

1994
CHEVROLET
BERETTA

B

③

1994 Beretta

ORDERING INFORMATION

Focus Vehicle for 1994 is the Beretta Coupe. This model offers 5-passenger seating, a sporty appearance and advanced technology at an exceptional value. When equipped with the recommended PEG 1 (LVA1), this model represents the best opportunity for high-volume Beretta sales at your dealership.

Feature Vehicle is the Beretta Z26 Coupe (detailed on the following sheet).

Safety and Security

■ **Driver Air Bag**—in conjunction with seat belts, helps protect driver in certain frontal collisions ■ **Brake/Transmission Shift Interlock (BTSI)**—prevents transmission from inadvertently being shifted out of park without first applying foot brake (automatic transmission only) ■ **Power Door Locks with Automatic Locking/Unlocking Feature**—doors automatically lock when vehicle is shifted out of park and automatically unlock when shifted into park ■ **Rear Seat Child Safety Belt Comfort Guide**—provides comfortable placement of seat belt for smaller rear seat occupants

Performance

■ **2.2 Liter 4-Cylinder Engine with Multi-Port Fuel Injection**—redesigned for lower friction, improved fuel economy and increased power ■ **Five-Speed Manual Transmission**—allows driver to select best gear for any driving condition. Over-drive gear reduces RPM at cruising speeds, thereby increasing fuel economy and reducing engine wear ■ **Four-Wheel Anti-Lock Brakes**—help reduce wheel lockup to maintain steering control during severe braking even on slippery roads ■ **Power Rack and Pinion Steering**—a compact, lightweight system that provides easy control of vehicle's steering

Appearance

■ **Base Coat/Clear Coat Paint**—resists fading and provides a high gloss shine for long-lasting exterior beauty ■ **Two-Sided Galvanized Steel**—zinc-coated outer body panels (except roof) resist corrosion ■ **Body-Color Side Moldings**—matches exterior paint color for an upscale look ■ **Sport Steering Wheel**—enhances interior with sportier appearance ■ **Gloss Black Door and Quarter Window Moldings**—add a bold look to exterior ■ **Medium Adriatic Blue Metallic and Blackrose Metallic Exterior Colors**—allow the customer a wider choice ■ **Medium Blue Interior Color**—offers a wider interior color selection ■ **Bolt-on Full Wheel Covers**—attractive design is bolted on to reduce chance of loss or theft ■ **Door Panels**—redesigned for 1994 with passive front seat belts

Comfort and Convenience

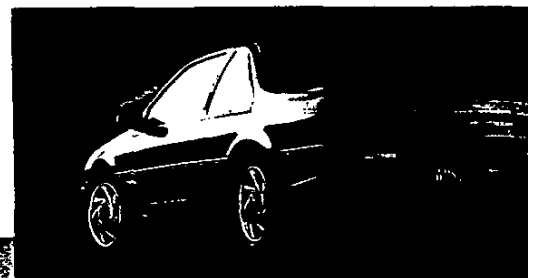
■ **Rear Seating Area Heat Ducts**—provide better heat distribution to rear seat passengers for increased comfort ■ **Cloth Reclining Bucket Seats**—combine support and comfort with a reclining feature ■ **Inside Day/Night Rearview Mirror with Reading Lamps**—allows for nighttime dimming and provides convenient overhead illumination ■ **Luggage Area Convenience Net**—designed to keep items such as small packages and groceries secure within cargo area ■ **Intermittent Wipers**—allow driver to match wiper speed to weather conditions ■ **Driver-Side 4-Way Manual Seat Adjuster**—allows individual seat placement for optimum comfort

Easy-To-Own

■ **Scotchgard™ Fabric Protector**—on seats, door panels, carpeting and floor mats: resists stains and makes cleanup easy ■ **Stainless Steel Exhaust**—includes all pipes, catalytic converter and muffler to resist corrosion ■ **Low Oil Level Indicator**—warns driver of low oil level to prevent engine damage ■ **CFC-Free Air Conditioning**—quickly cools interior for maximum occupant comfort and contains no ozone-depleting CFCs

RED ■ : New Feature
BLACK ■ : Focus Vehicle Feature

FEATURE VEHICLE: BERETTA Z26 COUPE



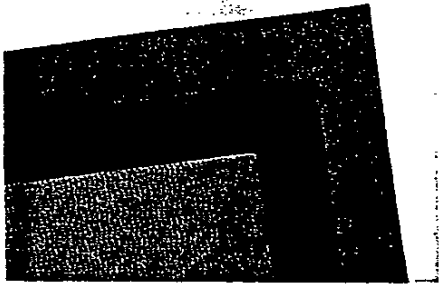
FOCUS
VEHICLE:
BERETTA
COUPE



94 Beretta

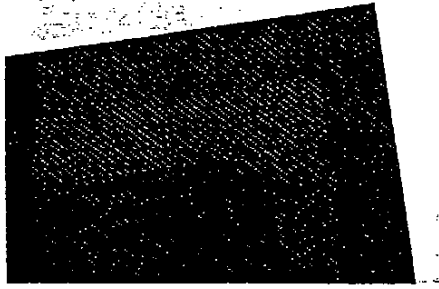
Trim Color/Seat Style Availability

Cloth
available in Medium Blue, Garnet Red
and Gray

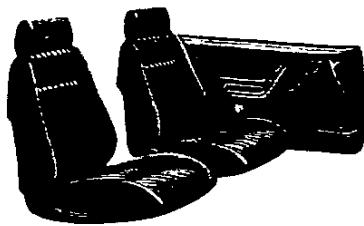


Reclining Bucket Seats

Sport Cloth
available in Medium Blue, Gray
and Garnet Red



Sport Reclining Bucket Seats



Four Most Popular Exterior Colors By Percentage

Below are the anticipated four most popular Beretta colors for 1994 based on national sales volume. They are listed for reference only. To identify the top selling colors in your area by model, use the Retail Sales Analysis (RSA).



- Bright Aqua Metallic22%
- Bright Red21%
- Bright White18%
- Blackrose Metallic13%

Four Most Popular Exterior Colors with Corresponding Interior Color Availability

		I N T E R I O R		
		Medium Blue	Gray	Garnet Red
EXTERIOR	Bright Aqua Metallic		■	
	Bright Red		■	
	Bright White	■	■	■
	Blackrose Metallic		■	

NOTE: New Beretta interior color is Medium Blue. New exterior colors are Medium Adriatic Blue Metallic and Blackrose Metallic.

Wheels



Beretta Coupe standard
14" steel bolt-on
full wheel cover



New standard
15" steel bolt-on
full wheel cover for
Beretta Z26.

Option for the Beretta Coupe...



New Beretta Z26
optional
16" styled aluminum wheel
with locks

'94 Beretta

Beretta Feature Availability

	Beretta Coupe	Beretta Z26 Coupe
2.2L MFI L4	S	N/A
2.3L MFI Quad 4 (H.O.)	N/A	S1
3.1L MFI V6	O2	O2
5-Speed Manual Transmission	S4	S
3-Speed Automatic Transmission	O4	N/A
4-Speed Automatic Transmission	O5	O5
P205/60R-15 Blackwall Tires	O3	S
P185/75R-14 Blackwall Tires	S	N/A
P195/70R-14 Blackwall Tires	O	N/A
P205/55R-16 Blackwall Tires	N/A	O
Driver Air Bag	S	S
4-Wheel Anti-Lock Brakes	S	S
Power Front Disc/Rear Drum Brakes	S	S
Brake/Transmission Shift Interlock (auto. trans. only)	S	S
Power Rack and Pinion Steering	S	S
Basecoat/Clearcoat Paint	S	S
Stainless Steel Exhaust	S	S
Scotchgard™ Fabric Protector	S	S
Level II Sport Suspension	O	S
Gage Package with Tachometer and Trip Odometer	O	S
Rear Decklid Spoiler	O	S
Luggage Area Convenience Net	O	S
Styled Exhaust Outlets	N/A	S
Power Windows with Driver Auto Down	O	O

S=Standard

O=Optional

N/A=Not Available

1 Requires 5-speed manual transmission

2 Requires 4-speed automatic transmission

3 requires 15" Bolt-On Wheel Cover (PG1)

4 Requires 2.2L MFI engine (LN2)

5 Requires 3.1L SFI engine (L82)

Additional Information on Significant Features

- **New power door locks with automatic locking/unlocking feature.** When shifting out of Park, the doors are automatically locked. All doors will automatically unlock when the ignition key is turned to the "off" position.
- Another important safety feature is **Brake/Transmission Shift Interlock** which prevents the driver from shifting out of Park unless first depressing the brake pedal, thereby reducing the possibility of accidental shifting (automatic transmission only).
- Beretta also offers standard **4-Wheel Anti-Lock Brakes**, which minimizes the possibility of wheel lockup during severe braking. When wheel sensors detect an impending lockup, the control unit modulates brake pressure to the appropriate brake lines, improving steering and yaw control even on slippery surfaces.

Deletions and Rationale

- Beretta Coupe's beige interior has been discontinued this year due to low customer demand.
- Two exterior colors have also been discontinued: Maui Blue Metallic and Medium Quasar Metallic. Two new colors have in turn been added: Medium Adriatic Blue Metallic and Blackrose Metallic.
- Beretta GT and GTZ models have been dropped for 1994. Their combined features, technology and design have been incorporated into the new Beretta Z26. Putting the most popular options together makes ordering easier for both the dealer and customer.
- ABS badging has also been dropped this year from the deck lid to give a cleaner appearance.
- Deck lid luggage rack was dropped as an option from Beretta Coupe due to low demand.

BERETTA

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1994 ORDER GUIDE

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

CHEVROLET SPECIFICATIONS --1994 BERETTA

MODELS

PASSENGERS

Beretta Z26 2-Door Coupe (1LW37)	5
Beretta 2-Door Coupe (1LV37)	5

DIMENSIONS (inches)

EXTERIOR

Wheelbase	103.4
Length (overall)	187.3
Width (overall)	67.9
Height (overall)	53.0

INTERIOR

Head Room-Front/Rear	37.6/36.6
Shoulder Room-Front/Rear	54.8/55.2
Hip Room-Front/Rear	51.1/50.8
Leg Room-Front/Rear	43.4/32.6

LUGGAGE COMPARTMENT CAPACITY (cu. ft.)

Usable Luggage Capacity	13.5
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RATED FUEL TANK CAPACITY (gallons)

	15.2
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STANDARD EQUIPMENT SUMMARY

EXTERIOR

Brake System, 4-Wheel Anti-Lock
 Brake System, Power Front Disc/Rear Drum
 Brake-Transmission Shift Interlock (Auto Trans Only)
 Bumpers, 5-MPH
 Engine, 2.2 Liter MFI L4
 Exhaust, Stainless Steel
 Glass, Tinted
 Headlamps, Composite Halogen
 Insulator Blanket, Under Hood
 Mirrors, Dual Remote, Black
 Moldings, Body Side, Color-Keyed and Facia Rub Strips
 Moldings, Gloss Black Door and Quarter Window
 Paint, Base Coat/Clear Coat
 Steering, Power, Rack and Pinion
 Suspension, Level I Soft Ride
 Tires, P185/75 R14 B/W
 Transmission, 5-Speed Manual
 Trim, Full Trunk
 Wheels, 14" Steel with Bolt-On Full Wheel Covers

INTERIOR

Air Bag System (Driver Side)
 Air Conditioning
 Console, Center Shift w/Integral Armrest Covered Storage,
 Lighter, Cupholder and Ashtray
 Cupholder, Retractable in Instrument Panel
 Door Locks, Automatic w/Relock and Unlock Feature
 Fabric Protector, Scotchgard (Includes Seats, Door Trim
 and Floor Covering)
 Heat Ducts, Rear Seat
 Lamps, Courtesy: Dome, Under Dash, Trunk
 Light, Low Oil Level
 Map Pockets, Front Door
 Radio, Electronically Tuned AM/FM Stereo Radio w/Seek-
 Scan, Digital Clock and Extended Range Front and Rear
 Speakers
 Reminder, Headlamps-On
 Safety Belt, Rear, Comfort Guide
 Seat Belt System, Passive, Front
 Seats, Cloth Reclining Bucket with Adjustable Head
 Restraints and a Driver's Side 4-Way Manual Seat
 Adjuster
 Steering Wheel, Sport
 Visors, LH and RH, with Map Straps and Passenger Side
 Vanity Mirror

CHEVROLET SPECIFICATIONS --1994 BERETTA

STANDARD EQUIPMENT SUMMARY

The following equipment is in addition to or replacing items included in the Standard Equipment Summary

Z26 COUPE

EXTERIOR

Convenience Net, Luggage Area
Engine, 2.3 Liter MFI Quad 4 (H.O.)
Exhaust Outlet, Styled
Grille, Block-Out, Body Color
Lamps, Fog
Mirrors, Sport, Remote, Body Color
Spoilers, Front Lower and Rear Decklid
Suspension, Level II Sport
Tires, P205/60 R15 B/W
Treatment, Specific Ground Effects
Wheels, 15" Steel w/Bolt-On Wheel Covers
Windshield Wipers, Intermittent

INTERIOR

Gage Package w/Tachometer and Trip Odometer
Horns, Dual Note
Mirror, Rear View, Day/Night w/Reading Lamps
Radio, Electronically Tuned AM/FM Stereo w/Seek-Scan,
Digital Clock, Stereo Cassette Tape and Coaxial Front
and Extended Range Rear Speakers
Seats, Custom Cloth Reclining Sport Bucket with
Adjustable Articulating Head Restraints, Inflatable
Lumbar Support, Driver's Side and Passenger's
Side 4-Way Manual Seat Adjusters, Easy Entry Feature
and 60/40 Split Folding Rear Seat
Visor Mirrors, Covered, LH and RH, with Map Straps

***13,070.00 BERETTA COUPE MODEL 1LV37**

*Includes Destination & Handling Charges

**MUST SPECIFY: ENGINE, TRANSMISSION, EMISSIONS
MUST ORDER ONE GROUP -- NO DELETIONS ALLOWED**

		LVAB	LVA1	LVA2
N.C.	Base Preferred Equipment Group (Refer Standard Equipment Summary)	x		
165.00	Preferred Equipment Group 1			
	Carpeted Mats, Color-Keyed Front and Rear with Scotchgard		x	x
	Windshield Wipers: Intermittent		x	x
	Day/Night Rear View Mirror with Reading Lamps		x	x
	LH and RH Covered Visor Mirrors		x	x
	Luggage Area Convenience Net		x	x
745.00	Preferred Equipment Group 2			
	Tilt-Wheel			x
	Power Trunk Opener			x
	Speed Control, Electronic with Resume Speed			x
	Split Folding Rear Seat with Arm Rest			x

ADDITIONAL OPTIONS

N.C.	R8S	ACKNOWLEDGEMENTS				
N.C.	R8T	Multiple Order Numbers	V.P.S.	UM6	RADIO EQUIPMENT	Electronically Tuned AM/FM Stereo
N.C.	VK3	Preliminary Invoice				Radio w/Seek-Scan, Digital Clock,
		BRACKET: License Plate, Front				Stereo Cassette Tape and Coaxial
		CLIMATE CONTROL				Front and Extended Range Rear
20.00	K05	Heater, Engine Block				Speakers
		(Note: One of the Following	V.P.S.	U1C	Electronically Tuned AM/FM Stereo Radio	
		Defogger Options must be				w/Seek-Scan, Digital Clock, Compact
		Specified)				Disc Player, Delco-Loc II, Coaxial Front
170.00	C49	Defogger, Rear Window: Electric				and Extended Range Rear Speakers
N.C.	R9W	Defogger, Rear Window not Desired	N.C.	C**2	SEAT TRIM: Cloth Bucket	
		EMISSIONS: (Refer Emission	110.00	D52	SPOILER: Deck Lid	
		Requirements Tab Section)	350.00	AD3	SUNROOF: Manual, Removable	
N.C.	FE9	Federal Emission Requirements				TIRES
N.C.	NG1	NY State Emission Requirements	93.00	QME	P195/70 R14 B/W	
N.C.	YF5	California Emission Requirements	175.00	Q1M	P205/60 R15 B/W (Reqs PG1 Wheels)	
N.C.	NB8	California/NY Emission Override			TRANSMISSION	
		(Reqs FE9 Emission)	N.C.	MM5	5-Speed Manual (Base) (Reqs LN2 Eng)	
N.C.	NC7	Federal Emission Override (Reqs	N.C.	MX0	4-Speed Automatic (Reqs L82 Eng)	
		YF5/NG1 Emission)	555.00	MX1	3-Speed Automatic (Reqs LN2 Eng)	
		ENGINE			WHEELS	
N.C.	LN2	2.2 Liter MFI L4 (Base)	N.C.	PG1	15" Steel Bolt-on Wheel Covers (Incls Level II	
1275.00	L82	3.1 Liter SFI V6 (Reqs MX0 Trans)			Suspension) (Reqs Q1M Tires)	
111.00	UB3	GAGE PACKAGE: With Tachometer	275.00	A31	WINDOWS: Power w/Driver Express Down	
		and Trip Odometer				

BERETTA COUPE

COLOR AND TRIM SELECTION

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

Interior Trim Color	Med Blue	Garnet Red	Med Gray
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MODEL	SEAT TYPE			
1LV37	Cloth Bucket	CDD2	CFF2	CQQ2

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code 1	Color Code 2	Med Blue	Garnet Red	Med Gray
Aqua, Bright (Met)	43	43			x
Black	41	41		x	x
Black Rose (Met)	73	73			x
Blue, Med Adriatic (Met)	30	30	x		x
Gray, Light (Met)	14	14	x	x	x
Gray, Dk Green (Met)	18	18			x
Red, Med Garnet (Met)	72	72		x	x
Red, Bright	81	81			x
White, Bright	16	16	x	x	x

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO		
	2.97	3.18	3.83
WITH FE9 FEDERAL EMISSIONS			
LN2 MM5	---	---	Std
MX1*	---	Std	---
L82 MX0	Std	---	---
WITH YF5 CALIFORNIA OR NG1 NY STATE EMISSIONS			
LN2 MM5	---	---	Std
MX1	---	Std	---
L82 MX0	Std	---	---

*LN2 with MX1 Power Team N/A Hawaii

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*15,795.00 **BERETTA Z26 COUPE MODEL 1LW37**

*Includes Destination & Handling Charges

**MUST SPECIFY: ENGINE, TRANSMISSION, EMISSIONS
MUST ORDER ONE GROUP -- NO DELETIONS ALLOWED**

		LEAB	LEA1
N.C.	Base Preferred Equipment Group (Refer Standard Equipment Summary)	x	
463.00	Preferred Equipment Group 1		
	Carpeted Mats, Color-Keyed Front and Rear w/Scotchgard		x
	Tilt Wheel		x
	Power Trunk Opener		x
	Speed Control, Electronic w/Resume Speed		x

ADDITIONAL OPTIONS

N.C.	ACKNOWLEDGEMENTS			Front and Extended Range Rear Speakers
N.C.	R8S Multiple Order Numbers			
N.C.	R8T Preliminary Invoice	N.C.	L**2	SEAT TRIM: Custom Cloth, Sport Bucket
N.C.	VK3 BRACKET: License Plate, Front			
	CLIMATE CONTROL	350.00	AD3	SUNROOF: Manual, Removable
20.00	K05 Heater, Engine Block			TIRES: P205/55 R16 B/W (Reqs PF4 Wheels)
	(Note: One of the Following Defogger Options must be Specified)	372.00	QMS	TRANSMISSION
170.00	C49 Defogger, Rear Window: Electric			5-Speed Manual (Base) (Reqs LG0 Engine)
N.C.	R9W Defogger, Rear Window not Desired	N.C.	MM5	4-Speed Electronically Controlled Automatic (Reqs L82 Eng)
	EMISSIONS: (Refer Emission Requirements Tab Section)	N.C.	MX0	WHEEL: 16" Styled Aluminum Wheels w/Locks (Incls Level III Performance Handling Suspension) (Reqs QMS Tires)
N.C.	FE9 Federal Emission Requirements			
N.C.	NG1 NY State Emission Requirements	N.C.	PF4	
100.00	w/L82 Eng			
	w/LG0 Eng			
N.C.	YF5 California Emission Requirements			
100.00	w/L82 Eng			
N.C.	w/LG0 Eng			
N.C.	NB8 California/NY Emission Override (Reqs FE9 Emission)			
N.C.	NC7 Federal Emission Override (Reqs YF5/NG1 Emission)			
	ENGINE			
N.C.	LG0 2.3 Liter MFI Quad 4 (H.O.) (Base) (Reqs MM5 Trans)			
525.00	L82 3.1 Liter SFI V6 (Reqs MX0 Trans)			
	RADIO EQUIPMENT			
V.P.S.	U1C Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Digital Clock, Compact Disc Player, Delco-Loc II, Coaxial			

BERETTA Z26 COUPE

COLOR AND TRIM SELECTION

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

Interior Trim Color	Med Blue	Garnet Red	Med Gray
---------------------	----------	------------	----------

MODEL	SEAT TYPE	LDD2	LFF2	LQQ2
1LW37	Custom Cloth Sport Bucket			

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code 1	Color Code 2	Med Blue	Garnet Red	Med Gray
Aqua. Bright (Met)	43	43			x
Black	41	41		x	x
Black Rose (Met)	73	73			x
Blue. Med Adriatic (Met)	30	30	x		x
Red. Bright	81	81			x
Red. Med Garnet (Met)	72	72		x	x
White. Bright	16	16	x	x	x

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO	
	2.97	3.94
WITH FE9 FEDERAL EMISSIONS		
LG0 MM5	----	Std
L82 MX0	Std	----
WITH YF5 CALIFORNIA OR NG1 NY STATE EMISSIONS		
LG0 MM5	----	Std
L82 MX0	Std	----

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NOTES

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1994

Manufacturer CHEVROLET MOTOR DIVISION GENERAL MOTORS CORPORATION	Vehicle Line BERETTA	
Mailing Address 30007 VAN DYKE WARREN, MI 48090-9065	Issued SEPTEMBER, 1993	Revised

Direct questions concerning these specifications to the manufacturer listed above.

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

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.

MVMA

Motor Vehicle Manufacturers Association
of the United States, Inc.

Blank Forms Provided by Technical Affairs Division

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) specifications 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 BERETTA
 Model Year 1994 Issued 9-93 Revised(*) _____

METRIC (U.S. Customary)

Vehicle Origin

Design & development (company)	Lansing Automotive Division
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 (Mfg'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)	25/31
BERETTA Z26 2-Door Notchback Coupe (FWD)	1LW37	5 (2/3)	64 (141)	TBD

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

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 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, onv, 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)		.6 mm (.024 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)		One, 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.)	Hydroelastic (1)	Elastomeric (2 Manual, 1 Auto.)
	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, 328 (11.57)
--	-----------------------

Engine Camshaft

Location	In Block, Right Side	
Material & mass kg (weight, lbs.)	Assembled Steel	
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 1994 issued 9-93 Revised(*)

METRIC (U.S. Customary)

Engine Description **3.1 LITER V6 (191 CID)**
 Engine Code **SEQUENTIAL FUEL INJECTION RPO L82**

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, Front-Wheel-Drive
Manufacturer		General Motors Powertrain Division
No. of cylinders		6
Bore		89.00
Stroke		84.01
Bore spacing (C/L to C/L)		111.76 (4.4)
Cyl block matl & mass kg(lbs.) (machined)		Cast Iron
Cylinder block deck height		224.0mm (9.0 in.)
Cylinder block length		435.5mm (17.4 in.)
Deck clearance (minimum) (above or below block)		.58 above TDC
Cyl. head material & mass kg (lbs.)		Cast Aluminum 5.3 (11.7)
Cylinder head volume cu. cm. (cu. in.)		28.0 (1.71)
Cylinder liner material		Not Applicable
Head gasket thickness (compressed)		1.62 mm
Minimum combustion chamber total volume cu. cm. (cu. in.)		27.0 (1.65)
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.)**		Cast Aluminum Upper 3.0 (6.63) Lower 5.6 (12.36)
Exh. manifold matl & mass kg (lbs.)**		Cast Iron RT 3.76 (8.28) LT 2.63 (5.79)
Knock sensor (number & location)		1 - Left Side Center Of Block
Fuel required unleaded, diesel, etc.		Unleaded
Fuel antiknock index (R + M) / 2		87
Engine mounts	Quantity	
	Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)	
	Added isolation (sub-frame, crossmember, etc.)	
Total dressed engine mass (wt) dry***		

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum Alloy, 369 (13.0)
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Engine Camshaft

Location	Above Crankshaft At Center of "V"	
Material & mass kg (weight, lbs.)	Assembled Steel, 2.25 (4.97)	
Drive type	Chain/belt	Chain
	Width/pitch	15.88 x 9.53

*Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.
 **Finished state.
 ***Dressed engine mass (weight) includes the following:

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 issued 9-93 Revised _____

METRIC (U.S. Customary)

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

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hmi, wedge, pre-chamber, etc.)		Inline, Front, Transverse, Pent Roof, DOHC	
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 blk matl & mass kg(lbs.) (machined)		Cast Iron, 48.05 (105.93)	
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 +/- 1.5 cc	
Cylinder liner material		None	
Head gasket thickness (compressed)		1.10 (.043)	
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, 5.3 (11.72)	
Exh. manifold matl & mass kg (lbs.)**		Cast Iron, 6.74 (14.86)	
Knock sensor (number & location)		1, Rear Face of Block	
Fuel required unleaded, diesel, etc.		Unleaded	
Fuel antiknock index (R + M) / 2		87	
Engine mounts	Quantity	3 Manual Only	
	Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric (2) Hydroelastic (1)	
	Added isolation (sub-frame, crossmember, etc.)	No	
Total dressed engine mass (wt) dry***		158.30 (348.99)	

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum 419 (14.78)
--	----------------------

Engine Camshaft

Location		Overhead	
Material & mass kg (weight, lbs.)		Cast Iron	Intake 3.045 (6.713) Exhaust 2.948 (6.499)
Drive type	Chain/belt	Chain	
	Width/pitch	22.86 mm	9.525mm (.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 1994 Issued 9-93 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
	Head O.D. intake/exhaust

4/4
 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
	Rear

One Piece Fluoroelastomer
 One Piece Fluoroelastomer

Engine - Lubrication System

Normal oil pressure kPa (psi) @ eng rpm	435-530 (63-77) @ 1200 12-20 @ 3000
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 1994 Issued 9-93 Revised(*)

METRIC (U.S. Customary)

Engine Description 3.1 LITER V6 (191 CID)
 Engine Code SEQUENTIAL FUEL INJECTION RPO L82

Engine - Valve System

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

6/6
 43.64mm (1.72 in.) / 36.20mm (1.43 in.)

Engine - Connecting Rods

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

Engine - Crankshaft

Material & mass kg., (weight, lbs.)*	Cast Iron 17.2 (37.9)
End thrust taken by bearing (no.)	3
Length & number of main bearings	29.5 mm (1.4) 24.0 mm (2.3) / 4
Seal (material, one, two piece design, etc.)	Front
	Rear

Viton/Steel, One Piece
 Viton/Steel, One Piece

Engine - Lubrication System

Normal oil pressure kPa (psi) @ eng rpm	280 - 360 @ 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 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 1994 Issued 9-93 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, .689 (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 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 1994 Issued 9-94 Revised _____

METRIC (U.S. Customary)

Engine Description	2.2 LITER L4 (133 CID)
Engine Code	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	680 (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
	Number of blades & type (flex, solid, material)	7 Plastic
	Number & location (front, rear of radiator)	1 Fan, Behind Radiator
	Diameter & projected width	381 (15.0)
	Ratio(fan to crnshft.rev.)	Not Applicable
	Fan cutout type	ECM Controlled
	Drive type (direct, remote)	Direct - Electric Motor
	RPM at idle (elec.)	1800
	Motor rating(wattage/elec.)	150
	Motor switch (type & location/elec.)	ECM
Switch point (temp./ pressure/elec.)	On At 106; Off at 103 On At 193; Off At 108	
Fan shroud (material)	None	

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

Engine Description **3.1 LITER V6 (191 CID)**
 Engine Code **SEQUENTIAL FUEL INJECTION RPO L82**

Engine - Cooling System

Coolant recovery system (std, opt, n.a.)		Standard	
Coolant fill location (rad., bottle)		Bottle, Radiator	
Radiator cap relief valve pressure kPa (psi)		103 (15)	
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		
	Number of pumps	1	
	Drive (V-belt, other)	Serpentine	
	Bearing type	Ball-Roller	
	Impeller material	Cast Iron	
Housing material		Cast Aluminum	
By-pass recirculation type (inter., ext.)		External	
Cooling system capacity	With heater - L (qt.)	12.0 (12.7)	
	With air conditioner-L(qt.)	12.0 (12.7)	
	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	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	
	Number of blades & type (flex, solid, material)	7 Plastic	
	Number & location (front, rear of radiator)	1 Fan Behind Radiator	
	Diameter & projected width	381 (15.0)	
	Ratio(fan to crkshft.rav.)	Not Applicable	
	Fan cutout type	ECM Controlled	
	Drive type (direct, remote)	Electric	
	RPM at idle (elec.)	1800	
	Motor rating(wattage/elec.)	150	
	Motor switch (type & location/elec.)	ECM	
	Switch point (temp./ pressure/elec.)	On at 193, Off at 108 PSI A/C Pressure On at 108, Off at 104 Deg. C	
Fan shroud (material)		None	Plastic

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

Engine Description	2.3 LITER L4 (138 CID)
Engine Code	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	1 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)	Partial	
Water jackets open at head face (yes,no)	Partial	
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 end tank material	Plastic	
Fan	Std., elec., opt.	Electric
	Number of blades & type (flex, solid, material)	7 - Plastic
	Number & location (front, rear of radiator)	1 Fan, Behind Radiator
	Diameter & projected width	381 (15.0)
	Ratio(fan to crnshft.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; Off At 108 On At 193; Off At 108
Fan shroud (material)	None	

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 issued 9-93 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 Ini. 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.		Computer Controlled
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	Computer Controlled
	Automatic	Computer Controlled
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)		57.5 (15.2)
Location (describe)		Under Rear Seat (Forward Of Rear Axle)
Attachment		Two Longitudinal Steel Straps
Material & Mass kg (weight lbs.)		Steel
Filler pipe	Location & material	Right Rear Quarter - Steel
	Connection to tank	Fuel Filler And Vent Hose With Clamps
Fuel line (material)		Steel/Nylon/Rubber
Fuel hose (material)		Filler Hose - Rubber
Return line (material)		Steel/Nylon/Rubber
Vapor line (material)		Steel/Nylon/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 1994 Issued 9-93 Revised(*) _____

METRIC (U.S. Customary)

Engine Description	3.1 LITER V6 (191 CID)
Engine Code	SEQUENTIAL FUEL INJECTION RPO L62

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

Induction type: carburetor, fuel injection system, etc.		Sequential
Manufacturer		AC/Rochester Products
Carburetor no. of barrels		None
Idle A/F mix.		PCM Controlled
Fuel Injection	Point of inj. (no.)	Intake Port (6)
	Constant. pulse, flow	Pulse
	Control (elec., mech.)	Electronic
	Sys. press. kPa (psi)	
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	PCM Controlled
	Automatic	PCM Controlled
Intake manifold heat control (exhaust or water thermostatic or fixed)		Fixed
Air cleaner type		Replaceable Paper Element
Fuel filter (type/location)		Chassis Mounted, Inline, Replaceable
Fuel pump	Type (elec. or mech.)	Electrical
	Location (eng., tank)	Tank
	Press. range kPa (psi)	
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	62.5 (16.4) @ 350 (50..8)

Fuel Tank

Capacity refill L (gallons)		57.5 (15.2)
Location (describe)		Under Rear Seat (Forward Of Rear Axle)
Attachment		Two Longitudinal Steel Straps
Material & Mass kg (weight lbs.)		Steel
Filler pipe	Location & material	Right Rear Quarter - Steel
	Connection to tank	Fuel Filler And Vent Hose With Clamps
Fuel line (material)		Steel/Nylon/Rubber
Fuel hose (material)		Filler Hose - Rubber
Return line (material)		Steel/Nylon/Rubber
Vapor line (material)		Steel/Nylon/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 1994 Issued 9-93 Revised(*) _____

METRIC (U.S. Customary)

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

Engine - Fuel System (See supplemental page for details of Fuel Ini. 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.		Computer 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	Computer Controlled
	Automatic	Computer Controlled
Intake manifold heat control (exhaust or water thermostatic or fixed)		None
Air cleaner type		Single Snorkel, Remote Mounted, Replaceable Paper Element
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)		57.5 (15.2)
Location (describe)		Under Rear Seat (Forward Of Rear Axle)
Attachment		Two Longitudinal Steel Straps
Material & Mass kg (weight lbs.)		Steel
Filler pipe	Location & material	Right rear Quarter - Steel
	Connection to tank	Fuel Filler And Vent Hose With Clamps
Fuel line (material)		Steel/Nylon/Rubber
Fuel hose (material)		Filler Hose - Rubber
Return line (material)		Steel/Nylon/Rubber
Vapor line (material)		Steel/Nylon/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 1994 Issued 9-93 Revised(*)

METRIC (U.S. Customary)

Engine Description 2.2 LITER L4 (133 CID)
 Engine Code 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), Palladium (Pd)	
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 int.(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, 6.89 (15.15)
Resonator no. & type		Not Applicable
Exhaust pipe	Branch o.d., wall thickness	Not Applicable
	Main o.d., wall thickness	41.3 x 1.42 mm (1.625 x .056)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 3.4 (7.6)
Inter-mediate pipe	o.d. & wall thickness	50.8 x 1.37 mm (2.0 x .054 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 1994 Issued 9-93 Revised(*)

METRIC (U.S. Customary)

Engine Description
 Engine Code

3.1 LITER V6 (191 CID)
 SEQUENTIAL FUEL INJECTION RPO L82

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Not Used
	Air injection	Pump or pulse	"
		Driven by	"
		Air distribution (head, manifold, etc.)	"
		Point of entry	"
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled Flow, Digital
		Exhaust source	Right Side Exhaust Manifold
		Point of exh.inj. (spacer, carb., manifold, other)	Intake Manifold
	Catalytic Converter	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.)		Federal: 0.000837; California: 0.000837	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges to (intake manifold, other)		Intake Manifold
	Air Inlet (breather cap, other)		Right Rear Rocker Arm Cover
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		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) Material & Mass kg (weight lbs.)		1, Triflow Muffler, Stainless Steel, 6.89 (15.15)
Resonator no. & type		1, 89 mm Diameter Bottle
Exhaust pipe	Branch o.d., wall thickness	9.65
	Main o.d., wall thickness	50.8 x 1.77 mm (2.0 x .038 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 1.9 (4.2)
Intermediate pipe	o.d. & wall thickness	50.8 x 1.37 mm (2.0 x .054 in.)
	Matl. & Mass kg (wght.lbs.)	409 Stainless Steel, 3.0 (6.7)
Tail pipe	o.d. & wall thickness	49.8 x 1.09 mm (1.34 x .043 in.)*
	Matl. & Mass kg (wght.lbs.)	409 Alum. 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 1994 Issued 9-93 Revised(*) _____

METRIC (U.S. Customary)

Engine Description	2.3 LITER L4 (138 CID)
Engine Code	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 orifices, 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)	2.671 (163)
		Substrate type	Monolith - Ceramic
Noble metal type		Platinum (Pt), Rhodium (Rh)	
Noble metal concentration (g/cu. cm.)		Federal: .000873 California: .000943	
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 inlt(breather cap, other)		None
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	None
	Vapor storage provision		Charcoal 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, 7.5 (16.7)
Resonator no. & type		1, 102 mm O.D. "Bottle" Resonator
Exhaust pipe	Branch o.d., wall thickness	44.5 x 1.9 mm (1.75 x .075 in.)
	Main o.d., wall thickness	44.5 x 1.0 mm (1.75 x .040 in.)
	Matt. & Mass kg (wght.lbs.)	409 Stainless Steel, 1.73 (3.81)
Inter-mediate pipe	o.d. & wall thickness	50.8 x 1.37 mm (2.0 x .054 in.)
	Matt. & 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.)
	Matt. & Mass kg (wght.lbs.)	304 Stainless Steel, 1.8 (4.0)

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

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

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
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 mfr. & matl. coding	Valeo F202
	Facing matl. & construction	t202
	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 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

Engine Description 3.1 LITER V6 (191 CID)
 Engine Code SEQUENTIAL FUEL INJECTION RPO L82

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

Manual 4-speed (manufacturer/country)	
Manual 5-speed (manufacturer/country)	
Manual 6-speed (manufacturer/country)	
Automatic (manufacturer/country)	General Motors Powertrain Transmission, U.S.A.
Auto. overdrive (manufacturer/country)	

Manual Transmission/Transaxle (NOT APPLICABLE)

Number of forward speeds		
Gear ratios	1st	
	2nd	
	3rd	
	4th	
	5th	
	6th	
	Reverse	
Synchronous meshing (specify gears)		
Shift lever location		
Trans. case mat'l & mass kg (lbs)*		
Lubricant	Capacity L (pt.)	
	Type recommended	

Clutch (Manual Transmission) (NOT APPLICABLE)

Clutch manufacturer		
Clutch type (dry, wet; single, multiple disc)		
Linkage (hyd., cable, rod, lever, other)		
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	
	Released	
Assist (spring, power/percent, nominal)		
Type pressure plate springs		
Total spring load (nominal) N (lbs)		
Clutch facing	Facing mfr. & mat'l coding	
	Facing mat'l. & construction	
	Rivets per facing	
	Outside x inside dia. (nom.)	
	Total eff. area sq cm (sq in)	
	Thickness (pressure plate side/fly wheel side)	
	Rivet depth (pressure plate side/fly wheel side)	
Engagement cushion method		
Release bearing type & method lub.		
Torsional damping method, springs, hysteresis		

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

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

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

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

Manual 4-speed (manufacturer/country)	
Manual 5-speed (manufacturer/country)	USA
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	3.50
	2nd	2.05
	3rd	1.38
	4th	1.03
	5th	.72
	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 (pL)	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. & mat'l. coding	Daikin NC80
	Facing mat'l. & 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 1994 Issued 9-93 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 With Torque Converter Clutch	
Shift mechanics	Synchronous	
Gear selector	Location (column, floor, other)	
	Ltr./No. designation (e.g. PRND21)	P-R-N-D-2-1
	Shift interlock (yes, no, describe)	
Gear ratios	1st	2.84
	2nd	1.60
	3rd	1.00 (Converter Clutch Engagement)
	4th	Not Applicable
	5th	"
	6th	"
	Reverse	2.07
	Final drive ratio	2.84
Max. upshift vehicle speed - drive range km/h (mph)	- (Dependent On Axle Ratio/Application Specific)	
Max. upshift engine speed RPM	6200	
Max. kickdown speed - drive range km/h (mph)	- (Dependent On Axle Ratio/Application Specific)	
Min. overdrive speed km/h (mph)	- (Dependent On Axle Ratio/Application Specific)	
Torque converter	Type	Lock-Up
	Torus design	Yes
	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
Pump type	Positive Variable Displacement Vane	
Lubricant	Capacity refill L (pt.)	8.5 (17.85) Dry
	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	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(% frt/rear)	

* Input speed / square root of torque.

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

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

Engine Description	3.1 LITER V6 (191 CID)
Engine Code	SEQUENTIAL FUEL INJECTION RPO L82

Automatic Transmission/Transaxle

Trade Name	GMPT 4T60-E Transaxle	
Type and special features (describe)	4-Speed Automatic With Torque Converter Clutch	
Shift mechanics	Synchronous	
Gear selector	Location (column, floor, other)	
	Ltr./No. designation (e.g. PRND21)	P-R-N- <u>OD</u> -D-2-1
	Shift interlock (yes, no, describe)	
Gear ratios	1st	2.92
	2nd	1.57
	3rd	1.00
	4th	.71
	5th	Not Applicable
	6th	"
	Reverse	2.39
	Final drive ratio	3.33
Max. upshift vehicle speed - drive range km/h (mph)	- (Dependent On Axle Ratio / Application Specific)	
Max. upshift engine speed RPM	6000	
Max. kickdown speed - drive range km/h (mph)	- (Dependent On Axle Ratio / Application Specific)	
Min. overdrive speed km/h (mph)	- (Dependent On Axle Ratio / Application Specific)	
Torque converter	Type	Lock-Up
	Torus design	Yes
	Number of elements	3
	Max. ratio at stall	1.93
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.7)
	Capacity factor "K" ^{**}	140
Pump type	Positive Variable Displacement Vane	
Lubricant	Capacity refill L (pt.)	12.7 (26.8) dry
	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. ^{**}	81.0 (178.50) dry	

All Wheel / 4 Wheel Drive

(NOT APPLICABLE)

Desc. & type (part-time, full-time, 2/4 shift while moving, mech., elect. chain/gear, etc.)		
Transfer	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(% frt/rear)	

* Input speed / square root of torque.
 ** Dry weight including torque converter. If other, specify.

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

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

Automatic Transmission/Transaxle (NOT APPLICABLE)

Trade Name		
Type and special features (describe)		
Shift mechanics		
Gear selector	Location (column, floor, other)	
	Ltr./No. designation (e.g. PRND21)	
	Shift interlock (yes, no, describe)	
Gear ratios	1st	
	2nd	
	3rd	
	4th	
	5th	
	6th	
	Reverse	
Final drive ratio		
Max. upshift vehicle speed - drive range km/h (mph)		
Max. upshift engine speed RPM		
Max. kickdown speed - drive range km/h (mph)		
Min. overdrive speed km/h (mph)		
Torque converter	Type	
	Torus design	
	Number of elements	
	Max. ratio at stall	
	Type of cooling (air, liquid)	
	Nominal diameter	
Capacity factor "K"		
Pump type		
Lubricant	Capacity refill L (pt.)	
	Type recommended	
Oil cooler (std., opt., N.A., internal, external, air, liquid)		
Trans. mass kg (lbs) & case matl.**		

All Wheel / 4 Wheel Drive (NOT APPLICABLE)

Desc. & type (part-time, full-time, 2/4 shift while moving, mech., elect., chain/gear, etc.)		
Transfer	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 (% frt/rear)	

* Input speed / square root of torque.
 ** Dry weight including torque converter. If other, specify.

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

Engine Description **2.2 LITER L4 (133 CID)**
 Engine Code **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)
Trnsfr ratio and method(chain,gear,etc)		1.12, Chain (33/37)	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 mm
		Right	23.81 x 663.0 mm
	Automatic transaxle	Left	23.81 x 311.0 mm
		Right	23.81 x 364.3 mm
	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	Tripot 61.0 Stroke
		Outer	Rzeppa - Fixed Center
	Attach (u-bolt, clamp, etc.)		Splined
	Bearing	Type (plain, anti-friction)	Inner, Ball & Roller; 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 1994 Issued 9-93 Revised(*) _____

METRIC (U.S. Customary)

Engine Description 3.1 LITER V6 (191 CID)
 Engine Code SEQUENTIAL FUEL INJECTION RPO L82

Axle Ratio and Tooth Combinations

AUTOMATIC - M13		MANUAL - MG2
Effective final drive ratio (or overall top gear ratio)		2.97
Trnsfr ratio and method(chain,gear,etc)		(37/33), chain .8918
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 mm	
		Right	27.05 x 315.5 mm	
	Automatic transaxle	Left	23.81 X 304.6 mm	
		Right	23.81 X 365.4 mm	
	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	Cross-Groove 61.2 Stroke
		Outer	Rzeppa - Fixed Center	
	Attach (u-bolt, clamp, etc.)		Splined	
	Bearing	Type (plain, anti-friction)	Inner - Ball & Roller	Inner - Ball
Lubrication (fitting, prepack)		Outer - Ball	Outer - Ball	
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 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

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

Axle Ratio and Tooth Combinations MANUAL - MV5 (Does Not Come With Base)

Effective final drive ratio (or overall top gear ratio)		3.94	
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 (qt.)	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 308.0 mm	
		Right	27.1 x 315.5 mm	
	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 81.2 Stroke	
		Outer	Rzeppa - Fixed Center	
	Attach (u-bolt, clamp, etc.)		Splined	
	Bearing	Type (plain, anti-friction)	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

METRIC (U.S. Customary)

Vehicle Line BERETTA
 Model Year 1994 Issues 9-93 Revised(*)

Model Code/Description And/Or Engine Code/Description 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	--
Acceleration		--	
Road surface		--	
Shock absorber (front & rear)	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
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)
Stabilizer	Rate @ wheel N/mm (lb./in)	17.5 (154.9)
	Type (link, linkless, frmless)	Link
	Material & O.D. bar/tube, wall thickness	Steel, 24 mm

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
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 - Rubber Bottom - Microcellular Urethane
	If leaf	No. of leaves
Shackle (comp or tens)		--
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 1994 Issued 9-93 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 assist	Operational speed range	Not Applicable			
	Type (engine or brake intervention)	Not Applicable			
Anti-lock device	Front/rear (std., opt., n.a.)	Standard			
	Manufacturer	Delco Chassis Division			
	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	324.1 (50.2) Rear		
Gross Lng area sq cm (sq in)** (F/R)		204 (31.7) Front	324.1 (50.2) Rear		
Swept area sq cm (sq in)*** (F/R)		1175 (182.2) Front	558 (86.2) Rear		
Rotor	Outer working diameter	F/R	Front - 259.5(10.2)		
	Inner working diameter	F/R	Front- 149.8 (5.9)		
	Thickness	F/R	Front - 20 (.79)		
	Matl & type (vented/sld)	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 Chassis Division	
		Lining code ****		128 FE	
		Material		Semi-Metallic	
		****	Pri. or out-brd	124 x 46 x 8.2 (4.88 x 1.81 x .32)	
		****	Size	124 x 46 x 10.6 (4.88 x 1.81 x .42)	
	Shoe thcknss. (no lng)		4.85 (.19)		
	Rear wheel	Bonded or riveted		Riveted	
		Manufacturer		Delco Chassis Division	
		Lining code ****		235 FE	
		Material		Organic	
		****	Pri. or out-brd	167.9 x 44.2 x 6.6mm(6.61 x 1.74 x .28in)	
		****	Size	198.8 x 44.2 x 7.2mm(7.83 x 1.74 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 1994 Issued 9-93 Revised(*)

METRIC (U.S. Customary)

Model Code/Description And/Or
 Engine Code/Description BASE

Tires And Wheels (Standard)

Tires	Size (service description)		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
	Attachment	Type (bolt or stud & nut)	Stud
		Circle diameter	100.0 mm
Number & size		5-M12 x 1.5 - 6H, T D. (Metric)	
Spare	Tire and wheel	T115/70D14 BW, Wheel Dia. 14 x 4. Inflation 420 KPA (60) PSI	
	Storage position & location (describe)	Flat Under Rear Load Floor	

Tires And Wheels (Optional)

Tire size (service description)	P195/70R14 BW
Type (bias, radial, steel, nylon, etc.)	Steel Belted Radial
Wheel (type & material)	Steel
Rim (size, flange type and offset)	14 x 6
Tire size (service description)	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 (service description)	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
Tire size (service description)	
Type (bias, radial, steel, nylon, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
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 1994 Issued 9-93 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)		--	
	Type (coaxial, elec. hyd., etc.)		Rack And Pinion W/Center Take-Off Tie Rods - Integral	
Power	Manufacturer		Saginaw Division	
	Gear	Type	Rack And Pinion W/Center Take-Off Tie Rods - Integral	
		Ratios	Gear	Not Applicable
			Overall	16.12:1 (FE1) 13.96:1 (FE2/FE3)
	Pump (drive)		Belt Off Crankshaft Pulley	
	No. wheel turns (stop to stop)		2.33 FE2/FE3 2.88 Base (FE1)	
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		MacPherson Strut		

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

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised(*) _____

METRIC (U.S. Customary)

Model Code/Description And/Or

Engine Code/Description

BASE

Wheel Alignment

Wheel Position	Service	Parameter	Specification
Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	Not Adjustable
		Camber (deg.)	.1 (+/-) .7 -2 (+/-) .7 FE3
		Toe-in outside track - mm (in.)	0 +/- .10
	Service reset*	Caster (deg.)	Not Adjustable
		Camber (deg.)	.0 (+/-) .7 -2 (+/-) .7 FE3
		Toe-in - mm(in.)	0 (+/-) .10
	Periodic M.V. inspection	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. inspection	Camber (deg.)	"
		Toe-in - mm(in.)	"

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

Electrical - Instruments and Equipment

ELECTRIC BASE CLUSTER

OPTIONAL ELECTRIC BASE 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, ad.	"
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	Light
Fuel indicator	Type	Electric Gauge W/Pointer
	Warning device	Not Available
Windshield wiper	Type (standard)	Electric 2-Speed
	Type (optional)	Intermittent Windshield Wiper Sys.
	Blade length	482.6 mm (19.0 in.)
	Swept area sq cm (sq in)	6221.9 (964.4)
Windshield 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' Notes)
Other	Headlamp-on Warning	Standard, Chimes

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 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	19813646 Opt.
	Voltage	12	
	Amps at 0 deg F cold crnk	525	600
	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)	329 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)	Control Module With Two Integral Coils And One Remote Timing Sensor	
Coil	Manufacturer	Delco Remy	
	Model	1103902	
	Current	Engine stopped-A	Less Than 100 ma
		Engine idling - A	Less Than 1.5 Amp (Average)
Spark plug	Manufacturer	AC Spark Plug	
	Model	41-908	
	Thread (mm)	14 x 1.25	
	Tightening torque Newton meters (lb. ft.)	10-20 (7-15)	
	Gap	1.14 mm (0.060in.)	
	Number per cylinder	1	
Distributor	Manufacturer	Not Applicable	
	Model	"	

Electrical - Suppression

Locations & type	Not Available
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MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

Engine Code/Description 3.1 LITER V6 (191 CID)
 SEQUENTIAL FUEL INJECTION RPO L82

Electrical - Supply System

Battery	Manufacturer	Delco Remy	
	Model, std., (opt.)	1982514 Std.	1983646 Opt.
	Voltage	12	
	Amps at 0 deg F cold crnk	525	600
	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.-20 (-20)deg C (F)	350 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)	Control Module With 3 Integral Coils & One Remote Timing Sensor	
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	R44LTSM6	
	Thread (mm)	14 x 1.25	
	Tightening torque Newton meters (lb. ft.)	9-20 (7-15)	
	Gap	1.52 (0.060)	
Distributor	Number per cylinder	1	
	Manufacturer	Not Applicable	
	Model	"	

Electrical - Suppression

Locations & type	Not Available
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MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 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
	Voltage	12
	Amps at 0 deg F cold crnk	600
	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.)	2.56:1
	Output at idle (rpm, park)	70 Amps @ 27 Deg. C. 900 RPM
	Optional (type & rating)	None
Regulator	Type	Internal to Alternator

Electrical - Starting System

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

Electrical - Ignition System

Type	Electronic (std, opt,n.a.)	Direct Ignition (Std.)	
	Other (specify)	None	
Coil	Manufacturer	Delco Remy (2)	
	Model		
	Current	Engine stopped-A	300 ma
		Engine idling - A	Peak 8.35 Amps
Spark plug	Manufacturer	A/C Spark Plug	
	Model	.FR2LS 41-602	
	Thread (mm)	14 x 1.25	
	Tightening torque Newton meters (lb. ft.)	21-24 (15-18)	
	Gap	.889 (.035)	
	Number per cylinder	1	
Distributor	Manufacturer	Not Applicable	
	Model	"	

Electrical - Suppression

Locations & type	Not Available
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MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 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 60/40 Split Folding Rear Seat Standard

Frame

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

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 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			
		Second seat	Lap/Shoulder Combination	Lap Belt	Lap/Shoulder Combination
	Standard/optional	Third seat			
Passive	Type & description (air bag, motorized-2-point belt, fixed belt, knee bolster, manual-lap belt)	First seat	Air Bag plus 3 Point Door Mt. Belt		3 Point Door Mt. Belts
		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 (748)
Total glass exposed surface area sq. cm. (sq. in.)	S4	16910 (2622)
Windshield glass (type/thickness)		Laminated
Side glass (type/thickness)		Tempered
Backlight glass (type/thickness)		Tempered
Tinted (yes/no, location)		
Solar control (yes/no, coated/batched, location)		

Headlamps

Description - sealed beam, halogen, replaceable bulb, etc.	Halogen, Replaceable Bulb - 2 Lamps - 2 Bulbs Each
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 1994 Issued 9-93 Revised _____

METRIC (U.S. Customary)

Engine Code/Description

BASE

Climate Control System

Air conditioning (std., opt., man., auto.)		Optional With Manual Operation And Electrically Operated Temperature Door
Condenser	Type	Serpentine
	Eff. face area (sq. mm.)	265,281
	Fins per inch	14
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 Compressor
	Displacement (cc)	9.2
	Manufacturer	Harrison Division
	A/C pulley ratio	1.24 1.35 (L82 Engine)
Accumulator	Type	None
	Height (mm.)	None
	Diameter (mm.)	None
Receiver	Type	Aluminum
	Height (mm.)	169
	Diameter (mm.)	77
Refrigerant control (CCOT, TVS, etc.)		TXV
Heater water valve (yes / no)		No
Refrigerant (R - 12, R - 134a, etc.)		R-134a
Charge level (lbs. - oz.)		2.25 lbs.
Cold engine lockout switch (yes / no)		Yes
Wide open throttle cutout switch (yes / no)		Yes

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised(*)

METRIC (U.S. Customary)

Model Code/Description

BASE

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

	Clock (digital, analog)	Part of Radio Package
	Compass / thermometer	Not Available
	Console (floor, overhead)	Standard Full Floor
	Defroster, electric windshield	NA
	Defroster, electric backlight	Optional (C49)
Electronic	Diagnostic monitor (integrated, individual)	Not Available
	Instrument cluster (list instruments)	Optional (UB3) Oil Pressure, Temp, Volts, Trip Odom & Tach Standard (UH6) Temp
	Keyless entry	NA
	Tripminder (avg. spd. fuel)	NA
	Voice alert (list items)	NA
	Other	Key Left In/Headlight On/Turn Signal On Warning - Standard
	Fuel door lock (remote, key, electric)	Not Available
Lamps	Auto head on/off delay, dimming	Not Available
	Cornering	"
	Courtesy (map, reading)	Standard: Footwell, Dome Optional: Reading (DC 4)
	Door lock, ignition	Not Available
	Engine compartment	"
	Fog	Standard On Z26 (T98)
	Glove compartment	Not Available
	Trunk	Standard
	Illuminated entry system (list lamps, activation)	Footwell, Dome with Theater Dimming, Front Door Handle Activation - Std.
	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.)	Std. RH/LH No Light, No Cover; Opt. RH/LH No Light,Covered
	Navigation system (describe)	Not Available
	Pkg. brake-auto release (warn. light)	Standard (Manual Release) Warning Light in Lower Area of Speedometer

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

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 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)		Standard (AU4) Automatic Door Lock/Unlock
	Seats	2 - 4 - 6 way, etc.	NA
		Reclining(R.H., L.H.)	NA
		Memory (R.H., L.H., preset, recline)	NA
		Support (lumbar, hip, thigh, etc.)	NA
		Heated (R.H., L.H., other)	NA
	Side windows		Optional (A31)
	Vent windows		NA
	Rear windows		NA
Radio systems	Antenna (location, whip, w/shield, power)		(US6) Standard. Fixed RH Front Fender
	Stan.	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	(UM7) AM/FM Stereo Radio With Seek/Scan, Clock with ETR
	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) Standard 4, Dual Front Kick Panel, Dual Rear Shelf
Roof: open air or fixed (flip-up, sliding, T)			(AD3) Optional Hinged Removable
Speed control device			(K34) Optional
Speed warn. dev. (light, buzzer, etc.)			NA
Tachometer (rpm)			(UB3) Optional
Telephone system (describe)			NA
Theft deterrent system			NA

Trailer Towing

Towing capable	Yes / No	Yes
Engine/transmission/axle	Std / Opt	L60 Opt., L82 Opt. With M13
Tow class (I, II, III)*	Std / Opt	
Max. gross trailer wgt. (lbs.)	Std / Opt	1000 Lbs.
Max. trailer tongue load (lbs.)	Std / Opt	100 Lbs.
Towing package available	Yes / No	No

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

MVMA Specifications

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 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	1727 (68.0)
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	SAE Ref. No.	
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 **	SAE Ref. No.	
Passenger distribution (front/rear)	PD1,2,3	2/3
Trunk/cargo load		
Vehicle height	H101	1346 (53.0)
Cowl point to ground	H114	925 (36.4)
Deck point to ground	H138	988 (39.3)
Rocker panel-front to ground	H112	211 (8.3) 214 (8.4)
Rocker panel-rear to ground	H111	210 (8.3) 213 (8.4)
Windshield slope angle (deg.)	H122	60.5
Backlight slope angle (deg.)	H121	65

Ground Clearance **	SAE Ref. No.	
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.)	H108	13
Angle of departure (deg.)	H107	19
Ramp breakover angle (deg.)	H147	15
Axle differential to ground (front/rear)	H153	166 (6.5)
Min. running ground clearance	H156	143 (5.6)
Location of min. run. grd. clear.	H148	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 1994 Issued 9-93 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	H81	958 (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.)	L48	88.5
Design H-point front travel	L17	212 (8.3)
Normal driving & riding seat track trvl.	L23	189 (7.4)
Shoulder room	W3	1360 (53.5)
Hip room	W5	1249 (49.2)
*** 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	H87	12 (0.5)

Front Compartment Int. Dim. Are Measured With The Seating Ref. Pt.

Rear Compartment

(SgRP) mm Forward And mm Upward of Rearmost Position.

SgRP point couple distance	L50	760 (29.9)
Effective head room	H83	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	W8	1292 (50.9)
*** 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)
*** Lifterover height	H105	831 (32.7) 827 (32.6)

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 1994 Issued 9-93 Revised(*)

METRIC (U.S. Customary) Vehicle Dimensions

See Key Sheets for Definitions

Model Code/Description

2-DOOR NOTCHBACK COUPES

Station Wagon / MPV**

- Third Seat

SAE Ref. No. (NOT APPLICABLE)

	SAE Ref. No.	(NOT APPLICABLE)
Seat facing direction	SD1	
SgRP couple distance	L85	
Shoulder room	W85	
Hip Room	W88	
Effective leg room	L88	
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)

		(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	
Cargo volume index**	V6	
Cargo width at floor**	W500	
Maximum cargo height**	H505	

Hatchback - Cargo Space

(NOT APPLICABLE)

		(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 1994 Issued 9-93 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** 238 (9.4)
	*** H183** 260 (10.2)
Rear	W22** 440 (17.3)
	L55** 4953 (195.0)
	H82** 362 (14.3)
	*** H182** 398 (15.7)
	*** H184** 426 (16.8)

* 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)

MVMA Specifications
METRIC (U.S. Customary)

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

		Optional Equipment Differential Mass (we			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
AD3	Sunroof - Hinged Roof	4.8 (10.6)	3.8 (8.4)	8.6 (19.0)	
AM9	Split Second Seat Back	.2 (.4)	1.0 (2.2)	1.2 (2.6)	
AP8	Convenience Net	-2 (-4)	.8 (1.7)	.6 (1.3)	
A31	Power Windows	1.4 (3.1)	2.2 (4.8)	3.6 (7.9)	
A44	Adjuster - Passenger Seat Manual 4-Way	.8 (1.7)	.4 (.9)	1.2 (2.6)	
A90	Power Trunk Opener	-2 (-4)	1.0 (2.2)	.8 (1.8)	
B37	Floor Mats - Front & Rear	1.8 (3.5)	1.0 (2.2)	2.8 (5.7)	
CD4	Intermittent Windshield Wiper System	.2 (.4)	0 (0)	.2 (.4)	
C49	Electric Rear Window Defogger	0 (0)	.4 (.9)	.4 (.9)	
D07	Console - Front Compartment Floor - Custom	1.0 (2.2)	.6 (1.3)	1.6 (3.5)	
D34	Mirror - I/S Sunshade	.2 (.4)	0 (0)	.2 (.4)	
D52	Spoiler - Rear End Sport	-1.0 (-2.2)	3.4 (7.5)	2.4 (5.3)	

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

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

		Optional Equipment Differential Mass (weight)*			Remarks Restrictions, Requirements
Code	Equipment	MASS, kg. (lb.)			
		Front	Rear	Total	
FE2	Ride & Handling Suspension System	.4 (.9)	.8 (1.7)	1.2 (2.6)	
FE3	Sport Suspension System	.4 (.9)	.8 (1.7)	1.2 (2.6)	
K05	Engine Block Heater	.2 (.4)	0 (0)	.2 (.4)	
K34	Electronic Speed Control	1.8 (3.9)	0 (0)	1.8 (3.9)	
K60	Generator - 100 Amp	.2 (.4)	0 (0)	.2 (.4)	
LG0	2.3 Liter L4 Engine	45.0 (99.0)	-4.0 (-8.8)	41.0 (90.2)	
L82	3.1 Liter V6 Engine	45.0 (99.0)	-3.0 (-6.6)	42.0 (93.0)	
MD9	Automatic Transmission	18.2 (40.1)	-1.6 (-3.5)	16.6 (36.6)	With Base LN2 Engine
MV5	5-Speed Manual Transmission	2.6 (5.7)	-2 (-.4)	2.4 (5.3)	With LG0 Engine
M13	Transmission - 4-Speed Automatic	35.6 (78.5)	-1.4 (-3.1)	34.2 (75.4)	With L82 Engine
NP5	Leather Wrapped Steering Wheel	.2 (.4)	0 (0)	.2 (.4)	
N33	Comfortilt Steering Wheel	.4 (.9)	.2 (.4)	.6 (1.3)	

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

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line BERETTA
 Model Year 1994 Issued 9-93 Revised _____

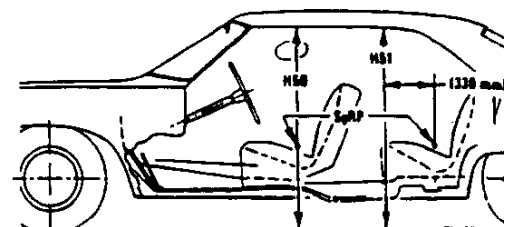
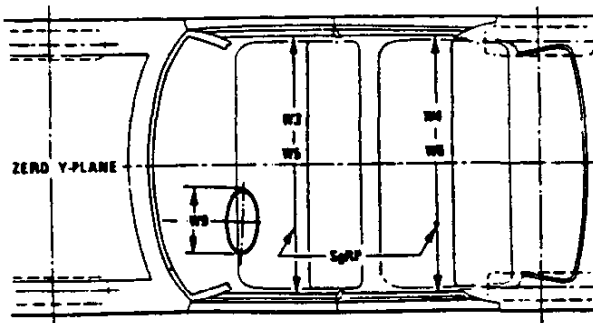
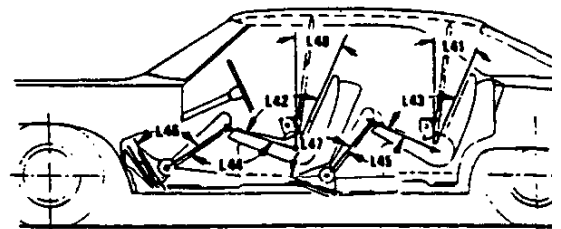
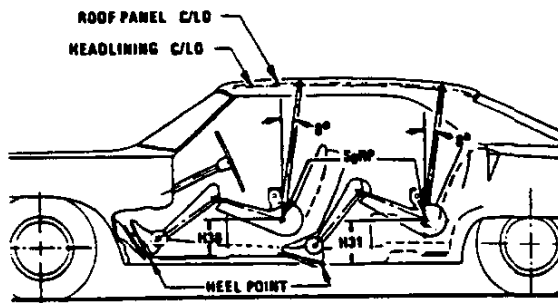
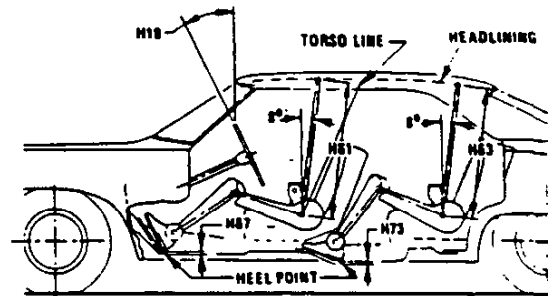
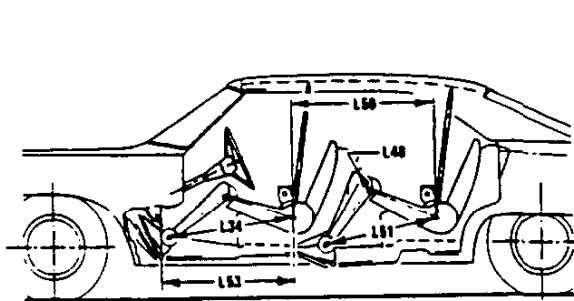
		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
PB4	Wheel Locks	.2 (.4)	.2 (.4)	.4 (.8)	
PF4	Aluminum Wheels - 16"	3.6 (8.0)	3.6 (8.0)	7.2 (16.0)	
PG1	Steel Wheels - 15"	1.2 (2.6)	1.2 (2.6)	2.4 (5.3)	
QIM	P205/60/R15 Tires	2.8 (6.2)	2.8 (6.2)	5.6 (12.4)	
QME	P195/70R/14 Tires	1.6 (3.5)	1.6 (3.5)	3.2 (7.0)	
QMS	P205/55R/16 Tires	3.6 (7.9)	3.4 (7.5)	7.0 (15.4)	
T96	Lamp - Fog	1.2 (2.5)	0 (0)	1.2 (2.5)	
UA1	Heavy Duty Battery	1.6 (3.5)	-.4 (-.9)	1.2 (2.6)	Required With Auto. Trans. On L4. Mandatory For Canada.
U05	Dual Horns	.4 (.9)	0 (0)	.4 (.9)	
U2C	Radio - AM/FM Stereo Seek/Scan	1.0 (2.2)	0 (0)	1.0 (2.2)	
VK3	Front License Plate Mounting	.4 (.9)	0 (0)	.4 (.9)	
Z04	Beretta Z28 Option	4.0 (8.8)	6.0 (13.2)	10.0 (22.0)	

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

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet



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 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 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 vertical reference line and a chord of the windshield running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the arc to be measured will be formed by a chord 457 mm (18.0 inch) long drawn from the lower DLO to the intersecting point of 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 line tangent to the front tire static loaded radius arc and initial point of structural interference forward of the front to ground. The limiting structural component shall be designated.
- H107 ANGLE OF DEPARTURE. The angle measured between line tangent to the rear tire static loaded radius arc and initial point of structural interference rearward of the rear 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 underbody of the vehicle which defines the largest ramp over which 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 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 trimme 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 undepressed floor covering to the rearmost point on the undepressed floor covering on the open tailgate or cargo surface if the rear closure is a conventional door type tailgate at the zero "Y" plane.
- L201 CARGO LENGTH – OPEN – SECOND. The dimension measured longitudinally from the back of the second seatback at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the open tailgate or cargo floor surface if the rear closure is a conventional door type tailgate, at the zero "Y" plane.

- L202 CARGO LENGTH – CLOSED – FRONT. The minimum dimension measured horizontally from the back of the seat at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L203 CARGO LENGTH – CLOSED – SECOND. The dimension measured horizontally from the back of the second seat at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L204 CARGO LENGTH AT BELT – FRONT. The minimum dimension measured horizontally from the back of the seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab back 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 wheelhouse floor level. For any vehicle not trimmed, measure to 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 passenger box.
- W205 REAR OPENING WIDTH ABOVE BELT. The minimum dimension measured laterally between the limiting interferences of the rear opening above the belt height.
- W500 CARGO WIDTH AT FLOOR. The maximum dimension measured laterally between the limiting interferences floor level. This dimension shall include ribs and pillars will exclude wheelhouses.
- H197 FRONT SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the horizontal top of the seatback to the undepressed floor covering on the top of the undepressed floor covering to the head at the rear wheel "X" coordinate on the zero "Y" plane.
- H201 CARGO HEIGHT. The dimension measured vertically from the top of the undepressed floor covering to the head at the rear wheel "X" coordinate on the zero "Y" plane.
- H202 REAR OPENING HEIGHT. The dimension measured vertically from the top of the undepressed floor covering to the upper trimmed opening on the zero "Y" plane with door fully open.
- H250 TAILGATE TO GROUND CURB MASS (WT.). The dimension measured vertically from the top of the undepressed floor covering on the lowered tailgate to ground on the zero "Y" plane.
- H505 MAXIMUM CARGO HEIGHT. The maximum vertical dimension rear of the front seat from the cargo floor to roof 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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