
1989
CHEVROLET
CAVALIER

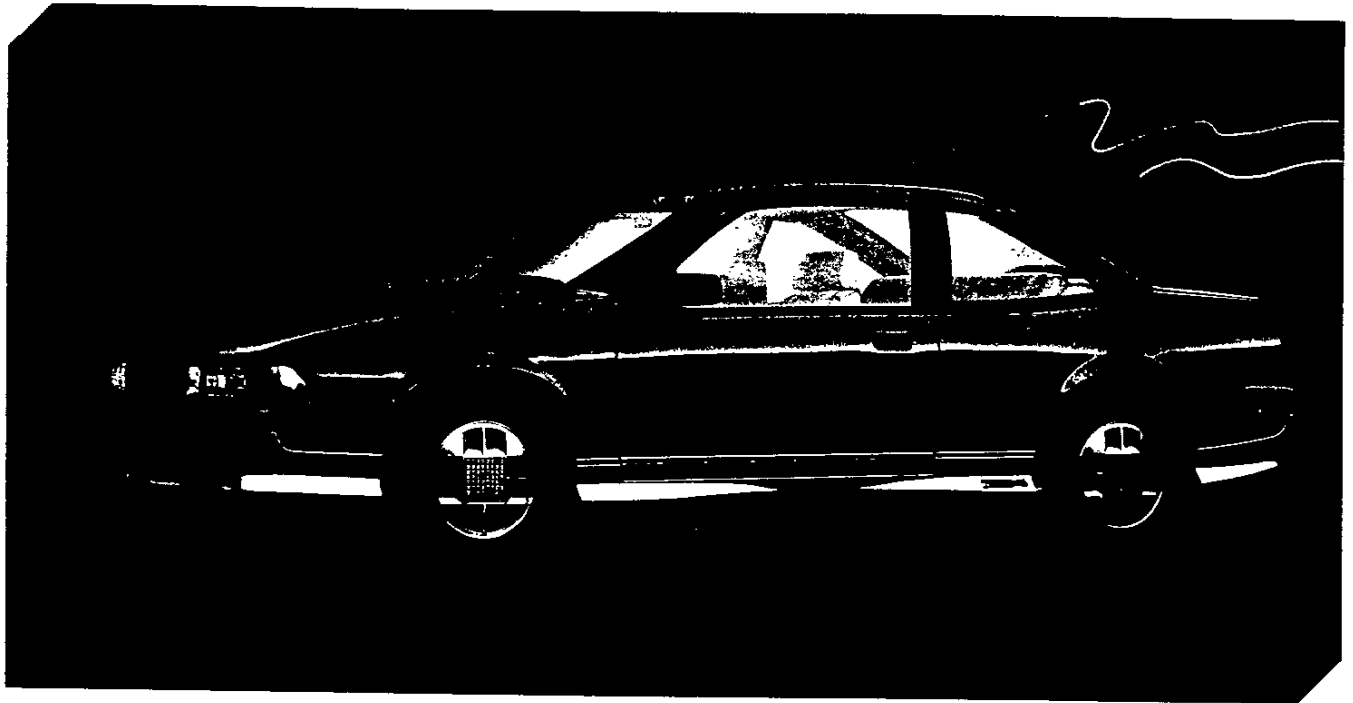
'89 CAVALIER

CAVALIER
 4-Door Sedan
 2-Door Coupe
 4-Door Wagon
 Z24
 2-Door Coupe

MODEL NUMBER
 1JC69*
 1JC37†
 1JC35*
 1JF37

Z24
 2-Door Convertible
PASSENGER CAPACITY
 All Models
 *RPO Z12 RS package available.
 †RPO WV9 "VL" price-leader package available.

MODEL NUMBER
 1JF67
 5



Cavalier Z24 Coupe.

NEW FEATURES

- RS models discontinued, new RPO Z12 RS Functional and Appearance package retains most exterior and functional content of last year's model
- Uplevel CL Custom interior with new bucket seats, center armrest, acoustical package and split-folding rear seat-back (Coupe and Sedan) optional for base models
- Redesigned steering wheel common to all models
- 3-point rear-seat/shoulder safety belts for outboard passenger positions added to safety belt system
- Coupes have revised easy-entry seat adjuster*
- Improved power rack-and-pinion steering, optional base, standard on RS and Z24
- Deflected disc front struts
- RS option includes new 14" Rally Wheels with trim rings
- Radio delete (RPO UL5) available only with Base model packages

STANDARD FEATURES

- Front drive
- AM/FM stereo radio with Seek and Scan and digital clock†
- Rack-and-pinion steering
- Power front disc/rear drum brakes
- Color-keyed safety belt system**
- MacPherson-strut front suspension
- 5-speed manual transmission with overdrive
- 2.0 Liter L4 with Electronic Fuel Injection (EFI)

*Not included with Cavalier VL Coupe

**Black on Cavalier VL Coupe.

†May be deleted for credit from Base model packages only, not included with Cavalier VL Coupe.

EQUIPMENT AVAILABILITY

	Cavalier Coupe/Sedan	Cavalier RS* Coupe/Sedan	Cavalier Wagon	Cavalier RS* Wagon	Cavalier Z24 Coupe/Conv.
Body-color grille	S	NA	S	NA	NA
Black grille (specific)	NA	S	NA	S	S
Body-color bumper fascias	S	S	S	S	NA
Body-color and silver bumper fascias	NA	NA	NA	NA	S
Black LH sport mirror	S	NA	S	NA	NA
Black dual sport mirrors (LH remote)	O	S	O	S	S
Center floor console	S	S	S	S	S
Passenger and trunk or load floor carpet	S	S	S	S	S
Acoustical insulation package	O†	O†	O†	O†	S
Instrument panel gage cluster with tachometer and trip odometer	O	S	O	S	S
Headlamps-on reminder	S**	S	S**	S	S**
Side window defoggers	S	S	S	S	S
Ashtray and glove compartment lamps	S**	S	S	S	S
Day/night inside rearview mirror	S	S	S	S	S
Black body side moldings	O	S	O	S	S
Engine compartment hood insulator pad	S	S	S	S	S
Air induction hood	NA	NA	NA	NA	S
All-season steel-belted radial ply tires	S	S	S	S	NA
All-season steel-belted Eagle GT+4 performance radial tires	NA	NA	NA	NA	S
Power rack-and-pinion steering	O	S	O	S	S
FE3 Sport Suspension	NA	NA	NA	NA	S

S—Standard O—Optional at Extra Cost NA—Not Available *With RPO Z12 RS Package. †With CL Custom interior. **Not included with Cavalier VL Coupe.

Refer to Passenger Car Order Guide for option availability and application.

ORDERING INFORMATION

CAVALIER OPTIONS

▲ STANDARD

● INCLUDED IN OPTION PACKAGE

● INDIVIDUAL OPTION AVAILABILITY

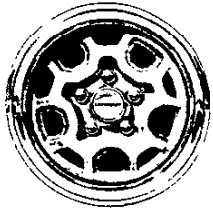
NOTE: NOT TO BE USED FOR ORDERING. REFER TO ORDER GUIDE FOR CURRENT USAGE AND AVAILABILITY.

PACKAGED OPTIONS (Not available individually unless indicated)

	(A) CAVALIER VL COUPE, (B) CAVALIER COUPE/SEDAN							CAVALIER WITH RS (Z12) COUPE/SEDAN			CAVALIER Z24 COUPE			CAVALIER Z24 CONV.		CAVALIER WAGON			CAVALIER WITH RS (Z12) WAGON				
	PKG. 1		PKG. 2		PKG. 3		PKG. 4*	PKG. 1	PKG. 2	PKG. 3	PKG. 1	PKG. 2	PKG. 3	PKG. 1	PKG. 2	PKG. 1	PKG. 2	PKG. 3	PKG. 1	PKG. 2	PKG. 3		
	(A)	(B)	(A)	(B)	(A)	(B)	(B)																
Power Steering	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Auxiliary Lighting	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Heavy-Duty Battery (See Order Guide)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Tinted Glass	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Floor Mats, Front/Rear Carpeted	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Body Side Moldings			▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Dual Sport Mirrors (LH Remote)			▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Air Conditioning	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Intermittent Wiper System					▲	▲	▲																
Electronic Speed Control					▲	▲	▲																
Comfortilt Steering Wheel					▲	▲	▲																
Power Door Lock System	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Power Windows							▲																
Power Trunk Release																							
Deck Lid Carrier, Black (Coupe only)								●	●	●	●	●	●	●									
Deck Lid Carrier (Bright)																							
Deck Lid Carrier (Black)																					●	●	▲
TIRES																							
P185/80R-13 Whitewall Radials	▲	▲	▲	▲	▲	▲	▲																
P215/60R-14 Raised White Outlined Letter Radials											▲	▲	▲										
P195/70R-14 Blackwall Radials											▲	▲	▲								▲	▲	▲
WHEEL TRIM																							
Trim Rings	●	▲	●	▲	●	▲	▲																
Aluminum Wheels (13")		●		●		●	●														●	●	●
Styled Steel Wheels (14")								▲	▲	▲											▲	▲	▲
CLIMATE CONTROL																							
Rear Window Defogger	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Engine Block Heater	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
RADIO EQUIPMENT																							
AM/FM Stereo with Seek and Scan and Digital Clock	●	▲**	●	▲**	●	▲**		▲**	▲**		▲**				▲**	▲**	▲**	▲**	▲**	▲**	▲**	▲**	▲**
AM/FM Stereo with Seek and Scan, Cassette, Digital Clock and ERS**	●	●	●	●	●	●	▲**	●	●	▲**	●	▲**	▲**	▲**	▲**	▲**	▲**	▲**	▲**	▲**	▲**	▲**	▲**
AM Stereo* FM Stereo with Seek and Scan, Graphic Equalizer, Cassette ERS** and Digital Clock								●	●	●	●	●	●	●									●
ADDITIONAL INDIVIDUAL OPTIONS																							
Front License Plate Bracket	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Hinged Removable Sunroof								●	●	●	●	●	●	●									
Electronic Instrumentation								●	●	●	●	●	●	●									
Sport Suspension Equipment Reqs. V6, 14" Tires & Wheels								▲	▲	▲											▲	▲	▲

*Not available with VL. **Also available as an individual option with Base model package. ***May be upgraded. +++Extended Range Sound System.
 Receives C-Quam AM stereo broadcasts. Most AM stations across the country broadcast in C-Quam, but some do not. Check with your local stations for compatibility in your area. C-Quam is a registered trademark of the Motorola Co.

WHEEL TRIM

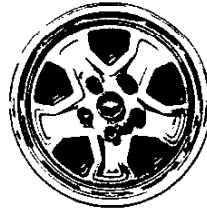


Standard Cavalier 13" styled steel wheels with trim rings.*

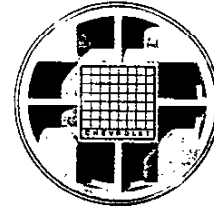
*Trim rings deleted on Cavalier VL Coupe.



Optional Cavalier 13" aluminum wheels (RPO PX1).



14" stamped steel rally wheels with painted accents and bright lug nuts, included with RS option.



Standard Cavalier Z24 14" aluminum wheels.

RADIOS



Standard electronically tuned AM/FM stereo radio with Seek and Scan and digital clock, dual front and extended range rear speakers.

*May be deleted for credit from Base model packages only, not included with Cavalier VL Coupe



Optional electronically tuned AM/FM stereo radio with Seek and Scan, dual front and extended range rear speakers, cassette and digital clock (RPO UM6).



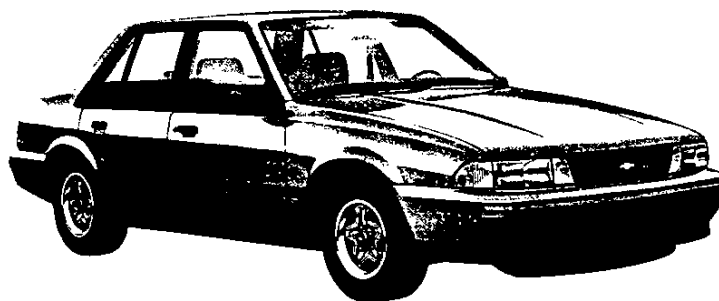
Optional (RS and Z24 models only) electronically tuned AM stereo/FM stereo radio with Seek and Scan, dual front and extended range rear speakers, graphic equalizer, cassette with Search and Repeat, and digital clock (RPO UX1).

Appearance of radios may vary by car model.

†Receives C-Quam* AM stereo broadcasts. Most AM stereo stations across the country broadcast in C-Quam but some do not. Check with your local stations for compatibility in your area. C-Quam is a registered trademark of the Motorola Company.

EXTERIOR DECOR

RS Exterior Functional and Appearance Package (RPO Z12) includes black grille, body-color and black bumper fascias with red stripes, black body side moldings and door edge guards, black door handles and lock cylinders, rocker panel appliques, red on black RS decklid badge, black side window frames and trim, dual black sport mirrors (LH remote), RS door (interior) nameplates, 14" x 6" Rally Wheels with trim rings, P195/70R-14 blackwall Touring tires, tachometer, power steering and FE2 Sport Suspension.



All illustrations and specifications in this brochure are based on the latest product information available at the time of publication approval. The right is reserved to make changes at any time, without notice, in colors, materials, specifications and models, and also to discontinue models. Chevrolet Motor Division, General Motors Corporation, Warren, Michigan 48090.



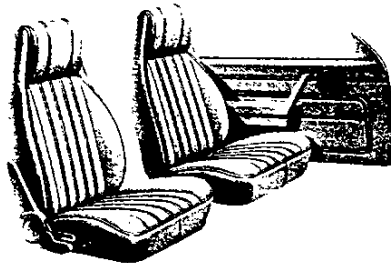
Refer to Passenger Car Order Guide for option availability and application.

SEAT TRIMS & COLORS

CAVALIER SEATS



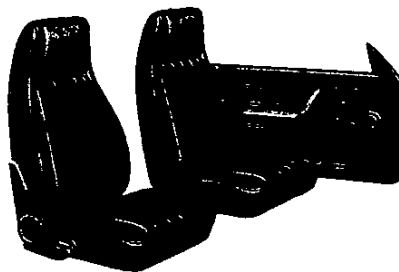
Cavalier optional cloth seat trim available in Black, Dark Blue, Light Brown or Gray.



Cavalier optional cloth reclining bucket seats with adjustable head restraints.



Standard vinyl seat trim available in Light Brown or Gray.

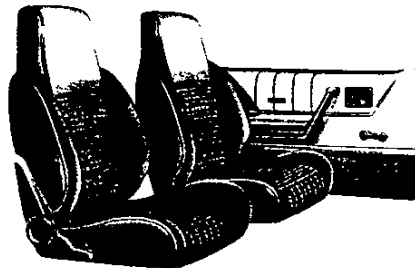


Cavalier standard vinyl reclining bucket seats with integral head restraints.

CAVALIER CUSTOM CLOTH SEATS



Standard sport cloth seat trim available in Black, Dark Blue, Light Brown or Gray.



Cavalier Z24 standard cloth reclining bucket seats with stationary head restraints. Also included with optional CL Custom interior for base Cavalier.

Refer to Passenger Car Order Guide for option availability and application.

CHEVROLET SPECIFICATIONS — 1989 CAVALIER

MODELS	PASSENGERS
Cavalier 2-Door Coupe (1JC37*)	5
Cavalier VL 2-Door Coupe (1JC37/WV9)	5
Cavalier 4-Door Sedan (1JC69*)	5
Cavalier 4-Door Wagon (1JC35*)	5
Cavalier Z24 2-Door Coupe (1JF37)	5
Cavalier Z24 2-Door Convertible (1JF67)	4

*RS Option Available with This Model

DIMENSIONS (inches)

EXTERIOR

Wheelbase	101.2
Length (overall)	Sedan, Coupe 178.4
	Wagon 174.5
Width (overall)	Sedan, Wagon 66.3
	Coupe 66.0
Height (overall)	Sedan 52.1
	Coupe 52.0
	Wagon 52.8

INTERIOR

Head Room-Front/Rear	Sedan 39.7/37.9
	Coupe 37.9/36.1
	Wagon 38.3/38.8
Shoulder Room-Front/Rear	Sedan, Wagon 53.7/53.7
	Coupe 53.7/52.0
Hip Room-Front/Rear	Sedan 48.8/48.8
	Coupe 49.1/48.6
	Wagon 48.8/49.0
Leg Room-Front/Rear	Sedan 42.9/34.3
	Coupe 42.9/31.6
	Wagon 42.2/33.7

LUGGAGE/CARGO CAPACITY (cu. ft.)

Luggage Capacity	Sedan 13.7
	Coupe 13.2
Cargo Volume	
with Rear Seat Up	Wagon 34.1
with Rear Seat Down	Wagon 64.4

RATED FUEL TANK CAPACITY (gallons) 13.6

POWER TEAMS

STANDARD ENGINE

RPO LL8, 2.0 Liter (121 cu. in.) L4 with Electronic Fuel Injection (EFI)

OPTIONAL ENGINE

RPO LB6, 2.8 Liter (173 cu. in.) V6 with Multi-Port Fuel Injection (MPI) (Std Z24, Optional Wagon)

STANDARD TRANSMISSION

5-Speed Manual with Overdrive

OPTIONAL TRANSMISSION

3-Speed Automatic

STANDARD EQUIPMENT SUMMARY

Composite Halogen Headlamps
 5-MPH Bumpers
 Styled Steel Wheels with Center Caps
 Bright Trim Rings*
 All-Season Steel-Belted Radial Blackwall Tires
 L.H. Sport Mirror (Black)
 Engine Compartment Hood Insulator Pad
 3-Point Safety Belts, Driver, Front and Outer Rear Passenger Positions (Rear Center Lap Belt)
 Passenger Floor and Trunk (Coupe, Sedan) or Load Floor (Wagon) Carpeting
 Center High-Mounted Stop Lamp
 Side Window Defoggers
 New Easy-Entry Passenger Seat (Coupe)*
 Dome, Ashtray* and Glove Compartment*
 Courtesy Lamps
 AM/FM Stereo Radio with Seek and Scan and Digital Clock* (May be Deleted for Credit)
 Day/Night Inside Rear View Mirror
 Headlamps-On Reminder*
 Rack and Pinion Steering
 Power Disc/Drum Front Rear Brakes
 New Standard Steering Wheel - All Models

*Not Included on VL Coupe

SEAT STYLES

STANDARD SEATS

Vinyl Reclining Bucket Seats with Integral Head Restraints

OPTIONAL SEATS

Cloth Reclining Bucket Seats with Integral Head Restraints
 Sport Cloth Reclining Bucket Seats with Adjustable Head Restraint: Standard Z24, N/A VL Coupe. (Includes Split Folding Rear Seat and Center Armrest)

CAVALIER Z24 COUPE

COLOR AND TRIM SELECTION

PLEASE NOTE: The Exterior Paint and Interior Trim Combinations Shown Below are the Only Combinations that are Available.

Interior Trim Color	Black	Dk Blue	Lt Brown	Gray	
MODEL	SEAT TYPE				
1JF37	Sport Cloth Bucket	JBB2	JDD2	JEE2	JQQ2

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code 1	Color Code 2	Black	Dk Blue	Lt Brown	Gray
Black	19	19	●			●
Blue, Med (Met)	24	24	●	●		●
Gray, Med (Met)	15	15	●			●
Red	70	70	●		●	●
Red, Dk (Met)	89	89	●			●
White	11	11	●	●	●	●

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO	
	3.18	3.61
WITH NA5 STANDARD EMISSIONS		
LB6 MM5	—	Std
MX1	*Std	—
WITH YF5 CALIFORNIA EMISSIONS		
LB6 MM5	—	*Std
MX1	*Std	—

*Reqs C60 Air

11,750.00 **Model 1JF37**

PREFERRED VEHICLE

MUST ORDER ONE GROUP — NO DELETIONS ALLOWED

	JZA1	JZA2	JZA3
850.00 Preferred Equipment Group 1			
(-700.00) Preferred Equipment Group 1 Savings -			
Air Conditioning	x	x	x
Battery, Heavy-Duty	x	x	x
Glass, Tinted	x	x	x
Lighting, Auxiliary	x	x	x
1,360.00 Preferred Equipment Group 2			
(-700.00) Preferred Equipment Group 2 Savings			
Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System		x	N/I
Floor Covering: Carpeted Mats, Color-Keyed Front and Rear		x	x
Speed Control, Electronic: with Resume Speed		x	x
Steering Wheel, Comfortilt		x	x
Windshield Wiper System, Intermittent		x	x
1,915.00 Preferred Equipment Group 3			
(-800.00) Preferred Equipment Group 3 Savings			
Electronically Tuned AM Stereo/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape with Search and Repeat, Graphic Equalizer and Clock w/Extended Range Sound System			x
Power Door Lock System			x
Power Trunk Opener			x
Power Windows			x

Base Vehicles may be ordered by specifying Preferred Equipment Group Code JZAB (Incls LH Remote, RH Manual Sport Mirrors, 2.8 Liter MFI V6 Eng, 5-Speed Manual Trans, Power Brakes, 14" Aluminum Wheels, AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System, Power Steering, Gage Pkg w/Tach, Black Body Side Moldings and Split Folding Rear Seat).

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

ENGINE (Must Order)	V.P.S.	UX1	Electronically Tuned AM Stereo/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape with Search and Repeat, Graphic Equalizer and Clock w/Extended Range Sound System (Incl w/Group JZA3)
N.C. LB6 2.8 Liter MFI V6			
TRANSMISSION (Must Order One)			
N.C. MM5 5-Speed Manual			
415.00 MX1 3-Speed Automatic (Reqs C60 Air)			
EMISSION (Must Order One)			
N.C. NA5 Standard Emissions			
100.00 YF5 California Emissions (Reqs C60 Air)	V.P.S.	UL5	Radio Delete (Reqs Group JZAB)
TIRES (Must Order One)			INTERIOR TRIM
N.C. QMB P215/60 R14 B/W (Base)		N.C. J**2	Sport Cloth Bucket
102.00 QMG P215/60 R14 Raised White Outlined Letter			ADDITIONAL OPTIONS
CLIMATE CONTROL	115.00	V56	Carrier, Deck Lid: Black (Reqs A01 Glass)
675.00 C60 Air Conditioning (Incl w/Groups JZA1, JZA2 and JZA3)			
145.00 C49 Defogger, Rear Window: Electric	33.00	B37	Floor Covering: Carpeted Mats, Front/Rear (Incl w/Groups JZA2 and JZA3)
20.00 K05 Heater, Engine Block	105.00	A01	Glass, Tinted-All Windows (Incl w/Groups JZA1, JZA2 and JZA3)
RADIO EQUIPMENT	145.00	AU3	Power Door Lock System (Incl w/Group JZA3)
V.P.S. --- Electronically Tuned AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System (Base)	50.00	A90	Power Trunk Opener (Incl w/Group JZA3)
V.P.S. UM6 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System (Incl w/Group JZA2)		N.C. VK3	License Plate Bracket, Front
	350.00	AD3	Sunroof, Removable (Reqs C60 Air)

REVISED: 1-89

1989 ORDER GUIDE

CAVALIER

Page 3

Prices Shown Are Manufacturer's Suggested Retail Prices (MSRP) At The Time Of Publication. These Prices Are To Be Used Only As An Aid To Inventory Management Since MSRP Figures Change Periodically. The Vehicle Price Schedule Is The Official Pricing Documentation Of Chevrolet Motor Division And Should Be Used In Discussing Vehicle Prices With Potential Buyers. The Model Prices Shown In The Order Guide Include The Destination Freight Charges.

CAVALIER Z24 CONVERTIBLE

COLOR AND TRIM SELECTION

PLEASE NOTE: The Exterior Paint and Interior Trim Combinations Shown Below are the Only Combinations that are Available.

Interior Trim Color	Black	Dk Blue	Lt Brown	Gray
---------------------	-------	---------	----------	------

MODEL	SEAT TYPE				
1JF67	Sport Cloth Bucket	JBB2	JDD2	JEE2	JQQ2

SOLID PAINT APPLICATION (Top Color Must Be Specified)

Exterior Paint Color	Color Code 1	Color Code 2	Black	Dk Blue	Lt Brown	Gray
Black	19	19	11T/19T			11T/19T
Blue, Med (Met)	24	24	19T	29T		11T/19T
Gray, Med (Met)	15	15	19T			11T/19T
Red	70	70	11T/19T			11T/19T
Red, Dk (Met)	89	89	11T/19T			11T/19T
White	11	11	11T/19T	11T/29T	11T/57T	11T

Convertible Top Colors: 11T-White, 19T-Black, 29T-Dk Blue, 57T-Lt Brown

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO	
	3.18	3.61
WITH NA5 STANDARD EMISSIONS		
LB6 MM5	-	Std
MX1	*Std	-
WITH YF5 CALIFORNIA EMISSIONS		
LB6 MM5	-	*Std
MX1	*Std	-

*Reqs C60 Air

CAVALIER Z24 CONVERTIBLE

17,040.00 **Model 1JF67**

PREFERRED VEHICLE

MUST ORDER ONE GROUP — NO DELETIONS ALLOWED

838.00 Preferred Equipment Group 1	JFA1	JFA2
(-700.00) Preferred Equipment Group 1 Savings		
Air Conditioning	x	x
Battery, Heavy-Duty	x	x
Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System	x	N/I
Lighting, Auxiliary	x	x
1,426.00 Preferred Equipment Group 2		
(-1,000.00) Preferred Equipment Group 2 Savings		
Electronically Tuned AM Stereo/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape with Search and Repeat, Graphic Equalizer and Clock w/Extended Range Sound System		x
Floor Covering: Carpeted Mats, Color-Keyed Front and Rear		x
Power Trunk Opener		x
Speed Control, Electronic: with Resume Speed		x
Steering Wheel, Comfortilt		x
Windshield Wiper System, Intermittent		x

Base Vehicles may be ordered by specifying Preferred Equipment Group Code JFAB (Incls LH Remote, RH Manual Sport Mirrors, 2.8 Liter MFI V6 Eng, 5-Speed Manual Trans, Power Brakes, 14" Aluminum Wheels, Power Steering, Tinted Glass, Power Door Locks, Power Windows, Black Body Side Moldings, Gage Pkg w/Tach and AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System).

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

ENGINE (Must Order)	V.P.S.	UM6	Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System (Incl w/Group JFA1)
N.C. LB6 2.8 Liter MFI V6			
TRANSMISSION (Must Order One)	V.P.S.	UX1	Electronically Tuned AM Stereo/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape with Search and Repeat, Graphic Equalizer and Clock w/Extended Range Sound System (Incl w/Group JFA2)
N.C. MM5 5-Speed Manual			
415.00 MX1 3-Speed Automatic (Reqs C60 Air)			
EMISSION (Must Order One)	V.P.S.	UL5	Radio Delete (Reqs Group JFAB)
N.C. NA5 Standard Emissions			
100.00 YF5 California Emissions (Reqs C60 Air)			
TIRES (Must Order One)			
N.C. QMB P215/60 R14 B/W (Base)			
102.00 QMG P215/60 R14 Raised White Outlined Letter			
CLIMATE CONTROL			
675.00 C60 Air Conditioning (Incl w/Groups JFA1 and JFA2)			
20.00 K05 Heater, Engine Block			
RADIO EQUIPMENT			
V.P.S. --- Electronically Tuned AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System (Base)			
			INTERIOR TRIM
	N.C.	J*2	Sport Cloth Bucket
			ADDITIONAL OPTIONS
	115.00	V56	Carrier Deck Lid: Black
	N.C.	VK3	License Plate Bracket, Front
	33.00	B37	Floor Covering: Carpeted Mats, Front/Rear (Incl w/Group JFA2)

REVISED: 1-30-89

1989 ORDER GUIDE

CAVALIER
Page 5

Prices Shown Are Manufacturer's Suggested Retail Prices (MSRP) At The Time Of Publication. These Prices Are To Be Used Only As An Aid To Inventory Management Since MSRP Figures Change Periodically. The Vehicle Price Schedule Is The Official Pricing Documentation Of Chevrolet Motor Division And Should Be Used In Discussing Vehicle Prices With Potential Buyers. The Model Prices Shown In The Order Guide Include The Destination Freight Charges.

CAVALIER RS COUPE AND SEDAN

COLOR AND TRIM SELECTION

PLEASE NOTE: The Exterior Paint and Interior Trim Combinations Shown Below are the Only Combinations that are Available.

Interior Trim Color		Black	Dk Blue	Lt Brown	Gray
MODEL	SEAT TYPE				
1JC69	Vinyl Bucket			VEE2	VQQ2
1JC37	Cloth Bucket	CBB2	CDD2	CEE2	CQQ2
	*Sport Cloth Bucket	JBB2	JDD2	JEE2	JQQ2

*Incls Split Folding Rear Seat and Center Armrest

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code 1	Color Code 2	Black	Dk Blue	Lt Brown	Gray
Black	19	19	●			●
Blue, Dk (Met)	29	29		●		●
Blue, Lt (Met)	26	26		●		
Blue, Med (Met)	24	24	●	●		●
Brown, Lt (Met)	57	57			●	
Gray, Med (Met)	15	15	●			●
Red	70	70	●		●	●
Red, Dk (Met)	89	89	●			●
Silver (Met)	12	12	●	●		●
White	11	11	●	●	●	●

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO	
	3.18	3.45
WITH NA5 STANDARD EMISSIONS		
LL8 MM5	-	Std
MX1	Std	-
WITH YF5 CALIFORNIA EMISSIONS		
LL8 MM5	-	Std
MX1	Std	-

CAVALIER RS COUPE AND SEDAN

- 8,820.00 **Model 1JC37 Cavalier RS Coupe**
 9,020.00 **Model 1JC69 Cavalier RS Sedan**
 695.00 RS Coupe Base Equipment (Preferred Equipment Group JRAB Only)
 705.00 RS Sedan Base Equipment (Preferred Equipment Group JRAB Only)

PREFERRED VEHICLE

MUST ORDER ONE GROUP — NO DELETIONS ALLOWED

	JRA1	JRA2	JRA3
911.00 Preferred Equipment Group 1 (1JC37 w/MM5 Trans)			
885.00 Preferred Equipment Group 1 (1JC37 w/MX1 Trans)			
921.00 Preferred Equipment Group 1 (1JC69 w/MM5 Trans)			
895.00 Preferred Equipment Group 1 (1JC69 w/MX1 Trans)			
(-400.00) Preferred Equipment Group 1 Savings			
Battery, Heavy-Duty (w/MM5 Trans Only)	x	x	x
Floor Covering: Carpeted Mats, Color-Keyed Front and Rear	x	x	x
Glass, Tinted	x	x	x
Lighting, Auxiliary	x	x	x
1,941.00 Preferred Equipment Group 2 (1JC37 w/MM5 Trans)			
1,915.00 Preferred Equipment Group 2 (1JC37 w/MX1 Trans)			
1,951.00 Preferred Equipment Group 2 (1JC69 w/MM5 Trans)			
1,925.00 Preferred Equipment Group 2 (1JC69 w/MX1 Trans)			
(-700.00) Preferred Equipment Group 2 Savings			
Air Conditioning		x	x
Speed Control, Electronic: with Resume Speed		x	x
Steering Wheel, Comfortilt		x	x
Windshield Wiper System, Intermittent		x	x
2,583.00 Preferred Equipment Group 3 (1JC37 w/MM5 Trans)			
2,557.00 Preferred Equipment Group 3 (1JC37 w/MX1 Trans)			
2,603.00 Preferred Equipment Group 3 (1JC69 w/MM5 Trans)			
2,577.00 Preferred Equipment Group 3 (1JC69 w/MX1 Trans)			
(-800.00) Preferred Equipment Group 3 Savings			
Carrier, Deck Lid (Coupe Only)			x
Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System			x
Power Door Lock System			x
Power Trunk Opener			x
Power Windows			x

Base Vehicles may be ordered by specifying Preferred Equipment Group Code JRAB (Incls Exterior Ornamentation, Door Edge Guards, Sport Mirrors, Body Side Stripe, 2.0 Liter L4 Eng. Sport Suspension, 5-Speed Manual Trans, Power Brakes, 14" Styled Steel Wheels, P195/70R14 Blackwall Tires, AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System, Power Steering, Body Side Moldings and Gage Pkg w/Tach).

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

ENGINE (Must Order One)		TIRES	
N.C.	LL8 2.0 Liter EFI L4	N.C.	--- P195/70 R14 B/W (Base)
TRANSMISSION (Must Order One)		CLIMATE CONTROL	
N.C.	MM5 5-Speed Manual	675.00	C60 Air Conditioning (Incl w/Groups JRA2 and JRA3)
415.00	MX1 3-Speed Automatic	145.00	C49 Defogger, Rear Window: Electric
EMISSION (Must Order One)		20.00	K05 Heater, Engine Block
N.C.	NA5 Standard Emissions		
100.00	YF5 California Emissions		

CAVALIER RS COUPE AND SEDAN

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

RADIO EQUIPMENT		INTERIOR TRIM	
V.P.S.	--- Electronically Tuned AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System (Base)	28.00	C**2 Cloth Bucket
		N.C.	V**2 Vinyl Bucket
		459.00	J**2 Sport Cloth Bucket (1JC37 Model)
		483.00	J**2 Sport Cloth Bucket (1JC69 Model)
V.P.S.	UM6 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System (Incl w/Group JRA3)	115.00	ADDITIONAL OPTIONS V56 Carrier, Deck Lid: Black (1JC37 Only) (Incl w/Group JRA3) (Reqs A01 Glass)
V.P.S.	UX1 Electronically Tuned AM Stereo/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape with Search and Repeat, Graphic Equalizer and Clock w/Extended Range Sound System	156.00	U52 Electronic Instrumentation (Reqs C60 Air)
V.P.S.	UL5 Radio Delete (Reqs Group JRAB)	33.00	B37 Floor Covering: Carpeted Mats, Front/Rear (Incl w/Groups JRA1, JRA2 and JRA3)
		105.00	A01 Glass, Tinted: All Windows (Incl w/Groups JRA1, JRA2 and JRA3)
		N.C.	VK3 License Plate Bracket, Front
		145.00	AU3 Power Door Lock System (Incl w/Group JRA3) (1JC37 Model)
		195.00	AU3 Power Door Lock System (Incl w/Group JRA3) (1JC69 Model)
		350.00	AD3 Sunroof, Removable

CAVALIER RS WAGON

COLOR AND TRIM SELECTION

PLEASE NOTE: The Exterior Paint and Interior Trim Combinations Shown Below are the Only Combinations that are Available.

Interior Trim Color		Black	Dk Blue	Lt Brown	Gray
MODEL	SEAT TYPE				
1JC35	Vinyl Bucket			VEE2	VQQ2
	Cloth Bucket	CBB2	CDD2	CEE2	CQQ2
	*Sport Cloth Bucket (CL)	JBB2	JDD2	JEE2	JQQ2

*Incls Split Folding Rear Seat and Center Armrest

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code 1	Color Code 2	Black	Dk Blue	Lt Brown	Gray
Black	19	19	●			●
Blue, Dk (Met)	29	29		●		●
Blue, Lt (Met)	26	26		●		
Blue, Med (Met)	24	24	●	●		●
Brown, Lt (Met)	57	57			●	
Gray, Med (Met)	15	15	●			●
Red	70	70	●		●	●
Red, Dk (Met)	89	89	●			●
Silver (Met)	12	12	●	●		●
White	11	11	●	●	●	●

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO			
	2.84	3.18	3.45	3.61
WITH NA5 STANDARD EMISSIONS				
LL8 MM5	—	—	Std	—
MX1	—	Std	—	—
LB6 MM5	—	—	—	Std
MX1	*Std	—	—	—
WITH YF5 CALIFORNIA EMISSIONS				
LL8 MM5	—	—	Std	—
MX1	—	Std	—	—
LB6 MM5	—	—	—	*Std
MX1	*Std	—	—	—

*Reqs C60 Air

CAVALIER RS WAGON

9,400.00 **Model 1JC35**

705.00 **RS Wagon Base Equipment (Preferred Equipment Group JSAB Only)**

PREFERRED VEHICLE

MUST ORDER ONE GROUP — NO DELETIONS ALLOWED

	JSA1	JSA2	JSA3
927.00 Preferred Equipment Group 1 (w/MM5 Trans or LB6 Eng)			
901.00 Preferred Equipment Group 1 (w/MX1 Trans and LL8 Eng)			
(-400.00) Preferred Equipment Group 1 Savings			
Battery, Heavy-Duty (w/LL8 Eng N/A MX1 Trans)	x	x	x
Floor Covering: Carpeted Mats, Color-Keyed Front and Rear	x	x	x
Glass, Tinted	x	x	x
Lighting, Auxiliary	x	x	x
1,957.00 Preferred Equipment Group 2 (w/MM5 Trans or LB6 Eng)			
1,931.00 Preferred Equipment Group 2 (w/MX1 Trans and LL8 Eng)			
(-700.00) Preferred Equipment Group 2 Savings			
Air Conditioning		x	x
Speed Control, Electronic: with Resume Speed		x	x
Steering Wheel, Comfortilt		x	x
Windshield Wiper System, Intermittent		x	x
2,674.00 Preferred Equipment Group 3 (w/MM5 Trans or LB6 Eng)			
2,648.00 Preferred Equipment Group 3 (w/MX1 Trans and LL8 Eng)			
(-800.00) Preferred Equipment Group 3 Savings			
Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System			x
Roof Carrier, Black			x
Power Door Lock System			x
Power Windows			x

Base Vehicles may be ordered by specifying Preferred Equipment Group Code JSAB (Incls Exterior Ornamentation, Door Edge Guards, Sport Mirrors, Body Side Stripe, 2.0 Liter L4 Eng, Sport Suspension, 5-Speed Manual Trans, Power Brakes, 14" Styled Steel Wheels, P195/70R14 Blackwall Tires, AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System, Power Steering, Body Side Moldings, Gage Pkg w/Tach and Power Tailgate Release).

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

ENGINE (Must Order One)		V.P.S.	UM6	Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System (Incl w/Group JSA3)
N.C.	LL8 2.0 Liter EFI L4			
660.00	LB6 2.8 Liter MFI V6			
TRANSMISSION (Must Order One)		V.P.S.	UX1	Electronically Tuned AM Stereo/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape with Search and Repeat, Graphic Equalizer and Clock w/Extended Range Sound System
N.C.	MM5 5-Speed Manual			
415.00	MX1 3-Speed Automatic (w/LB6 Eng Reqs C60 Air)			
EMISSION (Must Order One)		V.P.S.	UL5	Radio Delete (Reqs Group JSAB)
N.C.	NA5 Standard Emissions			
100.00	YF5 California Emissions (w/LB6 Eng Reqs C60 Air)			
TIRES				
N.C.	--- P195/70 R14 B/W (Base)	28.00	C**2	Cloth Bucket
CLIMATE CONTROL		N.C.	V**2	Vinyl Bucket
675.00	C60 Air Conditioning (Incl w/Groups JSA2 and JSA3)	383.00	J**2	Sport Cloth Bucket
145.00	C49 Defogger, Rear Window: Electric (Reqs A01 Glass)	115.00	V54	Carrier, Roof: Black (Incl w/Group JSA3)
20.00	K05 Heater, Engine Block	105.00	A01	Glass, Tinted: All Windows (Incl w/Groups JSA1, JSA2 and JSA3)
RADIO EQUIPMENT		N.C.	VK3	License Plate Bracket, Front
V.P.S.	--- Electronically Tuned AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System (Base)	33.00	B37	Floor Covering: Carpeted Mats, Front/Rear (Incl w/Groups JSA1, JSA2 and JSA3)
		195.00	AU3	Power Door Lock System (Incl w/Group JSA3)

REVISED: 1-30-89

1989 ORDER GUIDE

CAVALIER
Page 11

Prices Shown Are Manufacturer's Suggested Retail Prices (MSRP) At The Time Of Publication. These Prices Are To Be Used Only As An Aid To Inventory Management Since MSRP Figures Change Periodically. The Vehicle Price Schedule Is The Official Pricing Documentation Of Chevrolet Motor Division And Should Be Used In Discussing Vehicle Prices With Potential Buyers. The Model Prices Shown In The Order Guide Include The Destination Freight Charges.

CAVALIER COUPE AND SEDAN

COLOR AND TRIM SELECTION

PLEASE NOTE: The Exterior Paint and Interior Trim Combinations Shown Below are the Only Combinations that are Available.

Interior Trim Color		Black	Dk Blue	Lt Brown	Gray
MODEL	SEAT TYPE				
1JC69	Vinyl Bucket			VEE2	VQQ2
1JC37	Cloth Bucket	CBB2	CDD2	CEE2	CQQ2
	*Sport Cloth Bucket (CL)	JBB2	JDD2	JEE2	JQQ2

*Incls Split Folding Rear Seat and Center Armrest

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code 1	Color Code 2	Black	Dk Blue	Lt Brown	Gray
Black	19	19	●			●
Blue, Dk (Met)	29	29		●		●
Blue, Lt (Met)	26	26		●		
Blue, Med (Met)	24	24	●	●		●
Brown, Lt (Met)	57	57			●	
Gray, Med (Met)	15	15	●			●
Red	70	70	●		●	●
Red, Dk (Met)	89	89	●			●
Silver (Met)	12	12	●	●		●
White	11	11	●	●	●	●

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO	
	3.18	3.45
WITH NA5 STANDARD EMISSIONS		
LL8 MM5	-	Std
MX1	Std	-
WITH YF5 CALIFORNIA EMISSIONS		
LL8 MM5	-	Std
MX1	Std	-

CAVALIER COUPE AND SEDAN

8,820.00 **Model 1JC37 Cavalier Coupe**
 9,020.00 **Model 1JC69 Cavalier Sedan**

PREFERRED VEHICLE

MUST ORDER ONE GROUP — NO DELETIONS ALLOWED

	JCA1	JCA2	JCA3	JCA4
303.00 Preferred Equipment Group 1 (w/MM5 Trans)				
277.00 Preferred Equipment Group 1 (w/MX1 Trans)				
(-300.00) Preferred Equipment Group 1 Savings				
Battery, Heavy-Duty (w/MM5 Trans Only)	x	x	x	x
Lighting, Auxiliary	x	x	x	x
Steering, Power	x	x	x	x
544.00 Preferred Equipment Group 2 (w/MM5 Trans)				
518.00 Preferred Equipment Group 2 (w/MX1 Trans)				
(-400.00) Preferred Equipment Group 2 Savings				
Floor Covering: Carpeted Mats, Color-Keyed Front and Rear		x	x	x
Glass, Tinted		x	x	x
Moldings, Body Side		x	x	x
Sport Mirrors, LH Remote, RH Manual		x	x	x
1,574.00 Preferred Equipment Group 3 (w/MM5 Trans)				
1,548.00 Preferred Equipment Group 3 (w/MX1 Trans)				
(-700.00) Preferred Equipment Group 3 Savings				
Air Conditioning			x	x
Speed Control, Electronic: with Resume Speed			x	x
Steering Wheel, Comfortilt			x	x
Windshield Wiper System, Intermittent			x	x
2,051.00 Preferred Equipment Group 4 (1JC37 w/MM5 Trans)				
2,025.00 Preferred Equipment Group 4 (1JC37 w/MX1 Trans)				
2,176.00 Preferred Equipment Group 4 (1JC69 w/MM5 Trans)				
2,150.00 Preferred Equipment Group 4 (1JC69 w/MX1 Trans)				
(-800.00) Preferred Equipment Group 4 Savings				
Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System				x
Power Door Lock System				x
Power Windows				x

Base Vehicles may be ordered by specifying Preferred Equipment Group Code JCAB (Incls LH Sport Mirror 2.0 Liter EFI L4 Eng, 5-Speed Manual Trans, Power Brakes, 13" Styled Steel Wheels and AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System).

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

ENGINE (Must Order One)		CLIMATE CONTROL	
N.C.	LL8 2.0 Liter EFI L4	675.00	C60 Air Conditioning (N/A Group JCAB) (Incl w/Groups JCA3 and JCA4)
TRANSMISSION (Must Order One)		145.00	C49 Defogger, Rear Window: Electric
N.C.	MM5 5-Speed Manual	20.00	K05 Heater, Engine Block
415.00	MX1 3-Speed Automatic	RADIO EQUIPMENT	
EMISSION (Must Order One)		V.P.S.	--- Electronically Tuned AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System (Base)
N.C.	NA5 Standard Emissions	V.P.S.	UM6 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System (Incl w/Group JCA4)
100.00	YF5 California Emissions	V.P.S.	UL5 Radio Delete (Reqs Group JCAB)
TIRES (Must Order One)			
N.C.	QHS P185/80 R13 B/W (Base)		
68.00	QHT P185/80 R13 W/S		
WHEELS (May Choose One)			
N.C.	--- Styled Steel Wheels (Base)		
212.00	PX1 Aluminum Wheel		

REVISED: 1-30-89

1989 ORDER GUIDE

CAVALIER

Page 13

Prices Shown Are Manufacturer's Suggested Retail Prices (MSRP) At The Time Of Publication. These Prices Are To Be Used Only As An Aid To Inventory Management Since MSRP Figures Change Periodically. The Vehicle Price Schedule Is The Official Pricing Documentation Of Chevrolet Motor Division And Should Be Used In Discussing Vehicle Prices With Potential Buyers. The Model Prices Shown In The Order Guide Include The Destination Freight Charges.

CAVALIER COUPE AND SEDAN

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

INTERIOR TRIM						
28.00	C**2	Cloth Bucket	33.00	B37	Floor Covering: Carpeted Mats, Front/Rear (Incl w/Groups JCA2, JCA3 and JCA4)	
	N.C.	V**2				
		Vinyl Bucket				
459.00	J**2	Sport Cloth Bucket (1JC37 Model)	105.00	A01	Glass, Tinted: All Windows (Incl w/Groups JCA2, JCA3 and JCA4)	
483.00	J**2	Sport Cloth Bucket (1JC69 Model)				
				N.C.	VK3	License Plate Bracket, Front
ADDITIONAL OPTIONS						
50.00	B84	Body Side Moldings (Incl w/Groups JCA2, JCA3 and JCA4)	145.00	AU3	Power Door Lock System (Incl w/Group JCA4) (1JC37 Model)	
			195.00	AU3	Power Door Lock System (Incl w/Group JCA4) (1JC69 Model)	

CAVALIER WAGON

COLOR AND TRIM SELECTION

PLEASE NOTE: The Exterior Paint and Interior Trim Combinations Shown Below are the Only Combinations that are Available.

Interior Trim Color		Black	Dk Blue	Lt Brown	Gray
MODEL	SEAT TYPE				
1JC35	Vinyl Bucket			VEE2	VQQ2
	Cloth Bucket	CBB2	CDD2	CEE2	CQQ2
	*Sport Cloth Bucket (CL)	JBB2	JDD2	JEE2	JQQ2

*Incls Split Folding Rear Seat and Center Armrest

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code 1	Color Code 2	Black	Dk Blue	Lt Brown	Gray
Black	19	19	●			●
Blue, Dk (Met)	29	29		●		●
Blue, Lt (Met)	26	26		●		
Blue, Med (Met)	24	24	●	●		●
Brown, Lt (Met)	57	57			●	
Gray, Med (Met)	15	15	●			●
Red	70	70	●		●	●
Red, Dk (Met)	89	89	●			●
Silver (Met)	12	12	●	●		●
White	11	11	●	●	●	●

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO			
	2.84	3.18	3.45	3.61
WITH NA5 STANDARD EMISSIONS				
LL8 MM5	-	-	Std	-
MX1	-	Std	-	-
≠LB6 MM5	-	-	-	Std
MX1	*Std	-	-	-
WITH YF5 CALIFORNIA EMISSIONS				
LL8 MM5	-	-	Std	-
MX1	-	Std	-	-
≠LB6 MM5	-	-	-	*Std
MX1	*Std	-	-	-

*Reqs C60 Air

≠Reqs FE2 Susp Equip and N40 Power Steering

9,400.00 **Model 1JC35**

PREFERRED VEHICLE

MUST ORDER ONE GROUP — NO DELETIONS ALLOWED

309.00	Preferred Equipment Group 1 (w/MM5 Trans or LB6 Eng)	JWA1	JWA2	JWA3
283.00	Preferred Equipment Group 1 (w/MX1 Trans and LL8 Eng)			
(-300.00)	Preferred Equipment Group 1 Savings			
	Battery, Heavy-Duty (w/LL8 Eng N/A MX1 Trans)	x	x	x
	Lighting, Auxiliary	x	x	x
	Steering, Power	x	x	x
550.00	Preferred Equipment Group 2 (w/MM5 Trans or LB6 Eng)			
524.00	Preferred Equipment Group 2 (w/MX1 Trans and LL8 Eng)			
(-400.00)	Preferred Equipment Group 2 Savings			
	Floor Covering: Carpeted Mats, Color-Keyed Front and Rear		x	x
	Glass, Tinted		x	x
	Moldings, Body Side		x	x
	Sport Mirrors, LH Remote, RH Manual		x	x
1,695.00	Preferred Equipment Group 3 (w/MM5 Trans or LB6 Eng)			
1,669.00	Preferred Equipment Group 3 (w/MX1 Trans and LL8 Eng)			
(-700.00)	Preferred Equipment Group 3 Savings			
	Air Conditioning			x
	Carrier, Roof			x
	Speed Control, Electronic: with Resume Speed			x
	Steering Wheel, Comfortilt			x
	Windshield Wiper System, Intermittent			x

Base Vehicles may be ordered by specifying Preferred Equipment Group Code JWAB (Incls LH Sport Mirror 2.0 Liter EFI L4 Eng, 5-Speed Manual Trans, Power Brakes, 13" Styled Steel Wheels, AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System and Power Tailgate Release).

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

ENGINE (Must Order One)			RADIO EQUIPMENT		
N.C.	LL8	2.0 Liter EFI L4	V.P.S.	---	Electronically Tuned AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System (Base)
660.00	LB6	2.8 Liter MFI V6 (Reqs QME Tires, PC4 Wheels and FE2 Suspension)			
TRANSMISSION (Must Order One)			V.P.S.	UM6	Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System
N.C.	MM5	5-Speed Manual			
415.00	MX1	3-Speed Automatic (w/LB6 Eng Reqs C60 Air)	V.P.S.	UL5	Radio Delete (Reqs Group JWAB)
EMISSION (Must Order One)			INTERIOR TRIM		
N.C.	NA5	Standard Emissions	28.00	C**2	Cloth Bucket
100.00	YF5	California Emissions (w/LB6 Eng Reqs C60 Air)	N.C.	V**2	Vinyl Bucket
TIRES (Must Order One)			383.00	J**2	Sport Cloth Bucket
N.C.	QHS	P 185/80 R13 B/W (Base)	ADDITIONAL OPTIONS		
68.00	QHT	P 185/80 R13 W/S	50.00	B84	Body Side Moldings (Incl w/Groups JWA2 and JWA3)
129.00	QME	P 195/70 R14 B/W (Reqs LB6 Eng)	115.00	V55	Carrier, Roof: Bright (Incl w/Group JWA3)
WHEELS (May Choose One)			33.00	B37	Floor Covering: Carpeted Mats, Front/Rear (Incl w/Groups JWA2 and JWA3)
N.C.	---	13" Styled Steel Wheel (Base) (N/A QME Tires)	105.00	A01	Glass, Tinted: All Windows (Incl w/Groups JWA2 and JWA3)
212.00	PX1	Aluminum Wheel (N/A QME Tires)	N.C.	VK3	License Plate Bracket, Front
N.C.	PC4	14" Styled Steel Wheel (Reqs QME Tires and LB6 Eng)	195.00	AU3	Power Door Lock System
CLIMATE CONTROL			285.00	A31	Power Windows (Reqs AU3 Door Locks)
675.00	C60	Air Conditioning (Incl w/Group JWA3) (w/LL8 Eng N/A Group JWAB)	27.00	FE2	Suspension Equipment, Sport (Reqs LB6 Eng, QME Tires and PC4 Wheels)
145.00	C49	Defogger, Rear Window: Electric (Reqs A01 Glass)			
20.00	K05	Heater, Engine Block			

CAVALIER VL COUPE

COLOR AND TRIM SELECTION

PLEASE NOTE: The Exterior Paint and Interior Trim Combinations Shown Below are the Only Combinations that are Available.

Interior Trim Color		Black	Dk Blue	Gray
MODEL	SEAT TYPE			
1JC37/ WV9	Vinyl Bucket			VQQ2
	Cloth Bucket	CBB2	CDD2	CQQ2

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code 1	Color Code 2	Black	Dk Blue	Gray
Blue, Lt (Met)	26	26		•	
Gray, Med (Met)	15	15	•		•
Red	70	70	•		•
Silver (Met)	12	12	•	•	•
White	11	11	•	•	•

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO	
	3.18	3.45
WITH NA5 STANDARD EMISSIONS		
LL8 MM5	—	Std
MX1	Std	—
WITH YF5 CALIFORNIA EMISSIONS		
LL8 MM5	—	Std
MX1	Std	—

CAVALIER VL COUPE

7,800.00 **Model 1JC37 Cavalier VL Coupe**

PREFERRED VEHICLE

MUST ORDER ONE GROUP — NO DELETIONS ALLOWED

	JPA1	JPA2	JPA3
303.00 Preferred Equipment Group 1 (w/MM5 Trans)			
277.00 Preferred Equipment Group 1 (w/MX1 Trans)			
(-200.00) Preferred Equipment Group 1 Savings			
Battery, Heavy-Duty (w/MM5 Trans Only)	x	x	x
Lighting, Auxiliary	x	x	x
Steering, Power	x	x	x
544.00 Preferred Equipment Group 2 (w/MM5 Trans)			
518.00 Preferred Equipment Group 2 (w/MX1 Trans)			
(-250.00) Preferred Equipment Group 2 Savings			
Floor Covering: Carpeted Mats, Color-Keyed Front and Rear		x	x
Glass, Tinted		x	x
Moldings, Body Side		x	x
Sport Mirrors, LH Remote, RH Manual		x	x
1,574.00 Preferred Equipment Group 3 (w/MM5 Trans)			
1,548.00 Preferred Equipment Group 3 (w/MX1 Trans)			
(-300.00) Preferred Equipment Group 3 Savings			
Air Conditioning			x
Speed Control, Electronic: with Resume Speed			x
Steering Wheel, Comfortilt			x
Windshield Wiper System, Intermittent			x

Base Vehicles may be ordered by specifying Preferred Equipment Group Code JPAB (Incls LH Sport Mirror, 2.0 Liter EFI L4 Eng, 5-Speed Manual Trans and 13" Styled Steel Wheels).

REGIONALIZED OPTIONS

ADDITIONAL OPTIONS MAY BE ORDERED FROM THIS LISTING ONLY

ENGINE (Must Order)		RADIO EQUIPMENT	
N.C.	LL8 2.0 Liter EFI L4	V.P.S.	UM7 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan and Digital Clock w/Extended Range Sound System
TRANSMISSION (Must Order One)			
N.C.	MM5 5-Speed Manual		
415.00	MX1 3-Speed Automatic	V.P.S.	UM6 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Stereo Cassette Tape and Digital Clock w/Extended Range Sound System
EMISSION (Must Order One)			
N.C.	NA5 Standard Emissions	V.P.S.	--- Radio Delete (Base)
100.00	YF5 California Emissions	INTERIOR TRIM	
TIRES (Must Order One)		28.00	C**2 Cloth Bucket
N.C.	QHS P185/80 R13 B/W (Base)	N.C.	V**2 Vinyl Bucket
68.00	QHT P185/80 R13 W/S	ADDITIONAL OPTIONS	
WHEELS (May Choose One)		33.00	B37 Floor Covering: Carpeted Mats, Front/Rear (Incl w/Groups JPA2 and JPA3)
N.C.	--- Styled Steel Wheel (Base)	105.00	A01 Glass, Tinted: All Windows (Incl w/Groups JPA2 and JPA3)
39.00	PO6 Trim Rings	N.C.	VK3 License Plate Bracket, Front
CLIMATE CONTROL		50.00	B84 Moldings, Body Side (Incl w/Groups JPA2 and JPA3)
675.00	C60 Air Conditioning (N/A Group JPAB)	145.00	AU3 Power Door Lock System
145.00	C49 Defogger, Rear Window: Electric		
20.00	K05 Heater, Engine Block		

NOTES

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1989

Manufacturer Chevrolet Motor Division General Motors Corporation	Vehicle Line Cavalier	
Mailing Address Chevrolet-Pontiac-Canada Group Engineering Center General Motors Corporation 30003 VanDyke Warren, Michigan 48090-9060	Issued June, 1988	Revised

Direct questions concerning these specifications to the manufacturer listed above.

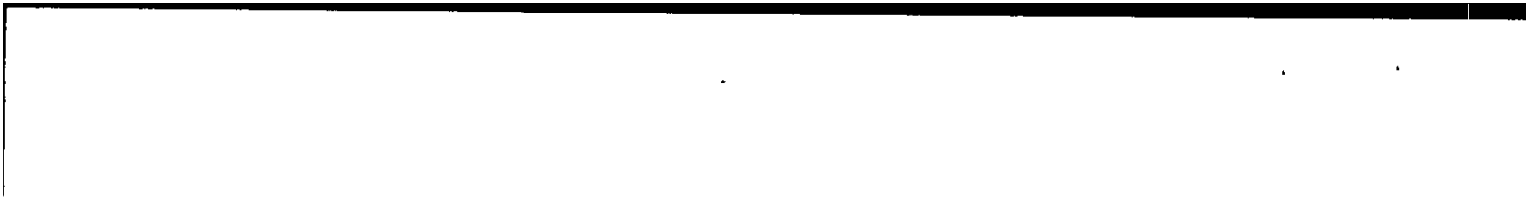
The information contained herein is prepared, distributed by, and is solely the responsibility of the vehicle manufacturing company to whose products it relates. This specification form was developed by the vehicle manufacturing companies under the auspices of the Motor Vehicle Manufacturers Association of the United States, Inc.

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



Motor Vehicle Manufacturers Association
of the United States, Inc.

Blank Forms Provided by Technical Affairs Division



MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

Vehicle Origin

Design & development (company)	General Motors, L.A.D. Lansing
Where built (country)	United States
Authorized U.S. sales marketing representative	Chevrolet Motor Division

Vehicle Models

Model Description & Drive (FWD/RWD/AWD/4WD)*	Introduction Date	Make, Vehicle Models, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)
Front Wheel Drive Station Wagon		1JC35	2/3	40 (88)
Front Wheel Drive Notchback Coupe		1JC37	2/3	60 (132)
Front Wheel Drive Z24 Notchback Coupe		1JF37	2/3	60 (132)
Front Wheel Drive Z24 Convertible Coupe		1JF67	2/2	60 (132)
Front Wheel Drive Notchback Sedan		1JC69	2/3	60 (132)

* FWD - Front Wheel Drive RWD - Rear Wheel Drive
 AWD - All Wheel Drive 4WD - Four Wheel Drive

SAE J1349 Specifications Form

Vehicle Line Cavalier
 Model Year 1989 issued _____ Revised (e) _____

SAE J1349 (U.S. Customary)

Power Teams (Indicate whether standard or optional)

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

SERIES AVAILABILITY	ENGINE						E x h a u s t S/D*	TRANSMISSION/ TRANSAXLE	AXLE RATIO (std. first)
	Code	Displ. Liters (in ³)	Induction (FI, CARB/ BBL, etc.)	Compr. Ratio	SAE Net at RPM				
					Power kW (bhp)	Torque N·m (lb. ft.)			
IJC (Std.)	LL8	L-4 2.0L (121)	EFI	9.0:1	67 (90) @ 5600	146 (108) @ 3200	S	(Std.) 5-Speed Manual (Opt.) 3-Speed Auto	3.45 3.18
IJF (Std.) IJC35 (Opt.)	LB6	2.8L (173)V6	MFI	8.9:1	93 (125) @ 4500	217 (160) @ 3600	S	(Std.) 5-Speed Manual (Opt.) 3-Speed Auto	3.61 3.18 (JF Only) Z-24 2.84 (JC Only) WAGON

* Single/Dual

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (•) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.0 (121) L4 LL8

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	
Bore	89 (3.50)	
Stroke	80 (3.15)	
Bore spacing (C / L to C / L)	99 (3.90)	
Cylinder block material & mass kg (lbs.) (machined)	Cast Iron/32.050 (70.7)	
Cylinder block deck height	215.55 (8.49)	
Cylinder block length	443 (17.4)	
Deck clearance (minimum) (above or below block)	0.15 (.006) Below	
Cylinder head material & mass kg (lbs.)	Aluminum 9.740 (21.5)	
Cylinder head volume (cm ³)	43.3	
Cylinder liner material	Not Available	
Head gasket thickness (compressed)	1.1 (.043)	
Minimum combustion chamber total volume (cm ³)	59.988 (3.66) @	
Cyl. no. system (front to rear)*	L. Bank	1-2-3-4
	R. Bank	--
Firing order	1-3-4-2	
Intake manifold material & mass [kg (lbs.)]**	Aluminum Cast/3.870 (8.5)	
Exhaust manifold material & mass [kg (lbs.)]**	Stamped Steel/2.585 (5.7)	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) + 2	87	
Engine mounts	Number	3
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric
	Added isolation (sub-frame, crossmember, etc.)	No
Total dressed engine mass (wt) dry***	146.8 (323.6) Auto 162.4 (358.0) Manual	
Engine - Pistons		
Material & mass, g (weight, oz.) - piston only	Aluminum Alloy .350 (10.9)	
Engine - Camshaft		
Location	In Cylinder Block, Right Side in Block Above Crankshaft	
Material & mass kg (weight, lbs.)	Cast Iron 3.065 (6.8)	
Drive type	Chain / belt	Chain
	Width / pitch	19.3 (0.76)/9.53 (0.38)

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

** Finished state.

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

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.8 (173) V6 LB6

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	60° V Transverse, Front of Engine Faces Right Side of Vehicle	
Manufacturer	Chevrolet	
No. of cylinders	6	
Bore	89 (3.50)	
Stroke	76 (2.99)	
Bore spacing (C / L to C / L)	111.8 (4.40)	
Cylinder block material & mass kg (lbs.) (machined)	Cast Alloy Iron 41.731 (91.9)	
Cylinder block deck height	224 (8.819)	
Cylinder block length	435.5 (17.1)	
Deck clearance (minimum) (above or below block)	0.12 (.005) Below	
Cylinder head material & mass kg (lbs.)	Cast Alloy Aluminum 5.300 (11.7)	
Cylinder head volume (cm ³)	--	
Cylinder liner material	Not Applicable	
Head gasket thickness (compressed)	0.838 (0.033)	
Minimum combustion chamber total volume (cm ³)	59.8481 (3.6515)@	
Cyl. no. system (front to rear)*	L. Bank	2-4-6
	R. Bank	1-3-5
Firing order	1-2-3-4-5-6	
Intake manifold material & mass (kg (lbs.))**	Cast Aluminum 3.810 (8.4)	
Exhaust manifold material & mass (kg (lbs.))**	Cast Iron LH 2.630 (5.8) RH 3.670 (8.1)	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) + 2	87	
Engine mounts	Number	3
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric
	Added isolation (sub-frame, crossmember, etc.)	No
Total dressed engine mass (wt) dry***	193.8 (427.3) Manual 181.5 (400.1) Automatic	
Engine - Pistons		
Material & mass, g (weight, oz.) - piston only	Cast Aluminum Alloy, .474 (1.04)	
Engine - Camshaft		
Location	In Block Above Crankshaft	
Material & mass kg (weight, lbs.)	Cast Iron, 3.098 (6.83)	
Drive type	Chain / belt	Chain
	Width / pitch	19.4 (.764)/9.53 (3.75)

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

** Finished state.

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

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

MVMA Specifications Form

Vehicle Line CAVALIER
 Model Year 1989 Issued _____ Revised (e) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.0 (121) L4 LL8

Engine - Valve System

Hydraulic lifters (std., opt., NA)	Standard
Valves	Number intake / exhaust
	Head O.D. intake / exhaust

4/4
 43.00 (1.69) 37.00 (1.46)

Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))*	Cast Steel, .373 (.820)
Length (axes to ϕ) mm	

Engine - Crankshaft

Material & mass (kg., (weight, lbs.))*	Nod. Cast Iron/13.360 (29.5)
End thrust taken by bearing (no.)	5
Length & number of main bearings	5
Seal (material, one, two piece design, etc.)	Front
	Rear

Silicon, one
 Silicon, one

Engine - Lubrication System

Normal oil pressure (kPa (psi) at engine rpm)	435-530 (63-77) @ 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)

Engine - Diesel Information

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

Engine - Intake System

Turbo charger - manufacturer	X
Super charger - manufacturer	
Intercooler	

*Finished State

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.8 (173) V6 LB6

Engine - Valve System

Hydraulic lifters (std., opt., NA)	<u>Standard</u>
Valves	Number intake / exhaust <u>6/6</u>
	Head O.D. intake / exhaust <u>43.64 (1.72)/36.20 (1.43)</u>

Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))*	<u>1038 Steel/.399 (0.879)</u>
Length (axes to axes) mm	

Engine - Crankshaft

Material & mass (kg., (weight, lbs.))*	<u>Nodular Cast Iron/17.125 (37.75)</u>
End thrust taken by bearing (no.)	<u>3</u>
Length & number of main bearings	<u>4</u>
Seal (material, one, two piece design, etc.)	Front <u>Viton/One</u>
	Rear <u>Viton/One</u>

Engine - Lubrication System

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

Engine - Diesel Information

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

Engine - Intake System

Turbo charger - manufacturer	
Super charger - manufacturer	
Intercooler	

*Finished State

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.0 (121) L4 LL8

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)	Standard	
Coolant fill location (rad., bottle)	Recovery Tank	
Radiator cap relief valve pressure (kPa (psi))	103.4 (15 psi)	
Circulation thermostat	Type (choke, bypass)	Choke
	Starts to open at °C (°F)	94° C (199° F)
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	Cast Iron
	Housing material	Aluminum
By-pass recirculation (type (inter., ext.))	External -Thru Intake Manifold Internal	
Cooling system capacity	With heater-L(qt.)	7.5 (7.9)
	With air cond.-L(qt.)	7.5 (7.9)
	Opt. equipment (specify-L(qt.))	7.1 (7.5) Auto Transmission Oil Cooler
Water jackets full length of cyl. (yes, no)	Yes	
Water all around cylinder (yes, no)	Yes	
Water jackets open at head face (yes, no)	No	
Radiator core	Std., A/C, HD	
	Type (cross-flow, etc.)	Cross Flow
	Construction (fin & tube mechanical, braze, etc.)	Tube and Fin; Soldered
	Material, mass (kg (wgt. lbs.))	Copper/Brass
	Width	3 87 (15.24)
	Height	500.0 (19.7)
	Thickness	
Fins per inch	16.9	
Radiator end tank material	Copper/Brass	
Fan	Std., elec., opt.	Electric
	Number of blades & type (flex, solid, material)	
	Diameter & projected width	
	Ratio (fan to crankshaft rev.)	Not Applicable
	Fan cutout type	ECM Controlled
	Drive type (direct, remote)	Direct - Electric Motor
	RPM at idle (elec.)	
	Motor rating (wattage) (elec.)	100
	Motor switch (type & location) (elec.)	Engine Block
	Switch point (temp., pressure) (elec.)	on 108 off 101
Fan shroud (material)		

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.8L (173) V6 LB6

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard
Coolant fill location (rad., bottle)		Surge Tank
Radiator cap relief valve pressure (kPa (psi))		103.4 (15)
Circulation thermostat	Type (choke, bypass)	Bypass
	Starts to open at °C (°F)	91 (195°)
Water pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	22.7 @ 3000 Pump RPM
	Number of pumps	One
	Drive (V-belt, other)	Single Poly "V" Belt (Serpentine)
	Bearing type	Ball-Roller
	Impeller material	Cast Iron
Housing material		Aluminum
By-pass recirculation (type (inter., ext.))		External, Bypass Pipe
Cooling system capacity	With heater—L.(qt.)	10.5 (11.1) Manual
	With air cond.—L.(qt.)	10.6 (11.2) Automatic and Manual
	Opt. equipment (specify—L.(qt.))	
Water jackets full length of cyl. (yes, no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes, no)		--
Radiator core	Std., A/C, HD	Manual Auto
	Type (cross-flow, etc.)	Cross-Flow
	Construction (fin & tube mechanical, braze, etc.)	Tube and Fin; Brazed
	Material, mass (kg (wgt. lbs.))	Aluminum 3.4 (7.5) Aluminum 4.08 (9.0)
	Width	387 (15.3)
	Height	600 (23.6)
	Thickness	34 (1.3)
	Fins per inch	14.5
Radiator end tank material		Plastic
Fan	Std., elec., opt.	Electric
	Number of blades & type (flex, solid, material)	7 (Solid)*
	Diameter & projected width	373 (14.7)
	Ratio (fan to crankshaft rev.)	Not Applicable
	Fan cutout type	ECM Controlled
	Drive type (direct, remote)	Direct - Electric Motor
	RPM at idle (elec.)	2200
	Motor rating (wattage) (elec.)	150
	Motor switch (type & location) (elec.)	Engine Block
	Switch point (temp., pressure) (elec.)	On 106; Off 102
Fan shroud (material)		Plastic

* Mineral/Glass Filled Nylon

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (#) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.0L (121) L4 LL8

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
Manufacturer		Rochester Products
<input checked="" type="checkbox"/>	Carburetor no. of barrels	None
Idle A/F mix		
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)
Idle spd./rpm (Spec. neutral or drive and propane if used)	Manual	Not Applicable
		Not Applicable
	Automatic	Not Applicable
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water
Air cleaner type		Replaceable Paper Element Single Snorkel
Fuel filter (type/location)		Replaceable/Inline Rear of Tank
<input checked="" type="checkbox"/>	Fuel pump	Type (elec. or mech.)
		Location (eng., tank)
		Pressure range (kPa (psi))
<input checked="" type="checkbox"/>	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	
	8.16 (22.5) @ 83 (12)	

Fuel Tank

Capacity (refill L (gallons))		51.5 (13.6)
Location (describe)		Rear Center Underside, R.H. Rear Quarter Panel
Attachment		Underbody Strap
Material & Mass (kg (weight lbs))		Steel
Filler pipe	Location & material	Right Rear Quarter Panel - Steel
	Connection to tank	Hoses
Fuel line (material)		Steel GM124M
Fuel hose (material)		Rubber GM6163M
Return line (material)		Steel GM124M
Vapor line (material)		Steel GM124M
Extended range tank	Opt., n.a.	NA
	Capacity (L (gallons))	
	Location & material	
	Attachment	
Auxiliary tank	Opt., n.a.	NA
	Capacity (L (gallons))	
	Location & material	
	Attachment	
	Selector switch or valve	
Separate fill		

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.8 (173) V6 LB6

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
Manufacturer		Rochester Products
Carburetor no. of barrels		Not Applicable
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)]	
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	
	Automatic	
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water
Air cleaner type		Replaceable Paper Element, Single Snorkel
Fuel filter (type/location)		
Fuel pump	Type (elec. or mech.)	SEE PAGE 6
	Location (eng., tank)	
	Pressure range [kPa (psi)]	
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	58.28 (15.4) @ 350 (51)

Fuel Tank SEE PAGE 6

Capacity (refill L (gallons))		
Location (describe)		
Attachment		
Material & Mass [kg (weight lbs)]		
Filler pipe	Location & material	
	Connection to tank	
Fuel line (material)		
Fuel hose (material)		
Return line (material)		
Vapor line (material)		
Extended range tank	Opt., n.a.	
	Capacity [L (gallons)]	
	Location & material	
	Attachment	
Auxiliary tank	Opt., n.a.	
	Capacity [L (gallons)]	
	Location & material	
	Attachment	
	Selector switch or valve	
Separate fill		

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.8 (173) V6 LB6

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		CCC Control
	Air Injection	Pump or pulse	None
		Driven by	None
		Air distribution (head, manifold, etc.)	None
		Point of entry	None
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Not Available
		Exhaust source	Not Available
		Point of exhaust injection (spacer, carburetor, manifold, other)	Not Available
	Catalytic Converter	Type	Single Bed, Oxidizing & REDucing
		Number of	One
		Location(s)	Mounted to Underbody
		Volume (L (in ³))	2.78 (170)
		Substrate type	Monolith
		Noble metal type	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges (to intake manifold, other)		Intake Manifold
	Air inlet (breather cap, other)		Air Cleaner
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	--
	Vapor storage provision		Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Tri-Flow Single with Cross-Over
Muffler no. & type (reverse flow, straight thru, separate resonator) Matenal & Mass (kg (weight lbs))		One Reverse Flow
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	--
	Main o.d., wall thickness	50.8 O.D. x 0.81 (2.0 x 0.03)
	Matenal & Mass (kg (weight lbs))	Laminated Tubing - Stainless Steel Outer, Steel Inner
Inter-mediate pipe	o.d. & wall thickness	50.8 O.D. x 1.37 (2 O.D. x .054)
	Matenal & Mass (kg (weight lbs))	Aluminized Steel Tubing GM 6178-M
Tail pipe	o.d. & wall thickness	50.8 O.D. x 1.37 (2 O.D. x .054)
	Matenal & Mass (kg (weight lbs))	Aluminum Coated Steel Tubing

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.0L
 (121) L4 LL8

Transmissions/Transaxle (Std., Opt., N.A.)

Manual 3-speed (manufacturer/country)	Not Available
Manual 4-speed (manufacturer/country)	" "
Manual 5-speed (manufacturer/country)	Standard Daikin (MK7)
Automatic (manufacturer/country)	Optional Hydramatic (MD9)
Automatic overdrive (manufacturer/country)	Not Available

Manual Transmission/Transaxle

Number of forward speeds	5	
Gear ratios	1st	3.91
	2nd	2.15
	3rd	1.45
	4th	1.03
	5th	0.74
	Reverse	3.58
Synchronous meshing (specify gears)	All Forward Gears	
Shift lever location	Floor	
Trans. case mat'l. & mass kg (lbs)*	Aluminum	
Lubricant	Capacity [L (pt.)]	1.9 (4.0)
	Type recommended	STF - Synchronesh Transmission Fluid #9985648

Clutch (Manual Transmission)

Clutch manufacturer	Daikin	
Clutch type (dry, wet: single, multiple disc)	Dry Disc	
Linkage (hydraulic, cable, rod, lever, other)	Hydraulic	
Max. pedal effort (nom. spring load, new) N (lbs)	Depressed	133.4 (30.0)
	Released	115.6 (26.0)
Assist (spring, power/percent, nominal)	Not Available	
Type pressure plate springs	Diaphragm	
Total spring load (nominal, new) N (lbs)	5391 (1212)	
Clutch facing	Facing mfg. & material coding	Daikin
	Facing material & construction	Non-asbestos
	Rivets per facing	16
	Outside x inside dia. (nominal)	215.0 x 154.0 (8.46 x 6.06)
	Total eff. area [cm ² (in. ²)]	176.6 (23.37)
	Thickness (pressure plate side/fly wheel side)	3.5 (.14) Pressure Plate Side, 3.2 (.13) Flywheel Side
	Rivet depth (pressure plate side/fly wheel side)	1.3 mm (0.05 In)/1.2 mm (0.05 In)
	Engagement cushion method	Driven Plate, Wave Spoke Springs
Release bearing type & method lub.	Self Centering, Angular Contact Ball Bearing Prepacked and Sealed	
Torsional damping method, springs, hysteresis	Coil Springs with Non-metal Friction Control	

* Includes shift linkage, lubricant, and clutch housing. If other specify.

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (*) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.8L (173) V6 LB6

Transmissions/Transaxle (Std., Opt., N.A.)

Manual 3-speed (manufacturer/country)	Not Available
Manual 4-speed (manufacturer/country)	" "
Manual 5-speed (manufacturer/country)	Standard Muncie MG2
Automatic (manufacturer/country)	Optional Hydramatic MD9
Automatic overdrive (manufacturer/country)	Not Available

Manual Transmission/Transaxle

Number of forward speeds	5	
Gear ratios	1st	3.50
	2nd	2.05
	3rd	1.38
	4th	0.94
	5th	0.72
	Reverse	3.41
Synchronous meshing (specify gears)	All Forward Gears	
Shift lever location	Floor	
Trans. case mat'l. & mass kg (lbs)*	Aluminum	
Lubricant	Capacity (L (pt.))	2.55L (5.36 Pts.)
	Type recommended	SAE 5W-30 Engine Oil SF, SF/CC or SF/CD

Clutch (Manual Transmission)

Clutch manufacturer	LUK	
Clutch type (dry, wet; single, multiple disc)	Dry Single Disc	
Linkage (hydraulic, cable, rod, lever, other)	Hydraulic	
Max. pedal effort (nom. spring load, new) N (lbs)	Depressed	133.4 (30.0)
	Released	133.4 (33.0)
Assist (spring, power/percent, nominal)	Not Available	
Type pressure plate springs	Diaphragm	
Total spring load (nominal, new) N (lbs)	6210 (1396)	
Clutch facing	Facing mfr. & material coding	LUK
	Facing material & construction	Non-asbestos
	Rivets per facing	32
	Outside x inside dia. (nominal)	232 x 156 (9.12 x 6.12)
	Total eff. area (cm ² (in. ²))	232 (35.90)
	Thickness (pressure plate side/fly wheel side)	7.50 - 8.00 (.295 - .315)
	Rivet depth (pressure plate side/fly wheel side)	1.4 mm (0.06 in)/1.4 mm (0.06 in)
	Engagement cushion method	Cushion Springs
Release bearing type & method lub.	Self centering, angular contact ball bearing prepacked & sealed.	
Torsional damping method, springs, hysteresis	Coil springs with non-metal friction control.	

* Includes shift linkage, lubricant, and clutch housing. If other specify.

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.0L (121) L4 LL8

Automatic Transmission/Transaxle

Trade name		Turbo Hydramatic (THM 125C) (MD9)
Type and special features (describe)		3-Speed with Torque Converter
Selector	Location	Floor
	Ltr./No. designation	PRND21
Gear ratios	1st	2.84
	2nd	1.60
	3rd	1.00 Converter Clutch Engagement
	4th	None
	Reverse	2.07
Max. upshift speed - drive range (km/h (mph))		123 (77)
Max. kickdown speed - drive range (km/h (mph))		118 (74)
Min. overdrive speed (km/h (mph))		N/A (No 4th Gear)
Torque converter	Number of elements	Three
	Max. ratio at stall	2.7
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.65)
	Capacity factor "K" ^{***}	237
Lubricant	Capacity (refill L (pt.))	7.2 (15) With Cooler and Cooler Lines Full
	Type Recommended	ATF Dexron II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Std. External, Oil to Engine Coolant
Transmission case material & mass kg (lbs)**		Aluminum 73.1 (161.16)

Axle or Front Wheel Drive Unit

Type (front, rear)		Front
Description		Integral with Transmission
Limited slip differential (type)		None Available
Drive pinion offset		N/A
Drive pinion (type)		N/A
No. of differential pinions		Two
Pinion/differential adjustment (shim, other)		N/A
Pinion/differential bearing adjustment (shim, other)		N/A
Driving wheel bearing (type)		Integral Double Row Ball Bearing
Lubricant	Capacity (L (pt.))	N/A
	Type recommended	ATF Dexron II

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

Axle ratio (or overall top gear ratio)		3.18
No. of teeth	Pinion	N/A
	Ring gear or gear	N/A
Ring gear o.d.		None
Transaxle	Transfer gear ratio	1.12
	Final drive ratio	2.84

* Input speed + $\sqrt{\text{torque}}$

** Includes shift linkage, lubricant, & clutch housing. If other specify.

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.0L
 (121) L4 LL8

Axis Shafts - Front Wheel Drive

Manufacturer and number used		Saginaw, Two		
Type (straight, solid bar, tubular, etc.)	Left	Straight Solid Bar		
	Right	Straight Solid Bar		
Outer diam. x length* x wall thickness	Manual transaxle	Left	23.9 x 320.0 (.94 x 12.59)	
		Right	23.9 x 663.0 (.94 x 26.22)	
	Automatic transaxle	Left	23.9 x 311.0 (.94 x 12.24)	
		Right	23.9 x 364.3 (.94 x 14.34)	
	Optional transaxle	Left	-	
		Right	-	
Slip yoke	Type	None		
	Number of teeth	None		
	Spline o.d.	None		
Universal joints	Make and mtg. no.	Inner	Saginaw	
		Outer	Saginaw	
	Number used	Two on Each Drive Shaft		
	Type, size, plunge	Inner	Tripot, 61.0, Plunge	
		Outer	RZEPPA - Fixed	
	Attach (u-bolt, clamp, etc.)	Retaining Ring		
	Bearing	Type (plan, anti-friction)	Ball and Roller (Inner) Ball (Outer)	
Lubrication (fitting, prepack)		Prepack		
Drive taken through (torque tube, arms or springs)		Wishbone Lower Control Arm, Upper McPherson Strut		
Torque taken through (torque tube, arms or springs)		Engine Mounting System		

All Wheel/4 Wheel Drive

Description and type (part-time, full-time, 2/4 shift while moving, mechanical, elect., chain/gear, etc.)		X
Transfer case	Manufacturer	
	Type	
	Model	
Low-range gear ratio		
System disconnect (describe)		
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)	
	Torque split (% front/rear)	

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

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Engine Description/Carb. Engine Code 2.8 (173) V6 LB6

Axle Shafts – Front Wheel Drive

Manufacturer and number used		Saginaw, Two		
Type (straight, solid bar, tubular, etc.)	Left	Straight Solid Bar		
	Right	Straight Solid Bar		
Outer diam. x length* x wall thickness	Manual transaxle	Left	27.2 x 308.0 (1.07 x 12.13)	
		Right	27.2 x 315.5 (1.07 x 12.42)	
	Automatic transaxle	Left	23.9 x 311.0 (.94 x 12.24)	
		Right	23.9 x 364.3 (.94 x 14.34)	
	Optional transaxle	Left	-	
		Right	-	
Slip yoke	Type	None		
	Number of teeth	None		
	Spline o.d.	None		
Universal joints	Make and mfg. no.	Inner	Saginaw	
		Outer	Saginaw	
	Number used	Two on Each Drive Shaft		
	Type, size, plunge	Inner	Tripot 66.0, 61.0, Plunge	
		Outer	RZEPPA - Fixed	
	Attach (u-bolt, clamp, etc.)	Retaining Ring		
	Bearing	Type (plain, anti-friction)	Ball and Roller (Inner) Ball (Outer)	
Lubrication (fitting, prepack)		Prepacked		
Drive taken through (torque tube, arms or springs)		Wishbone Lower Control Arm, Upper McPherson Strut		
Torque taken through (torque tube, arms or springs)		Engine Mounting System		

All Wheel / 4 Wheel Drive

Description and type (part-time, full-time, 2/4 shift while moving, mechanical, elect., chain/gear, etc.)				
Transfer case	Manufacturer			
	Type			
	Model			
Low-range gear ratio				
System disconnect (describe)				
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)			
	Torque split (% front/rear)			

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

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

METRIC (U.S. Customary)

Body Type And/Or
 Engine Displacement

ALL

Suspension - General Including Electronic Controls

Car leveling	Standard/optional/not avail.	NA	
	Manual/automatic control	NA	
	Type (air/hydraulic)	NA	
	Primary/assist spring		
	Rear only/4 wheel leveling		
	Single/dual rate spring		
	Single/dual ride heights		
Provision for jacking	Body Jack & Pads on Rocker		
Shock absorber damping controls	Standard/option/not avail.		
	Manual/automatic control		
	Number of damping rates		
	Type of actuation (manual/electric motor/air, etc.)		
	s e n s o r s	Lateral acceleration	
		Deceleration	
		Acceleration	
Road surface			
Shock absorber (front & rear)	Type	Front - MacPherson Strut; Rear - Telescopic (Double-Acting)	
	Make	Delco Products	
	Piston diameter	Front: 32 (1.26) Rear: 25 (.98)	
	Rod diameter	Front: 22 (.87) Rear: 13 (.51)	

Suspension - Front

Type and description		MacPherson Strut with Coil Sprint
Travel*	Full jounce	95 (3.74) (From Design)
	Full rebound	84 (3.31) (From Design)
Spring	Type (coil, leaf, other) & material	Coil - Steel
	Insulators (type & material)	Top & Bottom - Rubber
	Size (coil design height & i.d., bar length x dia.)	Spring Computer Selected - Varies with Option Content
	Spring rate (N/mm (lb./in.))	20 N/mm (Base Car)
Stabilizer	Rate at wheel (N/mm (lb./in.))	17.5 N/mm (Base Car)
	Type (link, linkless, frameless)	Link
	Material & bar diameter	Steel: 22 (.87) (Base Car)

Suspension - Rear

Type and description		Trailing Crank Arm with Twist Beam
Travel*	Full jounce	93 (3.7) (Base Car From Design)
	Full rebound	99 (3.9) (Base Car From Design)
Spring	Type (coil, leaf, other) & material	Coil - Steel
	Size (length x width, coil design height & i.d., bar length & dia.)	Spring Computer Selected - Varies with Option Content
	Spring rate (N/mm (lb./in.))	23 N/mm @ Curb - Variable (Base Car)
	Rate at wheel (N/mm (lb./in.))	11.1 N/mm @ Curb - Variable (Base Car)
	Insulators (type & material)	Top & Bottom - Rubber
if leaf	No. of leaves	NA
	Shackle (comp. or tens.)	NA
Stabilizer	Type (link, linkless, frameless)	NA (Base Car)
	Material & bar diameter	NA (Base Car)
Track bar (type)		NA

* Define load condition:

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Body Type And/Or
 Engine Displacement

ALL

Brakes - Service

Description		Power Assisted Hydraulic Brakes			
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)	Std. - Disc			
	Rear (disc or drum)	Std. - Drum			
Valving type (proportion, delay, metering, other)		Proportioning, Diagonal Split Circuit			
Power brake (std., opt., n.a.)		Std.			
Booster type (remote, integral, vac., hyd., etc.)		Tandem Vacuum			
Vacuum	Source (inline, pump, etc.)	Inline			
	Reservoir (volume in. ³) and source	None			
	Pump-type (elec. gear driven, belt driven)	NA			
Traction control	Operational speed range	NA			
	Type engine intervention (electronic, mech.)				
Anti-lock device	Front/rear (std., opt., n.a.)				
	Manufacturer				
	Type (electronic, mech.)	NA			
	Number sensors or circuits				
	Number anti-lock hydraulic circuits				
	Integral or add-on system				
	Yaw control (yes, no)				
Hydraulic power source (elect., vac. mtr., pwr. strg.)					
Effective area (cm ² (in. ²))*		309 (47.9)			
Gross lining area (cm ² (in. ²))**(F/R)		381 (59.1)			
Swept area (cm ² (in. ²))*** (F/R)		1624 (251.8)			
Rotor	Outerworking diameter	F/R	Front - 247 (9.72)		
	Inner working diameter	F/R			
	Thickness	F/R	Front - 22.4 (.88)		
	Material & type (vented/solid)	F/R	Front - Vented Cast Iron		
Drum	Diameter & width	F/R	Front - 200 x 45 (7.87 x 1.77)		
	Type and material	F/R	Cast Iron		
Wheel cylinder bore		Front - 57 (2.24) Rear - 16 (.63)			
Master cylinder	Bore/stroke	F/R	Bore - 22.2 (.874) Stroke 35.7 (1.41)		
Pedal arc ratio		3.7:1			
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]		10,900			
Lining clearance		F/R	Both - Self Adjusting		
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		Inboard Integrally Molded - Inboard and Outboard	
		Rivet size		NA	
		Manufacturer		Delco Moraine	
		Lining code*****		128 FE	
		Material		Semi-Metallic	
		****	Primary or out-board	116.7 x 47 x 10.92	
		Size	Secondary or in-board	125 x 47 x 10.2	
	Shoe thickness (no lining)		4.72 IB (.186), 3.14 OB (1.23)		
	Rear wheel	Bonded or riveted (rivets/seg.)		Riveted	
		Manufacturer		Inland Division	
		Lining code*****		235 FE	
		Material		Organic	
		****	Primary or out-board	167.7 x 43.9 x 6 mm	
		Size	Secondary or in-board	194 x 43.9 x 7 mm	
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

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Body Type And/Or
 Engine Displacement

ALL

Steering

Manual (std., opt., n.a.)		Std.		
Power (std., opt., n.a.)		Opt.		
Adjustable steering wheel/column (tilt, telescope, other)	Type	Tilt		
	Manufacturer	Saginaw Division		
	(Std., opt., n.a.)	Opt.		
Wheel diameter** (W9) SAE J1100	Manual	375 mm (14.8)		
	Power	375 mm (14.8)		
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	11.3 (37.2)	
		Curb to curb (l. & r.)	10.5 (34.3)	
	Inside rear	Wall to wall (l. & r.)	5.8 (19.2)	
		Curb to curb (l. & r.)	5.9 (19.4)	
Scrub Radius*				
Manual	Gear	Type	Rack & Pinion	
		Manufacturer	Saginaw Division	
		Ratios	Gear - Overall 22.0:1	
	No. wheel turns (stop to stop)		3.96	
Power	Type (coaxial, elec., hyd., etc.)		Rack & Pinion w/Integral Unit	
	Manufacturer		Saginaw Division	
	Gear	Type	Rack & Pinion	
		Ratios	Gear	- -
			Overall	16.0:1
	Pump (drive)		Belt Off Crankshaft Pulley	
No. wheel turns (stop to stop)		2.88		
Linkage	Type		Center Take-off Tie Rods, Rack & Pinion	
	Location (front or rear of wheels, other)		Rear	
	Tie rods (one or two)		Two	
Steering axis	Inclination at camber (deg.)		13.5°	
	Bearings (type)	Upper	Ball Bearings	
		Lower	Ball Joint	
		Thrust	Incorporated in Upper Bearing	
Steering spindle & joint type		McPherson Strut		
Wheel spindle/hub	Diameter	Inner bearing	N/A	
		Outer bearing	N/A	
	Thread (size)		M20 x 1.5	
	Bearing (type)		Integral Double Row Ball, Permanently Lubed	

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

**See Page 22

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

METRIC (U.S. Customary)

Body Type And/Or
 Engine Displacement

ALL

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	-0.8° to 4.2° Cross Car Must be Within 0.75°
		Camber (deg.)	-0.2° to 1.8° Cross Car Must be Within 1.0°
		Toe-in (outside track-mm (in.))	-.3° to +.3° Sum Toe
	Service reset*	Caster	-0.8° to 4.2° Cross Car Must be Within 0.75°
		Camber	-0.2° to 1.8° Cross Car Must be Within 1.0°
		Toe-in	-.2° to +.2° (Degrees Per Wheel)
Periodic M.V. in- spection	Caster	Not Applicable	
	Camber	Not Applicable	
	Toe-in	Not Applicable	
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	Not Applicable
		Toe-in (outside track-mm (in.))	Not Applicable
	Service reset*	Camber	Not Applicable
		Toe-in	Not Applicable
	Periodic M.V. in- spection	Camber	Not Applicable
		Toe-in	Not Applicable

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

Electrical - Instruments and Equipment

Speed- ometer	Type (analog, digital, std., opt.)	Dial with Pointer, Digital Speedo Optional
	Trip odometer (std., opt., n.a.)	Optional
EGR maintenance indicator		Not Available
Charge indicator	Type	Telltale Standard, Gage Optional
	Warning device (light, audible)	Light
Temperature indicator	Type	Telltale Standard, Gage Optional
	Warning device (light, audible)	Light
Oil pressure indicator	Type	Telltale Standard, Gage Optional
	Warning device (light, audible)	Light
Fuel indicator	Type	Electric Gage
	Warning device (light, audible)	Not Available
Wind- shield wiper	Type (standard)	Electric 2-Speed
	Type (optional)	Pulse Wiper
	Blade length	430 (16)
	Swept area (cm ² (in. ²))	5074.2 (787) Coupe, 5085 (788) Sedan & Wagon
Wind- shield washer	Type (standard)	Electric Pump Mounted on Reservoir Bottle
	Type (optional)	None
	Fluid level indicator (light, audible)	None
Rear window wiper, wiper/washer (std., opt., n.a.)		Not Available
Horn	Type	Electric Vibrating
	Number used	One
Other		Indicator Lamps for Parking Brake and Brake Failure, Fasten Belt, Upshift, Check Engine, Low Coolant, High Beam, Left and Right Turn and Gate Ajar.

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (#) _____

METRIC (U.S. Customary)

Engine Description/Carb. Engine Code	2.0L (121) L4 LL8 MT	2.0L (121) L4 LL8 AT
---	-------------------------	-------------------------

Electrical - Supply System

Battery	Manufacturer	Delco Remy	
	Model, std., (opt.)	1981730 (1981601)	1981601
	Voltage	12 Volt	
	Amps at 0°F cold crank	525 CCA (630 CCA)	630 CCA
	Minutes-reserve capacity	90	
	Amp/hrs. - 20 hr. rate	54	
	Location	Underhood Front	
Alternator	Manufacturer	Delco Remy	
	Rating (idle/max. rpm)	28/74 1105697	
	Ratio (alt. crank/rev.)	2.44:1	
	Output at idle (rpm, park)	48 Amps at 27°C (81°F) 875 RPM	
	Optional (type & rating)	30/85 1105701 Canada Only	
Regulator	Type	Internal to Alternator	

Electrical - Starting System

Start, motor	Manufacturer	
	Current drain at -20°F	363 Amps 10455020
	Power rating (kw (hp))	
Motor drive	Engagement type	Solenoid with Positive Shift
	Pinion engages from (front, rear)	Front

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	--
	Other (specify)	Computer Controlled - Coil Ignition (C ³ I)
Coil	Manufacturer	Delco Remy
	Model	1103761
	Current	Engine stopped - A Engine idling - A
Spark plug	Manufacturer	AC Spark Plug
	Model	FR3LM
	Thread (mm)	M14 x 1.25
	Tightening torque (N·m (lb. ft))	9-20 (7-15)
	Gap	0.89 (.035)
	Number per cylinder	One
Distributor	Manufacturer	Not Applicable
	Model	" "

Electrical - Suppression

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

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 issued _____ Revised (●) _____

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

2.8L
 (173) V6 LB6

Electrical – Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	1981730 (1981601)
	Voltage	12V
	Amps at 0°F cold crank	525 CCA (630 CCA)
	Minutes-reserve capacity	90
	Amp-hrs. - 20 hr. rate	54
	Location	Underhood Front
Alternator	Manufacturer	Delco Remy
	Rating (idle/max. rpm) *	28/74 1101319, (36/100 1105694)
	Ratio (alt. crank/rev.)	2.65:1
	Output at idle (rpm, park)	51 Amps at 27°C, 66 Amps at 27°C 850 RPM
Optional (type & rating)	36/100 1105694 Canada Heater Cars	
Regulator	Type	Internal to Alternator

Electrical – Starting System

Start. motor	Manufacturer	
	Current drain at -20°F	10455019 315 CCA
	Power rating (kw (hp))	
Motor drive	Engagement type	Solenoid with Positive Shift
	Pinion engages from (front, rear)	Front

Electrical – Ignition System

Type	Electronic (std., opt., n.a.)	Not Applicable	
	Other (specify)	Computer Controlled Coil Ignition (C ³ I)	
Coil	Manufacturer	Delco Remy	
	Model	1115463	
	Current	Engine stopped - A	Not Available
		Engine idling - A	Not Available
Spark plug	Manufacturer	AC	
	Model	R43LTSE	
	Thread (mm)	M14 x 1.25	
	Tightening torque (N-m (lb. ft))	9-20 (7-15)	
	Gap	1.143 (.045)	
	Number per cylinder	One	
Distributor	Manufacturer	Not Applicable	
	Model	Not Applicable	

Electrical – Suppression

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

* First Model # Listed is for Heater Only, 2nd if for A/C.

MVMA Specifications Form

Vehicle Models Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Body Type

Body

Structure	Unitized body construction including front end structure with bolted-on fenders and hood.
<input checked="" type="checkbox"/> 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).
Anti-corrosion treatment	Special anticorrosion materials are used on interior and exterior metal panel surfaces. Materials include one and two-sided galvanized and zincrometal steel. Special metal conditioners, primers, protective waxes and sealers are used on interior surfaces. Chip resistant primer or plastisol material is applied to exterior lower body.

Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	Acrylic Lacquer or Base Coat/Clear Coat Enamel	
Hood	Material & mass	
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Prop Rod - Single Pivot Hinge
	Release control (internal, external)	Internal
Trunk lid	Material & mass	Torque Rods on Coupe and Sedan
	Type (counterbalance, other)	Electrical (Opt.)
	Internal release control (elec., mech., n.a.)	
Hatch-back lid	Material & mass	
	Type (counterbalance, other)	
	Internal release control (elec., mech., n.a.)	
Tailgate	Material & mass	
	Type (drop, lift, door)	Gas Rods
	Internal release control (elec., mech., n.a.)	Electrical Solenoid (Opt.)
Vent window control (crank, friction, pivot, power)	Front	N/A
	Rear	N/A
Window regulator type (cable, tape, flex, drive, etc.)	Front	N/A
	Rear	N/A
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Foam
	Rear	Foam
	3rd seat	N/A
Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Foam
	Rear	Foam
	3rd seat	N/A
		Left Topside of I/P

MVMA Specifications Form
METRIC (U.S. Customary)

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

Body Type

ALL

Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.)	First seat	Lap/Shoulder Combination	Not Available	Lap/Shoulder Combination
	Standard / optional	Second seat	Lap/Shoulder Combination	Lap Belt	Lap/Shoulder Combination
		Third seat	 		
Passive	Type & description (air bag, motorized - 2-point belt, fixed belt, knee bolster, manual - lap belt)	First seat	 		
	Standard / optional	Second seat			
		Third seat			
Glass	SAE Ref. No.	37		69	
Windshield glass exposed surface area (cm ² (in. ²))	S1	7487 (1161)		7487 (1161)	
Side glass exposed surface area (cm ² (in. ²)) - total 2-sides	S2	9050 (1403)		10678 (1655)	
Backlight glass exposed surface area (cm ² (in. ²))	S3	5154 (799)		5691 (882)	
Total glass exposed surface area (cm ² (in. ²))	S4	21691 (3363)		23856 (3698)	
Windshield glass (type)		Curved - Laminated Float			
Side glass (type)		Curved - Tempered Float			
Backlight glass (type)		Curved - Tempered Float			

Lamps and Headlamp Locations

Headlamps	Description - sealed beam, halogen, replaceable bulb, etc.	Replaceable Bulb - 2 Lamps - 2 Bulbs Each
	Shape	Rectangular
	Lo-beam type (2A1, 2B1, 2C1, etc.)	9006
	Quantity	2
	Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	9005
	Quantity	2

Frame

Type and description (separate frame, unitized frame, partially-unitized frame)	Unitized Frame
---	----------------

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

Body Type

Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.)	First seat			
	Standard / optional	Second seat			
		Third seat			
Passive	Type & description (air bag, motorized - 2-point belt, fixed belt, knee bolster, manual - lap belt)	First seat			
	Standard / optional	Second seat			
		Third seat			

Glass	SAE Ref. No.	* 67	** 35
Windshield glass exposed surface area (cm ² {in. ² })	S1	7487 (1161)	7487 (1161)
Side glass exposed surface area (cm ² {in. ² }) - total 2-sides	S2	7794 (1208)	16274 (2522)
Backlight glass exposed surface area (cm ² {in. ² })	S3	4671 (724)	5399 (837)
Total glass exposed surface area (cm ² {in. ² })	S4	19952 (3093)	29160 (4520)
Windshield glass (type)		Curved - Laminated Float	
Side glass (type)		Curved - Tempered Float	
Backlight glass (type)		*Super Ultralight Plastic	**Curved - Laminated Float

Lamps and Headlamp Locations

Headlamps	Description - sealed beam, halogen, replaceable bulb, etc.	
	Shape	
	Lo-beam type (2A1, 2B1, 2C1, etc.)	
	Quantity	
	Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	
	Quantity	

Frame

Type and description (separate frame, unitized frame, partially-unitized frame)

MVMA Specifications Form
METRIC (U.S. Customary)

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

Body Type

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

<input checked="" type="checkbox"/>	Air conditioning (manual, auto. temp control)	(C60) Opt. Manual
	Clock (digital, analog)	Part of Radio Package
	Compass / thermometer	
	Console (floor, overhead)	(D06) Opt. Floor
	Defroster, elec. backlight	(C49) Opt.
Electronic	Diagnostic monitor (integrated, individual)	
	Instrument cluster (list instruments)	(U83) Std. JF Opt. JC Oil, Temp, Volts, Trip Odom. & Tach. (UH6) Std. JC Oil, Temp (U52) Opt.
	Keyless entry	
	Tripminder (avg. spd., fuel)	
	Voice alert (list items)	
	Other	
	Fuel door lock (remote, key, electric)	
Lamps	Auto head on / off delay, dimming	
	Cornering	
	Courtesy (map, reading)	(C88) Opt. (C95) Opt. (U29) Std. 67 Opt. JC & JF37
	Door lock, ignition	
	Engine compartment	(U26) Std. JF Opt. JC
	Fog	
	Glove compartment	
	Trunk	(U25) Opt.
	Illuminated entry system (list lamps, activation)	
	Other	
Mirrors	Day / night (auto. man.)	
	L.H. (remote, power, heated)	(D35) Std. JF Rem. Opt. JC (D51) Std. on JC Dir.
	R. H. (convex, remote, power, heated)	(D35) Std. JF Direct Opt. JC
	Visor vanity (RH / LH, illuminated)	
<input checked="" type="checkbox"/>	Navigation system (describe)	
	Parking brake-auto release (warning light)	

MVMA Specifications Form
METRIC (U.S. Customary)

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

Body Type

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

Power equipment	Deck lid (release, pull down)		(A90) Opt. Electrical Rem. Release	
	Door locks (manual, automatic, describe system)		(AU3) Std. on 67 Opt. on JC & JF37 (AU6) Opt. on 35	
	Seats	2 - 4 - 6 way, etc.		
		Reclining (R.H., L.H.)	(AR9) Std.	
		Memory (R.H., L.H., preset, recline)		
		Lumbar, hip, thigh, support		
		Heated (R.H., L.H., other)		
	Side windows		(A31) Std. on 67 Opt. on JC & JF37	
	Vent windows			
	Rear windows			
Antenna (location, whip, w/shield, power)		(US6) Std. Fixed RH Front Fender		
Radio systems	Standard	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	(UM7) AM/FM Stereo, Seek/Scan, Clock & ETR	
	Optional		(UM6) Opt. AM/FM Stereo, Seek/Scan, Clock, ETR & Cassette (UX1) Opt. AM/FM Stereo, Seek/Scan, Clock, ETR, Cassette & Equalizer	
	Speaker (number, location)		(U66) Std. 4 Dash & Rear Quarter	
	Roof open air fixed (flip-up, sliding, 'T')		(AD3) Opt. Hinged	
Speed control device		(K34) Opt.		
Speed warning device (light, buzzer, etc.)				
Tachometer (rpm)		(UB3) Std. JF Opt. JC		
Telephone system (describe)				
Theft deterrent system				

MVMA Specifications Form

Vehicle Model Cavalier

Model Year 1989 issued _____ Revised (e) _____

METRIC (U.S. Customary)

Vehicle 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 vehicle 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.	COUPE & ALL	CONVERTIBLE	SEDANS	WAGON
Width					
Tread (front)	W101	1412 (55.6)			
Tread (rear)	W102	1402 (55.2)			
Vehicle width	W103	1677 (66.0)	1685 (66.3)	1677 (66.0)	
Body width at Sg RP (front)	W117	1652 (65.0)			
Vehicle width (front doors open)	W120	3684 (145.0)		3218 (126.7)	
Vehicle width (rear doors open)	W121	Not Applicable		2832 (111.5)	
Front fender overall width	W106	1664 (65.5)			
Rear fender overall width	W107	1677 (66.0)		1685 (66.3)	
Tumble-home (deg.)	W122	21.5°			22°
Vehicle width including mirrors		1862 (73.3)			

Length

Wheelbase	L101	2571 (101.2)			
Vehicle length	L103	4536 (178.6)	4538 (178.6)	4536 (178.6)	4542 (178.6)
Overhang (front)	L104	985 (38.8)	987 (38.9)	985 (38.8)	
Overhang (rear)	L105	980 (38.6)			990 (39.0)
Upper structure length	L123	2335 (91.9)	2340 (92.1)	2363 (93.0)	2924 (115.1)
Rear wheel C/L "X" coordinate	L127	2354 (92.7)			
Cowl point "X" coordinate	L125	247 (9.7)		245 (9.6)	246 (9.7)
Front end length at centerline	L126	1104 (43.5)			
Rear end length at centerline	L129	570 (22.4)	590 (23.2)	595 (23.4)	34 (1.3)

Height **

Passenger distribution (front/rear)	PD1.2.3	2/0	**		
Trunk/cargo load		0	**		
Vehicle height	H101	1321 (52.0)	1326 (52.2)	1361 (53.6)	1380 (54.3)
Cowl point to ground	H114		944 (37.2)		
Deck point to ground	H138	958 (37.7)		944 (37.2)	
Rocker panel-front to ground	H112	223 (8.8)	187 (7.4)	191 (7.5)	203 (8.0)
Bottom of door closed-front to ground	H133	284 (11.2)	288 (11.3)	283 (11.1)	298 (11.7)
Rocker panel-rear to ground	H111	206 (8.1)	211 (8.3)	205 (8.1)	200 (7.9)
Bottom of door closed-rear to ground	H135	Not Applicable		282 (11.1)	300 (11.8)
Windshield slope angle	H122	58.5°	58.75°	55.0°	
Backlight slope angle	H121	51.0°	54.5°	49.0°	35.5°

Ground Clearance **

Front bumper to ground	H102	231 (9.1)	226 (8.9)	231 (9.1)	234 (9.2)
Rear bumper to ground	H104	268 (10.6)	273 (10.7)	268 (10.6)	320 (12.6)
Bumper to ground (front at curb mass (wt.))	H103	246 (9.7)	238 (9.4)	246 (9.7)	249 (9.8)
Bumper to ground (rear at curb mass (wt.))	H105	298 (11.7)			345 (13.6)
Angle of approach (degrees)	H106	18°			
Angle of departure (degrees)	H107	18°			23°
Ramp breakover angle (degrees)	H147	14°			
Axle differential to ground (front/rear)	H153	163 (6.4)		163 (6.4)	168 (6.6)
Min. running ground clearance	H156	141 (5.6)			146 (5.7)
Location of min. run. grd. clear.		Front Suspension			

** All Vehicle Height And Ground Clearance 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

Vehicle Model Cavalier

Model Year 1989

Issued _____

Revised (●) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Body Type _____

SAE Ref. No.	COUPE
Sg RP front "X" coordinate	L31 1128 (44.4)
Effective head room	H61 961 (37.8)
Max. eff. leg room (accelerator)	L34 1090 (42.9)
SgRP to heel point	H30 230 (9.1)
SgRP to heel point	L53 897 (35.3)
Back angle	L40 25°
Hip angle	L42 99°
Knee angle	L44 133°
Foot angle	L46 87°
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)
Upper body opening to ground	H50 1196 (47.1)
Steering wheel maximum diameter*	W9 368 (14.5)
Steering wheel angle	H18 18.5°
Accel. heel pt. to steer. whl. ctr	L11
Accel. heel pt. to steer. whl. ctr	H17
Steering wheel to C/L of thigh	H13 108 (4.3)
Steering wheel torso clearance	L7 380 (15.0)
Headlining to roof panel (front)	H37 10 (.4)
Undepressed floor covering thickness	H67 16 (.6)

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

Rear Compartment

Sg RP Point couple distance	L50 705 (27.8)
Effective head room	H63 931 (36.7)
Mfn. effective leg room	L51 774 (30.5)
Sg RP (second to heel)	H31 259 (10.2)
Knee clearance	L48 -41 (-1.6)
Compartment room	L3 609 (24.0)
Shoulder room	W4 1335 (52.6)
Hip room	W8 1265 (49.8)
Upper body opening to ground	H51 Not Applicable
Back angle	L41 25°
Hip angle	L43 78°
Knee angle	L45 76.5°
Foot angle	L47 114.5°
Headlining to roof panel (second)	H38 9 (.4)
Depressed floor covering thickness	H73 18 (.7)

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1 374 (13.2)
Liftover height	H196 819 (32.2)

Interior Volumes (EPA Classification)

Vehicle class	Compact
Interior volume index (cu. ft.)	101.2
Trunk / cargo index (cu. ft.)	13.2

All linear dimensions are in millimeters (inches).

** EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications Form

Vehicle Models Cavalier
 Model Year 1989 Issued _____ Revised (•) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Body Type

NOTCHBACK
SEDANS

SAE
Ref.
No.

Front Compartment

Sg RP front, "X" coordinate	L31	1113 (43.8)
Effective head room	H61	980 (38.6)
Max. eff. leg room (accelerator)	L34	1072 (42.2)
SgRP to heel point	H30	257 (10.1)
SgRP to heel point	L53	866 (34.1)
Back angle	L40	25°
Hip angle	L42	98°
Knee angle	L44	127°
Foot angle	L46	87°
Design H-point front travel	L17	192 (7.6)
Normal driving & riding seat track trvl.	L23	171 (6.7)
Shoulder room	W3	1363 (53.7)
Hip room	W5	1240 (48.8)
• • Upper body opening to ground	H50	1236 (48.7)
Steering wheel maximum diameter*	W9	375 (14.8)
Steering wheel angle	H18	20.0°
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)
Steering wheel torso clearance	L7	377 (14.8)
Headlining to roof panel (front)	H37	10 (0.4)
Undepressed floor covering thickness	H67	16 (0.6)

Front Compartment Interior Dimensions Are Measured With The Seating Reference Point (SgRP) 21 mm Forward And _____ mm Upward of Rearmost Position.

Rear Compartment

Sg RP Point couple distance	L50	758 (29.8)
Effective head room	H63	964 (38.0)
Min. effective leg room	L51	871 (34.3)
Sg RP (second to heel)	H31	272 (10.7)
Knee clearance	L48	9 (0.4)
Compartment room	L3	657 (25.9)
Shoulder room	W4	1364 (53.7)
Hip room	W6	1241 (48.9)
• • Upper body opening to ground	H51	1238 (48.7)
Back angle	L41	26°
Hip angle	L43	83°
Knee angle	L45	85°
Foot angle	L47	118°
Headlining to roof panel (second)	H38	8 (0.3)
Depressed floor covering thickness	H73	18 (0.7)

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	386 (13.6)
• • Lifter height	H195	819 (32.2)

Interior Volumes (EPA Classification)

Vehicle class		Compact
Interior volume index (cu. ft.)		101.2
Trunk / cargo index (cu. ft.)		13.6

All linear dimensions are in millimeters (inches).

• • EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications Form

Vehicle Models Cavalier

Model Year 1989

Issued _____

Revised (●) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Body Type

STATION WAGONS

SAE
Ref.
No.

Front Compartment

Sg RP front "X" coordinate	L31	113 (43.8)
Effective head room	H61	973 (38.3)
Max. eff. leg room (accelerator)	L34	1072 (42.2)
SgRP to heel point	H30	256 (10.1)
SgRP to heel point	L53	866 (34.1)
Back angle	L40	25°
Hip angle	L42	98.5°
Knee angle	L44	127.5°
Foot angle	L46	87°
Design H-point front travel	L17	192 (7.6)
Normal driving & riding seat track trvl.	L23	170 (6.7)
Shoulder room	W3	1363 (53.7)
Hip room	W5	1241 (48.9)
• • Upper body opening to ground	H50	1249 (49.2)
Steering wheel maximum diameter*	W9	375 (14.8)
Steering wheel angle	H18	20°
Accel. heel pt. to steer. whl. cntr	L11	
Accel. heel pt. to steer. whl. cntr	H17	
Steering wheel to C/L of thigh	H13	88 (3.5)
Steering wheel torso clearance	L7	377 (14.8)
Headlining to roof panel (front)	H37	13 (0.5)
Undepressed floor covering thickness	H67	16 (.6)

Front Compartment Interior Dimensions Are Measured With The Seating Reference Point (SgRP) 21 mm Forward And _____ mm Upward of Rearmost Position.

Rear Compartment

Sg RP Point couple distance	L50	741 (29.2)
Effective head room	H63	986 (38.8)
Min. effective leg room	L51	857 (33.7)
Sg RP (second to heel)	H31	259 (10.2)
Knee clearance	L48	2 (.1)
Compartment room	L3	660 (26.0)
Shoulder room	W4	1364 (53.7)
Hip room	W6	1244 (49.0)
• • Upper body opening to ground	H51	1254 (49.4)
Back angle	L41	25°
Hip angle	L43	81.0°
Knee angle	L45	86.0°
Foot angle	L47	121.0°
Headlining to roof panel (second)	H38	13 (0.5)
Depressed floor covering thickness	H73	20 (0.8)

Luggage Compartment

Usable luggage capacity (L (cu. ft.))	V1	Not Applicable
• • Liftover height	H195	Not Applicable

Interior Volumes (EPA Classification)

Vehicle class		Small
Interior volume index (cu. ft.)		125.0
Trunk / cargo index (cu. ft.)		34.1

All linear dimensions are in millimeters (inches).

* • EPA Loaded Vehicle Weight, Loading Conditions

METRIC (U.S. Customary)
Vehicle Dimensions See Key Sheets for definitions

Body Type

CONVERTIBLE

SAE
 Ref.
 No.

Front Compartment

Sg RP front, "X" coordinate	L31	1128 (44.4)
Effective head room	H61	992 (39.1)
Max. eff. leg room (accelerator)	L34	1090 (42.9)
SgRP to heel point	H30	230 (9.1)
SgRP to heel point	L53	897 (35.3)
Back angle	L40	25°
Hip angle	L42	99°
Knee angle	L44	133°
Foot angle	L46	87°
Design H-point front travel	L17	192 (7.6)
Normal driving & riding seat track trvl.	L23	Not Applicable
Shoulder room	W3	1364 (53.7)
Hip room	W5	1230 (48.4)
Upper body opening to ground	H50	1221 (48.1)
Steering wheel maximum diameter*	W9	368 (14.5)
Steering wheel angle	H18	18.5°
Accel. heel pt. to steer. whl. cntr	L11	
Accel. heel pt. to steer. whl. cntr	H17	
Steering wheel to C/L of thigh	H13	108 (4.3)
Steering wheel torso clearance	L7	380 (15.0)
Headlining to roof panel (front)	H37	
Undepressed floor covering thickness	H67	17 (.7)

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

Rear Compartment

Sg RP Point couple distance	L50	705 (27.8)
Effective head room	H63	949 (37.4)
Min. effective leg room	L51	791 (31.1)
Sg RP (second to heel)	H31	259 (10.2)
Knee clearance	L48	-39 (-1.5)
Compartment room	L3	593 (23.3)
Shoulder room	W4	964 (38.0)
Hip room	W6	964 (38.0)
Upper body opening to ground	H51	Not Applicable
Back angle	L41	19°
Hip angle	L43	73°
Knee angle	L45	79.5°
Foot angle	L47	115.5°
Headlining to roof panel (second)	H38	Not Applicable
Depressed floor covering thickness	H73	19 (.7)

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	294 (10.4)
Liftover height	H198	825 (32.4)

Interior Volumes (EPA Classification)

Vehicle class		Sub-Compact
Interior volume index (cu. ft.)		87.9
Trunk/cargo index (cu. ft.)		10.3

All linear dimensions are in millimeters (inches).
 ** EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications Form

Vehicle Line Cavalier

Model Year 1989

Issued _____

Revised (●) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Body Type

Station Wagon - Third Seat

	SAE Ref. No.	
Seat facing direction	SD1	
Sg RP couple distance	L85	
Shoulder room	W85	
Hip room	W86	
Effective leg room	L86	
Effective head room	H86	
Sg RP to heel point	H87	
Knee clearance	L87	
Back angle	L88	
Hip angle	L89	
Knee angle	L90	
Foot angle	L91	

Station Wagon - Cargo Space

Cargo length (open front)	L200	Not Applicable
Cargo length (open second)	L201	Not Applicable
Cargo length (closed front)	L202	1709 (67.3)
Cargo length (closed second)	L203	980 (38.6)
Cargo length at belt (front)	L204	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 (47.3)
Min. 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	545 (21.5)
Front seat back to load floor height	H197	
Cargo volume index (m ³ (ft. ³))	V2	1824 (64.4)
Hidden cargo volume index (m ³ (ft. ³))	V4	
Cargo volume, index-rear of 2-seat	V10	966 (34.1)

Hatchback - Cargo Space

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

Aerodynamics*

	COUPE	CONV	SEDAN	STATION WAGON
Wheel lip to ground, front	646 (25.4)			651 (25.6)
Wheel lip to ground, rear	622 (24.5)			642 (25.3)
Frontal area (m ² (ft ²))	1.86 (19.81)		1.92 (20.45)	1.94 (20.88)
Drag coefficient (Cd)				

* EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications Form
METRIC (U.S. Customary)

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (e) _____

Body Type

ALL

Vehicle Fiducial Marks

Fiducial Mark Number*	Define Coordinate Location				
Front	X	Fiducial mark to vertical base grid line - front, measured horizontally from base grid line to the front fiducial mark located on top of the front seat adjuster mounting bolt.			
	Y	Fiducial mark to centerline of car - front, width measurement made from centerline of car to the 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 base grid line to rear fiducial mark located on the rail (compartment pan - longitudinal).			
Fiducial Mark Number	ALL-COUPE	SEDAN	STATION WAGON	CONVERTIBLE	
Front	W21*	504 (19.8)			505 (19.9)
	L54*	2746 (108.1)			
	H81*	246 (9.7)			264 (10.4)
	H161*	287 (11.3)		296 (11.7)	305 (12.0)
	** H163*	266 (10.5)		277 (10.9)	288 (11.3)
Rear	W22*	440 (17.3)			
	L55*	4900 (192.9)	4951 (194.9)	4951 (194.9)	4900 (192.9)
	H82*	362 (14.3)			
	H162*	407 (16.0)		425 (16.7)	407 (16.0)
	** H164*	377 (14.8)		401 (15.8)	383 (15.1)

* 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

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

		Vehicle Mass (weight)								
Code	Model	CURB MASS, kg. (lb.)*			% PASS. MASS DISTRIBUTION				ETWC**	
		Front	Rear	Total	Pass In Front		Pass In Rear			
					Front	Rear	Front	Rear		
1JC35	Station Wagon	689 (1519)	435 (959)	1124 (2478)					1093 (2410)	
1JC37	Coupe	687 (1515)	410 (903)	1097 (2418)					1066 (2350)	
1JC69	Sedan	690 (1521)	409 (902)	1099 (2423)					1068 (2355)	
1JF37	Coupe	750 (1653)	425 (937)	1175 (2590)					1144 (2522)	
1JF67	Convertible	778 (1715)	460 (1014)	1238 (2729)					1205 (2657)	

SHIPPING MASS (weight) = Curb Weight Less Kg. (lbs.) _____

* Reference - SAE J1100 Motor vehicle dimensions, curb weight definition.
 ** ETWC - Equivalent Test Weight Class - U.S. Environmental Protection Agency emission certifications are based on the ETWC's shown.
 NA - Not Applicable - applies to model/series combinations not requiring testing.

MVMA Specifications Form

Vehicle Line Cavalier
 Model Year 1989 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Code	Equipment	Optional Equipment Differential Mass (weight)*			Remarks Restrictions, Requirements
		MASS, kg. (lb.)			
		Front	Rear	Total	
Power Windows	A31	1.0 (2.2)	1.8 (4.0)	2.8 (6.2)	Coupe
Power Windows	A31	1.8 (4.0)	3.2 (7.0)	5.0 (11.0)	Sedan/Wagon
Mats, Front & Rear	B37	1.4 (3.0)	.8 (2.0)	2.2 (5.0)	
Air Conditioning	C60	25.8 (56.9)	-1.8 (-4.0)	24.0 (52.9)	LL8
Air Conditioning	C60	24.6 (54.2)	-1.8 (-4.0)	22.8 (50.3)	LB6
Cruise Control	K34	1.8 (4.0)	.0 (.0)	1.8 (4.0)	
Engine Option	LB6	39.8 (87.7)	.0 (.0)	39.6 (87.7)	1JC35-37
Power Steering	N40	8.4 (18.5)	.4 (.9)	8.8 (19.4)	1JC00 - LL8 & MK7
Power Steering	N40	9.2 (20.3)	.4 (.9)	9.6 (21.2)	1JC00 - LL8 & MD9
Power Steering	N40	8.6 (19)	.4 (.9)	9.0 (19.9)	1JC35 - LB6

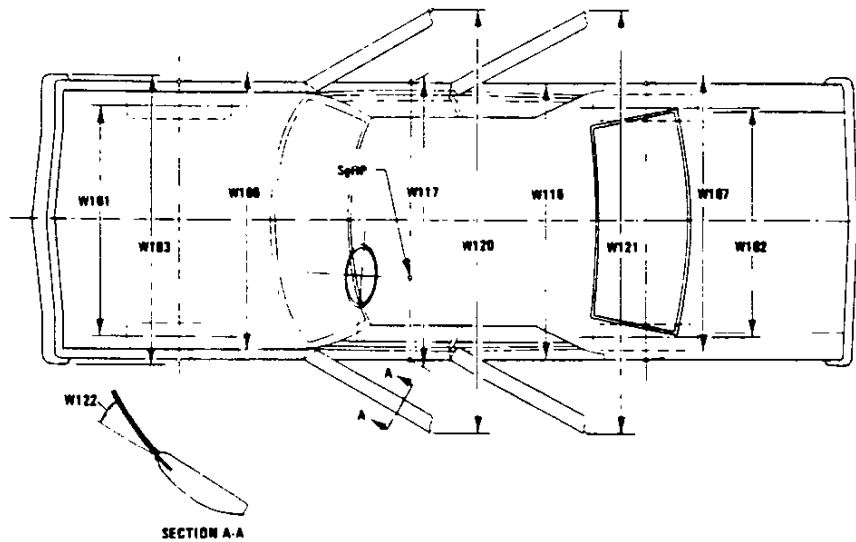
* Also see Engine - General Section for dressed engine mass (weight).

MVMA Specifications Form

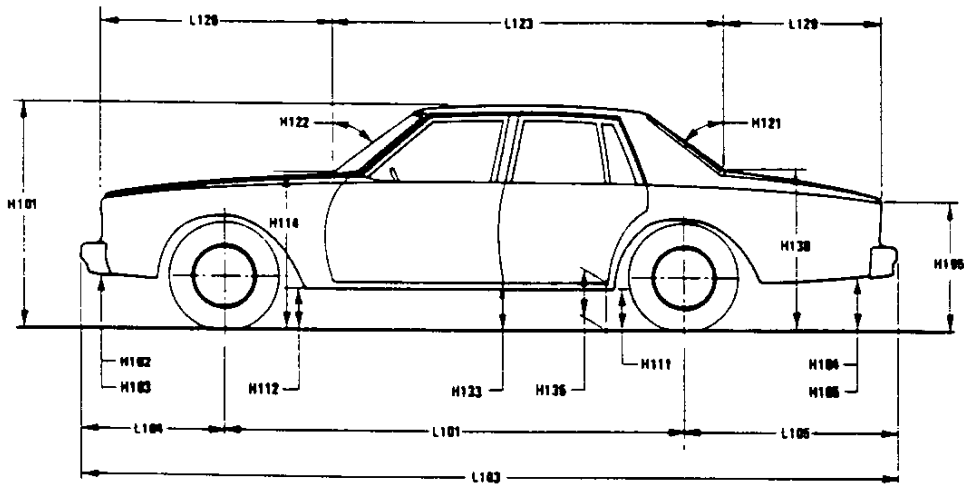
METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions – Key Sheet

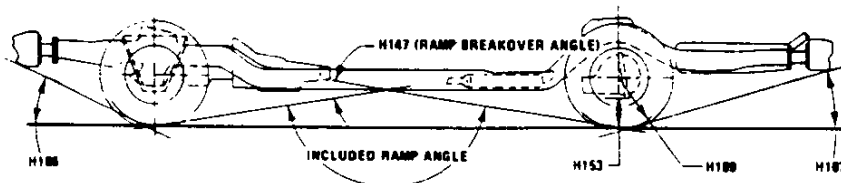
Exterior Width



Exterior Length & Height



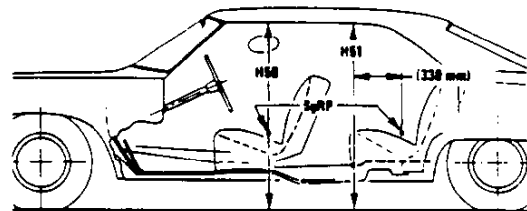
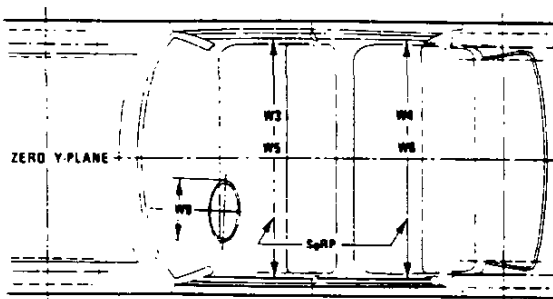
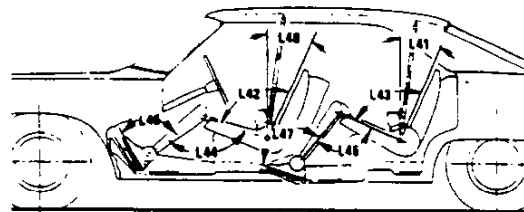
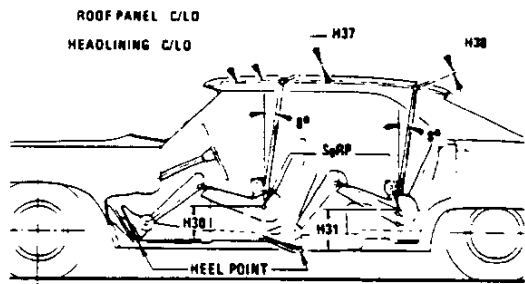
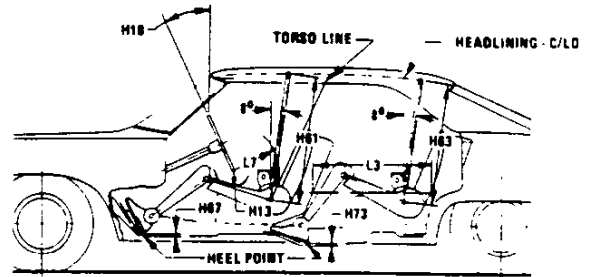
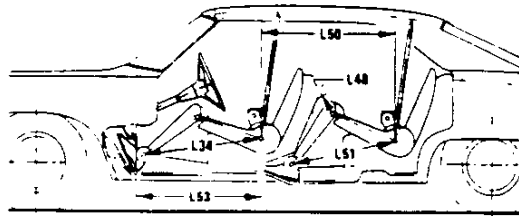
Exterior Ground Clearance



MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet

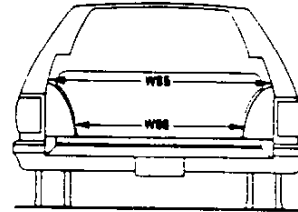
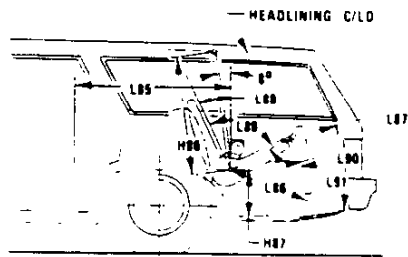


MVMA Specifications Form

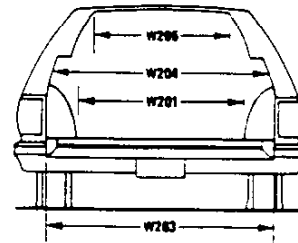
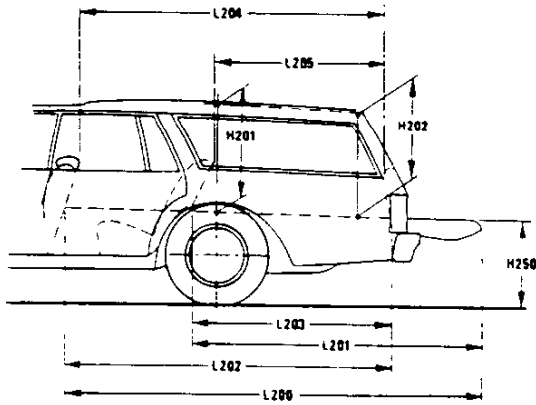
METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet

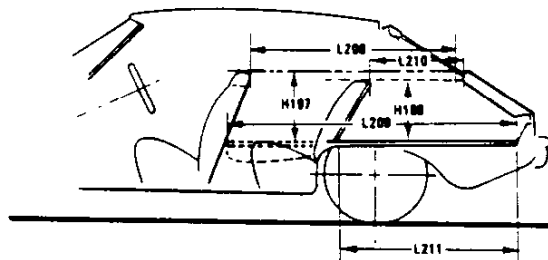
Third Seat



Cargo Space



Station Wagon



Hatchback

MVMA Specifications Form

METRIC (U.S. Customary)

Exterior Vehicle 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.
- H133 BOTTOM OF DOOR CLOSED–FRONT TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- H135 BOTTOM OF DOOR CLOSED–REAR TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- H138 DECK POINT TO GROUND. Measured at zero "Y" plane.
- H109 STATIC LOAD–TIRE RADIUS–REAR. Specified by the manufacturer in accordance with composite TIRE SECTION STANDARD.

Ground Clearance Dimensions

- H102 FRONT BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the front bumper to ground, including bumper guards, if standard equipment.
- H103 FRONT BUMPER TO GROUND–CURB MASS (WT.). Measured in the same manner as H102.

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

- H104 REAR BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment.
- H105 REAR BUMPER TO GROUND - CURB MASS (WT.). Measured in the same manner as H104.
- H106 ANGLE OF APPROACH. The angle measured between a line tangent to the front tire static loaded radius arc and the initial point of structural interference forward of the front tire to ground. The limiting structural component shall be designated.
- H107 ANGLE OF DEPARTURE. The angle measured between a line tangent to the rear tire static loaded radius arc and the initial point of structural interference rearward of the rear tire to ground. The limiting component shall be designated.
- H147 RAMP BREAKOVER ANGLE. The angle measured between two lines tangent to the front and rear tire static loaded radius and intersecting at a point on the underside of the vehicle which defines the largest ramp over which the vehicle can roll.
- H153 REAR AXLE DIFFERENTIAL TO GROUND. The minimum dimension measured from the rear axle differential to ground.
- H156 MINIMUM RUNNING GROUND CLEARANCE. The minimum dimension measured from the sprung vehicle to ground. Specify location.
- Glass Areas**
- S1 Windshield area.
- S2 Side windows area. Includes the front door, rear door, vents, and rear quarter windows on both sides of the vehicle.
- S3 Backlight areas.
- S4 Total area. Total of all areas (S1 + S2 + S3).
- Fiducial Mark Dimensions**
- Fiducial Mark - Number 1**
- L54 "X" coordinate.
- W21 "Y" coordinate.
- H81 "Z" coordinate.
- H161 Height "Z" coordinate to ground at curb weight.
- H163 Height "Z" coordinate to ground.
- Fiducial Mark - Number 2**
- L55 "X" coordinate.
- W22 "Y" coordinate.
- W82 "Z" coordinate.
- H162 Height "Z" coordinate to ground at curb weight.
- H164 Height "Z" coordinate to ground.
- Front Compartment Dimensions**
- L7 STEERING WHEEL TORSO CLEARANCE. The minimum dimension measured in the side view from the rearmost edge of the steering wheel, with front wheels in the straight ahead position, to the torso line.
- L11 ACCELERATOR HEEL POINT TO STEERING WHEEL CENTER. The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering wheel rim.
- L17 DESIGN H-POINT-FRONT TRAVEL. The dimension measured horizontally between the design H-point-front in the foremost and rearmost seat track positions. (See SAE J1100)
- L23 NORMAL DRIVING AND RIDING SEAT TRACK TRAVEL. The dimension measured horizontally between a point on the design H-point travel line from the SgRP to the displaced point on the design H-point travel line with the seat moved to the foremost seat position, but not to include seat track travel used for purposes other than normal driving and riding positions. (See SAE J1100)
- L31 SgRP-FRONT. "X" COORDINATED.
- L34 MAXIMUM EFFECTIVE LEG ROOM-ACCELERATOR. The dimension measured along a line from the ankle pivot center to the SgRP-front plus 254 mm (10.0 in) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.
- L-40 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.
- L-42 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.
- Rear Compartment Dimensions**
- L3 COMPARTMENT ROOM-SECOND. The dimension measured horizontally from the back of the front seat to the front of the second seatback at a height tangent to the top of the second seat cushion.

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

- L-41 BACK ANGLE-SECOND. The angle measured between a vertical line through the SgRP-second and the torso line.
- L43 HIP ANGLE-SECOND. The angle measured between torso line and thigh centerline.
- L45 KNEE ANGLE-SECOND. The angle measured between thigh centerline and lower leg centerline.
- L47 FOOT ANGLE-SECOND. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the three-dimensional devices bare foot flesh line (Reference J826).
- L48 KNEE CLEARANCE-SECOND. The minimum dimension measured from the knee pivot center to the back of the front seatback minus 51 mm (2.0 in.).
- L50 SgRP COUPLE DISTANCE-SECOND. The dimension measured horizontally from the driver SgRP-front to the SgRP-second.
- L51 MINIMUM EFFECTIVE LEG ROOM-SECOND. The dimension measured along a line from the ankle pivot center to the SgRP-second plus 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.

Luggage Compartment Dimensions

- V1 USABLE LUGGAGE CAPACITY-Total of volumes of individual pieces of standard luggage set plus H-boxes stowed in the luggage compartment in accordance with the procedure described in paragraph 8.2 of SAE-J1100a.
- H195 LIFTOVER HEIGHT. The dimension measured vertically from the luggage compartment lower opening at the zero "Y" plane to ground.

Interior Volumes (EPA Classification)

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

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

Station Wagon - Third Seat Dimensions

- L85 SgRP COUPLE DISTANCE-THIRD. The dimension measured horizontally from the SgRP-second to the SgRP-third.
- L86 EFFECTIVE LEG ROOM-THIRD. The dimension measured along a line from the ankle pivot center to the SgRP-third plus 254 mm (10.0 in.).
- L87 KNEE CLEARANCE-THIRD. The minimum dimension from the knee pivot center to the back of second seatback minus a constant of 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. from the SgRP-third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- H87 SgRP-THIRD TO HEEL POINT.
- 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

METRIC (U.S. Customary)

Interior Vehicle 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 undepressed floor covering.
- H201 CARGO HEIGHT. The dimension measured vertically from the top of the undepressed 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 undepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door fully open.
- H250 TAILGATE TO GROUND CURB MASS (WT.). The dimension measured vertically from the top of the undepressed floor covering on the lowered tailgate to ground on the zero "Y" plane.
- V2 STATION WAGON
Measured in inches:

$$\frac{W4 \times H201 \times L204}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{W4 \times H201 \times L204}{10^9} = \text{m}^3 \text{ (cubic meter)}$$
- V4 HIDDEN 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 undepressed floor covering.
- H198 SECOND SEATBACK TO LOAD FLOOR HEIGHT: The dimension measured vertically from the second seat back to the undepressed 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

METRIC (U.S. Customary)

Index

Subject	Page No.
Aerodynamics	23
All Wheel Drive	10
Alternator	16
Automatic Transmission / Transaxle	8, 9
Axis, Steering	14
Axle, Drive, Front, Rear, All, Four	2, 9, 10
Axle Shafts	10
Battery	16
Body and Miscellaneous Information	17
Brakes—Parking, Service	12, 13
Camber	15
Camshaft	3
Capacities	
Cooling System	5
Fuel Tank	6
Lubricants	
Engine Crankcase	4
Transmission / Transaxle	8, 9
Rear Axle	10
Carburetor	2, 8
Caster	15
Clutch - Pedal Operated	8
Coil, Ignition	16
Connecting Rods	4
Convenience Equipment	19-20
Cooling System	5
Crankshaft	4
Cylinders and Cylinder Head	3
Diesel Information	4
Dimension Definitions	
Key Sheet - Extenor	27, 30, 31
Key Sheet - Interior	28, 29, 31, 32, 33
Electrical System	15, 16
Emission Controls	7
Engine - General	
Bore, Stroke, Type	3
Compression Ratio	2
Displacement	2, 3
Firing Order, Cylinder Numbering	3
General Information, Power & Torque	2
Intake System	4
Power Teams	2
Exhaust System	7
Equipment Availability, Convenience	19
Fan, Cooling	5
Filters - Engine Oil, Fuel System	4
Four Wheel Drive	10
Frame	18
Front Suspension	11
Front Wheel Drive Unit	10
Fuel System	6
Fuel Injection	6
Fuel Tank	6
Glass	18
Headlamps	18
Headroom - Body	22, 23
Heights	21
Horns	15
Horsepower - Brake	2
Ignition System	16
Inflation - Tires	13
Interior Volumes	22
Instruments	15
Legroom	22, 23
Lengths	21
Leveling, Suspension	11
Lifters, Valve	4
Linings - Clutch, Brake	8, 12
Lubrication - Engine Transmission / Transaxle	4, 8, 9
Luggage Compartment	22
Models	1
Motor Starting	16
Muffler	7

Subject	Page No.
Origin	1
Passenger Capacity	1
Passenger Mass Distribution	25
Pistons	3
Power Brakes	12
Power, Engine	2
Power Steering	14
Power Teams	2
Propeller Shaft, Universal Joints	10
Pumps - Fuel	6
Water	5
Radiator - Cap, Hoses, Core	5
Ratios - Axle, Transaxle	2, 9
Compression	2
Steering	14
Transmission / Transaxle	2, 8, 9
Rear Axle	2, 9, 10
Regulator - Alternator	16
Restraint System	18
Rims	13
Rods - Connecting	4
Scrub Radius	14
Seats	17
Shock Absorbers, Front & Rear	11
Spark Plugs	18
Speedometer	15
Springs - Front & Rear Suspension	11
Stabilizer (Sway Bar) - Front & Rear	11
Starting System	16
Steering	14
Suppression - Ignition, Radio	16
Suspension - Front & Rear	11
Tail Pipe	7
Theft Protection	20
Thermostat, Cooling	5
Tires	13
Toe-in	15
Torque Converter	9
Torque - Engine	2, 8, 9
Transaxle	9
Transmission - Types	2, 8, 9
Transmission - Automatic	2, 8, 9
Transmission - Manual	2, 8, 9
Transmission - Ratios	2, 9
Tread	21
Trunk Cargo Load	1
Trunk Luggage Capacity	22
Turning Diameter	14
Unitized Construction	18
Universal Joints, Propeller Shaft	10
Valve System	4
Vehicle Dimensions	
Width	21
Length	21
Height	21
Ground Clearance	21
Front Compartment	22
Rear Compartment	22
Luggage Compartment	22
Station Wagon - Third Seat	23
Station Wagon - Cargo Space	23
Hatchback - Cargo Space	23
Fiducial Marks	24
Voltage Regulator	16
Water Pump	5
Weights	25, 26
Wheel Alignment	15
Wheelbase	21
Wheels & Tires	13
Wheel Spindle	14
Widths	21
Windshield	18
Windshield Wiper and Washer	15

