





GENUINE CHEVROLET



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# Lumina

Dealer Order Guide inserts are your first look at Chevrolet Passenger Car models for 1997. Overall improvements, changes and deletions are highlighted. Use these inserts to assist you in ordering your initial shipments. (NOTE: some information is preliminary and is subject to change.)

## Positioning Statement

*A well-equipped, worry-free family sedan you can trust to be engineered and built to be safe, dependable and provide outstanding value.*

### FOCUS

The Focus vehicle is the model that is chosen for its saleability. It is equipped with the product features that customers want most. Generally, it is the "volume" vehicle that comprises the majority of the build. NOTE: Model, PEG and optional equipment may vary in your locality.

## Lumina Sedan (image above, top)

### Ordering Recommendations:

Recommended Lumina content, based on anticipated national sales volume, is listed below to assist your dealership in ordering.

Lumina Sedan with Preferred Equipment Group ISA includes standard equipment only (see page 4 for details).

### Evaluate option on an as-needed basis:

- Rear-Window Defogger (C49)
- Four-Wheel Anti-Lock Brake System (ABS) (JM4)
- Custom Cloth 60/40 Seats (AM6)
- Integral Child Safety Seat (AN2)

### Colors: Bright White.

Dark Carmine Red Metallic, Dark Jade Green Metallic, Medium Adriatic Blue Metallic.

NOTE: Model, PEG and optional content may vary in your locality. Use the Retail Sales Analysis (RSA) to verify or select your dealership's Lumina Focus vehicle content.

### FEATURE

The Feature vehicle is the "image" model Chevrolet will profile most in its advertising. Generally, it does the best job of capturing attention and creating consumer awareness.

## FOCUS: Lumina Sedan



## FEATURE: Lumina LS



## FEATURE: Lumina LTZ



## Lumina LS and Lumina LTZ (images above, center and bottom)

Feature vehicles for 1997 are Lumina LS and LTZ Sedans. (See page 4 for list of standard equipment for each vehicle.)

Lumina LS gives you all the contemporary styling and roomy interior of Lumina, plus a long list of desirable features, including:

- Four-Wheel Anti-Lock Brake System (ABS)
- Custom Cloth or Optional Leather 60/40 Seat with Center Storage Armrest
- Power Windows with Driver's Express-Down Feature and Power Window Lockout
- Tachometer and Trip Odometer
- 16" Aluminum wheels
- P225/60R-16 Blackwall Touring Tires
- Dual Visor Mirrors with RH Illuminated

Lead Color: Dark Carmine Red Metallic. (shown in Dark Jade Green Metallic)

Lumina LTZ offers a new level of style and performance, and includes many LS features, plus:

- Available 3.4 Liter DOHC V6 engine (requires P225/60R-16 Blackwall Eagle RS-A1)
- Sporty 16" aluminum wheels
- Optional Custom Cloth or Leather Front Bucket Seats with Center Console and Cup Holders
- LTZ Embroidery on Center of Rear Bench Seat
- Ride and Handling Suspension with optional 3.4 Liter DOHC V6 engine
- Specific sporty Front and Rear Fascias, Rear Spoiler, Body-Side Moldings and LTZ badging.

Lead Color: Black.





# Lumina

'97

Lumina

S.P.A.C.E. is an acronym to help organize and explain key features and benefits in the major categories a customer needs and wants. Overall improvements, changes and actions are highlighted. Please review the supplied information, keeping in mind that this material is provided to you before production startup — and is liable to change.

## S.P.A.C.E. (New-for-'97 features appear in color.)



### SAFETY

- **AUTOMATIC DAYTIME RUNNING LAMPS** — headlamps automatically come on at low intensity when ignition is turned on, increasing vehicle's visibility to other drivers. Also includes automatic exterior lamp control, which turns on headlamps and all other exterior lamps at full intensity when it's dark outside. System is overridden when driver utilizes headlamps manually.
- **DRIVER AND FRONT-PASSENGER AIR BAGS** — help reduce the chance of injury in certain moderate to severe frontal collisions. Always wear safety belts, even with air bags.
- **STANDARD 4-WHEEL ANTI-LOCK BRAKE SYSTEM (ABS) (OPTIONAL ON BASE MODEL)** — helps reduce wheel lockup and helps driver maintain steering control during severe braking, even on slippery surfaces.
- **CHILD SECURITY REAR-DOOR LOCKS** — manually lock to prevent a child from opening rear doors from the inside.
- **AVAILABLE INTEGRAL REAR CHILD SAFETY SEAT** — helps protect child in back seat in the event of an accident.



### PERFORMANCE

- **3100 V6 ENGINE WITH SFI AND 4-SPEED ELECTRONICALLY CONTROLLED AUTOMATIC TRANSMISSION** — delivers smooth, effortless power for passing and merging. Shifts are virtually seamless.
- **PLATINUM-TIP SPARK PLUGS** — designed to last up to 100,000 miles.\*
- **AVAILABLE 3.4 LITER DOHC V6 (LTZ MODEL ONLY)** — this four-valves-per-cylinder engine delivers 215 hp at 5200 rpm, for truly impressive performance. Comes with a new 4-speed electronically controlled automatic transmission.

\*Maintenance needs vary with different uses and driving conditions.



### APPEARANCE

- **TWO NEW EXTERIOR COLORS** — Dark Jade Green Metallic and Deep Purple Metallic.
- **LTZ EXTERIOR** — Includes sporty front and rear fascias, rear spoiler, body-side moldings, badging and standard aluminum wheels.
- **BASECOAT/CLEARCOAT PAINT** — not only provides a more durable, lustrous finish, but also reduces the severity of water-spotting and etching from acid rain.



### COMFORT AND CONVENIENCE

- **OPTIONAL ELECTRIC SUNROOF (OPTIONAL ON LUMINA LS AND LTZ MODELS)** — provides outside air and sunlight for interior.
- **LEATHER-WRAPPED STEERING WHEEL WITH MOUNTED RADIO CONTROLS (OPTIONAL ON LUMINA LS AND LTZ MODELS)** — for added convenience.
- **POWER WINDOWS WITH DRIVER'S EXPRESS-DOWN FEATURE AND POWER LOCKOUT FEATURE (STANDARD ON LUMINA LS AND LTZ SEDAN, OPTIONAL ON BASE SEDAN)** — allow easy operation of all windows and one-touch operation to lower driver's window.
- **OPTIONAL INDIVIDUAL DRIVER AND FRONT-PASSENGER TEMPERATURE CONTROL** — creates more comfortable environment for driver and front passenger.



### EASY-TO-OWN

- **OIL WEAR SENSOR INDICATOR** — informs driver of when it is time to change the engine oil.
- **SCOTCHGARD™ FABRIC PROTECTOR** — on cloth seats, door panels, floor carpeting and floor mats. Resists stains and makes cleanup easy.
- **DEXRON III AUTOMATIC TRANSMISSION FLUID** — never needs changing under normal driving conditions.
- **EXTENDED-LIFE ENGINE COOLANT** — has a recommended service change interval of 5 years or 100,000 miles, whichever comes first.\*
- **STAINLESS-STEEL EXHAUST SYSTEM** — includes all pipes, catalytic converter and muffler to resist corrosion, for a long service life.
- **GENUINE CUSTOMER CARE** — a no-deductible, 3-year/36,000-mile limited warranty, 24-hour roadside assistance via toll-free hot line, and courtesy transportation, if your vehicle ever needs warranty work, at participating dealers.

\*Maintenance needs vary with different uses and driving conditions.



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# LUMINA

REVISED 8-19-96

1997 ORDER GUIDE

LUMINA

Page 1

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





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**LUMINA**  
**TRIM DEFINITION & OPTION SUMMARY**

**INTERIOR TRIM**

		1WL69	1WL69	1WN69
		SED	LS	LTZ
BADGING:	'LTZ' ON DASH	--	--	S
MIRRORS:	VISOR, LH AND RH	S	S	S
	VISOR RH ILLUMINATED	--	S	S
SEATS:	CLOTH 60/40 SEAT WITH CENTER STORAGE ARMREST WITH CUPHOLDER AND 4-WAY MANUAL DRIVER'S SEAT ADJUSTER AND FIXED REAR BENCH SEAT	S	--	--
	CUSTOM CLOTH 60/40 SEAT WITH CENTRAL ARMREST WITH CUPHOLDER, 4-WAY MANUAL DRIVER'S SEAT ADJUSTER AND FIXED REAR BENCH SEAT	--	S	--
	CUSTOM CLOTH 60/40 SEAT WITH CENTER ARMREST WITH CUPHOLDER, 4-WAY MANUAL DRIVER'S SEAT ADJUSTER AND FIXED REAR BENCH SEAT WITH EMBROIDERED 'LTZ' GRAPHICS ON SEAT BACK	--	--	S
STORAGE POCKET:	SEAT BACK STORAGE POCKET	S	S	S

**EXTERIOR TRIM**

BADGING:	'LS'	--	S	--
	'LTZ'	--	--	S
SPOILER:	REAR DECK	--	--	S
MIRRORS:	DUAL BLACK SPORT (LH REMOTE)	S	--	--
	DUAL BLACK SPORT REMOTE, ELECTRIC	--	S	--
	DUAL BODY COLOR REMOTE, ELECTRIC	--	--	S
MOLDINGS:	BODYSIDE, COLOR-KEYED	S	S	S
WHEEL COVERS:	15" BOLT-ON FULL-WHEEL COVER (SILVER)	S	--	--
	16" ALUMINUM	--	S	--
	16" SPORTY ALUMINUM	--	--	S

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# LUMINA SEDAN

## COLOR AND TRIM SELECTION

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

Interior Trim Color		Med Gray	Med Blue	Ruby Red	Neutral	
MODEL	SEAT TYPE	SEAT OPTION**				
1WL69	Cloth 60/40	AM6	14B	30B	79B	52B
	Custom Cloth 60/40	AM6	14C	30C	79C	52C

\*\*Seat Option AM6 Must Be Specified

## SOLID PAINT APPLICATION

Exterior Paint Color	Color Code	Med Gray	Med Blue	Ruby Red	Neutral
Black	41U	x		x	x
Blue, Med Adriatic (Met)	30U	x	x		
Blue, Lt Adriatic (Met)	36U		x		
Granite (Met)	03U	x		x	x
Green, Med Lichen (Met)	47U				x
Green, Dark Jade (Met)	56U	x			x
Purple, Deep (Met)	89U	x			x
Red, Dk Carmine (Met)	51U	x		x	x
White, Bright	16U	x	x	x	x

## POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO
	3.33
L82 MX0	Std



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# LUMINA LS SEDAN

## COLOR AND TRIM SELECTION

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

Interior Trim Color	Med Gray	Med Blue	Ruby Red	Neutral
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MODEL	SEAT TYPE	SEAT OPTION**				
1WL69	Custom Cloth 60/40	AM6	14C	30C	79C	52C
	Leather 60/40	AM6	144			524

= Reqs 1SD

\*\*Seat Option AM6 Must Be Specified

## SOLID PAINT APPLICATION

Exterior Paint Color	Color Code	Med Gray	Med Blue	Ruby Red	Neutral
Black	41U	x		x	x
Blue, Med Adriatic (Met)	30U	x	x		
Blue, Lt Adriatic (Met)	36U		x		
Granite (Met)	03U	x		x	x
Green, Med Lichen (Met)	47U				x
Green, Dark Jade (Met)	56U	x			x
Purple, Deep (Met)	89U	x			x
Red, Dk Carmine (Met)	51U	x		x	x
White, Bright	16U	x	x	x	x

## POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO
	3.33
L82 MX0	Std



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**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 Gray	Med Blue	Ruby Red	Neutral
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MODEL	SEAT TYPE	SEAT OPT**				
1WN69	#Custom Cloth 60/40	AM6	14C	30C	79C	52C
	*Custom Cloth Bucket	AR9	14C	30C	79C	52C
	#Leather 60/40	AM6	144			524
	*Leather Bucket	AR9	144			524

\*Includes Console  
 \*\*Seat Option AM6 or AR9 Must Be Specified  
 # N/A LQ1 Eng

**SOLID PAINT APPLICATION**

Exterior Paint Color	Color Code	Med Gray	Med Blue	Ruby Red	Neutral
Black	41U	x		x	x
Blue, Med Adriatic (Met)	30U	x	x		
Green, Med Lichen (Met)	47U				x
Green, Dark Jade (Met)	56U	x			x
Purple, Deep (Met)	89U	x			
Red, Dk Carmine (Met)	51U	x		x	x
Red, Torch (Met)	70U	x			x
White, Bright	16U	x	x	x	x

**POWER TEAMS**

ENGINE OPTION CONDITION	FINAL DRIVE RATIO	
	3.33	3.43
L82 MX0	Std	----
LQ1 MX0	----	Std





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# MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. CUSTOMARY)

# 1997

Manufacturer CHEVROLET MOTOR DIVISION GENERAL MOTORS CORPORATION	Vehicle Line  LUMINA	
Mailing Address  30007 VAN DYKE WARREN, MI 48090-9065	September, 1996	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.**

## AAMA

American Automobile Manufacturers Association

Blank Forms Provided by Technical Affairs Division



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# Specifications

## METRIC

### Table of Contents

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1	Vehicle Models/Origin	ø	Indicates Format Change
2	Power Teams		From Previous Year
3	Engine		
4	Lubrication System		
4	Diesel System		
5	Cooling System		
6	Fuel System		
7	Vehicle Emission Control		
7	Exhaust System		
8-10	Transmission, Axles and Shafts		
11	Suspension		
12-13	Brakes, Tires and Wheels		
14	Steering		
15-16	Electrical		
17	Body – Miscellaneous Information		
17	Frame		
18	Glass		
18	Headlamps		
19	Climate Control System		
20-21	Convenience Equipment		
21	Trailer Towing		
22-24	Vehicle Dimensions		
25	Vehicle Fiducial Marks		
26	Vehicle Mass		
27	Optional Equipment Differential Mass (Weight)		
28-34	Vehicle Dimensions Definitions – Key Sheets		
35	Index		

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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 LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

### Vehicle Origin

Design & development (company)	G.M., Midsize Car Division
Where built (country)	Canada
Authorized U.S. sales marketing representative	Chevrolet Motor Division

### Vehicle Models

Model Description & Drive (FWD / RWD / AWD / 4WD)*	Introduction Date	Make, Vehicle Models, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front / Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)	EPA Fuel Economy (City/Hwy)
LUMINA 4-Door Notchback Sedan (FWD)		1WL69	6 (3/3)		19/29 - L82
LUMINA LS 4-Door Notchback Sedan (FWD)		1WN69	6 (3/3) 5 (2/3) Opt.		19/29 - L82 17/26 - LQ1
LUMINA LTZ 4-Door Notchback Sedan (FWD)		1WN69	6 (3/3) 5 (2/3) Opt.		19/29 - L82 17/26 - LQ1

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

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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

### Power Teams

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

		A	B	C	D	
<b>E N G I N E</b>	Engine Code	L82	LQ1			
	Displacement Liters (in <sup>3</sup> )	3.1 (191)	3.4 (206)			
	Induction system (FI, Carb, etc.)	Sequential Fuel Injection	Sequential Fuel Injection			
	Compression ratio	9.6:1	9.7:1			
	SAE Net at RPM	Power kW (bhp)	119 (160) @ 5200	160 (215) @ 5200		
		Torque N • m (lb. ft.)	251 (185) @ 4000	298 (220) @ 4400		
Exhaust single, dual	Single	Dual				
<b>T R A N S</b>	Transmission/ Transaxle	M13 Auto Transaxle Four-Speed	M15 Auto Transaxle Four-Speed			
	Effective Final Drive / Axle Ratio (std. first)	3.33	3.42			

Series Availability		Power Teams (A - B - C - D)	
Model	Code	Standard	Optional
LUMINA			
4-Dr. Notchback Coupe	1W69	A	-
LUMINA LS			
4-Dr. Notchback Coupe	1WN69	A	B
LUMINA LTZ	1WN69	A	B





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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

3.1 LITER V6 (191 CID)  
 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 Degree V, Transverse, OHV, Front-Wheel-Drive	
Manufacturer	General Motors Powertrain Group	
No. of cylinders	Six	
Bore	89.0 mm	
Stroke	84.0 mm	
Bore Spacing (C / L to C / L)	111.76 mm	
Cylinder block material & mass kg. (lbs.) (machined)	Cast Iron, 57kg (125.7 in.) Block, Bearing Caps, Bolts, & Cup Plug	
Cylinder block deck height	224.0 mm	
Cylinder block length	435.5 mm	
Deck clearance (minimum) (above or below block)	0.58 Above TDC	
Cylinder head material & mass kg. (lbs.)	Cast Aluminum, 5.8 (12.8)	
Cylinder head volume cm <sup>3</sup> (inches <sup>3</sup> )	26.2 (1.6)	
Cylinder liner material	None	
Head gasket thickness (compressed)	1.55 mm	
Minimum combustion chamber total volume cm <sup>3</sup> (inches <sup>3</sup> )	60.29 (3.7)	
Cyl. no. system (front to rear)*	L. Bank	2-4-6
	R. Bank	1-3-5
Firing order	1-2-3-4-5-6	
Intake manifold material & mass kg. (lbs.)**	Cast Aluminum, 8.5 (18.7) Upper & lower	
Exhaust manifold material & mass kg. (lbs)**	Cast Iron, Rt: 3.6kg (7.9); Lt: 2.4 (5.3)	
Knock sensor (number & location)	One, Left Side Center of Block	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) + 2	86	
Engine Mounts	Quantity	Four
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	One - Hydraulic, One - Elastomeric (Three-Speed Trans.); Two - Hydraulic (Four-Speed Trans.); Two - Torque Struts
	Added isolation (sub-frame, crossmember, etc.)	Isolated Cradle Supporting Left & Right Mounts
Total dressed engine mass (wt) dry***	188 kg with oil	

### Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum Alloy, 0.38 kg
------------------------------------------------	-------------------------

### Engine - Camshaft

Location	Above Crankshaft at Center of "V"	
Material & mass kg (weight, lbs.)	Assembled Steel, 2.26 (Five)	
Drive type	Chain / belt	Chain
	Width / pitch	16.18 mm Max width; 3/8 pitch inverted Tooth "Silent" Chain

\* 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.



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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

3.4 LITER V6 (207 CID)  
 SEQUENTIAL FUEL INJECTION RPO LQ1

### Engine - General

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)	60 Degree V, Front, Transverse, DOHC, Front Wheel Drive	
Manufacturer	General Motors Powertrain Group	
No. of cylinders	Six	
Bore	92.029 mm	
Stroke	84.0 mm	
Bore Spacing (C / L to C / L)	111.76 mm	
Cylinder block material & mass kg. (lbs.) (machined)	Cast Iron, 52.1kg. (114.9 lbs.) Block, Bearing Caps, Bolts & Cup Plug	
Cylinder block deck height	224.0 mm	
Cylinder block length	435.5 mm	
Deck clearance (minimum) (above or below block)	0.028 mm, Above Block, Nominal ( $\pm 0.24$ mm)	
Cylinder head material & mass kg. (lbs.)	Aluminum, 7.9 (17.4)	
Cylinder head volume cm <sup>3</sup> (inches <sup>3</sup> )	50.3 (3.1)	
Cylinder liner material	Not Applicable	
Head gasket thickness (compressed)	1.55 mm	
Minimum combustion chamber total volume cm <sup>3</sup> (inches <sup>3</sup> )	67.7 (4.13)	
Cyl. no. system (front to rear)*	L. Bank	2-4-6
	R. Bank	1-3-5
Firing order	1-2-3-4-5-6	
Intake manifold material & mass kg. (lbs.)**	Aluminum, 9.3 (20.4) Upper & Lower	
Exhaust manifold material & mass kg. (lbs.)**	Cast Iron - RT: 4.5 (10) LT: 2.9 (6.5)	
Knock sensor (number & location)	Two, Near Starter Motor Under Exhaust Manifold	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) + 2	87	
Engine Mounts	Quantity	Four
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	One - Elastomeric; Two - Hydraulic; One - Torque Strut
	Added isolation (sub-frame, crossmember, etc.)	Isolated (Sub-frame) Supporting the Right & Left Hand Mounts
Total dressed engine mass (wt) dry***	237.0 kg with oil	

### Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum Alloy, 0.41kg
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### Engine - Camshaft

Location	(Four) OHC in Carrier	
Material & mass kg (weight, lbs.)	Cast Iron - Left Bank Intake and Exhaust, 4.2 (9.3) Cast Iron - Right Bank Intake and Exhaust, 4.6 (10.1)	
Drive type	Chain / belt	Belt and Chain
	Width / pitch	Belt, 34.0/8.00 mm (1.34/0.315 in.) Chain, 19.05/9.53 mm (0.750/0.375 in.)

- \* Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.
- \*\* Finished state.
- \*\*\* Dressed engine mass (weight) includes the following: All those items necessary to make the engine a complete ready-to-run unit.



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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

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

### Engine - Valve System

Hydraulic lifters (std., opt., n.a.)	Standard
Valves	Number intake / exhaust
	Head O.D. intake / exhaust
	Six/Six
	43.64 mm / 36.20 mm

### Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Forged Steel, 0.59 (1.3)
Length (axes C/L to C/L)	144.78 mm

### Engine - Crankshaft

Material & mass kg., (weight, lbs.)*	Cast Iron, 17.2 (37.9)
End thrust taken by bearing (no.)	Three
Number & Length of main bearing journals	one - 29.5 mm, Two and Three - 24.0 mm, Four - 36.0 mm
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) at engine rpm	280 - 360 (40.6 - 52.2) @ 2400
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)

### Engine - Diesel Information

(NOT APPLICABLE)

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

### Engine - Intake System

(NOT APPLICABLE)

Turbo charger - manufacturer	
Super charger - manufacturer	
Intercooler	

\* Finished State



# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

3.4 LITER V6 (207 CID)  
 SEQUENTIAL FUEL INJECTION RPO LQ1

### Engine - Valve System

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

### Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Forged Steel, 0.59 (1.3)
Length (axes C/L to C/L)	144.78 mm

### Engine - Crankshaft

Material & mass kg., (weight, lbs.)*	Nodular Cast Iron, 17.2 (37.9)
End thrust taken by bearing (no.)	Three
Length & number of main bearings	One - 29.5 mm, Two and Three - 24.0 mm, Four - 36.0 mm
Seal (material, one, two piece design, etc.)	Front
	Rear

### Engine - Lubrication System

Normal oil pressure kPa (psi) at engine rpm	275 (40) @ 2000
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	With Optional Oil Cooler 4.73 (5.0), Without Filter

### Engine - Diesel Information

(NOT APPLICABLE)

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

### Engine - Intake System

(NOT APPLICABLE)

Turbo charger - manufacturer	
Super charger - manufacturer	
Intercooler	

\* Finished State





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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

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

### Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard	
Coolant fill location (rad., bottle)		Bottle	
Radiator cap relief valve pressure kPa (psi)		103.4 (15.0)	
Circulation thermostat	Type (choke, bypass)	Bypass	
	Starts to open at °C (°F)	90 (195)	
Water pump	Type (centrifugal, other)	Centrifugal	
	GMP 1000 pump rpm	12	
	Number of pumps	One	
	Drive (V-belt, other)	Serpentine	
	Bearing type	Ball-Roller	
	Impeller material	Cast Iron	
Housing material		Aluminum	
By-pass recirculation type (inter., ext.)		External, Bypass	
Cooling System capacity	With heater - L (qt.)	A/C is Standard	
	With air conditioner - L (qt.)	11.59 (12.2) - Includes 0.5L Reservoir Reserve	
	Opt. equipment specify - L (qt.)	Not Applicable	
Water jackets full length of cyl. (yes, no)		No	
Water all around cylinder (yes, no)		Yes	
Water jackets open at head face (yes, no)		Yes	
Radiator core	Std., A/C, HD	A/C is Standard Equipment	
	Type (cross-flow, etc.)	Cross-Flow	
	Construction (fin & tube mechanical, oraze, etc.)	High Efficiency Radiator (H.E.R.), Fin & Tube	
	Material, mass kg (wt., lbs.)	Aluminum, 3.22 (7.16)	
	Width	774.0 mm (30.5 in.)	
	Height	382.4 mm (15.0 in.)	
	Thickness	16.0 mm (0.630 in.)	
Fins per inch		17.0, 2.5 mm	
Radiator end tank material		Plastic	
Fan	Std., elec., opt.	Electric	Electric
	Number of blades & type (flex, solid, material)	Seven Blades, Solid, Plastic	Seven Blades, Solid, Plastic
	Number & location (front, rear of radiator)	Rear	Rear
	Diameter & projected width	360.0 mm (14.2 in.), Diameter	360.0 mm (14.2 in.), Diameter
	Ratio (fan to crankshaft rev.)	Not Applicable	Not Applicable
	Fan cutout type	ECM Controlled	ECM Controlled
	Drive type (direct, remote)	Direct	Direct
	RPM at idle (elec.)	1800 Primary	1650 Secondary
	Motor rating (wattage/elec.)	150 W	90 W
	Motor switch (type & location/elec.)	Engine Mounted Coolant Temp. Sensor, A/C Liquid Line Press. Switch or Transducer	(Same)
	Switch point (temp./pressure/elec.)	(See Below)	(See Below)
	Fan shroud (material)	Not Available	Not Available

PRIMARY FAN (LH)  
 A/C Head Pressure or  
 Engine Coolant

ON  
 190 PSI  
 223 deg. F.

OFF  
 140 PSI  
 216 deg. F.

SECONDARY FAN (RH)  
 A/C Head Pressure or  
 Engine Coolant

ON  
 240 PSI  
 235 deg. F.

OFF  
 190 PSI  
 228 deg. F.



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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

3.4 LITER V6 (207 CID)  
 SEQUENTIAL FUEL INJECTION RPO LQ1

### Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard	
Coolant fill location (rad., bottle)		Bottle	
Radiator cap relief valve pressure kPa (psi)		103.4 (15.0)	
Circulation thermostat	Type (choke, bypass)	Bypass	
	Starts to open at °C (°F)	90 (194)	
Water pump	Type (centrifugal, other)	Centrifugal	
	GMP 1000 pump rpm	9.7	
	Number of pumps	One	
	Drive (V-belt, other)	Serpentine Poly V	
	Bearing type	Ball Roller	
	Impeller material	Cast Iron	
Housing material		Aluminum	
By-pass recirculation type (inter., ext.)			
Cooling System capacity	With heater - L (qt.)	A/C is Standard	
	With air conditioner - L (qt.)	11.04 (12.35) - Includes 0.5L Reservoir Reserve	
	Opt. equipment specify - L (qt.)	Not Available	
Water jackets full length of cyl. (yes, no)		No	
Water all around cylinder (yes, no)		Yes	
Water jackets open at head face (yes, no)		Yes	
Radiator core	Std., A/C, HD	A/C is Standard Equipment	
	Type (cross-flow, etc.)	Cross-Flow	
	Construction (fin & tube mechanical, braze, etc.)	High Efficiency Radiator (H.E.R.), Fin & Tube	
	Material, mass kg (wgt., lbs.)	Aluminum, 5.46 (12.04)	
	Width	774.0 mm (30.5 in.)	
	Height	382.4 mm (15.0 in.)	
	Thickness	34 mm (1.3 in.)	
Fins per inch		17, 3.0 mm	
Radiator end tank material		Plastic	
Fan	Std., elec., opt.	Dual Electric Standard	
	Number of blades & type (flex, solid, material)	Seven Blades, Solid, Plastic	Seven Blades, Solid, Plastic
	Number & location (front, rear of radiator)	Rear	Rear
	Diameter & projected width	360.0 mm (14.2 in.), Diameter	360.0 mm (14.2 in.), Diameter
	Ratio (fan to crankshaft rev.)	Not Applicable	Not Applicable
	Fan cutout type	ECM Controlled	ECM Controlled
	Drive type (direct, remote)	Direct	Direct
	RPM at idle (elec.)	2100 Primary	1650 Secondary
	Motor rating (wattage/elec.)	240 W	90 W
	Motor switch (type & location/elec.)	Engine Mounted Coolant Temp. Sensor, A/C Liquid Line Press. Switch or Transducer	(Same)
	Switch point (temp./pressure/elec.)	(See Below)	(See Below)
	Fan shroud (material)	Not Available	Not Available

<b>PRIMARY FAN (LH)</b>	<b>ON</b>	<b>OFF</b>	<b>SECONDARY FAN (RH)</b>	<b>ON</b>	<b>OFF</b>
A/C Head Pressure or Engine Coolant	190 PSI 223 deg. F.	140 PSI 216 deg. F.	A/C Head Pressure or Engine Coolant	240 PSI 235 deg. F.	190 PSI 228 deg. F.



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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

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

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

Induction type: carburetor, fuel injection system, etc.		Sequential Fuel Injection
Manufacturer		Delphi
Carburetor no. of barrels		Not Applicable
Idle A/F mix.		PCM Controlled
Fuel injection	Point of injection (no.)	Intake Port (Six)
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	Electronic
	System pressure kPa (psi)	300.0 (43.5)
Idle speed-rpm (spec. neutral or drive and propane if used)	Manual	Not Applicable
	Automatic	PCM Controlled
Intake manifold heat control (exhaust or water thermostatic or fixed)		Fixed
Air cleaner type		Replaceable Paper Element
Fuel filter (type/location)		Replaceable Enclosed Paper Element (Near Fuel Tank)
Fuel pump	Type (elec. or mech.)	Electrical
	Location (eng., tank)	Tank
	Pressure range kPa (psi)	250-300 (36-44)
	Flow rate at regulated pressure L (gal)/hr @ kPa (psi)	62.4 (16.51) @ 350 (50.8), Figures for Wide Open Throttle

### Fuel Tank

Capacity refill L (gallons)		60.9 (16.1)
Location (describe)		Underbody, Forward of Rear Axle
Attachment		Two Steel Straps w/Four Vertical Fasteners
Material & Mass kg. (weight lbs.)		Stamped Steel Upper & Lower w/Perimeter Seam Weld, 9.634 (21.239)
Filler pipe	Location & material	Left Rear Quarter Panel-Steel
	Connection to tank	Flexible Hose
Fuel line (material)		Steel & Nylon
Fuel hose (material)		Nylon
Return line (material)		Steel & Nylon
Vapor line (material)		Steel & Nylon
Extended range tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	Not Applicable
	Location & material	Not Applicable
	Attachment	Not Applicable
Auxiliary tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	Not Applicable
	Location & material	Not Applicable
	Attachment	Not Applicable
	Selector switch or valve	Not Applicable
Separate fill		Not Applicable



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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

3.4 LITER V6 (207 CID)  
 SEQUENTIAL FUEL INJECTION RPO LQ1

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

Induction type: carburetor, fuel injection system, etc.		Sequential Fuel Injection
Manufacturer		AC Rochester Products
Carburetor no. of barrels		None
Idle A/F mix.		PCM Controlled
Fuel injection	Point of injection (no.)	At Inlet Ports (6)
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	Electronic
	System pressure kPa (psi)	300 (43.5)
Idle speed-rpm (spec. neutral or drive and propane if used)	Manual	Not Applicable
	Automatic	PCM Controlled
Intake manifold heat control (exhaust or water thermostatic or fixed)		Throttle Body Water Heat; No Induction Air Heat
Air cleaner type		Single Snorkel, Replaceable Paper Element
Fuel filter (type/location)		Replaceable Enclosed Paper Element (Near Fuel Tank)
Fuel pump	Type (elec. or mech.)	Electrical
	Location (eng., tank)	Tank
	Pressure range kPa (psi)	250-300 (36-44)
	Flow rate at regulated pressure L (gal)/hr @ kPa (psi)	91.2 (24.0) @ 350.0 (51.0)

### Fuel Tank

Capacity refill L (gallons)		64.7 (17.1)
Location (describe)		Underbody, Forward of Rear Axle
Attachment		Two Steel Straps w/Four Vertical Fasteners
Material & Mass kg. (weight lbs.)		Stamped Steel Upper & Lower w/Perimeter Seam Weld, 9.634 (21.239)
Filler pipe	Location & material	Left Rear Quarter Panel-Steel
	Connection to tank	Flexible Hose
Fuel line (material)		Steel & Nylon
Fuel hose (material)		Nylon (No Coupled Hose)
Return line (material)		Steel & Nylon
Vapor line (material)		Steel & Nylon
Extended range tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	Not Applicable
	Location & material	Not Applicable
	Attachment	Not Applicable
Auxiliary tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	Not Applicable
	Location & material	Not Applicable
	Attachment	Not Applicable
	Selector switch or valve	Not Applicable
Separate fill		Not Applicable



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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

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

### Vehicle Emission Control

Type (air injection, engine modifications, other)		Not Applicable		
Exhaust Emission Control	Air injection	Pump or pulse	Not Applicable	
		Driven by	Not Applicable	
		Air distribution (head, manifold, etc.)	Not Applicable	
		Point of entry	Not Applicable	
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled Flow, Linear	
		Exhaust source	Right Side Exhaust Manifold	
		Point of exhaust injection (spacer, carburetor, manifold, other)	Intake Manifold	
	Catalytic Converter	Type	Three Way Catalyst	
		Number of	One	
		Locations(s)	Underbody	
Volume L (in <sup>3</sup> )		2.67 (163)		
Substrate type		Monolith/Ceramic		
Noble metal type		Platinum (Pt) / Palladium (Pd) / Rhodium (Rh)		
Noble metal concentration (g/cm <sup>2</sup> )	0.07/0.0/0.005 (Troy oz)			
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System	
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum	
	Discharges to (intake manifold, other)		Intake Manifold	
	Air inlet (breather cap, other)		Right Rear Rocker Arm Cover	
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel Tank	Canister	
		Carburetor	Not Applicable	
	Vapor storage provision		Charcoal	
Electronic system	Closed loop (yes/no)		Yes	
	Open loop (yes/no)		No	

### Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single w/Crossover
○	Muffler no. & type (reverse flow, straight thru, separate resonator), Muffler volume (liters), Material & Mass kg. (weight lbs.)	Reverse Flow
○	Resonator no., type, & volume (liters)	88.9 mm O.D., Round Bottle, Straight Thru
Exhaust pipe	Branch o.d., wall thickness	--
	Main o.d., wall thickness	--
	Material & Mass kg. (weight lbs.)	409 Stainless Steel (Airgap)
Intermediate pipe	o.d. & wall thickness	50.8 x 1.07 mm (2.0 x 0.042 in.)
	Material & Mass kg. (weight lbs.)	409 Stainless Steel
Tail pipe	o.d. & wall thickness	50.8 x 1.07 mm (2.0 x 0.042 in.)
	Material & Mass kg. (weight lbs.)	409 Stainless Steel - Painted Black



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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

3.4 LITER V6 (207 CID)  
 SEQUENTIAL FUEL INJECTION RPO LQ1

### Vehicle Emission Control

Exhaust Emission Control	Air injection	Pump or pulse	Pump
		Driven by	Electric motor
		Air distribution (head, manifold, etc.)	Exhaust manifolds
		Point of entry	Exhaust manifolds
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled Flow, Linear
		Exhaust source	Right Exhaust Manifold
		Point of exhaust injection (spacer, carburetor, manifold, other)	Intake Manifold
	Catalytic Converter	Type	Three Way Catalyst
		Number of	One
		Location(s)	Underbody
		Volume L (in <sup>3</sup> )	2.67 (163)
		Substrate type	Ceramic/Monolith
Noble metal type		Platinum (Pt.), Rhodium (Rh), Palladium (Pd)	
	Noble metal concentration (g/cm <sup>2</sup> )	0.09/0.0/0.009 (Troy oz)	
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)		Inlet Manifold
	Air inlet (breather cap, other)		Throttle Body
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel Tank	Canister
		Carburetor	Not Applicable
	Vapor storage provision		Charcoal
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

### Engine - Exhaust System

Type (single, single with cross-over, dual, other)	Dual, w/Crossover	
Ø Muffler no. & type (reverse flow, straight thru, separate resonator), Muffler volume (liters), Material & Mass kg. (weight lbs.)	Reverse Flow	
Ø Resonator no., type, & volume (liters)	88.9 mm O.D., Round Bottle, Straight Thru	
Exhaust pipe	Branch o.d., wall thickness	--
	Main o.d., wall thickness	63.5 x 1.77 mm (2.5 x 0.070 in.)
	Material & Mass kg. (weight lbs.)	Laminated 409 Stainless Steel
Intermediate pipe	o.d. & wall thickness	57.2 x 1.37 mm, Legs 50.8 x 1.37 mm
	Material & Mass kg. (weight lbs.)	409 Stainless Steel
Tail pipe	o.d. & wall thickness	57.2 x 1.37 mm, Tip 1.20 mm
	Material & Mass kg. (weight lbs.)	409 Stainless - Steel Painted Black

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

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

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

Manual 4-speed (manufacturer/country)	Not Available
Manual 5-speed (manufacturer/country)	Not Available
Manual 6-speed (manufacturer/country)	Not Available
Automatic (manufacturer/country)	Not Available
Automatic overdrive (manufacturer/country)	Hydra-Matic/U.S.A.

### 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 material & mass kg. (lbs.)*		
Lubricant	Capacity L (pt.)	
	Type recommended	

### Clutch (Manual Transmission) (NOT APPLICABLE)

Clutch manufacturer		
Clutch type (dry, wet; single, multiple disc)		
Linkage (hydraulic, 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 mfg. & material coding	
	Facing material & construction	
	Rivets per facing	
	Outside x inside dia. (nominal)	
	Total eff. area cm <sup>2</sup> (in. <sup>2</sup> )	
	Thickness (pressure plate side/ty wheel side)	
	Rivet depth (pressure plate side/ty 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 LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## MÉTRIC (U.S. Customary)

Engine Description **3.4 LITER V6 (207 CID)**  
 Engine Code **SEQUENTIAL FUEL INJECTION RPO LQ1**

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

Manual 4-speed (manufacturer/country)	Not Applicable
Manual 5-speed (manufacturer/country)	Not Applicable
Manual 6-speed (manufacturer/country)	Not Applicable
Automatic (manufacturer/country)	Not applicable
Automatic overdrive (manufacturer/country)	Gm Powertrain Group, USA

### 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 material & mass kg. (lbs.)*		
Lubricant	Capacity L (pt.)	
	Type recommended	

### Clutch (Manual Transmission) (NOT APPLICABLE)

Clutch manufacturer		
Clutch type (dry, wet; single, multiple disc)		
Linkage (hydraulic, 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. & material coding	
	Facing material & construction	
	Rivets per facing	
	Outside x inside dia. (nominal)	
	Total eff. area cm <sup>2</sup> (in. <sup>2</sup> )	
	Thickness (pressure plate side/wheel side)	
	Rivet depth (pressure plate side/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 LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ 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		Hydra-Matic 4T60-E Transaxle
Type and special features (describe)		Four-Speed Automatic w/Torque Converter Clutch
Shift mechanics		Hydraulic Clutches/Electronic Controls
Gear selector	Location (column, floor, other)	Column & Floor (Mechanical)
	Ltr./No. designation (e.g. PRND21)	P-R-N- <b>D</b> -D-2-1
	Shift interlock (yes, no, describe)	Yes - Brake, Ignition Key
Gear ratios	1st	2.92
	2nd	1.57
	3rd	1.00
	4th	0.70
	5th	Not Applicable
	6th	Not Applicable
	Reverse	2.38
Final drive ratio		3.33
Max. upshift vehicle speed - drive range km/h (mph)		One - Two = 66 (41)      Three - Four = 163 (101) Two - Three = 124 (77)
Max. upshift engine speed RPM		5600
Max. kickdown speed - drive range km/h (mph)		Two - One = 48 (30) Three - Two = 104 (65)
Min. overdrive speed km/h (mph)		52 (32)
Torque converter	Type	Lock-Up
	Torus design	Yes
	Number of elements	Three
	Max. ratio at stall	1.95
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245.0 mm
Capacity factor "K"		180
Pump type		Variable Displacement Vane
Lubricant	Capacity refill L (qts.)	12.7 (13.4) Dry
	Type recommended	Dexron III
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard, Integral with Radiator
Transmission mass kg (lbs.) & case material**		81.0 (178.50), Cast Aluminum

### All Wheel / 4 Wheel Drive

(NOT APPLICABLE)

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

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

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

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description	3.4 LITER V6 (207 CID)
Engine Code	SEQUENTIAL FUEL INJECTION RPO LQ1

### Automatic Transmission/Transaxle

Trade Name	Hydra-Matic 4T65E Transaxle	
Type and special features (describe)	Four Speed, Front Wheel Drive, Electronically Controlled, Automatic Transaxle with Torque Converter Clutch and Overdrive	
Shift mechanics	Hydraulic Clutches/Electronic Controls	
Gear selector	Location (column, floor, other)	Floor
	Ltr./No. designation (e.g. PRND21)	P-R-N- <b>OD</b> -D-2-1
	Shift interlock (yes, no, describe)	Yes - Brake, Ignition Key
Gear ratios	1st	2.92
	2nd	1.57
	3rd	1.00
	4th	0.71
	5th	Not Applicable
	6th	Not Applicable
	Reverse	2.39
	Final drive ratio	3.05 3.43 Effective
Max. upshift vehicle speed - drive range km/h (mph)	One - Two = 77 (48) Three - Four = 185 (115) Two - Three = 138 (86)	
Max. upshift engine speed RPM	6500	
Max. kickdown speed - drive range km/h (mph)	Two - One = 59 (37) Three - Two = 122 (76)	
Min. overdrive speed km/h (mph)	67 (42)	
Torque converter	Type	ECCC
	Torus design	Yes
	Number of elements	Three
	Max. ratio at stall	2.35
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245.0 mm (9.7 in.)
Capacity factor "K"	177	
Pump type	Variable Displacement Vane	
Lubricant	Capacity refill L (pt.)	12.7 (26.8), Dry Transmission
	Type recommended	Dexron III
Oil cooler (std., opt., N.A., internal, external, air, liquid)	Standard, Integral with Radiator	
Transmission mass kg (lbs.) & case material**	93 wet, Cast Aluminum	

### All Wheel / 4 Wheel Drive

(NOT APPLICABLE)

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

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

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



# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## MÉTRIC (U.S. Customary)

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

### Axle Ratio and Tooth Combinations (See 'Power Teams' for axle ratio usage) (AUTOMATIC TRANS - M13)

Effective final drive ratio (or overall top gear ratio)		3.33 (2.35)	
Transfer ratio and method (chain, gear, etc.)		1.00 Chain	
Front drive unit	Ring gear o.d.	Not Applicable	
	No. of teeth	Pinion	Not Applicable
		Ring gear	Not Applicable

### Front Drive Unit

Description (integral to trans., etc.)		Planetary Final Drive Integral with Transmission
Limited slip differential (type)		Not Applicable
Drive pinion	Type	Not Applicable
	Offset	Not Applicable
No. of differential pinions		Two
Pinion / differential	Adjustment (shim, etc.)	Not Applicable
	Bearing adjustment	Not Applicable
Driving wheel bearing (type)		
Lubricant	Capacity L (pt.)	8.0 (16.9)
	Type recommended	Dexron II

### Axle Shafts - Front Wheel Drive

Manufacturer and number used		Two Per Car		
Type (straight, solid bar, tubular, etc.)	Left	Straight Solid Bar		
	Right	Straight Solid Bar		
Outer diam. x length* x wall thickness	Manual Transaxle	Left	Not Applicable	
		Right	Not Applicable	
	Automatic transaxle	Left	--	
		Right	--	
	Optional transaxle	Left	27.1 x 326.0 mm (1.07 x 12.83 in.)	
		Right	27.1 x 360.0 mm (1.07 x 14.17 in.)	
Slip yoke	Type	--		
	Number of teeth	--		
	Spline o.d.	--		
Universal joints	Make and mfg. no.	Inner	Delphi Saginaw Steering Systems	
		Outer	Delphi Saginaw Steering Systems	
	Number used		Four, Two on Each Shaft	
	Type, size, plunge	Inner	Tripot Joint, 27 Size 66.0 mm Plunge	
		Outer	Rzeppa Joint; Fixed, 27 Size	
	Attach (u-bolt, clamp, etc.)		Inboard Joint - Snap Ring, Outboard Joint (Nut/Washer - Clamping)	
	Bearing	Type (plain, anti-friction)	Inboard Joint: Ball Bearing, Needle Roller Bearing (Anti-Friction Bearing) Outboard Joint: Ball Bearing	
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 LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description  
 Engine Code

3.4 LITER V6 (207 CID)  
 SEQUENTIAL FUEL INJECTION RPO LQ1

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

(AUTOMATIC TRANS - M13)

Effective final drive ratio (or overall top gear ratio)		3.43 (2.41)	
Transfer ratio and method (chain, gear, etc.)			
Front drive unit	Ring gear o.d.		
	No. of teeth	Pinion	
		Ring gear	

### Front Drive Unit

Description (integral to trans., etc.)		Integral to Transmission
Limited slip differential (type)		Not Applicable
Drive pinion	Type	Not Applicable
	Offset	Not Applicable
No. of differential pinions		Two
Pinion / differential	Adjustment (shim, etc.)	Not Applicable
	Bearing adjustment	Not Applicable
Driving wheel bearing (type)		Sealed Ball Bearing
Lubricant	Capacity L (pt.)	
	Type recommended	

### Axle Shafts - Front Wheel Drive

Manufacturer and number used		Delphi Saginaw Steering Systems, Two		
Type (straight, solid bar, tubular, etc.)	Left	Straight Solid Bar		
	Right	Straight Solid Bar		
Outer diam. x length* x wall thickness	Manual Transaxle	Left	Not Applicable	
		Right	Not Applicable	
	Automatic transaxle	Left	27.1 x 326.0 mm (1.07 x 12.83 in.)	
		Right	27.1 x 360.0 mm (1.07 x 14.17 in.)	
	Optional transaxle	Left	Not Available	
		Right	Not Available	
Slip yoke	Type	Not Applicable		
	Number of teeth	Not Applicable		
	Spline o.d.	Not Applicable		
Universal joints	Make and mfg. no.	Inner	Saginaw Division	
		Outer	Saginaw Division	
	Number used			Inboard & Outboard on Each Shaft Assembly
	Type, size, plunge	Inner	Tripot Joint, 27 Size 66.0 mm Plunge	
		Outer	Rzeppa Joint; Fixed Center, 27 Size	
	Attach (u-bolt, clamp, etc.)			Retaining Ring
	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 LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description And/Or  
 Engine Code/Description

SEDAN (EXCEPT 3.4L ENGINE) (FE1 SUSPENSION)

### Suspension - General Including Electronic Controls

Car leveling	Standard/optional/not available	Not Available	
	Manual/automatic control	Not Available	
	Type (air/hydraulic)	Not Available	
	Primary/assist spring	Not Available	
	Rear only/4 wheel leveling	Not Available	
	Single/dual rate spring	Not Available	
	Single/dual ride heights	Not Available	
	Provision for jacking	Body Rails, Under Rocker Panels; Jack Pad at Center of Rear Crossmember	
Shock absorber damping controls	Standard/option/not available	Not Available	
	Manual/automatic control	Not Available	
	Number of damping rates	Not Available	
	Type of actuation (manual/electric motor/air, etc.)	Not Available	
	Sensors	Lateral acceleration	Not Available
		Deceleration	Not Available
Acceleration		Not Available	
Road surface		Not Available	
Shock absorber (front & rear)	Type	MacPherson Strut Front, MacPherson Strut Rear	
	Make	Delphi Chassis Systems	
	Piston diameter	35.0 mm (1.38 in.)	
	Rod diameter	25.0 mm (1.00 in.)	

### Suspension - Front

Type and description	MacPherson Strut with Coil Springs, One-Piece "A" Configuration Lower Control Arms	
Travel	Full jounce (define load condition)	78.0 mm (3.07 in.)
	Full rebound	95.0 mm (3.74 in.)
Spring	Type (coil, leaf, other & material)	Coil
	Insulators (type & material)	Rubber
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)	Coil: 200.3 mm (7.89 in.); 173 mm (6.81 in.)
	Spring rate N/mm (lb./in.)	19.5 (111.4)
	Rate at wheel N/mm (lb./in.)	24.0 (137.1)
Stabilizer	Type (link, linkless, frameless)	Linkless
	Material & O.D. bar/tube, wall thickness	Steel, 30.0 mm (1.18 in.) - Solid

### Suspension - Rear

Type and description	Tri-Link Independent MacPherson Strut with Coil Springs, Lateral Links Attached to Body Cross Member, Trailing Arms		
Travel	Full jounce (define load condition)	102.0 mm (4.02 in.)	
	Full rebound	105.0 mm (4.13 in.)	
Spring	Type (coil, leaf, other & material)	Coil	
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)	Coil: 224.0 (8.8 in.); 137.0 mm (5.4 in.)	
	Spring rate N/mm (lb./in.)	16.0 / 40.5 Variable Rate	
	Rate at wheel N/mm (lb./in.)	TBD	
	Insulators (type & material)	Rubber	
	If leaf	No. of leaves	--
		Shackle (comp. or tens.)	--
Stabilizer	Type (link, linkless, frameless)	Link	
	Material & O.D. bar/tube, wall thickness	Steel, 20.0 mm (0.767 in.) Solid	
Track bar (type)	Not Applicable		

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description And/Or  
 Engine Code/Description

SEDAN (3.4L DOHC ENGINE) (F41 SUSPENSION)

### Suspension - General Including Electronic Controls

Car leveling	Standard/optional/not available	Not Available	
	Manual/automatic control	Not Available	
	Type (air/hydraulic)	Not Available	
	Primary/assist spring	Not Available	
	Rear only/4 wheel leveling	Not Available	
	Single/dual rate spring	Not Available	
	Single/dual ride heights	Not Available	
	Provision for jacking	Body Rails, Under Rocker Panels; Jack Pad at Center of Rear Crossmember	
Shock absorber damping controls	Standard/option/not available	Not Available	
	Manual/automatic control	Not Available	
	Number of damping rates	Not Available	
	Type of actuation (manual/ electric motor/air, etc.)	Not Available	
	Sensors	Lateral acceleration	Not Available
		Deceleration	Not Available
Acceleration		Not Available	
Road surface		Not Available	
Shock absorber (front & rear)	Type	MacPherson Strut Front, MacPherson Strut Rear	
	Make	Delco Chassis Division	
	Piston diameter	35.0 mm (1.38 in.)	
	Rod diameter	25.0 mm (1.00 in.)	

### Suspension - Front

Type and description	MacPherson Strut with Coil Springs, One-Piece "A" Configuration Lower Control Arms	
Travel	Full jounce (define load condition)	78.0 mm (3.07 in.)
	Full rebound	95.0 mm (3.74 in.)
Spring	Type (coil, leaf, other & material)	Coil
	Insulators (type & material)	Rubber
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)	Coil: 200.3 mm (7.89 in.); 173.0 mm (6.81 in.)
	Spring rate N/mm (lb./in.)	23.5 (134.2)
	Rate at wheel N/mm (lb./in.)	26.8 (153.0)
Stabilizer	Type (link, linkless, frameless)	Linkless
	Material & O.D. bar/tube, wall thickness	Steel, 34.0 mm (1.34 in.) - Hollow (Wall Thickness = 5.1 mm)

### Suspension - Rear

Type and description	Tri-Link Independent MacPherson Strut with Coil Springs Lateral Links Attached to Body Cross Member, Trailing Arms	
Travel	Full jounce (define load condition)	102.0 mm (4.02 in.)
	Full rebound	105.0 mm (4.13 in.)
Spring	Type (coil, leaf, other & material)	Coil
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)	Coil: 224.0 mm (8.8 in.); 137.0 mm (5.4 in.)
	Spring rate N/mm (lb./in.)	18.5 / 33.3 Variable Rate
	Rate at wheel N/mm (lb./in.)	TBD
	Insulators (type & material)	Rubber
	If leaf	No. of leaves
Shackle (comp. or tens.)		-
Stabilizer	Type (link, linkless, frameless)	Link
	Material & O.D. bar/tube, wall thickness	Steel, 22.0 mm (0.866 in.) Solid
Track bar (type)	Not Applicable	

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description And/Or  
 Engine Code/Description

SEDAN

### Brakes - Service

Description		Dual Piston Caliper - Front Disc; Single Piston Caliper - Rear Disc		
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)	Disc		
	Rear (disc or drum)	Disc		
Valving type (proportion, delay, metering, other)		Proportioning		
Power brake (std., opt., n.a.)		Standard		
Booster type (remote, integral, vac., hyd., etc.)		Vacuum		
Vacuum	Source (inline, pump, etc.)	Inline		
	Reservoir (volume in. <sup>3</sup> )	Not Applicable		
	Pump-type (elec., gear or belt driven)	Not Applicable		
Traction assist	Operational speed range	Not Applicable		
	Type (engine or brake intervention)	Not Applicable		
Antilock device	Front/rear (std., opt., n.a.)	Standard - All Models Exc. Available on Base Sedan		
	Manufacturer	Delphi Chassis Systems		
	Type (electronic, mech.)	Electronic		
	Number sensors or circuits	Four		
	Number antilock hydraulic circuits	Four Separate Brake Lines/Three Controlled Channels (LF, RF, RR)		
	Integral or add-on system	Add-On Mounted to Master Cylinder		
	Yaw control (yes, no)	Yes		
Hyd. power source (elec., vac., mtr., pwr., strg.)		Not Applicable		
Effective area cm <sup>2</sup> (in. <sup>2</sup> )*		560.1 (86.4)		
Gross Lining area cm <sup>2</sup> (in. <sup>2</sup> )** (F/R)		F: 167.7 (26.0); R: 392.4 (60.4)		
Swept area cm <sup>2</sup> (in. <sup>2</sup> )** (F/R)		F: 1090.9 (169.09); R: 1272.3 (197.2)		
Rotor	Outer working diameter	F/R	F: 267.0 mm (10.5 in.)	
	Inner working diameter	F/R	F: 167.0 mm (6.6 in.)	
	Thickness	F/R	F: 26.3 mm (1.04 in.)	
	Material & type (vented/solid)	F/R	F: Composite Vented	
Drum	Diameter & width	F/R	225.0 x 45.0 mm (8.86 x 1.77 in.)	
	Type and material	F/R	Composite Solid	
Wheel cylinder bore		F: 42.0 mm (1.65 in.)		
Master cylinder	Bore/stroke	F/R	Bore: 24.0 mm (0.94 in.); Stroke: 35.5 mm (1.40 in.)	
Pedal arc ratio		3.5:1		
Line press. at 445 N (100 lb.) pedal load (kPa (psi))		13600 kPa (1972 psi)		
Lining clearance		F/R	0/0 mm	
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		Integrally Molded
		Rivet Size		--
		Manufacturer		Delphi Chassis Systems
		Lining code *****		DM130EE
		Material		Semi-Metallic
		****	Primary or out-board	119.4 x 38.1 mm / (4.7 x 1.5 in.)
		Size	Secondary or in-board	119.4 x 38.1 mm / (4.7 x 1.5 in.)
	Shoe thickness (no lining)		4.98 mm (0.197 in.)	
	Rear wheel	Bonded or riveted (rvts/seg.)		Riveted
		Manufacturer		Delphi Chassis Systems
		Lining code *****		245FF
		Material		Semi-Metallic
		****	Primary or out-board	44.2 x 22.2 mm (1.74 x 0.874 in.)
		Size	Secondary or in-board	44.2 x 22.2 mm (1.74 x 0.874 in.)
Shoe thickness (no lining)		2.0 mm (0.0787 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 circumference.)  
 (Disc brake: Square of Outer Working Dia. minus Square of inner Working Dia. multiplied by Pi/2 for each brake.)

\*\*\*\* Size for drum brakes includes length x width x thickness. \*\*\*\*\*Manufacturer I.D., catalog for formulation designation and coefficient of friction classification.

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description And/Or  
 Engine Code/Description

SEDAN

### Tires And Wheels (Standard)

Tires	Size (service description)		P205/70R15 ALS BW (95 S)
	Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial (Two Ply)
	Inflation pressure (cold) for recommended max. vehicle load	Front kPa (psi)	205 (30)
		Rear kPa (psi)	205 (30)
	Rev./mile at 70 km/h (45 mph)		492 Rev/Km
Wheels	Type & material		Stamped Steel
	Rim (size & flange type)		15 x 6
	Wheel offset		42.0 mm (1.65 in.)
	Attachment	Type (bolt or stud & nut)	Stud (M12 x 1.5)
		Circle diameter	115 mm (4.52 in.)
Number & size		5 & M12	
Spare	Tire and wheel		Compact Spare T125/70D16 16 x 4 Wheel
	Storage position & location (describe)		Horizontal, Under Trunk Compartment Load Floor

### Tires And Wheels (Optional)

Tire size (service description)		P215/65R15 - Police (95 H)
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
Wheel (type & material)		Stamped Steel
Rim (size, flange type and offset)		15 x 6 (42.0 mm Offset)
Tire size (service description)		
Type (bias, radial, steel, nylon, etc.)		
Wheel (type & material)		
Rim (size, flange type and offset)		
Tire size (service description)		P225/60R16 - AL2 BW (97 S)
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
Wheel (type & material)		Cast Aluminum
Rim (size, flange type and offset)		16 x 6.5 (38 mm Offset)
Tire size (service description)		P225/60R16 - AL3 BL - Z34 (97 H)
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
Wheel (type & material)		Cast Aluminum
Rim (size, flange type and offset)		16 x 6.5 (38.0 mm 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		Single Stroke - Push to Release, Foot Pedal Application
Location of control		Left of Driver's Left Knee
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 LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description And/Or  
 Engine Code/Description

SEDAN

### Steering

Manual (std., opt., n.a.)		Not Available		
Power (std., opt., n.a.)		Standard		
Speed-sensitive (std., opt., n.a.)		Not Available		
4-wheel steering (std., opt., n.a.)		Not Available		
Adjustable steering wheel/column (tilt, telescope, other)	Type	Tilt		
	Manufacturer	Saginaw Division		
	(std., opt., n.a.)	Standard		
Wheel diameter** (W9) SAE J1100	Manual	Not Available		
	Power	380.0 mm		
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	Sedan: FE1 - 12.91 (42.37); F41/FE3/FE2 - 13.56 (44.50)	
		Curb to curb (l. & r.)	FE1 - 11.2 (36.7); F41 - 11.88 (39.0); FE2 - 11.88 (39.0); FE3 - 11.88 (39.0)	
	Inside rear	Wall to wall (l. & r.)	Not Available	
		Curb to curb (l. & r.)	7.18 (23.6)	
Scrub Radius*		Base - 15.78 mm; Touring - 16.39; Sport - 24.05 mm		
Manual	Gear	Type	Not Available	
		Manufacturer	Not Available	
		Ratios	Overall	Not Available
	No. wheel turns (stop to stop)		Not Available	
Power	Type (coaxial, elec. hyd., etc.)		Hydraulic	
	Manufacturer		Delphi Saginaw Steering Systems	
	Gear	Type	End Take-Off Rack and Pinion	
		Ratios	Gear	49.9 mm/Rev
		Overall	16.1:1	
	Pump (drive)		Belt	
No. wheel turns (stop to stop)		P205/70R15-2.60; (FE1) P225/60R16-2.26; (FE1) P225/60R16 RS-2.26 (F41)		
Linkage	Type		End Take-Off	
	Location (front or rear of wheels, other)		Rear	
	Tie rods (one or two)		Two	
Steering axis	Inclination at camber (deg.)		13.4	
	Bearings (type)	Upper	Ball Bearing	
		Lower	Ball Joint	
		Thrust	Not Applicable	
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 23.

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description And/Or  
 Engine Code/Description

SEDAN

### Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	1.8 ± 0.5
		Camber (deg.)	0.7 ± 0.5
		Toe-in outside track mm (in.)	0.0 ± 0.20
	Service reset*	Caster (deg.)	Pre-set
		Camber (deg.)	0.7
		Toe-in mm (in.)	0.0
Periodic M.V. inspection	Caster (deg.)		
	Camber (deg.)		
	Toe-in mm (in.)		
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	15" Wheel - 0.35 ± 0.5; 16" Wheel -0.45 ± 0.5
		Toe-in outside track (deg.)	0.0 ± 0.3 (Sum Toe)
	Service reset*	Camber (deg.)	15" Wheel -0.35 ± 0.5; 16" Wheel -0.45 ± 0.5
		Toe-in mm (deg.)	0.0 ± 0.3 (Sum Toe)
	Periodic M.V. insp.	Camber (deg.)	
		Toe-in mm (in.)	

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

### Electrical - Instruments and Equipment

Speedometer	Type (analog, digital, std., opt.)	Analog	
	Trip odometer (std., opt., n.a.)	Mechanical	
Head-up display	Standard, optional, not available		Not Available
	Type	Secondary, opto-electronic	Not Available
	Speedometer	Digital	Not Available
	Status/warning indicators	Turn signals, high beam, low fuel, check gauges	Not Available
	Brightness control	Day / night mode, adjustable	Not Available
EGR maintenance indicator		Not Available	
Charge indicator	Type	Analog	
	Warning device (light, audible)	Tell-Tale Light	
Temperature indicator	Type	Analog	
	Warning device (light, audible)	Tell-Tale Light	
Oil pressure indicator	Type	Not Available	
	Warning device (light, audible)	Tell-Tale Light	
Fuel indicator	Type	Analog	
	Warning device (light, audible)	Not Available	
Windshield wiper	Type (standard)	Depressed Park/Pulse Wiper	
	Type (optional)	Not Available	
	Blade length	560 mm (22.0 in.)	
	Swept area cm <sup>2</sup> (in. <sup>2</sup> )	7558.3 (1171.5)	
Windshield washer	Type (standard)	Wet-Arm System	
	Type (optional)	Not Available	
	Fluid level indicator (light, audible)	Not Available	
Rear window wiper, wiper/washer (std., opt., n.a.)		Not Available	
Horn	Type	Vibrator	
	Number used	Two	
Other	PRNDL Odometer Tachometer	Mechanical Mechanical Analog	



# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Code/Description

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

### Electrical - Supply System

Battery	Manufacturer	Delphi Energy & Engine Management Systems
	Model, std., (opt.)	SAE 75-525 (1983655)
	Voltage	12
	Amps at 0° F. cold crank	525
	Minutes-reserve capacity	90
	Amps/hrs.-20 hr. rate	54
	Location	Engine Compartment
Alternator	Manufacturer	Delphi Energy & Engine Management Systems
	Rating (idle/max. rpm)	36/100 Amps
	Ratio (alt. crank/rev.)	2.75
	Output at idle (rpm, park)	68 Amps W/AC
Regulator	Optional (type & rating)	Not Applicable
	Type	Integral with Alternator

### Electrical - Starting System

Motor	Manufacturer	Delphi Energy & Engine Management Systems
	Current drain -29 (-20) °C (°F)	325 Amps
	Power rating kw (hp)	1.5 (2.0)
Motor drive	Engagement type	Solenoid Actuated, Positive Engagement
	Pinion engages from (front, rear)	Front

### Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	Standard	
	Other (specify)	None	
Coil	Manufacturer	Delphi Energy & Engine Management Systems	
	Model	Direct Ignition	
	Current	Engine stopped - A	Less than 100 ma
		Engine idling - A	Less than 1.5 A (Avg.)
Spark plug	Manufacturer	Delphi	
	Model	41-940	
	Thread (mm)	14 x 1.25	
	Tightening torque N-m (lb. ft.)	9-20 (7-15)	
	Gap	1.52 mm (0.060 in.)	
	Number per cylinder	One	
Distributor	Manufacturer	Not Applicable	
	Model	Not Applicable	

### Electrical - Suppression

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

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Code/Description

3.4 LITER V6 (207 CID)  
 SEQUENTIAL FUEL INJECTION RPO LQ1

### Electrical - Supply System

Battery	Manufacturer	Delphi Energy & Engine Management Systems
	Model, std., (opt.)	Standard
	Voltage	12
	Amps at 0° F. cold crank	690 CCA
	Minutes-reserve capacity	90
	Amps/hrs. -20 hr. rate	54
Location	Engine Compartment	
Alternator	Manufacturer	Delphi Energy & Engine Management Systems
	Rating (idle/max. rpm)	42/105 Amps
	Ratio (alt. crank/rev.)	2.74
	Output at idle (rpm, park)	66 Amps W/AC
Optional (type & rating)	Not Applicable	
Regulator	Type	Integral with Alternator

### Electrical - Starting System

Motor	Manufacturer	Delphi Energy & Engine Management Systems
	Current drain -29 (-20) °C (°F)	450 Amps
	Power rating kw (hp)	1.7 (2.3)
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 (Standard) - Control Module with Three Integral Coils and One Remote Timing Sensor	
	Other (specify)	Not Applicable	
Coil	Manufacturer	Delphi Energy & Engine Management Systems	
	Model	1103792	
	Current	Engine stopped - A	Less than 100.0 ma
		Engine idling - A	Less than 1.5 A (Avg.)
Spark plug	Manufacturer	Delphi Energy & Engine Management Systems	
	Model	41-419	
	Thread (mm)	14 x 1.25	
	Tightening torque N-m (lb. ft.)	10-20 (7.38-14.75)	
	Gap	1.14 mm (0.045 in.)	
Distributor	Number per cylinder	One	
	Manufacturer	Not Applicable	
	Model	Not Applicable	

### Electrical - Suppression

Locations & type	Alternator - Internal Capacitor Suppression Ignition - Internal Resistor/Capacitor Networks
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# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description

SEDAN

### Body

Structure	Unitized Body - Frame. Body Side Assembly Includes Full Drawn Quarter Panels. Fully Stamped Inner/Outer Door Panels with Header Extending into Roof. Full-Length Deck Lid Inner/Outer Panels, Full-Drawn Floor Pan.
Bumper system front - rear	Body Color Soft Fascia, Frt.-Honeycomb Absorber/Rr.-Foam Absorber and Rigid Reinforcing Bar Used at Both Front and Rear.
Anti-corrosion treatment	Double-Sided Galvanizing or Gavanneal of all Major Body/Sheet Metal Inner/Outer Panels Including Hood, Deck Lid, Doors as well as Rear and End Panel, Plenum, Fenders, Compartment Pan, Quarter Panels, Rocker Panels and Wheelhouse Outer Panels.

### Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	Base Coat-Clear Coat Acrylic Enamel Over ELPO Primer	
Hood	Material & mass	Steel, 17.3 kg.
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Gas Charged Strut
	Release control (internal, external)	Internal
Trunk lid	Material & mass	Steel
	Type (counterbalance, other)	Dual Torque Rods
	Internal release control (elec., mech., n.a.)	Electric, Optional
Hatchback lid	Material & mass	Not Available
	Type (counterbalance, other)	Not Applicable
	Internal release control (elec., mech., n.a.)	Not Applicable
Tailgate	Material & mass	Not Applicable
	Type (drop, lift, door)	Not Applicable
	Internal release control (elec., mech., n.a.)	Not Applicable
Vent window control (crank, friction, pivot, power)	Front	Not Applicable
	Rear	Not Applicable
Window regulator type (cable, tape, flex drive, etc.)	Front	Cross Arm Regulator
	Rear	Cross Arm Regulator
Seat cushion type (e.g. 60/40 bucket, bench, wire, foam, etc.)	Front	Base - 60/40 Split Bench, Trim Material on Foam Uplevel - 60/40 Split Bench or 40/40 Bucket, Trim Material Bonded to Foam
	Rear	Base - Bench, Trim Material on Foam with Encapsulated Frame Uplevel - Bench, Trim Material Bonded to Foam with Encapsulated Frame
	3rd seat	Not Applicable
Seat back type (e.g., 60/40 bucket, bench, wire, foam, etc.)	Front	Base - 60/40 Split Bench, Trim Material on Foam Uplevel - 60/40 Split Bench or 40/40 Bucket, Trim Material Bonded to Foam
	Rear	Base - Bench, Trim Material on Foam with Encapsulated Frame Uplevel - Bench, Trim Material Bonded to Foam with Encapsulated Frame
	3rd seat	Not Applicable

### Frame

Type and description (separate frame, unitized frame, partially-unitized frame)	Unitized Body/Frame. Bolted-On Powertrain Cradle with Mounting Provisions for Suspension and Engine Mounts.
---------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description

SEDAN

### Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.)	First seat	3 Pt. Single Loop W/Shldr. Retractor, End Release Buckle, Adjustable Guide Loop/All Retractors are Web & Vehicle Sensitive Retractors.	Lap Belt Manual Adjustment End Release Buckle	3 Pt. Single Loop W/Shldr. Retractor, End Release Buckle, Adjustable Guide Loop, Child Cinch Retractor/All Retractors are Web & Vehicle Sensitive Retractors.
	Standard/Optional	Second seat	3 Pt. Single Loop W/Shldr. End Release Buckle, Child Cinch Retractor, Child Comfort Guide/All Retractors are Web & Vehicle Sensitive Retractors	Lap Belt Manual Adjustment End Release Buckle	3 Pt. Single Loop W/Shldr. Retractor, End Release Buckle, Child Cinch Retractor, Child Comfort Guide/All Retractors are Web & Vehicle Sensitive Retractors.
		Third seat			
Passive	Type & description (air bag, motorized-2-point belt, fixed belt, knee bolster, manual-lap belt)	First seat	Air Bag	Air Bag (Passenger Side)	Air Bag
	Standard / Optional	Second seat			
		Third seat			
<b>Glass</b>		SAE Ref.No.			
Windshield glass exposed surface area cm <sup>2</sup> (in. <sup>2</sup> )		S1	8798.0 (1363.7)		
Side glass exposed surface area cm <sup>2</sup> (in. <sup>2</sup> ) - total 2 sides		S2	2771.94 cm <sup>2</sup> F/D; 2610.53 cm <sup>2</sup> R/D		
Backlight glass exposed surface area cm <sup>2</sup> (in. <sup>2</sup> )		S3	4624.0 (716.7)		
Total glass exposed surface area cm <sup>2</sup> (in. <sup>2</sup> )		S4	-		
Windshield glass (type/thickness)			Curved-2nd Laminated Float, 5.4 mm		
Side glass (type/thickness)			Curved-Tempered Float: 5.0 mm F/D Sedan; 4.0 mm R/D Sedan, Quarter		
Backlight glass (type/thickness)			Curved-Tempered Float, 4.0 mm		
Tinted (yes/no, location)			Tinted All Around		
Solar control (yes/no, coated/batched, location)			No		

### Headlamps

Description (sealed beam, halogen, replaceable bulb, etc.)	Halogen, Replacement Bulb Unit
Shape	Aero
Lo-beam type (2A1, 2B1, 2C1, etc.)	Trade No. 9006/HB4
Quantity	Two
Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	Trade No. 9005/HB3
Quantity	Two

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Code/Description

ALL

### Climate Control System

Air conditioning (std., opt., man., auto.)		Standard - L82, LQ1
Condenser	Type	Tube & Fin
	Eff. face area (sq. mm.)	315,181
	Fins per inch	13
Evaporator	Type	U Flow, Aluminum
	Eff. face area (sq. mm.)	48,437
	Fins per inch	14
Heater core	Material	Aluminum
	Eff. face area (sq. mm.)	33,028
	Fins per inch	30
Compressor	Type	V5
	Displacement (cc.)	Variable Displacement
	Manufacturer	Delphi Harrison Thermal Systems
Accumulator	A/C pulley ratio	1.37
	Type	Non-Serviceable, Sealed, Integral Design
	Height (mm.)	206.0
Receiver	Diameter (mm.)	89.0
	Type	Not Applicable
	Height (mm.)	Not Applicable
Refrigerant control (CCOT, TVS, etc.)		Not Applicable
Refrigerant (R - 12, R - 134a, etc.)		Variable Displacement Compressor VDOT
Heater water valve (yes / no)		No
Refrigerant (R - 12, R - 134a, etc.)		R134A
Charge level (lbs. - oz.)		2.0 lbs.
Cold engine lockout switch (yes / no)		No
Wide open throttle cutout switch (yes / no)		Yes
Power steering cut-out switch (yes/no)		Yes, LQ1 Only

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description

SEDAN

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

	Clock (digital, analog)	Digital - In Radio, Standard
	Compass / thermometer	Not Available
	Console (floor, overhead)	Optional, Floor (Overhead - Not Available)
	Defroster, electric windshield	Not Available
	Defroster, electric backlight	Optional
Electronic	Diagnostic monitor (integrated, individual)	Not Available
	Instrument cluster (list instruments)	Not Available
	Keyless entry	Optional
	Trip/finder (avg. spd., fuel)	Not Available
	Voice alert (list items)	Not Available
	Other	
	Fuel door lock (remote, key, electric)	
Integrated Child Seating	Std./opt. & location in vehicle	OPT, Center
	Number of occupants	(One)
	Occupant weight/height (min. & max.)	Not Available
	Restraint system description (3 or 5-point belts/booster seat capability)	Not Available
Lamps	Auto head on/off delay, dimming	Not Available
	Comenng	Not Available
	Courtesy (map, reading) Dome	Standard
	Door lock, ignition	
	Engine compartment	Standard
	Fog	Not Available
	Glove compartment	Standard
	Trunk	Standard
	Illuminated entry system (list lamps, activation)	Sustained Interior Illumination - Standard
	Other Ashtray	Standard
CHMSL	Standard	
Mirrors	Day / night (auto., man.)	Standard - Manual
	L.H. (remote, power, heated)	Standard - Remote; Optional - Power
	R.H. (convex, remote, power, heated)	Standard - Manual; Optional - Power
	Visor vanity (RH / LH, illuminated)	Not Available, (Uncovered Visor Vanity - Optional)
	Navigation system (describe)	Not Available
	Parking brake-auto release (warning light)	Standard - Warning Light

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/Description

SEDAN

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

Power equipment	Deck lid (release, pull down)		Optional, Electric Release
	Door locks (manual, automatic, describe system)		Electric, Standard
	Seats	2 - 4 - 6 way, etc.	Standard Four-Way, Driver Side Only; Optional Six-Way
		Reclining (R.H., L.H.)	Standard - Manual
		Memory (R.H., L.H., preset recline)	Not Available
		Support (lumbar, hip, thigh, etc.)	Not Available
		Heated (R.H., L.H., other)	Not Available
	Side windows		Optional Electric
	Vent windows		Not Applicable
Rear windows		Optional Electric	
Radio systems	Antenna (location, whip, w/shield, power)		Standard, Fixed Whip Located on Right Rear Upper Quarter Panel
	Standard		AM/FM Stereo, Seek & Scan/Standard
	Optional	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	AM/FM Stereo, Seek & Scan, Cassette ATC (Theft Deterrent) - Optional AM/FM Stereo, Seek & Scan, Cassette - Optional AM/FM Stereo, Seek & Scan/Compact Disc ATC (Theft Deterrent) - Optional
	Speaker (number, location)		Standard - Two In Front Doors, Two In Package Shelf, Optional - Dual Coax
	Roof: open air or fixed (flip-up, sliding, "T")		Not Available
Speed control device		Optional, Automatic Electronic	
Speed warning device (light, buzzer, etc.)		Not Available	
Tachometer (rpm)		Optional (Included as Part of Optional Gauge Package)	
Telephone system (describe)		Not Available	
Theft deterrent system		Not Available	

### Trailer Towing

Towing capable	Yes / No	Yes
Engine / transmission / axle	Std. / Opt.	3.1L, Four-Spd. Auto., 3.33; 3.4L, Four-Spd. Auto., 3.43
Tow class (I, II, III)*	Std. / Opt.	One
Max. gross trailer wgt. (lbs.)	Std. / Opt.	1000
Max. trailer tongue load (lbs.)	Std. / Opt.	100
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 LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ 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

SAE Ref. No.

SEDAN

#### Width

Tread (front)	W101	1512.0 (59.5)
Tread (rear)	W102	1500.0 (59.0)
Vehicle width	W103	1841.0 (72.5)
Body width at SgRP (front)	W117	1800.0 (70.8)
Vehicle width (front doors open)	W120	3480.0 (137.0)
Vehicle width (rear doors open)	W121	3483.0 (137.1)
Tumble-home (degrees)	W122	27.0 (1.1)
Outside mirror width	W410	1980.0 (77.9)

#### Length

Wheelbase	L101	2730.0 (107.5)
Vehicle length	L103	5104.0 (200.9)
Overhang (front)	L104	1174.0 (46.2)
Overhang (rear)	L105	1200.0 (47.2)
Upper structure length	L123	2880.0 (113.3)
Rear Wheel C/L "X" coordinate	L127	4525.0 (178.1)

#### Height \*\*

Passenger distribution (front/rear)	PD1 .2,3		**
Trunk/cargo load			**
Vehicle height	H101	1403.0 (55.2)	
Cowl point to ground	H114	937.0 (36.8)	
Deck point to ground	H138	1001.0 (39.4)	
Rocker panel-front to ground	H112	194.0 (7.6)	
Rocker panel-rear to ground	H111	195.0 (7.7)	
Windshield slope angle (degrees)	H122	60.0 (2.3)	
Backlight slope angle (degrees)	H121	64.0 (2.5)	

#### Ground Clearance \*\*

Front bumper to ground	H102	329.0 (12.9)
Rear bumper to ground	H104	321.0 (12.6)
Bumper to ground front at curb mass (wt.)	H103	356.0 (14.0)
Bumper to ground rear at curb mass (wt.)	H105	370.0 (14.6)
Angle of approach (degrees)	H106	16.0
Angle of departure (degrees)	H107	10.0
Ramp breakover angle (degrees)	H147	13.0
Axle differential to ground (front/rear)	H153	163.0 (6.4)
Min. running ground clearance	H156	165.0 (6.5)
Location of min. running ground clear.		Exhaust Pipe Rear of Converter

\*\* 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 LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

### Vehicle Dimensions

See Key Sheets for definitions

Model Code/Description

SAE  
Ref.  
No.

SEDAN

#### Front Compartment

SgRP front, "X" coordinate	L31	3140 (123.6)
Effective head room	H61	975 (38.4)
Max. effective leg room (accelerator)	L34	1077 (42.4)
SgRP to heel point	H30	251.0 (9.9)
SgRP to heel point	L53	875.0 (34.4)
Back angle (degrees)	L40	26.0
Hip angle (degrees)	L42	99.0
Knee angle (degrees)	L44	128.0
Foot angle (degrees)	L46	87.0
Design H-point front travel	L17	218.0 (8.6)
Normal driving & riding seat track trvl.	L23	179.0 (7.04)
Shoulder room	W3	1483.0 (58.4)
Hip room	W5	1407.0 (55.4)
Upper body opening to ground	H50	1271.0 (50.0)
Steering wheel maximum diameter*	W9	375.0 (14.8)
Steering wheel angle (degrees)	H18	22.0
Accel. heel pt. to steer. whl. cntr.	L11	515.0 (20.3)
Accel. heel pt. to steer. whl. cntr.	H17	620.0 (24.4)
Undepressed floor covering thickness	H67	

Front Compartment interior Dimensions are Measured with the Seating Reference Point (SgRP) \_\_\_\_\_ mm forward and \_\_\_\_\_ mm Upward of Rearmost Position.

#### Rear Compartment

SgRP point couple distance	L50	826.0 (32.5)
Effective head room	H63	949.0 (37.4)
Min. effective leg room	L51	930.0 (36.6)
SgRP (second to heel)	H31	286.0 (11.2)
Knee clearance	L48	35.0 (1.3)
Shoulder room	W4	1458.0 (57.4)
Hip room	W8	1404.0 (55.3)
Upper body opening to ground	H51	1331.0 (52.4)
Back angle (degrees)	L41	28.0
Hip angle (degrees)	L43	90.0
Knee angle (degrees)	L45	95.0
Foot angle (degrees)	L47	123.0
Depressed floor covering thickness	H73	17.0 (6.7)

#### Luggage Compartment

Usable luggage capacity L (cu. ft.)	V1	444.0 (17.4)
Lifover height	H195	679.0 (26.7)

#### Interior Volumes (EPA Classification)

Vehicle class	Mid Size
Interior volume index including trunk/cargo (cu. ft.)**	116.0
Trunk/cargo index (cu. ft.)	15.5

\* See page 14.

\*\* See definition page 33.

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

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

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Model Code/Description

SEDAN

Station Wagon/MPV\*  
 -Third Seat

SAE  
 Ref.  
 No.

(NOT APPLICABLE)

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

Station Wagon/MPV\* - Cargo Space

(NOT APPLICABLE)

Cargo length (open front)	L200	
Cargo length (open second)	L201	
Cargo length (closed front)	L202	
Cargo length (closed second)	L203	
Cargo length at belt (front)	L204	
Cargo length at belt (second)	L205	
Cargo width (wheelhouse)	W201	
Rear opening width at floor	W203	
Opening width at belt	W204	
Min. rear opening width above belt	W205	
Cargo height	H201	
Rear opening height	H202	
Tailgate to ground height	H250	
Front seat back to load floor height	H187	
Cargo volume index m <sup>3</sup> (ft. <sup>3</sup> )	V2	
Hidden cargo volume index m <sup>3</sup> (ft. <sup>3</sup> )	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)

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	H187	
Second seatback to load floor height	H198	
Cargo volume index m <sup>3</sup> (ft. <sup>3</sup> )	V3	
Hidden cargo volume index m <sup>3</sup> (ft. <sup>3</sup> )	V4	
Cargo volume index - rear of 2-seat	V11	

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

\* MPV - Multipurpose Vehicle

\*\* EPA Loaded Vehicle Weight, Loading Conditions

# MVMA Specifications

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

## METRIC (U.S. Customary)

Model Code/  
Description

SEDAN

### 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 zero grid line to 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**	555.0
	L54**	2776.0 (109.29)
	H81**	279.0 (11.0)
	*** H181**	334.0 (13.1)
	*** H183**	314.0 (12.3)
Rear	W22**	488.0 (19.2)
	L55**	5200.0 (204.7)
	H82**	388.0 (15.2)
	*** H182**	314.0 (12.3)
	*** H164**	425.0 (16.7)

- \* Reference - SAE Recommended Practice, J182a, 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) unless otherwise noted.

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

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

		VEHICLE MASS (WEIGHT)				% PASS MASS DISTRIBUTION				
Code	Model	CURB MASS, kg. (lb.)*			Shipping Mass	ETWC* Code	Pass in Front		Pass in Rear	
		Front	Rear	Total	kg (lb)***		Front	Rear	Front	Rear
LUMINA 1WL69		970	554	1524	1487	V	49.4	50.6	21.8	78.2
	4-Dr. Notchback Sedan (L82 & M13)	(2138.4)	(1221.3)	(3359.8)	(3278.2)					
LUMINA LS 1WN69		979	558	1537	1501	V	49.4	50.6	21.8	78.2
	4-Dr. Notchback Sedan (L82 & M13)	(2158.3)	(1230.2)	(3388.4)	(3309.1)					

\* Reference - SAE J1100 Motor vehicle dimensions, curb weight definition.  
 \*\* ETWC - Equivalent Test Weight Class - basis for U.S. Environmental Protection Agency emission certifications.  
 Refer to ETWC code legend below for test weight class.

**ETWC LEGEND**

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

\*\*\* Shipping Mass (weight) = Curb Weight Less:  
 \_\_\_\_\_  
 38 (84)  
 \_\_\_\_\_

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

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

		Optional Equipment Differential Mass (weight)*			Remarks Restrictions, Requirements
Code	Equipment	MASS, kg. (lb.)			
		Front	Rear	Total	
AG1	Seat Adj-6 Way Power Driver Only	0.6 (1.3)	0.6 (1.3)	1.2 (2.6)	
AQ9	Seat Front-Bucket/Recliner	6.0 (13.2)	6.0 (13.2)	12.0 (26.4)	
AR9	Seat Front Bucket, Euro P/D Recliner	-2.4 (-5.3)	-1.8 (-4.0)	-4.2 (-9.3)	
A31	Windows - Power	2.0 (4.4)	2.0 (4.4)	4.0 (8.8)	
A90	Lock-RR Compt. Lid, Rem Count Ele.	0.0 (0.0)	0.2 (0.4)	0.2 (0.4)	
BF9	Cover-Floor Mat Delete	-1.8 (-4.0)	-1.4 (-3.0)	-3.2 (-7.0)	
C49	Defogger-RR Window, Electric	0.0 (0.0)	0.2 (0.4)	0.2 (0.4)	
DG7	Mirror-O/S, L&R, Elec Painted	0.2 (0.4)	0.0 (0.0)	0.2 (0.4)	
D55	Console-Frt. Compt Floor, Var 1	2.0 (4.0)	2.0 (4.0)	4.0 (8.0)	
F41	Suspension System-Frt/RR, Firm Ride, Hdig	1.0 (2.2)	1.0 (2.2)	2.0 (4.4)	
JL9	Brake System-Power Frt & RR Disc ABS	6.4 (14.1)	0.6 (1.3)	7.0 (15.4)	
JM4	Antilock Brakes	6.4 (14.1)	0.6 (1.3)	7.0 (15.4)	
KC4	Cooling System-Engine Oil	2.4 (5.3)	-0.2 (0.4)	2.2 (4.9)	
KD1	Cooling System-Transmission Oil	1.4 (3.1)	-0.2 (-0.4)	1.2 (2.6)	
K05	Heater-Engine Block	0.4 (0.9)	0.0 (0.0)	0.4 (0.9)	
K34	Cruise Control Auto Electronic	1.2 (2.6)	0.0 (0.0)	1.2 (2.6)	

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

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

Vehicle Line LUMINA  
 Model Year 1997 Issued \_\_\_\_\_ Revised (●) \_\_\_\_\_

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
LQ1	Engine-Gas, 6 Cylinder, 3.4L MF1	61.4 (135.4)	-7.8 (-17.2)	53.6 (118.2)	
M13	Transmission-Four Speed Auto. HMD	18.8 (41.4)	0.0 (0.0)	18.8 (41.4)	
NC5	Exhaust-Dual Vert Tail Pipes	1.0 (2.2)	10.8 (23.8)	11.8 (26.0)	
NWO	Wheel 16 x 6.5 Cast Aluminum	-3.6 (-7.9)	-3.6 (-7.9)	-7.2 (-15.8)	
N81	Fullsize Spare Tire	0.0 (0.0)	2.6 (5.7)	2.6 (5.7)	
P01	Trim Discs-Wheel, Var 1	0.6 (1.3)	0.6 (1.3)	1.2 (2.6)	
QNJ	Tire All P215/65R15 BW	2.0 (4.4)	2.0 (4.4)	4.0 (8.8)	
QNX	Tire-P225/60R16/NBL	0.6 (1.3)	0.6 (1.3)	1.2 (2.6)	
QVG	Tire-P225/60R16/N	2.2 (4.9)	2.2 (4.9)	4.4 (9.8)	
UA1	Battery-High Capacity, Wet	1.6 (3.5)	0.0 (0.0)	1.6 (3.5)	
UL0	Radio AM/FM Stereo	0.6 (1.3)	0.2 (0.4)	0.8 (1.7)	
UL5	Radio-Delete	-2.2 (-4.9)	-1.4 (-3.1)	-3.6 (-8.0)	
UM6 CL	Radio-AM/FM Stereo, Seek & Scan, Cass., CL	0.6 (1.3)	0.2 (0.4)	0.8 (1.7)	
UN0	Radio-AM/FM Cassette	0.8 (1.8)	0.2 (0.4)	1.0 (2.2)	
UV8	Telephone Provision	0.2 (0.4)	0.2 (0.4)	0.4 (0.8)	
U62	Speaker System-4 Dual Front Coax	0.2 (0.4)	0.2 (0.4)	0.4 (0.8)	
VB7	Bumper Frt & RR Sport	-0.6 (-1.3)	0.2 (0.4)	-0.4 (-0.9)	

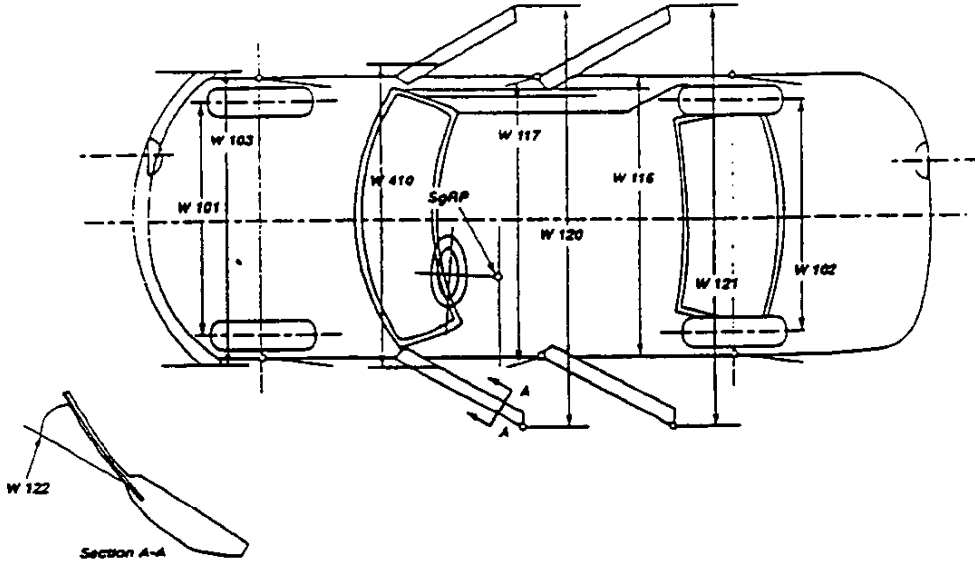
\* Also see Engine - General Section for dressed engine mass (weight.)



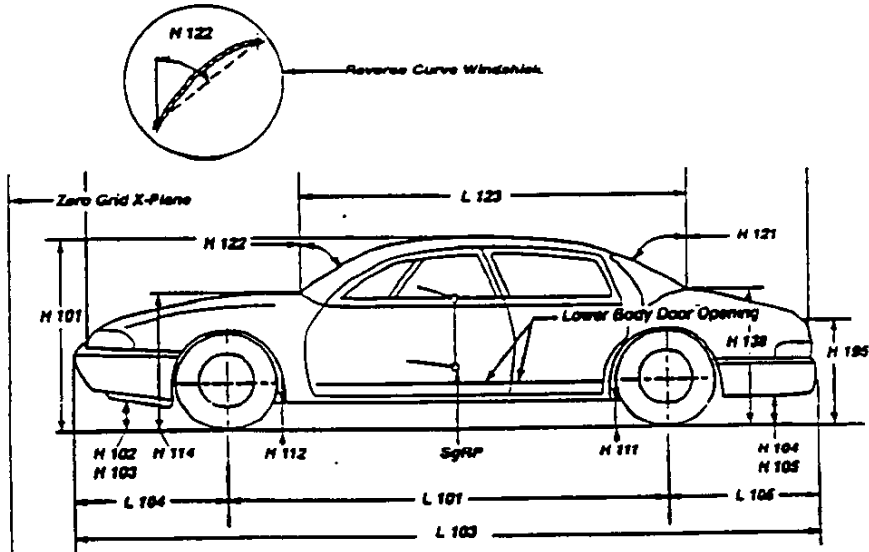
# Specifications METRIC

## Exterior Vehicle And Body Dimensions - Key Sheet

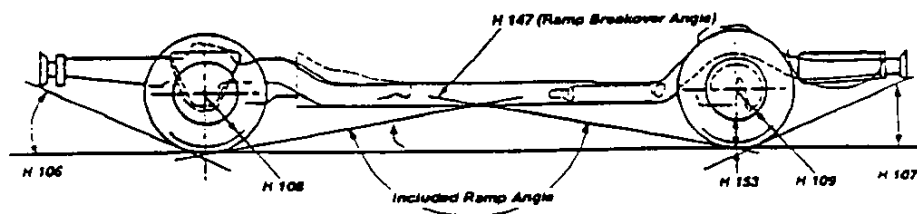
Exterior Width Dimensions



Exterior Length & Height Dimensions



Ground Clearance Dimensions



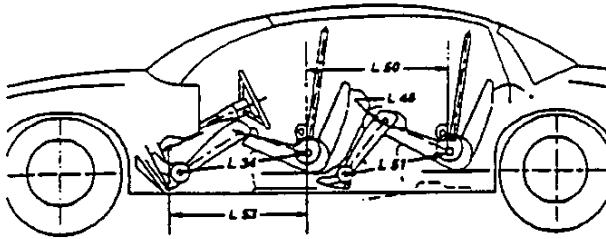


# Specifications

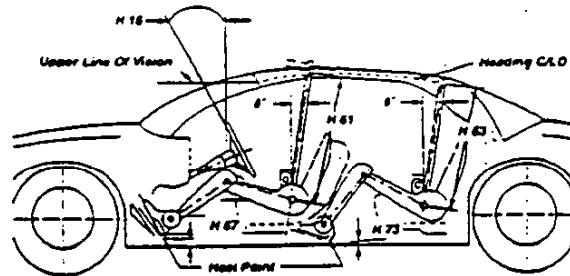
## METRIC

### Interior Vehicle And Body Dimensions - Key Sheet

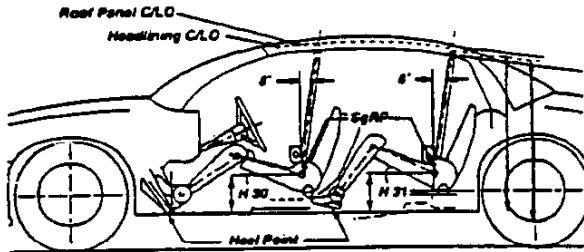
Interior Length Dimensions



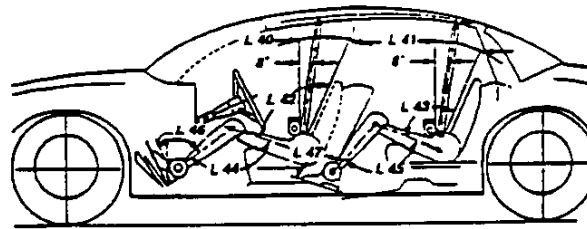
Interior Height Dimensions



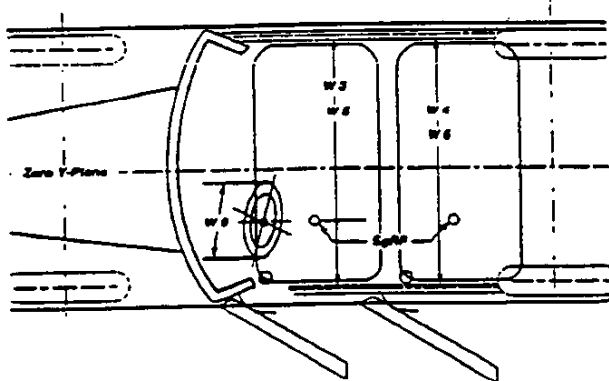
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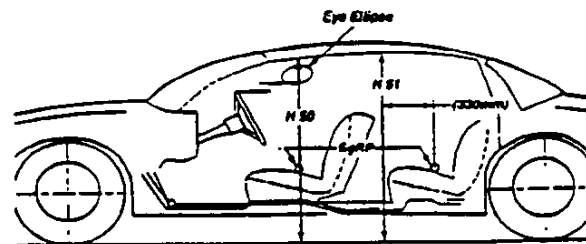
Interior Length Dimensions



Interior Width Dimensions



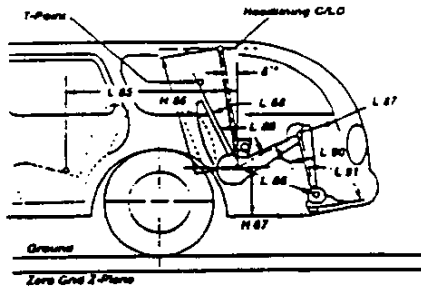
Interior Height Dimensions



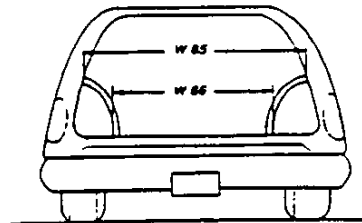
Specifications  
METRIC

Interior Vehicle And Body Dimensions - Key Sheet

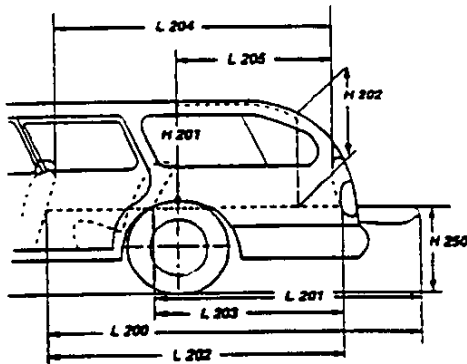
Interior Dimensions, Station Wagon Third Row



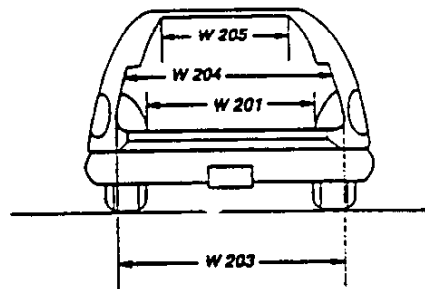
Interior Dimensions



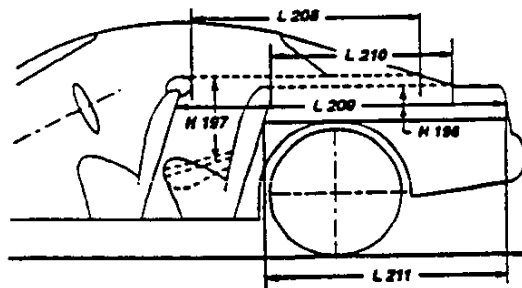
Cargo Space Dimensions



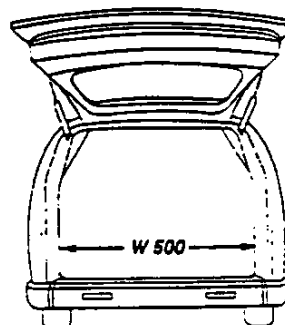
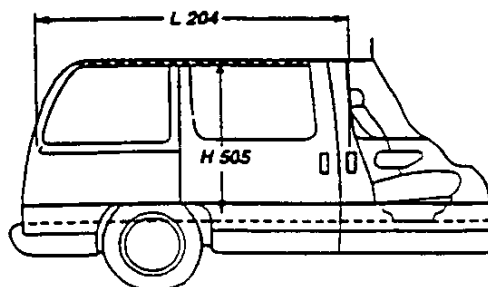
Cargo Space Dimensions



Cargo Space Dimensions



Multipurpose Vehicle Cargo Space



# Specifications

## METRIC

### 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 rear 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 centerline. In case of dual rear axles, the dimension shall be to the midpoint of the centerlines of the rear wheels.
- L103 VEHICLE LENGTH. The maximum dimension measured longitudinally between the foremost point and the rearmost point on the vehicle, including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.
- L104 OVERHANG-FRONT. The dimension measured longitudinally from the centerline of the front wheels to the foremost point on the vehicle including bumper, bumper guards, tow hook and/or rub strips, if standard equipment.
- L105 OVERHANG-REAR. The dimension measured longitudinally from the centerline of the rear wheels; or in the case of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

- L123 UPPER STRUCTURE LENGTH. The dimension measured longitudinally from the cowl point to the deck point.
- L127 REAR WHEEL CENTERLINE "x" COORDINATE or in the case of dual rear axles, the coordinate shall be the midpoint of the distance between the rear axle centerlines.

#### Height Dimensions

- H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.
- H111 ROCKER PANEL-REAR TO GROUND. The dimension measured vertically from the bottom of the rocker or side quarter panel at the front of the rear wheel opening, excluding flanges, to ground.
- H112 ROCKER PANEL-FRONT TO GROUND. The dimension measured vertically from the foremost point on the bottom of the rocker panels, excluding flanges, to ground.
- H114 COWL POINT TO GROUND. Measured at zero "Y" plane.
- H121 BACKLIGHT SLOPE ANGLE. The angle between the vertical reference line and the surface of backlight at vehicle zero "Y" plane. For curve backlight, the angle is to chord of backlight arc from lower DLO to upper DLO.
- H122 WINDSHIELD SLOPE ANGLE. The angle between the vertical reference line and a chord of the windshield arc running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the angle to be measured will be formed by a chord 457 mm (18.0 in.) long drawn from the lower DLO to the intersecting point on the windshield.
- H138 DECK POINT TO GROUND. Measured at zero "Y" plane.
- H109 STATICLOAD-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-CURBMASS(WT.). Measured in the same manner as H102.
- H104 REAR BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment.
- H105 REAR BUMPER TO GROUND-CURB MASS(WT.). Measured in the same manner as H104.
- H106 ANGLE OF APPROACH. The angle measured between a line tangent to the front tire static loaded radius arc and the initial point of structural interference forward of the front tire to ground. The limiting structural component shall be designated.
- H107 ANGLE OF DEPARTURE. The angle measured between a line tangent to the rear tire static loaded radius arc and the initial point of structural interference rearward of the rear tire to ground. The limiting component shall be designated.
- H147 RAMP BREAKOVER ANGLE. The angle measured between two lines tangent to the front and rear tire static loaded radius and intersecting at a point on the underside of the vehicle which defines the largest ramp over which the vehicle can roll.
- H153 REAR AXLE DIFFERENTIAL TO GROUND. The minimum dimension measured from the rear axle differential to ground.
- H156 MINIMUM RUNNING GROUND CLEARANCE. The minimum dimension measured from the sprung vehicle to ground. Specify location.

# Specifications

## METRIC

### 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.
- H82 "Z" coordinate.
- H162 Height "Z" coordinate to ground at curb weight.
- H164 Height "Z" coordinate to ground.

#### Front Compartment Dimensions

- L11 ACCELERATOR WHEEL 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.
- L40 BACK ANGLE-FRONT. The angle measured between a vertical line through the SgRP-front and the torso line. If the seatback is adjustable, use the normal driving and riding position specified by the manufacturer.
- L42 HIP ANGLE-FRONT. The angle measured between torso line and thigh centerline.
- L44 KNEE ANGLE-FRONT. The angle measured between thigh centerline and lower leg centerline measured on the right leg.
- L46 FOOT ANGLE-FRONT. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref SAE J826.
- L53 SgRP-FRONT TO HEEL. The dimension measured horizontally from the SgRP-front to the accelerator heel point.
- W3 SHOULDER ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front at height between the belt line and 254 mm (10.0 in.) above the SgRP-front, excluding the door assist strap and attaching parts.

- W5 HIP ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front within 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP-front and 76 mm (3.0 in.) fore and aft of the SgRP-front.
- W9 STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. Define if other than round.
- 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

- L41 BACK ANGLE-SECOND. The angle measured between a vertical line through the SgRP-second and the torso line.
- L43 HIP ANGLE-SECOND. The angle measured between torso line and thigh centerline.
- L45 KNEE ANGLE-SECOND. The angle measured between thigh centerline and lower leg centerline.
- L47 FOOT ANGLE-SECOND. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the three-dimensional devices bare foot flesh line (Reference J826).
- L48 KNEE CLEARANCE-SECOND. The minimum dimension measured from the knee pivot center to the back of the front seatback minus 51 mm (2.0 in.).
- L50 SgRP COUPLE DISTANCE-SECOND. The dimension measured horizontally from the driver SgRP-front to the SgRP-second.
- L51 MINIMUM EFFECTIVE LEG ROOM-SECOND. The dimension measured along a line from the ankle pivot center to the SgRP-second plus 254 mm (10.0 in.).
- W4 SHOULDER ROOM-SECOND. The minimum dimension measured laterally between door or quarter trimmed surfaces on the "X" plane through the SgRP-second at height between 254-406 mm (10.0-16.0 in.) above the SgRP-second, excluding the door assist straps and attaching parts.
- W6 HIP ROOM-SECOND. Measured in the same manner as W5.
- H31 SgRP-SECOND TO HEEL. The dimension measured vertically from the SgRP-second to the two dimensional device heel point on the depressed floor covering.
- H51 UPPER BODY OPENING TO GROUND-SECOND. The dimension measured vertically from the trimmed body opening to the ground on the "X" plane 330 mm (13.0 in.) forward of the SgRP-second.
- H63 EFFECTIVE HEAD ROOM-SECOND. The dimension measured along a line 8 deg. rear of vertical from the SgRP to the headlining, plus 102 mm (4.0 in.).
- H73 FLOOR COVERING-DEPRESSED-SECOND. The dimension measured vertically from the heel point to the underbody sheet metal.

# Specifications

## METRIC

### 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 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 (2.0in.). With rear-facing third seat, dimension is measured to closure.
- L88 **BACK ANGLE-THIRD**. Measured in the same manner as L41.
- L89 **HIP ANGLE-THIRD**. Measured in the same manner as L43.
- L90 **KNEE ANGLE-THIRD**. Measured in the same manner as L45.
- L91 **FOOT ANGLE-THIRD**. Measured in the same manner as L47.
- W85 **SHOULDER ROOM-THIRD**. Measured in the same manner as W4.
- W86 **HIP ROOM-THIRD**. Measured in the same manner as W5.
- H86 **EFFECTIVE HEAD ROOM-THIRD**. The dimension, measured along a line 8 deg. from the SgRP-third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- H87 **SgRP-THIRD TO HEEL POINT**
- SD1 **SEAT FACING DIRECTION-THIRD**.

#### Station Wagon/MPV - Cargo Space Dimensions

- L200 **CARGO LENGTH-OPEN-FRONT**. The minimum dimension measured longitudinally from the back of the front seatback at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the open tailgate or cargo surface if the rear closure is a conventional door type tailgate at the zero "Y" plane.
- L201 **CARGO LENGTH-OPEN-SECOND**. The dimension measured longitudinally from the back of the second seatback at the height of the undeepressed floor covering on the open tailgate or cargo floor surface if the rear closure is a conventional door type tailgate, at the zero "Y" plane.

- L202 **CARGO LENGTH-CLOSED-FRONT**. The minimum dimension measured horizontally from the back of the front seat at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L203 **CARGO LENGTH-CLOSED-SECOND**. The dimension measured horizontally from the back of the second seat at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L204 **CARGO LENGTH AT BELT-FRONT**. The minimum dimension measured horizontally from the back of the front seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab backpanel at the height of the belt, on the zero "Y" plane.
- L205 **CARGO LENGTH AT BELT-SECOND**. The minimum dimension measured horizontally from the back of the second seatback top to the foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.
- W201 **CARGO WIDTH-WHEELHOUSE**. The minimum dimension measured laterally between the trimmed wheelhousings at floor level. For any vehicle not trimmed, measure to the sheet metal.
- W203 **REAR OPENING WIDTH AT FLOOR**. The minimum dimension measured laterally between the limiting interferences of the rear opening at floor level.
- W204 **REAR OPENING WIDTH AT BELT**. The minimum dimension measured laterally between the limiting interferences of the rear opening at belt height or top of pick up box.
- W205 **REAR OPENING WIDTH ABOVE BELT**. The minimum dimension measured laterally between the limiting interferences of the rear opening above the belt height.
- W500 **CARGO WIDTH AT FLOOR**. The maximum dimension measured laterally between the limiting interferences at the floor level. This dimension shall include ribs and pillars, but will exclude wheelhouses.
- H197 **FRONT SEATBACK TO LOAD FLOOR HEIGHT**. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undeepressed floor covering.
- H201 **CARGO HEIGHT**. The dimension measured vertically from the top of the undeepressed floor covering to the headlining at the rear wheel "X" coordinate on the zero "Y" plane.
- H202 **REAR OPENING HEIGHT**. The dimension measured vertically from the top of the undeepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door fully open.
- H250 **TAILGATE TO GROUND CURB MASS (WT.)** The dimension measured vertically from the top of the undeepressed floor covering on the lowered tailgate to ground on the zero "Y" plane.
- H505 **MAXIMUM CARGO HEIGHT**. The maximum vertical dimension rear of the front seat from the cargo floor to roof bow or headlining at the zero "Y" plane.

# Specifications

## METRIC

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

V2 STATION WAGON

Measured in inches:

$$\frac{W4 \times H201 \times L204}{1728} - ft^3$$

Measured in mm:

$$\frac{W4 \times H201 \times L204}{10^9} - m^3(\text{cubicmeter})$$

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:

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

Measured in mm:

$$\frac{L506 \times W505 \times H503}{10^9} - m^3(\text{cubicmeter})$$

V6 TRUCKS AND MPV'S WITH CLOSED AREA.

Measured in inches:

$$\frac{L204 \times W500 \times H505}{1728} - ft^3$$

Measured in mm:

$$\frac{L204 \times W500 \times H505}{10^9} - m^3(\text{cubicmeter})$$

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:

$$\frac{H201 \times L205 \times \frac{W4 + W201}{2}}{1728} - ft^3$$

Measured in mm:

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

#### 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 towed 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:

$$\frac{\frac{L208 - L209}{2} \times W4 \times H197}{1728} - ft^3$$

Measured in mm:

$$\frac{\frac{L208 - L209}{2} \times W4 \times H197}{10^9} - m^3(\text{cubicmeter})$$

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:

$$\frac{\frac{L210 - L211}{2} \times W4 \times H198}{1728} - ft^3$$

Measured in mm:

$$\frac{\frac{L210 - L211}{2} \times W4 \times H198}{10^9} - m^3(\text{cubicmeter})$$

# Specifications

## METRIC

### Index

Subject	Page No.	Subject	Page No.
Alternator	16	Origin	1
Axle, Drive, Front, Rear, All Four	2, 9, 10	Passenger Capacity	1
Axle Shafts	10	Passenger Mass Distribution	26
Battery	16	Pistons	3
Body and Miscellaneous Information	17	Power Brakes	12
Brakes-Parking Service	12, 13	Power Engine	2
Camber	15	Power Steering	14
Camshaft	3	Power Teams	2
Capacities		Propeller Shaft	10
Cooling System	5	Pumps-Fuel	6
Fuel Tank	6	Water	5
Lubricants		Radiator-Cap, Hoses, Core	5
Engine Crankcase	4	Ratios-Axle, Transaxle	2,9,10
Transmission/Transaxle	8,9	Compression	2
Rear Axle	10	Steering	14
Carburetor	2,6	Transmission/Transaxle	2,8,9
Caster	15	Rear Axle	2,10
Climate Control System	19	Regulator-Alternator	16
Clutch-Pedal Operated	8	Restraint System	18
Coil, Ignition	16	Rims	13
Connecting Rods	4	Rods-Connecting	4
Convenience Equipment	20-21	Scrub Radius	14
Cooling System	5	Seats	17
Crankshaft	4	Shock Absorbers, Front & Rear	11
Cylinders and Cylinder Head	3	Spark Plugs	16
Diesel Information	4	Speedometer	15
Dimension Definitions		Springs-Front & Rear Suspension	11
Key Sheet-Exterior	28,31,32	Stabilizer (Sway Bar)-Front & Rear	11
Key Sheet-Interior	29,30,32,33,34	Starting System	16
Electrical System	15,16	Steering	14
Emission Controls	7	Suppression-Ignition, Radio	16
Engine-General		Suspension-Front & Rear	11
Bore, Stroke, Type	3	Tail Pipe	7
Compression Ratio	2	Theft Protection	21
Displacement	2,3	Thermostat, Cooling	5
Firing Order, Cylinder Numbering	3	Tires	13
General Information, Power & Torque	2	Toe-In	15
Intake System	4	Torque Converter	9
Power Teams	2	Torque-Engine	2,8,9
Exhaust System	7	Trailer Towing	21
Equipment Availability, Convenience	20	Transaxle	9
Fan, Cooling	5	Transmission-Types	2,8,9
Filters - Engine Oil, Fuel System	4	Transmission-Automatic	2,9
Four Wheel Drive	10	Transmission-Manual	2,8
Frame	17	Transmission-Ratios	2,8,9
Front Suspension	11	Tread	22
Front Wheel Drive Unit	10	Trunk Cargo Load	1
Fuel Economy, EPA	1	Trunk Luggage capacity	23
Fuel Injection	6	Turning Diameter	14
Fuel System	6	Unitized Construction	18
Fuel Tank	6	Universal Joints, Propeller Shaft	10
Glass	18	Valve System	4
Headlamps	18	Vehicle Dimensions	
Headroom-Body	23,24	Width	22
Heights	22	Length	22
Horns	15	Height	22
Horsepower-Brake	2	Ground Clearance	22
Ignition System	16	Front Compartment	23
Inflation-Tires	13	Rear Compartment	23
Interior Volumes	23	Luggage Compartment	23
Instruments	15	Station Wagon-Third Seat	24
Legroom	23,24	Station Wagon-Cargo Space	24
Lengths	22	Hatchback-Cargo Space	24
Leveling,Suspension	11	Fiducial Marks	25
Lifters, Valve	4	Voltage Regulator	16
Linings-Clutch, Brake	8,12	Water Pump	5
Lubrication-Engine Transmission/Transaxle	4,8,9	Weights	26,27
Luggage Compartment	23	Wheel Alignment	15
Models	1	Wheelbase	22
Motor Starting	16	Wheels & Tires	13
Muffler	7	Wheel Spindle	14
		Widths	22
		Windshield	18
		Windshield Wiper and Washer	15