description (Separate frame, unitized frame, partially-unitized frame)	PARTIALLY - UNITIZED FRAME

Body Type
ALL

Convenience Equipment

Power windows	Side Windows	OPTIONAL
	Vent windows	N.A.
	Backlight or tailgate	N.A.
Power seats (specify type as well as availability)		N.A.
Reclining front seat back (R-L or both)		N.A.
Radios (specify type as well as availability)		OPT: AM, AM-FM, AM-FM STEREO, AM W/TAPE, AM-FM STEREO W/TAPE, AM-MONO W/CB, AM-FM STEREO W/CB, AM-FM STEREO W/DIGITAL CLOCK
Rear seat speaker		OPTIONAL
Power antenna		OPTIONAL - STANDARD WITH CITIZENS BAND
Clock		OPTIONAL
Air conditioner (specify type)		OPTIONAL: MANUAL TEMPERATURE CONTROL
Speed warning device		NOT AVAILABLE
Speed control device		OPTIONAL (N.A. WITH 403 V8)
Ignition lock lamp		NOT AVAILABLE
Dome lamp		STANDARD - DOME AND READING LAMP OPTIONAL
Glove compartment lamp		OPTIONAL
Luggage compartment lamp		OPTIONAL
Underhood lamp		NOT AVAILABLE
Courtesy lamp		OPTIONAL
Map lamp		NOT AVAILABLE
Cornering lamp		NOT AVAILABLE
Rear window defroster electrically heated		OPTIONAL
Rear window defogger		NOT AVAILABLE
Theft protection—type		
POWER DOOR LOCKS		OPTIONAL
FUEL ECONOMY GAUGE		NOT AVAILABLE
DECK LID RELEASE		OPTIONAL

Model	Vehicle Mass (Weights)							
	CURB MASS, kg. (Weight, lb.)*			% PASS. WEIGHT DISTRIBUTION				SHIPPING MASS. Kg. (Weight, lb.,**
	Front	Rear	Total	Pass. In Front		Pass. In Rear		
				Front	Rear	Front	Rear	
FIREBIRD:								
2-DR HARDTOP CPE 2FS87	1855.2	1512.8	3368	40.7	59.3	15.3	84.7	3258
2-DR HARDTOP CPE 2FT87	1841.0	1535.7	3376.7	40.7	59.3	15.3	84.7	3266.5
2-DR HARDTOP CPE 2FU87	1940.5	1525.6	3466	40.7	59.3	15.3	84.7	3355.8
2-DR HARDTOP CPE 2FW87	2050.7	1550	3600.7	40.7	59.3	15.3	84.7	3490.5

*Reference — SAE J1100a, Motor Vehicle Dimensions, Curb Weight Definition.
**Shipping Mass (Weight) definition—

Car and Body Dimension See Key Sheets, for definitions.

All dimensions to ground are for comparative purposes only. Dimensions are to be shown for all base body models of each car line.
SAE Ref. No. refers to the definition published in SAE Recommended Practice.
J1100a "Motor Vehicle Dimensions," unless otherwise specified.

	SAE Ref. No.	Body Type: 2-DOOR HARDTOP COUPE
Width		
Tread — Front	W101	61.3
Tread — Rear	W102	60.0
Vehicle width	W103	73.0
Body width at Sg RP — front	W117	
Vehicle width — front doors open	W120	140.5
Vehicle width — rear doors open	W121	
Length		
Wheelbase	L101	108.2
Vehicle length	L103	198.1
Overhang — front	L104	42.8
Overhang — rear	L105	45.8
Upper structure length	L123	
Rear wheel C/L "X" coordinate	L127	86.8
Cowl point "X" coordinate	L125	
Height*		
Passenger Distribution (frt./rear)	PD1,2,3	2/2
Trunk/Cargo load		-
Vehicle height	H101	49.3
Cowl point to ground	H114	35.7
Deck point to ground	H138	
Rocker panel front to ground	H112	6.7
Bottom of door closed-front to grd	H133	9.6
Rocker panel rear to ground	H111	5.7
Bottom of door closed-rear to grd.	H135	--
Windshield slope angle	H122	
Ground Clearance*		
Front bumper to ground	H102	11.7
Rear bumper to ground	H104	10.2
Bumper to ground—front at curb mass (wt.)	H103	14.5
Bumper to ground—rear at curb mass (wt.)	H109	13.1
Angle of approach	H106	18.4
Angle of departure	H107	10.4
Ramp breakover angle	H147	10.3
Rear axle differential to ground	H153	6.8
Min. running ground clearance	H156	4.6
Location of min. run. grd. clear		CATALYTIC CONVERTER

*All vehicle height and ground clearances are made at the Manufacturer's Design Load Weight, unless otherwise specified. Manufacturers Design Load Weight is defined with indicated passenger distribution and trunk/cargo load.

Optional Equipment Mass (Weights)*

Equipment Differential Mass (Weights)	MASS, kg. (Weight, lb.) Front	Rear	Total	Remarks
305 2BBL ENGINE LG3	89.0	11.5	100.5	ALL
400 4BBL ENGINE L78	225.7	26.2	252	ALL
350 4BBL ENGINE LM1	115.5	14.8	130.3	ALL
403 4BBL ENGINE L80	144.6	17.6	162.2	ALL
4-SPEED MT M21	-5.3	-2.4	-7.7	ALL
3-SPEED MT M33	15	6.8	21.8	ALL
CUSTOM A/C	76	0	76	WITH LD5 ENGINE
	95.1	.9	96	WITH LG3/LM1/L80 ENGINE
	95.1	.9	96	WITH L78 ENGINE PLUS M33
	109.5	-1.5	108	WITH L78 ENGINE PLUS M21
POWER DISC BRAKES	8.2	16.3	24.5	ALL
POWER WINDOWS	4.8	5.2	10	ALL
RADIO-AM WITH TAPE	7.4	6.6	14.1	ALL
RADIO-AM/FM STER TAPE	7.8	6.6	14.4	ALL
AM/FM STER CASS TAPE	7.8	6.6	14.4	ALL
AM/FM MONO W/CB	10.9	7.1	18	ALL
AM/FM STER 40 CB	11.5	10.9	22.4	ALL
RADIO-CLOCK-AM/FM	6	5.6	11.6	ALL
RADIO-AM/FM STEREO	8.8	7.8	16.6	ALL
RADIO-AM	4.7	1.8	6.5	ALL
RADIO-AM/FM	5.8	1.8	7.6	ALL
REAR SEAT SPEAKER	.88	4	4.8	ALL

*Also see Engine—General Section for dressed engine mass (weight).

Car Line _____ Model Year 1979 Issued 9-1-78 Revised (•) _____

Car and Body Dimensions See Key Sheets for definitions

	SAE Ref. No.	Body Type: ALL
Front Compartment		
Sg RP front, "X" coordinate	L31	42.8
Effective head room	H61	37.2
Effective T Point head room	H75	37.4
Max. eff. leg room—accelerator	L34	43.9
Sg RP — front to heel	H30	6.0
Design H-point front travel	L17	5.0
Shoulder room	W3	56.7
Hip room	W5	52.4
Upper body opening to ground	H50	44.6
Steering Wheel Angle	H18	17.6°
Back Angle	L40	26.0
Rear Compartment		
Sg RP Point couple distance	L50	27.3
Effective head room	H63	36.0
Effective T Point head room	H76	35.9
Min. effective leg room	L51	28.4
Sg RP—second to heel	H31	8.4
Knee clearance	L48	-2.5
Compartment room	L3	22.7
Shoulder room	W4	54.4
Hip room	W6	46.3
Upper body opening to ground	H51	-
Luggage Compartment		
Usable luggage capacity—L (cu. ft.)	V1	7.3
Liftover height	H195	27.3

Car and Body Dimensions See Key Sheets for definitions

	Body Type
SAE Ref. No.	

Station Wagon — Third Seat

Shoulder room	W85	
Hip room	W86	
Effective leg room	L86	
Effective head room	H86	
Effective T Point head room	H89	
Seat facing direction	SD1	

NOT AVAILABLE

Station Wagon — Cargo Space

Cargo length—open—front	L200	
Cargo length—open—second	L201	
Cargo length—closed—front	L202	
Cargo length—closed—second	L203	
Cargo length at belt—front	L204	
Cargo length at belt—second	L205	
Cargo width—wheelhouse	W201	
Rear opening width at floor	W203	
Opening width at belt	W204	
Max. rear opening width above belt	W205	
Cargo height	H201	
Rear opening height	H202	
Tail gate to ground height	H250	
Front seat back to load floor height	H197	
Cargo volume index—m^3 ($ft.^3$)	V2	
Hidden cargo volume—m^3 ($ft.^3$)	V4	

NOT AVAILABLE

Hatchback — Cargo Space

Front seat back to load floor height	H197	
Cargo length at front seat Back Height	L208	
Cargo length at floor—front	L209	
Cargo volume index—L ($ft.^3$)	V3	
Hidden cargo volume—L ($ft.^3$)	V4	

NOT AVAILABLE

A printed or computer tape supplement containing additional car and body dimensions and/or drawings (based in part on SAE J1100a "Motor Vehicle Dimensions") may be available from the manufacturer.

Car and Body Dimensions See Key Sheets for definitions

Body Type
ALL

Vehicle Fiducial Marks

Fiducial Mark Number*	Define Coordinate Location
Front	X - FIDUCIAL MARK TO VERTICAL BODY ZERO LINE - FRONT, MEASURED HORIZONTALLY FROM THE BODY ZERO LINE TO THE FRONT FIDUCIAL MARK LOCATED ON TOP OF THE FRONT SEAT ADJUSTER MOUNTING BOLT. Y - FIDUCIAL MARK TO CENTER LINE OF CAR - FRONT, WIDTH MEASUREMENT MADE FROM CENTER LINE OF CAR TO FIDUCIAL MARK LOCATED ON TOP OF THE FRONT SEAT ADJUSTER MOUNTING BOLT. Z - FIDUCIAL MARK TO HORIZONTAL BODY ZERO LINE - FRONT, MEASURED VERTICALLY FROM BODY ZERO LINE TO FRONT FIDUCIAL MARK LOCATED ON TOP OF THE FRONT SEAT ADJUSTER MOUNTING BOLT.
Rear	X - FIDUCIAL MARK TO VERTICAL BODY ZERO LINE - REAR, MEASURED HORIZONTALLY FROM BODY ZERO LINE TO THE REAR FIDUCIAL MARK LOCATED ON REAR UNDER BODY CROSS BAR. Y - FIDUCIAL MARK TO CENTER LINE OF CAR - REAR, WIDTH MEASUREMENT MADE FROM CENTER LINE OF CAR TO FIDUCIAL MARK LOCATED ON THE REAR UNDER BODY CROSS BAR. Z - FIDUCIAL MARK TO HORIZONTAL BODY ZERO LINE - REAR, MEASURED VERTICALLY FROM BODY ZERO LINE TO THE REAR FIDUCIAL MARK LOCATED ON REAR UNDER BODY CROSS BAR.

	Fiducial Mark Number	
Front	W21	21.26
	L54	27.63
	H81	5.04
	H161	11.3
	H163	9.6
Rear	W22	23.20
	L55	75.00
	H82	.86
	H162	15.5
	H164	13.2

NOTE: "0" INCH LINE IS BASE GRID FOR HORIZONTAL AND VERTICAL DIMENSIONS.

*Reference — SAE Recommended Practice, J182a, A Motor Vehicle Fiducial Marks — September, 1973.

Car and Body Dimensions See Key Sheets for definitions

	SAE Ref. No.	Body Type: ALL

Glass

Backlight slope angle	H121	
Windshield slope angle	H122	
Tumble-Home	W122	
Windshield glass exposed surface area—cm^2 ($in.^2$)	S1	1137.6
Side glass exposed surface area—cm^2 ($in.^2$)	S2	1139.8
Backlight glass exposed surface area—cm^2 ($in.^2$)	S3	1213.0
Total glass exposed surface area—cm^2 ($in.^2$)	S4	3490.5
Windshield glass type		CURVED LAMINATED PLATE
Side glass type		CURVED TEMPERED PLATE
Backlight glass type		CURVED LAMINATED PLATE

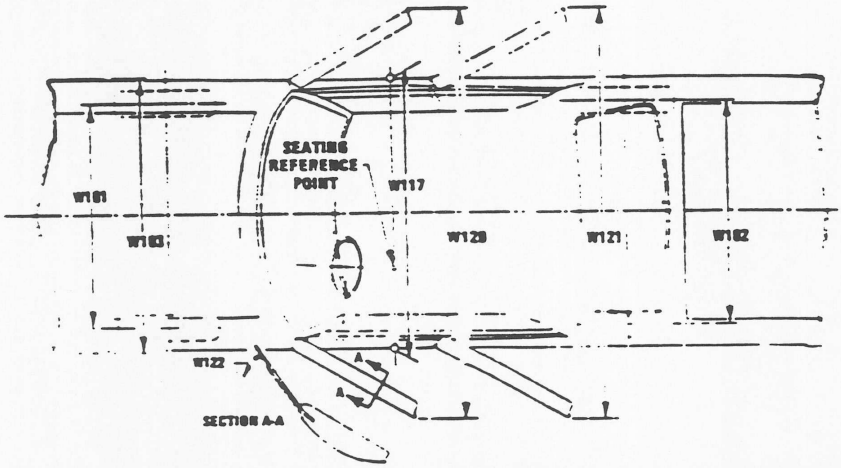
Lamps and Headlamp Shape*

Height above ground to center of bulb or marker	Headlamp (H125)	Highest**	27.2
		Lowest	
	Tail (H126)	Highest	26.1
		Lowest	
	Sidemarker	Front	22.2
		Rear	19.5
Distance from C/L of car to center of bulb	Headlamp	Inside	14.2
		Outside**	24.3
	Tail	Inside	13.3
		Outside	-
	Directional	Front	23.5
		Rear	26.8
Headlamp Shape			

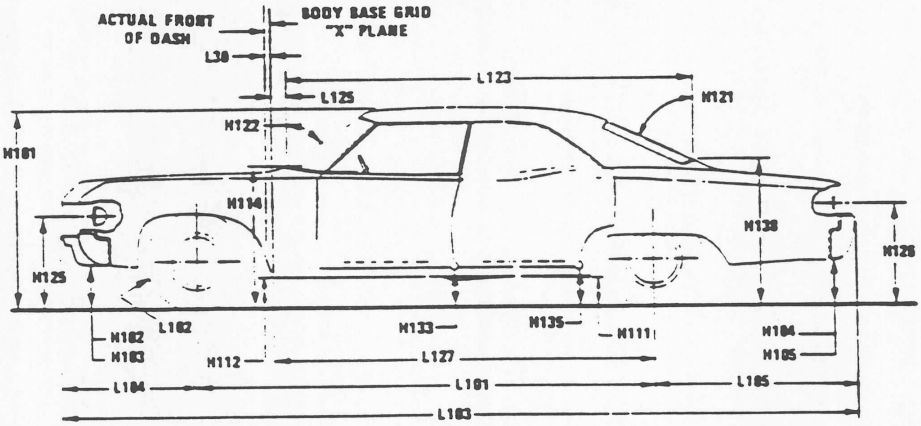
*Measured at curb mass (weight).
**If single headlamps are used enter here

Exterior Car And Body Dimensions — Key Sheet

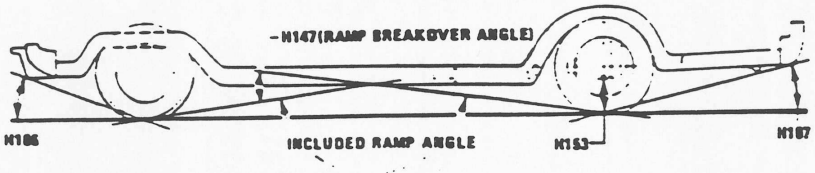
Exterior Width



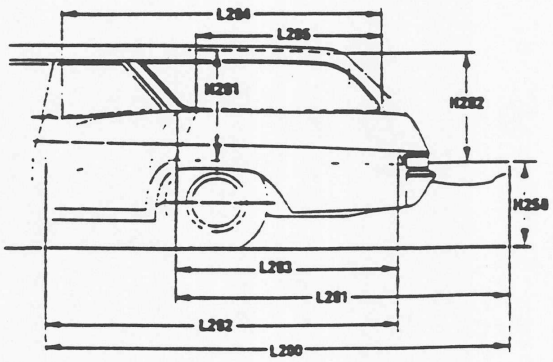
Exterior Length & Height

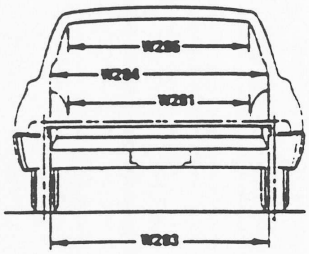


Exterior Ground Clearance

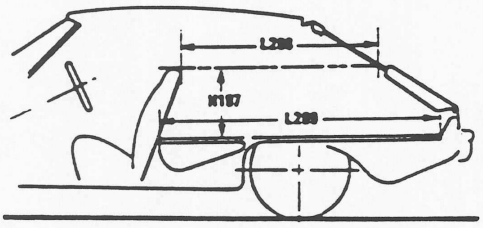


Cargo Space





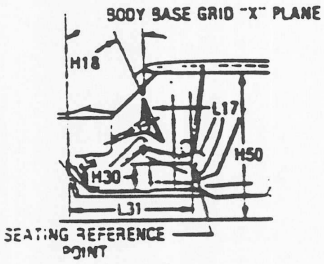
Station Wagon

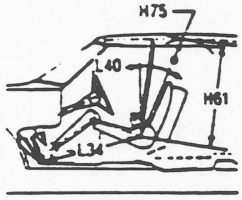


Hatchback

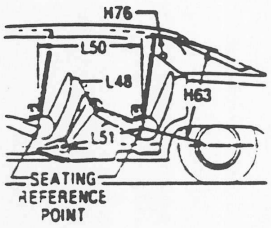
Interior Car And Body Dimensions — Key Sheet

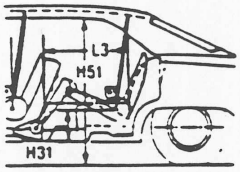
Front Compartment



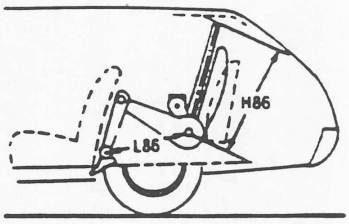


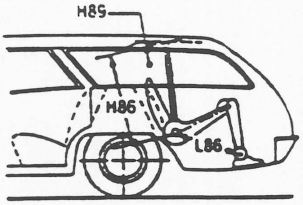
Rear Compartment

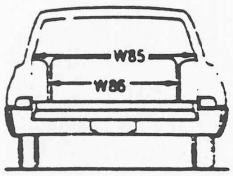




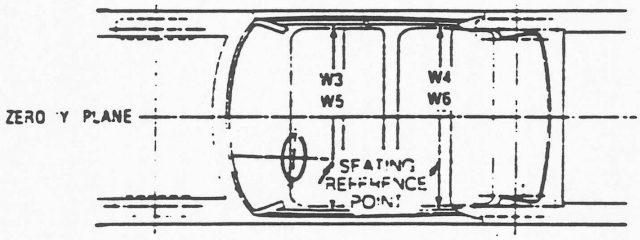
Third Seat







Interior Width



Exterior Car And Body Dimensions — Key Sheet
Dimension Definitions

Seating Reference Point

SEATING REFERENCE POINT means the manufacturer's design reference point which —

(a) Establishes the rearmost normal design driving or riding position of each designated seating position in a vehicle;

(b) Has coordinates established relative to the designed vehicle structure.

(c) Simulates the position of the pivot center of the human torso and thigh, and

(d) Is the reference point employed to position the two dimensional templates described in SAE Recommended Practice J826, "Manikins for Use in Defining Vehicle Seating Accommodations," November 1962.

Width Dimensions

W101 TREAD — FRONT. The dimension measured between the tire centerlines at the ground.

W102 TREAD — REAR. The dimension measured between the tire centerlines at the ground. In case of dual wheels, the dimension will be measured to the centerline of tire and wheel assemblies.

W103 VEHICLE WIDTH. The maximum dimension measured between the widest point on the vehicle, excluding exterior mirrors, flexible mud flaps, marker lamps, but including bumpers, moldings, sheet metal protrusions or dual wheels, if standard equipment.

W117 BODY WIDTH AT SgRP — FRONT. The dimension measured laterally between the widest points on the body at the SgRP - front, excluding door handles, applied moldings, or appliques.

W120 VEHICLE WIDTH — FRONT DOORS OPEN. The dimension measured between the widest point on the front doors in maximum hold-open position.

W121 VEHICLE WIDTH — REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door on only one side, this dimension is to the zero "Y" plane.

W122 TUMBLE HOME. STRAIGHT SIDE GLASS. The angle measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane.
CURVED SIDE GLASS. The angle measured from a vertical to a chord extending from the upper DLO to the lower DLO, at the outside surface of the front door glass at the front SgRP "X" plane.

Length Dimensions

L30 FRONT OF DASH "X" COORDINATE. A minus (-) dimension indicates actual front of dash is forward of the zero "X" plane.

L101 WHEELBASE (WB). The dimension measured longitudinally between front and rear wheel centerlines. In case of dual rear axles, the dimension shall be to the midpoint of the centerlines of the rear wheels.

L102 TIRE SIZE. As specified by the manufacturer.

L103 VEHICLE LENGTH. The maximum dimension measured longitudinally between the foremost point and the rearmost point on the vehicle, including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.

L104 OVERHANG — FRONT. The dimension measured longitudinally from the centerline of the front wheels to the foremost point on the vehicle including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.

L105 OVERHANG — REAR. The dimension measured longitudinally from the centerline of the rear wheels or in the case of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels to the rearmost point on the vehicle, including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

L123 UPPER STRUCTURE LENGTH. The dimension measured longitudinally from the cowl point to the deck point.

L127 REAR WHEEL CENTERLINE "X" COORDINATE. In the case of dual rear axles, the coordinate shall be the midpoint of the distance between the rear axle centerlines.

L125 COWL POINT "X" COORDINATE.

Height Dimensions

H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.

H114 COWL POINT TO GROUND. Measured at zero "Y" plane.

H138 DECK POINT TO GROUND. Measured at zero "Y" plane.

H112 ROCKER PANEL — FRONT TO GROUND. The dimension measured vertically from the foremost point of the bottom of the rocker panels, excluding flanges, to ground.

H132 BOTTOM OF DOOR OPEN — FRONT TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum hold-open position, to ground.

H111 ROCKER PANEL — REAR TO GROUND. The dimension measured vertically from the bottom of the rocker or side quarter panel at the front of the rear wheel opening, excluding flanges, to ground.

H134 BOTTOM OF DOOR OPEN — REAR TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum hold-open position, to ground.

H135 BOTTOM OF DOOR CLOSED — REAR TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.

H121 BACKLIGHT SLOPE ANGLE. The angle between the vertical reference line and the surface of backlight at vehicle zero "Y" plane. For curve backlight, the angle is to chord of backlight arc from lower DLO to upper DLO.

H122 WINDSHIELD SLOPE ANGLE. The angle between the vertical reference line and a chord of the windshield arc running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap around glass, the angle to be measured will be formed by a chord 18.0 in. (457 mm) long, drawn from the lower DLO to the intersecting point on the windshield.

H125 HEADLAMP TO GROUND. The dimension measured vertically from the centerline of the lowest headlamp lens to ground.

H126 TAILLAMP TO GROUND. The dimension measured vertically from the centerline of the upper bulb to ground.

Ground Clearance Dimensions

H102 FRONT BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on front bumper to ground, including bumper guards, if standard equipment.

Interior Car And Body Dimensions — Key Sheet
Dimension Definitions

H103 FRONT BUMPER TO GROUND — CURB WEIGHT. Measured in the same manner as H104.

H104 REAR BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment.

H105 REAR BUMPER TO GROUND — CURB WEIGHT. Measured in the same manner as H104

H106 ANGLE OF APPROACH. The angle measured between a line tangent to the front tire static loaded radius are the initial point of structural interference forward of the front tire to ground. The limiting structural component shall be designated.

H107 ANGLE OF DEPARTURE. The angle measured between a line tangent to the rear tire static loaded radius are the initial point of structural interference rearward of the rear tire to ground. The limiting component shall be designated.

H147 REAR BREAKOVER ANGLE. The angle measured between two lines tangent to the front and rear tire static loaded radius and intersecting at a point on the underside of the vehicle which defines the largest ramp over which the vehicle can roll.

H153 REAR AXLE DIFFERENTIAL TO GROUND. The minimum dimension measured from the rear axle differential to ground

H156 MINIMUM RUNNING GROUND CLEARANCE. The minimum dimension measured from the sprung vehicle to ground. Specify location.

Front Compartment Dimensions

PD1 PASSENGER DISTRIBUTION — FRONT.

L31 SgRP — FRONT "X" COORDINATED.

H61 EFFECTIVE HEAD ROOM — FRONT. The dimension measured along a line 8 deg rear of vertical from the SgRP - front to the headline, plus 4.0 in. (102 mm).

H75 EFFECTIVE T-POINT HEAD ROOM — FRONT. The minimum radius from the T-point to the headlining plus 30 in. (762 mm).

L34 MAXIMUM EFFECTIVE LEG ROOM — ACCELERATOR The dimension measured along a line from the ankle pivot center to the SgRP - front plus 10.0 in. (254 mm) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.

H30 SgRP — FRONT TO HEEL The dimension measured vertically from the SgRP - front to the accelerator heel point.

L17 DESIGN H-POINT — FRONT TRAVEL. The dimension measured horizontally between the design H-point - front in the foremost and rearmost seat track positions.

W3 SHOULDER ROOM — FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP - front within the belt line and 10.0 in. (254 mm) above the SgRP - front

W5 HIP ROOM — FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP - front within 1.0 in. (25 mm) below and 3.0 (76 mm) above the SgRP - front and 3.0 (76 mm) fore and aft of the SgRP - front.

H150 UPPER BODY OPENING TO GROUND — FRONT. The dimension measured vertically from the trimmed body opening to the ground on the SgRP - front "X" plane.

H18 STEERING WHEEL ANGLE. The angle measured from a vertical to the surface plane of the steering wheel.

L40 BACK ANGLE — FRONT The angle measured between a vertical line through the SgRP - front and the torso line. If the seatback is adjustable, use the normal driving and riding position specified by the manufacturer

Rear Compartment Dimensions

PD2 PASSENGER DISTRIBUTION — SECOND

L50 SgRP COUPLE DISTANCE. The dimension measured horizontally from the driver SgRP - front to the SgRP - second.

H63 EFFECTIVE HEAD ROOM — SECOND The dimension measured along a line 8 deg rear of vertical from the SgRP - second to the headlining, plus 4.0 in. (102 mm).

H76 EFFECTIVE T-POINT HEAD ROOM — SECOND. Measured in the same manner as H75.

L51 MINIMUM EFFECTIVE LEG ROOM — SECOND. The dimension measured along a line from the ankle pivot center to the SgRP - second plus 10.0 in. (254 mm).

H31 SgRP — SECOND TO HEEL. The dimension measured vertically from the SgRP - second to the two dimensional device heel point on the depressed floor covering.

L48 KNEE CLEARANCE — SECOND. The minimum dimension measured from the knee pivot to the back of front seatback minus 2.0 in. (51 mm)

L3 COMPARTMENT ROOM — SECOND. The dimension measured horizontally from the back of front seat to the front of the second seatback at a height tangent to the top of the second seat cushion.

W4 SHOULDER ROOM — SECOND. The minimum dimension measured laterally between trimmed surfaces on the "X" plane through the SgRP - second within 10.0-16.0 in. (254-406 mm) above the SgRP - second

W6 HIP ROOM — SECOND Measured in the same manner as W5

H51 UPPER BODY OPENING TO GROUND — SECOND The dimension measured vertically from the trimmed body opening to the ground on the "X" plane 13.0 in. (330 mm) forward of the SgRP - second.

Luggage Compartment Dimensions

V1 USABLE LUGGAGE CAPACITY — Total of volumes of individual pieces of standard luggage set plus H-boxes stowed in the luggage compartment in accordance with the procedure described in paragraph 8.2 of SAE-J1100A.

H195 LIFTOVER HEIGHT The dimension measured vertically from the luggage compartment lower opening at the zero "Y" plane to ground.

Station Wagon - Third Seat Dimensions

PD3 PASSENGER DIRECTION — THIRD.

W85 SHOULDER ROOM — THIRD. Measured in the same manner as W5

W86 HIP ROOM — THIRD Measured in the same manner as W5.

L86 EFFECTIVE LEG ROOM — THIRD. The dimension measured along a line from the ankle pivot center to the SgRP - third plus 10.0 in. (254 mm).

H86 EFFECTIVE HEAD ROOM — THIRD The dimension measured along a line 8 deg from the SgRP - third to the headlining rear of vertical plus a constant of 4.0 in. (102 mm)

H89 EFFECTIVE T-POINT HEAD ROOM — THIRD Measured in the same manner as H75.

Station Wagon - Cargo Space Dimensions

L200 CARGO LENGTH — OPEN — FRONT The minimum dimension measured longitudinally from the back of

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Interior Car And Body Dimensions — Key Sheet
Dimension Definitions

the front seatback at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the open tailgate or cargo surface if the rear closure is a conventional door type tailgate, at the zero "Y" plane.

L201 CARGO LENGTH — OPEN — SECOND. The dimension measured longitudinally from the back of the second seatback at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the open tailgate or cargo floor suface if the rear closure is a conventional door type tailgate, at the zero "Y" plane.

L202 CARGO LENGTH — CLOSED — FRONT. The minimum dimension measured horizontally from the back of the front seat at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.

L203 CARGO LENGTH — CLOSED — SECOND. The dimension measured horizontally from the back of the second seat at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.

L204 CARGO LENGTH AT BELT — FRONT. The minimum dimension measured horizontally from the back of the front seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab back panel at the height of the belt, on the zero "Y" plane.

L205 CARGO LENGTH AT BELT — SECOND. The minimum dimension measured horizontally from the back of the second seatback at the seatback top to the foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.

W201 CARGO WIDTH — WHEELHOUSE. The minimum dimension measured laterally between the trimmed wheelhousings at floor level. For any vehicle not trimmed, measure the sheet metal.

W203 REAR OPENING WIDTH AT FLOOR. The minimum dimension measured laterally between the limiting interferences of the rear opening at floor level.

W204 REAR OPENING WIDTH AT BELT. The minimum dimension measured laterally between the limiting intereferences of the rear opening at belt height or top of pick up box.

W205 REAR OPENING WIDTH ABOVE BELT. The minimum dimension measured laterally between the limiting interferences of the rear opening above the belt height.

H201 CARGO HEIGHT The dimension measured vertically from the top of the undepressed floor covering to the headlining at the rear wheel "X" coordinated on the zero "Y" plane.

H202 REAR OPENING HEIGHT The dimension measured vertically from the top of the undepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door fully open.

H250 TAILGATE TO GROUND (CURB WEIGHT) The dimension measured vertically from the top of the undepressed floor covering on the lowered tailgate to ground on the zero "Y" plane

V2 STATION WAGON.
Measured in inches:

$$\frac{W4 \times H201 \times L204}{1728} = Ft.^3$$

Measured in mm:

$$\frac{W4 \times H201 \times L204}{10^9} = m^3 \text{ (cubic meter}$$

V4 HIDDEN CARGO VOLUME. As specified by the manufacturer.

Hatchback — Cargo Space Dimensions

All hatchback cargo dimensions are to be taken with the front seat in full down and rear position, and the rear seat folded down. The hatchback door is in the closed position. (For electrically adjusted seats, see manufacturer's specifications for Design "H" Point).

H197 FRONT SEATBACK TO LOAD HEIGHT. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undepressed floor covering.

L208 CARGO LENGTH AT FRONT SEATBACK HEIGHT. The minimum horizontal dimension from the "X" plane tangent to the rearmost surface of the driver's seat back to the inside limiting interference of the hatchback door on the vehicle zero "Y" plane.

L209 CARGO LENGTH AT FLOOR — FRONT — HATCHBACK. The minimum horizontal dimension measured at floor level from the rear of the front seat back to the normal limiting interference of the hatchback door on the vehicle zero "Y" plane.

V3 HATCHBACK.
Measured in inches:

$$\frac{\frac{L208 + L209}{2} \times W4 \times H197}{1728} = Ft.^3$$

Measured in mm:

$$\frac{\frac{L208 - L209}{2} \times W4 \times H197}{10^9} = m^3 \text{ (cubic mete}$$