

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC(U.S. Customary)

Passenger Car

1987

Manufacturer Pontiac Motor Division General Motors Corporation	Car Line Grand Am	
Mailing Address Chevrolet-Pontiac-Canada Group Engineering Center General Motors Corporation 30003 Van Dyke	Issued	Revised

Warren, Michigan 48090-9060

Questions concerning these specifications should be directed to the manufacturer whose address is shown above.

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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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Motor Vehicle Manufacturers Association
of the United States, Inc.

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Table of Contents

1	Car Models
2	Power Teams
3-6	Engine
4	Lubrication System
4	Diesel Information
5	Cooling System
6	Fuel System
7	Vehicle Emission Control
7	Exhaust System
8-10	Transmission, Axles and Shafts
11	Suspension-Front and Rear
12-13	Brakes
13	Tires and Wheels
14-15	Steering
15-16	Electrical
17	Body - Miscellaneous Information
18	Restraint System
18	Frame
18	Glass
19	Convenience Equipment
20-22	Car and Body Dimensions
23	Vehicle Fiducial Marks
24	Lamps and Headlamps
25	Vehicle Mass (Weight)
26	Optional Equipment Differential Mass (Weight)
27-33	Car and Body Dimensions Definitions - Key Sheets
34	Index

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 (based in part on SAE J1100 "Motor Vehicle Dimensions") may be available from the manufacturer.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) _____

Car Models

Model Description & Drive (FWD/RWD)	Introduction Date	Make, Car Line, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load—Kilograms (Pounds)
Grand Am Coupe		2NE27	2/3	60 (132)
Grand Am Sedan		2NE69	2/3	60 (132)
Grand Am LE Coupe		2NV27	2/3	60 (132)
Grand Am LE Sedan		2NV69	2/3	60 (132)
Grand Am SE Coupe		2NW27	2/3	60 (132)
Grand Am SE Sedan		2NW69	2/3	60 (132)

MVMA Specifications Form Passenger Car

Car Line GRAND AM
Model Year 1987 Issued _____ Revised (•) August, 1986

METRIC (U.S. Customary)

Power Teams (Indicate whether standard or optional)

SAE J1349 Net bhp (brake horsepower) and net torque corrected to 77°F/25° C and 29.61 in. Hg/100 kPa atmospheric pressure.

SERIES AVAILABILITY	ENGINE					E x h a u s t S/D	TRANSMISSION, TRANSAXLE	AXLE RATIO (std. first)
	Displ. Liters (in ³)	Carb. (Barrels, FI, etc.)	Compr. Ratio	SAE Net at RPM				
				Power kW (bhp)	Torque N·m (lb. ft.)			
NA00 (Std.)	2.5L (151) L4 L68	EFI	9.0:1	119@ 4400	(134@ 2800)	S	(Std.) Manual/ 5 Speed (opt.) Auto/ 3 Speed	Std. 3.35 Std. 2.84
NA00 (Opt.)	3.0L (181) V6 LN7	SFI	8.8:1	125@ 4900	(150@ 2400)	S	(Std.) Auto/3 Speed	Std. 2.84
NA00 (Opt.)	2.0L (121) L4 LT3	MFI TURBO	8.0:1	160@ 5600	160@ 2800	S	(Std.) Manual/ 5 Speed (Opt.) Auto/ 3 Speed	Std. 3.61 Std. 3.18

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued Revised (●) August, 1986

Engine Description/Carb.
Engine Code

2.5L L-4
(151 CID) (L68)

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	In Line, Front, Transverse
Manufacturer	Pontiac
No. of cylinders	4
Bore	101.6 (4.00)
Stroke	76.2 (3.00)
Bore spacing (C/L to C/L)	111.8 (4.40)
Cylinder block material & mass kg (lbs.) (machined)	Cast Iron 41.64 (91.8)
Cylinder block deck height	236.1 (9.3) From Pan Rail
Cylinder block length	
Deck clearance (minimum) (above or below block)	.64 (.025) Below
Cylinder head material & mass kg (lbs.)	Swirl Port Cast Iron 18.27 (40.2)
Cylinder head volume (cm ³)	45.62 (2.76)
Cylinder liner material	
Head gasket thickness (compressed)	1.12 (0.044)
Minimum combustion chamber total volume (cm ³)	70.82 (4.32)
Cyl. no. system (front to rear)*	L. Bank 1-2-3-4 R. Bank --
Firing order	1-3-4-2
Intake manifold material & mass [kg (lbs.)]**	Aluminum 3.70 (8.14)
Exhaust manifold material & mass [kg (lbs.)]**	Stainless Steel 1.72 (3.79)
Recommended fuel (leaded, unleaded, diesel)	Unleaded
Fuel antiknock index (R + M) 2	87
Total dressed engine mass (wt) dry***	164.316 (361.5)

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Cast Alum Alloy 530.0 (18.7)
--	---------------------------------

Engine - Camshaft

Location	Right Side of Block
Material & mass kg (weight, lbs.)	Cast Nodular Iron 3.375 (7.425)
Drive type	Chain / belt Gear 54T/27T
	Width / pitch 22.23 (.88) NDP#10

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

** Finished state.

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

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line GRAND AM
Model Year 1987 Issued August, 1986

Engine Description/Carb.
Engine Code

3.0L V-6
(181 CID) (LN7)

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	90°V
Manufacturer	ROC Flint
No. of cylinders	6
Bore	96.5 (3.80)
Stroke	67.6 (2.7)
Bore spacing (C/L to C/L)	107.7 (4.24)
Cylinder block material & mass kg (lbs.) (machined)	CAST IRON 42.284 (93.218)
Cylinder block deck height	210.4 (8.282)
Cylinder block length	398 (15.67)
Deck clearance (minimum) (above or below block)	.45 (.018) ABOVE
Cylinder head material & mass kg (lbs.)	CAST IRON 12.000 (26.455)
Cylinder head volume (cm ³)	40.48 (2.47)
Cylinder liner material	None
Head gasket thickness (compressed)	1.58 (.062)
Minimum combustion chamber total volume (cm ³)	64.2
Cyl. no. system (front to rear)*	I. Bank 1-3-5
	R. Bank 2-4-6
Firing order	1-6-5-4-3-2
Intake manifold material & mass [kg (lbs.)]**	ALUM 5.270 (11.618)
Exhaust manifold material & mass [kg (lbs.)]**	LT. 1.926 (4.246) STAINLESS STEEL
Recommended fuel (leaded, unleaded, diesel)	RT 2.470 (5.445) STAINLESS STEEL UNLEADED
Fuel antiknock index (R + M)	2 87
Total dressed engine mass (wt) dry***	176.3 (387.8)

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	530 (18.69)
--	-------------

Engine - Camshaft

Location	ABOVE CRANKSHAFT CENTER OF VEE
Material & mass kg (weight, lbs.)	CAST IRON ALLOY/2.82 (6.20)
Drive type	Chain/belt CHAIN
	Width/pitch 22.23/9.53

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

** Finished state.

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

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) August 1986

Engine Description/Carb.
Engine Code

2.0L
(121) L4
LT3

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)		Inline, Front, Transverse
Manufacturer		Brazil & Pontiac PLT 9
No. of cylinders		4
Bore		86 (3.39)
Stroke		86 (3.39)
Bore spacing (C/L to C/L)		93.0 (3.66)
Cylinder block material & mass kg (lbs.) (machined)		Cast Iron
Cylinder block deck height		216.0 (8.5)
Cylinder block length		418 (16.5)
Deck clearance (minimum) (above or below block)		0.36 Above 0.14 Below
Cylinder head material & mass kg (lbs.)		Aluminum
Cylinder head volume (cm ³)		43.3
Cylinder liner material		None
Head gasket thickness (compressed)		1.25 (.049)
Minimum combustion chamber total volume (cm ³)		64.05
Cyl. no. system (front to rear)*	L. Bank	1-2-3-4
	R. Bank	-
Firing order		1-3-4-2
Intake manifold material & mass [kg (lbs.)]**		Aluminum
Exhaust manifold material & mass [kg (lbs.)]**		Cast Iron
Recommended fuel (leaded, unleaded, diesel)		Unleaded
Fuel antiknock index (R + M)		87
Total dressed engine mass (wt) dry***		506.2 (229.6) Auto *
		532.9 (241.7) Manual *

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Cast Aluminum Alloy
	310 + 5 (10.9 + .18)

Engine - Camshaft

Location	Overhead Camshaft
Material & mass kg (weight, lbs.)	Hardened Alloy Cast Iron
Drive type	Chain / belt
	Belt
	Width / pitch
	20 (.78) x 9.525

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

** Finished state.

*** Dressed engine mass (weight) includes the following: *With Accessories Add 95.7 (+43.4)

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued Revised (●) August, 1986

Engine Description/Carb.
Engine Code

2.5L L-4
(151) CID) (L68)

Engine - Valve System

Hydraulic lifters (std., opt., NA)	Standard (Roller Lifters)
Valves	Number intake / exhaust 4/4
	Head O.D. intake / exhaust 43.69 (1.72) 38.10 (1.50)

Engine - Connecting Rods

Material & mass [kg., (weight, lbs.)]*	Cast Arma Steel
--	-----------------

Engine - Crankshaft

Material & mass [kg., (weight, lbs.)]*	Nodular Cast Iron 13.77 (30.3)
End thrust taken by bearing (no.)	5
Number of main bearings	5
Seal (material, one, two piece design, etc.)	Front One Piece Radial Lip-Viton
	Rear One Piece Radial Lip-Viton

Engine - Lubrication System

Normal oil pressure [kPa (psi) at engine rpm]	259.0 (37.5) @2000
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full Flow
Capacity of c/case, less filler-refill-L (qt.)	3.78 (4.0)

Engine - Diesel Information

Diesel engine manufacturer	NA
Glow plug, current drain at 0°F	
injector nozzle	Type Opening pressure [kPa (psi)]
Pre-chamber design	
Fuel in-jection pump	Manufacturer Type
Fuel injection pump drive (belt, chain, gear)	
Supplementary vacuum source (type)	
Fuel heater (yes/no)	
Water separator, description (std., opt.)	
Turbo manufacturer	
Oil cooler-type (oil to engine coolant; oil to ambient air)	
Oil filter	

Engine - Intake System

Turbo charger - manufacturer	
Super charger - manufacturer	
Charge cooler	

*Finished State

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) _____

Engine Description: Carb.
Engine Code

3.0L
(181) V6
LN7

Engine - Valve System

Hydraulic lifters (std., opt., NA)	Std.
Valves	6/6
Head O.D. intake / exhaust	43.4 (1.71) / 38.1 (1.50)

Engine - Connecting Rods

Material & mass [kg., (weight, lbs.)]*	Pearlitic Malleable / .620 kg. (1.327)
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Engine - Crankshaft

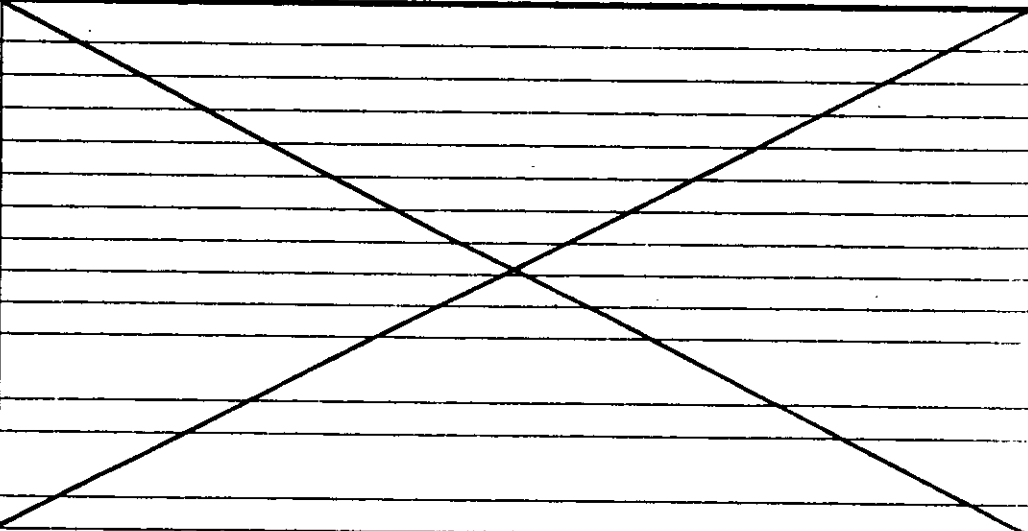
Material & mass [kg., (weight, lbs.)]*	Nodular Iron 13.76 (29.59)
End thrust taken by bearing (no.)	2
Number of main bearings	4
Seal (material, one, two piece design, etc.)	Front Spring Loaded Lip Rear Two Piece Rope

Engine - Lubrication System

Normal oil pressure [kPa (psi) at engine rpm]	255 @ 2400 RPM
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full Flow
Capacity of c/case, less filler-refill-L (qt.)	3.78 (4)

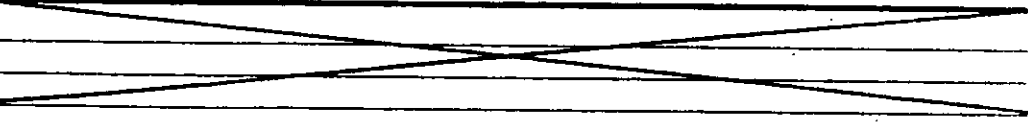
Engine - Diesel Information

NA

Diesel engine manufacturer	
Glow plug, current drain at 0°F	
Injector nozzle	
Type	
Opening pressure [kPa (psi)]	
Pre-chamber design	
Fuel injection pump	
Manufacturer	
Type	
Fuel injection pump drive (belt, chain, gear)	
Supplementary vacuum source (type)	
Fuel heater (yes/no)	
Water separator, description (std., opt.)	
Turbo manufacturer	

Engine - Intake System

NA

Turbo charger - manufacturer	
Super charger - manufacturer	
Charge cooler	
*Finished State	

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) August 1986

Engine Description/Carb.
Engine Code

2.0L
(121) L4
LT3

Engine - Valve System

Hydraulic lifters (std., opt., NA)	Standard
Valves	Number intake / exhaust 4/4
	Head O.D. intake / exhaust 43 (1.69)/36.5 (1.44)

Engine - Connecting Rods

Material & mass [kg., (weight, lbs.)]*	Cast Iron
--	-----------

Engine - Crankshaft

Material & mass [kg., (weight, lbs.)]*	Nodular Cast Iron 16.2 (35.71)
End thrust taken by bearing (no.)	Three
Number of main bearings	Five
Seal (material, one, two piece design, etc.)	Front One Piece-Viton
	Rear One Piece-Viton

Engine - Lubrication System

Normal oil pressure [kPa (psi) at engine rpm]	448 (65) @ 2500 RPM
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.5 (3.7)

Engine - Diesel Information

Diesel engine manufacturer	NA
Glow plug, current drain at 0°F	
Injector nozzle	Type Opening pressure [kPa (psi)]
Pre-chamber design	
Fuel injection pump	Manufacturer Type
Fuel injection pump drive (belt, chain, gear)	
Supplementary vacuum source (type)	
Fuel heater (yes/no)	
Water separator, description (std., opt.)	
Turbo manufacturer	
Oil cooler-type (oil to engine coolant; oil to ambient air)	
Oil filter	

Engine - Intake System

Turbo charger - manufacturer	Garrett
Super charger - manufacturer	None
Charge cooler	None

*Finished State

MVMA Specifications Form Passenger Car

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) August, 1986

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

2.5L
(151) L4
L68

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Std.
Coolant fill location (rad., bottle)		Bottle
Radiator cap relief valve pressure [kPa (psi)]		103.4 (15)
Circulation thermostat	Type (choke, bypass)	Choke
	Starts to open at °C (°F)	91° (195°)
Water pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	8.0
	Number of pumps	One
	Drive (V-belt, other)	V-Belt
	Bearing type	Ball
	Impeller material	Powdered Metal
	Housing material	Die Cast Alum
By-pass recirculation [type (inter, ext.)]		External-Thru Heater Core
Cooling system capacity	With heater-L[qt.]	7.42 (7.81)
	With air cond.-L[qt.]	7.46 (7.85)
	Opt. equipment [specify-L[qt.]]	
Water jackets full length of cyl. (yes, no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes, no)		Yes
Radiator core	Std., A/C, HD	Std. A/C
	Type (cross-flow, etc.)	Cross Flow
	Construction (fin & tube mechanical, braze, etc.)	Copper/ Brass
	Material, mass [kg (wtg. lbs.)]	3.45 kg. 5.36 kg.
	Width	600 (23.6) 600 (23.6)
	Height	314 (12.4) 377 (14.8)
	Thickness	25 (.98) 25 (.98)
	Fins per inch	8.5 10
Radiator end tank material		Brass Brass
Fan	Std., elec., opt.	Electric Electric
	Number of blades & type (flex, solid, material)	5 6
	Diameter & projected width	290 mm 373 mm
	Ratio (fan to crankshaft rev.)	NA NA
	Fan cutout type	NA NA
	Drive type (direct, remote)	Direct Drive Electric Motor
	RPM at idle (elec.)	2200 1900
	Motor rating (wattage) (elec.)	100W 150W
	Motor switch (type & location) (elec.)	Engine Block
	Switch point (temp., pressure) (elec.)	* Temp of Coolant
	Fan shroud (material)	None Plastic

* Low Speed 102°C or 260 PSI A/C Head Pressure
High Speed 108°C or 300 PSI A/C Head Pressure

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (•) August, 1986

Engine Description/Carb.
Engine Code

3.0L
(181) V6
LN7

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)	Std.	
Coolant fill location (rad., bottle)	Bottle	
Radiator cap relief valve pressure [kPa (psi)]	103.4 (15.0)	
Circulation thermostat	Type (choke, bypass) -	Bypass
	Starts to open at °C (°F)	91° (195°)
Water pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	8.0
	Number of pumps	One
	Drive (V-belt, other)	V-Belt
	Bearing type	Two-Row Ball
	Impeller material	Aluminum
	Housing material	Aluminum
By-pass recirculation [type (inter., ext.)]	External-Thru Heater Core	
Cooling system capacity	With heater-L(qt.)	9.46 (10.0)
	With air cond.-L(qt.)	9.72 (10.3)
	Opt. equipment [specify-L(qt.)]	
Water jackets full length of cyl. (yes, no)	Yes	
Water all around cylinder (yes, no)	Yes	
Water jackets open at head face (yes, no)	No	
Radiator core	Std., A/C, HD	Std. A/C
	Type (cross-flow, etc.)	Cross Flow
	Construction (fin & tube mechanical, braze, etc.)	Aluminum
	Material, mass [kg (wtg, lbs.)]	3.50 kg. 4.02 kg.
	Width	600 (23.6) 600 (23.6)
	Height	382 (15.0) 382 (15.0)
	Thickness	23.5 (.9) 34.0 (1.3)
	Fins per inch	10 10
Radiator end tank material	Plastic Plastic	
Fan	Std., elec., opt.	Electric Electric
	Number of blades & type (flex, solid, material)	6 6
	Diameter & projected width	381 381
	Ratio (fan to crankshaft rev.)	NA NA
	Fan cutout type	NA NA
	Drive type (direct, remote)	Direct Drive Electric Motor
	RPM at idle (elec.)	1900 1900
	Motor rating (wattage) (elec.)	150W 150 W
	Motor switch (type & location) (elec.)	Engine Block
	Switch point (temp., pressure) (elec.)	* Temp of Coolant
	Fan shroud (material)	None None

* Low Speed 102°C or 260 PSI A/C Head Pressure
High Speed 108°C or 300 PSI A/C Head Pressure

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

CarLine Grand Am
Model Year 1987 Issued _____ Revised (•) August 1986

Engine Description/Carb.
Engine Code

2.0L
(121) L4
LT3

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard
Coolant fill location (rad., bottle)		Bottle or Thermostate Housing
Radiator cap relief valve pressure [kPa (psi)]		103.4 (15 PSI)
Circulation thermostat	Type (choke, bypass)	By Pass
	Starts to open at °C (°F)	91°C (195°F)
Water pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump/rpm	
	Number of pumps	One
	Drive (V-belt, other)	Cam Shaft Drive Belt
	Bearing type	Sealed Ball Bearing
	Impeller material	Cast Iron
	Housing material	Aluminum
By-pass recirculation [type (inter., ext.)]		External-Thru Intake Manifold Internal
Cooling system capacity	With heater-L (qt.)	7.4L (7.8 qt.)
	With air cond.-L (qt.)	7.6L (8.0 qt.)
	Opt. equipment [specify -L (qt.)]	7.6L (8.0 qt.)
Water jackets full length of cyl. (yes, no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes, no)		Yes
Radiator core	Std., A/C, HD	Standard A/C
	Type (cross-flow, etc.)	Cross Flow
	Construction (fin & tube mechanical, braze, etc.)	High Efficiency Radiator
	Material, mass [kg (wgt, lbs.)]	Copper Brass
	Width	500 (19.7) 600.0 (23.6)
	Height	387.5 (15.25) 387.5 (15.25)
	Thickness	25.0 (.98) 40.0 (1.58)
	Fins per inch	14.5 20.3
	Radiator end tank material	Copper Brass
Fan	Std., elec., opt.	Electric
	Number of blades & type (flex, solid, material)	Standard - 5 A/C - 7
	Diameter & projected width	Standard - 290 (11.4) A/C - 373 (14.7)
	Ratio (fan to crankshaft rev.)	NA
	Fan cutout type	NA
	Drive type (direct, remote)	NA
	RPM at idle (elec.)	2200
	Motor rating (wattage) (elec.)	100 150
	Motor switch (type & location) (elec.)	Engine Block
	Switch point (temp., pressure) (elec.)	110°C
	Fan shroud (material)	Glass Filled Nylon

MVMA Specifications Form Passenger Car

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Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) August, 1986

Engine Description/Carb.
Engine Code

2.5L L-4
(151 CID) (L68)

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

Induction type: carburetor, fuel injection system, etc.		Throttle Body Injection	
Manufacturer		Rochester	
Carburetor	Choke (type)	None	
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	
		Automatic	
Idle A/F mix.		ECM Control	
Fuel injection	Point of injection (no.)	Throttle Body - Single Point	
	Constant, pulse, flow	Pulse	
	Control (electronic, mech.)	Electronic	
	System pressure [kPa (psi)]	83 KPA (12 PSI)	
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water	
Air cleaner type	Standard	Replaceable Paper Element	
	Optional		
Fuel pump	Type (elec. or mech.)	Electric	
	Location (eng., tank)	In Tank	
	Pressure range [kPa (psi)]	83 KPA (12 PSI)	

Fuel Tank SEE PAGE 6.1

Capacity (refill L (gallons))		
Location (describe)		
Attachment		
Material & Mass [kg (weight lbs)]		
Filler pipe	Location & material	
	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		

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) _____

Engine Description: Carb.
Engine Code

3.0L
(181) V6
LN7

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

Induction type: carburetor, fuel injection system, etc.			Port Fuel Injection
Manufacturer			Rochester
Carburetor	Choke (type)		NA
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	NA
		Automatic	NA
			NA
Idle A/F mix.			ECM Control
Fuel injection	Point of injection (no.)		Port
	Constant, pulse, flow		Pulse
	Control (electronic, mech.)		Electronic
	System pressure [kPa (psi)]		230-300 KPA (34-44 PSI)
Intake manifold heat control (exhaust or water thermostatic or fixed)			Water
Air cleaner type	Standard		Replaceable Paper Element
	Optional		
Fuel pump	Type (elec. or mech.)		Electrical
	Location (eng., tank)		Tank
	Pressure range [kPa (psi)]		230-300 KPA (34-44 PSI)

Fuel Tank

Capacity (refill L (gallons))		51.6 (13.6)
Location (describe)		Rear Center Underside, R.H. Rear Quarter Panel
Attachment		Underbody Strap
Material & Mass [kg (weight lbs)]		Steel
Filler pipe	Location & material	Right Rear Quarter Panel
	Connection to tank	Hoses
Fuel line (material)		Steel - GM124M
Fuel hose (material)		Rubber - GM6163M
Return line (material)		Steel - GM124M
Vapor line (material)		Steel - GM124M
Extended range tank	Opt., n.a.	NA
	Capacity [L (gallons)]	NA
	Location & material	NA
	Attachment	NA
Auxiliary tank	Opt., n.a.	NA
	Capacity [L (gallons)]	NA
	Location & material	NA
	Attachment	NA
	Selector switch or valve	NA
	Separate fill	NA

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) August, 1986

Engine Description/Carb.
Engine Code

2.0L
(121) L4
LT3

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

Induction type: carburetor, fuel injection system, etc.		Multi Point	
Manufacturer		Bosch	
Carburetor	Choke (type)	None	
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	
		Automatic	
Idle A:F mix.			
Fuel injection	Point of injection (no.)	4	
	Constant, pulse, flow	Pulse	
	Control (electronic, mech.)	Electronic	
	System pressure [kPa (psi)]		
Intake manifold heat control (exhaust or water thermostatic or fixed)			
Air cleaner type	Standard		
	Optional		
Fuel pump	Type (elec. or mech.)	Electric	
	Location (eng., tank)	Tank	
	Pressure range [kPa (psi)]		

Fuel Tank See Page 6

Capacity [refill L (gallons)]		
Location (describe)		
Attachment		
Material & Mass [kg (weight lbs)]		
Filler pipe	Location & material	
	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	

MVMA Specifications Form Passenger Car

Car Line Grand Am
Model Year 1987 Issued Revised (●) August, 1986

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

2.5L
L4 (151 CID)
L68

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Computer Command Control
	Air Injection	Pump or pulse	None
		Driven by	
		Air distribution (head, manifold, etc.)	
		Point of entry	
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled Flow
		Exhaust source	Cylinder Head
		Point of exhaust injection (spacer, carburetor, manifold, other)	Intake Manifold
	Catalytic Converter	Type	Single Bed Pellet
		Number of	One
		Location(s)	Underfloor
		Volume (L (in ³))	2623.0 CM ³ (160)
Substrate type		Alumina Pellet	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges (to intake manifold, other)		Intake Manifold
	Air inlet (breather cap, other)		TBI Air Cleaner
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	None
	Vapor storage provision		Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Tri-Flow with Single Tail Pipe
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		Reverse Flow 8.13 (17.92)
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	
	Main o.d., wall thickness	50.8 O.D. x 1.37 (2 O.D. x .054)
	Material & Mass [kg (weight lbs)]	GM 6125-M Stainless Steel 2.88 (6.34)
Inter-mediate pipe	o.d. & wall thickness	50.8 O.D. x 1.37 (20.D. x .054)
	Material & Mass [kg (weight lbs)]	GM 6178-M Aluminized Steel 3.64 (8.02)
Tail pipe	o.d. & wall thickness	50.8 O.D. x 1.09 (2 O.D. x .043)
	Material & Mass [kg (weight lbs)]	GM 6125-M Stainless Steel - -

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) August, 1986

Engine Description/Carb.
Engine Code

3.0L
V6 (181 CID)
LN7

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Port Fuel Injection
	Air Injection	Pump or pulse	
		Driven by	
		Air distribution (head, manifold, etc.)	
		Point of entry	
	Exhaust Gas Recircula- tion	Type (controlled flow, open orifice, other)	Controlled Flow/Electronic Vacuum Regulator Valve
		Exhaust source	Exhaust Manifold
		Point of exhaust injection (spacer, carburetor, manifold, other)	Intake Manifold
	Catalytic Converter	Type	Single Bed Monolith
		Number of	One
		Location(s)	Underfloor
		Volume [L (in³)]	2782.2 CM³ (170)
Substrate type		Cordierite Monolith	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges (to intake manifold, other)		Intake Manifold
	Air inlet (breather cap, other)		Inlet Duct to Rocker Cover
Evapora- tive Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	None
	Vapor storage provision		Charcoal
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Tri-Flow with Dual Tail Pipes
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		Reverse Flow
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	
	Main o.d., wall thickness	50.8 O.D. x 1.02 (2 O.D. x .040)
	Material & Mass [kg (weight lbs)]	Stainless Steel Per GM 6125-M 2.72 (5.99)
Inter- mediate pipe	o.d. & wall thickness	50.8 O.D. x 1.09 (2 O.D. x .043)
	Material & Mass [kg (weight lbs)]	Steel SAE 1008 or 1010 Aluminum Coated --
Tail pipe	o.d. & wall thickness	50.8 O.D. x 1.09 (2 O.D. x .043)
	Material & Mass [kg (weight lbs)]	Steel SAE 1008 or 1010 Aluminum Coated --

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) August, 1986

Engine Description/Carb.
Engine Code

2.0L
(121) L4
LT3

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Engine Modifications
	Air Injection	Pump or pulse	N.A.
		Driven by	N.A.
		Air distribution (head, manifold, etc.)	N.A.
		Point of entry	N.A.
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Back Pressure EGR
		Exhaust source	Exhaust Manifold
		Point of exhaust injection (spacer, carburetor, manifold, other)	Manifold
	Catalytic Converter	Type	Single Bed Pellet
		Number of	One
Location(s)		Underfloor	
Volume [L (in³)]		2623.0 CM³	
Substrate type		Alumina Pellet	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges (to intake manifold, other)		Intake Manifold
	Air inlet (breather cap, other)		Air Cleaner
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	- -
	Vapor storage provision		Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Tri-Flow with Dual Tail Pipes
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		One Reverse Flow 8.13 (17.92)
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	N.A.
	Main o.d., wall thickness	57.1 O.D. x 1.37 (2.25 x .054)
	Material & Mass [kg (weight lbs)]	Stainless Steel GM 6125-M 3.64 (8.02)
Inter-mediate pipe	o.d. & wall thickness	50.8 O.D. x 1.37 (2 O.D. x .054)
	Material & Mass [kg (weight lbs)]	Aluminized Steel Tubing GM 6178-M 3.64 (8.02)
Tail pipe	o.d. & wall thickness	50.8 O.D. x 1.09 (2 O.D. x .043)
	Material & Mass [kg (weight lbs)]	Aluminum Coated Steel Tubing - -

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line _____ Grand Am
Model Year 1987 Issued _____ Revised (●) August, 1986

Engine Description/Carb.
Engine Code

2.5L
(151) L4
L68

Transmissions/Transaxle

Manual 3-speed (std., opt., n.a.) (mfr.)	NA
Manual 4-speed (std., opt., n.a.) (mfr.)	NA
Manual 5-speed (std., opt., n.a.) (mfr.)	Std.- Isuzu MT2
Manual overdrive (std., opt., n.a.) (mfr.)	Std.
Automatic (std., opt., n.a.) (mfr.)	Opt.
Automatic overdrive (std., opt., n.a.) (mfr.)	NA

Manual Transmission/Transaxle

Number of forward speeds		5
Transmission ratios	In first	3.73
	In second	2.15
	In third	1.45
	In fourth	1.03
	In fifth	.74
	In overdrive	NA
	In reverse	3.58
Synchronous meshing (specify gears)		All Forward Gears
Shift lever location		Floor - Console
Lubricant	Capacity [L (pt.)]	2.55 (5.38)
	Type recommended	SAE 5W-30 Engine Oil SF, SF/CC or SF/CD
	SAE viscosity number	Summer SAE 5W-30 Engine Oil SF, SF/CC or SF/CD
		Winter SAE 5W-30 Engine Oil SF, SF/CC or SF/CD
		Extreme cold SAE 5W-30 Engine Oil SF, SF/CC or SF/CD

Clutch (Manual Transmission)

Make, type, engagement (describe) - (hydraulic, cable, rod)		
Assist (yes, no percent)		
Type pressure plate springs		
Total spring load [N (lb.)]		
No. of clutch driven discs		
Clutch facing	Material	
	Manufacturer	
	Part number	
	Rivets plate	
	Rivet size	
	Outside & inside dia.	
	Total eff. area [cm ² (in. ²)]	
	Thickness	
Engagement cushion method		
Release bearing	Type & method of lubrication	
Torsional damping	Method: springs, friction material	

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am

Model Year 1987

Issued

Revised (•)

August, 1986

Engine Description/Carb.
Engine Code

3.0L
(181) V6
LN7

Transmissions/Transaxle

Manual 3-speed (std., opt., n.a.) (mfr.)	NA
Manual 4-speed (std., opt., n.a.) (mfr.)	NA
Manual 5-speed (std., opt., n.a.) (mfr.)	NA
Manual overdrive (std., opt., n.a.) (mfr.)	NA
Automatic (std., opt., n.a.) (mfr.)	Std.
Automatic overdrive (std., opt., n.a.) (mfr.)	NA

Manual Transmission/Transaxle

Number of forward speeds			
Transmission ratios	In first		
	In second		
	In third		
	In fourth		
	In fifth		
	In overdrive		
	In reverse		
Synchronous meshing (specify gears)			
Shift lever location			
Lubricant	Capacity [L (pt.)]		
	Type recommended		
	SAE viscosity number	Summer	
		Winter	
		Extreme cold	

Clutch (Manual Transmission)

Make, type, engagement (describe) – (hydraulic, cable, rod)		
Assist (yes, no : percent)		
Type pressure plate springs		
Total spring load [N (lb)]		
No. of clutch driven discs		
Clutch facing	Material	
	Manufacturer	
	Part number	
	Rivets plate	
	Rivet size	
	Outside & inside dia.	
	Total eff. area [cm ² (in. ²)]	
	Thickness	
Engagement cushion method		
Release bearing	Type & method of lubrication	
Torsional damping	Method: springs, friction material	

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line _____ Grand Am
Model Year 1987 Issued _____ Revised (•) August, 1986

Engine Description/Carb.
Engine Code

2.0L
(121) L4
LT3

Transmissions/Transaxle

Manual 3-speed (std., opt., n.a.) (mfr.)	NA
Manual 4-speed (std., opt., n.a.) (mfr.)	NA
Manual 5-speed (std., opt., n.a.) (mfr.)	Std. Muncie (Getrag) (MG1)
Manual overdrive (std., opt., n.a.) (mfr.)	NA
Automatic (std., opt., n.a.) (mfr.)	Opt.
Automatic overdrive (std., opt., n.a.) (mfr.)	NA

Manual Transmission/Transaxle

Number of forward speeds			5
Transmis- sion ratios	In first		3.50
	In second		2.19
	In third		1.38
	In fourth		.94
	In fifth		.72
	In overdrive		NA
	In reverse		3.41
Synchronous meshing (specify gears)			All Forward Gears
Shift lever location			Floor-Console
Lubricant	Capacity [L (pt.)]		1.9 (4.0)
	Type recommended		SAE 5W-30 Engine Oil SF, SF/CC or SF/CD
	SAE vis- cosity number	Summer	SAE 5W-30 Engine Oil SF, SF/CC or SF/CD
		Winter	SAE 5W-30 Engine Oil SF, SF/CC or SF/CD
		Extreme cold	SAE 5W-30 Engine Oil SF, SF/cc or SF/CD

Clutch (Manual Transmission)

Make, type, engagement (describe) - (hydraulic, cable, rod)	Borg Warner Automotive Single Dry Disc-Hydraulic Controls		
Assist (yes, no, percent)	No		
Type pressure plate springs	Belleville Spring (Diaphragm)		
Total spring load [N (lb.)]	5540 (1245)		
No. of clutch driven discs	One		
Clutch facing	Material	Non-Asbestos F-202	
	Manufacturer	Valeo	
	Part number	10054260	
	Rivets plate	16	
	Rivet size	3.6 x 5.4 (.143 x .213)	
	Outside & inside dia.	215.5 x 152.5 (8.48 x 6.00)	
	Total eff. area [cm ² (in. ²)]	183 (28.3)	
	Thickness	3.56 (.14) Pressure Plate, 3.30 (.13) Flywheel Side	
	Engagement cushion method	Driven Plate Cushion Springs	
Release bearing	Type & method of lubrication	Prelubed and Sealed, Self Centering, Angular Contact Ball Bearings	
Torsional damping	Method: springs, friction material	Coil Springs with Metallic Friction Washers	

MVMA Specifications Form Passenger Car

Car Line Grand Am
Model Year 1987 Issued Revised (●) August, 1986

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

2.5L
(151) L4
168

Automatic Transmission/Transaxle

Trade name		Turbo Hydramatic (THM 125C) (MD9)
Type and special features (describe)		3-speed with Torque Converter
Selector	Location	Floor
	Ltr. No. designation	PRND21
Gear ratios	1st	2.84
	2nd	1.60
	3rd	1.00 Converter Clutch Engagement
	4th	None
	Reverse	2.07
Max. upshift speed - drive range [km/h (mph)]		114 (71)
Max. kickdown speed - drive range [km/h (mph)]		109 (68)
Min. overdrive speed [km/h (mph)]		N/A
Torque converter	Number of elements	Three
	Max. ratio at stall	2.48
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.65)
Lubricant	Capacity [refill L (pt.)]	7.2 (15) With Cooler and Converter Lines Full
	Type Recommended	Dex ron II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Std. - External, Oil to Engine Coolant

Axle or Front Wheel Drive Unit

Type (front, rear)		Front	
Description		Integral with Transmission	
Limited slip differential (type)		None	
Drive pinion offset		N/A	
Drive pinion (type)		N/A	
No. of differential pinions		Two	
Pinion / differential adjustment (shim, other)		N/A	
Pinion / differential bearing adjustment (shim, other)		N/A	
Driving wheel bearing (type)		Integral Double Row Ball Bearing	
Lubricant	Capacity [L (pt.)]	N/A	
	Type recommended	ATF Dex ron II	
	SAE viscosity number	Summer	
		Winter	
		Extreme cold	

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

Axle ratio (or overall top gear ratio)		2.84
No. of teeth	Pinion	35
	Ring gear or gear	35
Ring gear o.d.		None
Transaxle	Transfer gear ratio	1.00
	Final drive ratio	2.84

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (•) August, 1986

Engine Description/Carb.
Engine Code

3.0L
(181) V6
LN7

Automatic Transmission/Transaxle

Trade name		Turbo Hydramatic (THM 125C) (MD9)
Type and special features (describe)		3-speed with Torque Converter
Selector	Location	Floor
	Ltr./No. designation	PRND21
Gear ratios	1st	2.84
	2nd	1.60
	3rd	1.00 Converter Clutch Engagement
	4th	None
	Reverse	2.07
Max. upshift speed - drive range [km/h (mph)]		114 (71)
Max. kickdown speed - drive range [km/h (mph)]		109 (68)
Min. overdrive speed [km/h (mph)]		N/A
Torque converter	Number of elements	Three
	Max. ratio at stall	2.35
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.65)
Lubricant	Capacity (refill L (pt.))	7.2 (15) With Cooler and Converter Lines Full
	Type Recommended	Dex ron II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Std. - External, Oil to Engine Coolant

Axle or Front Wheel Drive Unit

Type (front, rear)		Front	
Description		Integral with Transmission	
Limited slip differential (type)		None	
Drive pinion offset		N/A	
Drive pinion (type)		N/A	
No. of differential pinions		Two	
Pinion / differential adjustment (shim, other)		N/A	
Pinion / differential bearing adjustment (shim, other)		N/A	
Driving wheel bearing (type)		Integral Double Row Ball Bearing	
Lubricant	Capacity [L (pt.)]	N/A	
	Type recommended	ATF Dex ron II	
	SAE vis- cosity number	Summer	
		Winter	
Extreme cold			

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

Axle ratio (or overall top gear ratio)		2.84
No. of teeth	Pinion	35
	Ring gear or gear	35
Ring gear o.d.		None
Transaxle	Transfer gear ratio	1.00
	Final drive ratio	2.84

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) August, 1986

Engine Description/Carb.
Engine Code

2.0L
(121) L4
LT3

Automatic Transmission/Transaxle

Trade name		Turbo Hydramatic (THM 125C) (MD9)
Type and special features (describe)		3-speed with Torque Converter
Selector	Location	Floor
	Ltr. No. designation	PRND21
Gear ratios	1st	2.84
	2nd	1.60
	3rd	1.00 Converter Clutch Engagement
	4th	None
	Reverse	2.07
Max. upshift speed - drive range [km/h (mph)]		114 (71)
Max. kickdown speed - drive range [km/h (mph)]		109 (68)
Min. overdrive speed [km/h (mph)]		N/A
Torque converter	Number of elements	Three
	Max. ratio at stall	2.00
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.65)
Lubricant	Capacity [refill L (pt.)]	7.2 (15) With Cooler and Converter Lines Full
	Type Recommended	Dex ron II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Std. - External, Oil to Engine Coolant

Axle or Front Wheel Drive Unit

Type (front, rear)		Front	
Description		Integral with Transmission	
Limited slip differential (type)		None	
Drive pinion offset		N/A	
Drive pinion (type)		N/A	
No. of differential pinions		Two	
Pinion / differential adjustment (shim, other)		N/A	
Pinion / differential bearing adjustment (shim, other)		N/A	
Driving wheel bearing (type)		Integral Double Row Ball Bearing	
Lubricant	Capacity [L (pt.)]	N/A	
	Type recommended	ATF Dex ron II	
	SAE viscosity number	Summer	
		Winter	
		Extreme cold	

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

Axle ratio (or overall top gear ratio)		2.84
No. of teeth	Pinion	33
	Ring gear or gear	37
Ring gear o.d.		None
Transaxle	Transfer gear ratio	1.0
	Final drive ratio	3.18

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued August, 1986 Revised (●)

Engine Description/Carb.
Engine Code

2.5L
(151) L4
L68

Axle Shafts – Front Wheel Drive

Manufacturer and number used		Saginaw Two	
Type (straight, solid bar, tubular, etc.)	Left	Straight Solid Bar	
	Right	Straight Solid Bar	
Outer diam. x length* x wall thickness	Manual transmission	Left	27.2 x 308.0 (1.07 x 12.13)
		Right	27.2 x 665.0 (1.07 x 26.18)
	Automatic transmission	Left	23.9 x 302.0 (.94 x 11.89)
		Right	23.9 x 364.3 (.94 x 14.34)
	Optional transmission	Left	-
		Right	-
Slip yoke	Type	None	
	Number of teeth	None	
	Spline o.d.	None	
Universal joints	Make and mfg. no.	Inner	Saginaw
		Outer	Saginaw
	Number used	Two on Each Drive Shaft	
	Type, size, plunge	Inner	Tripot, 66.0 Plunge 61.0
		Outer	RZEPPA - Fixed
	Attach (u-bolt, clamp, etc.)	Retaining Ring	
	Bearing	Type (plain, anti-friction)	Ball & Roller (Inner) Ball (Outer)
Lubrication (fitting, prepack)		Prepack	
Drive taken through (torque tube, arms or springs)		Wishbone Lower Control Arm, Upper McPherson Strut	
Torque taken through (torque tube, arms or springs)		Engine Mounting System	

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

MVMA Specifications Form Passenger Car

Car Line Grand Am
Model Year 1987 Issued Revised (●) August, 1986

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

3.0L
(181) V6
LN7

Axle Shafts – Front Wheel Drive

Manufacturer and number used		Saginaw Two	
Type (straight, solid bar, tubular, etc.)		Left	Straight Solid Bar
		Right	Straight Solid Bar
Outer diam. x length* x wall thickness	Manual transmission	Left	- -
		Right	- -
	Automatic transmission	Left	23.9 x 302.0 (.94 x 11.89)
		Right	23.9 x 364.3 (.94 x 14.34)
	Optional transmission	Left	- -
		Right	- -
Slip yoke	Type	None	
	Number of teeth	None	
	Spline o.d.	None	
Universal joints	Make and mfg. no.	Inner	Saginaw
		Outer	Saginaw
	Number used	Two on Each Drive Shaft	
	Type, size, plunge	Inner	Tripot - 61 Plunge
		Outer	RZEPPA - Fixed
	Attach (u-bolt, clamp, etc.)	Retaining Ring	
	Bearing	Type (plain, anti-friction)	Ball & Roller (Inner) Ball (Outer)
Lubrication (fitting, prepack)		Prepack	
Drive taken through (torque tube, arms or springs)		Wishbone Lower Control Arm, Upper McPherson Strut	
Torque taken through (torque tube, arms or springs)		Engine Mounting System	

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

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued Revised (●) August, 1986

Engine Description/Carb.
Engine Code

2.0L
(121) L4
LT3

Axle Shafts – Front Wheel Drive

Manufacturer and number used		<u>Saginaw Two</u>	
Type (straight, solid bar, tubular, etc.)	Left	<u>Straight Solid Bar</u>	
	Right	<u>Straight Solid Bar</u>	
Outer diam. x length* x wall thickness	Manual transmission	Left	<u>27.2 x 313.0 (1.07 x 12.32)</u>
		Right	<u>27.2 x 418.0 (1.07 x 16.46)</u>
	Automatic transmission	Left	<u>23.9 x 302.0 (.94 x 11.89)</u>
		Right	<u>23.9 x 364.3 (.94 x 14.34)</u>
	Optional transmission	Left	<u>-</u>
		Right	<u>-</u>
Slip yoke	Type	<u>None</u>	
	Number of teeth	<u>None</u>	
	Spline o.d.	<u>None</u>	
Universal joints	Make and mfg. no.	Inner	<u>Saginaw</u>
		Outer	<u>Saginaw</u>
	Number used	<u>Two on Each Drive Shaft</u>	
	Type, size, plunge	Inner	<u>Tripot, 66.0 Plunge 61</u>
		Outer	<u>RZEPPA - Fixed</u>
	Attach (u-bolt, clamp, etc.)	<u>Retaining Ring</u>	
	Bearing	Type (plain, anti-friction)	<u>Ball & Roller (Inner)</u> <u>Ball (Outer)</u>
Lubrication (fitting, prepack)		<u>Prepack</u>	
Drive taken through (torque tube, arms or springs)		<u>Wishbone Lower Control Arm, Upper McPherson Strut</u>	
Torque taken through (torque tube, arms or springs)		<u>Engine Mounting System</u>	

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

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) _____

Body Type And/Or
Engine Displacement

ALL

Suspension - General

Car leveling	Std. opt. n.a.	NA
	Type (air, hyd., etc.)	NA
	Manual auto. controlled	NA
Provision for brake dip control		Front Suspension Geometry
Provision for accel. squat control		Rear Suspension Geometry
Provisions for car jacking		Body Jack & Pads on Rocker
Shock absorber (front & rear)	Type	Front: MacPherson Strut Rear: Telescopic (Double-Acting)
	Make	Delco Products
	Piston diameter	Front: 35 mm Rear: 25 mm
	Rod diameter	Front: 25 mm Rear: 13 mm

Suspension - Front

Type and description		MacPherson Strut with Coil Spring
Travel	Full jounce	92.5 mm
	Full rebound	84 mm
Spring	Type (coil, leaf, other) & material	Coil - Steel
	Insulators (type & material)	Top & Bottom - Rubber
	Size (coil design height & i.d., bar length x dia.)	Spring Computer Selected - Varies with Option Content
	Spring rate [N/mm (lb. in.)]	20 N/mm
	Rate at wheel [N/mm (lb. in.)]	17.5 N/mm
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	Steel: 24 mm (Base Car)

Suspension - Rear

Type and description		Trailing Crank Arm with Twist Beam
Travel	Full jounce	134 mm
	Full rebound	68 mm
Spring	Type (coil, leaf, other) & material	Coil - Steel
	Size (length x width, coil design height & i.d., bar length & dia.)	Spring Computer Selected - Varies with Option Content
	Spring rate [N/mm (lb./in.)]	23 N/mm @ Curb - Variable
	Rate at wheel [N/mm (lb./in.)]	11.1 N/mm @ Curb - Variable
	Insulators (type & material)	Top & Bottom - Rubber
If leaf	No. of leaves	NA
	Shackle (comp. or tens.)	NA
Stabilizer	Type (link, linkless, frameless)	NA (Base Car)
	Material & bar diameter	NA (Base Car)
Track bar (type)		NA

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am

Model Year 1987 Issued _____

Revised (•) August, 1986

Body Type And/Or
Engine Displacement

--

Brakes - Service

Description			Power Assisted Hydraulic Brakes
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)		Std. - Disc
	Rear (disc or drum)		Std. - Drum
Self-adjusting (std., opt., n.a.)			Std.
Special valving	Type (proportion, delay, metering, other)		Diagonal Split Circuit
Power brake (std., opt., n.a.)			Std.
Booster type (remote, integral, vac., hyd., etc.)			Tandem Vacuum
Vacuum source (inline, pump, etc.)			Inline
Vacuum reservoir (volume in. ³)			-
Vacuum pump-type (elec, gear driven, belt driven, if other so state)			None
Anti-lock device type (std., opt., n.a.) (F/R)			NA
Effective area [cm ² (in. ²)]*			318 (49.3)
Gross lining area [cm ² (in. ²)]**(F/R)			381 (59.0)
Swept area [cm ² (in. ²)]*** (F/R)			1624 (251.74)
Rotor	Outerworking diameter	F/R	247 mm (9.72)
	Inner working diameter	F/R	147 mm (5.79)
	Thickness	F/R	22 mm (.87)
	Material & type (vented solid)	F/R	Cast Iron - Vented
Drum	Diameter & width	F/R	200 mm (7.87)
	Type and material	F/R	Cast Iron
Wheel cylinder bore			57 mm (2.24)/16 mm (.63) RR
Master cylinder	Bore stroke	F/R	Bore - 24 (.945) Stroke - 33.9 (1.33)
Pedal arc ratio			3.7:1
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]			10,900
Lining clearance			F/R Both Self Adjusting
Brake lining	Front wheel	Bonded or riveted (rivets seg.)	Bonded Inboard & Outboard
		Rivet size	None
		Manufacturer	Delco Moraine
		Lining code*****	128 FE
		Material	Semi Metallic
		**** Primary or out-board	116.7 x 47 x 10.92
		Size Secondary or in-board	125 x 47 x 10.2
		Shoe thickness (no lining)	4.72 IB/3.14 OB (.19 IB/1.23 OB)
	Rear wheel	Bonded or riveted (rivets seg.)	Riveted
		Manufacturer	Inland Division
		Lining Code*****	235 FE
		Material	Organic
		**** Primary or out-board	167.7 x 43.9 x 6 mm (6.6 x 1.73 x .24)
		Size Secondary or in-board	194.0 x 43.9 x 7 mm (7.64 x 1.73 x .28)
	Shoe thickness (no lining)	2.75 mm (.11)	

*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 width x thickness

*****Manufacturer I.D., catalog or formulation designation and coefficient of friction classification.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am
Model Year 1987 Issued _____ Revised (●) _____

Body Type And/Or
Engine Displacement

ALL

Tires And Wheels (Standard)

Tires	Size (load range, ply)		P185/80R13
	Type (bias, radial, etc.)		Radial
	Inflation pressure (cold) for recommended max. vehicle load	Front [kPa (psi)]	240 (35 PSI)
		Rear [kPa (psi)]	240 (35 PSI)
	Rev./mile—at 70 km/h (45 mph)		526
Wheels	Type & material		Stamped Steel
	Rim (size & flange type)		13 x 5.5 JB
	Wheel offset		48 mm
	Attachment	Type (bolt or stud)	Stud
		Circle diameter	100 mm
Spare	Number & size		5-12 mm
	Tire and wheel (same, if other describe)		T125/70D14 Wheel 14 x 4T Inflation 415 (60 PSI)
	Storage position & location (describe)		Under Deck of Luggage Compartment

Tires And Wheels (Optional)

Size (load range, ply)		P205/70R13
Type (bias, radial, etc.)		Radial
Wheel (type & material)		Stamped Steel (Styled)
Rim (size, flange type and offset)		13 x 5.5 JB (48 mm Offset)
Size (load range, ply)		
Type (bias, radial, etc.)		
Wheel (type & material)		Aluminum
Rim (size, flange type and offset)		13 x 5.5 JB 47 mm Offset
Size (load range, ply)		P215/60R14
Type (bias, radial, etc.)		Radial
Wheel (type & material)		Cast Aluminum
Rim (size, flange type and offset)		14 x 6.0 JJ 47 mm Offset
Size (load range, ply)		P195/70R14
Type (bias, radial, etc.)		Radial
Wheel (type & material)		Stamped Steel
Rim (size, flange type and offset)		14 x 6.0 JJ 47 mm Offset
Spare tire and wheel		
(if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)		T125/70D15 Wheel 14 x 4T Inflation 415 (60 PSI) Storage Under Deck of Luggage Compartment

Brakes - Parking

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

MVMA Specifications Form Passenger Car

Car Line Grand Am
Model Year 1987 Issued _____ Revised (e) August, 1986

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

ALL

Steering

Manual (std., opt., n.a.)		NA	
Power (std., opt., n.a.)		Std.	
Adjustable steering wheel column (tilt, telescope, other)	Type	Tilt	
	Manufacturer (Std., opt., n.a.)	Saginaw Steering Gear Opt.	
Wheel diameter** (W9) SAE J1100	Manual	375 mm (14.8)	
	Power	375 mm (14.8)	
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	
		Curb to curb (l. & r.)	10.79 (35.4)
	Inside rear	Wall to wall (l. & r.)	
		Curb to curb (l. & r.)	
Scrub Radius*			
Manual	Gear	Type	NA
		Manufacturer	NA
		Ratios	
		Gear Overall	NA
No. wheel turns (stop to stop)		NA	
Power	Type (coaxial, linkage, etc.)		Rack & Pinion w/ Integral Unit
	Manufacturer		Saginaw
	Gear	Type	Rack & Pinion
		Ratios	
		Gear Overall	16.0:1
	Pump (drive)		Belt Off Crankshaft Pulley
No. wheel turns (stop to stop)		2.88	
Linkage	Type		Center Take-Off Tie Rods, Rack & Pinion
	Location (front or rear of wheels, other)		Rear
	Tie rods (one or two)		Two
	Inclination at camber (deg.)		13.5°
Steering axis	Bearings (type)	Upper	Ball Bearing
		Lower	Ball Joint
		Thrust	Incorporated in Upper Bearing
Steering spindle & joint type		MacPherson Strut	
Wheel spindle hub	Diameter	Inner bearing	NA
		Outer bearing	NA
	Thread (size)		M20 x 1.5
	Bearing (type)		Integral Double Row Ball, Permanently Lubed

*The horizontal distance in the front elevation between wheel centerline and kingpin (ball joint) axis at ground.

**See Page 21.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line GRAND AM
Model Year 1987 Issued 6-7-86 Revised (●) _____

Body Type And/Or
Engine Displacement

ALL

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	Cross car must be within 0.75°
		Camber (deg.)	0.2° to 1.5° (Cross car must be within 1.0°)
		Toe-in [outside track-mm (in.)]	-0.06° + 0.10° (Degrees per wheel)
	Service reset*	Caster	Cross car must be within 0.75°
		Camber	0.2° to 1.5° (Cross car must be within 1.0°)
		Toe-in	-0.0° + .10° (Degrees per wheel)
	Periodic M.V. inspection	Caster	NA
		Camber	NA
		Toe-in	NA
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	NA
		Toe-in [outside track-mm (in.)]	NA
	Service reset*	Camber	NA
		Toe-in	NA
	Periodic M.V. inspection	Camber	NA
		Toe-in	NA
		Toe-in	NA
		Toe-in	NA
		Toe-in	NA

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

Electrical – Instruments and Equipment

Speedometer	Type (analog, digital, std., opt.)	Analog dial
	Trip odometer (std., opt., n.a.)	Optional
EGR maintenance indicator		NA
Charge indicator	Type	Generator output voltage
	Warning device (light, audible)	Telltale standard, Gage optional (with T.T.)
Temperature indicator	Type	Over temp sender/switch
	Warning device (light, audible)	Gage with T.T. Standard, Gage with check gage T.T. optional
Oil pressure indicator	Type	Low oil pres sender/switch
	Warning device (light, audible)	Telltale standard, gage with check gage T.T. optional
Fuel indicator	Type	Electric gage
	Warning device (light, audible)	Check gage T.T. optional
Windshield wiper	Type (standard)	Electric 2-speed
	Type (optional)	Controlled cycle pulse
	Blade length	(19.0)
	Swept area [cm ² (in. ²)]	5583.7 (865.5)
Windshield washer	Type (standard)	Electric pump mounted on motor asm.
	Type (optional)	NA
	Fluid level indicator (light, audible)	
Rear window wiper, wiper/washer (std., opt., n.a.)		
Horn	Type	Electric vibrator
	Number used	2 standard
Other	RPM	Electric gage optional
	Turbo boost gage	" "
	Upshift	Telltale
	Fasten belts	"
	High beam	"
	Turn signals	"
	Service engine soon	"
	Brake	"

MVMA Specifications Form Passenger Car

Car Line Grand AM
Model Year 1987 Issued Revised (e) August, 1986

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

2.5L L4
L68

Electrical – Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	1981601
	Voltage	12V
	Amps at 0°F cold crank	630 CCA
	Minutes-reserve capacity	90 RC
	Amp/hrs. - 20 hr. rate	54 AH
	Location	Underhood Front
Alternator	Manufacturer	Delco Remy
	Rating *	1101123/85 amps or 1101124/100 amps
	Ratio (alt. crank/rev.)	2.6:1
	Optional (type & rating)	No heavy duty option
Regulator	Type	Internal to Alternator

Electrical – Starting System

Start, motor	Current drain at -20°F	1998531 417 amps
Motor drive	Engagement type	Solenoid w/positive shift
	Pinion engages from (front, rear)	Front

Electrical – Ignition System

Type	Electronic (std., opt., n.a.)	- -
	Other (specify)	Direct
Coil	Make	Delco Remy
	Model	1103646 - 1103745
	Current	Engine stopped - A 0
		Engine idling - A 8-10
Spark plug	Make	AC
	Model	R43TS6
	Thread (mm)	14
	Tightening torque (N-m (lb, ft))	75 (50)
	Gap	1.5 (.060)
	Number per cylinder	One
Distributor	Make	None
	Model	- -

Electrical – Suppression

Locations & type	Module Package
------------------	----------------

*First Model # listed is for heater only, 2nd Model # is for air conditioning.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand AM
Model Year 1987 Issued Revised (•) August, 1986

Engine Description/Carb.
Engine Code

3.0L V6
LN7

Electrical – Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	1981601
	Voltage	12V
	Amps at 0°F cold crank	630 CCA
	Minutes-reserve capacity	90 RC
	Amp/hrs. - 20 hr. rate	54 AH
	Location	Underhood Front
Alternator	Manufacturer	Delco Remy
	Rating *	1101125/85 amps or 1101126/100 amps
	Ratio (alt. crank/rev.)	2.8:1
	Optional (type & rating)	1101184/105 amps (Heavy duty option)
Regulator	Type	Internal to Alternator

Electrical – Starting System

Start, motor	Current drain at -20°F	1998546 431 amps
Motor drive	Engagement type	Solenoid w/positive shift
	Pinion engages from (front, rear)	
		Front

Electrical – Ignition System

Type	Electronic (std., opt., n.a.)	Computer Controlled Coil
	Other (specify)	- -
Coil	Make	Magnavox
	Model	Integral With Electronics
	Current	Engine stopped - A
		Engine idling - A
Spark plug	Make	AC
	Model	R44LTS
	Thread (mm)	14
	Tightening torque (N-m (lb, ft))	20-34 (15-25)
	Gap	1.0 (.040)
	Number per cylinder	One
Distributor	Make	None
	Model	- -

Electrical – Suppression

Locations & type	Module Package
------------------	----------------

*First Model #listed is for heater only, 2nd Model # is for air conditioning.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CORVETTE AM

Model Year 1987

Issued

Revised (e) August, 1986

Engine Description/Carb.
Engine Code

2.0LT L4
LT3

Electrical - Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	1981601
	Voltage	12V
	Amps at 0°F cold crank	630 CCA
	Minutes-reserve capacity	90 RC
	Amp/hrs. - 20 hr. rate	54 AH
	Location	Underhood Front
Alternator	Manufacturer	Delco Remy
	Rating *	1101144/85 amps or 1101145/100 amps
	Ratio (alt. crank/rev.)	2.42:1
Regulator	Optional (type & rating)	1101190/105 amps I.L.D. for Canada only
	Type	Internal to Alternator

Electrical - Starting System

Start, motor	Current drain at -20°F	1998529 379 amps
Motor drive	Engagement type	Solenoid w/positive shift
	Pinion engages from (front, rear)	Front

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	Standard
	Other (specify)	
Coil	Make	Delco Remy
	Model	
	Current	Engine stopped - A Engine idling - A
Spark plug	Make	AC
	Model	R42XLF
	Thread (mm)	14
	Tightening torque (N·m (lb. ft))	25-30 (18-22)
	Gap	1.5 (.060)
Distributor	Number per cylinder	One
	Make	Delco Remy
	Model	

Electrical - Suppression

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

*First Model # listed is for heater only, 2nd Model # is for air conditioning.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand AM
Model Year 1987 Issued Revised (●) August, 1986

Body Type

ALL

Body

Structure

UNITIZED FRAME

Bumper system
front - rear

Bumper Fascias are Attached to Steel Impact Bar and Dual
Energizers for Collision Energy Absorption. (Meets
GM 5 MPH Impact Standard).

Anti-corrosion treatment

Special anticorrosion materials are used on interior A.
Exterior metal panel surfaces. Materials include one and
two-sided galvanized, zincrometal and zinc-iron alloy steel.
Special metal conditioners, primers, protective waxes and
sealers are used on interior surfaces. Chip resistant
plastisol material is applied to exterior lower body.

Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	Base coat/ Clear coat enamel	
Hood	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Prop Rod - Single Pivot Hinge
	Release control (internal, external)	Internal
Trunk lid	Type (counterbalance, other)	Hinge Mounted in Sail Area W/Extension Spring Counter Balance
	Internal release control (elec., mech., n.a.)	Electrical Solenoid (Opt.)
Hatch- back lid	Type (counterbalance, other)	N/A
	Internal release control (elec., mech., n.a.)	N/A
Station wagon		N/A
Vent window control (crank, friction, pivot, power)	Front	N/A
	Rear	N/A
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Foam
	Rear	Foam
	3rd seat	N/A
Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Foam
	Rear	Foam
	3rd seat	N/A
Vin Location	Left topside of I/P	

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

Car Line Grand Am
 Model Year 1987 Issued _____ Revised (●) August, 1986

Body Type

COUPES

SEDANS

Restraint System

Active restraint system	Standard/optional	
	Type and description	
	Location	
Passive seat belts	Standard/optional	Standard
	Power/manual	Manual
	2 or 3 point	3 Point
	Knee bar/lap belt	

Frame

Type and description (separate frame, unitized frame, partially-unitized frame)	Body-Frame Integral, With Bolt-On Power Train Cradle
---	--

Glass	SAE Ref. No.		
Windshield glass exposed surface area [cm ² (in. ²)]	S1	8464 (1312)	8464 (1312)
Side glass exposed surface area [cm ² (in. ²)] - total 2-sides	S2	10190 (1579)	10826 (1678)
Backlight glass exposed surface area [cm ² (in. ²)]	S3	3418 (529)	3418 (529)
Total glass exposed surface area [cm ² (in. ²)]	S4	22072 (3421)	22708 (3520)
Windshield glass (type)		Curved Laminated Plate	
Side glass (type)		Curved Laminated Plate	
Backlight glass (type)		Curved Laminated Plate	

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

Car Line Grand AM
 Model Year 1987 Issued Revised (●) August, 1986

Body Type

ALL

Convenience Equipment (standard, optional, n.a.)

Air conditioning (manual, auto. temp control)		(C60) Opt. - Manual
Clock (digital, analog)		Part of Radio Pkg.
Compass thermometer		Not available
Console (floor, overhead)		(D55) Std. Floor
Defroster, elec. backlight		(C49) Opt.
Electronic	Diagnostic monitor (integrated, individual)	
	Instrument cluster (list instruments)	
	Keyless entry	
	Tripfinder (avg. spd., fuel)	(U40) Opt.
	Voice alert (list items)	
	Other	
Fuel door lock (remote, key, electric)		(N08) Opt. Remote
Lamps	Auto head on / off delay, dimming	
	Cornering	(TU2)
	Courtesy (map, reading)	(75) Opt. Front header (C96) Opt. Qtr. Upper
	Door lock, ignition	
	Engine compartment	Not available
	Fog	(T37) Opt.
	Glove compartment	
	Trunk	(U25) Opt. w/ Lamp Group
Mirrors	Day/night (auto. man.)	
	L.H. (remote, power, heated)	(D35) Opt. Remote (D51) Std. Direct (DG7) Opt. Remote
	R. H. (convex, remote, power, heated)	(D35) Opt. Direct (DG7) Opt. Remote
	Visor vanity (RH, LH, illuminated)	
Parking brake-auto release (warning light)		
Power equipment	Door locks / deck lid - specify	(AU3-A90) Opt. Door & Remote Deck Lid
	Seat (2-4-6 way) heated (driver, pass. other) lumbar, hip, thigh support (power, manual) reclining (driver, pass) memory (1-2 preset, recline)	(AC3) Opt. 6-way Driver
	Side windows	(A31) Opt.
	Vent windows	Not available
	Rear window	N/A
Radio systems	Antenna (location, whip, w-shield, power)	(US6 - US7)
	AM, FM, stereo, tape, CB	(U63)
	Speaker (number, location) Premium sound	Opt. 6-Speaker performance sound 2 speakers I/P 2 door, 2 rear
Roof open air fixed (flip-up, sliding, "T")		(AD3) Opt. Hinged Roof Window
Speed control device		(K34)
Speed warning device (light, buzzer, etc.)		
Tachometer (rpm)		
Telephone system - mobile		
Theft protection-type		

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Car and Body Dimensions See Key Sheets for definitions

Car Line Grand AM

Model Year 1987

Issued

Revised (e) August, 1986

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 J1100 "Motor Vehicle Dimensions," unless otherwise specified.

Body Type	SAE Ref. No.	COUPES	SEDANS
Width			
Tread (front)	W101	1412 (55.6)	
Tread (rear)	W102	1402 (55.2)	
Vehicle width	W103	1694 (66.7)	
Body width at Sg RP (front)	W117	1690 (66.5)	
Vehicle width (front doors open)	W120	3723 (146.6)	3195 (125.8)
Vehicle width (rear doors open)	W121	NA	3205 (126.2)
Front fender overall width	W106	1631 (64.2)	
Rear fender overall width	W107	1657 (65.2)	
Tumble-home (deg.)	W122	22°	

Length

Wheelbase	L101	2627 (103.4)	
Vehicle length	L103	4509 (177.5)	
Overhang (front)	L104	978 (38.5)	
Overhang (rear)	L105	904 (35.6)	
Upper structure length	L123	2284 (89.9)	
Rear wheel C/L "X" coordinate	L127	2410 (94.9)	
Cowl point "X" coordinate	L125	194 (7.6)	
Front end length at centerline	L126	1197 (47.1)	
Rear end length at centerline	L129	685 (27.0)	

Height **

Passenger distribution (front/rear)	PD1.2.3	2/0	
Trunk/cargo load		0	
Vehicle height	H101	1336 (52.6)	
Cowl point to ground	H114		
Deck point to ground	H138	970 (38.2)	
Rocker panel-front to ground	H112	201 (7.9)	
Bottom of door closed-front to grd.	H133	292 (11.5)	
Rocker panel-rear to ground	H111	204 (8.0)	
Bottom of door closed-rear to grd.	H135	- -	292 (11.5)
Windshield slope angle	H122	60°	
Backlight slope angle	H121	33°	

Ground Clearance **

Front bumper to ground	H102	223 (8.8)	
Rear bumper to ground	H104	300 (11.8)	
Bumper to ground (front at curb mass (wt.))	H103	236 (9.3)	
Bumper to ground (rear at curb mass (wt.))	H105	333 (13.1)	
Angle of approach (degrees)	H106	15.09°	
Angle of departure (degrees)	H107	20.40°	
Ramp breakover angle (degrees)	H147	13.35°	
Axle differential to ground (front/rear)	H153		
Min. running ground clearance	H156		
Location of min. run. grd. clear.			

**All Vehicle Height And Ground Clearances Are Made Using EPA Loaded Vehicle Weight, Loading Conditions.

EPA LOADED VEHICLE WEIGHT is The Base Vehicle Weight Plus All Coolant And Fluids Necessary For Operation Plus 100% Of The Fuel Capacity, Plus The Weight Of All Options And Accessories Which Weigh Three Pounds Or More And Which Are Sold On At Least 33% Of The Car Line, Plus Two Occupants.

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Car and Body Dimensions See Key Sheets for definitions

Car Line GRAND AM

Model Year 1987

Issued

Revised (e) August, 1986

Body Type

SAE
Ref.
No.

COUPES

SEDANS

Front Compartment

Sg RP front, "X" coordinate	L31	1128	(44.4)		
Effective head room	H61	957	(37.7)		
Max. eff. leg room (accelerator)	L34	1090	(42.9)		
SgRP to heel point	H30	234	(9.2)		
SgRP to heel point	L53	895	(35.2)		
Back angle	L40	26.5°			
Hip angle	L42	100.5°			
Knee angle	L44	132.0°			
Foot angle	L46	87.0°			
Design H-point front travel	L17	192	(7.6)		
Normal driving & riding seat track trvl.	L23	171	(6.7)		
Shoulder room	W3	1386	(54.6)	1379	(54.3)
Hip room	W5	1240	(48.8)	1227	(48.3)
** Upper body opening to ground	H50				
Steering wheel maximum diameter	W9	376	(14.8)		
Steering wheel angle	H18	19.0°			
Accel. heel pt. to steer. whl. cntr	L11	748	(29.4)		
Accel. heel pt. to steer. whl. cntr	H17	NOT AVAILABLE			
Steering wheel to C/L of thigh	H13	107	(4.2)		
Steering wheel torso clearance	L7	379	(14.9)		
Headlining to roof panel (front)	H37				
Undepressed floor covering thickness	H67				

Rear Compartment

All Interior Dimensions Are Measured With The Seating Reference Point (SgRP) 21 mm (1 Seat Adjuster Notch) Forward Of Rearmost Seat Position.

Sg RP Point couple distance	L50	769	(30.3)		
Effective head room	H63	942	(37.1)		
Min. effective leg room	L51	870	(34.3)		
Sg RP (second to heel)	H31	267	(10.5)		
Knee clearance	L48	5	(0.2)		
Compartment room	L3	666	(26.2)		
Shoulder room	W4	1403	(55.2)	1375	(54.1)
Hip room	W6	1281	(50.4)	1278	(50.3)
** Upper body opening to ground	H51				
Back angle	L41	25.0°			
Hip angle	L43	82.5°			
Knee angle	L45	88.75°			
Foot angle	L47	120.0°			
Headlining to roof panel (second)	H38	8	(0.3)		
Depressed floor covering thickness	H73	20	(0.8)		

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1				
** Liftover height	H195	849	(33.4)		

Interior Volumes (EPA Classification)

Vehicle class (subcompact, compact, etc.)		COMPACT			
Interior volume index (cu. ft.)					
Trunk/cargo index (cu. ft.)					

All linear dimensions are in millimeters (inches).

** 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 Grand AMModel Year 1987

Issued _____

Revised (●) August, 1986

Body Type

SAE
Ref.
No.

COUPES

SEDANS

Station Wagon – Third Seat

NOT APPLICABLE

Sg RP couple distance	L85	
Shoulder room	W85	
Hip room	W86	
Effective leg room	L86	
Effective head room	H86	
Sg RP to heel point	H87	
Knee clearance	L87	
Seat facing direction	SD1	
Back angle	L88	
Hip angle	L89	
Knee angle	L90	
Foot angle	L91	

Station Wagon – Cargo Space

NOT APPLICABLE

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	
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	
Cargo volume, index-rear of 2-seat	V10	

Hatchback – Cargo Space

NOT APPLICABLE

Cargo length at front seatback height	L208	
Cargo length at floor (front)	L209	
Cargo length at second seatback height	L210	
Cargo length at floor (second)	L211	
Front seatback to load floor height	H197	
Second seatback to load floor height	H198	
Cargo volume index [m ³ (ft. ³)]	V3	
Hidden cargo volume [m ³ (ft. ³)]	V4	
Cargo volume index-rear of 2-seat	V11	

Aerodynamics*

NE

NV & NW

Wheel lip to ground, front	647 (25.5)	656 (25.8)	-	-
Wheel lip to ground, rear	660 (26.0)	661 (26.0)	-	-
Frontal area [m ² (ft. ²)]	194	194	-	-
Drag coefficient (Cd)				

* EPA Loaded Vehicle Weight, Loading Conditions

All linear dimensions are in millimeters (inches) unless otherwise noted.

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

Car Line Grand Am
 Model Year 1987 Issued _____ Revised (●) August, 1986

Body Type

COUPES

SEDANS

Vehicle Fiducial Marks

Fiducial Mark Number*		Define Coordinate Location
Front	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 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 base grid line - front, measured vertically from base grid line to front fiducial mark located on top of the front seat adjuster mounting bolt.
Rear	X	Fiducial mark to vertical base grid line - rear, measured horizontally from base grid line to the rear fiducial mark located on the right hand rail (compartment pan - longitudinal).
	Y	Fiducial mark to center line of car - rear, width measurement made from center line of car to fiducial mark located on the right hand rail (compartment pan - longitudinal).
	Z	Fiducial mark to horizontal base grid line - rear, measured vertically from body base grid line to the rear fiducial mark located on the right hand rail (compartment pan - longitudinal).
Fiducial Mark Number		
Front	W21	505 (19.9)
	L54	2761 (108.7)
	H81	246 (9.7)
	H161	296 (11.7)
	** H163	275 (10.8)
Rear	W22	440 (17.3)
	L55	4953 (195.0)
	H82	362 (14.3)
	H162	422 (16.6)
	** H164	391 (15.4)

* Reference - SAE Recommended Practice, J182, Motor Vehicle Fiducial Marks.

All linear dimensions are in millimeters (Inches).

** EPA Loaded Vehicle Weight, Loading Conditions

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

Car Line Grand AM
 Model Year 1987 Issued _____ Revised (●) August, 1986

Body Type

ALL

COUPES

SEDANS

Lamps and Headlamp Shape*

Height above ground to center of bulb or marker	Headlamp (SAE - H127)	Highest**	646 (25.4)
		Lowest	
	Taillamp (SAE - H128)	Highest**	751 (29.6)
		Lowest	
	Sidemarker	Front	614 (24.2)
		Rear	782 (30.8)
Distance from C.L. of car to center of bulb	Headlamp	Inside	
		Outside**	678 (26.7)
	Taillamp	Inside	
		Outside**	681 (26.8)
	Directional	Front	583.0 (22.9)
		Rear	550 (21.7)
Halogen headlamp (std., opt., n.a.)	Lo beam		N.A.
	Hi beam		OPT. (INBOARD)
	Replaceable bulb		SEALED BEAM
	Shape		RECTANGULAR
Headlamp other than above	Lo beam		REPLACEABLE BULB HEADLAMP
	Hi beam		REPLACEABLE BULB HEADLAMP
	Replaceable		BULB HALOGEN
	Shape		AERO DESIGN
	Type		FOUR LAMP

* Measured at curb mass (weight).

** If single lamps are used enter here.

All linear dimensions are in millimeters (inches) unless otherwise noted.

METRIC (U.S. Customary)

Model Year 1987

Issued

Revised (●)

* Reference – SAE J1100 Motor vehicle dimensions, curb weight definition.
 ** Shipping mass (weight) definition –

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line Grand Am

Model Year 1987

Issued _____

Revised (•) _____

		Optional Equipment Differential Mass (weight)*			
Equipment		MASS, kg (weight, lb.)			Remarks
		Front	Rear	Total	
Door Locks, Power	AU3	.8(2)	1.0(2)	1.8(4)	Coupe
	AU3	1.4(3)	1.8(4)	3.2(7)	Sedan
Window, Roof Hinged	AD3	4.6	5.2	9.8	
		(10)	(11)	(22)	
Windows, Power	A31	1.6	1.2	2.8	Coupe
		(4)	(3)	(6)	
	A31	3.4	2.2	5.6	Sedan
		(7)	(5)	(12)	
Mats, Front	B34	1.0	.6	1.6	
		(2)	(1)	(4)	
Mats, Rear	B35	.4	.4	.8	
		(1)	(1)	(2)	
Mats, Front Deluxe	B53	1.0	.4	1.4	
		(2)	(1)	(3)	
Mats, Rear Deluxe	B54	.2	.6	.8	
		(.4)	(1)	(2)	
Molding, Body Side	B88	2.6	2.4	5.0	
		(6)	(5)	(11)	
A/C & L68	C60	22.0		22.0	
		(49)		(49)	
A/C & LN7/LT3	C60	17.6		17.6	
		(39)		(39)	
Susp	FE2	2.0	3.4	5.4	
		(4)	(7)	(12)	
Susp	FE3	2.1	3.5	5.6	
		(5)	(8)	(12)	
Cruise Control & L68 & MD9	K34	2.0	- .2	1.8	
		(4)	(-.4)	(4)	
Cruise & L68 & MT2	K34	2.0		2.0	
		(4)		(4)	
Cruise & LN7/LT3		1.8		1.8	
		(4)		(4)	

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

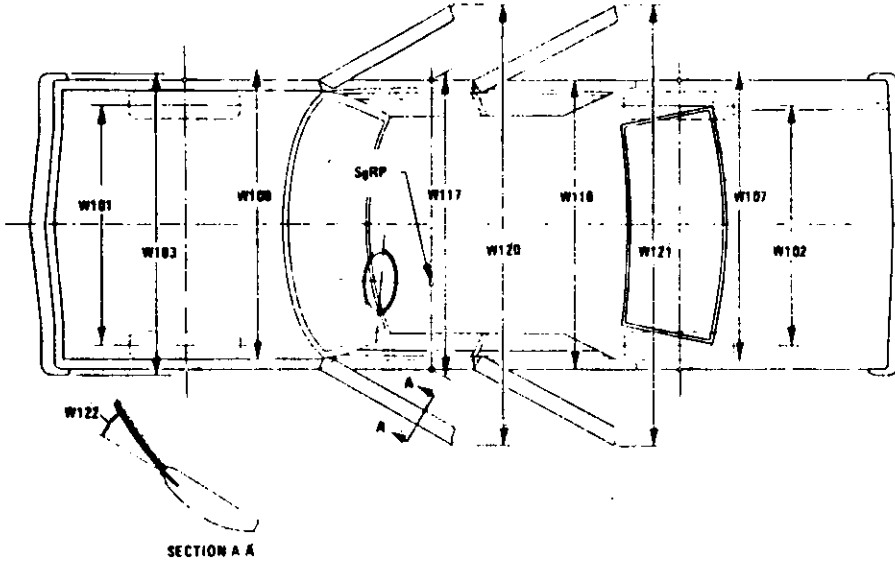
METRIC (U.S. Customary)Model Year 1987 Issued _____ Revised (●) _____

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

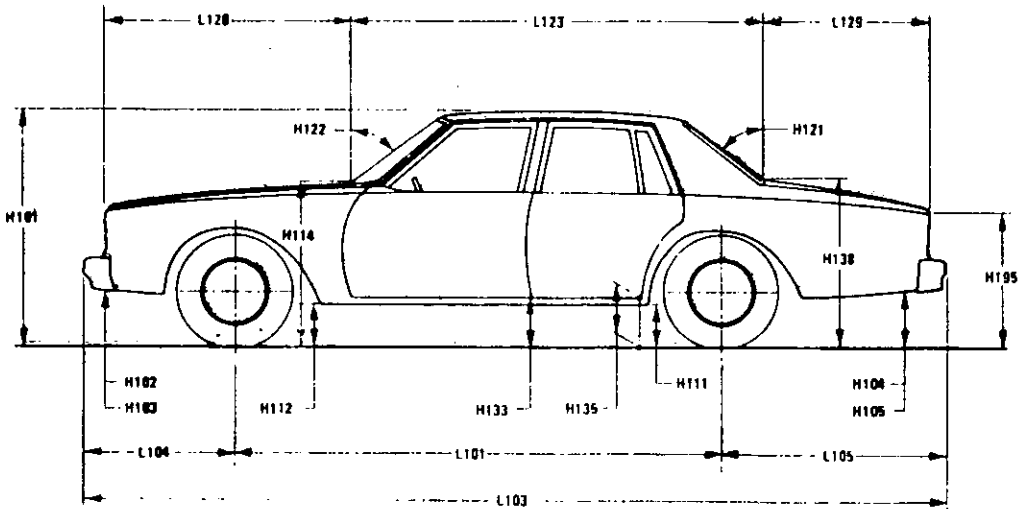
METRIC (U.S. Customary)

Exterior Car And Body Dimensions – Key Sheet

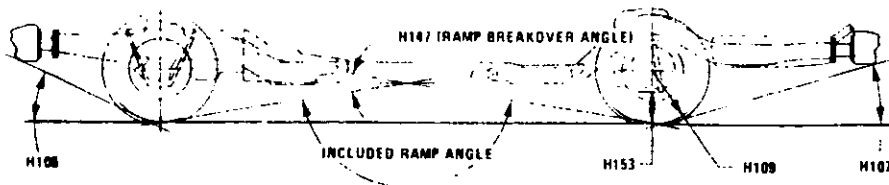
Exterior Width



Exterior Length & Height



Exterior Ground Clearance

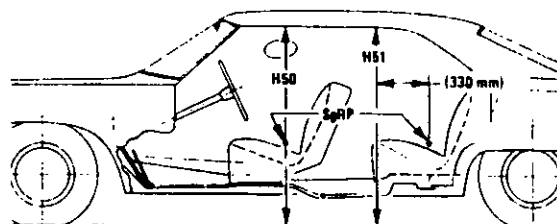
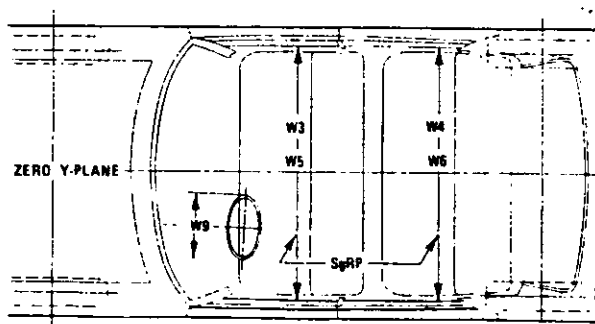
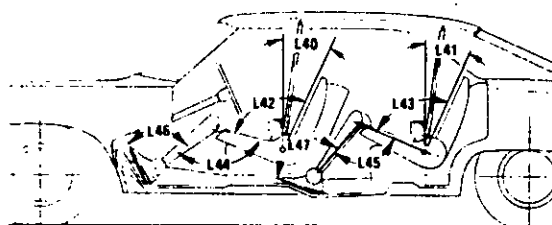
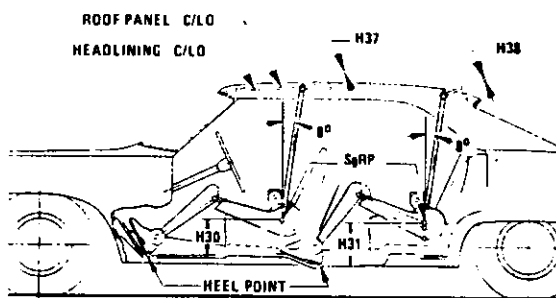
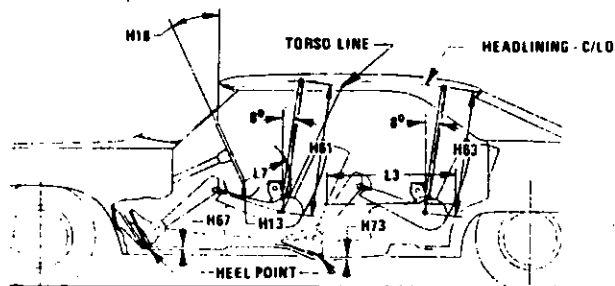
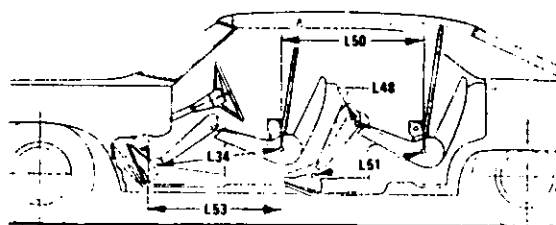


MVMA Specifications Form

Passenger Car

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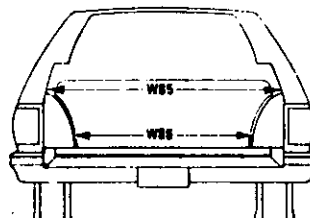
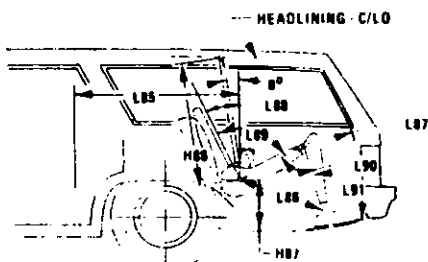
Interior Car And Body Dimensions – Key Sheet



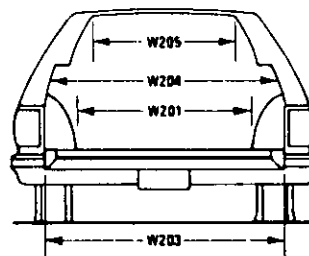
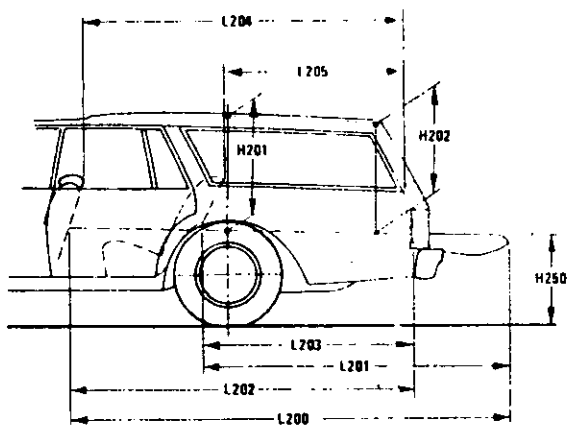
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Passenger Car
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Interior Car And Body Dimensions – Key Sheet

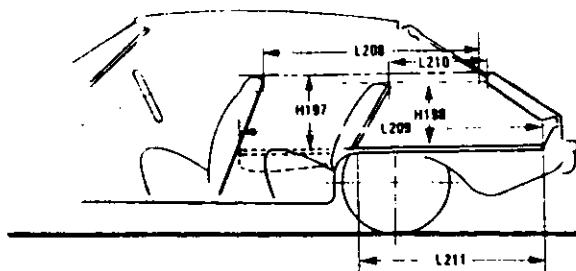
Third Seat



Cargo Space



Station Wagon



Hatchback

MVMA Specifications Form

Passenger Car

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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, "Devices for Use in Defining and Measuring Vehicle Seating Accommodations."

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.
- W106 FRONT FENDER WIDTH. The dimension measured between the widest points at the front wheel centerline, excluding moldings.
- W107 REAR FENDER WIDTH. The dimension measured between the widest points at the rear wheel centerline, excluding moldings.
- 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

- 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.
- 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.
- L125 COWL POINT "X" COORDINATE.
- L126 FRONT END LENGTH. The dimension measured longitudinally from the cowl point to the foremost point on the vehicle at the zero "Y" plane excluding ornamentation or bumpers. In cases where bumpers and/or grills are integrated with the profile, measurement is made at the foremost point of front end contour.
- L127 REAR WHEEL CENTERLINE "X" COORDINATE or in the case of dual rear axles, the coordinate shall be the midpoint of the distance between the rear axle centerlines.
- L129 REAR END LENGTH. The dimension measured longitudinally from the deck point to the rearmost visible point of the body sheet metal at the zero "Y" plane, excluding ornamentation or bumpers.

Height Dimensions

- H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body 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.
- 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.
- H114 COWL POINT TO GROUND. Measured at zero "Y" plane.
- 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 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.
- H133 BOTTOM OF DOOR CLOSED-FRONT 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.
- 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.
- H138 DECK POINT TO GROUND. Measured at zero "Y" plane.
- H109 STATIC LOAD-TIRE RADIUS-REAR. Specified by the manufacturer in accordance with composite TIRE SECTION STANDARD.

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.
- H103 FRONT BUMPER TO GROUND-CURB MASS (WT.). Measured in the same manner as H102.

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Interior Car And Body Dimensions – Key Sheet

Dimensions Definitions

- 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 arc and 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 arc and the initial point of structural interference rearward of the rear tire to ground. The limiting component shall be designated.
- H147 RAMP 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.

Glass Areas

- S1 Windshield area.
- S2 Side windows area. Includes the front door, rear door, vents, and rear quarter windows on both sides of the vehicle.
- S3 Backlight areas.
- S4 Total area. Total of all areas (S1 + S2 + S3).

Fiducial Mark Dimensions

Fiducial Mark – Number 1

- L54 "X" coordinate.
- W21 "Y" coordinate.
- H81 "Z" coordinate.
- H161 Height "Z" coordinate to ground at curb weight.
- H163 Height "Z" coordinate to ground.

Fiducial Mark – Number 2

- L55 "X" coordinate.
- W22 "Y" coordinate.
- W82 "Z" coordinate.
- H162 Height "Z" coordinate to ground at curb weight.
- H164 Height "Z" coordinate to ground.

Front Compartment Dimensions

- L7 STEERING WHEEL TORSO CLEARANCE. The minimum dimension measured in the side view from the rearmost edge of the steering wheel, with front wheels in the straight ahead position, to the torso line.
- L11 ACCELERATOR HEEL POINT TO STEERING WHEEL CENTER. The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering wheel rim.
- L17 DESIGN H-POINT–FRONT TRAVEL. The dimension measured horizontally between the design H-point–front in the foremost and rearmost seat track positions. (See SAE J1100)
- L23 NORMAL DRIVING AND RIDING SEAT TRACK LEVEL. The dimension measured horizontally between a point on the design H-point travel line from the SgRP to the displaced point on the design H-point travel line with the seat moved to the foremost seat position, but not to include seat track travel used for purposes other than normal driving and riding positions. (See SAE J1100)
- L31 SgRP–FRONT. "X" COORDINATED.

- 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.
- 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.
- L42 HIP ANGLE–FRONT. The angle measured between torso line and thigh centerline.
- L44 KNEE ANGLE–FRONT. The angle measured between thigh centerline and lower leg centerline measured on the right leg.
- L46 FOOT ANGLE–FRONT. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref SAE J826.
- L53 SgRP–FRONT TO HEEL. The dimension measured horizontally from the SgRP–front to the accelerator heel point.
- W3 SHOULDER ROOM–FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP–front at height between the belt line and 254 mm (10.0 in.) above the SgRP–front, excluding the door assist strap and attaching parts.
- 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 of the SgRP–front.
- W9 STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. Define if other than round.
- H13 STEERING WHEEL TO CENTERLINE OF THIGH. The minimum dimension measured from the bottom of steering wheel, with front wheels in the straight position, to the thigh centerline.
- H17 ACCELERATOR HEEL POINT TO THE STEERING WHEEL CENTER. The dimension measured vertically from the AHP–front to the intersection of the steering column centerline to a plane tangent to the upper surface of the steering wheel rim.
- H18 STEERING WHEEL ANGLE. The angle measured from a vertical to the surface plane of the steering wheel.
- H30 SgRP–FRONT TO HEEL. The dimension measured vertically from the SgRP–front to the accelerator heel point.
- H37 HEADLINING TO ROOF PANEL–FRONT. The dimension measured from the intersection of the headlining and the extended effective head room line normal to the sheet metal.
- H50 UPPER BODY OPENING TO GROUND–FRONT. The dimension measured vertically from the trimmed body opening to the ground on the SgRP–front "X" plane.
- 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.).
- H67 FLOOR COVERING THICKNESS–UNDEPRESSED–FRONT. The dimension measured vertically from the surface of the undepressed floor covering to the underbody sheet metal at the accelerator heel point.
- PD1 PASSENGER DISTRIBUTION–FRONT.

Rear Compartment Dimensions

- 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.

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Interior Car And Body Dimensions – Key Sheet

Dimensions Definitions

- L-41 BACK ANGLE-SECOND. The angle measured between a vertical line through the SgRP-second and the torso line.
- L43 HIP ANGLE-SECOND. The angle measured between torso line and thigh centerline.
- L45 KNEE ANGLE-SECOND. The angle measured between thigh centerline and lower leg centerline.
- L47 FOOT ANGLE-SECOND. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the three-dimensional devices bare foot flesh line (Reference J826).
- L48 KNEE CLEARANCE-SECOND. The minimum dimension measured from the knee pivot center to the back of the front seatback minus 51 mm (2.0 in.).
- L50 SgRP COUPLE DISTANCE-SECOND. The dimension measured horizontally from the driver SgRP-front to the SgRP-second.
- 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.).
- W4 SHOULDER ROOM-SECOND. The minimum dimension measured laterally between door or quarter trimmed surfaces on the "X" plane through the SgRP-second at height between 254-406 mm (10.0-16.0 in.) above the SgRP-second, excluding the door assist straps and attaching parts.
- W6 HIP ROOM-SECOND. Measured in the same manner as W5.
- 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.
- H38 HEADLINING TO ROOF PANEL-SECOND. The dimension measured from the intersection of the headlining and the extended effective head room line normally to the roof sheet metal.
- 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.
- 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.).
- H73 FLOOR COVERING-DEPRESSED-SECOND. The dimension measured vertically from the heel point to the underbody sheet metal.
- PD2 PASSENGER DISTRIBUTION-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.

Interior Volumes (EPA Classification)

The Interior Volume Index is listed for each body style except two seaters. The interior volume index estimates the space in a car. It is based on four measurements – head room, shoulder room, hip room, and leg room – for the front and rear seats, plus trunk capacity. The interior volume index is an estimate of the size of the passenger compartment.

The Trunk Cargo Index is an estimate of the size of the trunk/cargo space. In station wagons and hatchbacks it is an estimate of the space behind the second seat.

Station Wagon – Third Seat Dimensions

- L85 SgRP COUPLE DISTANCE-THIRD. The dimension measured horizontally from the SgRP-second to the SgRP-third.
- 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.).
- L87 KNEE CLEARANCE-THIRD. The minimum dimension from the knee pivot center to the back of second seatback minus a constant of 51 mm (2.0 in.). With rear-facing third seat, dimension is measured to closure.
- L88 BACK ANGLE-THIRD. Measured in the same manner as L41.
- L89 HIP ANGLE-THIRD. Measured in the same manner as L43.
- L90 KNEE ANGLE-THIRD. Measured in the same manner as L45.
- L91 FOOT ANGLE-THIRD. Measured in the same manner as L47.
- W85 SHOULDER ROOM-THIRD. Measured in the same manner as W4.
- W86 HIP ROOM-THIRD. Measured in the same manner as W5.
- 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.).
- H87 SgRP-THIRD TO HEEL POINT.
- PD3 PASSENGER DIRECTION-THIRD.
- SD1 SEAT FACING DIRECTION-THIRD.

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 to the rearmost point on 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 backpanel 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 to the sheet metal.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Interior Car And Body Dimensions – Key Sheet Dimensions Definitions

- 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.
- H197 FRONT SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undeepressed floor covering.
- H201 CARGO HEIGHT. The dimension measured vertically from the top of the undeepressed floor covering to the headlining at the rear wheel "X" coordinate on the zero "Y" plane.
- H202 REAR OPENING HEIGHT. The dimension measured vertically from the top of the undeepressed 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 undeepressed 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 LUGGAGE CAPACITY-REAR OF FRONT SEAT. The total volumes of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the front seat.
- V5 TRUCKS AND MPV'S WITH OPEN AREA.
Measured in inches:

$$\frac{L506 \times W500 \times H503}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{L506 \times W500 \times H503}{10^9} = \text{m}^3 \text{ (cubic meter)}$$
- V6 TRUCKS AND MPV'S WITH CLOSED AREA.
Measured in inches:

$$\frac{L204 \times W500 \times H505}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{L204 \times W500 \times H505}{10^9} = \text{m}^3 \text{ (cubic meter)}$$
- V8 HIDDEN LUGGAGE CAPACITY-REAR OF SECOND SEAT. The total volume of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the second seat.
- V10 STATION WAGON CARGO VOLUME INDEX
Measured in inches:

$$\frac{H201 \times L205 \times \frac{W4 + W201}{2}}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{H201 \times L205 \times \frac{W4 + W201}{2}}{10^9} = \text{m}^3 \text{ (cubic meter)}$$

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).

- 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.
- L210 CARGO LENGTH AT SECOND SEATBACK HEIGHT-HATCHBACK. The minimum dimension measured from the "X" plane tangent to the rearmost surface of second seatback or the load floor which is stowed at least one half of the H198 dimension height above the rear load floor, to the rearmost inside limiting interference on the zero "Y" plane.
- L211 CARGO LENGTH AT FLOOR-SECOND HATCHBACK. The minimum horizontal dimension measured at floor level from the rear of the second seatback or load floor panel to the normal limiting interference of the hatchback door on the vehicle zero "Y" plane.
- H197 FRONT SEATBACK TO LOAD HEIGHT. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undeepressed floor covering.
- H198 SECOND SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the second seat back to the undeepressed floor covering.
- V3 HATCHBACK.
Measured in inches:

$$\frac{\frac{L208 + L209}{2} \times W4 \times H197}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{\frac{L208 + L209}{2} \times W4 \times H197}{10^9} = \text{m}^3 \text{ (cubic meter)}$$
- V4 HIDDEN LUGGAGE CAPACITY-REAR OF FRONT SEAT. The total volumes of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the front seat.
- V11 HATCHBACK CARGO VOLUME INDEX Usable luggage (one (1) stand and luggage set) below floor:
Measured in inches:

$$\frac{\frac{L210 + L211}{2} \times W4 \times H198}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{\frac{L210 + L211}{2} \times W4 \times H198}{10^9} = \text{m}^3 \text{ (cubic meter)}$$

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Index

Subject	Page No.
Aerodynamics	22
Alternator	16
Automatic Transmission/Transaxle	8, 9
Axis, Steering	14
Axle, Drive, Front, Rear	2, 9, 10
Axle Shafts	10
Battery	16
Body and Miscellaneous Information	17
Brakes—Parking, Service	12, 13
Camber	15
Camshaft	3
Capacities	
Cooling System	5
Fuel Tank	6
Lubricants	
Engine Crankcase	4
Transmission/Transaxle	8, 9
Rear Axle	10
Car Models	1
Car and Body Dimensions	
Width	20
Length	20
Height	20
Ground Clearance	20
Front Compartment	21
Rear Compartment	21
Luggage Compartment	21
Station Wagon — Third Seat	22
Station Wagon — Cargo Space	22
Hatchback — Cargo Space	22
Carburetor	2, 6
Caster	15
Choke, Automatic	6
Clutch — Pedal Operated	8
Coil, Ignition	16
Connecting Rods	4
Convenience Equipment	19
Cooling System	5
Crankshaft	4
Cylinders and Cylinder Head	3
Diesel Information	4
Dimension Definitions	
Key Sheet — Exterior	27, 30, 31
Key Sheet — Interior	28, 29, 31, 32, 33
Electrical System	15, 16
Emission Controls	7
Engine — General	
Bore, Stroke, Type	3
Compression Ratio	2
Displacement	2, 3
Firing Order, Cylinder Numbering	3
General Information, Power & Torque	2
Intake System	4
Power Teams	2
Exhaust System	7
Equipment Availability, Convenience	19
Fan, Cooling	5
Fiducial Marks	23
Filters — Engine Oil, Fuel System	4
Frame	17
Front Suspension	11
Front Wheel Drive Unit	10
Fuel System	6
Fuel Injection	6
Fuel Tank	6
Glass	18
Headroom — Body	21, 22
Heights — Car and Body	20
Horns	15
Horsepower — Brake	2
Ignition System	16
Inflation — Tires	13
Interior Volumes	21
Instruments	15

Subject	Page No.
Lamps and Headlamp Shape	24
Legroom	21, 22
Lengths — Car and Body	20
Leveling, Suspension	11
Lifters, Valve	4
Linings — Clutch, Brake	8, 12
Lubrication — Engine Transmission/Transaxle	4, 8, 9
Luggage Compartment	21
Mass	25, 26
Models	1
Motor Starting	16
Muffler	7
Passenger Capacity	1
Passenger Mass Distribution	25
Pistons	3
Power Brakes	12
Power, Engine	2
Power Steering	14
Power Teams	2
Propeller Shaft, Universal Joints	10
Pumps — Fuel	6
Water	5
Radiator — Cap, Hoses, Core	5
Ratios — Axle, Transaxle	2, 9
Compression	2
Steering	14
Transmission/Transaxle	2, 8, 9
Rear Axle	2, 9, 10
Regulator — Alternator	16
Restraint System	18
Rims	13
Rods — Connecting	4
Scrub Radius	14
Seats	17
Shock Absorbers, Front & Rear	11
Spark Plugs	16
Speedometer	15
Springs — Front & Rear Suspension	11
Stabilizer (Sway Bar) — Front & Rear	11
Starting System	16
Steering	14
Suppression — Ignition, Radio	16
Suspension — Front & Rear	11
Tail Pipe	7
Theft Protection	19
Thermostat, Cooling	5
Tires	13
Toe-In	15
Torque Converter	9
Torque — Engine	2, 8, 9
Transaxle	9
Transmission — Types	2, 8, 9
Transmission — Automatic	2, 8, 9
Transmission — Manual	2, 8, 9
Transmission — Ratios	2, 9
Tread	20
Trunk Cargo Load	1
Trunk Luggage Capacity	21
Turning Diameter	14
Unitized Construction	17
Universal Joints, Propeller Shaft	10
Valve System	4
Voltage Regulator	16
Water Pump	5
Weights	25, 26
Wheel Alignment	15
Wheelbase	20
Wheels & Tires	13
Wheel Spindle	14
Widths — Car and Body	20
Windshield	18
Windshield Wiper and Washer	15