

Specifications

Form

Passenger Car

1983

METRIC (U.S. Customary)

Manufacturer PONTIAC MOTOR DIVISION GENERAL MOTORS CORPORATION	Car Line 1000	
Mailing Address ONE PONTIAC PLAZA PONTIAC, MICHIGAN 48053	Model Year 1983	Issued: 10-15-82
		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.

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

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NOTE:

1. This form uses both SI metric units and U.S. Customary units. The metric unit of measure 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 millimeters (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. Additional Car and Body Dimensions and/or drawings (based in part on SAE J1100a "Motor Vehicle Dimensions") may be available from the manufacturer.

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Car Models

Model Description	Introduction Date	Make, Car Line, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Truck/Cargo Load—Kilograms (Pounds)
2-DOOR HATCHBACK COUPE 1000	9-23-82	2TL08	4 (2/2)	
4-DOOR HATCHBACK SEDAN 1000	9-23-82	2TL68	4 (2/2)	

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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. Liters (in3)	Carb. (Barrels, FI, etc.)	Compr. Ratio	SAE Net at RPM		Exhaust System*		
				kW (bhp)	Torque N - m (lb. ft.)			
<u>49 States</u>								
Standard	L17 1.6	2-Bb1.	9	49@ 5200 (65@ 5200)	109@ 3200 (180@ 3200)	S	4M	3.36 3.62 A/C
							5M Opt.	3.62 Opt. 3.36 Opt. (1)
Optional	LJ5 1.8 (Diesel)	F.I.	22	38@ 5000 (51@ 3200)	98@ 2000 (72@ 2000)	S	5M 3A - 180C Opt.	3.36 3.62 Opt.
<u>California Only</u>								
Standard	L17 1.6	2-Bb1.	9	49@ 5200	109@ 3200	S	4M	3.62
							3A - 180C Opt.	3.36 3.62 Opt.
Optional	LJ5 1.8 Diesel	FI	22	38@ 5000	98@ 2000	S	5M 3A - 200C Opt.	3.36 (2) 3.36 (2) 3.62 (2)
(1) A/C and Power Steering Not Available - Fuel Economy Leader								
(2) A/C Not Available								

* S—Single D—Dual

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Engine Description/Carb.
 Engine Code

1.6L L4 (98 CID)
 2-BBL. CARBURETOR
 RPO L17

1.8L L4 (111 CID)
 FUEL INJECTION (DIESEL)
 RPO LJ5

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, etc.)	OHC, In-Line Front Longitudinal	
No. of cylinders	4	
Bore	82 (3.23)	84 (3.131)
Stroke	75.7 (2.98)	82 (3.23)
Bore spacing (c/l to c/l)	93.0 (3.7)	99.5 (3.0)
Cylinder block material	Cast Alloy Iron	
Cylinder block deck height	198 (7.8)	218.5 (8.6)
Deck clearance (minimum) (above or below block)	Zero	
Cylinder head material	Cast Alloy Iron	
Cylinder head volume (cm ³)		
Head gasket thickness (compressed)	.95 (.037)	1.40 (0.055)
Minimum combustion chamber volume (cm ³)	42.7	19.48
Cyl. no. system (front to rear)*	L Bank	1-2-3-4
	R Bank	--
Firing order	1-3-4-2	
Recommended fuel (leaded, unleaded, diesel)	Unleaded	Diesel #2
Fuel antiknock index (R + M) / 2	87	--
Total dressed engine mass (wt) dry**	144.1 (317.7)	172 (379.3)

Engine - Pistons

Material	Cast Aluminum Alloy	
Mass, g (weight, oz.) - Piston Only	364 (12.84)	540 (19.05)

Engine - Camshaft

Location	In Cylinder Head	
Material (kg., weight, lbs.)	Cast Alloy Iron	
Mass (kg., weight, lbs.)	2.946 (6.49)	2.100 (4.63)
Type of drive (chain or belt)	Width	19 (.748)
	Pitch	9.5 (.375)
		30 (1.181)
		9.525 (0.375)

* Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

** Dressed engine mass (weight) includes the following:

All those items necessary to make the engine a complete ready-to-run unit.

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Engine - Valve System

Lifters (std., opt., n.a.)	Hydraulic	Hydraulic Valve Lash Adjusters	Mechanical Valve Lash Adj.
	Solid	—	

Engine - Connecting Rods

Material & mass (kg., weight, lbs.)	.354 (0.78) Forged Steel 1141	.730 (1.61) Forged Alloy Steel
-------------------------------------	----------------------------------	-----------------------------------

Engine - Crankshaft

Material (kg., weight, lbs.)	Nodular Cast Iron	Forged Steel, Softenitrided
Mass (kg., weight, lbs.)	12.474 (27.50)	14.500 (32.00)
End thrust taken by bearing (no.)	5	3

Engine - Lubrication System

Normal oil pressure (kPa (psi) at engine rpm)	397 (57) @ 1200	441 (64) @ 5000
Type oil intake (floating, stationary)	Stationary	
Oil filter system (full flow, part, other)	Full Flow	
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)	4.7 (5.0)

Engine - Diesel Information

Glow plug, current drain at 0°F		*
Injector nozzle	Type	Not
	Opening pressure (kPa (psi))	Available
Pre-chamber design		Ricardo Comet V
Fuel injection pump	Manufacturer	Diesel Kiki
	Type	Bosch VE
Supplementary vacuum source (type)		Generator Driven

(*) 180 Amps Decreasing to 50 Amps as Flow Plugs Heat Up.

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 RPO LJ5

Engine - Fuel System (See supplemental page for details of Fuel Injection, Supercharger, Turbocharger, etc. if used)

Induction type: carburetor, fuel injection system, etc.			Carburetor	Fuel Injection
Carburetor	Mfr.		Holley	
	Choke (type)		Electric	None
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	800 & 700 with 3.36:1 Axle)	
		Automatic	700	
Idle A/F mix.				
Fuel injection	Point of injection (no.)			
	Constant, pulse, flow			Head, 4
	Control (electronic, mech.)			Pulse
	System pressure [kPa (psi)]			Mechanical
Intake manifold heat control (exhaust or water) thermostatic or fixed			Exhaust Replaceable Paper Element,	None
Air cleaner type	Standard		Single Snorkel	Remote Paper Element
	Optional		--	
Fuel pump	Type (elec. or mech.)		Mechanical	Engine Mounted - Integral
	Location (eng., tank)		Lower LF	with Injection Pump
	Pressure range [kPa (psi)]		34-45 (5.0-6.5)	

Fuel Tank

Capacity (refill L (gallons))		47.3 (12.5) Approximately
Location (describe)		
Attachment		
Material		
Filler pipe	Location & material	Left Rear Quarter Panel
	Connection to tank	
Fuel line (material)		
Fuel hose (material)		
Return line (material)		
Vapor line (material)		
Extended range tank	Opt. n.a.	
	Capacity [L (gallons)]	
	Location & material	
	Attachment	
Auxiliary tank	Opt. n.a.	
	Capacity [L (gallons)]	
	Location & material	
	Attachment	
	Selector switch or valve	
Separate fill		

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 FUEL INJECTION (DIESEL)
 RPO L15

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)			Standard	
Coolant fill location (rad., bottle)				
Radiator cap relief valve pressure [kPa (psi)]			103.4 (15.0)	
Circulation thermostat	Type (choke, bypass)	Choke		
	Starts to open at °C (°F)	88 (190)		82 (180)
Water pump	Type (centrifugal, other)	Centrifugal		
	GPM 1000 pump rpm			
	Number of pumps	One		
	Drive (V-belt, other)	V-Belt		
	Bearing (type)	Double Row Ball		
By-pass recirculation (type (inter., ext.))			Internal	External
Radiator core (type (cross-flow vertical cellular tube and fin, other) and material)			Cross Flow	
Cooling system capacity	With heater—L(qt.)	8.51 (9) AT;8.55(9.04) MT		8.46(8.94)AT;8.55(9.04)MT
	With air cond.—L(qt.)	8.67 (9.16)AT;8.76(9.26)MT		
	Opt. equipment (specify—L(qt.))	8.67 (9.16)AT;8.76(9.26)MT H.D. Rad.		
Water jackets full length of cyl. (yes, no)			Yes	
Water all around cylinder (yes, no)			Yes	
Radiator core	Standard	Width	304.8 (12.0)	430.0 (16.9)
		Height	375.2 (14.8)	387.5 (15.25)
		Thickness	31.5 (1.24)	25.0 (.98)
		Fins per inch	6.2	7.26
	A/C	Width	426.7 (16.8)	--
		Height	375.2 (14.8)	--
		Thickness	31.5 (1.24)	--
		Fins per inch	5.5	--
	Heavy duty	Width	426.7 (16.8)	--
		Height	375.2 (14.8)	--
		Thickness	31.5 (1.24)	--
		Fins per inch	7.06	--
Fan (standard)	Number of blades & type (flex, solid, material)		4, Staggered	7, Plastic Blades,Fan Clutch
	Diameter & projected width		330 (13.0)	390 (15.35)
	Ratio (fan to crankshaft rev.)		1.07	1.11
	Fan cutout type		None	Clutch, Thermo-Modulated
	Drive (type (direct, remote))		V-Belt - One	
	Fan shroud (material)			
Fan (electric)	Diameter & projected width			
	RPM at idle			
	Motor rating (wattage)			
	Motor switch (type & location)			
	Switch point (temp., pressure)			
	Fan shroud (material)			
Fan (optional)	No. of blades and spacing		7, Staggered	None
	Diameter & projected width		360 (14.17)	--
	Ratio (fan to crankshaft rev.)			--
	Fan cut-out (type)		Clutch, Thermo-Modulated	--
	Drive (type, direct, remote)		V-Belt, One	--

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 RPO LJ5

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Computer Command Control With Air Injection	None
	Air Injection	Pump (type)	Vane	
		Driven by	V-Belt	
		Air distribution (head, manifold, etc.)	Converter	
		Point of entry		
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled Flow	None
		Exhaust source	Manifold	
		Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet Manifold	
	Catalytic Converter	Type	Dual Bed, Oxidizing & Reducing	None
		Number of	One	
Location(s)		Beneath RF Underbody		
Volume [L (in ³)]		2.782 (170)		
Substrate type		Monolith		
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System	
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum	None
	Discharges (to intake manifold, other)		Inlet Manifold	
	Air inlet (breather cap, other)		Carburetor Air Cleaner	
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister	
		Carburetor	Canister	
	Vapor Storage provision (crankcase, canister, other)		Canister	

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single	
Muffler no. & type (reverse flow, straight thru, separate resonator)		One, Reverse Flow	Not Available
Resonator no. & type		Not Available	One, Straight Thru
Exhaust pipe	Branch o.d., wall thickness		
	Main o.d., wall thickness	44.45x.81 (1.75x0.32)	50.8x1.83(2.0x.072)
	Material	(1)	Aluminum Coated Steel
Inter-mediate pipe	o.d. & wall thickness	50.8x1.83(2.0x.072)	
	Material	Aluminum Coated Steel	
Tail pipe	o.d. & wall thickness	44.45x1.83(1.75x.072)	
	Material	Aluminum Coated Steel	

(1) Laminated Tubing - Steel Inner, Stainless Steel Outer.

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Electrical – Supply System

Battery	Voltage rtg. (V & total plates)	12 Volt	
	Minimum reserve cranking	60 min (MT), 70 min (AT) @	115 minutes
	SAE capacity (amps)	310 (MT)-Base, 390 (MT)-HD 355 (AT)-Base, 390 (AT)-HD	550
	Location	Engine Compartment, R.F.	Engine Compartment, L.F.
Generator or alternator	Type and rating	42 Amps	50 Amps
	Ratio (alt. crank/rev.)		1.75
	Optional (type & rating)		
Regulator	Type	Micro Circuit; Integral	Integrated Circuit

Electrical – Starting System

Start. motor	Current drain at 0°F		
Motor drive	Engagement type	Positive Shift Solenoid	
	Pinion engages from (front, rear)	Rear	

@ 90 Minutes with H.D. Battery

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 RPO LJ5

Electrical – Ignition System

Type	Conventional (std., opt., n.a.)		Not Available
	Transistorized (std., opt., n.a.)		—
	Other (specify)		High Energy Ignition (HEI)
Coil	Make		Delco Remy
	Model		1115454
	Current	Engine stopped — A	Applicable
		Engine idling — A	
Spark plug	Make		AC
	Model		R42TS
	Thread (mm)		M14x1.25
	Tightening torque (N-m (lb., ft.))		9-20 (7-15)
	Gap		0.889 (.035)
Distributor	Make		Delco Remy
	Model		1103506

Electrical – Suppression

Locations & type	Internal alternator capacitor, non-metallic high-tension cables, resistor spark plugs, ignition coil by-pass capacitor, internal AC blower motor by-pass capacitor & A/C compression diode, with radio provisions; hood grounding clip, engine to dash panel ground strap, fuse block capacitor and on "heater only" blower motors and coax capacitor.
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Electrical – Instruments and Equipment

Speed-ometer	Type	Circular Dial With Pointer
	Trip odometer (std., opt., n.a.)	Not Available
EGR maintenance indicator		None
Charge indicator	Type	Tell-Tale Warning Light
	Warning device	None
Temperature indicator	Type	Tell-Tale Warning Light
	Warning device	None
Oil pressure indicator	Type	Tell-Tale Warning Light
	Warning device	None
Fuel indicator	Type	Electric Gage
	Warning device	None
Wind-shield wiper	Type (standard)	Electric 2-Speed
	Type (optional)	None
	Blade length	403.4 (15.9 in.)
	Swept area (cm ² (in. ²))	3951 (612.5 in ²)
Wind-shield washer	Type (standard)	Electric Push-Button
	Type (optional)	None
	Fluid level indicator	None
Horn	Type	Electric Vibrator
	Number used	One
Other	Parking Brake Warning Light and Brake Failure Warning Light, Restraint System Warning Light and Buzzer.	

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Transmissions

Manual 3-speed (std., opt., n.a.)	Not Available	
Manual 4-speed (std., opt., n.a.)	Base	Not Available
Manual 5-speed (std., opt., n.a.)	Optional	Base
Manual overdrive (std., opt., n.a.)	Included with 5-Speed Transmission	
Automatic (std., opt., n.a.)	Optional (with Converter Clutch)	
Automatic overdrive (std., opt., n.a.)	Not Available	

Manual Transmission

Number of forward speeds		4	5	5
Transmission ratios	In first	3.75	3.76	3.76
	In second	2.16	2.18	2.18
	In third	1.38	1.36	1.42
	In fourth	1.00	1.00	1.00
	In fifth	--	.86	.86
	In overdrive	--	--	--
	In reverse	3.82	3.76	3.76
Synchronous meshing (specify gears)		All Forward Gears		
Shift lever location		Floor Mounted		
Lubricant	Capacity [L (pt.)]	1.6 (3.4)		1.55 (3.3)
	Type recommended	GL-5 Gear Lubricant		
	SAE viscosity number	Summer	80W or 80W-90	SAE 5W-30SF
		Winter	80W or 80W-90	SAE 5W-30SF
		Extreme cold	80W or 80W-90	SAE 5W-30SF

Clutch (Manual Transmission)

Make & type		(1) Borg & Beck, Dry Single Plate	Daikin, Dry Single Plate
Type pressure plate springs		Diaphragm	Diaphragm
Total spring load [N (lb.)]		4182 (940) (2)	3234 (727)
No. of clutch driven discs		One	
Clutch facing	Material	Molded Type Asbestos	Special Woven N13
	Manufacturer	Borg & Beck (3)	Hitachi Kasel
	Part number	14032337 (4-Speed) (4)	94241951
	Rivets/plate	16 (5)	
	Rivet size	3.63x5.41 (.143x.213)	4.0 (0.157)
	Outside & inside dia.	180x131 (8.0x6.0)	180x131 (8.0x5.16)
	Total eff. area [cm ² (in. ²)]	142 (22.0)	362.9
	Thickness	8.128 (.320)	3.5 (.138)
Engagement cushion method		Flat Spring Steel Between Facings	
Release bearing	Type & method of lubrication	Single Row Ball, Packed & Sealed Angular Contact Ball Bearings	
Torsional damping	Method: springs, friction material	Coil Springs	

- (1) Luc, Inc., Dry Single Plate for 5-Speed (4) 14061690 for 5-Speed
 (2) 5512 (1240) for 5-Speed (5) 18 for 5-Speed
 (3) Luc, Inc., for 5-Speed

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Automatic Transmission

Trade name		3-Speed Automatic	
Type (describe)		Torque Converter with Planetary Gears	
Selector	Location	180-C	Floor Mounted 200-C
	Ltr./No. designation	P-R-N-D-2-1	
Gear ratios	R	1.92	2.07
	D	1.00	1.00
	L ₃	1.48	1.57
	L ₂	2.40	2.74
	L ₁		
Max. upshift speed - drive range [km/h (mph)]			
Max. kickdown speed - drive range [km/h (mph)]			
Min. overdrive speed [km/h (mph)]		—	
Torque converter	Number of elements	3	
	Max. ratio at stall	2.25	
	Type of cooling (air, liquid)	Liquid	
	Nominal diameter	245 (9.65)	
Lubricant	Capacity (refill L (pt.))	2.8 (6.0)	
	Type recommended	Dexron II	
Special transmission features		Torque Converter Clutch, 3rd Gear Lock-Up	

Axle or Front Wheel Drive Unit

Type (front, rear)		Rear	
Description		Semi-Floating with Hypoid Overhung Pinion Gear	
Limited slip differential (type)		Not Available	
Drive pinion offset		28.4 (1.12)	
Drive pinion (type)		Hypoid Gear	
No. of differential pinions		Two	
Pinion adjustment (shim, other)		Shims	
Pinion bearing adj. (shim, other)		Collapsible Sleeve	
Driving wheel bearing (type)		Direct Single Row Ball	
Lubricant	Capacity [L (pt.)]		0.8 (1.75)
	Type recommended		GL-5 Gear Lubricant
	SAE viscosity number	Summer	80W or 80W-90
		Winter	80W or 80W-90
		Extreme cold	80W or 80W-90

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

Axle ratio or overall ratio (:1)		3.36, 3.62	
No. of teeth	Pinion	10	
	Ring gear or gear	37	
Ring gear o.d.		165 (6.50)	
Transaxle	Transfer gear ratio	Not Available	
	Final drive ratio	Not Available	

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2-DOOR
 HATCHBACK COUPE
 RPO 2TL08

4-DOOR
 HATCHBACK SEDAN
 RPO 2TL68

Propeller Shaft — Conventional Drive

Type (straight tube, tube-in-tube, internal-external damper, etc.)		(a)	(b)
Outer diam. x length* x wall thickness	Manual 3-speed trans	Not Available	
	Manual 4-speed trans.	50.8 x 7.31.5 x 1.40 (2.0 x 28.8 x .055)	50.8 x 808.2 x 1.40 (2.0 x 31.8 x .055)
	Manual 5-speed trans.	50.8 x 535.2 x 1.40 (20.0 x 21.1 x .055)	50.8 x 611.4 x 1.40 (2.0 x 24.1 x .055)
	Overdrive	Not Available	
	Automatic transmission	5.08 x 586.0 x 1.40 (2.0 x 23.1 x .055)	50.8 x 662.2 x 1.40 (2.0 x 26.1 x .055)
Inter-mediate bearing	Type (plain, anti-friction)	Anti-Friction	
	Lubrication (fitting, prepack)	Pre-Packed	
Slip yoke	Type	Spline	
	Number of teeth	27	
	Spline o.d.	28 (1.2)	
Universal joints	Make and mfg. no.	Front	Saginaw 23
		Rear	
	Number used	Two	
	Type (ball and trunnion, cross)	Cross	
	Rear attach (u-bolt, clamp, etc.)	U-Bolt	
	Bearing	Type (plain, anti-friction)	Anti-Friction
Lubric. (fitting, prepack)		Pre-Packed	
Drive taken through (torque tube, arms or springs)		Control Arms	
Torque taken through (torque tube, arms or springs)		Torque Tube	

* Centerline to centerline of universal joints, or to centerline of rear attachment.

- (a) Straight tube attached to "U" joints to a solid steel pinion extension.
 A torque tube housing extension shaft is bolted.
- (b) Tuned torsional damper used with automatic transmission and gasoline engines.

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line 1000
 Model Year 1983 Issued 10-15-82 Revised (*)

Engine Description/Carb.
 Engine Code

2-DOOR
 HATCHBACK COUPE
 RPO 2TL08

4-DOOR
 HATCHBACK SEDAN
 RPO 2TL68

Tires And Wheels (Standard)

Tires	Size (load range, ply)		P155/80R-13 (BW,WW)
	Type (bias, radial, etc.)		Glass Belted Radial
	Inflation pressure (cold) for recommended max. vehicle load	Front (kPa (psi))	205 (30)
		Rear (kPa (psi))	205 (30)
	Rev./mile—at 70 km/h (45 mph)		569 (916)
Wheels	Type & material		Short Yoke Disc, Steel
	Rim (size & flange type)		13 x 5
	Wheel offset		37 mm
	Attachment	Type (bolt or stud)	Stud
		Circle diameter	100 mm
Number & size		4 Hex Nuts - M12x1.5	
Spare	Tire and wheel (same, if other describe)		14 x 4 (49 mm); Compact Tire - T115/70D-14
	Storage position & location (describe)		Flat Under Rear Load Floor

Tires And Wheels (Optional)

Size (load range, ply)		P175/70R-13 (BW,WW)
Type (bias, radial, etc.)		Steel Belted Radial
Wheel (type & material)		
Rim (size, flange type and offset)		
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)		
Rim (size, flange type and offset)		
Size (load range, ply)		
Type (bias, radial, etc.)		
Wheel (type & material)		
Rim (size, flange type and offset)		
Spare tire and wheel (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)		

Brakes — Parking

Type of control		Grip Handle
Location of control		One Floor Between Seats
Operates on		Rear Service Brakes
If separate from service brakes	Type (internal or external)	--
	Drum diameter	--
	Lining size (length x width x thickness)	--

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line 1000
 Model Year 1983 Issued 10-15-82 Revised (*)

Body Type And/Or
 Engine Displacement

2-DOOR HATCHBACK COUPE RPO 2TL08	4-DOOR HATCHBACK SEDAN RPO 2TL68
--	--

Brakes - Service

Description			
Brake type (std., opt., n.a.)	Front (disc or drum)	Disc	
	Rear (disc or drum)	Drum	
Self-adjusting (std., opt., n.a.)			Standard
Special valving	Type (proportion, delay, metering, other)	Proportioning	
Power brake (std., opt., n.a.)			Optional
Booster type (remote, integral, vac., hyd., etc.)			Integral
Anti-skid device type (std., opt., n.a.)			Not Available
Effective area [cm ² (in. ²)] *			514.9 (79.83)
Gross lining area [cm ² (in. ²)] **			--
Swept area [cm ² (in. ²)] ***			1804.5 (279.77)
Rotor	Outer working diameter	F	246 (9.68)
		R	--
	Inner working diameter	F	143.8 (5.66)
		R	--
	Thickness	F	11 (.433)
		R	--
	Material & type (vented/solid)	F	Cast Iron, Solid
		R	--
Drum	Diameter (nominal)	F	--
		R	200 (7.87)
	Type and material	Duo-Servo; Cast Iron	
Wheel cyl- inder bore	Front	52 (2.05)	
	Rear	17.5 (0.69)	
Master cylinder	Bore	22 (0.87)	
	Stroke	33 (1.30)	
Pedal arc ratio			6.5:1 Manual; 4.75:1 Power
Line pressure at 445 N (100 lb.) pedal load [kPa (psi)]			--
Lining clearance per shoe	Front	Self Adjusting	
	Rear	Self Adjusting	
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)	Bonded
		Rivet size	--
		Manufacturer	Delco Moraine
		Lining code	--
		Material	Semi-Metallic
		**** Primary or out-board	117 x 54.7 x 10.9 (4.6 x 2.15 x .43)
		Size Secondary or in-board	123 x 48.8 x 11.4 (4.8 x 1.92 x .45)
		Shoe thickness (no lining)	--
	Rear wheel	Bonded or riveted (rivets/seg.)	Riveted
		Manufacturer	Delco Moraine
		Lining code	--
		Material	Organic
		**** Primary or out-board	167.7 x 43.9 x 3.8 (6.6 x 1.73 x 0.15)
		Size Secondary or in-board	203.3 x 43.9 x 4.8 (8.0 x 1.73 x 0.19)
		Shoe thickness (no lining)	2.75 (.106)

* 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 Working Dia. minus Square of Inner Working Dia. multiplied by Pi/2 for each brake.)

**** Size for drum brakes includes length x thickness.

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line 1000
 Model Year 1983 Issued 10-15-82 Revised (*) _____

Body Type And/Or
 Engine Displacement

2-DOOR HATCHBACK COUPE 2TL08	4-DOOR HATCHBACK SEDAN 2TL68
------------------------------------	------------------------------------

Steering

Manual (std., opt., n.a.)			Standard	
Power (std., opt., n.a.)			Optional (a)	
Adjustable steering wheel (tilt, swing, other)	Type and description		Tilt-Universally Jointed Steering Shaft at Base of Steering Wheel	
	(Std., opt., n.a.)		Optional	
Wheel diameter	Manual		381 (15.0)	
	Power		381 (15.0)	
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	10.5 (34.3)	10.6 (34.9)
		Curb to curb (l. & r.)	9.2 (30.2)	9.4 (30.8)
	Inside rear	Wall to wall (l. & r.)	5.0 (16.5)	
		Curb to curb (l. & r.)	4.8 (15.9)	
Manual	Gear	Type	Rack and Pinion	
		Make	Saginaw Steering Gear	
		Ratios	Gear	19.0:1
			Overall	18.4:1
	No. wheel turns (stop to stop)		3.6	
Power	Type (coaxial, linkage, etc.)			
	Make		Saginaw Steering Gear	
	Gear	Type	Rack and Pinion with Integral Power Unit	
		Ratios	Gear	
			Overall	18.0:1
	Pump (drive)		V Velt Off Crankshaft Pulley	
No. wheel turns (stop to stop)		--		
Linkage	Type		Rack and Pinion	
	Location (front or rear of wheels, other)		Front	
	Drag links (trans. or longit.)		None	
	Tie rods (one or two)		Two	
Steering axis	Inclination at camber (deg.)		7.55	
	Bearings (type)	Upper	Ball Joint	
		Lower	Ball Joint	
		Thrust	None	
Steering spindle & joint type		Forged Knuckle W/Upper and Lower Spherical Joints		
Wheel spindle	Diameter	Inner bearing	26.97 (1.06)	
		Outer bearing	17.45 (0.69)	
	Thread (size)		3/4 - 20 NEF (MIG-T)	
	Bearing (type)		Tapered Roller	

(a) With Gas Engine, Automatic Transmission Must Be Ordered.

MVMA Specifications Form
Passenger Car
(METRIC (U.S. Customary))

Car Line 1000
 Model Year 1983 Issued 10-15-82 Revised (*)

Body Type And/Or
 Engine Displacement

2-DOOR
 HATCHBACK COUPE
 2TL08

4-DOOR
 HATCHBACK SEDAN
 2TL68

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	+3.0° to +7.0°
		Camber (deg.)	-.5° to +.9°
		Toe-in [outside track-mm (in.)]	-.02° to +.14° (-.5 mm to +3.5 mm)
	Service reset*	Caster	+5.0° +/- 1°
		Camber	+2.0 +/- .4°
		Toe-in	+0.06° +/- .04° (+1.5 +/- 1.00 mm)
	Periodic M.V. in-spection	Caster	+3.0° to +7.0°
		Camber	-1.25° to +1.75°
		Toe-in	-.02° to +.14° (-.5 mm to +3.5 mm)
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	
		Toe-in [outside track-mm (in.)]	
	Service reset*	Camber	
		Toe-in	
	Periodic M.V. in-spection	Camber	
		Toe-in	

* Indicates pre-set, adjustable, trend set or other.

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line 1000
 Model Year 1983 Issued 10-15-82 Revised (*)

Body Type And/Or
 Engine Displacement

2-DOOR HATCHBACK COUPE 2TL08	4-DOOR HATCHBACK SEDAN 2TL68
------------------------------------	------------------------------------

Suspension — General

Car leveling	Std./opt./n.a.	None
	Type (air, hyd., etc.)	--
	Manual/auto. controlled	--
Provision for brake dip control		Front Suspension Geometry
Provision for accel. squat control		Rear Suspension Geometry
Special provisions for car jacking		Bumper Slots in Bottom of Front and Rear Bumper Face Bars
Shock absorber (front & rear)	Type	Direct, Double Acting, Hydraulic
	Make	Delco
	Piston diameter	25 (1.0)
Other special features		--

Suspension — Front

Type and description		Independent SLA
Travel	Full jounce	--
	Full rebound	--
Spring	Type (coil, leaf, other)	Coil
	Material	Steel Alloy
	Size (coil design height & i.d., bar length x dia.)	209.3 (8.24) x 8.17 (3.22) x 2690.8 (105.9) x 12.06 (0.475)
	Spring rate [N/mm (lb./in.)]	28 (160)
	Rate at wheel [N/mm (lb./in.)]	12.9 (74)
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	HR Steel - 22 (.87)

Suspension — Rear

Type and description		Solid Axle, Positioned by Links, Torque Tube and Track Bar
Drive and torque taken through		Control Arms, Torque Tube
Travel	Full jounce	--
	Full rebound	--
Spring	Type (coil, leaf, other)	Coil
	Material	Steel Alloy
	Size (length x width, coil design height & i.d., bar length & dia.)	233.7 (9.20) x 92.62 (3.65) x 2301.9 (90.6) x 13.19 (0.519)
	Spring rate [N/mm (lb./in.)]	27.1 (155) - Variable Rate
	Rate at wheel [N/mm (lb./in.)]	20.5 (117)
	Mounting insulation (type)	--
	If leaf	No. of leaves
		Shackle (comp. or tens.)
Stabilizer	Type (link, linkless, frameless)	None
	Material & bar diameter	--
Track bar (type)		Tubular, with Rubber Bushings

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line 1000
 Model Year 1983 Issued 10-15-82 Revised (*)

Body Type

2-DOOR
 HATCHBACK COUPE
 2TL08

4-DOOR
 HATCHBACK SEDAN
 2TL68

Body — Miscellaneous Information

Type of finish (lacquer, enamel, other)	Acrylic Lacquer	
Hood	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Prop Rod
	Release control (internal, external)	Internal
Trunk lid	Type (counterbalance, other)	Telescoping Gas Strut - Left Side
	Internal release control (elec., mech., n.a.)	Not Available
Bumper front	Bar material & mass (wt.)	Steel 9.365 (20.6)
	Reinforcement material & mass (wt.)	Steel 2.835 (6.2)
Bumper rear	Bar material & mass (wt.)	Steel 8.487 (18.7)
	Reinforcement material & mass (wt.)	None
Vent window control (crank, friction, pivot, power)	Front	None
	Rear	Friction Pivot
Seat cushion type	Front	Formed Foam Pad
	Rear	Formed Foam Pad
	3rd seat	None
Seat back type	Front	Formed Foam Pad
	Rear	Formed Foam Pad
	3rd seat	None
Vehicle ident. no. location	Top Left Hand of Instrument Panel Pad	

Passive Restraint System

Inflatable restraint system	Standard/optional	None
	Type of charging system	
	Location (stg. whl., instru. panel, other)	
Passive seat belts	Standard/optional	
	Power/manual	
	2 or 3 point	
	Knee bar/lap belt	

Frame

Type and description (separate frame, unitized frame, partially-unitized frame)	Unitized Frame with Crossmember Reinforcement.
---	--

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line 1000
Model Year 1983 Issued 10-15-82 Revised (*)

Body Type

2-DOOR
HATCHBACK COUPE
2TL08

4-DOOR
HATCHBACK SEDAN
2TL68

Convenience Equipment

[illegible]

MVMA Specifications Form
Passenger Car

Car Line 1000
Model Year 1983 Issued 10-15-82 Revised (e) _____

FEATURE HIGHLIGHTS

(Manufacturers selected list of special vehicle features;
indicate if new or model year introduced)

BODY:

CHASSIS:

ENGINE:

ELECTRICAL:

OTHER:

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line 1000
Model Year 1983 Issued 10-15-82 Revised (*) _____

[illegible]

* Reference — SAE J1100a, Motor vehicle dimensions, curb weight definition.
** Shipping mass (weight) definition —

METRIC (U.S. Customary)

Model Year 1983 Issued 10-15-82 Revised (•) _____

[illegible]

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

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)
Car and Body Dimensions See Key Sheets for definitions

Car Line 1000
Model Year 1983 Issued 10-15-82 Revised (*)

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.

Body Type	SAE Ref. No.	2-DOOR HATCHBACK COUPE 2TL08	4-DOOR HATCHBACK SEDAN 2TL68
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Width

Tread (front)	W101	1300 (51.2)	
Tread (rear)	W102	1300 (51.2)	
Vehicle width	W103	1570 (61.8)	
Body width at Sq RP (front)	W117	1546 (60.9)	
Vehicle width (front doors open)	W120	3384 (133.2)	3048 (120.0)
Vehicle width (rear doors open)	W121	--	2974 (117.1)

Length

Wheelbase	L101	2394 (94.3)	2466 (97.2)
Vehicle length	L103	4111 (161.9)	4183 (164.8)
Overhang (front)	L104	787 (31.0)	
Overhang (rear)	L105	930 (36.6)	
Upper structure length	L123	2510 (98.8)	2586 (101.8)
Rear wheel C/L "X" coordinate	L127	2179 (95.5)	
Cowl point "X" coordinate	L125	306 (12.0)	

Height*

Passenger distribution (frt./rear)	PD1,2,3	2-0	**	2-0
Trunk/cargo load			**	
Vehicle height	H101	1342 (52.9)		1341 (52.8)
Cowl point to ground	H114	894 (35.2)		893 (35.2)
Deck point to ground	H138	957 (37.7)		958 (37.7)
Rocker panel-front to ground	H112	206 (8.1)		205 (8.1)
Bottom of door closed-front to grd.	H133	269 (10.6)		269 (10.6)
Rocker panel-rear to ground	H111	203 (8.0)		202 (7.9)
Bottom of door closed-rear to grd.	H135	--		266 (10.5)

Ground Clearance*

Front bumper to ground	H102	327 (12.9)	326 (12.8)
Rear bumper to ground	H104	330 (13.0)	331 (13.0)
Bumper to ground (front at curb mass (wt.))	H103	357 (14.1)	
Bumper to ground (rear at curb mass (wt.))	H105	349 (13.7)	
Angle of approach	H108	18.6°	18.4°
Angle of departure	H107	24.7°	27.5°
Ramp breakover angle	H147	18.0°	17.4°
Rear axle differential to ground	H153	272 (10.7)	272 (10.7)
Min. running ground clearance	H156	144 (5.7)	143
Location of min. run. grd. clear.		Front Suspension	

All linear dimensions are in millimeters (inches) and all mass (weight) specifications are in kilograms (pounds).

* 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.

** All Vehicle Height and Ground Clearances are Made Using EPA Loaded Vehicle Weight, Loading Conditions.

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Car and Body Dimensions See Key Sheets for definitions

Car Line 1000
Model Year 1983 Issued 10-15-82 Revised (*)

Body Type

SAE Ref. No.	2-DOOR HATCHBACK COUPE 2TL08	4-DOOR HATCHBACK SEDAN 2TL68
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Front Compartment

Sg RP front, "X" coordinate	L31	1118 (44.0)	
Effective head room	H61	960 (37.8)	974 (38.3)
Max. eff. leg room (accelerator)	L34	1058 (41.6)	
Sg RP (front to heel)	H30	259 (10.2)	
Design H-point front travel	L17	134 (5.3)	
Shoulder room	W3	1261 (49.7)	
Hip room	W5	1270 (50.0)	
Upper body opening to ground	H50	1232	
Steering wheel angle	H18	30.2°	
Back angle	L40	26.5°	

Rear Compartment

Sg RP Point couple distance	L50	678 (26.7)	754 (29.7)
Effective head room	H63	945 (37.2)	937 (36.9)
Min. effective leg room	L51	785 (30.9)	884 (33.2)
Sg RP (second to heel)	H31	268 (10.5)	268 (10.5)
Knee clearance	L48	-62 (-2.4)	4 (0.2)
Compartment room	L3	584 (23.0)	662 (26.1)
Shoulder room	W4	1254 (49.4)	1256 (49.4)
Hip room	W6	1045 (41.1)	1047 (41.2)
Upper body opening to ground	H51	--	1225

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	--	--
Liftover height	H195	752 (29.6)	757 (29.8)

All linear dimensions are in millimeters (inches).

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Car and Body Dimensions See Key Sheets for definitions

Car Line 1000
Model Year 1983 Issued 10-15-82 Revised (*)

Body Type

SAE Ref. No.	2-DOOR HATCHBACK COUPE 2TL08	4-DOOR HATCHBACK SEDAN 2TL68
--------------	------------------------------------	------------------------------------

Station Wagon - Third Seat

Shoulder room	W85	Not
Hip room	W86	Applicable
Effective leg room	L86	
Effective head room	H86	
Effective T-point head room	H89	
Seat facing direction	SD1	

Station Wagon - Cargo Space

Cargo length (open front)	L200	
Cargo length (open second)	L201	
Cargo length (closed front)	L202	
Cargo length (closed second)	L203	Not
Cargo length at belt (front)	L204	Applicable
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	
Tailgate 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	

Hatchback - Cargo Space

Front seat back to load floor height	H197	488 (19.2)	488 (19.2)
Cargo length at front seat back height	L208	1024 (40.3)	1100 (43.3)
Cargo length at floor (front)	L209	1471 (57.9)	1547 (60.9)
Cargo volume index [m ³ (ft. ³)]	V3	764L (27.0)*	811L (28.6 cu.ft.)*
Hidden cargo volume [m ³ (ft. ³)]	V4	--	

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.

All dimensions are in millimeters (inches).

*VII - Hatchback, Cargo Volume Index - Second Seat Up, 263 (9.3).

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Car and Body Dimensions See Key Sheets for definitions

Car Line 1000

Model Year 1983

Issued 10-15-82

Revised (*)

Body Type	2-DOOR	4-DOOR
	HATCHBACK COUPE	HATCHBACK SEDAN
	2TL08	2TL68

Vehicle Fiducial Marks

Fiducial Mark Number*		Define Coordinate Location
Front	(1)	X - Fiducial mark to vertical base grid line - front, measured horizontally from the base grid line to the front fiducial mark located on top of the front seat adjuster mounting bolt.
	Y	Fiducial mark to centerline of car - front, width measurement made from centerline of car to fiducial mark located on top of the front seat adjuster mounting bolt.
Rear	(2)	Z - Fiducial mark to horizontal base grid - front, measured vertically from base grid line to front fiducial mark located on top of the front seat adjuster mounting bolt.
	(1)	X - Fiducial mark to vertical base grid line - rear, measured horizontally from base grid line to the rear fiducial mark located on rear underbody crossbar.
Fiducial Mark Number	Y	Fiducial mark to centerline of car - rear, width measurement made from centerline of car to fiducial mark located on the rear underbody crossbar.
	(2)	Z - Fiducial mark to horizontal base grid line - rear, measured vertically from base grid line to the rear fiducial mark located on rear underbody crossbar.
Front	W21	504 (19.8)
	L54	1850 (72.8)
	H81	250 (9.8)
	H161	290 (11.4)
	H163	267 (10.5)
Rear	W22	195 (7.7)
	L55	2850 (112.3) 2926 (115.3)
	H82	378 (14.9)
	H162	422 (16.2)
	H164	404 (15.9)
(1) Base Grid is 1100 mm Line		
(2) Base Grid is 0 mm Line		

* Reference - SAE Recommended Practice, J182a, Motor Vehicle Fiducial Marks - September, 1973.
All linear dimensions are in millimeters (inches).

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)
Car and Body Dimensions See Key Sheets for definitions

Car Line 1000
Model Year 1983 Issued 10-15-82 Revised (*) _____

Body Type	SAE Ref. No.	2-DOOR HATCHBACK COUPE 2TL08	4-DOOR HATCHBACK SEDAN 2TL68
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Glass

Backlight slope angle (deg.)	H121	62.5°	
Windshield slope angle (deg.)	H122	52.8°	
Tumble-Home (deg.)	W122	20.3°	
Windshield glass exposed surface area [cm ² (in. ²)]	S1	6735 (1043.9)	
Side glass exposed surface area [cm ² (in. ²)]	S2	9926 (1538.5)	10903 (1690.0)
Backlight glass exposed surface area [cm ² (in. ²)]	S3	5835 (904.4)	
Total glass exposed surface area [cm ² (in. ²)]	S4	22496 (3486.9)	23473 (3638.3)
Windshield glass (type)		Curved - Laminated Plate	
Side glass (type)		Curved - Tempered Plate	
Backlight glass (type)		Curved - Tempered Plate	

Lamps and Headlamp Shape*

Height above ground to center of bulb or marker	Headlamp (H127)	Highest**	667 (26.3)
		Lowest	--
	Taillamp (H128)	Highest**	694 (27.3)
		Lowest	--
	Sidemarker	Front	543 (21.4)
		Rear	695 (27.4)
Distance from C/L of car to center of bulb	Headlamp	Inside	--
		Outside**	562.0 (22.1)
	Taillamp	Inside	--
		Outside**	615 (24.2)
	Directional	Front	566 (22.3)
		Rear	615 (24.2)
	Headlamp shape		Rectangular

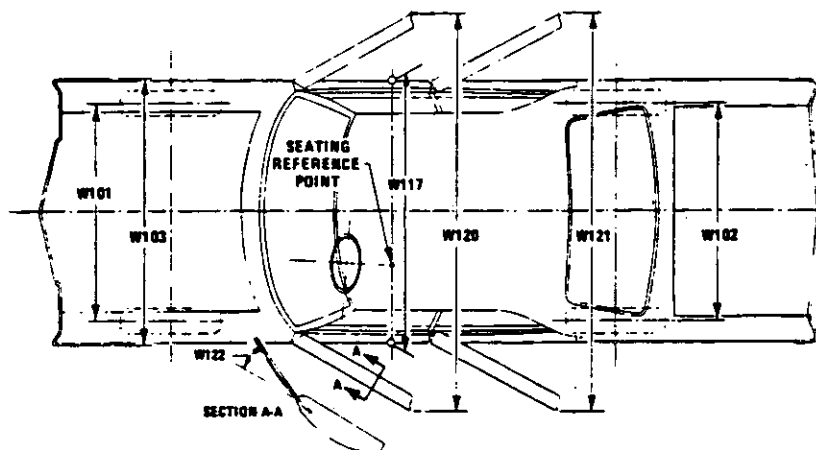
* Measured at curb mass (weight).

** If single lamps are used enter here.

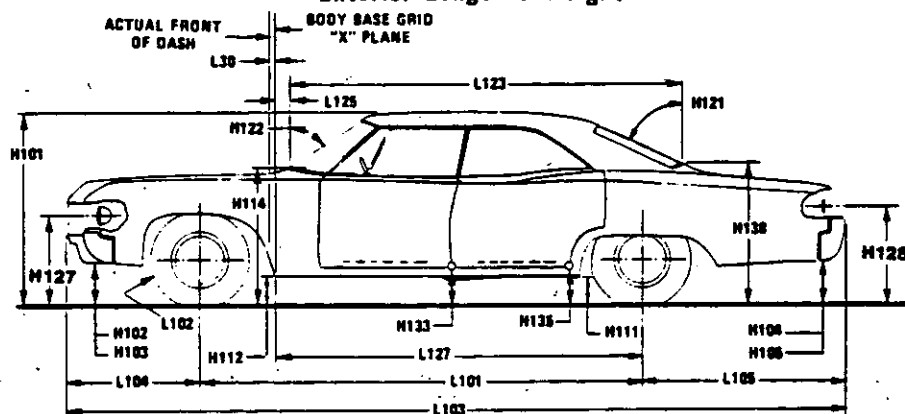
MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Exterior Car And Body Dimensions — Key Sheet

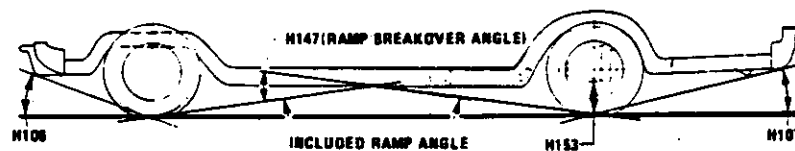
Exterior Width



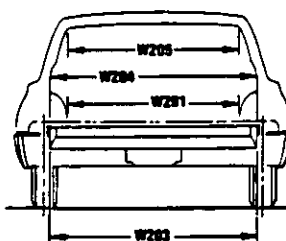
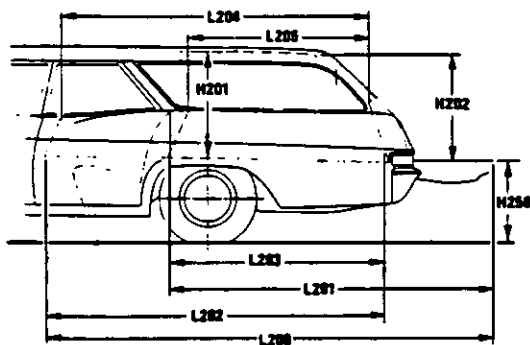
Exterior Length & Height



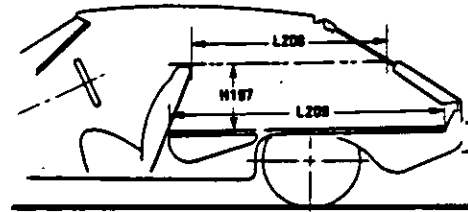
Exterior Ground Clearance



Cargo Space



Station Wagon



Hatchback

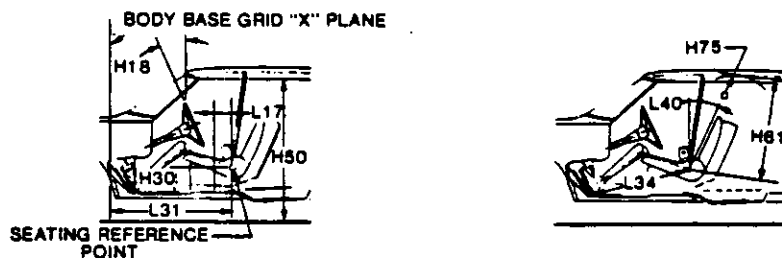
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Passenger Car

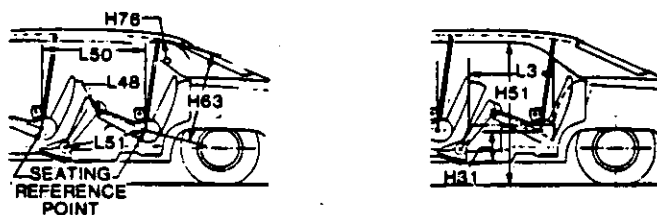
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Interior Car And Body Dimensions — Key Sheet

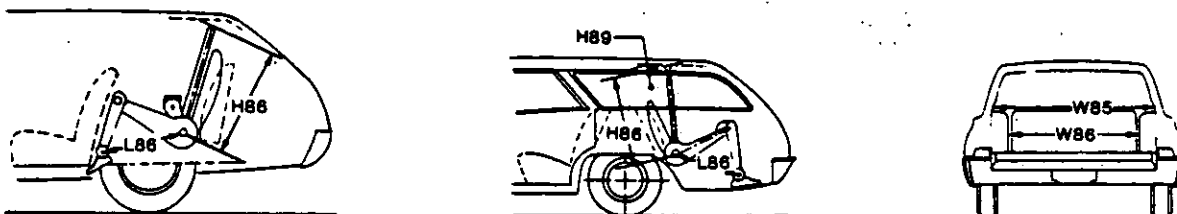
Front Compartment



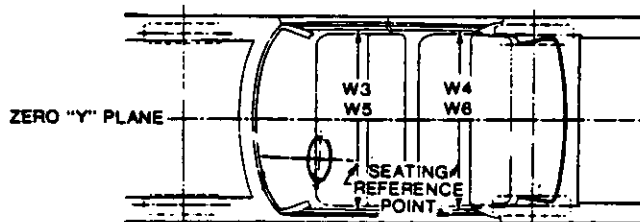
Rear Compartment



Third Seat



Interior Width



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Passenger Car

METRIC (U.S. Customary)

Exterior Car And Body Dimensions — Key Sheet

Dimensions 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 design 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 in 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 or in the case of dual rear axles, the coordinate shall be in 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 on 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 are running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the angle to be measured will be formed by a chord 457 mm (18.0 in.) long drawn from the lower DLO to the intersecting point on the windshield.
- H127 HEADLAMP TO GROUND—CURB MASS (WT.). The dimension measured vertically from the centerline of the lowest headlamp lens to ground.
- H128 TAILLAMP TO GROUND—CURB MASS (WT.). 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 the front bumper to ground, including bumper guards, if standard equipment.

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Passenger Car

METRIC (U.S. Customary)

Interior Car And Body Dimensions — Key Sheet

Dimensions Definitions

- H103 FRONT BUMPER TO GROUND CURB MASS (WT.). 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 MASS (WT.). 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 headlining plus 102 mm (4.0 in.).
- H75 EFFECTIVE T-POINT HEAD ROOM—FRONT. The minimum radius from the T-point to the headlining plus 762 mm (30 in.).
- L34 MAXIMUM EFFECTIVE LEG ROOM—ACCELERATOR. The dimension measured along a line from the ankle pivot center to the SgRP—front plus 254 mm (10.0 in.) 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 trace 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 254 mm (10.0 in.) 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 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP—front and 76 mm (3.0 in.) fore and aft 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 COUBLE 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 to the headlining, plus 102 mm (4.0 in.).
- 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 254 mm (10.0 in.).
- 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 51 mm (2.0 in.).
- 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 254-406 mm (10.0-16.0 in.) 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 330 mm (13.0 in.) 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 254 mm (10.0 in.).
- 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 102 mm (4.0 in.).
- H89 EFFECTIVE T-POINT HEAD ROOM—THIRD. Measured in the same manner as H75.

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METRIC (U.S. Customary)

Interior Car And Body Dimensions — Key Sheet

Dimensions Definitions

Station Wagon — Cargo Space Dimensions

- L200** CARGO LENGTH—OPEN—FRONT. The minimum dimension measured longitudinally from the back of 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 on the open tailgate or cargo floor surface 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 interferences 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 MASS WT.). 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:

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

Measured in mm:

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

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 the 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 seatback 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 seatback to the normal limiting interference of the hatchback door on the vehicle zero "Y" plane.

V3 HATCHBACK.

Measured in inches:

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

Measured in mm:

$$\frac{L208 + L209}{2} \times W4 \times H197 = \text{m}^3(\text{cubic meter})$$

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