


# MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

# 1992

<b>Manufacturer</b> CHEVROLET MOTOR DIVISION GENERAL MOTORS CORPORATION	<b>Vehicle Line</b>  BERETTA	
<b>Mailing Address</b> CHEVROLET-PONTIAC-CANADA GROUP ENGINEERING CENTER GENERAL MOTORS CORPORATION 30003 VAN DYKE WARREN, MICHIGAN 48090-9060	<b>Issued</b> SEPTEMBER, 1991	<b>Revised</b>

Direct questions concerning these specifications to the manufacturer listed above.

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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.

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# MVMA Specifications

METRIC (U.S. Customary)

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### NOTE:

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

# MVMA Specifications

Vehicle Line BERETTAModel Year 1992 Issued 9-91 Revised(\*) 

METRIC (U.S. Customary)

## Vehicle Origin

Design & development (company)	Chevrolet-Pontiac-GM of Canada
Where built (country)	U.S.A.
Authorized U.S. Sales marketing representative	Chevrolet Motor Division

## Vehicle Models

Model Description & Drive (FWD/RWD/AWD/4WD)*	Make, Vehicle Models, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)	EPA Fuel Economy (City/Hwy)
BERETTA 2-Door Notchback Coupe (FWD)	1LV37	5 (2/3)	64 (141)	24/33
BERETTA 'GT' 2-Door Notchback Coupe (FWD)	1LW37	5 (2/3)	64 (141)	19/28
BERETTA 'GTZ' 2-Door Notchback Coupe (FWD)	1LZ37	5 (2/3)	64 (141)	23/33

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

## MVMA Specifications

Vehicle Line	BERETTA			
Model Year	1992	Issued	9-91	Revised(*)

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

SAE J1349 Net bhp (brake hrspwr) and Net Torque corrected to 77 deg. F / 25 deg. C and 29.61 in. Hg/100 kPA atmos. press.

		A	B	C	D	
E N G I N E	Engine Code	LN2	LN2	LHO	LHO	
	Displacement Liters (cu. in.)	2.2 (133)	2.2 (133)	3.1 (191)	3.1 (191)	
	Induction system (FI, Carb, etc.)	Multi-Port Fuel Injection	Multi-Port Fuel Injection	Multi-Port Fuel Injection	Multi-Port Fuel Injection	
	Compression ratio	9.0:1	9.0:1	8.9:1	8.9:1	
	SAE Net at RPM	Power kW (bhp)	82 (110) @ 5200	82 (110) @ 5200	104 (140) @ 4200	104 (140) @ 4200
		Torque Newton meters (lb.ft.)	176 (130) @ 3200	176 (130) @ 3200	250 (185) @ 3200	250 (185) @ 3200
Exhaust Single, dual		Single	Single	Single	Single	
T R A N S	Transmission/ Transaxle	MR3 Manual Transaxle 5-Speed	MD9 Auto Transaxle 3-Speed	MG2 Manual Transaxle 5-Speed	MD9 Auto Transaxle 3-Speed	
	Axle Ratio (std. first)	3.83	3.18	3.61	2.84	

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## MVMA Specifications

**Vehicle Line**                      **BERETTA**

Model Year	1992	Issued	9-91	Revised(*)
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**METRIC (U.S. Customary)**

## Power Teams

SAE J1349 Net bhp (brake hrspwr) and Net Torque corrected to 77 deg. F / 25 deg. C and 29.61 in. Hg/100 kPA atmos. press.

			E	F	G	H
E N G I N E	Engine Code		LHO	LGO		
	Displacement Liters (cu. in.)		3.1 (191)	2.3 (138)		
	Induction system (FI, Carb, etc.)		Multi-Port Fuel Injection	Multi-Port Fuel Injection		
	Compression ratio		8.9:1	10.0:1		
	SAE Net at RPM	Power kW (bhp)	104 (140) @ 4200	134 (180) @ 6200		
		Torque Newton meters (lb.ft.)	250 (185) @ 3200	217 (160) @ 5200		
Exhaust Single, dual		Single	Single			
T R A N S	Transmission/ Transaxle		MD9 Auto Transaxle 3-Speed	MV5 Manual Transaxle 5-Speed		
	Axle Ratio (std. first)		2.53	3.94		

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# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

2.2 LITER L4 (133 CID)  
MULTI-PORT FUEL INJECTION RPO LN2

## ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)

Inline, Front,  
Transverse - OHV

### Manufacturer

General Motors Powertrain Division

### No. of cylinders

4

### Bore

89.0 mm (3.50 in.)

### Stroke

88.0 mm (3.46 in.)

### Bore spacing (C/L to C/L)

99.0 mm (3.90 in.)

### Cyl block matl & mass kg(lbs.)(machined)

Cast Iron, 40 (88)

### Cylinder block deck height

216.65 mm (8.53 in.)

### Cylinder block length

443 mm (17.44 in.)

### Deck clearance (minimum) (above or below block)

.7 mm (.028 in.) Below

### Cyl. head material & mass kg (lbs.)

Aluminum, 9.7 (21.3)

### Cylinder head volume cu. cm. (cu. in.)

32.8 (2.00)

### Cylinder liner material

No Liner

### Head gasket thickness (compressed)

1.50 (.059)

### Minimum combustion chamber total volume cu. cm. (cu. in.)

67.34 (4.11)

### Cyl. no. system (front to rear)\*

#### L. Bank

1-2-3-4

#### R. Bank

-

### Firing order

1-3-4-2

### Intake manifold matl & mass kg (lbs.)\*\*

Aluminum, 3.9 (8.6)

### Exh. manifold matl & mass kg (lbs.)\*\*

Cast Iron, 4.5 (10)

### Knock sensor (number & location)

None

### Fuel required unleaded, diesel, etc.

Unleaded

### Fuel antiknock index (R + M) / 2

87

### Engine mounts

#### Quantity

3 Manual

2 Auto

#### Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)

Hydroelastic

Elastomeric

#### Added isolation (sub-frame, crossmember, etc.)

No

### Total dressed engine mass (wt) dry\*\*\*

163.3 kg. (359 lbs.), Manual

147.7 kg. (325 lbs.), Automatic

## Engine - Pistons

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

Aluminum, 320 (11.26)

## Engine Camshaft

### Location

In Block, Right Side

### Material & mass kg (weight, lbs.)

Cast Iron, 3.1 (6.8)

### Drive type

#### Chain/belt

Chain

#### Width/pitch

19.3 / 9.5 mm (.76 / .37 in.)

\*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.

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

3.1 LITER V6 (191 CID)  
MULTI-PORT FUEL INJECTION RPO LHO

## ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)

60 deg. V, Front, Transverse, OHV

### Manufacturer

General Motors Powertrain Division

### No. of cylinders

6

### Bore

89 (3.5)

### Stroke

84 (3.3)

### Bore spacing (C/L to C/L)

111.76 (4.4)

### Cyl block matl & mass kg(lbs.)(machined)

Cast Iron, 48.15 (107.0)

### Cylinder block deck height

224.0mm (9.0 in.)

### Cylinder block length

435.5mm (17.4 in.)

### Deck clearance (minimum) (above or below block)

0.12 +/- 0.24mm (.005 +/- .009 in.), ABA

### Cyl. head material & mass kg (lbs.)

Aluminum, 5.30 (11.7)

### Cylinder head volume cu. cm. (cu. in.)

28.0 (1.71)

### Cylinder liner material

Not Applicable

### Head gasket thickness (compressed)

1.62mm (.062 in.)

### Minimum combustion chamber total volume cu. cm. (cu. in.)

27.9 (1.70)

### 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 matl & mass kg (lbs.)\*\*

Upper Manifold - Aluminum Alloy, 3.5 (7.9)

Lower Manifold - Aluminum Alloy, 5.6 (12.4)

### Exh. manifold matl & mass kg (lbs.)\*\*

Nodular Cast Iron, Wt. Of Manifold, Fire Wall Side 3.76 (8.283);

Wt. Of Other Manifold, 2.63 (5.786)

### Knock sensor (number & location)

1 - Right Side Of Block

### Fuel required unleaded, diesel, etc.

Unleaded

### Fuel antiknock index (R + M) / 2

87

### Engine mounts

#### Quantity

3 Manual

2 Auto

#### Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)

Elastomeric

Hydroelastic

#### Added isolation (sub-frame, crossmember, etc.)

Not Applicable

### Total dressed engine mass (wt) dry\*\*\*

171.91 kg. (379 lbs.)

## Engine - Pistons

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

Aluminum Alloy, 365 (12.8)

## Engine Camshaft

### Location

Cylinder Block

### Material & mass kg (weight, lbs.)

Cast Iron, 3.098 (6.83)

### Drive type

#### Chain/belt

Chain

#### Width/pitch

18.52 x 9.525mm (0.729 x 0.375 in.)

\*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.

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

Engine Description  
Engine Code

2.3 LITER L4 (138 CID)  
MULTI-PORT FUEL INJECTION RPO LGO

## ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)		Inline, Front, Transverse, Pent Roof	
Manufacturer		General Motors Powertrain Division	
No. of cylinders		4	
Bore		92 mm (3.63 in.)	
Stroke		85 mm (3.35 in.)	
Bore spacing (C/L to C/L)		100 mm (3.94 in.)	
Cyl block matl & mass kg(lbs.) (machined)		Cast Iron, 42.83 (94.226)	
Cylinder block deck height		222 mm (8.74 in.)	
Cylinder block length		499.5 (19.66)	
Deck clearance (minimum) (above or below block)		0	
Cyl. head material & mass kg (lbs.)		Aluminum Alloy, 8.60 (18.96)	
Cylinder head volume cu. cm. (cu. in.)		47.0 +/- 1.5cc	
Cylinder liner material		None	
Head gasket thickness (compressed)		1.03 - 1.13 mm (.040 - .044 in.)	
Minimum combustion chamber total volume cu. cm. (cu. in.)		62.8	
Cyl. no. system (front to rear)*	L. Bank	1-2-3-4	
	R. Bank	None	
Firing order		1-3-4-2	
Intake manifold matl & mass kg(lbs.) **		Aluminum, 4.80 (10.56)	
Exh. manifold matl & mass kg (lbs.) **		Cast Iron, 6.74 (14.86)	
O Knock sensor (number & location)			
Fuel required unleaded, diesel, etc.		Unleaded	
Fuel antiknock index (R + M) / 2		87	
Engine mounts	Quantity	2	
	Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric      Hydroelastic	
	Added isolation (sub-frame, crossmember, etc.)	No	
Total dressed engine mass (wt) dry***		177.8 (391.16)	

## Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum 423 (14.88)
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## Engine Camshaft

Location		Overhead	
Material & mass kg (weight, lbs.)		Intake 3.045 (6.713)	
		Exhaust 2.948 (6.499)	
Drive type	Chain/belt	Chain	
	Width/pitch	22.86 mm      9.525 mm (.375 in.) Duplex - 130 Pitches	

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

\*\*Finished state.

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



# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

#### Engine Code

2.2 LITER L4 (133 CID)  
MULTI-PORT FUEL INJECTION RPO LN2

### Engine - Valve System

Hydraulic lifters (std., opt., n.a.)		Standard
Valves	Number intake/exhaust	4/4
	Head O.D. intake/exhaust	44.0 mm (1.73 in.) / 37.0 mm (1.46 in.)

### Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Forged Steel, .544 (1.2)
Length (axes centerline to centerline)	141.95 (5.59)

### Engine - Crankshaft

Material & mass kg., (weight, lbs.)*		Nodular Cast Iron, 14.4 (31.7)
End thrust taken by bearing (no.)		4
Length & number of main bearings		5, 20.72 mm (.82 in.)
Seal (material, one, two piece design, etc.)	Front	One Piece Fluoroelastomer
	Rear	One Piece Fluoroelastomer

### Engine - Lubrication System

Normal oil pressure kPa (psi) @ eng rpm	435-530 (63-77) @ 1200
Type oil intake (floating, stationary)	Stationary
Oil filter sys. (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)

### Engine - Diesel Information

(NOT APPLICABLE)

Diesel engine manufacturer		
Glow plug, current drain at 0 deg. F		
Injector Nozzle	Type	
	Opening pressure kPa (psi)	
Pre-chamber design		
Fuel injection pump	Manufacturer	
	Type	
Fuel inj. 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

(NOT APPLICABLE)

Turbo charger - manufacturer	
Super charger - manufacturer	
Intercooler	

\* Finished State

## MVMA Specifications

Vehicle Line	BERETTA			
Model Year	1992	Issued	9-91	Revised(*)

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

### Engine Description

**3.1 LITER V6 (191 CID)**  
**MULTI-PORT FUEL INJECTION BPO LHO**

## Engine – Valve System

Hydraulic lifters (std., opt., n.a.)		Standard
Valves	Number intake/exhaust	8/6
	Head O.D. intake/exhaust	43.64mm (1.72 in.) / 36.20mm (1.43 in.)

### Engine – Connecting Rods

Material & mass kg., (weight, lbs.)*	Forged Steel, .592 (1.31) Full Assembly
Length (axis centerline to centerline)	144.78 (5.79)

## Engine – Crankshaft

Material & mass kg., (weight, lbs.)*		Nodular Cast Iron, 17.9 (39.5)
End thrust taken by bearing (no.)		3
Length & number of main bearings		** 4 Bearings
Seal (material, one, two piece design, etc.)	Front	Viton/Steel, One Piece
	Rear	Viton/Steel, One Piece

## Engine – Lubrication System

Normal oil pressure kPa (psi) @ eng rpm	345-450 (50-65) @ 2400
Type oil intake (floating, stationary)	Stationary
Oil filter sys. (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)

### Engine – Diesel Information

(NOT APPLICABLE)

Diesel engine manufacturer		
Glow plug, current drain at 0 deg. F		
Injector Nozzle	Type	
	Opening pressure kPa (psi)	
Pre-chamber design		
Fuel in- jection pump	Manufacturer	
	Type	
Fuel inj. 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

(NOT APPLICABLE)

Turbo charger - manufacturer	
Super charger - manufacturer	
Intercooler	

\* Finished State

**\*\* Bearing Overall Length:**

For 3.1L V6: #1 = 24.8mm (0.976 in.) #2 = 18.7mm (0.736 in.)  
#3 = 23.90mm (0.940 in.), Upper #4 = 23.90mm (0.940 in.), Upper  
18.7mm (0.736 in.), Lower 18.7mm (0.736 in.), Lower

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

#### Engine Code

2.3 LITER L4 (138 CID)  
MULTI-PORT FUEL INJECTION RPO LGO

### Engine - Valve System

Hydraulic lifters (std., opt., n.a.)	Standard
Valves	Number intake/exhaust 8/8
	Head O.D. intake/exhaust 36.50 mm (1.44 in.) / 31.50 mm (1.24 in.)

### Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Steel, .673 (1.5) Each
Length(axes centerline to centerline)	147.5 (5.81)

### Engine - Crankshaft

Material & mass kg., (weight, lbs.)*	Nodular Iron, 19.0 (41.9)
End thrust taken by bearing (no.)	#3
Length & number of main bearings	#1, 2, 4, & 5 21.25 mm (.84 in.) #3 27.25 mm (1.09 in.)/5
Seal (material, one, two piece design, etc.)	Front One Piece, Viton
	Rear One Piece, Viton

### Engine - Lubrication System

Normal oil pressure kPa(psi) @ eng rpm	207 (30) @ 2000
Type oil intake (floating, stationary)	Stationary Pick-Up
Oil filter sys. (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.79 (4)

### Engine - Diesel Information

(NOT APPLICABLE)

Diesel engine manufacturer	
Glow plug, current drain at 0 deg. F	
Injector Nozzle	Type
	Opening pressure kPa(psi)
Pre-chamber design	
Fuel in-jection pump	Manufacturer
	Type
Fuel inj. 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

(NOT APPLICABLE)

Turbo charger - manufacturer	
Super charger - manufacturer	
Intercooler	

\* Finished State

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-81 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

2.2 LITER L4 (133 CID)

MULTI-PORT FUEL INJECTION RPO LN2

## 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)		124 (18)
Circulation thermostat	Type (choke, bypass)	Choke
	Starts to open @ deg's C(F)	89 (192)
Water Pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	7.3
	Number of pumps	1
	Drive (V-belt, other)	V-Belt
	Bearing type	Sealed, Ball Roller
	Impeller material	Stamped Steel
	Housing material	Aluminum
By-pass recirculation type (inter., ext.)		External - Thru Intake Manifold Internal
Cooling system capacity	With heater - L (qt.)	8.7 (9.2)
	With air conditioner-L(qt.)	8.7 (9.2)
	Opt. equip. specify-L (qt.)	
Water jackets full length of cyl(yes,no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes,no)		Yes
Radiator core	Std., A/C, HD	Standard A/C
	Type (cross-flow, etc.)	Cross-Flow
	Construction (fin & tube mechanical, braze, etc.)	Tube & Center / Brazed
	Matl., mass kg (wgt., lbs.)	Aluminum 3.08 (6.78) Standard 3.95 (8.69) Auto
	Width	660 (26)
	Height	383 (15)
	Thickness	24 (.9)
	Fins per inch	13 Standard 17 Auto
Radiator end tank material		Plastic
Fan	Std., elec., opt.	Electric - Standard Air Conditioned
	Number of blades & type (flex, solid, material)	5 Plastic 7 Plastic
	Diameter & projected width	290 (11.4) 373 (14.7)
	Ratio(fan to crnkshft.rev.)	Not Applicable
	Fan cutout type	ECM Controlled
	Drive type (direct, remote)	Direct - Electric Motor
	RPM at idle (elec.)	1800
	Motor rating(wattage)(elec)	100
	Motor switch (type & location/elec.)	ECM
	Switch point (temp., pressure/elec.)	On At 108; Off At 101 On At 106; Off At 99
	Fan shroud (material)	None Plastic

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

3.1 LITER V6 (191 CID)  
MULTI-PORT FUEL INJECTION RPO LHO

## 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)		124 (18) (Surge Tank Cap)
Circulation thermostat	Type (choke, bypass)	Bypass
	Starts to open @ deg's C(F)	90 (195)
Water Pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	12
	Number of pumps	1
	Drive (V-belt, other)	Serpentine
	Bearing type	Ball-Roller
	Impeller material	Cast Iron
	Housing material	Aluminum
By-pass recirculation type (inter., ext.)		External, Bypass
Cooling system capacity	With heater - L (qt.)	12.33 (13.1)
	With air conditioner-L(qt.)	12.47 (13.2)
	Opt. equip. specify-L(qt.)	None
Water jackets full length of cy(Yes,no)		Yes, Outer Wall; No, Inner Wall
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes,no)		Yes
Radiator core	Std., A/C, HD	All
	Type (cross-flow, etc.)	Cross Flow
	Construction (fin & tube mechanical, braze, etc.)	Tube & Fin/Brazed
	Matl., mass kg (wgt., lbs.)	Aluminum 4.20 (9.24) Std 4.88 (10.74) Auto
	Width	660 (26)
	Height	383 (15.1)
	Thickness	24 (0.9) Standard 34 (1.3)
	Fins per inch	17
Radiator end tank material		Plastic
Fan	Std., elec., opt.	Electric - Standard Air Conditioned
	Number of blades & type (flex, solid, material)	5 Plastic 6 Plastic
	Diameter & projected width	290 (11.4) 373 (14.7)
	Ratio(fan to crnkshft.rev.)	Not Applicable
	Fan cutout type	ECM Controlled
	Drive type (direct, remote)	Electric
	RPM at idle (elec.)	1800
	Motor rating(wattage)(elec)	100 150
	Motor switch (type & location/elec.)	ECM
	Switch point (temp.,/ pressure/elec.)	On At 190, Off At 100 PSI A/C Pressure On At 106, Off At 100 Deg. C
	Fan shroud (material)	None Plastic

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

2.3 LITER L4 (138 CID)  
MULTI-PORT FUEL INJECTION RPO LGO

## 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)		124 (18) (Surge Tank Cap)
Circulation thermostat	Type (choke, bypass)	Bypass
	Starts to open @ deg's C(F)	89 (192)
Water Pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	6.5
	Number of pumps	1
	Drive (V-belt, other)	Chain
	Bearing type	2 Row Ball
	Impeller material	Sheet Metal
	Housing material	Die Cast Aluminum
By-pass recirculation type (inter., ext.)		External - Heater Water Flow & Throttle Body Water Flow
Cooling system capacity	With heater - L (qt.)	9.8 (10.4)
	With air conditioner-L(qt.)	9.8 (10.4)
	Opt. equip. specify-L(qt.)	None
Water jackets full length of cyl(yes,no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes,no)		Yes
Radiator core	Std., A/C, HD	Standard & A/C
	Type (cross-flow, etc.)	Cross-Flow
	Construction (fin & tube mechanical, braze, etc.)	Tube & Center / Brazed
	Matl., mass kg (wgt.,lbs.)	Aluminum 3.08 (6.78)
	Width	660 (26)
	Height	383 (15.1)
	Thickness	24 (0.9)
Fins per inch		13
Radiator and tank material		Plastic
Fan	Std., elec., opt.	Electric
	Number of blades & type (flex, solid, material)	6 - Nylon 6/6 Mineral Filled
	Diameter & projected width	381 (15.0)
	Ratio(fan to crnkshft.rev.)	Not Applicable
	Fan cutout type	Engine Control Module (ECM)
	Drive type (direct, remote)	Electric - Direct
	RPM at idle (elec.)	1800
	Motor rating(wattage)(elec)	150
	Motor switch (type & location/elec.)	ECM
	Switch point (temp.,/ pressure/elec.)	On At 106 deg. (223) Coolant Temperature Or 190 PSI A/C Head Pressure
	Fan shroud (material)	None

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

2.2 LITER L4 (133 CID)

MULTI-PORT FUEL INJECTION RPO LN2

### Engine - Fuel System

(See supplemental page for details of Fuel Inj, Supercharger, Turbocharger, etc. if used)

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		AC/Rochester Products
Carburetor no. of barrels		None
Idle A/F mix.		Preset - No Adjustment Provided
Fuel Injection	Point of inj. (no.)	Entering Cylinder Head (Four)
	Constant, pulse, flow	Pulse
	Control (elec., mech.)	Electronic
	Sys. press. kPa (psi)	294 - 306 (43 - 44)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	900 In Neutral
	Automatic	700 In Drive.
Intake manifold heat control (exhaust or water thermostatic or fixed)		None
Air cleaner type		Single Snorkel
Fuel filter (type/location)		Replaceable Paper Element Located Near Fuel Tank
Fuel pump	Type (elec. or mech.)	Electrical
	Location (eng., tank)	Fuel tank
	Press. range kPa (psi)	Pressure Depends On Flow Rate And System Voltage
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	62.4 @ 350 (16.51 @ 50.8) Figures For Wide Open Throttle

### Fuel Tank

Capacity refill L (gallons)		59.0 (15.6)
Location (describe)		Under Rear Seat (Forward Of Rear Axle)
Attachment		Two Longitudinal Steel Straps
Material & Mass kg (weight lbs.)		High Density Polyethylene 8.92 (20.46) W/Sender
Filler pipe	Location & material	Right Rear Quarter - Steel
	Connection to tank	Fuel Filler And Vent Hose With Clamps
Fuel line (material)		Steel/Nylon With Quick Connect Fittings
Fuel hose (material)		Filler Hose - Rubber
Return line (material)		Steel/Nylon With Quick Connect Fittings
Vapor line (material)		Steel/Rubber
Extended range tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	"
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
	Sictr switch or valve	"
	Separate fill	"

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*) \_\_\_\_\_

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

3.1 LITER V6 (191 CID)

MULTI-PORT FUEL INJECTION RPO LHO

### Engine - Fuel System

(See supplemental page for details of Fuel Inj, Supercharger, Turbocharger, etc. if used)

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		AC/Rochester Products
Carburetor no. of barrels		None
Idle A/F mix.		Preset-No Adjustment Provided
Fuel Injection	Point of inj. (no.)	Fuel Injectors At Inlet Ports
	Constant, pulse, flow	Pulse
	Control (elec., mech.)	Electronic
	Sys. press. kPa (psi)	300 (43.5), Regulated To Manifold Pressure
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	Not Applicable
	Automatic	600 In Drive
Intake manifold heat control (exhaust or water thermostatic or fixed)		None
Air cleaner type		Single Snorkel
Fuel filter (type/location)		Replaceable Enclosed Paper Element Located Near Fuel Tank.
Fuel pump	Type (elec. or mech.)	Electrical
	Location (eng., tank)	Fuel Tank
	Press. range kPa (psi)	Normal Operating Range 250 To 300 kPa (36 to 44 psi)
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	62.4 @ 350 (Pump Rating) (18.51 @ 50.8)

### Fuel Tank

Capacity refill L (gallons)		59.0 (15.6)
Location (describe)		Under Rear Seat (Forward Of Rear Axle)
Attachment		Two Longitudinal Steel Straps
Material & Mass kg (weight lbs.)		High density Polyethylene 8.92 (20.46) W/Sender
Filler pipe	Location & material	Right Rear Quarter - Steel
	Connection to tank	Fuel Filler And Vent Hose With Clamps
Fuel line (material)		Steel/Nylon With Quick Connect Fittings
Fuel hose (material)		Filler Hose - Rubber
Return line (material)		Steel/Nylon With Quick Connect Fittings
Vapor line (material)		Steel/Rubber
Extended range tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	"
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
	Slctr switch or valve	"
	Separate fill	"



# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

Engine Description  
Engine Code

2.3 LITER L4 (138 CID)  
MULTI-PORT FUEL INJECTION RPO LGO

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

Induction type: carburetor, fuel injection system, etc.		Port Fuel Injection
Manufacturer		AC/Rochester Products
Carburetor no. of barrels		None
Idle A/F mix.		ECM Controlled
Fuel Injection	Point of inj. (no.)	4 Injectors At Ports In Cylinder Head
	Constant, pulse, flow	Pulse
	Control (elec., mech.)	Electronic
	Sys. press. kPa (psi)	300 (43)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	
	Automatic	
Intake manifold heat control (exhaust or water thermostatic or fixed)		None
Air cleaner type		Single Snorkel
Fuel filter (type/location)		Replaceable Enclosed Paper Element Located Near Fuel Tank
Fuel pump	Type (elec. or mech.)	Electrical
	Location (eng., tank)	Fuel Tank
	Press. range kPa (psi)	Pressure Depends On Flow Rate And System Voltage
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	62.4 @ 350 (Figures For Wide Open Throttle) (16.51 @ 50.8)

## Fuel Tank

Capacity refill L (gallons)		59.0 (15.6)
Location (describe)		Under Rear Seat (Forward Of Rear Axle)
Attachment		Two Longitudinal steel Straps
Material & Mass kg (weight lbs.)		High Density Polyethylene 8.92 (20.46) W/Sender
Filler pipe	Location & material	Right rear Quarter - Steel
	Connection to tank	Fuel Filler And Vent Hose With Clamps
Fuel line (material)		Steel/Nylon With Quick Connect Fittings
Fuel hose (material)		Filler Hose - rubber
Return line (material)		Steel/Nylon With Quick Connect Fittings
Vapor line (material)		Steel/Rubber
Extended range tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	"
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
	Sictr switch or valve	"
	Separate fill	"

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

2.2 LITER L4 (133 CID)

MULTI-PORT FUEL INJECTION RPO LN2

## Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		CCC Control
	Air injection	Pump or pulse	Not
		Driven by	Applicable
		Air distribution (head, manifold, etc.,)	
		Point of entry	
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Negative Back Pressure EGR Valve With Integral Transducer And Single Shaft Cross Hole
		Exhaust source	#4 Cylinder At Cylinder Head
		Point of exh.inj. (spacer, carb., manifold, other)	Inlet Manifold
	Catalytic Converter	Type	3-Way Monolith
		Number of	1
		Location(s)	Mounted To Center Underbody
		Volume L (cu.in)	1.8 (110)
		Substrate type	Monolith
Noble metal type		Platinum (Pt), Rhodium (Rh)	
Noble metal concentration (g/cu. cm.)			
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 Outlet Duct
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)		Single
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass kg (weight lbs.)		1, Triflow. Muffler, Stainless Steel, 6.5 (14.4)
Resonator no. & type		Not Applicable
Exhaust pipe	Branch o.d., wall thickness	"
	Main o.d., wall thickness	50.8 x 1.77 mm (2.0 x .070 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 3.4 (7.6)
Inter-mediate pipe	o.d. & wall thickness	50.8 x 1.09 mm (2.0 x .043 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 3.0 (6.7)
Tail pipe	o.d. & wall thickness	50.8 x 1.09 mm (2.0 x .043 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, .4 (.9)

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

3.1 LITER V6 (191 CID)

### Engine Code

MULTI-PORT FUEL INJECTION RPO LHO

### Vehicle Emission Control

#### Manual Transmission

#### Automatic Transmission

	Type (air injection, engine modifications, other)		Not Applicable	Not Applicable
	Air injection	Pump or pulse	"	"
		Driven by	"	"
		Air distribution (head, manifold, etc.,)	"	"
		Point of entry	"	"
Exhaust Emission Control	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	3 Sized Orifices Which Are Opened Or Closed Using, Pintles And Solenoids. 8 Flow Combination.	
		Exhaust source		
	Catalytic Converter	Point of exh.inj. (spacer, carb., manifold, other)	Plenum, Near Throttle Body	
		Type	Bed Monolith (Dual)	
		Number of	1	
		Location(s)	Mounted To Underbody	
		Volume L (cu.in)	2.79 (170)	
		Substrate type	Ceramic Monolith	
		Noble metal type	Platinum (Pt), Rhodium (Rh)	
		Noble metal concentration (g/cu. cm.)		
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Closed Induction System	
	Energy source (manifold vacuum, carburetor, other)		Plenum Vacuum	
	Discharges to (intake manifold, other)		Discharges To Plenum	
	Air int.(breather cap, other)		Duct Between Air Cleaner And Throttle Body	
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Fuel Tank To Canister To Throttle Body Port	
		Carburetor	Not Applicable	
	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)		Single
Muffler no. & type (reverse flow, straight thru, separate resonator)		1, Triflow Muffler, Stainless Steel, 6.5 (14.4)
Material & Mass kg (weight lbs.)		
Resonator no. & type		Not Applicable
Exhaust pipe	Branch o.d., wall thickness	"
	Main o.d., wall thickness	50.8 x 1.77 mm (2.0 x .070 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 1.9 (4.2)
Inter-mediate pipe	o.d. & wall thickness	50.8 x 1.09 mm (2.0 x .043 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 3.0 (6.7)
Tail pipe	o.d. & wall thickness	50.8 x 1.09 mm (2.0 x .043 in.)*
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, .8 (1.8); W/Z21 1.0 (2.2)

\* W/Z21 57.1 x 1.09 mm (2.2 x .043 in.)

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 8-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

2.3 LITER L4 (138 CID)  
MULTI-PORT FUEL INJECTION RPO LG0

## Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		C3 Engine Modification
	Air injection	Pump or pulse	None
		Driven by	
		Air distribution (head, manifold, etc.,)	
		Point of entry	
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	California Only - Controlled Flow Dual None/Orifice Digital EGR Valve
		Exhaust source	
		Point of exh.inj. (spacer, carb, manifold, other)	Intake Manifold
	Catalytic Converter	Type	Single Bed
		Number of	1
		Location(s)	Under Floor
		Volume L (cu.in)	2.786 (170)
		Substrate type	Monolith - Ceramic
		Noble metal type	Platinum (Pt), Paladium (Pd), Rhodium (Rh)
		Noble metal concentration (g/cu. cm.)	.00102/ - / .00010
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Orifice + Bypass. No PCV Valve. Closed - Ventilates To Induction System.
	Energy source (manifold vacuum, carburetor, other)		Orificed Connection To Manifold Vacuum. Open Hose Connection To Clean Side Of A/C.
	Discharges to (intake manifold, other)		Induction System
	Air int.(breather cap, other)		None
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	None
	Vapor storage provision		Charcoal Canister
Electron-ic System	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

## Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass kg (weight lbs.)		1, Triflow Muffler, Stainless Steel, 7.5 (16.7)
Resonator no. & type		1, 63 mm O.D. "Bottle" Resonator
Exhaust pipe	Branch o.d., wall thickness	Not Applicable
	Main o.d., wall thickness	57.2 x 2.2 mm (2.3 x .090 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 3.2 (7.1)
Inter-mediate pipe	o.d. & wall thickness	50.8 x 1.89 mm (2.0 x .074 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 5.0 (11.1)
Tail pipe	o.d. & wall thickness	76.0 x .86 mm (3.0 x .034 in.)
	Matl. & Mass kg (wght.lbs.)	304 Stainless Steel, 1.8 (4.0)

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

Engine Description  
Engine Code

2.2 LITER L4 (133 CID)  
MULTI-PORT FUEL INJECTION RPO LN2

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

Manual 4-speed (manufacturer/country)	Not Applicable
Manual 5-speed (manufacturer/country)	Standard Isuzu / Japan (MR3)
Manual 6-speed (manufacturer/country)	Not Applicable
Automatic (manufacturer/country)	Optional, General Motors Powertrain / U.S.A.
Auto. overdrive (manufacturer/country)	Not Applicable

### Manual Transmission/Transaxle

Number of forward speeds		5
o Gear ratios	1st	3.73
	2nd	2.15
	3rd	1.33
	4th	.923
	5th	0.74
	6th	
	Reverse	3.58
Synchronous meshing (specify gears)		1-5
Shift lever location		Floor
Trans. case mat'l. & mass kg (lbs)*		Aluminum, 36.5 (80.1)
Lubricant	Capacity L (pt.)	1.9 (4.0)
	Type recommended	Synchromesh Transmission Fluid (STF)

### Clutch (Manual Transmission)

Clutch manufacturer		Daikin
Clutch type (dry, wet; single, multiple disc)		Dry Disc, Single
Linkage (hyd., cable, rod, lever, other)		Hydraulic
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	133.4 (30.0)
	Released	115.6 (26.0)
Assist (spring, power/percent, nominal)		None
Type pressure plate springs		Diaphragm
Total spring load (nominal) N (lbs.)		5688 (1279)
Clutch facing	Facing mfg. & matl. coding	Valeo F202
	Facing matl. & construction	F202
	Rivets per facing	16
	Outside x inside dia. (nom.)	215.0 x 150.0 (8.46 x 5.91)
	Total eff. area sq cm (sq in)	186.3 (28.88)
	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 (0.05) / 1.2 (0.05)
Engagement cushion method		Driven Plate, Wave Spoke 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

Vehicle Line BERETTA  
Model Year 1992 Issued 8-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

3.1 LITER V6 (191 CID)  
MULTI-PORT FUEL INJECTION RPO LHO

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

Manual 4-speed (manufacturer/country)	
Manual 5-speed (manufacturer/country)	Standard - N. Venture/U.S.A. (MG2)
Manual 6-speed (manufacturer/country)	
Automatic (manufacturer/country)	Optional - Hydra-Matic, U.S. (MD9)
Auto. overdrive (manufacturer/country)	

### 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
	6th	
	Reverse	3.41
Synchronous meshing (specify gears)		1, 2, 3, 4 and 5
Shift lever location		Floor Mount
Trans. case mat'l. & mass kg (lbs)*		Aluminum, 41.0 (90.2)
Lubricant	Capacity L (pt.)	1.9 (4.01)
	Type recommended	Synchromesh Transmission Fluid (STF)

### Clutch (Manual Transmission)

Clutch manufacturer		LUK
Clutch type (dry, wet; single, multiple disc)		Dry Single Disc
Linkage (hyd., cable, rod, lever, other)		Hydraulic
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	133.4 (30.0)
	Released	133.4 (30.0)
Assist (spring, power/percent, nominal)		Not Applicable
Type pressure plate springs		Diaphragm
Total spring load (nominal) N (lbs)		6540 (1470)
Clutch facing	Facing mfr. & mat'l. coding	LUK
	Facing mat'l. & construction	Non-Asbestos
	Rivets per facing	32
	Outside x inside dia. (nom.)	232 x 156mm (9.12 x 6.12 in.)
	Total eff. area sq cm (sq in)	232 (35.90)
	Thickness (pressure plate side/fly wheel side)	7.50 - 8.00mm (.295 - .315 in.)
	Rivet depth (pressure plate side/fly wheel side)	1.4mm (0.06 in.) / 1.4mm (0.06 in.)
	Engagement cushion method	Cushion Springs
Release bearing type & method lub.		Self Centering, Angular Contact Ball Bearing Pre-Packed & 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

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

Engine Description

Engine Code

2.3 LITER L4 (138 CID)  
MULTI-PORT FUEL INJECTION RPO LG0

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

Manual 4-speed (manufacturer/country)	
Manual 5-speed (manufacturer/country)	
Manual 6-speed (manufacturer/country)	
Automatic (manufacturer/country)	Not Applicable
Auto. overdrive (manufacturer/country)	"

### Manual Transmission/Transaxle

Number of forward speeds		5
○ Gear ratios	1st	3.77
	2nd	2.19
	3rd	1.38
	4th	1.03
	5th	.81
	6th	
	Reverse	3.41
Synchronous meshing (specify gears)		All Forward Gears
Shift lever location		Floor - Console
Trans. case mat'l. & mass kg (lbs)*		Aluminum 30.314 (13.75)
Lubricant	Capacity L (pt.)	1.9 (4.0)
	Type recommended	Standard Transmission Fluid (STF)

### Clutch (Manual Transmission)

Clutch manufacturer		Daikin
Clutch type (dry, wet; single, multiple disc)		Dry, Single
Linkage (hyd., cable, rod, lever, other)		Hydraulic
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	151 (34)
	Released	0 (0)
Assist (spring, power/percent, nominal)		None
Type pressure plate springs		Belleville Spring
Total spring load (nominal) N (lbs.)		5892 (1325)
Clutch facing	Facing mfr. & matl. coding	Daikin NC80
	Facing matl. & construction	NC80
	Rivets per facing	16
	Outside x inside dia. (nom.)	232 x 150 mm (9.13 x 5.91 in.)
	Total eff. area sq cm (sq in)	442 (68.5)
	Thickness (pressure plate side/fly wheel side)	3.2 (.126) Pressure Plate, 3.5 (.138) Fly Wheel
	Rivet depth (pressure plate side/fly wheel side)	1.6 (.06) Pressure Plate, 1.5 (.06) Fly Wheel
Engagement cushion method		Driven Plate Cushion
Release bearing type & method lub.		Ball Thrust - Prepacked & Sealed
Torsional damping method, springs, hysteresis		Coil Spring With Friction Washer

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

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

2.2 LITER L4 (133 CID)

### Engine Code

MULTI-PORT FUEL INJECTION RPO LN2

## Automatic Transmission/Transaxle

Trade Name		3T40 Transaxle Assembly
Type and special features (describe)		3-Speed Automatic, Fully Automatic Shifted Planetary Gear W/Torque Converter And Lock-Up Clutch
Gear selector	Location (column, floor, other)	Floor
	Ltr./No. designation (e.g. PRND21)	P-R-N-D-2-1
	Shift interlock (yes, no, describe)	No
Gear ratios	1st	2.84
	2nd	1.60
	3rd	1.00 (Converter Clutch Engagement)
	4th	--
	5th	--
	6th	--
	Reverse	2.07
Max. upshift speed - drive range km/h (mph)		2-3 = 140 (87)
Max. kickdown speed - drive range km/h (mph)		3-2 = 134 (83)
Min. overdrive speed km/h (mph)		--
Torque converter	Number of elements	3
	Max. ratio at stall	2.48
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.8)
	Capacity factor "K"	203
Lubricant	Capacity refill L (pt.)	8.5 (17.85) Dry Transmission, Original Filling
	Type recommended	Dexron II
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard, Integral Part Of Radiator
Trans. mass kg (lbs) & case matl.**		65.7 (144.54) Dry Weight

## All Wheel / 4 Wheel Drive

(NOT APPLICABLE)

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

\* Input speed / square root of torque.

\*\* Dry weight including torque converter. If other, specify.



# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

2.2 LITER L4 (133 CID)  
MULTI-PORT FUEL INJECTION RPO LN2

### Axle Ratio and Tooth Combinations

AUTOMATIC - MD9

MANUAL - MR3

Effective final drive ratio (or overall top gear ratio)			3.18	3.83 (2.83)
Transr ratio and method(chain,gear,etc)			1.12, Chain	Not Applicable
Front drive unit	Ring gear o.d.		Not Applicable	"
	No. of teeth	Pinion	"	"
		Ring gear	"	"

### Front Drive Unit

Description (integral to trans., etc.)		Planetary Final Drive
		Integral With Transmission
Limited slip differential (type)		Not Applicable
Drive pinion	Type	"
	Offset	"
No. of differential pinions		2
Pinion/differential	Adjustment (shim, etc.)	Not Applicable
	Bearing adjustment	"
Driving wheel bearing (type)		
Lubricant	Capacity L (pt.)	See Automatic Trans Spec
	Type recommended	"

### Axle Shafts - Front Wheel Drive

Manufacturer and number used			Saginaw Division, 2	
Type (straight, solid bar, tubular, etc.)		Left	Straight, Solid Bar	
		Right	Straight, Solid Bar	
Outer diam. x length* x wall thickness	Manual transaxle	Left	23.81 X 320.0	
		Right	23.81 X 663.0	
	Automatic transaxle	Left	23.81 X 311.0	
		Right	23.81 X 364.3	
	Optional transaxle	Left	None	
		Right	None	
Slip yoke	Type		None	
	Number of teeth		None	
	Spline o.d.		None	
Universal joints	Make and mfg. no.		Inner	Saginaw Division
			Outer	Saginaw Division
	Number used		2 On Each Drive Shaft	
	Type, size, plunge		Inner	TRI-POT 61.0 Stroke
			Outer	Rzeppa - Fixed Center
	Attach (u-bolt, clamp, etc.)		Splined	
	Bearing	Type (plain, anti-friction)	Inner - Ball & Roller Anti-Friction      Outer - Ball	
		Lubrication (fitting, prepack)	Prepacked	
Drive taken through (torque tube, arms or springs)			Wishbone Lower Control Arm; Upper MacPherson Strut	
Torque taken through (torque tube, arms or springs)			Engine Mounting System	

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

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

3.1 LITER V6 (181 CID)

### Engine Code

MULTI-PORT FUEL INJECTION RPO LHO

### Axle Ratio and Tooth Combinations

AUTOMATIC - MD9

MANUAL - MG2

Effective final drive ratio (or overall top gear ratio)			2.53 & 2.84	3.61 (2.60)
Transr ratio and method(chain,gear,etc)			1.00, Chain	Not Applicable
Front drive unit	Ring gear o.d.		Not Applicable	"
	No. of teeth	Pinion	"	"
		Ring gear	"	"

### Front Drive Unit

Description (integral to trans., etc.)		Planetary Final Drive Integral With Transmission
Limited slip differential (type)		Not Applicable
Drive pinion	Type	"
	Offset	"
No. of differential pinions		2
Pinion/ differential	Adjustment (shim, etc.)	Not Applicable
	Bearing adjustment	"
Driving wheel bearing (type)		
Lubricant	Capacity L (pt.)	See Automatic Trans Spec
	Type recommended	"

### Axle Shafts - Front Wheel Drive

Manufacturer and number used			2		
Type (straight, solid bar, tubular, etc.)		Left	Straight, Solid Bar		
		Right	Straight, Solid Bar		
Outer diam. x length* x wall thickness	Manual transaxle	Left	27.05 X 308.0		
		Right	27.05 X 315.5		
	Automatic transaxle	Left	23.81 X 304.6		
		Right	23.81 X 365.4		
	Optional transaxle	Left	None		
		Right	None		
Slip yoke	Type		None		
	Number of teeth		None		
	Spline o.d.		None		
Universal joints	Make and mfg. no.		Inner	Saginaw Division	
			Outer	Saginaw Division	
	Number used		2 On Each Drive Shaft		
	Type, size, plunge		Inner	FREE MOTION 61.0 Stroke	
			Outer	Rzeppa - Fixed Center	
	Attach (u-bolt, clamp, etc.)		Splined		
	Bearing	Type (plain, anti-friction)	Anti-Friction	Inner - Ball & Roller Outer - Ball	Inner - Ball Outer - Ball
		Lubrication (fitting, prepack)	Prepacked		
	Drive taken through (torque tube, arms or springs)			Wishbone Lower Control Arm; Upper MacPherson Strut	
Torque taken through (torque tube, arms or springs)			Engine Mounting System		

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

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Description

### Engine Code

2.3 LITER L4 (138 CID)  
MULTI-PORT FUEL INJECTION RPO LGO

### Axle Ratio and Tooth Combinations

Effective final drive ratio (or overall top gear ratio)			3.61 (2.92)
Transfr ratio and method(chain,gear,etc)			Gear
Front drive unit	Ring gear o.d.		202 (8.0)
	No. of teeth	Pinion	18
		Ring gear	65

### Front Drive Unit

Description (integral to trans., etc.)		Planetary Final Drive Integral With Transmission
Limited slip differential (type)		Not Applicable
Drive pinion	Type	"
	Offset	"
No. of differential pinions		2
Pinion/differential	Adjustment (shim, etc.)	Shim
	Bearing adjustment	Not Applicable
Driving wheel bearing (type)		Sealed Ball Bearing (Integral Part Of Bolt In Hub Unit)
Lubricant	Capacity L (pt.)	1.9 (4) (Transaxle)
	Type recommended	STF

### Axle Shafts – Front Wheel Drive

Manufacturer and number used			2
Type (straight, solid bar, tubular, etc.)		Left	Straight, Solid Bar
		Right	Straight, Solid Bar
Outer diam. x length* x wall thickness	Manual transaxle	Left	27.1 x 313.5
		Right	27.1 x 315.5
	Automatic transaxle	Left	
		Right	
	Optional transaxle	Left	None
		Right	None
Slip yoke	Type		None
	Number of teeth		None
	Spline o.d.		None
Universal joints	Make and mfg. no.	Inner	Saginaw Division
		Outer	Saginaw Division
	Number used		2 On Each Drive Shaft
	Type, size, plunge	Inner	Cross-Groove 61.2 Stroke
		Outer	Rzeppa - Fixed Center
	Attach (u-bolt, clamp, etc.)		Splined
	Bearing	Type (plain, anti-friction)	Inner - Ball Anti-Friction      Outer - Ball
		Lubrication (fitting, prepack)	Prepacked
Drive taken through (torque tube, arms or springs)			Wishbone Lower Control Arm; Upper MacPherson Strut
Torque taken through (torque tube, arms or springs)			Engine Mounting System

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

# MVMA Specifications

METRIC (U.S. Customary)

Model Code/Description And/Or  
Engine Code/Description

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

BASE

## Suspension - General Including Electronic Controls

Car leveling	Std./opt./n.a.	--
	Manual/automatic control	--
	Type (air/hydraulic)	--
	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	Std./opt./n.a.	--
	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
Shock absorber (front & rear)		Acceleration
		Road surface
	Type	Front: MacPherson Strut, Rear: Double Acting Hydraulic
	Make	Delco Products
	Piston diameter	Front: 32 (1.26) Rear: 32 (1.26)
	Rod diameter	Front: 22 (.87) Rear: 13 (.51)

## Suspension - Front

Type and description		MacPherson Strut With Coil Spring
Travel	Full jounce (define load condition)	82 mm (3.23 in.), From Design
	Full rebound	81 mm (3.19 in.), From Design
O Spring	Type (coil, leaf, other & matl)	Coil, Steel
	Insulators (type & matl)	Top & Bottom - Rubber
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)	Spring Computer Selected - Varies With Option Content
	Spring rate N/mm (lb./in.)	20 (177)
	Rate @ wheel N/mm (lb./in.)	17.5 (154.9)
O Stabilizer	Type (link, linkless, frmless)	Link
	Material & O.D. bar/tube, wall thickness	Steel, 30 mm (1.18 in.)

## Suspension - Rear

Type and description		Trailing Twist Axle With Tubular Control Arms And Open Section Transverse Beam
Travel	Full jounce (define load condition)	100.8 mm (3.97 in.), From Design
	Full rebound	91 mm (3.58 in.), From Design
O Spring	Type (coil, leaf, other & matl)	Coil, Steel
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)	Spring Computer Selected - Varies With Option Content
	Spring rate N/mm (lb./in.)	23 (203.6), Variable
	Rate @ wheel N/mm (lb./in.)	11.1 (98.2), Variable
	Insulators (type & material)	Top & Bottom - Rubber
	If leaf	No. of leaves
		Shackle (comp or tens)
O Stabilizer	Type (link, linkless, frmless)	--
	Material & O.D. bar/tube, wall thickness	--
Track bar (type)		--

# MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line BERETTA

Model Year 1992 Issued 9-91 Revised(\*)

Model Code/Description And/Or  
Engine Code/Description  
Brakes - Service

ALL

Description		Power Assisted Hydraulic Brakes	
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)	Standard - Disc	
	Rear (disc or drum)	Standard - Drum	
Valving type(prop, delay, metering, other)		Proportioning, Diagonal Split Circuit	
Power brake (std., opt., n.a.)		Standard	
Booster type(rmt, intgrl, vac., hyd., etc.)		Tandem Vacuum	
Vacuum	Source (inline, pump, etc.)	Inline	
	Reservoir (volume cu. in.)	None	
	Pump-type	Not Applicable	
Traction Control	Operational speed range	Not Applicable	
	Type (engine or brake intervention)		
Anti-lock device	Front/rear (std., opt., n.a.)	Standard	
	Manufacturer	Delco Moraine NDH	
	Type (electronic, mech.)	Electronic	
	Number sensors or circuits	4	
	No. anti-lock hyd. circuits	3	
	Integral or add-on system	Add-On	
	Yaw control (yes, no)	Yes	
Hydraulic power source		No	
Effective area sq. cm. (sq. in.)*		204 (31.7) Front	614 (95.2) Rear
Gross Lng area sq cm (sq in) ** (F/R)		204 (31.7) Front	650 (100.8) Rear
Swept area sq cm (sq in) *** (F/R)		1175 (182.2) Front	556 (86.2) Rear
Rotor	Outer working diameter	F/R	Front - 259.5(10.2)
	Inner working diameter	F/R	
	Thickness	F/R	Front - 20 (.79)
	Matl & type (vented/std)	F/R	Front - Vented Cast Iron
Drum	Diameter & width	F/R	Rear - 200 x 45 mm (7.87 x 1.77 in.)
	Type and material	F/R	Cast Iron
Wheel cylinder bore		Front - 57 mm (2.24 in.) Rear - 17.5 (.69)	
Master cylinder	Bore/stroke	F/R	Bore - 22.2 mm (.874 in.) Stroke 35.7 mm (1.41 in.)
Pedal arc ratio		3.35:1	
Line pressure at 445 N (100 lb.) pedal load kPa (psi)		(1,600) Max	
Lining clearance		F/R	Both - Self Adjusting
Brake lining	Front wheel	Bonded or riveted	Integrally Molded - Inboard And Outboard
		Rivet size	Not Applicable
		Manufacturer	Delco Moraine NDH
		Lining code *****	128 FE
		Material	Semi-Metallic
		**** Pri. or out-brd	124 x 46 x 8.6 (4.88 x 1.81 x .34)
		Size Sec. or in-brd	124 x 46 x 9.7 (4.88 x 1.81 x .38)
		Shoe thcknss.(no lng)	4.85 (.19)
	Rear wheel	Bonded or riveted	Riveted
		Manufacturer	Delco Products Division
		Lining code *****	235 FE
		Material	Organic
		**** Pri. or out-brd	167.7 x 43.9 x 6 mm (6.602 x 1.728 x .236 in.)
		Size Sec. or in-brd	194 x 43.9 x 7 mm (7.638 x 1.728 x .28 in.)
		Shoe thcknss (no lng)	2.75 mm (.11 in.)

\* 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 circum.) (Disc brake: Square of Outer Working Dia. - Square of inner Working Dia. X Pi/2 for each brake.)

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

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

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-81 Revised(\*)

## METRIC (U.S. Customary)

Model Code/Description And/Or  
Engine Code/Description

BASE

## Tires And Wheels (Standard)

Tires	Size (load range, ply)		P185/75R14 BW
	Type (bias, radial, etc.)		Steel Belted Radial
	Inflation pressure (cold) for recommended max. vehicle load	Front kPa (psi)	210 (30)
		Rear kPa (psi)	210 (30)
	Rev/mile—at 70 km/h(45mph)		
Wheels	Type & material		Steel
	Rim (size & flange type)		14 x 6
	Wheel offset		47.0 (1.89)
	Attachment	Type(bolt,stud)	Stud
		Circle diameter	100.0 (3.94)
Spare	Tire and wheel		T115/70D - 14 BW, Wheel Dia. 14 x 4. Inflation 415 (60)
	Storage position & location (describe)		Flat Under Rear Load Floor

## Tires And Wheels (Optional)

Tire size (load range, ply)		P195/70R14 BW
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
Wheel (type & material)		Steel
Rim (size, flange type and offset)		14x6
Tire size (load range, ply)		P205/60R15 BW
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
Wheel (type & material)		Aluminum
Rim (size, flange type and offset)		15 x 7
Tire size (load range, ply)		P205/55VR16 BW
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
Wheel (type & material)		Aluminum
Rim (size, flange type and offset)		16 x 7
Tire size (load range, ply)		P205/55R16 BW
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
Wheel (type & material)		Aluminum
Rim (size, flange type and offset)		16 x 7
Spare tire and wheel size (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)		

## Brakes - Parking

Type of control		Hand Lever Assembly
Location of control		In Console Between Front Seats
Operates on		Rear Service Brakes
If separate from service brakes	Type(internal or external)	--
	Drum diameter	--
	Lining size (length x width x thickness)	--

# MVMA Specifications

Vehicle Line BERETTA  
 Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

Model Code/Description And/Or  
 Engine Code/Description

BASE

### Steering

Manual (std., opt., n.a.)			Not Available		
Power (std., opt., n.a.)			Standard		
Speed-sensitive (std., opt., n.a.)					
4-wheel steering (std., opt., n.a.)					
Adjustable steering wheel/ column (tilt, telescope, other)		Type	Tilt		
		Manufacturer	Saginaw Division		
		(std., opt., n.a.)	Optional		
Wheel diameter ** (W9) SAE J1100		Manual	--		
		Power	386 (15.2)		
Turning diameter m (ft.)	Out-side front	Wall to wall (l. & r.)	11.3 (37.2)		
		Curb to curb (l. & r.)	10.75 (35.3)		
	In-side rear	Wall to wall (l. & r.)	5.8 (19.2)		
		Curb to curb (l. & r.)	7.5 (24.6)		
Scrub Radius *			-1.69 (14" Tires)		
Manual	Gear	Type	--		
		Manufacturer		--	
		Ratios	Gear	--	
			Overall	--	
	No. wheel turns(stop to stop)		--		
Power	Type (coaxial,elec.hyd.,etc.)		Rack And Pinion W/Center Take-Off Tie Rods - Integral		
	Manufacturer		Saginaw Division		
	Gear	Type	Rack And Pinion W/Center Take-Off Tie Rods - Integral		
		Ratios	Gear	Not Applicable	
			Overall	16.12:1	
	Pump (drive)		Belt Off Crankshaft Pulley		
	No. wheel turns(stop to stop)		2.88		
Linkage	Type		Center Take Off Tie Rods, Rack And Pinion		
	Location (front or rear of wheels, other)		Rear		
	Tie Rods (one or two)		2		
Steering axis	Inclination at camber (deg.)		13.2		
	Bear-ings (type)	Upper	Ball Bearings		
		Lower	Ball Joint		
		Thrust	Incorporated In Upper Bearing		
Steering spindle/knuckle & joint type			McPherson Strut		

\* The horizontal distance in the front elevation between wheel centerline and kingpin (ball joint) axis at ground.  
 \*\* See Page 22.

# MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

Model Code/Description And/Or  
Engine Code/Description

BASE

## Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	Not Adjustable
		Camber (deg.)	.1 (+/-) .7 FE1 & F41 -2 (+/-) .7 FE3 & FE7
		Toe-in outside track - mm (in.)	0 (+/-) .10
	Service reset*	Caster (deg.)	Not Adjustable
		Camber (deg.)	.1 (+/-) .7 FE1 & F41 -2 (+/-) .7 FE3 & FE7
		Toe-in - mm (in.)	0 (+/-) .10
	Periodic M.V. in-spection	Caster (deg.)	Not Adjustable
		Camber (deg.)	--
		Toe-in - mm (in.)	--
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	Not Applicable
		Toe-in outside track - mm (in.)	"
	Service reset*	Camber (deg.)	"
		Toe-in - mm (in.)	"
	Periodic M.V. in-spection	Camber (deg.)	"
		Toe-in - mm (in.)	"

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

## Electrical - Instruments and Equipment

ELECTRIC BASE CLUSTER

OPTIONAL ELECTRIC CLUSTER

Speedometer	Type (analog, digital, std., opt.)	Analog
	Trip odometer (std., opt., n.a.)	Not Available Standard
Head-up display	Std., opt., not avail.	Not Available
	Type - Secondary, Opto-electronic	
	Speedometer Digital	
	Status/warn. indicators - Turn signals, high beam, low fuel, check gauges	
	Brightness control	Day/night mode, adj.
EGR maintenance indicator		Not Available
Charge indicator	Type	Tell-Tale Warning Light Gauge
	Warning device (light, audible)	Light Not Available
Temperature indicator	Type	Gauge
	Warning device	Tell-Tale Warning Light
Oil pressure indicator	Type	Tell-Tale Warning Light Gauge
	Warning device	Not Available
Fuel indicator	Type	Electric Gauge W/Pointer
	Warning device	Not Available
Wind-shield wiper	Type (standard)	Electric 2-Speed
	Type (optional)	Intermittent Wiper System
	Blade length	482.6 mm (19.0 in.)
	Swept area sq cm (sq in)	6221.9 (964.4)
Wind-shield washer	Type (standard)	Wet-Arm Electric Pump Mounted On Reservoir Bottle
	Type (optional)	Not Available
	Fluid level indicator	"
Rear window wiper, wiper/washer (std., opt., n.a.)		"
Horn	Type	Electric Vibrating
	Number used	Two ('A' And 'F' Note)
Other Headlamp-on Warning		Standard, Chimes



# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Code/Description

2.2 LITER L4 (133 CID)  
MULTI-PORT FUEL INJECTION RPO LN2

### Electrical - Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	1982514 1981601, Opt.
	Voltage	12
	Amps at 0 deg F cold crnk	525 630
	Minutes-reserve capacity	90
	Amps/hrs. - 20 hr. rate	54
	Location	Engine Compartment
Alternator	Manufacturer	Delco Remy
	Rating (idle/max. rpm)	42/105
	Ratio (alt. crank/rev.)	2.64:1
	Output at idle (rpm, park)	42 Amps @ 27 Deg. C. 600 RPM
	Optional (type & rating)	
Regulator	Type	Integral With Alternator

### Electrical - Starting System

Motor	Manufacturer	Delco Remy
	Curr. dr. -29 (-20) deg C(F)	363 Amps
	Power rating kw (hp)	1.4 (1.9)
Motor drive	Engagement type	Solenoid Operated Shift Lever
	Pinion engages from (front, rear)	Front

### Electrical - Ignition System

Type	Electronic (std, opt, n.a.)	Electronic - Direct Ignition
	Other (specify)	Composite Unit Consists Of Two Coils & Electronic Control Module
Coil	Manufacturer	Delco Remy
	Model	1103870
	Current	Engine stopped-A Less Than 100 ma
		Engine idling - A Less Than 1.5 Amp (Average)
Spark plug	Manufacturer	AC Spark Plug
	Model	R44LT5MA
	Thread (mm)	14 x 1.25
	Tightening torque Newton meters (lb. ft.)	10-20 (7-15)
	Gap	1.14 (0.045)
	Number per cylinder	1
Distributor	Manufacturer	Not
	Model	Applicable

### Electrical - Suppression

Locations & type	Not Available
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# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*) \_\_\_\_\_

## METRIC (U.S. Customary)

### Engine Code/Description

3.1 LITER V6 (191 CID)  
MULTI-PORT FUEL INJECTION RPO LHO

### Electrical - Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	Standard
	Voltage	12
	Amps at 0 deg F cold crnk	525 630 Opt.
	Minutes-reserve capacity	90
	Amps/hrs. - 20 hr. rate	54
	Location	Engine Compartment
Alternator	Manufacturer	Delco Remy
	Rating(idle/max rpm drive)	36/100
	Ratio (alt. crank/rev.)	2.65
	Output at idle (rpm, park)	66 Amps @ 27 Deg. C. 850 RPM
	Optional (type & rating)	
Regulator	Type	Integral With Alternator

### Electrical - Starting System

Motor	Manufacturer	Delco Remy
	Curr.dr. -29 (-20) deg C(F)	323 Amps
	Power rating kw (hp)	1.4 (1.9)
Motor drive	Engagement type	Solenoid Operated Shift Lever
	Pinion engages from (front, rear)	Front

### Electrical - Ignition System

Type	Electronic (std, opt,n.a.)	Electronic - Direct ignition
	Other (specify)	Composite Unit Consists Of Three Coils & Electronic Control Module
Coil	Manufacturer	Delco Remy
	Model	1103759
	Current	Engine stopped-A Less Than 100 ma
		Engine idling - A Less Than 1.5 Amp (Average)
Spark plug	Manufacturer	AC/Rochester Products
	Model	R44LTSM
	Thread (mm)	14 x 1.25
	Tightening torque Newton meters (lb. ft.)	9-20 (7-15)
	Gap	1.14mm (.045 in.)
	Number per cylinder	1
Distributor	Manufacturer	Not
	Model	Applicable

### Electrical - Suppression

Locations & type	Not Available
------------------	---------------

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

### Engine Code/Description

2.3 LITER L4 (138 CID)  
MULTI-PORT FUEL INJECTION RPO LGO

### Electrical - Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	Standard Optional
	Voltage	12
	Amps at 0 deg F cold crnk	630
	Minutes-reserve capacity	90
	Amps/hrs. - 20 hr. rate	54
	Location	Engine Compartment
Alternator	Manufacturer	Delco Remy
	Rating (idle/max. rpm)	36/100
	Ratio (alt. crank/rev.)	2.08
	Output at idle (rpm, park)	68 Amps @ 27 Deg. C. 900 RPM
	Optional (type & rating)	None
Regulator	Type	Integral With Alternator

### Electrical - Starting System

Motor	Manufacturer	Delco Remy
	Curr.dr. -29 (-20) deg.C(F)	378 Amps
	Power rating kw (hp)	1.5 kw
Motor drive	Engagement type	Solenoid With Postive Shift
	Pinion engages from (front, rear)	Front

### Electrical - Ignition System

Type	Electronic (std, opt,n.a.)	Standard/Direct Ignition System
	Other (specify)	None
Coil	Manufacturer	Delco Remy (2)
	Model	
	Current	Engine stopped-A 300 MA
		Engine idling - A Peak 9.5 Amps
Spark plug	Manufacturer	A/C Spark Plug
	Model	.FR 3LSK
	Thread (mm)	14 x 1.25
	Tightening torque Newton meters (lb. ft.)	21 - 24 (15 - 18)
	Gap	.889 mm (.035 in.)
	Number per cylinder	1
Distributor	Manufacturer	Not Applicable
	Model	"

### Electrical - Suppression

Locations & type	Not Available
------------------	---------------

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-81 Revised(\*)

## METRIC (U.S. Customary)

Model Code/Description

Base

### Body

Structure	Unitized Body Construction Including Front End Structure With Bolted-On Fenders And Hood
Bumper System Front - Rear	Bumper Fascias Are Attached To Steel Impact Bar And Dual Energy Absorbers For Collision Energy Absorption. (Meets G.M. 5 mph Impact Standard)
Anti-Corrosion Treatment	Special Anti-Corrosion Materials Are Used On Interior And Exterior Metal Panel Surfaces. Materials Include One And Two-Sided Galvanized Steel, Special Metal Conditioners, Primers, And Sealers. Protective Moldings Are Applied To Exterior Lower Body.

### Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	High Solids Basecoat/Clearcoat Enamel	
Hood	Material & mass	Two Sided Galvanized Steel 17.91 Kg (39.5 lbs.)
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Prop
	Release control (int., ext.)	Internal
Trunk lid	Material & mass	Two sided Galvanized Steel 10.6 Kg (23.4 lbs.)
	Type (counterbalance, other)	Torsion Rods
	Internal release control (elec., mech., n.a.)	Electrical - Optional
Hatch-back lid	Material & mass	Not Applicable
	Type (counterbalance, other)	"
	Internal release control (elec., mech., n.a.)	"
Tailgate	Material & mass	"
	Type (drop, lift, door)	"
	Internal release control (elec., mech., n.a.)	"
Vent window control (crank, friction, pivot, power)	Front	None
	Rear	"
Window regulator type (cable, tape, flex drive, etc.)	Front	Not Applicable Elec. Pinion Gear & Sector Arm
	Rear	" Elec. Pinion Gear & Sector Arm
Seat cushion type (e.g., 60/40, bucket, bench wire, foam, etc.)	Front	Bucket With Polyurethane Padding
	Rear	Bench With Polyurethane Padding
	3rd seat	Not Applicable
Seat back type (e.g., 60/40, bucket, bench, wire, foam, etc.)	Front	Reclining Bucket With Polyurethane Padding
	Rear	Fixed Bench With Polyurethane Padding*
	3rd seat	Not Applicable
* For Beretta GT & GTZ, 60/40 Split Folding Rear Seat Standard		

### o Frame

Type and description (separate frame, unitized frame, partially-unitized frame)	Unitized Frame
	Body-Frame Integral With Bolt-On Powertrain Cradle.

# MVMA Specifications

Vehicle Line BERETTA  
 Model Year 1992 Issued 9-91 Revised(\*)           

METRIC (U.S. Customary)

Model Code/Description

BASE

## Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.)	First seat	3-Point Manual (Air Bag)		3-Point Manual
		Second seat	3-Point Belt	Adjustable Latch 2-Point Belt (Non Retractor)	3-Point Belt
	Standard/optional	Third seat			
Passive	Type & description (air bag, motorized-2-point belt, fixed belt, knee bolster, manual-lap belt)	First seat	Air Bag		
		Second seat			
	Standard/optional	Third seat			

## Glass

	SAE Ref No	
Windshield glass exposed surface area sq. cm. (sq. in.)	S1	10303 (1598)
Side glass exposed surface area sq. cm. (sq. in.) - total 2- sides	S2	1794 (278)
Backlight glass exposed surface area sq. cm. (sq. in.)	S3	4813 (746)
Total glass exposed surface area sq. cm. (sq. in.)	S4	16910 (2622)
Windshield glass (type)		Laminated
Side glass (type)		Tempered
Backlight glass (type)		Tempered

## Headlamps

Description - sealed beam, halogen, replaceable bulb, etc.	Halogen, Replaceable Bulb
Shape	Rectangular
Lo-beam type (2A1, 2B1, 2C1, etc.)	HB4
Quantity	2
Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	HB3
Quantity	2

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-81 Revised \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Code/Description

BASE

### o Climate Control System

Air conditioning (std., opt., man., auto.)		Optional With Manual Operation And Electrically Operated Temperature Door
Condenser	Type	Tube And Fin
	Eff. face area (sq. mm.)	262,080
	Fins per inch	17
Evaporator	Type	3-5-5 Parallel Rib "S" Flow Plate Type, Round Tank
	Eff. face area (sq. mm.)	45,212
	Fins per inch	14
Heater Core	Material	Aluminum
	Eff. face area (sq. mm.)	29,210
	Fins per inch	38
Compressor	Type	V5 (Five Cylinder, Variable Displacement)
	Displacement (cc)	136 (8.3) Optional Engine 147 (9.2)
	Manufacturer	Harrison Division
	A/C pulley ratio	1.24
Accumulator	Type	None
	Height (mm.)	None
	Diameter (mm.)	None
Receiver	Type	Aluminum R-12 Desiccant
	Height (mm.)	169 (6.7)
	Diameter (mm.)	77 (3.0)
Refrigerant control (CCOT, TVS, etc.)		TXV
Heater water valve (yes / no)		NO
Refrigerant (R - 12, R - 134a, etc.)		R12
Charge level (lbs. - oz.)		2.63 LBS.
Cold engine lockout switch (yes / no)		Yes
Wide open throttle cutout switch (yes / no)		Yes

# MVMA Specifications

Vehicle Line BERETTA  
 Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

Model Code/Description

BASE

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

Clock (digital, analog)		Digital (Integ. W/Stereo Radios)
Compass / thermometer		Not Available
Console (floor, overhead)		Optional,(D55) Full Floor
Defroster, elec. backlight		Optional (C49)
Electronic	Diagnostic monitor (integrated, individual)	Not Available
	Instrument cluster (list instruments)	Optional (UB3) Oil Pressure, Temp, Volts, Trip Odom & tack
	Keyless entry	
	Tripminder (avg. spd. fuel)	
	Voice alert (list items)	
	Other	
Fuel door lock (remote, key, electric)		Not Available
Lamps	Auto head on/off delay, dimming	"
	Cornering	"
	Courtesy (map, reading)	Standard, Map Reading Optional
	Door lock, ignition	Not Available
	Engine compartment	"
	Fog	Standard On LZ
	Glove compartment	
	Trunk	Standard
	Illuminated entry system (list lamps, activation)	
	Other	Ash Tray Lamp Standard
Mirrors	Day / night (auto. man.)	Optional (DC4) (Manual)
	L.H. (remote, pwr., heated)	Standard (D68) Remote
	R.H.(convex, rmt, pwr, htd)	Standard (D68) Remote
	Visor vanity (RH/LH illum.)	Optional
Navigation system (describe)		Not Available
Prkg. brake-auto release (warn. light)		Standard (Manual Release) Lower Area Of Speedometer

\*\* - Available In Optional Custom Interior (RPO B18)

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description

BASE

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

Power equipment	Deck lid(release, pull down)		Optional (A90) Power Release
	Door locks (manual, auto., describe system)		Optional (AU3) Power
	Seats	2 - 4 - 6 way, etc.	
		Reclining(R.H., L.H.)	
		Memory (R.H., L.H., preset, recline)	
		Support (lumbar, hip, thigh, etc.)	
		Heated (R.H., L.H., other)	
	Side windows		Optional (A31)
	Vent windows		Not Available
Rear windows		"	
Radio systems	Antenna (location, whip, w/shield, power)		Front Fender - R.H., Fixed Mast Standard
	Stan.	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	(UM7) Electronically Tuned AM/FM Stereo Radio With Seek And Scan And Clock. Included Dual Front And Extended Range Rear Speakers.
	Opt.		(UM6) AM/FM Stereo Cassette, Seek And Scan And Clock.
			(U1C) AM/FM Stereo, Seek/Scan, Clock, ETR & Compact Disc.
	Speaker (number, location)		(U79) 4 Speakers; 2 In Front And Two In Rear
Roof: open air or fixed (flip-up, sliding, 'T')			(AD3) Optional Hinged Removable
Speed control device			(K34) Optional
Speed warn. dev. (light, buzzer, etc.)			Not Available
Tachometer (rpm)			(UB3) Optional
Telephone system (describe)			Not Available
Theft deterrent system			

## Trailer Towing

Towing capable	Yes / No	
Engine/transmission/axle	Std / Opt	
Tow class (I, II, III)*	Std / Opt	
Max. gross trailer wgt. (lbs.)	Std / Opt	
Max. trailer tongue load (lbs.)	Std / Opt	
Towing package available	Yes / No	

\* Class I - 2,000 lbs. Class II - 3,500 lbs. Class III - 5,000 lbs.



# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised

## 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.

#### Model Code/Description

BASE

#### Width

##### SAE Ref. No.

Tread (front)	W101	1419 (55.9)
Tread (rear)	W102	1438 (56.6)
Vehicle width	W103	1724 (67.9)
Body width at Sg RP (front)	W117	1724 (67.9)
Vehicle width (front doors open)	W120	3901 (153.6)
Vehicle width (rear doors open)	W121	Not Applicable
Tumble-home (deg.)	W122	27
Outside mirror width	W410	1957 (77.0)

#### Length

Wheelbase	L101	2627 (103.4)	
Vehicle length	L103	4757 (187.3)	4751 (187) LW & LZ
Overhang (front)	L104	1067 (42.0)	
Overhang (rear)	L105	1063 (41.9)	1057 (41.6) LW & LZ
Upper structure length	L123	2693 (106.0)	
Rear wheel C/L 'X' coordinate	L127	4410 (173.6)	

#### Height \*\*

Passenger distribution (front/rear)	PD1,2,3		**
Trunk/cargo load			**
Vehicle height	H101	1346 (53.0)	
Cowl point to ground	H114	925 (36.4)	
Deck point to ground	H138	998 (39.3)	
Rocker panel-front to ground	H112	219 (8.6)	211 (8.3) LW & LZ
Rocker panel-rear to ground	H111	223 (8.8)	215 (8.5) LW & LZ
Windshield slope angle (deg.)	H122	60.5	
Backlight slope angle (deg.)	H121	65	

#### Ground Clearance \*\*

Front bumper to ground	H102	259 (10.2)
Rear bumper to ground	H104	264 (10.4)
Bumper to ground front at curb mass (wt.)	H103	276 (10.9)
Bumper to ground rear at curb mass (wt.)	H105	292 (11.5)
Angle of approach (deg.)	H106	13
Angle of departure (deg.)	H107	19
Ramp breakover angle (deg.)	H147	15
Axle differential to ground (front/rear)	H153	--
Min. running ground clearance	H156	143 (5.6)
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

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised

## METRIC (U.S. Customary) Vehicle Dimensions

See Key Sheets for Definitions

Model Code/Description

BASE

### Front Compartment

SAE Ref. No.

SgRP front, 'X' coordinate	L31	3138 (123.5)
Effective head room	H61	956 (37.6)
Max. eff. leg room (accelerator)	L34	1102 (43.4)
SgRP to heel point	H30	241 (9.5)
SgRP to heel point	L53	908 (35.7)
Back angle (deg.)	L40	26.5
Hip angle (deg.)	L42	103
Knee angle (deg.)	L44	136.5
Foot angle (deg.)	L46	88.5
Design H-point front travel	L17	212 (8.3)
Normal driving & riding seat track trvl.	L23	189 (7.4)
Shoulder room	W3	1392 (54.8)
Hip room	W5	1299 (51.1)
*** Upper body opening to ground	H50	1230 (48.4)
Steering wheel maximum diameter*	W9	386 (15.2)
Steering wheel angle (deg.)	H18	19
Accel. heel pt. to steer. whl. cntr	L11	--
Accel. heel pt. to steer. whl. cntr	H17	--
Undepressed floor covering thickness	H67	12 (0.5)

Front Compartment Int. Dim. Are Measured With The Seating Ref. Pt.  
(SgRP) mm Forward And mm Upward of Rearmost Position.

### Rear Compartment

SgRP point couple distance	L50	760 (29.9)
Effective head room	H63	930 (36.6)
Min. effective leg room	L51	827 (32.6)
SgRP (second to heel)	H31	262 (10.3)
Knee clearance	L48	-39 (-1.5)
Shoulder room	W4	1402 (55.2)
Hip room	W6	1290 (50.8)
*** Upper body opening to ground	H51	--
Back angle (deg.)	L41	24.5
Hip angle (deg.)	L43	81
Knee angle (deg.)	L45	87
Foot angle (deg.)	L47	119
Depressed floor covering thickness	H73	12 (0.5)

### Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	382.6 (13.5)
*** Lifter height	H195	831 (32.7) 821 (32.3) LW & LZ

### Interior Volumes (EPA Classification)

Vehicle class		Compact
Interior volume index (cu. ft.)**		103.4
Trunk / cargo index (cu. ft.)		13.5

\* See page 14.

\*\* Includes passenger and trunk / cargo index - see definition page 32.

\*\*\* EPA Loaded Vehicle Weight, Loading Conditions.

All Linear Dimensions Are In Millimeters (Inches).

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised \_\_\_\_\_

## METRIC (U.S. Customary) Vehicle Dimensions

See Key Sheets for Definitions

Model Code/Description

BASE

### Station Wagon / MPV\*\*

#### - Third Seat

SAE Ref. No. (NOT APPLICABLE)

Seat facing direction	SD1	
SgRP couple distance	L85	
Shoulder room	W85	
Hip Room	W86	
Effective leg room	L86	
Effective head room	H86	
SgRP to heel point	H87	
Knee clearance	L87	
Back angle (deg.)	L88	
Hip angle (deg.)	L89	
Knee angle (deg.)	L90	
Foot angle (deg.)	L91	

### Station Wagon / MPV\*\* - Cargo Space

(NOT APPLICABLE)

Cargo length (open front)	L200	
Cargo length (open second)	L201	
Cargo length (closed front)	L202	
Cargo length (closed second)	L203	
Cargo length at belt (front)	L204	
Cargo length at belt (second)	L205	
Cargo width (wheelhouse)	W201	
Rear opening width at floor	W203	
Opening width at belt	W204	
Min. rear opening width above belt	W205	
Cargo height	H201	
Rear opening height	H202	
* Tailgate to ground height	H250	
Front seat back to load floor height	H197	
Cargo volume index cu. m (cu. ft.)	V2	
Hidden cargo vol. index cu. m (cu. ft.)	V4	
Cargo volume index-rear of 2-seat	V10	
O Cargo volume index**	V6	
O Cargo width at floor**	W500	
O Maximum cargo height**	H505	

### Hatchback - Cargo Space

(NOT APPLICABLE)

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

\* EPA Loaded Vehicle Weight, Loading Conditions

\*\* MPV - Multipurpose Vehicle

All Linear Dimensions Are in Millimeters (Inches).

# MVMA Specifications

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

## METRIC (U.S. Customary)

Model Code/  
Description

2-DOOR NOTCHBACK COUPES

## Vehicle Fiducial Marks

Fiducial Mark Number*	Define Coordinate Location	
Front	X	Fiducial Mark To Vertical Zero Grid Line - Front Measured Horizontally, From The Zero Grid Line To The Front Fiducial Mark Located On Top Of The Front Seat Adjuster Mounting Bolt.
	Y	Fiducial Mark To Centerline Of Car - Front, Width Measurement Made From Centerline Car To Fiducial Mark Located On Top Of The Front Seat Adjuster Mounting Bolt.
	Z	Fiducial Mark To Horizontal Zero Grid Line - Front, Measured Vertically From The Zero Grid Line Front Fiducial Mark Located On Top Of The Front Seat Adjuster Mounting Bolt.
Rear	X	Fiducial Mark To Vertical Zero Grid Line - Rear, Measured Horizontally From The Zero 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 Zero Grid Line - Rear, Measured Vertically From The Zero Grid Line To Rear Fiducial Mark Located On The Rail (Compartment Pan - Longitudinal).
NOTE: Provide 3 of 4 Fiducial Mark Locations		
Front	W21**	346 (13.6)
	L54**	2761 (108.7)
	H81**	211 (8.3)
	H181**	263 (10.4)
	*** H183**	241 (9.5)
Rear	W22**	440 (17.3)
	L55**	4953 (195.0)
	H82**	362 (14.3)
	H182**	429 (16.9)
	*** H184**	401 (15.8)

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

\*\* Reference - SAE Recommended Practice J1100 - Motor Vehicle Dimensions.

\*\*\* EPA Loaded Vehicle Weight, Loading Conditions  
All Linear Dimensions Are In Millimeters (Inches)

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

Model Year 1992

Issued 9-91

Revised(\*)

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

\*\* ETWC - Equivalent Test Weight Class - basis for U.S. Environmental Protection Agency emission certifications.  
Refer to ETWC code legend below for test weight class.

A	1000	J	2000	Q	3000	4000	Y	4000
B	1125	K	2125	R	3125	4250	Z	4250
C	1250	L	2250	S	3250	4500	AA	4500
D	1375	M	2375	T	3375	4750	BB	4750
E	1500	N	2500	U	3500	5000	CC	5000
F	1625	O	2625	V	3625	5250	DD	5250
G	1750	P	2750	W	3750	5500	EE	5500
H	1875		2875	X	3875	5750	FF	5750

<sup>\*\*\*</sup> Shipping Mass (weight) = Curb Weight Less:

38 (84)

# MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line BERETTA  
Model Year 1992 Issued 9-91 Revised(\*)

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
AU3	Power Door Lock System	.6 (1.3)	1.2 (2.6)	1.8 (3.9)	
A31	Power Windows	1.4 (3.1)	2.2 (4.8)	3.6 (7.9)	
A90	Power Trunk Opener	-.2 (-0.4)	1.0 (2.2)	.8 (1.8)	
B19	Custom Interior	1.0 (2.2)	1.0 (2.2)	2.0 (4.4)	Standard On 'GT' Model (Z21)
B34	Floor Mats - Front	1.0 (2.2)	.2 (0.4)	1.2 (2.6)	
B35	Floor Mats - Rear	.2 (0.4)	.6 (1.3)	.8 (1.7)	
CD4	Intermittent Windshield Wiper System	.2 (0.4)	0 (0)	.2 (0.4)	
C49	Electric Rear Window Defogger	0 (0)	.4 (0.9)	.4 (0.9)	
C60	Air Conditioning	21.6 (47.6)	-1.4 (-3.1)	20.2 (44.5)	With RPO LN2 / LG0 ENGINES
		21.2 (46.7)	-1.4 (-3.1)	19.8 (43.6)	With RPO LH0 Engine
K05	Engine Block Heater	.2 (0.4)	0 (0)	.2 (0.4)	
K34	Electronic Speed Control	1.8 (3.9)	0 (0)	1.8 (3.9)	

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

# MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line BERETTA

Model Year 1992 Issued 9-91 Revised(\*)

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
LH0	3.1 Liter V6 Engine	45 (99)	-3.0 (-6.6)	42 (93)	
MD9	Automatic Transmission	18.2 (40.1)	-1.6 (-3.5)	16.6 (36.6)	With RPO LN2 Engine
		16.6 (36.6)	-1.4 (-3.1)	15.2 (33.5)	With RPO LH0 Engine
N33	Comfortilt Steering Wheel	.4 (0.9)	.2 (0.4)	.6 (1.3)	
PF2	Styled Aluminum Wheels - 15"	-3.2 (-7.0)	-3.2 (-7.0)	-6.4 (-14.0)	
UA1	Heavy Duty Battery	3.0 (6.6)	-0.4 (-0.9)	2.6 (5.7)	Required With Auto. Trans. On L4. Mandatory For Canada
UM6	AM/FM Stereo Radio, Cassette Player With Clock			0	
VK3	Front License Plate Mounting	0.4 (0.9)	0 (0)	0.4 (0.9)	
V56	Deck Lid Luggage Rack (Charcoal)	.6 (1.3)	2.6 (5.7)	3.2 (7.0)	
Z21	'Beretta GT' Option	53.8 (118.6)	9.0 (19.8)	62.8 (138.4)	

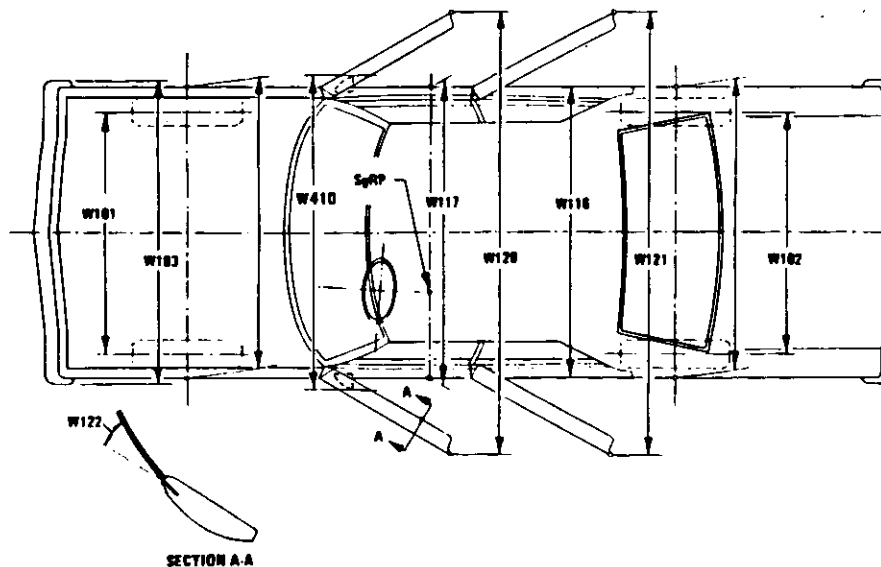
\* Also see Engine - General Section for dressed engine mass (weight).

# MVMA Specifications

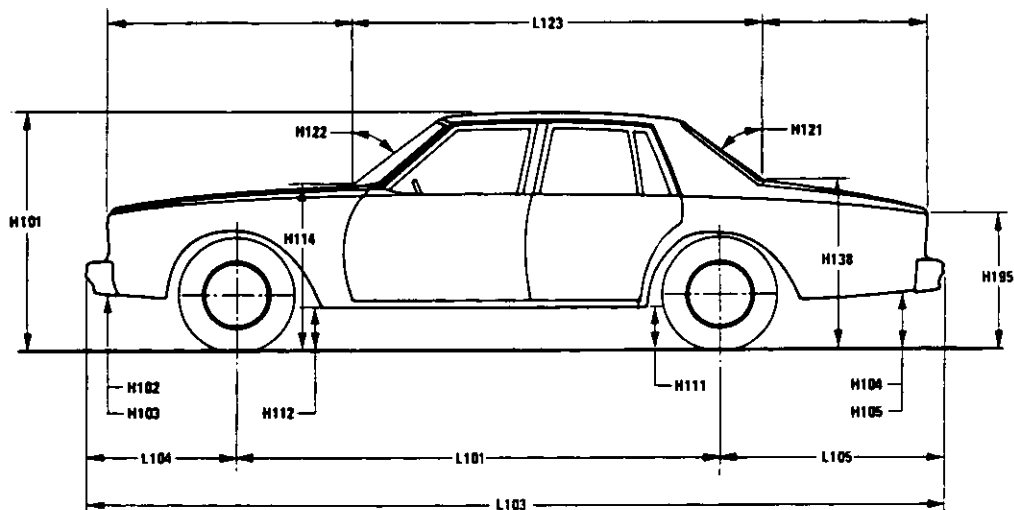
METRIC (U.S. Customary)

## Exterior Vehicle And Body Dimensions – Key Sheet

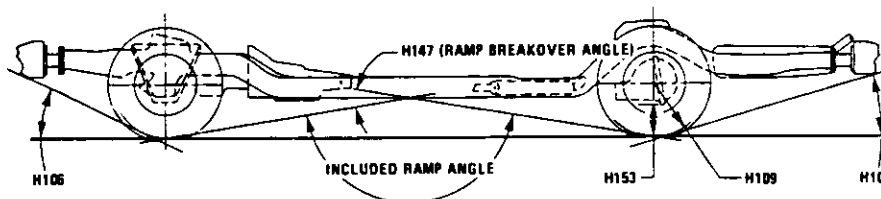
### Exterior Width



### Exterior Length & Height



### Exterior Ground Clearance

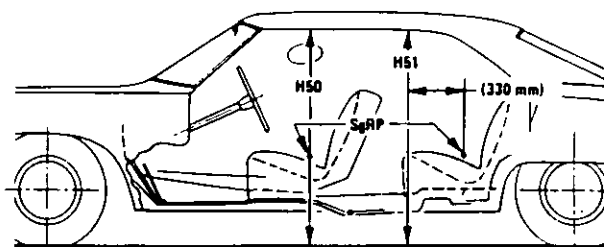
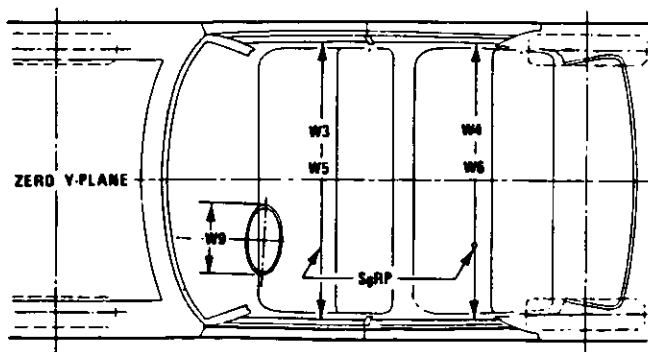
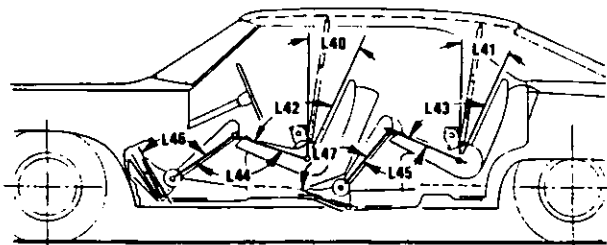
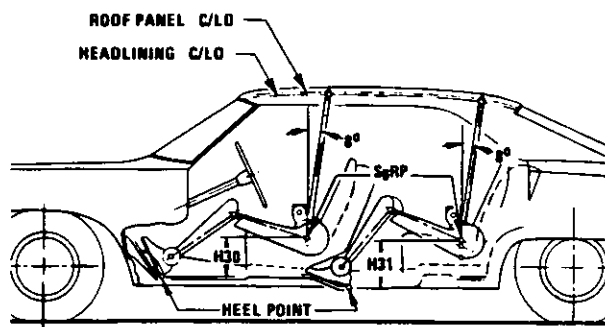
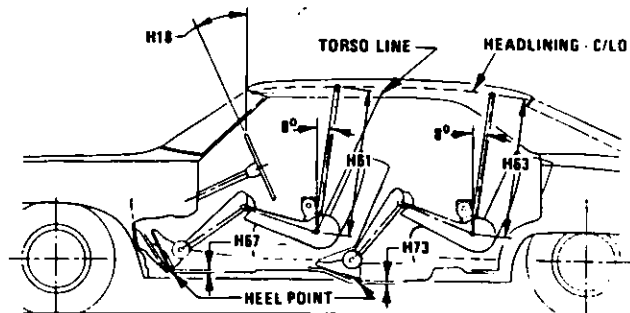
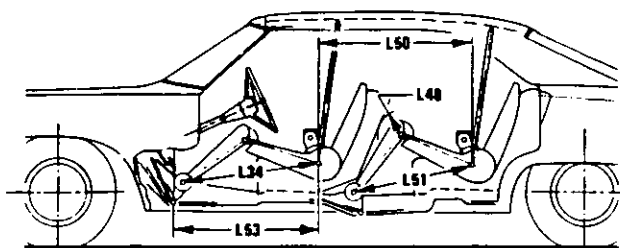




# MVMA Specifications Form

## METRIC (U.S. Customary)

### Interior Vehicle And Body Dimensions – Key Sheet

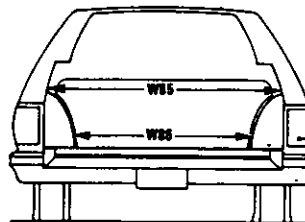
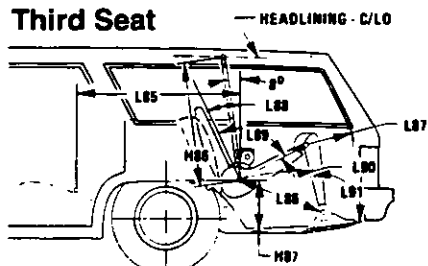


# MVMA Specifications

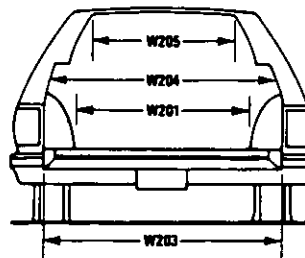
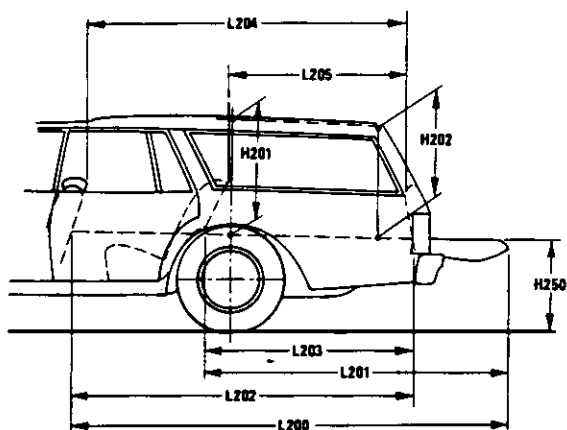
METRIC (U.S. Customary)

## Interior Vehicle And Body Dimensions – Key Sheet

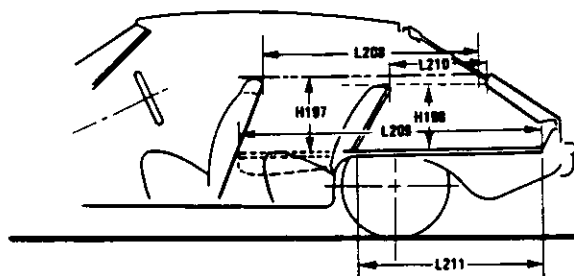
Third Seat



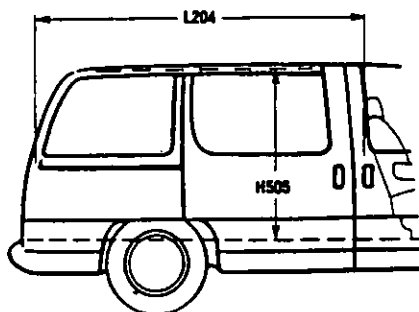
Cargo Space



Station Wagon



Hatchback



Ø Multipurpose Vehicle

# MVMA Specifications

## 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.
- 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.
- W410 OUTSIDE MIRROR WIDTH: The dimension between the widest point on the outside mirrors. The standard right and left mirror adjusted for normal driving will be shown unless otherwise noted. When only one outside mirror is standard, the dimension will be to the zero "Y" 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 OVERHAND – FRONT. The dimension measured longitudinally from the centerline of the front wheels to the foremost point on the vehicle including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.
- L105 OVERHANG – REAR. The dimension measured longitudinally from the centerline of the rear wheels; or in the case of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

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

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

#### 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.
- 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.
- 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 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.

# MVMA Specifications

## METRIC (U.S. Customary)

### Interior Vehicle And Body Dimensions -- Key Sheet Dimensions Definitions

#### 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

- 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.
- H7 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.
- 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

- L-41 BACK ANGLE -- SECOND. The angle measured between a vertical line through the SgRP -- second and the torso line.
- L43 HIP ANGLE -- SECOND. The angle measured between torso line and thigh centerline.
- L45 KNEE ANGLE -- SECOND. The angle measured between thigh centerline and lower leg centerline.
- L47 FOOT ANGLE -- SECOND. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the three-dimensional devices bare foot flesh line (Reference J826).
- L48 KNEE CLEARANCE -- SECOND. The minimum dimension measured from the knee pivot center to the back of the front seatback minus 51 mm (2.0 in.).
- L50 SgRP COUPLE DISTANCE -- SECOND. The dimension measured horizontally from the driver SgRP -- front to the SgRP -- second.
- L51 MINIMUM EFFECTIVE LEG ROOM -- SECOND. The dimension measured along a line from the ankle pivot center to the SgRP -- second plus 254 mm (10.0 in.).
- W4 SHOULDER ROOM -- SECOND. The minimum dimension measured laterally between door or quarter trimmed surfaces on the "X" plane through the SgRP -- second at height between 254-406 mm (10.0-16.0 in.) above the SgRP -- second, excluding the door assist straps and attaching parts.
- W6 HIP ROOM -- SECOND. Measured in the same manner as W5.
- H31 SgRP -- SECOND TO HEEL. The dimension measured vertically from the SgRP -- second to the two dimensional device heel point on the depressed floor covering.
- 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.

# MVMA Specifications

## METRIC (U.S. Customary)

### Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

#### 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.

#### 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 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 / MPV – Third Seat Dimensions

- L85 SgRP COUPLE DISTANCE – THIRD. The dimension measured horizontally from the SgRP – second to the SgRP – third.
- L86 EFFECTIVE LEG ROOM – THIRD. The dimension measured along a line from the ankle pivot center to the SgRP – third plus 254 mm (10.0 in.).
- L87 KNEE CLEARANCE – THIRD. The minimum dimension from the knee pivot center to the back of second seatback minus a constant of 51 mm (2.0 in.). With rear-facing third seat, dimension is measured to closure.
- L88 BACK ANGLE – THIRD. Measured in the same manner as L41.
- L89 HIP ANGLE – THIRD. Measured in the same manner as L43.
- L90 KNEE ANGLE – THIRD. Measured in the same manner as L45.
- L91 FOOT ANGLE – THIRD. Measured in the same manner as L47.
- W85 SHOULDER ROOM – THIRD. Measured in the same manner as W4.
- W86 HIP ROOM – THIRD. Measured in the same manner as W5.
- H86 EFFECTIVE HEAD ROOM – THIRD. The dimension, measured along a line 8 deg. from the SgRP – third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- H87 SgRP – THIRD TO HEEL POINT.
- SD1 SEAT FACING DIRECTION – THIRD.

#### Station Wagon / MPV – 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 undeepressed floor covering to the rearmost point on the undeepressed 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 undeepressed floor covering to the rearmost point on the undeepressed 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 undeepressed floor covering to the rearmost point on the undeepressed 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 undeepressed floor covering to the rearmost point on the undeepressed 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.
- 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.
- Ø W500 CARGO WIDTH AT FLOOR. The maximum dimension measured laterally between the limiting interferences at the floor level. This dimension shall include ribs and pillars, but will exclude wheelhouses.
- H197 FRONT SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undeepressed floor covering.
- H201 CARGO HEIGHT. The dimension measured vertically from the top of the undeepressed floor covering to the headlining at the rear wheel "X" coordinate on the zero "Y" plane.
- H202 REAR OPENING HEIGHT. The dimension measured vertically from the top of the undeepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door fully open.
- H250 TAILGATE TO GROUND CURB MASS (WT.). The dimension measured vertically from the top of the undeepressed floor covering on the lowered tailgate to ground on the zero "Y" plane.
- Ø H505 MAXIMUM CARGO HEIGHT. The maximum vertical dimension rear of the front seat from the cargo floor to roof bow or headlining at the zero "Y" plane.

# MVMA Specifications

METRIC (U.S. Customary)

## Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

### 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:

$$\frac{L506 \times W505 \times H503}{1728} = \text{ft}^3$$

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 electronically 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.** 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.** 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 "X" plane.

**L211 CARGO LENGTH AT FLOOR – SECOND SEATBACK.** 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 seatback 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

## METRIC (U.S. Customary)

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