

# MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC( U.S. Customary)

Passenger Car

# 1986

Manufacturer	Chevrolet Motor Division General Motors Corporation		Car Line	Cavalier
Mailing Address	Chevrolet-Pontiac-Canada Group Engineering Center General Motors Corporation 30003 Van Dyke Warren, MI 48090-9060		Issued July, 1985	

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)**

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#### **NOTE:**

1. This form uses both SI metric units and U.S. Customary units. The metric unit of measure is presented first, and the U.S. Customary unit follows in parentheses.
2. **UNLESS OTHERWISE INDICATED:**
  - a. Specifications apply to standard models without optional equipment. Significant deviations are noted.
  - b. Nominal design dimensions are used throughout these specifications.
  - c. All linear dimensions are in millimeters (inches), and all mass (weight) specifications are in kilograms (pounds).
3. The General Specifications herein are those in effect at date of completion and are subject to change without notice by the manufacturer.
4. Additional Car and Body Dimensions (based in part on SAE J1100 "Motor Vehicle Dimensions") may be available from the manufacturer.

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

CAVALIER  
Car Line 1986 7-85  
Model Year            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)
FRONT WHEEL DRIVE		MODEL NUMBER	FRONT/REAR	
<u>CAVALIER</u>				
2-Door Notchback Sedan		1JC27	2 3	60.0 (132.3)
4-Door Notchback Sedan		1JC69	2 3	61.8 (136.2)
4-Door Station Wagon		1JC35	2 3	92.7 (204.4)
<u>CAVALIER 'CS'</u>				
2-Door Hatchback Coupe		1JD77	2 3	72.0 (158.7)
4-Door Notchback Sedan		1JD69	2 3	61.8 (136.2)
4-Door Station Wagon		1JD35	2 3	92.7 (204.4)
<u>CAVALIER 'RS'</u>				
2-Door Notchback Coupe		1JE27	2 3	60.0 (132.3)
2-Door Hatchback Coupe		1JE77	2 3	72.0 (158.7)
4-Door Notchback Sedan		1JE69	2 3	61.8 (136.2)
4-Door Station Wagon		1JE35	2 3	92.7 (204.4)
2-Door Convertible Coupe		1JE67	2 2	48.2 (106.3)
<u>CAVALIER Z24</u>				
2-Door Notchback Coupe		1JF27	2 3	60.0 (132.3)
2-Door Hatchback Coupe		1JF77	2 3	72.0 (158.7)
NOTE: Any specifications on the following pages that are specific to California requirements are indicated accordingly.				

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Model Year 1986 Issued 7-85 Revised (●) 9-85

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**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	Drive Ratios (:1) Axle Ratio			
	Displ. Liters (in <sup>3</sup> )	Carb. (Barrels, FI, etc.)	Compr. Ratio	SAE Net at RPM				Overall Veh.	Overall Veh.	Base Drive	Opt Drive
				kW (bhp)	Torque N·m (lb. ft.)						
Base - All States	L-4 2.0Liter (121 CID) LQ5	EFI +	9.0:1	85 @ 4800	110 @ 2400	S	Man 4-Speed 3.53 Low Base (M19) 27,69 Models	3.32@	2.69	3.65#*	2.96
							Man 5-Speed 3.73 Low Base (MR3) 35,67,77 Models	3.65	2.96	--	--
							Man 5-Speed 3.73 Low Avail (MR3)	3.83	2.83	--	--
							Auto '125c' Avail (MD9)	3.18	3.18\$	3.43\$*	3.43
Base - All States For Convertible and Z24 Models only	V6 2.8Liter (173 CID) LB6	MFI %	8.5:1	120 @ 4800	155 @ 3600		Man 4-Speed 3.31 Low Base (MX6)	3.65	3.28	--	--
							Auto '125c' Avail. (MD9)	3.18\$	3.18	--	--
+ - Electronic Fuel Injection % - (2.8 Multi-Port FI) @ - Without A/C # - With A/C * - Optional Axle Ratio \$ - Axle Ratio = Chain Drive x Differential Drive Ratio											

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Car Line **CAVALIER**

Model Year **1986**

Issued **7-85**

Revised (●) **9-85**

Engine Description/Carb.  
Engine Code

2.0 Liter L-4 (121 CID)  
Electronic Fuel Injection  
RPO LQ5

2.8 Liter V6 (173 CID)  
(2.8 Multi-Port FI)  
RPO LB6

## 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, front of engine faces right side of vehicle	
Manufacturer	Chevrolet	
No. of cylinders	4	6
Bore	89 (3.50)	89 (3.50)
Stroke	80 (3.15)	76 (2.99)
Bore spacing (C/L to C/L)	99 (3.90)	111.8 (4.40)
Cylinder block material & mass kg (lbs.)	Cast Iron/32.050 (70.7)	Cast Iron/41.731 (91.9)
Cylinder block deck height	215.55 (8.49)	224 (8.819)
Deck clearance (minimum) (above or below block)	0.15 (.006) below	0.12 (.005) below
Cylinder head material & mass kg (lbs.)	Cast Iron/16.103 (35.50)	Cast Iron/11.227 (24.8)
Cylinder head volume (cm <sup>3</sup> )	Not Applicable	
Head gasket thickness (compressed)	1.1 (.043)	0.838 (0.033)
Minimum combustion chamber total volume (cm <sup>3</sup> )	59.988 (3.66)@	59.8481 (3.6515)@
Cyl. no. system (front to rear)*	L. Bank	1-2-3-4
	R. Bank	--
Firing order	1-3-4-2	1-2-3-4-5-6 /2.675 (5.9) Ctr
Intake manifold material & mass (kg (weight, lbs.))	Aluminum Cast/2.700 (5.9)	Aluminum Cast/3.810 (8.4) Lwr
Exhaust manifold material & mass (kg (weight, lbs.))	Stainless Steel/4.100 (9.0)	Iron Cast/2.200 (4.9) L.H. 2.948 (6.5) R.H.
Recommended fuel (leaded, unleaded, diesel)	Unleaded	
Fuel antiknock index (R + M) 2	87	
Total dressed engine mass (wt) dry**	150.9 (332.6) Auto	186.2 (410.6) Auto
	159.5 (351.6) Man	197.1 (434.6) Man

## Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum Alloy, .430 (15.2)	Aluminum Alloy, .467 (16.5)
--	-----------------------------	-----------------------------

## Engine - Camshaft

Location	In cylinder block, right side	In block above crankshaft
Material & mass kg (weight, lbs.)	Cast Iron 3.098 (6.83)	Cast Iron/3.098 (6.83)
Drive type	Chain / belt	Chain
	Width / pitch	19.3 (0.76)/9.53 (0.38)
		19.4 (.764)/9.53 (.375)

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

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

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

@ - Piston at TDC, spark plug and valves in place, and cylinder head torqued to specifications.

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Engine Description/Carb.  
Engine Code

2.0 Liter L-4 (121 CID)  
Electronic Fuel Injection  
RPO LQ5

2.8 Liter V6 (173 CID)  
(2.8 Multi-Port FI)  
RPO LB6

## Engine - Valve System

Hydraulic lifters (std., opt., NA)	Standard	
Valves	Number intake / exhaust	4/4
	Head O.D. intake / exhaust	40.64 (1.60)/35.00 (1.38)
		6/6
		43.64 (1.72)/36.20 (1.43)

## Engine - Connecting Rods

Material & mass [kg., (weight, lbs.)]	Cast Steel, .335 (.738)	Cast Steel, .399 (0.880)
---------------------------------------	-------------------------	--------------------------

## Engine - Crankshaft

Material & mass [kg., (weight, lbs.)]	Nodular Cast Iron/13.100(28.88)	
End thrust taken by bearing (no.)	5	3
Number of main bearings		4
Seal (material, one, two piece design, etc.)	Front	
	Rear	

## Engine - Lubrication System

Normal oil pressure [kPa (psi) at engine rpm]	435-530 (63-77) @ 1200	345-450 (50-65) @ 1200
Type oil intake (floating, stationary)	Stationary	
Oil filter system (full flow, part, other)	Full Flow	
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)	3.8 (4.0)

## Engine - Diesel Information

Diesel engine manufacturer		
Glow plug, current drain at 0°F	Not	
Injector nozzle	Type	Applicable
	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	Not
Super charger - manufacturer	Applicable
Charge cooler	

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Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (●)

Engine Description/Carb.  
Engine Code

2.0 Liter L4 (121 CID)  
Electronic Fuel Injection  
RPO LQ5

## Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard							
Coolant fill location (rad., bottle)		Bottle, coolant recovery							
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, with aluminum die cast body							
	GPM 1000 pump rpm	7.3 @ 1000 pump RPM							
	Number of pumps	One							
	Drive (V-belt, other)	V-belt							
	Bearing type	Sealed, ball-roller							
	Impeller material								
Housing material									
By-pass recirculation [type (inter., ext.)]		Internal							
Cooling system capacity	With heater-L (qt.)	8.19 (8.6) Auto, 8.29 (8.8) Man							
	With air cond.-L (qt.)	8.23 (8.7) Auto, 8.33 (8.8) Man							
	Opt. equipment [specify-L (qt.)]	8.37 (8.8) Auto, 8.37 (8.8) Man							
Water jackets full length of cyl. (yes, no)		Yes							
Water all around cylinder (yes, no)		Yes							
Water jackets open at head face (yes, no)									
Radiator core	Std., A/C, HD	Auto Std.	Auto A/C	Auto HD	Auto AC&HD	Man Std	Man A/C	Man HD	Man AC&HD
	Type (cross-flow, etc.)	Cross-flow							
	Construction (fin & tube mechanical, braze, etc.)								
	Material, mass [kg (wgt. lbs.)]	Copper-brass, high efficiency radiator							
	Width	430.0	500.0	430.0	500.0	430.0	500.0	430.0	500.0
	Height	387.5	387.5	387.5	387.5	303.2	303.2	387.5	387.5
	Thickness	25.0	25.0	40.2	40.2	25.0	25.0	40.2	40.2
	Fins per inch	3.5*	3.5*	3.5*	3.5*	4.5*	3.5*	3.5*	3.5*
Radiator end tank material									
Fan	Std., elec., opt.	Electric							
	Number of blades & type (flex, solid, material)	Std. - 4, flex, plastic (opt. - 5, flex, plastic)							
	Diameter & projected width	Std. - 291.0 (opt. - 354.0)							
	Ratio (fan to crankshaft rev.)	Not Applicable							
	Fan cutout type	ECM controlled							
	Drive type (direct, remote)	Direct							
	RPM at idle (elec.)	2200-2400 (constant)							
	Motor rating (wattage) (elec.)	96							
	Motor switch (type & location) (elec.)	Coolant switch, engine cylinder head							
	Switch point (temp., pressure) (elec.)	110°F							
	Fan shroud (material)	Plastic							

\* - Distance between top of fins.

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Engine Description/Carb.  
Engine Code

2.8 Liter V6 (173 CID)  
(2.8 Multi-Port FI)  
RPO LB6

## Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard			
Coolant fill location (rad., bottle)		Bottle, coolant recovery			
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, with aluminum die cast body			
	GPM 1000 pump rpm	--			
	Number of pumps	One			
	Drive (V-belt, other)	V-belt			
	Bearing type	Sealed, ball-roller			
	Impeller material				
	Housing material				
By-pass recirculation [type (inter., ext.)]		Internal			
Cooling system capacity	With heater-L(qt.)	10.71 (11.3) Auto, 10.75 (11.4) Man			
	With air cond.-L(qt.)	10.67 (11.3) Auto, 10.71 (11.3) Man			
	Opt. equipment [specify-L(qt.)]	10.71 (11.3) Auto, 10.71 (11.3) Man			
Water jackets full length of cyl. (yes, no)		Yes			
Water all around cylinder (yes, no)		Yes			
Water jackets open at head face (yes, no)					
Radiator core	Std., A/C, HD	Auto Std.	Auto A/C	Man. Std.	Man. A/C
	Type (cross-flow, etc.)	Cross-flow			
	Construction (fin & tube mechanical, braze, etc.)				
	Material, mass [kg (wgt, lbs.)]	Copper-brass, high efficiency radiator			
	Width	599.5			
	Height	360.4			
	Thickness	34.0			
	Fins per inch	4.0*	3.5*	4.0*	4.0*
Radiator end tank material					
Fan	Std., elec., opt.	Electric			
	Number of blades & type (flex, solid, material)	Std. - 7, flex, plastic (opt. same - 7, flex, plastic)			
	Diameter & projected width	Std. and opt. same - 352.5 (13.86)			
	Ratio (fan to crankshaft rev.)	Not Applicable			
	Fan cutout type	ECM controlled			
	Drive type (direct, remote)	Direct			
	RPM at idle (elec.)	--			
	Motor rating (wattage) (elec.)	--			
	Motor switch (type & location) (elec.)	--			
	Switch point (temp., pressure) (elec.)	--			
	Fan shroud (material)	Plastic			

\* - Distance between top of fins.



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Car Line CAVALIER  
Model Year 1985 Issued 7-85 Revised (●) 9-85

Engine Description/Carb.  
Engine Code

2.0 Liter L-4 (121 CID)  
Electronic Fuel Injection  
RPO LQ5

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

Induction type: carburetor, fuel injection system, etc.		Fuel Injection CCC controlled	
Carburetor	Mfr.	None	
	Choke (type)	None	
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	
		Automatic	
Idle A/F mix.		Preset - no adjustment provided	
Fuel injection	Point of injection (no.)	Throttle body	
	Constant, pulse, flow	Pulse	
	Control (electronic, mech.)	Electronic	
	System pressure [kPa (psi)]	68.95-82.74 (10-12)	
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water	
Air cleaner type	Standard	Replaceable paper element single snorkel	
	Optional	None	
Fuel pump	Type (elec. or mech.)	Electric	
	Location (eng., tank)	Tank	
	Pressure range [kPa (psi)]	Not Applicable	

## Fuel Tank

Capacity [refill L (gallons)]		51.5 (13.6)
Location (describe)		Underbody - rear center
Attachment		Underbody strap
Material & Mass [kg (weight lbs)]		Steel
Filler pipe	Location & material	R.H. rear quarter
	Connection to tank	Solid solder
Fuel line (material)		Steel
Fuel hose (material)		Rubber
Return line (material)		Steel
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	Not Available
	Capacity [L (gallons)]	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	"
	Capacity [L (gallons)]	"
	Location & material	"
	Attachment	"
	Selector switch or valve	"
	Separate fill	"

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Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (●) 9-85

Engine Description/Carb.  
Engine Code

2.8 Liter V6 (173 CID)  
(2.8 Multi-Port FI)  
RPO LB6

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

Induction type: carburetor, fuel injection system, etc.		Multi-Port Fuel Injection	
Carburetor	Mfgr.	None	
	Choke (type)	None	
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	
		Automatic	
Idle A/F mix.		Preset - no adjustment provided	
Fuel injection	Point of injection (no.)	Fuel Injectors at inlet ports	
	Constant, pulse, flow	Pulse	
	Control (electronic, mech.)	Electronic	
	System pressure [kPa (psi)]	Not Available	
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water	
Air cleaner type	Standard	Replaceable paper element single snorkel	
	Optional	None	
Fuel pump	Type (elec. or mech.)	Electric	
	Location (eng., tank)	Tank	
	Pressure range [kPa (psi)]	Not Applicable	

## Fuel Tank

Capacity [refill L (gallons)]		51.5 (13.6)
Location (describe)		Underbody - rear center
Attachment		Underbody strap
Material & Mass [kg (weight lbs)]		Steel
Filler pipe	Location & material	R.H. rear quarter
	Connection to tank	Solid solder
Fuel line (material)		Steel
Fuel hose (material)		Rubber
Return line (material)		Steel
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	Not Available
	Capacity [L (gallons)]	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	"
	Capacity [L (gallons)]	"
	Location & material	"
	Attachment	"
	Selector switch or valve	"
	Separate fill	"

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Model Year 1986 Issued 7-85 Revised (•) 9-85

Engine Description/Carb.  
Engine Code

2.0 Liter L-4 (121 CID) Electronic Fuel Injection RPO LQ5	2.8 Liter V6 (173 CID) 2.8 Multi-Port FI RPO LB6
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## Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		CCC control with fuel injection	
	Air Injection	Pump or pulse	None	None
		Driven by		None
		Air distribution (head, manifold, etc.)		None
		Point of entry		None
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled flow	Not available
		Exhaust source	Exhaust manifold	Not available
		Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet manifold	Not available
	Catalytic Converter	Type	Single bed, oxidizing & reducing	
		Number of	One	
		Location(s)	Mounted to center underbody	
		Volume [L (in <sup>3</sup> )]	2.78 (170)	
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	
Evapora- tive Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister	
		Carburetor	--	
Electronic system	Vapor storage provision		Canister	
	Closed loop (yes/no)		Yes	
	Open loop (yes/no)		No	

## Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single (with dual tailpipes 2-doors only)	
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		One, reverse flow	
Resonator no. & type		None	
Exhaust pipe	Branch o.d., wall thickness		--
	Main o.d., wall thickness		44.5 x 0.94 (1.75 x .037)*   50.8 x 0.94 (2.0 x .037)
	Material & Mass [kg (weight lbs)]		*
Inter- mediate pipe	o.d. & wall thickness		50.8 x 1.09 (2.0 x .043)
	Material & Mass [kg (weight lbs)]		Aluminum coated steel
Tail pipe	o.d. & wall thickness		50.8 x 1.09 (2.0 x .043)   50.8 x 1.09 (2.0 x .043)
	Material & Mass [kg (weight lbs)]		Aluminum coated steel

\* - Laminated tubing - steel inner, stainless steel outer.

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Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

Engine Description/Carb.  
Engine Code

2.0 Liter L4 (121 CID)  
Electronic Fuel Injection  
RPO LQ5

## Transmissions/Transaxle

Manual 3-speed (std., opt., n.a.) (mfr.)	Not Available
Manual 4-speed (std., opt., n.a.) (mfr.)	Standard
Manual 5-speed (std., opt., n.a.) (mfr.)	Optional
Manual overdrive (std., opt., n.a.) (mfr.)	Not Available
Automatic (std., opt., n.a.) (mfr.)	Optional
Automatic overdrive (std., opt., n.a.) (mfr.)	Not Available

## Manual Transmission/Transaxle

Number of forward speeds		4	5
Transmission ratios	In first	3.53	3.73
	In second	1.95	2.15
	In third	1.24	1.33
	In fourth	0.81	0.92
	In fifth	--	0.74
	In overdrive	--	--
	In reverse	3.42	3.50
Synchronous meshing (specify gears)		All forward gears	
Shift lever location		Floor	
Lubricant	Capacity [L (pt.)]	4-Speed 2.8L (5.9 pts.), 5-Speed 2.55L (5.36 pts.)	
	Type recommended	4-Speed & 5-Speed SAE 5W-30 Engine Oil SE, SE/CC or SE/CD	
	SAE viscosity number	Summer	4-Speed & 5-Speed SAE 5W-30 Engine Oil SE, SE/CC or SE/CD
		Winter	4-Speed & 5-Speed SAE 5W-30 Engine Oil SE, SE/CC or SE/CD
		Extreme cold	4-Speed & 5-Speed SAE 5W-30 Engine Oil SE, SE/CC or SE/CD

## Clutch (Manual Transmission)

Make, type, engagement (describe) – (hydraulic, cable, rod)		Manual 4-Speed Borg & Beck, dry disc	Manual 5-Speed Isuzu, dry disc
Assist (yes, no / percent)			
Type pressure plate springs		Diaphragm	Diaphragm
Total spring load [N (lb.)]		5516 (1240)	4609 (1036)
No. of clutch driven discs		One	One
Clutch facing	Material	Molded type asbestos	Not Available
	Manufacturer	Borg & Beck	Isuzu
	Part number	14079600	94253238
	Rivets/plate	36	16
	Rivet size	.143 x .213	Not Available
	Outside & inside dia.	203.2 x 152.4 (8.0 x 6.0)	215.0 x 154.0 (8.46 x 6.06)
	Total eff. area [cm <sup>2</sup> (in. <sup>2</sup> )]	142 (22.0)	176.6 (27.37)
	Thickness	6.86-7.37 (.270-.290)	7.8 (.307)
Release bearing	Engagement cushion method	Driven plate wave spoke springs	Not Available
Release bearing	Type & method of lubrication	Ball thrust - prepacked and sealed	Not Available
Torsional damping	Method: springs, friction material	Coil springs and metal-to-metal friction	Not Available

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (●) \_\_\_\_\_

Engine Description/Carb.  
Engine Code

2.8 Liter V6 (173 CID)  
(2.8 Multi-Port FI)  
RPO LB6

## Transmissions/Transaxle

Manual 3-speed (std., opt., n.a.) (mfr.)	Not Available
Manual 4-speed (std., opt., n.a.) (mfr.)	Standard
Manual 5-speed (std., opt., n.a.) (mfr.)	Not Available
Manual overdrive (std., opt., n.a.) (mfr.)	Not Available
Automatic (std., opt., n.a.) (mfr.)	Optional
Automatic overdrive (std., opt., n.a.) (mfr.)	Not Available

## Manual Transmission/Transaxle

Number of forward speeds			4
Transmission ratios	In first		3.31
	In second		1.95
	In third		1.24
	In fourth		0.90
	In fifth		--
	In overdrive		--
	In reverse		3.42
Synchronous meshing (specify gears)			All forward gears
Shift lever location			Floor
Lubricant	Capacity [L (pt.)]		2.8L (5.9 pts.)
	Type recommended		SAE 5W-30 Engine Oil SF, SE/CC or SE/CD
	SAE viscosity number	Summer	SAE 5W-30 Engine Oil SF, SE/CC or SE/CD
		Winter	"
		Extreme cold	"

## Clutch (Manual Transmission)

Make, type, engagement (describe) - (hydraulic, cable, rod)		Borg & Beck, dry single plate
Assist (yes, no / percent)		
Type pressure plate springs		Diaphragm
Total spring load [N (lb.)]		6227 (1400)
No. of clutch driven discs		One
Clutch facing	Material	Woven molded asbestos
	Manufacturer	Borg & Beck
	Part number	14085576
	Rivets/plate	32
	Rivet size	3.6 x 5.4 (.143 x .213)
	Outside & inside dia.	232 x 155 (9.12 x 6.12)
	Total eff. area [cm <sup>2</sup> (in. <sup>2</sup> )]	232 (35.9)
	Thickness	7.49-8.00 (.295-.315)
Engagement cushion method		Driven plate wave spoke springs
Release bearing	Type & method of lubrication	Ball thrust - prepacked and sealed
Torsional damping	Method: springs, friction material	Coil springs & metal-to-metal friction

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (e) \_\_\_\_\_

Engine Description/Carb.  
Engine Code

2.0 Liter L-4 (121 CID) Electronic Fuel Injection RPO LQ5	2.8 Liter V6 (173 CID) 2.8 Multi-Port FI RPO LB6
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## Automatic Transmission/Transaxle

Trade name		3-Speed Automatic
Type and special features (describe)		Torque converter with clutch 125C
Selector	Location	Floor
	Ltr./No. designation	P-R-N-D-2-1
Gear ratios	R	2.07
	D	1.00*
	2	1.60
	1	2.84
	Overdrive	Not Applicable
Max. upshift speed - drive range [km/h (mph)]		1-2=63(39), 2-3=111(69)   1-2=66(41), 2-3=117(73)
Max. kickdown speed - drive range [km/h (mph)]		3-2=100(62), 2-1=58(36)   3-2=111(69), 2-1=58(36)
Min. overdrive speed [km/h (mph)]		Not Available
Torque converter	Number of elements	3
	Max. ratio at stall	2.7   2.35
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.65)
Lubricant	Capacity [refill L (pt.)]	5.5L
	Type Recommended	Dexron II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Standard, integral part of radiator

\* = converter clutch engagement

## Axle or Front Wheel Drive Unit

Type (front, rear)		Front
Description		Front differential with helical gears and tapered roller bearings
Limited slip differential (type)		Not Available
Drive pinion offset		Not Available
Drive pinion (type)		Not Available
No. of differential pinions		2
Pinion / differential adjustment (shim, other)		None
Pinion / differential bearing adjustment (shim, other)		Shim
Driving wheel bearing (type)		Sealed ball bearings
Lubricant	Capacity [L (pt.)]	Part of auto. trans. lub.
	Type recommended	Transmission lub.
	SAE viscosity number	Transmission lub.
		Summer
		Winter
	Extreme cold	Transmission lub.

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

Axle ratio (or overall top gear ratio)		3.18	3.32	3.43	3.65	3.83
No. of teeth	Pinion or drive gr.	33	25	33	23	
	Ring gear or gear driven gr.	37	83	37	84	
Ring gear o.d. or driven gr. o.d.		195.2				
Transaxle	Transfer gear ratio	--				
	Final drive ratio	--				

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line **CAVALIER**  
Model Year **1986** Issued **7-85** Revised (•) \_\_\_\_\_

Engine Description/Carb.  
Engine Code

2.0 Liter L-4 (121 CID) Electronic Fuel Injection RPO LQ5	2.8 Liter V6 (173 CID) 2.8 Multi-Port FI RPO LB6
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## Axle Shafts – Front Wheel Drive

Number used			Two	
Type (straight, solid bar, tubular, etc.)		Left	Straight solid bar	
		Right	Straight solid bar (a)	
Outer diam. x length* x wall thickness	Manual transmission	Left	23.91 x 355.40 (Base), 27.05 x 359.70 (Heavy Duty) (b) *	
		Right	23.91 x 698.40 (Base), 27.05 x 714.70 (Heavy Duty) (b)**	
	Automatic transmission	Left	23.91 x 346.40	23.56 X 311 (b)
		Right	23.91 x 398.40	23.56 X 364.3 (b)
	Optional transmission	Left	None	
		Right	None	
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	TRI-POT (c)	TRI-POT (d)
		Outer	Rzeppa - fixed	
	Attach (u-bolt, clamp, etc.)		Splined	
	Bearing	Type (plain, anti-friction)	Anti-friction	
		Lubrication (fitting, prepack)	Prepacked	
	Drive taken through (torque tube, arms or springs)			Wishbone lower control arm; upper MacPherson strut
Torque taken through (torque tube, arms or springs)			Engine mounting system	

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

(a) - Tubular R.H. shaft with manual transmission (46.5 mm x 698.40 mm)

(b) - Shaft Capacity = Base - 2300 N.m.

Heavy Duty - 2700 N.m.

(c) - Plunge = Manual, Left (Base) - 24.84

Manual, Right (Base) - 33.29

Manual, Left (Heavy Duty) - 28.78

Manual, Right (Heavy Duty) - 25.23

Auto, Left - 24.51

Auto, Right - 23.36

\* 27.05 X 313 (Heavy-duty)(b)

\*\*27.05 X 665 (Heavy-duty)(b)

(d) Plunge (max)

Manual, left (H.D.)=66.0 mm

Manual, right(H.D.)=66.0 mm

Automatic, left(Base)=61.0 mm

Automatic, right(Base)=61.0mm

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

Body Type And/Or  
Engine Displacement

NOTCHBACK COUPE	HATCHBACK COUPE	CONVERTIBLE COUPE	NOTCHBACK SEDANS	LIFTGATE WAGONS
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## Suspension – General

Car leveling	Std./opt./n.a.	Not Available
	Type (air, hyd., etc.)	"
	Manual/auto. controlled	"
Provision for brake dip control		Front suspension geometry
Provision for accel. squat control		Rear suspension geometry
Provisions for car jacking		Body pickup at rocker panels
Shock absorber (front & rear)	Type	MacPherson strut - front; double acting hydraulic - rear
	Make	Delco
	Piston diameter	32.0 (1.26) Front, 25.0 (.98) Rear
	Rod diameter	25.0 (.98) Front, 13.5 (.53) Rear

## Suspension – Front

Type and description		MacPherson with coil springs, stamped lower control arms and nodular iron steering knuckles.
Drive and torque taken through		
Travel	Full jounce	89.0 mm (3.5 in)
	Full rebound	84.0 mm (3.3 in)
Spring	Type (coil, leaf, other) & material	Coil, steel
	Insulators (type & material)	--
	Size (coil design height & i.d., bar length x dia.)	406.6 (16.0) x 139.0 (5.47 x 2932 (115.4) x 12.9 (.5)
	Spring rate [N/mm (lb./in.)]	16.0 (91.0) Base, 24.0 (137.0) F40 & F41, 20.0 (114.3) LB6(**)
	Rate at wheel [N/mm (lb./in.)]	17.2 (98.0) Base, 19.9 (114.0) F40 & F41, 16.6 (94.9) LB6
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	Steel, 24.0 (.94), 30.0 (1.18) w/215 Tires   28.0 (1.1)

## Suspension – Rear

Type and description		Trailing arm with stamped control arms and open section transverse beam.
Drive and torque taken through		Section transverse beam
Travel	Full jounce	111.0 (4.37)
	Full rebound	91.0 (3.58)
Spring	Type (coil, leaf, other) & material	Progressive rate coil, HR steel
	Size (length x width, coil design height & i.d., bar length & dia.)	290 (11.42) x 105 (4.13) x 2626 (103.4) x 13.6 (.54)
	Spring rate [N/mm (lb./in.)]	23(131)Base, F40&F41-28(160)Sedans&Coupes 31.0(177)Base Wag(a)
	Rate at wheel [N/mm (lb./in.)]	14.6(83)Base, F40&F41-16.7(95)Sedans&Cpes 17.9(102)Base Wag
	Insulators (type & material)	Rubber - top & bottom
	If leaf	No. of leaves Shackle (comp. or tens.)
Stabilizer	Type (link, linkless, frameless)	Linkless function performance by axle beam
	Material & bar diameter	Steel, 13mm (.51) w/V6, 15mm (.59) w/F41-w/o PC1(*)
Track bar (type)		Transverse beam design; 30 (1.18)

(\*) 21mm (.82) w/F41 & PC1. (\*\*) 27.0 (154.0) Z24  
(a) 31.0 (177.0) Z24



# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (●) \_\_\_\_\_

Body Type And/Or  
Engine Displacement

NOTCHBACK COUPE	HATCHBACK COUPE	NOTCHBACK SEDANS	CONVERTIBLE COUPE	LIFTGATE WAGONS
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## Brakes - Service

Description			Single caliper disc front, duo-servo drum rear
Brake type (std., opt., n.a.)	Front (disc or drum)		Disc
	Rear (disc or drum)		Drum
Self-adjusting (std., opt., n.a.)			Standard
Special valving	Type (proportion, delay, metering, other)		Proportioning. Diagonal split circuit.
Power brake (std., opt., n.a.)			Standard
Booster type (remote, integral, vac., hyd., etc.)			Single or tandem vacuum depending on mass
Vacuum source (inline, pump, etc.)			Inline (intake manifold)
Vacuum reservoir (volume in. <sup>3</sup> )			None
Vacuum pump-type (elec. gear driven, belt driven, if other so state)			"
Anti-skid device type (std., opt., n.a.) (F/R)			Not Available
Effective area [cm <sup>2</sup> (in. <sup>2</sup> )]*			309 (47.9)
Gross lining area [cm <sup>2</sup> (in. <sup>2</sup> )]**(F/R)			381 (59.1)
Swept area [cm <sup>2</sup> (in. <sup>2</sup> )]*** (F/R)			1624 (251.8)
Rotor	Outerworking diameter	F/R	247 (9.72) / --
	Inner working diameter	F/R	-- / --
	Thickness	F/R	22.4 (0.88) / --
	Material & type (vented/solid)	F/R	Cast iron, vented / --
Drum	Diameter & width	F/R	-- / 200 x 45 (7.87 x 1.77)
	Type and material	F/R	-- / Cast iron, non-finned
Wheel cylinder bore			57 (2.24) / 16 (.63) All exc. wagon, 17.5 (.69) wagon
Master cylinder	Bore/stroke	F/R	22 (.866) / 31.8 (1.25)
Pedal arc ratio			3.9:1
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]			Not Available
Lining clearance		F/R	Self adjusting
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)	Riveted (6). In-board, outboard-integrally molded
		Rivet size	7.92 x 5.33 (0.312 x 0.21)
		Manufacturer	Delco Moraine
		Lining code*****	122EE
		Material	Semi-metallic
		**** Primary or out-board	116.7 x 54.7 x 10.92 (4.594 x 2.157 x .430)
		Size Secondary or in-board	125 x 59 x 10.2 (4.92 x 2.32 x 0.4)
		Shoe thickness (no lining)	4.72 IB, 3.14 OB (.186 IB, 0.123 OB)
	Rear wheel	Bonded or riveted (rivets/seg.)	Riveted. (8)
		Manufacturer	Inland Division
		Lining Code*****	235 FE
		Material	Organic
		**** Primary or out-board	167.7 x 43.9 x 3.8 (6.60 x 1.73 x .15)
		Size Secondary or in-board	167.7 x 43.9 x 4.8 (6.60 x 1.73 x .19)
		Shoe thickness (no lining)	2.75 (.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 CAVALIER  
Model Year 1986 Issued 7-85 Revised (•) 9-85

Body Type And/Or  
Engine Displacement

Notchback Coupe	Hatchback Coupe	Convertible Coupe	Notchback Sedans	Liftback Wagons
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Tires And Wheels (Standard)			1JC, 1JD00	1JE00	1JF00
Tires	Size (load range, ply)		P175/80R-13 BW	P195/70R-13BW	P215/60R14 BW
	Type (bias, radial, etc.)		Steel Belted Radial		
	Inflation pressure (cold) for recommended max. vehicle load	Front [kPa (psi)]	240 (35)		
		Rear [kPa (psi)]	240 (35)		
	Rev./mile—at 70 km/h (45 mph)		540		
Wheels	Type & material		Steel		
	Rim (size & flange type)		13x5.5		14 x 6
	Wheel offset		49.0 (1.93)		
	Attachment	Type (bolt or stud)	Stud		
		Circle diameter	100.0 (3.94)		
		Number & size	5-M12 x 1.5 - 6H, THD. (metric)		
Spare	Tire and wheel (same, if other describe)		T115/70D-14, wheel dia. 14-width x 4. Inflation 415 (60)		
	Storage position & location (describe)		Flat under rear load floor		

Tires And Wheels (Optional)		1JC, 1JD00	1JE67, 1JF00
Size (load range, ply)		P175/80R-13 W.S.	P215/60R14 WL
Type (bias, radial, etc.)		Steel Belted Radial	
Wheel (type & material)		Steel	Not Available
Rim (size, flange type and offset)		13 x 5.5	"
Size (load range, ply) (+)		P195/70R-13 BW, WS, WL	WL @
Type (bias, radial, etc.)		Steel Belted Radial	
Wheel (type & material)		Steel	
Rim (size, flange type and offset)		13 x 5.5	@
Size (load range, ply)		--	
Type (bias, radial, etc.)		--	
Wheel (type & material)		Aluminum	
Rim (size, flange type and offset)		13 x 5.5	14 x 6.0
Size (load range, ply)			
Type (bias, radial, etc.)			
Wheel (type & material)			
Rim (size, flange type and offset)			
Spare tire and wheel (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)		T125/70D-14, wheel dia. 14-width x 4. inflates 415 (60) Flat under rear load floor.	

(+) Required with sport suspension, RPO F41.  
(@) Available on 1JE00

## Brakes - Parking

Type of control	Grip handle	
Location of control	In console between front seats	
Operates on	Rear service brakes	
If separate from service brakes	Type (internal or external)	--
	Drum diameter	--
	Lining size (length x width x thickness)	--

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

Body Type And/Or  
Engine Displacement

NOTCHBACK COUPES	HATCHBACK COUPES	CONVERTIBLE COUPE	NOTCHBACK SEDANS	LIFTGATE WAGONS
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## Steering

Manual (std., opt., n.a.)			Standard (1JC, 1JD00)		
Power (std., opt., n.a.)			Standard (1JE, 1JF00, Optional 1JC, 1JD00, Required w/V-6 eng		
Adjustable steering wheel (tilt, swing, other)		Type and description	Tilt		
		(Std., opt., n.a.)	Optional		
Wheel diameter (W9) SAE J1100		Manual	@363.5 (14.3 in.) 1JD00, 368mm (14.5 in.) (1JE, 1JF00)		
		Power	@363.5 (14.3 in.) 1JD00, 368mm (14.5 in.) (1JE, 1JF00)		
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	--		
		Curb to curb (l. & r.)	10.59 mm (34.74 ft.)		
	Inside rear	Wall to wall (l. & r.)	Not Available		
		Curb to curb (l. & r.)	"		
Scrub Radius*			"		
Manual	Gear	Type	Rack and pinion w/center take-off tie rods - integral		
		Make	Saginaw Steering Gear		
		Ratios	Gear	22.0:1	
			Overall	Not Available	
	No. wheel turns (stop to stop)		4.04		
Power	Type (coaxial, linkage, etc.)		Rack and pinion w/center take-off tie rods - integral		
	Make		Saginaw Steering Gear		
	Gear	Type	Rack and pinion w/center take-off tie rods - integral		
		Ratios	Gear	16.0:1 with F41 - 14.0:1	
			Overall	Not Available	
	Pump (drive)		Belt off crankshaft pulley		
	No. wheel turns (stop to stop)		2.88		
Linkage	Type		Center take-off tie rods, rack and pinion		
	Location (front or rear of wheels, other)		Rear		
	Tie rods (one or two)		Two		
Steering axis	Inclination at camber (deg.)		13.5°		
	Bearings (type)	Upper	Ball bearing		
		Lower	Ball joint		
		Thrust	Not Available		
Steering spindle & joint type			"		
Wheel spindle	Diameter	Inner bearing	"		
		Outer bearing	"		
	Thread (size)		M20 x 1.5		
	Bearing (type)		Integral double row ball, permanently lubricated		

\*The horizontal distance in the front elevation between wheel centerline and kingpin (ball joint) axis at ground.  
@- 1JC00 models, oval wheel  
Vert. 362mm (14.25 in)  
Horiz. 374mm (14.7 in)

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (●) 9-85

Body Type And/Or  
Engine Displacement

NOTCHBACK COUPES	HATCHBACK COUPES	CONVERTIBLE COUPE	NOTCHBACK SEDANS	LIFTGATE WAGONS :
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## Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	Not adjustable
		Camber (deg.)	+ .85° +/- .65°
		Toe-in [outside track-mm (in.)]	.06° toe-out +/- .10°
	Service reset*	Caster	Not adjustable
		Camber	+ .85° +/- .65°
		Toe-in	.06° toe-out +/- .10°
	Periodic M.V. in- spection	Caster	Not adjustable
		Camber	--
		Toe-in	--
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	Not Applicable
		Toe-in [outside track-mm (in.)]	"
	Service reset*	Camber	"
		Toe-in	"
	Periodic M.V. in- spection	Camber	"
		Toe-in	"

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

Electrical – Instruments and Equipment		1JC, 1JD, 1JE00	1JF00
Speed-ometer	Type	Circular dial with pointer	Digital
	Trip odometer (std., opt., n.a.)	Optional	Standard
EGR maintenance indicator		Not Available	Not Available
Charge indicator	Type	Tell-Tale Warning Light	Gauge
	Warning device	Not Available	Not Available
Temperature indicator	Type	Tell-Tale Warning Light	Gauge
	Warning device	Not Available	Not Available
Oil pressure indicator	Type	Tell-Tale Warning Light	Gauge
	Warning device	Not Available	Not Available
Fuel indicator	Type	Electric gauge with pointer	
	Warning device	Not Available	
Wind-shield wiper	Type (standard)	Electric 2-speed	
	Type (optional)	Intermittent windshield wiper system	
	Blade length	430 (16.0)	
	Swept area [cm <sup>2</sup> (in. <sup>2</sup> )]	Coupe 4900 (759.7), sedan & wagon 4937 (765.4)	
Wind-shield washer	Type (standard)	Sliding switch on RH instrument cluster pod (1JE, 1JF00)*	
	Type (optional)	Not Available	
	Fluid level indicator	"	
Horn	Type	Vibrator	
	Number used	One	
Other		Parking brake warning light & brake failure warning light. Restraint system warning light and buzzer, Odometer flag for converter service, "choke" malfunction tell-tale warning light - (California only) 'Service Engine Soon' light.	

\*Paddle on turn signal lever (1JC, 1JD00)

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (●) \_\_\_\_\_

Engine Description/Carb.  
Engine Code

2.0 Liter L4 (121 CID)  
Electronic Fuel Injection  
RPO LQ5

2.8 Liter V 6 (173 CID)  
(2.8 Multi-Port FI)  
RPO LB6

## Electrical – Supply System

Battery	Make	Delco Remy
	Model, std., (opt.)	70-525, 75-630 H.D.
	Voltage	12 Volt
	Amps at 0°F cold crank	525, 630 H.D.
	Minutes-reserve capacity	90 minutes base, 90 minutes H.D.
	Amp/hrs. - 20 hr. rate	--
	Location	Engine compartment
Generator or alternator	Type and rating	Diode rectified, 42 amps
	Ratio (alt. crank/rev.)	2.3:1
	Optional (type & rating)	None
Regulator	Type	Integral with alternator

## Electrical – Starting System

Start, motor	Current drain at 0°F -20°F	305 @ -20°F
Motor drive	Engagement type	Solenoid
	Pinion engages from (front, rear)	Front

## Electrical – Ignition System

Type	Electronic (std., opt., n.a.)	--
	Other (specify)	High energy ignition system (H.E.I.)
Coil	Make	Delco Remy
	Model	1115461
	Current	Engine stopped - A 0
		Engine idling - A 5.5 Max
Spark plug	Make	AC spark plug
	Model	R42CTS
	Thread (mm)	M14x1.25
	Tightening torque [N-m (lb. ft)]	9-20 (7-15)
	Gap	.9 (.035)   1.14 (.045)
	Number per cylinder	One
Distributor	Make	Delco Remy
	Model	1103579

## Electrical – Suppression

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

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

Body Type

NOTCHBACK  
COUPES

CONVERTIBLE  
COUPE

HATCHBACK  
COUPES

## Body

Structure	Unitized body construction including front end structure with bolted-on fenders and hood
Bumper system front-rear	Bumper fascias are attached to steel impact bar and dual enersorbers for collision energy absorption. (Meets GM 5 mph impact standard). Bumper guards optional on all models except Z24 series.
Anti-corrosion treatment	Special anticorrosion materials are used on interior and exterior metal panel surfaces. Materials include one and two-sided galvanized, zincrometal and zinc-iron alloy steels. 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)		Acrylic lacquer or water base acrylic enamel	
Hood	Hinge location (front, rear)	Rear	
	Type (counterbalance, prop)	Prop rod	
	Release control (internal, external)	Internal	
Trunk lid	Type (counterbalance, other)	Torsion rods	--
	Internal release control (elec., mech., n.a.)	Electrical-Optional	--
Hatch-back lid	Type (counterbalance, other)	--	(A)
	Internal release control (elec., mech., n.a.)	--	Electrical-Opt.
Vent window control (crank, friction, pivot, power)	Front	None	
	Rear	"	
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Bucket %@, polyurethane padding	
	Rear	Bench @, polyurethane padding	
	3rd seat	--	
Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Reclining bucket w/E-Z entry feature @, polyurethane padding	
	Rear	Bench @, (full folding on hatchbacks-split opt.)poly. paddin	
	3rd seat	--	

(A) - Two-telescoping gas struts.

@ - Up-level design on 1JE67.

% - Low contour design ('Cavalier' & 'CS' series)  
High contour design ('RS' & 'Z24' series)

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (●) \_\_\_\_\_

## Body Type

NOTCHBACK  
SEDANS

LIFTGATE  
STATION WAGONS

## Body

Structure	Unitized body construction including front end structure with bolted-on fenders and hood.
Bumper system front - rear	Bumper fascias are attached to steel impact bar and dual enersorbers for collision energy absorption. (Meets G.M. 5 mph impact standard). Bumper guards optional on all models except Z24 series.
Anti-corrosion treatment	Special anticorrosion materials are used on interior and 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)	Acrylic lacquer or water base acrylic enamel	
Hood	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Prop rod
	Release control (internal, external)	Internal
Trunk lid	Type (counterbalance, other)	Torsion rods (A)
	Internal release control (elec., mech., n.a.)	Electrical-Optional
Hatch-back lid	Type (counterbalance, other)	--
	Internal release control (elec., mech., n.a.)	--
Vent window control (crank, friction, pivot, power)	Front	None
	Rear	None
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Bucket %, polyurethane padding
	Rear	Bench polyurethane padding
	3rd seat	None
Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Reclining bucket, polyurethane padding
	Rear	Bench (full folding on station wagons-split opt)poly. padding
	3rd seat	None

(A) - Lift gate, two-telescoping gas struts.

% - Low contour design ('Cavalier' & 'CS' series)  
High contour design ('RS' & 'Z24' series)

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

Car Line CAVALIER  
 Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

Body Type

NOTCHBACK COUPE	CONVERTIBLE	HATCHBACK COUPE
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**Restraint System**

Active restraint system	Standard/optional	Standard
	Type and description	Front-Seat belt and shoulder belt system with retractor Rear-Seat belt system (3-all except convertible)(2-convertible)
	Location	Front-Belt and shoulder belt attached to lock pillar with inertia reel in lower lock pillar. Frt buckle attached to underbody. Rr belts attached to underbody.
Passive seat belts	Standard/optional	Not Available
	Power/manual	"
	2 or 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 <sup>2</sup> (in. <sup>2</sup> )]	S1	7487 (1160.5)		
Side glass exposed surface area [cm <sup>2</sup> (in. <sup>2</sup> )] - total 2-sides	S2	10912 (1691.4)		11478 (1779.1)
Backlight glass exposed surface area [cm <sup>2</sup> (in. <sup>2</sup> )]	S3	5154 (798.9)	3393 (525.9)	8685 (1346.2)
Total glass exposed surface area [cm <sup>2</sup> (in. <sup>2</sup> )]	S4	23551 (3650.8)	21792 (337.8)	27650 (4285.8)
Windshield glass (type)		Curved - Laminated Plate		
Side glass (type)		Curved - Tempered Plate		
Backlight glass (type)		Curved - Tempered Plate		



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

Car Line CAVALIER  
 Model Year 1986 Issued 7-85 Revised (●) \_\_\_\_\_

Body Type

NOTCHBACK  
COUPE

LIFTGATE  
STATION WAGON

**Restraint System**

Active restraint system	Standard/optional	Standard
	Type and description	Front-Seat belt and shoulder belt system with retractor(2) Rear-Seat belt system (3)
	Location	Front-Belt and shoulder belt attached to lock pillar with inertia reel in lower lock pillar. Frt buckle attached to underbody. Rr belts attached to underbody.
Passive seat belts	Standard/optional	Not Available
	Power/manual	"
	2 or 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 <sup>2</sup> (in. <sup>2</sup> )]	S1	7487 (1160.5)	
Side glass exposed surface area [cm <sup>2</sup> (in. <sup>2</sup> )] - total 2-sides	S2	11532 (1787.5)	16954 (2627.9)
Backlight glass exposed surface area [cm <sup>2</sup> (in. <sup>2</sup> )]	S3	5691 (882.1)	4892 (758.3)
Total glass exposed surface area [cm <sup>2</sup> (in. <sup>2</sup> )]	S4	24710 (3830.0)	29333 (4546.6)
Windshield glass (type)		Curved - Laminated Plate	
Side glass (type)		Curved - Tempered Plate	
Backlight glass (type)		Curved - Tempered Plate	

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

Body Type

NOTCHBACK COUPES	HATCHBACK COUPES	CONVERTIBLE COUPE	NOTCHBACK SEDANS	LIFTBACK STATION WGNs.
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## Convenience Equipment (standard, optional, n.a.)

Air conditioning (manual, auto. temp control)		Optional (manual control)
Clock (digital, analog)		Digital (integ. w/ste. rad. & avail w/AM radio on 1JE, 1JF00)
Compass - thermometer		Not Available
Console (floor, overhead)		Standard, floor (full, 1JC, 1JD00 and cockpit 1JE, 1JF00)
Defroster, elec. backlight		Optional, except convertible
Electronic	Diagnostic warning (integrated, individual)	Not Available
	Instrument cluster (list instruments)	Opt. Fuel, temp., oil pres., battery charge, digital speedo (**
	Keyless entry	Not Available (1JE00, Standard (1JF00)
	Triminder (avg. spd., fuel)	"
	Voice alert (list items)	"
	Other	"
		(**) Bar graph tachometer
Fuel door lock (remote, key, electric)		Not Available
Lamps	Auto head on / off delay, dimming	"
	Cornering	"
	Courtesy (map, reading)	* (Standard on Convertible)
	Door lock, ignition	Not Available
	Engine compartment	*
	Fog	Not Available
	Glove compartment	*
	Trunk	*
	Other	See * Note
Mirrors	Day night (auto, man.)	Standard (manual)
	L.H. (remote, power, heated)	Optional (remote)
	R.H. (convex, remote, power, heated)	Optional, manual (convex) 1JC, 1JD, 1JE27, 35, 69, 77. Standard-
	Visor vanity (RH L.H. illuminated)	Not Available 1JE67, 1JF00.
Parking brake-auto release (warning light)		Standard (manual release) lower area of speedometer
Power equipment	Door locks deck lid - specity	Optional - both
	Seat (2-4-6 way) heated (driver, pass, other) lumbar, hip, thigh support (power, manual) reclining (driver, pass) memory (1-2 preset, recline)	Optional, 6-way power seat
	Side windows	Optional, all except convertible, standard on convertible.
	Vent windows	Not Available
	Rear window	"
Radio systems	Antenna (location, whip, w shield, power)	Front fender-R.H., whip standard (exc. 1JC00)
	AM, FM, stereo, tape, CB	AM standard (exc. 1JC00) Stereo optional
	Speaker (number, location) Premium sound	2-Standard, I.P. (exc. 1JC00), dual rear included w/stereo, premium dual rear available on 1JC, 1JD00, coaxial front & prem. dual rear avail. on 1JE, 1JF00.
Roof open air fixed (flip-up, sliding, "T")		Optional (removable) (27, 77, 69)
Speed control device		Optional
Speed warning device (light, buzzer, etc.)		Not Available
Tachometer (rpm)		Optional (1JC, 1JD, 1JE00) Standard (1JF00)

Auto. Trans.-Lock mounted on steering column; locks steering wheel, Auto.

Theft protection-type Trans. shift lever and ignition. Manual Trans.-Lock mounted on strg. column; locks steering wheel and ignition. Plus: Anti-theft design door lock buttons.

\*-Avail in optional lighting package only. Consists of following: headlamp "on" warning chimes, ash tray lamp & cigarette lighter on 1JC00, luggage compartment lamp (exc. 35 models), engine comp. lamp, glove comp. lamp, courtesy lamp (exc. convertible) dome reading lamp (exc. convertible), rear courtesy lamp on 35, 77 models.

# MVMA Specifications Form

## Passenger Car

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (•) 9-85

### METRIC (U.S. Customary) Car and Body Dimensions

See Key Sheets for definitions

All dimensions to ground are for comparative purposes only. Dimensions are to be shown for all base body models of each car line.  
SAE Ref. no. refers to the definition published in SAE Recommended Practice J1100 "Motor Vehicle Dimensions," unless otherwise specified.

Body Type	SAE Ref. No.	NOTCHBACK COUPE	CONVERTIBLE COUPE	HATCHBACK COUPE
Width				
Tread (front)	W101	1406 (55.4)		
Trear (rear)	W102	1401 (55.2)		
Vehicle width	W103	1677 (66.0)		
Body width at Sg RP (front)	W117	1652 (65.0)		
Vehicle width (front doors open)	W120	3684 (145.0)		
Vehicle width (rear doors open)	W121	--		
Front fender overall width	W106	1652 (65.0)		
Rear fender overall width	W107	1677 (66.0)		
Tumble-home (deg.)	W122	21.5°		

### Length

Wheelbase	L101	2571 (101.2)		
Vehicle length	L103	4378.5 (172.4)		
Overhang (front)	L104	896.5 (35.3)		
Overhang (rear)	L105	911.0 (35.9)		
Upper structure length	L123	2335 (91.9)	2340 (92.1)	2800 (110.2)
Rear wheel C/L "X" coordinate	L127	2354 (92.7)		
Cowl point "X" coordinate	L125	247 (9.7)		
Front end length at centerline	L126	1291 (50.8)		1361 (53.6)
Rear end length at centerline	L129	570 (22.4)	590 (23.2)	117 (4.6)

### Height \*\*

Passenger distribution (front/rear)	PD1,2,3		**	
Trunk/cargo load			**	
Vehicle height	H101	1275 (50.2)	1339 (52.7)	1274 (50.2)
Cowl point to ground	H114	898 (35.4)		
Deck point to ground	H138			
Rocker panel-front to ground	H112	196 (7.7)		
Bottom of door closed-front to grd.	H133	247 (9.7)		
Rocker panel-rear to ground	H111	161 (6.3)		
Bottom of door closed-rear to grd.	H135	--		
Windshield slope angle	H122	58.5°	58.8°	58.7°
Backlight slope angle	H121	51.0°	54.5°	69.0°

### Ground Clearance \*\*

Front bumper to ground	H102	370 (14.6)		365 (14.4)
Rear bumper to ground	H104	266 (10.5)		
Bumper to ground [front at curb mass (wt.)]	H103	381 (15.0)		376 (14.8)
Bumper to ground [rear at curb mass (wt.)]	H105	369 (14.5)		368 (14.5)
Angle of approach (degrees)	H106	26.5°		
Angle of departure (degrees)	H107	13.1°		
Ramp breakover angle (degrees)	H147	12.9°		
Axle differential to ground (front / rear)	H153	--		
Min. running ground clearance	H156	115 (4.5)		
Location of min. run. grd. clear.		Rear stabilizer bracket		

**\*\*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 **CAVALIER**

Model Year **1986** Issued **7-85** Revised (●) **9-85**

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.	NOTCHBACK SEDANS	LIFTGATE STATION WAGONS
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## Width

Tread (front)	W101	1406 (55.4)	
Trear (rear)	W102	1401 (55.2)	
Vehicle width	W103	1685 (66.3)	
Body width at Sg RP (front)	W117	1652 (65.0)	
Vehicle width (front doors open)	W120	3218 (126.7)	
Vehicle width (rear doors open)	W121	2832 (111.5)	
Front fender overall width	W106	1652 (65.0)	
Rear fender overall width	W107	1685 (66.3)	
Tumble-home (deg.)	W122	21.5°	22.0°

## Length

Wheelbase	L101	2571 (101.2)	
Vehicle length	L103	4428.0 (174.3)	4433.5 (174.5)
Overhang (front)	L104	896.5 (35.3)	
Overhang (rear)	L105	960.5 (37.8)	966.0 (38.0)
Upper structure length	L123	2363 (93.0)	2924 (115.1)
Rear wheel C/L "X" coordinate	L127	2354 (92.7)	
Cowl point "X" coordinate	L125	245 (9.6)	246 (9.7)
Front end length at centerline	L126	1291 (50.8)	
Rear end length at centerline	L129	595 (23.4)	34 (1.3)

## Height \*\*

Passenger distribution (front/rear)	PD1,2,3		**
Trunk/cargo load			**
Vehicle height	H101	1323 (52.1)	1342 (52.8)
Cowl point to ground	H114	898 (35.4)	905 (35.6)
Deck point to ground	H138		
Rocker panel-front to ground	H112	196 (7.7)	205 (8.1)
Bottom of door closed-front to grd.	H133	247 (9.7)	265 (10.4)
Rocker panel-rear to ground	H111	261 (10.3)	184 (7.2)
Bottom of door closed-rear to grd.	H135	283 (11.1)	259 (10.2)
Windshield slope angle	H122	55.0	
Backlight slope angle	H121	49.0	35.5

## Ground Clearance \*\*

Front bumper to ground	H102	370 (14.6)	367 (14.4)
Rear bumper to ground	H104	265 (10.4)	273 (10.7)
Bumper to ground (front at curb mass (wt.))	H103	381 (15.0)	382 (15.0)
Bumper to ground (rear at curb mass (wt.))	H105	368 (14.5)	359 (14.1)
Angle of approach (degrees)	H106	26.5°	26.3°
Angle of departure (degrees)	H107	13.9°	14.4°
Ramp breakover angle (degrees)	H147	12.9°	14.3°
Axle differential to ground (front / rear)	H153	--	
Min. running ground clearance	H156	115 (4.5)	132 (5.2)
Location of min. run. grd. clear.		Rear stabilizer bracket	

**\*\*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 **CAVALIER**  
 Model Year **1986** Issued **7-85** Revised (\*) **9-85**

**Body Type**

SAE Ref. No.	NOTCHBACK COUPE	CONVERTIBLE COUPE	HATCHBACK COUPE
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**Front Compartment**

Sg RP front, "X" coordinate	L31	1113 (43.8)	1128 (44.4)	
Effective head room	H61	958 (37.7)	992 (39.1)	955 (37.6)
Max. eff. leg room (accelerator)	L34	1071 (42.2)	1090 (42.9)	1071 (42.2)
SgRP to heel point	H30	233 (9.2)	230 (9.1)	233 (9.2)
SgRP to heel point	L53	872 (34.3)	897 (35.3)	872 (34.3)
Back angle	L40	25.0		
Hip angle	L42	96.0	99.0	96.0
Knee angle	L44	126.5	133.0	126.5
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	1364 (53.7)		
Hip room	W5	1248 (49.1)	1230 (48.4)	1248 (49.1)
** Upper body opening to ground	H50	1202 (47.3)		
Steering wheel maximum diameter	W9	375 (14.8)	368 (14.5)	375 (14.8)
Steering wheel angle	H18	20.0	18.5	20.0
Accel. heel pt. to steer. whl. cntr	L11	Not Available		
Accel. heel pt. to steer. whl. cntr	H17	"		
Steering wheel to C/L of thigh	H13	97 (3.8)	108 (4.3)	97 (3.8)
Steering wheel torso clearance	L7	388 (15.3)	380 (15.0)	388 (15.3)
Headlining to roof panel (front)	H37	10 (0.4)		
Undepressed floor covering thickness	H67	16 (0.6)	17 (0.7)	16 (0.6)

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

**Rear Compartment**

Sg RP Point couple distance	L50	720 (28.3)	705 (27.8)	715 (28.1)
Effective head room	H63	931 (36.7)	949 (37.4)	925 (36.4)
Min. effective leg room	L51	807 (31.8)	774 (30.5)	807 (31.8)
Sg RP (second to heel)	H31	259 (10.2)		252 (9.9)
Knee clearance	L48	-21 (-0.8)	-35 (-1.4)	-24 (-0.9)
Compartment room	L3	635 (25.0)	539 (21.2)	652 (25.7)
Shoulder room	W4	1335 (52.6)	964 (38.0)	1322 (52.0)
Hip room	W6	1265 (49.8)	964 (38.0)	1234 (48.6)
** Upper body opening to ground	H51	--		
Back angle	L41	25.0	19.0	25.0
Hip angle	L43	78.0		
Knee angle	L45	78.5	76.5	81.0
Foot angle	L47	115.5	114.0	116.5
Headlining to roof panel (second)	H38	9 (0.4)	--	10 (0.4)
Depressed floor covering thickness	H73	18 (0.7)	19 (0.7)	18 (0.7)

**Luggage Compartment**

Usable luggage capacity [L (cu. ft.)]	V1	374 (13.2)	294 (10.4)	--
** Liftover height	H195	750 (29.5)		755 (29.7)

**Interior Volumes (EPA Classification)**

Vehicle class (subcompact, compact, etc.)		Compact		
Interior volume index (cu. ft.)		85.0	77.1	84.1
Trunk/cargo index (cu. ft.)		13.2	10.3	14.8

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 CAVALIER  
Model Year 1986 Issued 7-85 Revised (•) 9-85

Body Type

SAE Ref. No.	NOTCHBACK SEDANS 1JC-1JD69	1JE69	LIFTGATE STATION WAGONS 1JC-1JD35	1JE35
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### Front Compartment

Sg RP front, "X" coordinate	L31	1113 (43.8)	1128 (44.4)	1113 (43.8)	1128 (44.4)
Effective head room	H61	980 (38.6)	1008 (39.7)	973 (38.3)	1002 (39.4)
Max. eff. leg room (accelerator)	L34	1072 (42.2)	1090 (42.9)	1072 (42.2)	1089 (42.9)
SgRP to heel point	H30	257 (10.1)	230 (9.1)	256 (10.1)	230 (9.1)
SgRP to heel point	L53	866 (34.1)	897 (35.3)	866 (34.1)	897 (35.3)
Back angle	L40	25.0			
Hip angle	L42	98.0	99.0	98.5	99.0
Knee angle	L44	127.0	132.0	127.5	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)		170 (6.7)	
Shoulder room	W3	1363 (53.7)			
Hip room	W5	1240 (48.8)		1241 (48.9)	
Upper body opening to ground	H50	1202 (47.3)		1219 (48.0)	
Steering wheel maximum diameter	W9	375 (14.8)	368 (14.5)	375 (14.8)	368 (14.5)
Steering wheel angle	H18	20.0	18.5	20.0	18.5
Accel. heel pt. to steer. whl. cntr	L11	Not Available			
Accel. heel pt. to steer. whl. cntr	H17	Not Available			
Steering wheel to C/L of thigh	H13	86 (3.4)	108 (4.3)	88 (3.5)	108 (4.3)
Steering wheel torso clearance	L7	377 (14.8)	380 (15.0)	377 (14.8)	380 (15.0)
Headlining to roof panel (front)	H37	10 (0.4)		13 (0.5)	
Undepressed floor covering thickness	H67	16 (0.6)			

### Rear Compartment

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

Sg RP Point couple distance	L50	758 (29.8)	743 (29.3)	741 (29.2)	
Effective head room	H63	964 (38.0)		986 (38.8)	
Min. effective leg room	L51	871 (34.3)	818 (32.2)	857 (33.7)	802 (31.6)
Sg RP (second to heel)	H31	272 (10.7)		259 (10.2)	
Knee clearance	L48	9 (0.4)	-16 (-0.6)	2 (0.1)	-25 (-1.0)
Compartment room	L3	657 (25.9)	622 (24.5)	660 (26.0)	
Shoulder room	W4	1364 (53.7)			
Hip room	W6	1241 (48.9)		1244 (49.0)	
Upper body opening to ground	H51	1254 (49.4)		1254 (49.4)	
Back angle	L41	26.0		25.0	
Hip angle	L43	83.0		81.0	
Knee angle	L45	85.0	80.0	86.0	81.0
Foot angle	L47	118.0	116.5	121.0	117.0
Headlining to roof panel (second)	H38	8 (0.3)		13 (0.5)	
Depressed floor covering thickness	H73	18 (0.7)		20 (0.8)	

### Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	386 (13.6)	--
Liftover height	H195	755 (29.7)	490 (19.3)

### Interior Volumes (EPA Classification)

Vehicle class (subcompact, compact, etc.)	Compact		
Interior volume index (cu. ft.)	91.1	91.9	90.9
Trunk/cargo index (cu. ft.)	13.6		34.1

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 CAVALIER  
 Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

**Body Type**

<b>SAE Ref. No.</b>	<b>HATCHBACK COUPE</b>	<b>LIFTBACK WAGONS</b>
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**Station Wagon – Third Seat**

Sg RP couple distance	L85	Not
Shoulder room	W85	Applicable
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**

Cargo length (open front)	L200		--
Cargo length (open second)	L201		--
Cargo length (closed front)	L202		1709 (67.3)
Cargo length (closed second)	L203	Not	980 (38.6)
Cargo length at belt (front)	L204	Applicable	1581 (62.2)
Cargo length at belt (second)	L205		837 (33.0)
Cargo width (wheelhouse)	W201		944 (37.2)
Rear opening width at floor	W203		1226 (48.3)
Opening width at belt	W204		1206 (47.5)
Max. rear opening width above belt	W205		970 (38.2)
Cargo height	H201		846 (33.3)
Rear opening height	H202		764 (30.1)
Tailgate to ground height	H250		490 (19.3)
Front seat back to load floor height	H197		--
Cargo volume index [m <sup>3</sup> (ft. <sup>3</sup> )]	V2		1824L (64.4 cu. ft.)
Hidden cargo volume [m <sup>3</sup> (ft. <sup>3</sup> )]	V4		--
Cargo volume, index-rear of 2-seat	V10		966 (34.1)

**Hatchback – Cargo Space**

Cargo length at front seatback height	L208	1107 (43.6)	Not
Cargo length at floor (front)	L209	1617 (63.7)	Applicable
Cargo length at second seatback height	L210	745 (29.3)	
Cargo length at floor (second)	L211	906 (35.7)	
Front seatback to load floor height	H197	602 (23.7)	
Second seatback to load floor height	H198	384 (15.1)	
Cargo volume index [m <sup>3</sup> (ft. <sup>3</sup> )]	V3	1084 (38.3)	
Hidden cargo volume [m <sup>3</sup> (ft. <sup>3</sup> )]	V4	--	
Cargo volume index-rear of 2-seat	V11	419 (14.8)	

**Aerodynamics\***

		N/B Coupe	Convertible	H/B Coupe	Sedan	Wagon
Wheel lip to ground, front	H172	644 (25.4)				648 (25.5)
Wheel lip to ground, rear	H173	628 (24.7)			616 (24.3)	637 (25.1)
Frontal area [m <sup>2</sup> (ft <sup>2</sup> )]	FA	1.81 (0.071)			1.83 (0.072)	1.88 (0.074)
Drag coefficient (Cd)						

\* EPA Loaded Vehicle Weight, Loading Conditions

**MVMA Specifications Form**  
**Passenger Car**  
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Car Line CAVALIER  
 Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

Body Type

NOTCHBACK COUPE	CONVERTIBLE COUPE	HATCHBACK COUPE	NOTCHBACK SEDANS	LIFTBACK STATION WGNs.
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**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 centerline of car - front, width measurement made from centerline 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 the base grid line to rear fiducial mark located on the rail (compartment pan - longitudinal).			
		Y - Fiducial mark to centerline of car - rear, width measurement made from centerline of car to fiducial mark located on the rail (compartment pan - longitudinal).			
		Z - Fiducial mark to horizontal base grid line - rear, measured vertically from the base grid line to rear fiducial mark located on the rail (compartment pan - longitudinal).			
Front	W21	504 ( 19.8)			
	L54	(*) 746 ( 29.4)			
	H81	(#) -54 (-2.1)	-36 (-1.4)	-54 (-2.1)	
	H161	Curb 293 (11.5)			300 (11.8)
	** H163	269 (10.6)			278 (10.9)
Rear	W22	440 ( 17.3)			
	L55	(*) 2900 (114.2)		(*) 2951 (116.2)	
	H82	(#) 62 ( 2.4)			
	H162	Curb 413 (16.3)			429 (16.9)
	** H164	381 (15.0)			401 (15.8)
		(*) Base Grid is 2000mm Line (#) Base Grid is 300mm Line			

\* 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**  
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Car Line CAVALIER  
 Model Year 1986 Issued 7-85 Revised (●) \_\_\_\_\_

Body Type

NOTCHBACK COUPE	CONVERTIBLE COUPE	HATCHBACK COUPE	NOTCHBACK SEDANS	LIFTBACK STATION WAGONS
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**Lamps and Headlamp Shape\***

Height above ground to center of bulb or marker	Headlamp (SAE - H127)	Highest**	646(25.4)			647(25.5)
		Lowest	646(25.4)			647(25.5)
	Taillamp (SAE - H128)	Highest**	748(29.4)	676(26.6)	748(29.4)	589(23.2)
		Lowest	--			
	Sidemarker	Front	501(19.7)			503(19.8)
		Rear	526(20.7)			757(29.8)
Distance from C/L of car to center of bulb	Headlamp	Inside	424.5(16.7)			
		Outside**	600.0(23.6)			
	Taillamp	Inside	--			
		Outside**	591.0(23.3)	678.0(26.7)	591.0(23.3)	714.5(28.1)
	Directional	Front	569.0(22.4)			
		Rear	591.0(23.3)	678.0(26.7)	591.0(23.3)	714.5(28.1)
Halogen headlamp (std., opt., n.a.)	Lo beam		Optional			
	Hi beam		Optional			
	Replaceable bulb		Sealed beam entire unit replaced			
	Shape		Rectangular			
Headlamp other than above	Lo beam		Not Available			
	Hi beam		Not Available			
	Replaceable		Not Available			
	Shape		Not Available			
	Type		Not Available			

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

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER

Model Year 1986 Issued 7-85 Revised (•) \_\_\_\_\_

Vehicle Mass (weight)								
Model	CURB MASS, kg. (weight, lb.)*			% PASS. MASS DISTRIBUTION				SHIPPING MASS, kg (weight, lb.)**
	Front	Rear	Total	Pass In Front		Pass In Rear		
				Front	Rear	Front	Rear	
Cavalier								
2-Door Notchback	514.9	528.1	1043.0					1012.0
Coupe 1JC27	(1135)	(1164)	(2299)					(2231)
4-Door Notchback	524.5	537.9	1062.4					1031.4
Sedan 1JC69	(1156)	(1186)	(2342)					(2274)
4-Door Station	540.7	553.6	1094.3					1063.3
Wagon 1JC35	(1192)	(1220)	(2412)					(2344)
Cavalier 'CS'								
2-Door Hatchback	531.6	545.5	1077.1					1046.1
Coupe 1JD77	(1172)	(1203)	(2375)					(2306)
4-Door Notchback	527.2	541.0	1068.2					1037.2
Sedan 1JD69	(1162)	(1193)	(2355)					(2287)
4-Door Station	543.0	556.3	1099.3					1068.3
Wagon 1JD35	(1197)	(1226)	(2423)					(2355)
Cavalier 'RS'								
2-Door Notchback	520.5	534.2	1054.7					1023.7
Coupe 1JE27	(1147)	(1178)	(2325)					(2257)
2-Door Hatchback	534.4	548.3	1082.7					1051.7
Coupe 1JE77	(1178)	(1209)	(2387)					(2319)
4-Door Notchback	530.0	543.8	1073.8					1042.8
Sedan 1JE69	(1168)	(1199)	(2367)					(2299)
4-Door Station	546.6	560.0	1106.6					1075.6
Wagon 1JE35	(1205)	(1235)	(2440)					(2371)
2-Door Convertible	547.7	561.3	1109.0					1078.0
Coupe 1JE67	(1207)	(1237)	(2444)					(2376)
Cavalier Z24								
2-Door Notchback	563.8	579.0	1142.8					1111.8
Coupe 1JF27	(1243)	(1276)	(2519)					(2451)
2-Door Hatchback	577.7	593.1	1170.8					1139.8
Coupe 1JF77	(1274)	(1307)	(2581)					(2513)

\* Reference - SAE J1100 Motor vehicle dimensions, curb weight definition.

\*\* Shipping mass (weight) definition -

**METRIC (U.S. Customary)**

Model Year 1986

Issued 7-85

Revised (●)

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

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Revised (●)

**Optional Equipment Differential Mass (weight)\***

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

# MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line CAVALIER  
Model Year 1986 Issued 7-85 Revised (•) 9-85

Optional Equipment Differential Mass (weight)*				
Equipment	MASS, kg. (weight, lb.)			Remarks
	Front	Rear	Total	
Sport Suspension	2.8	4.4	7.2	'Cavalier', 'CS' series and convertible
RPO F41	(6.2)	(9.7)	(15.9)	
Engine Block Heater	.2	0	.2	
RPO K05	(0.4)	(0)	(0.4)	
Electronic Speed Control with Resume Speed	1.8	0	1.8	
RPO K34	(4.0)	(0)	(4.0)	
2.8 Liter V6 (173 CID)	53.4	1.0	54.4	Optional convertible, standard Z24 series
RPO LB6	(117.7)	(2.2)	(119.9)	
Five-Speed Manual Transmission	5.0	-.4	4.6	
RPO MM5	(11.0)	(-0.9)	(10.1)	
Automatic Transmission	27.5	0	27.5	
RPO MX1	(60.6)	(0)	(60.6)	
Sport Steering Wheel	.2	0	.2	'Cavalier' and 'CS' series
RPO NK3	(0.4)	(0)	(0.4)	
Comfortilt Steering Wheel	.8	.4	1.2	
RPO N33	(1.8)	(0.9)	(2.7)	
Power Steering Required with LB6 eng.	8.8	.4	9.2	Standard 'RS' and 'Z24' series optional 'Cavalier' and 'CS' series
RPO N40	(19.4)	(0.9)	(20.3)	
Sport Wheel Covers	.8	.8	1.6	'Cavalier', 'CS' and 'RS'
RPO PB2	(1.8)	(1.8)	(3.6)	
Rally Wheels 14" RPO PC4	1.6	1.6	3.2	Standard 'Z24' series. Optional convertible.
	(3.5)	(3.5)	(7.0)	
Aluminum Wheels 14"				Z24 series
RPO PD8				
Wheel Trim Rings	.4	.4	.8	Standard 'RS' series. Optional 'Cavalier' and 'CS' series
RPO P06	(0.9)	(0.9)	(1.8)	
Aluminum Wheels (13")	.4	.4	.8	'Cavalier', 'CS', and 'RS' series
RPO PX1	(0.9)	(0.9)	(1.8)	
Heavy Duty Battery (Mandatory for Canada)	2.8	-.4	2.4	All except L-4 engine with automatic trans.
RPO UA1	(6.2)	(-0.9)	(5.3)	

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

**METRIC (U.S. Customary)**

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

**METRIC (U.S. Customary)**

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Revised (●)

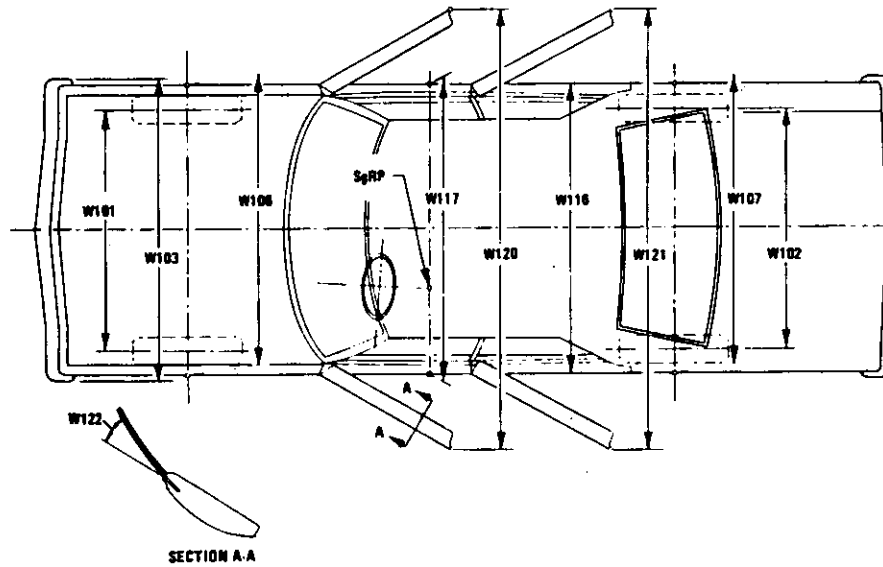
9-85

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

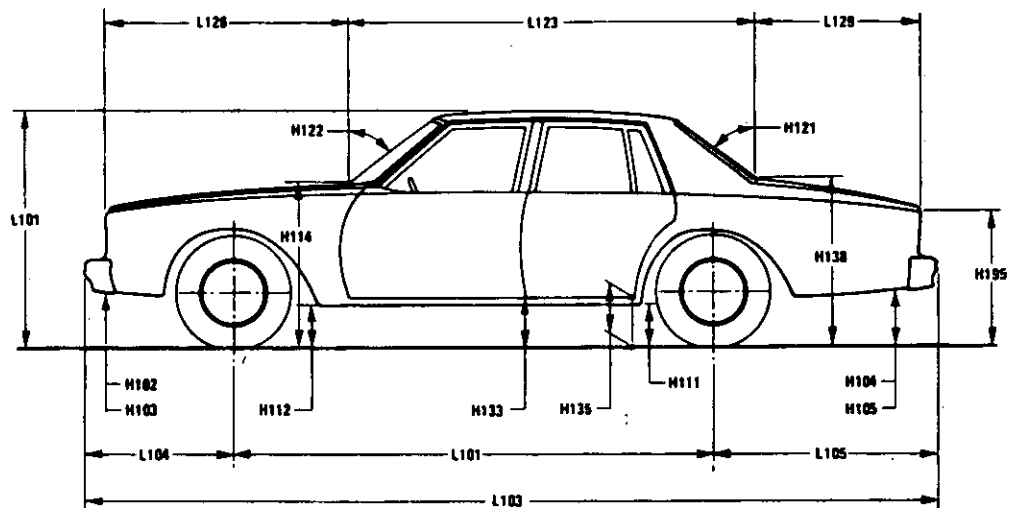
**MVMA Specifications Form**  
**Passenger Car**  
**METRIC (U.S. Customary)**

**Exterior Car And Body Dimensions – Key Sheet**

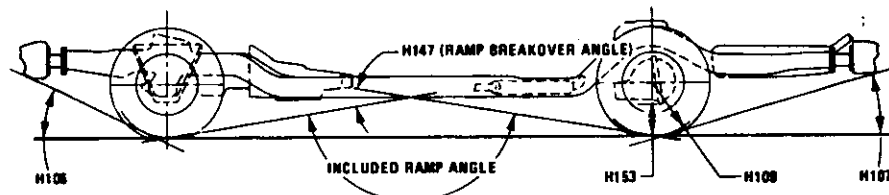
**Exterior Width**



**Exterior Length & Height**



**Exterior Ground Clearance**



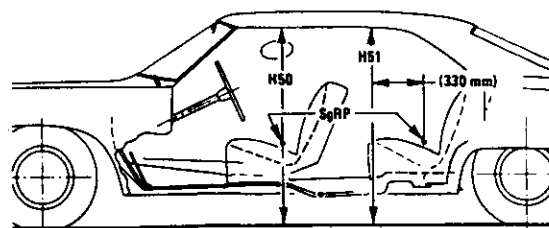
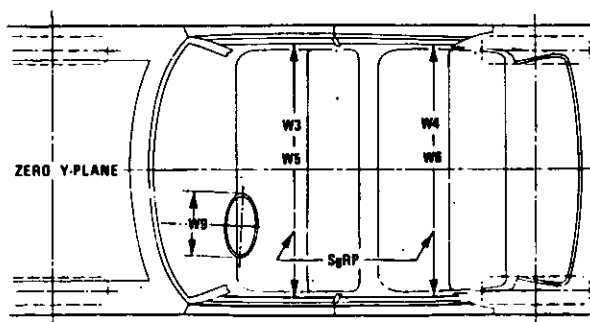
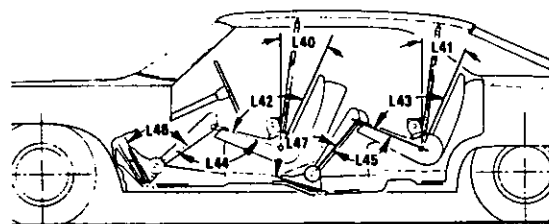
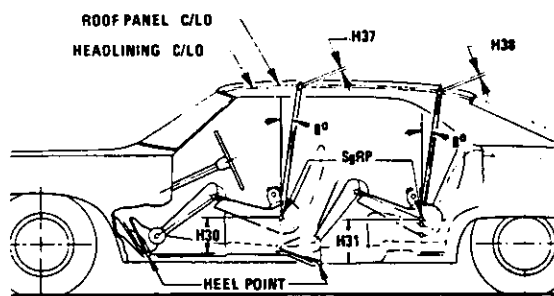
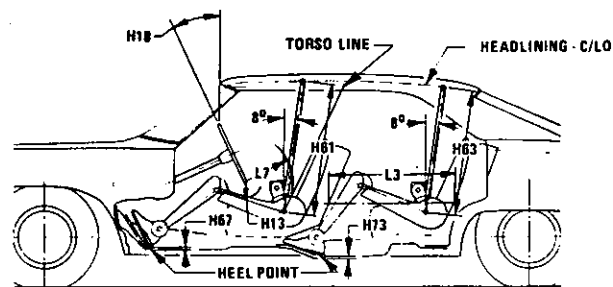
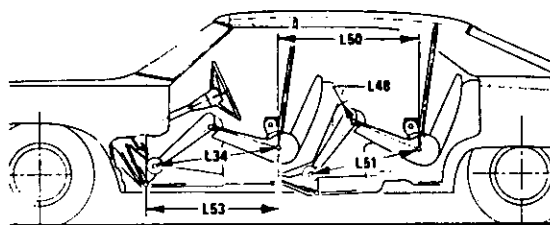


# MVMA Specifications Form

## Passenger Car

METRIC (U.S. Customary)

### Interior Car And Body Dimensions – Key Sheet



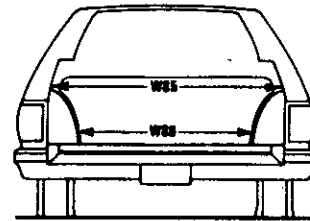
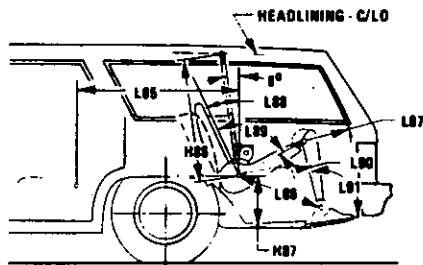
# MVMA Specifications Form

## Passenger Car

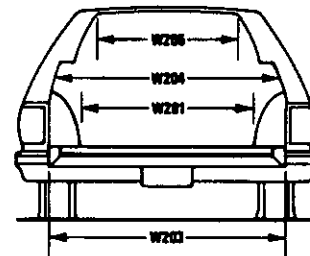
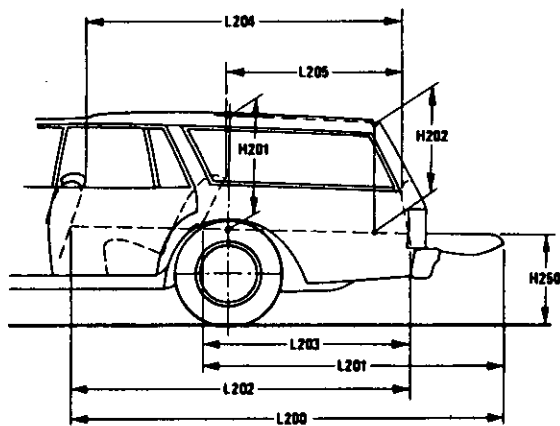
### METRIC (U.S. Customary)

## Interior Car And Body Dimensions – Key Sheet

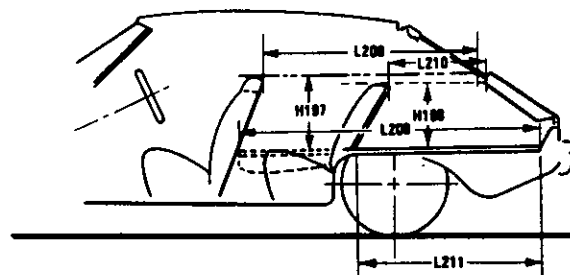
### Third Seat



## Cargo Space



## Station Wagon



## Hatchback

# MVMA Specifications Form

## Passenger Car

### METRIC (U.S. Customary)

#### Exterior Car And Body Dimensions – Key Sheet

##### Dimensions Definitions

##### Seating Reference Point

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

- (a) Establishes the rearmost normal design driving or riding position of each designated seating position in a vehicle;
- (b) Has coordinates established relative to the design vehicle structure;
- (c) Simulates the position of the pivot center of the human torso and thigh; and
- (d) Is the reference point employed to position the two dimensional templates described in SAE Recommended Practice J826, "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.

##### 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.
- 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.
- 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

- L41 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 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 254mm (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-J1100.
- 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 51mm (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. rear from the SgRP–third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- PD3 PASSENGER DISTRIBUTION–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)

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