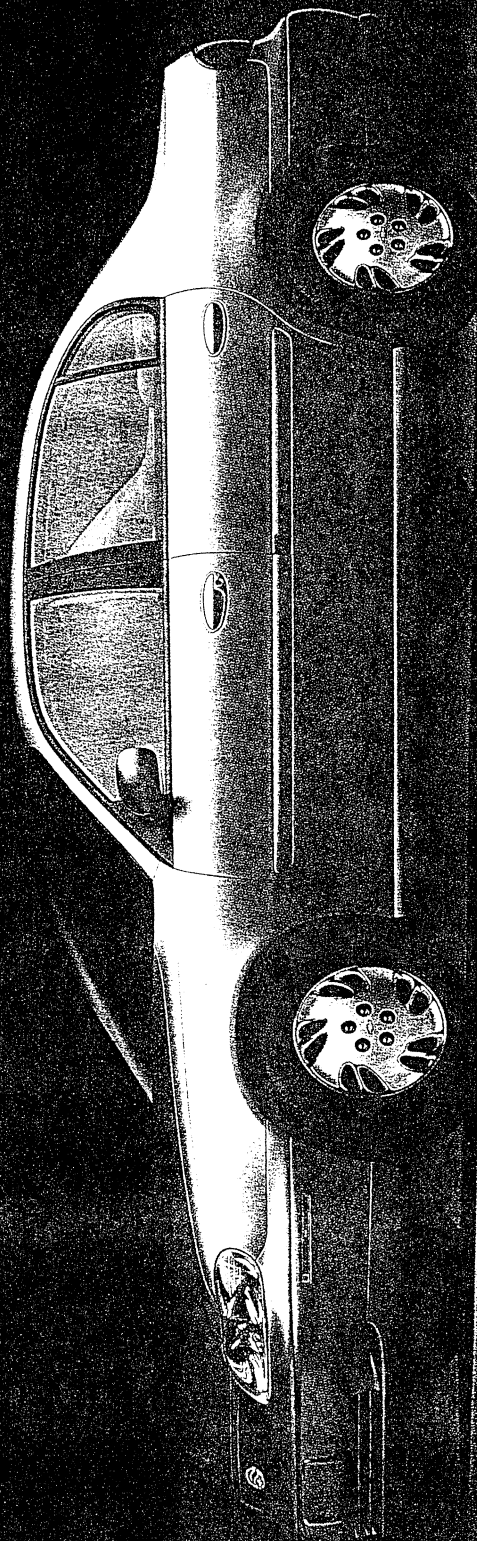




Genuine Chevrolet®

1997 Chevrolet Malibu

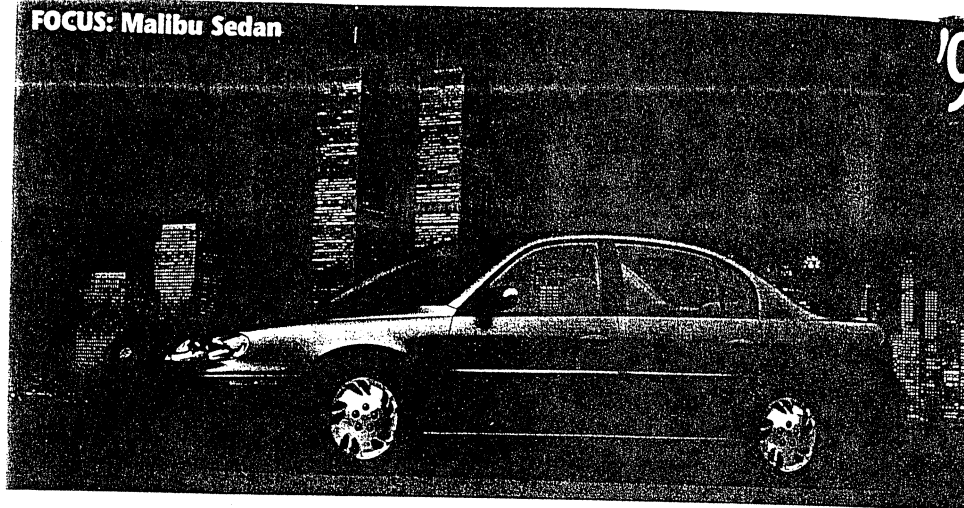


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Dealer Order Guide inserts are your first look at Chevrolet Passenger Car models for 1997. Overall improvements, changes and deletions are highlighted. Use these inserts to assist you in ordering your initial shipments. (NOTE: some information is preliminary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

Positioning Statement

Malibu is positioned as a sedan for informed, thoughtful people with high expectations of safety, dependability, accommodation, driving pleasure and rich, enduring design, and who seek the most affordable value in a great midsize sedan.



Malibu Sedan (image above, top)

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.

The Focus vehicle for 1997 is Malibu Sedan. This affordable, midsize, 5-passenger sedan offers contemporary styling combined with a high level of standard safety, comfort and performance features. When equipped with the recommended PEG 1SB, this model represents the best opportunity for Malibu high-volume sales at your dealership.

Ordering Recommendations: Recommended Malibu Sedan content, based on anticipated national sales volume, is listed below to assist your dealership in ordering.

Recommended options include:

- Preferred Equipment Group 1SB (Power Door Locks, Power Windows and Power Mirrors)
- Custom Cloth Bucket Seats with Split-Folding Rear Seat and Cargo Net (AR9)
- AM/FM Stereo with Cassette Player
- Rear-Window Defogger
- Front and Rear Floor Mats

Evaluate options on an as-needed basis.

Popular colors: Sandrift Metallic, Dark Carmine Red Metallic and Dark Jade Green Metallic.



Malibu Sedan

(image above, bottom, shown with optional aluminum wheels)

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.

The Feature vehicle for 1997 is also Malibu Sedan. Recommended options include:

- Custom Cloth Bucket Seats with Split-Folding Rear Seat and Cargo Net (AR9)
- Preferred Equipment Group 1SB (Power Door Locks, Power Windows and Power Mirrors)
- 15" Aluminum Wheels
- AM/FM Stereo (Std.)
- Front and Rear Floor Mats

Lead color: Sandrift 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 Malibu Focus vehicle content.

Trim Colors



Cloth available in Medium Neutral, Light Gray and Medium Gray (standard on Malibu Sedan).

Custom Cloth available in Medium Neutral, Light Gray and Medium Gray (optional on Malibu Sedan).

LS Custom Cloth available in Medium Neutral, Light Gray and Medium Gray (standard on Malibu LS Sedan).

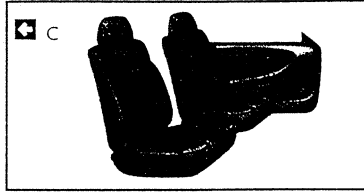
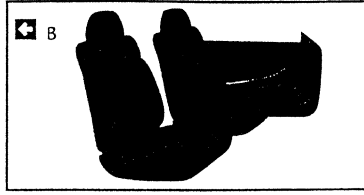
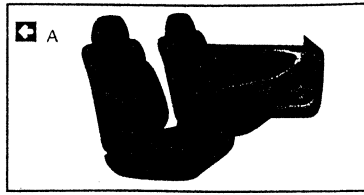
Most Popular Exterior Colors with Corresponding Interior Color Availability

INTERIOR MATERIAL COLORS

	Medium Neutral	Light Gray	Medium Gray
EXTERIOR COLORS			
Sandrift	✓	✓	✓
Metallic	✓	✓	✓
Dark Carmine Red	✓	✓	✓
Metallic	✓	✓	✓
Dark Jade Green	✓	✓	✓
Metallic	✓	✓	✓
Medium Opal Blue	✓	✓	✓
Metallic	✓	✓	✓

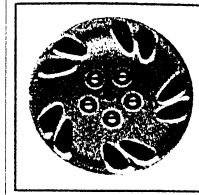
See Order Guide for color availability by model.

Seat Styles

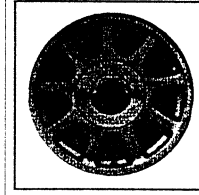


- A. Cloth front bucket seats (standard on Malibu Sedan).
- B. Custom Cloth front bucket seats (optional on Malibu Sedan) (includes split-folding rear seat).
- C. LS Custom Cloth front bucket seats (standard on Malibu LS Sedan) (includes split-folding rear seat).

Wheels

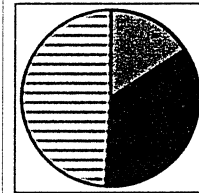


Malibu standard 15" bolt-on wheel cover.



Malibu LS standard 15" aluminum wheel (optional on Base).

Most Popular Exterior Colors by Percentage



Clockwise at left are the anticipated four most popular Malibu colors for 1997, based on national sales volume. They are listed for reference only.

To identify the top-selling colors in your area, by model, use the Retail Sales Analysis (RSA).

Sandrift Metallic	16%
Dark Carmine Red Metallic	13%
Dark Jade Green Metallic	12%
Medium Opal Blue Metallic	10%
Other colors	49%



S.P.A.C.E.

S.P.A.C.E. is an acronym to help organize and explain key features and benefits in five major categories a customer needs and wants. Overall improvements, changes and deletions 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.



SAFETY

- **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.
- **4-WHEEL ANTI-LOCK BRAKE SYSTEM (ABS)** — helps reduce wheel lockup and helps driver maintain steering control during severe braking, even on slippery surfaces.
- **SAFETY-CAGE CONSTRUCTION** — surrounds the entire passenger compartment.
- **AUTOMATIC DAYTIME RUNNING LAMPS** — headlamps automatically come on at low intensity when ignition is turned on, increasing vehicle's visibility to other drivers.
- **AUTOMATIC EXTERIOR LAMP CONTROL** — turns on headlamps and all other exterior lamps at full intensity when it's dark outside. System is overridden when driver utilizes headlamps manually.
- **PASSLOCK THEFT-DETERRENT SYSTEM** — prevents the car from successfully starting if an unauthorized key or other ignition method is used.
- **CHILD SECURITY REAR-DOOR LOCKS** — manually lock to prevent a child from opening rear doors from the inside.



PERFORMANCE

- **2.4 LITER TWIN CAM 4-CYLINDER ENGINE WITH 4-SPEED ELECTRONICALLY CONTROLLED AUTOMATIC TRANSMISSION (NOT AVAILABLE ON LS MODELS)** — delivers smooth, responsive power for outstanding performance. Shifts are virtually seamless.
- **FOUR-WHEEL INDEPENDENT SUSPENSION** — provides an excellent combination of ride and response.
- **3100 V6 WITH SFI AND 4-SPEED ELECTRONICALLY CONTROLLED AUTOMATIC TRANSMISSION (STANDARD ON LS, OPTIONAL ON BASE)** — delivers 155 hp at 5200 rpm for truly impressive performance.



APPEARANCE

- **BASECOAT/CLEARCOAT PAINT** — not only provides a more durable, lustrous finish, but reduces the severity of water-spotting and etching from acid rain.
- **SOFT-RAY TINTED GLASS** — with sunshade, enhances appearance and helps reflect sunlight.
- **TWO-SIDE-GALVANIZED STEEL** — on all exterior body panels (including the roof), for unsurpassed corrosion protection.
- **IMPACT-ABSORBING 5-MPH FRONT AND REAR BUMPERS** — with resilient body-color covers to resist minor dents and dings.
- **BODY-COLOR OUTSIDE MIRRORS, FASCIAS, BODY-SIDE MOLDINGS, ROCKER PANELS AND DOOR HANDLES** — provide an upscale look.
- **BOLT-ON FULL WHEEL COVERS** — add a distinctive styling touch, and reduce chance of loss or theft (15" aluminum wheels standard on LS and optional on base model).



COMFORT AND CONVENIENCE

- **TILT-WHEEL™ ADJUSTABLE STEERING COLUMN** — adjusts to a comfortable position for a wide range of drivers.
- **SPLIT- FOLDING REAR SEAT** — allows long cargo items to stretch from trunk to rear-seat area (optional on Base).
- **POWER WINDOWS WITH DRIVER'S EXPRESS-DOWN FEATURE** — allow easy operation of all windows and one-touch operation to lower driver's window (optional on Base).
- **REAR-SEAT HEAT DUCTS** — create more comfortable environment for rear-seat passengers.
- **INTERMITTENT WINDSHIELD WIPERS** — allow driver to match wiper speed to weather conditions.



EASY-TO-OWN

- **SCOTCHGARD™ PROTECTOR** — on seats, door panels, floor carpeting and floor mats, resists stains and makes cleanups easy.
- **LOW OIL LEVEL INDICATOR** — warns driver of low oil level, to prevent engine damage (V6 only).
- **DEXRON III AUTOMATIC TRANSMISSION FLUID** — never needs changing under normal driving conditions.*
- **ON-BOARD DIAGNOSTICS SECOND GENERATION (OBD II)** — provides easier powertrain diagnostics.
- **STAINLESS-STEEL EXHAUST SYSTEM** — includes all pipes, catalytic converter and muffler to resist corrosion, for a long service life.
- **EXTENDED-LIFE ENGINE COOLANT** — has a first scheduled replacement interval of 5 years or 150,000 miles, whichever comes first.*
- **PLATINUM-TIP SPARK PLUGS** — designed to last up to 100,000 miles.*
- **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. See owner's manual for more information.

Competitive Models

- Chrysler Cirrus/Dodge Stratus/Plymouth Breeze
- Ford Contour/Mercury Mystique
- Ford Taurus
- Honda Accord
- Mazda 626
- Nissan Altima
- Toyota Camry.

Additional Information on Significant Features

- A super-rigid body structure helps eliminate squeaks and rattles.
- Two-side-galvanized steel on all body panels, including the roof, protects against corrosion.
- The comprehensive Malibu safety package includes such standard features as four-wheel anti-lock brakes, dual air bags, a full engine cradle, automatic Daytime Running Lamps (DRL) and a high-strength safety cage surrounding the entire passenger compartment.
- Standard battery-rundown protection automatically shuts off the interior lights should they be left on inadvertently.
- An auxiliary power outlet is ergonomically located for convenience, and covered for safety and durability.
- Rear-seat heat ducts increase passenger comfort.
- Standard "reflector-optic" headlamps with a "flash-to-pass" feature are designed for optimal illumination, with the added convenience of minimal effort to indicate a desire to pass.
- Standard front-door map pockets and center console with integral armrest provide additional storage space.
- The brake system features aluminum front brake calipers that offer exceptional durability and value.

Feature Availability

	Malibu Sedan	Malibu LS Sedan
INTERIOR		
Air Bag – Driver and Front-Passenger	S	S
Air Conditioning – with CFC-Free Refrigerant	S	S
Assist Handles – Three, Headliner-Mounted	NA	S
Center Console – Front w/Center Shift Covered Storage Armrest	S	S
Convenience Net – Luggage-Area	O ¹	S
Defoggers – Rear-Window, Electric	O	S
– Side-Window	S	S
Door Locks – Power	O	S
– Child Security, Rear	S	S
Floor Mats – Front and Rear	O	S
Gauges – Tachometer, Odometer, Coolant Temperature	S	S
Heat Ducts – Rear-Seat	S	S
Mirror – Inside, Rearview w/Dual Reading Lamps	O ²	S
Scotchgard™ Protector	S	S
Seats – Cloth Bucket, Front	S	NA
– Custom Cloth Bucket, Front	O ²	NA
– LS Custom Cloth Bucket, Front	NA	S
– Driver, 6-Way Power	NA	S
– Split-Folding, Rear	O ¹	S
Speed Control – Electronic with Resume Speed	O ²	S
Steering Column – Tilt-Wheel™ Adjustable	S	S
Stereo – AM/FM	S	NA
– AM/FM with Cassette Player	O	S
– AM/FM with CD Player	O	O
– AM/FM with Remote Cassette and CD Players	O	O
Sunroof – Electric, Sliding (interim availability)	O	O
Trunk – Remote Electric Release	S	S
Warning Light – Low Oil Level	O ³	S
Windows – Power with Driver's Express-Down and Lockout Features	O ²	S
Wipers – Intermittent Variable	S	S
EXTERIOR		
Daytime Running Lamps – Automatic w/Automatic Exterior Lamp Control	S	S
Exhaust System – Stainless-Steel	S	S
Foglamps	NA	S
Headlamps – Reflector Optic w/Flash-to-Pass Feature	S	S
Mirrors – Outside, Driver-Side Remote, Body-Color	S	NA
– Outside, Dual Remote Electric, Body-Color	O ²	S
Paint – Basecoat/Clearcoat	S	S
Tires – P215/60R-15 Blackwall Touring	S	S
Wheel Covers – Full, Bolt-On	S	NA
Wheels – 15" Aluminum	O ²	S
FUNCTIONAL		
Battery – with Rundown Protection	S	S
Brake/Transmission Shift Interlock	S	S
Brakes – 4-Wheel Anti-Lock (ABS)	S	S
– Power, Front Disc/Rear Drum	S	S
Engine – 2.4 Liter Twin Cam 4-Cylinder	S	NA
– 3100 V6 SFI	O ²	S
PassLock Theft-Deterrent System	S	S
Remote Keyless Entry System	O ²	S
Suspension – 4-Wheel Independent	S	S
Transmission – 4-Speed Electronically Controlled Automatic with Second-Gear-Start Capabilities	S	S

S — Standard. O — Optional (some options may be available only as part of a Preferred Equipment Group.

See your Order Guide for feature availability). NA — Not available. 1 Included only with optional Custom Cloth seats.

2 Requires optional PEG. 3 Included only with optional 3100 V6 engine.

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1997 MALIBU INITIAL ORDERING RECOMMENDATIONS

IF YOU ONLY EXPECT A FEW UNITS INITIALLY, PLEASE CONSIDER EQUIPPING THEM AS FOLLOWS:
(ADDITIONAL OPTIONS, EXTERIOR COLOR AND TRIM SELECTIONS SHOULD BE BASED ON HISTORIC SEDAN PERFORMANCE IN YOUR LOCAL MARKET AREA)

MODEL	1ND69	BASE MALIBU
PREFERRED EQUIPMENT -- OR -- PREFERRED EQUIPMENT	1SB 1SC	LOCKS, WINDOWS AND POWER MIRRORS LOCKS, WINDOWS, POWER MIRRORS, READING LAMPS, KEYLESS ENTRY AND CRUISE
ENGINE	LD9	L4 TWIN CAM
RADIO	UL0	AM/FM CASSETTE
AVAILABLE COLORS	16U 49U 77U 42U	BRIGHT WHITE AVAILABLE AT START OF PRODUCTION SANDRIFT AVAILABLE THE WEEK OF 11/4/96 DARK CHERRY AVAILABLE THE WEEK OF 11/11/96 MALACHITE AVAILABLE THE WEEK OF 11/18/96

**BASED ON CONSUMER CLINICS, DEALER INPUT AND FORECAST ANALYSIS, THE FOLLOWING
PRODUCTION MIX SHOULD MAXIMIZE SALES TURNOVER DURING THE INITIAL MONTHS OF 1997
MALIBU PRODUCTION:**

MODEL		EXTERIOR COLOR		PAINTS WILL PHASE INTO PRODUCTION AS FOLLOWS
BASE 1ND69	65%	16U BRIGHT WHITE	19%	START OF PRODUCTION
LS 1NE69	35%	49U SANDRIFT	16%	WEEK OF 11/4/96
PEG 1ND69		77U DARK CHERRY	8%	WEEK OF 11/11/96
1SA	10%	42U MALACHITE	6%	WEEK OF 11/18/96
1SB	45%	51U CARMINE RED	13%	WEEK OF 11/25/96
1SC	45%	41U BLACK	8%	WEEK OF 12/2/96
ENGINE 1ND69		17U SILVERMIST	8%	WEEK OF 12/9/96
LD9 L4	45%	56U JADE GREEN	12%	WEEK OF 12/16/96
L82 V6	55%	24U OPAL BLUE	10%	WEEK OF 1/6/97
SEAT 1ND69		RADIO 1ND69		
BASE CLOTH	60%	AM/FM BASE	20%	
CUSTOM CLOTH	40%	UL0 CASSETTE	55%	
INTERIOR COLOR		UN0 COMPACT DISC	16%	
NEUTRAL	25%	UN8 CASSETTE & CD	9%	
LIGHT GRAY	25%	RADIO 1NE69		
MEDIUM GRAY	50%	CASSETTE BASE	35%	
		UN0 COMPACT DISC	45%	
		UN8 CASSETTE & CD	20%	

MALIBU

MALIBU EQUIPMENT SUMMARY

STANDARD INTERIOR FEATURES

		1ND69	1NE69
AIR CONDITIONING:		S	S
CUPHOLDER:	RETRACTABLE IN INSTRUMENT PANEL	S	S
DEFOGGER:	ZONED REAR WINDOW	-	S
GAGE PKG:	ANALOG INCLS TACHOMETER, COOLANT TEMP, TRIP ODOMETER, FUEL AND SPEEDOMETER	S	S
GLASS:	TINTED	S	S
HEAT DUCTS:	REAR SEAT	S	S
LIGHTING:	DOMED, UNDER DASH AND TRUNK	S	S
	DELAYED ENTRY AND EXIT WITH THEATRE DIMMING	S	S
LOCKS:	DOOR, CHILD SECURITY REAR DOOR	S	S
	POWER, DOOR	-	S
PASSLOCK II:	THEFT DETERRENT	S	S
POWER OUTLET:	AUXILIARY	S	S
RADIO:	ELECTRONICALLY TUNED AM/FM STEREO RADIO W/SEEK-SCAN, DIGITAL CLOCK AND DUAL FRONT COAXIAL & DUAL EXTENDED RANGE REAR SPEAKERS	S	-
	ELECTRONICALLY TUNED AM/FM STEREO WITH SEEK-SCAN, DIGITAL CLOCK, AUTOMATIC TONE CONTROL, CASSETTE TAPE, THEFT LOCK AND SPEED COMPENSATED VOLUME WITH DUAL FRONT COAXIAL AND DUAL EXTENDED RANGE REAR SPEAKERS	-	S
READING LAMPS:	DUAL, MIRROR MOUNTED	-	S
RESTRAINT SYSTEM:	DRIVER AND PASSENGER SIDE AIR BAGS	S	S
SAFETY BELTS:	REAR CHILD SEAT COMFORT GUIDES	S	S
	FRONT ADJUSTABLE GUIDE LOOPS	S	S
SCOTCHGARD:	FABRIC PROTECTOR, INCLUDES SEATS, DOOR TRIM AND FLOOR COVERING	S	S
SPEED CONTROL:	ELECTRONIC WITH RESUME SPEED	-	S
STEERING:	TILT-WHEEL	S	S
TRUNK RELEASE:	ELECTRIC	S	S
WARNING LAMPS:	LOW COOLANT, LOW FUEL, LOW WASHER FLUID AND DOOR AJAR	S	S
	LOW OIL LEVEL	-	S
WINDOWS:	POWER	-	S

STANDARD EXTERIOR FEATURES

CARGO NET:	LUGGAGE AREA	-	S
INSULATOR:	BLANKET, UNDER HOOD	S	S
KEYLESS ENTRY:	REMOTE	-	S
LICENSE PLATE:	FRONT MOUNTING PROVISION	S	S
PAINT:	BASE COAT/CLEAR COAT	S	S
RUNNING LAMPS:	AUTOMATIC DAYTIME, W/AUTO LIGHT CONTROL	S	S
TIRES:	P215/60R15 B/W	S	S
TRUNK TRIM :	FULL	S	S
WIPERS:	INTERMITTENT	S	S

MALIBU

TRIM DEFINITION & OPTION SUMMARY

STANDARD CHASSIS FEATURES

1ND69 1NE69

BATTERY:	RUNDOWN PROTECTION	S	S
BRAKES:	4-WHEEL ANTI-LOCK	S	S
	POWER FRONT DISC AND REAR DRUM	S	S
	BRAKE/TRANSMISSION SHIFT INTERLOCK	S	S
ENGINE:	2.4 LITER TWIN CAM L4	S	-
	3.1 LITER SFI V6	-	S
EXHAUST SYSTEM:	STAINLESS STEEL, ALUMINIZED	S	S
STEERING:	POWER	S	S
SUSPENSION:	FOUR WHEEL INDEPENDENT	S	S
TRANSMISSION:	4-SPEED AUTOMATIC W/2ND GEAR START CAPABILITY	S	S

INTERIOR TRIM

ASSIST HANDLES:	THREE (3), HEADLINER MOUNTED	-	S
CONSOLE:	CENTER SHIFT WITH INTEGRAL ARMREST, COVERED	S	S
FLOOR MATS:	FRONT AND REAR	-	S
MAP POCKETS:	FRONT DOORS	S	S
SEATS:	CLOTH RECLINING BUCKET WITH ADJUSTABLE HEAD RESTRAINTS,	S	S
	DRIVER POWER FRONT SEAT ADJUSTER	-	S
	SPLIT-FOLD DOWN REAR SEAT	-	S
STORAGE BIN:	LIGHTER, CUPHOLDER AND ASHTRAY	S	S
VISORS:	LH AND RH, WITH MAP STRAPS AND VANITY MIRRORS	S	S
	PASSENGER SIDE ILLUMINATED VANITY MIRROR	-	S

EXTERIOR TRIM

BUMPERS:	5 MPH	S	S
DOOR HANDLES:	BODY COLOR	S	S
FASCIAS:	FRONT AND REAR BODY COLOR	S	S
FOGLAMPS:		-	S
GRILLE:	ARGENT COLOR	S	S
HEADLAMPS:	REFLECTOR OPTICS W/FLASH TO PASS FEATURE	S	S
MIRRORS:	DUAL, DRIVER REMOTE, PASSENGER MANUAL, OUTSIDE		
	BODY COLORED, BREAKAWAY	S	-
	DUAL POWER OUTSIDE REARVIEW, BODY COLORED	-	S
MOLDINGS:	BODY COLOR	S	S
WHEELS:	15" STEEL WITH FULL BOLT-ON WHEEL COVERS	S	-
	15" ALUMINUM	-	S

MODEL 1ND69 MALIBU SEDAN

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

	1SA	1SB	1SC
Base Preferred Equipment Group (Refer Standard Summary Page)	x	x	x
Preferred Equipment Group 1			
Power Door Locks		x	x
Power Windows		x	x
Mirrors: Power Outside Rearview		x	x
Preferred Equipment Group 2			
Mirrors: Inside Rearview with Dual Reading Lamps			x
Remote Keyless Entry			x
Speed Control, Electronic with Resume Speed			x

ADDITIONAL OPTIONS

ACKNOWLEDGEMENTS

- R8S Multiple Order Numbers
R8T Preliminary Invoice
DEFOGGER: (Note: One of the Following Options Must Be Specified)
C49 Defogger, Rear Window. Electric
R9W Defogger, Rear Window not Desired

EMISSIONS: (Refer Emission Requirements Tab Section)

- FE9 Federal Emission Requirement
NG1 Massachusetts/NY Emission Requirement
YF5 California Emission Requirement
NB8 California Emission or NY/MA State Emission Override (Reqs FE9 Emission)
NC7 Federal Emission Override (Reqs YF5/NG1 Emission)

ENGINE

- LD9 2.4Liter L4 SFI Twin Cam (Base)
L82 3.1Liter SFI V6
B37 **FLOOR MATS:** Carpeted Front and Rear, Color-Keyed
K05 **HEATER:** Engine Block
AU0 **KEYLESS ENTRY, REMOTE:** (N/A w/1SA)
VH4 **MUD GUARDS:** Front and Rear (N/A w/1SA)

RADIO EQUIPMENT

- UL0 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Digital Clock, Auto Tone Control, Cassette Tape, Theft Lock and Speed Compensated Volume
UN0 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Digital Clock, Auto Tone Control, Compact Disc Player, Theft Lock and Speed Compensated Volume
UN8 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Digital Clock, Auto Tone Control, Compact Disc Player, Dual Playback Remote Cassette, Theft Lock and Speed Compensated Volume

SEAT:

- AR9 Cloth Bucket (Base)
AR9 Custom Cloth Bucket (Incls Split Folding Rear Seat) (N/A w/1SA)
MX0 **TRANSMISSION:** 4-Speed Automatic Electronically Controlled w/2nd Gear Start Capability (Base)
PF7 **WHEELS:** 15" Aluminum (N/A w/1SA)

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 Neutral	Light Gray	Med Gray
---------------------	-------------	------------	----------

MODEL	SEAT TYPE	SEAT OPTION*			
1ND69	Cloth Bucket	AR9	52B	92B	92E
	**Custom Cloth Bucket	AR9	52C	92C	92G

*Seat Option AR9 Must Be Specified

** Incl's Split Folding Rear Seat and Luggage Area Cargo Net

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code	Med Neutral	Light Gray	Med Gray
Black	41U	x	x	x
Blue, Med Opal (Met)	24U	x	x	x
Cherry, Dk (Met)	77U	x	x	x
Green, Dk Jade (Met)	56U	x	x	x
Sandrift (Met)	49U	x	x	x
Malachite Med (Met)	42U	x	x	x
Silvermist (Met)	17U	x	x	x
Red, Dk Carmine (Met)	51U	x	x	x
White, Bright	16U	x	x	x

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO	
	3.05	3.42
LD9 MX0	----	Std
L82 MX0	Std	----

MODEL 1NE69 MALIBU LS SEDAN

MUST SPECIFY: ENGINE, TRANSMISSION, EMISSIONS
MUST ORDER 1SD -- NO DELETIONS ALLOWED

Base Preferred Equipment Group (Refer Standard Summary Page)

1SD

ADDITIONAL OPTIONS

ACKNOWLEDGEMENTS

- R8S Multiple Order Numbers
- R8T Preliminary Invoice

EMISSIONS: (Refer Emission Requirements Tab Section)

- FE9 Federal Emission Requirement
- NG1 Massachusetts/NY Emission Requirement
- YF5 California Emission Requirement
- NB8 California Emission or NY/MA State Emission Override (Reqs FE9 Emission)
- NC7 Federal Emission Override (Reqs YF5/NG1 Emission)

ENGINE

- L82 3.1 Liter SFI V6 (Base)
- K05 **HEATER:** Engine Block
- VH4 **MUD GUARDS:** Front and Rear

RADIO EQUIPMENT

- UN0 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Digital Clock, Auto Tone Control, Compact Disc Player, Theft Lock and Speed Compensated Volume
- UN8 Electronically Tuned AM/FM Stereo Radio w/Seek-Scan, Digital Clock, Auto Tone Control, Compact Disc Player, Dual Playback Remote Cassette, Theft Lock and Speed Compensated Volume
- AR9 **SEAT:** LS Custom Cloth Bucket (Incls Split Folding Rear Seat)
- MX0 **TRANSMISSION:** 4-Speed Automatic Electronically Controlled w/ 2nd Gear Start Capability(Base)

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 Neutral	Light Gray	Med Gray
---------------------	-------------	------------	----------

MODEL	SEAT TYPE	SEAT OPTION*			
1NE69	** LS Custom Cloth Bucket	AR9	52D	92D	92H

*Seat Option AR9 Must Be Specified

**Includes Split Folding Rear Seat and Luggage Area Cargo Net

SOLID PAINT APPLICATION

Exterior Paint Color	Color Code	Med Neutral	Light Gray	Med Gray
Black	41U	x	x	x
Blue, Med Opal (Met)	24U	x	x	x
Cherry, Dk (Met)	77U	x	x	x
Green, Dk Jade (Met)	56U	x	x	x
Sandrift (Met)	49U	x	x	x
Malachite, Med (Met)	42U	x	x	x
Silvermist (Met)	17U	x	x	x
Red, Dk Carmine (Met)	51U	x	x	x
White, Bright	16U	x	x	x

POWER TEAMS

ENGINE OPTION CONDITION	FINAL DRIVE RATIO
L82	3.05
MX0	Std

MOTOR VEHICLE MANUFACTURERS SPECIFICATIONS

METRIC (U.S. CUSTOMARY)

1997

Manufacturer CHEVROLET MOTOR DIVISION GENERAL MOTORS CORPORATION	Vehicle Line MALIBU	
Mailing Address 30007 VAN DYKE WARREN, MICHIGAN		
	Issued 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 suggested specification form was developed by the vehicle manufacturing companies under the auspices of the American Automobile Manufacturers Association.

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

AAMA

American Automobile Manufacturers Association

Forms Provided by Engineering Affairs Division

Specifications

METRIC

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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.

AAMA Specifications
METRIC (U.S. Customary)

 Vehicle Line MALIBU

 Model Year 1997

 Issued 9-96

Revised (●) _____

Vehicle Origin

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

Vehicle Models

Model Description & Drive (FWD / RWD / AWD / 4WD)*	Introduction Date	Make, Vehicle Models, Series, Body Type (Mfgr's Model Code)	No. of Designated Seating Positions (Front / Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)	EPA Fuel Economy (City/Hwy)
MALIBU 4-Door Notchback (FWD)	9-96	1ND69	2/3	60(132)	20/29
MALIBU "LS" 4-Door Notchback (FWD)	9-96	1NE69	2/3	60(132)	20/29

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

METRIC (U.S. Customary)

Model Year 1997

Issued 9-96

Revised (●)

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	C		D	
E N G I N E	Engine Code		LD9	L82		
	Displacement Liters (in³)		2.4L (146) L4	3.1 L (191) V6		
	Induction system (FI, Carb, etc.)		Sequential Fuel Injection	Sequential Fuel Injection		
	Compression ratio		9.5:1	9.6:1		
	SAE Net at RPM	Power kW (bhp)	112 (150) @ 5600	116 (155) @ 5200		
		Torque N • m (lb.ft.)	210 (155) @ 4400	250 (185) @ 4000		
	Exhaust single, dual		Single	Single		
T R A N S	Transmission/ Transaxle		MN4 Automatic Transaxle 4 Speed	MN4 Automatic Transaxle 4 Speed		
	Effective Final Drive / Axle Ratio (std. first)		3.42	3.05		

[illegible]

Specifications**METRIC (U.S. Customary)**Vehicle Line MALIBUModel Year 1997Issued 9-96

Revised (●) _____

Engine Description**Engine Code**

2.4 LITER L4 (133 CID)

SEQUENTIAL FUEL INJECTION RPO LD9

Engine - General

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)		Inline, Front Traverse, DOHC, Pent Roof	
Manufacturer		General Motors Powertrain Group	
No. of cylinders		Four	
Bore		90 mm	
Stroke		94 mm	
Bore Spacing (C / L to C / L)		100 mm	
Cylinder block material & mass kg. (lbs.) (machined)		Cast Iron 52.2 (115.1)	
Cylinder block deck height		221.9 mm	
Cylinder block length		499.5 mm	
Deck clearance (minimum) (above or below block)		0	
Cylinder head material & mass kg. (lbs.)		Aluminum 9.0 (19.8)	
Cylinder head volume cm³ (inches³)		59.5 (3.03)	
Cylinder liner material		N/A	
Head gasket thickness (compressed)		1.2 mm	
Minimum combustion chamber total volume cm³ (inches³)		130.09 (7.94)	
Cyl. no. system (front to rear) *	L. Bank	1-2-3-4	
	R. Bank		
Firing order		1-3-4-2	
Intake manifold material & mass kg. (lbs.) **		Composite 1.5 (3.3)	
Exhaust manifold material & mass kg. (lbs.) **		High Silicon Moly Cast Iron 6.2 (13.9)	
Knock sensor (number & location)		One - Rear of Block	
Fuel required unleaded, diesel, etc.		Unleaded	
Fuel antiknock index (R + M) + 2		87	
Engine Mounts	Quantity	3-Automatic	4-Manual
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	(1) Hydroelastic, (2) Elastomeric-Automatic (1) Hydroelastic, (3) Elastomeric-Manual	
	Added isolation (sub-frame, crossmember, etc.)	No	
Total dressed engine mass (wt) dry***		Automatic 190.6 kg (With Oil)	Manual 203.0 kg (With Oil)

Engine - Pistons

Material & mass, kg (weight, oz.) - piston only	HyperEutectic 281.1 Alloy 345 gm (12 - 17oz)
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Engine - Camshaft

Location		Dual Overhead Cam
Material & mass kg (weight, lbs.)		Cast Iron 2.85 kg (6.28 lbs)
Drive type	Chain / belt	Chain
	Width / pitch	3/8" Pitch Inverted Tooth 4 x 4

* 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: A/C Compressor Brackets & Bolts, Radiator Pipe, Air Cleaner ASM., Ducts & Bolts, Generators Brackets, Bolts & ACC. Belt, Starter Motor & Bolts, Transaxle Brace, Flywheel Cover & Bolts, Exhaust Downpipe w/ Converter Bolts Evap EMIS Canister w/ Hoses, and Module Powertrain Control

Specifications
METRIC (U.S. Customary)

 Vehicle Line MALIBU

 Model Year 1997

 Issued 9-96

Revised (●) _____

Engine Description

Engine Code

3.1 LITER V6 (191 CID)
SEQUENTIAL FUEL INJECTION RPO 1.82
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	89.00 mm	
Stroke	84.00	
Bore Spacing (C / L to C / L)	111.76	
Cylinder block material & mass kg. (lbs.) (machined)	Cast Iron	
Cylinder block deck height	224.0 mm	
Cylinder block length	435.5 mm	
Deck clearance (minimum) (above or below block)	.58 Above TDC	
Cylinder head material & mass kg. (lbs.)	Cast Aluminum 5.3 (11.7)	
Cylinder head volume cm ³ (inches ³)	28.0 (1.71)	
Cylinder liner material	None	
Head gasket thickness (compressed)	1.62 mm	
Minimum combustion chamber total volume cm ³ (inches ³)	27.0 (1.65)	
Cyl. no. system (front to rear) *	L. Bank	2-4-6
	R. Bank	1-3-5
Firing order	1-2-3-4-5-6	
Intake manifold material & mass kg. (lbs.) **	Cast Aluminum Upper 3.0 kg (6.63 lbs.) Lower 5.6 kg (12.36 lbs.)	
Exhaust manifold material & mass kg. (lbs.) **	Cast Iron RT 3.76 kg (8.82 lbs.) LT 2.63 kg (5.76 lbs.)	
Knock sensor (number & location)	1, Left Center of Block	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) - 2	87	
Engine Mounts	Quantity	3 Automatic
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	(2) Hydroelastic, (2) Elastomeric
	Added isolation (sub-frame, crossmember, etc.)	No
Total dressed engine mass (wt) dry ***	187.8 kg Automatic w/ oil	

Engine - Pistons

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

Engine - Camshaft

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

* 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: A/C Compressor Brackets & Bolts, Radiator Pipe, Air Cleaner ASM., Ducts & Bolts, Generator Brackets, Bolts & ACC. Belts, Starter Motor & Bolts, Transaxle Brace, Flywheel Cover & Bolts, Exhaust Downpipe w/ Converter Bolts, Evap EMIS, Canister w/ Hoses and Module Powertrain Control

Specifications

METRIC (U.S. Customary)

Vehicle Line MALIBUModel Year 1997 Issued 9-96 Revised (●) _____**Engine Description**

Engine Code

2.4 LITER L4 (133 CID)
SEQUENTIAL FUEL INJECTION RPO LD9**Engine - Valve System**

Hydraulic lifters (std., opt., n.a.)		Standard	
Valves	Number intake / exhaust	Eight/Eight	
	Head O.D. intake / exhaust	35.5 mm	29.0 mm

Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Steel 0.662 kg (1.46 lbs)
Length (axes C/L to C/L)	145 mm

Engine - Crankshaft

Material & mass kg., (weight, lbs.)*	Cast Iron 19kg (41.9 lbs)
End thrust taken by bearing (no.)	Three
Length & number of main bearings	#1,2,4,5 28.6 mm #3 27.25 mm
Seal (material, one, two piece design, etc.)	Front One Piece Viton
	Rear One Piece Viton

Engine - Lubrication System

Normal oil pressure kPa (psi) at engine rpm	207 kPa (30 psi) @ 2000 RPM
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.75 L (4 qt)

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

Specifications

Vehicle Line MALIBU

Model Year 1997

Issued 9-96

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	Six/Six
	Head O.D. intake / exhaust	43.93/36.20

Engine - Connecting Rods

Material & mass kg., (weight, lbs.) *	Forged Steel .562 (1.31)
Length (axes C/L to C/L)	144.7 mm

Engine - Crankshaft

Material & mass kg., (weight, lbs.)*		Cast Iron 17.2 (37.9)
End thrust taken by bearing (no.)		Three
Length & number of main bearings		29.5 mm (1,4) 24.0 mm (2,3)
Seal (material, one, two piece design, etc.)	Front	One Piece Viton/Steel
	Rear	One Piece Viton/Steel

Engine - Lubrication System

Normal oil pressure kPa (psi) at engine rpm	280-360 @ 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 L (4.0 qt)

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

Specifications
METRIC (U.S. Customary)

 Vehicle Line MALIBU

 Model Year 1997

 Issued 9-96

Revised (●) _____

Engine Description
Engine Code

2.4 LITER L4 (133 CID)

SEQUENTIAL FUEL INJECTION RPO LD9

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard
Coolant fill location (rad., bottle)		Surge Tank
Radiator cap relief valve pressure kPa (psi)		103 kPa (15 psi)
Circulation thermostat	Type (choke, bypass)	Bypass
	Starts to open at °C (°F)	82°C (180°F)
Water pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	8.0
	Number of pumps	One
	Drive (V-belt, other)	Chain Drive
	Bearing type	Double Roll Ball Bearing
	Impeller material	Steel
	Housing material	Cast Aluminum
By-pass recirculation type (inter., ext.)		External
Cooling System capacity	With heater - L (qt.)	10.0 L. (10.6 qts.)
	With air conditioner - L (qt.)	10.0 L. (10.6 qts.)
	Opt. equipment specify - L (qt.)	N/A
Water jackets full length of cyl. (yes, no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes, no)		Yes
Radiator core	Std., A/C, HD	A/C
	Type (cross-flow, etc.)	Cross Flow
	Construction (fin & tube mechanical, braze, etc.)	Header Tube & Center - Brazed
	Material, mass kg (wgt., lbs.)	Aluminum, 1.53 kg. (3.4 lbs.)
	Width	660 mm. (26.0 in.)
	Height	360 mm. (14.2 in.)
	Thickness	16 mm. (0.63 in.)
	Fins per inch	16.9 fpi (3.0 K)
Radiator end tank material		Glass filled Nylon (33%)
Fan	Std., elec., opt.	Electric
	Number of blades & type (flex, solid, material)	7 Blade Solid Nylon 66
	Number & location (front, rear of radiator)	2 - Rear of Radiator
	Diameter & projected width	320 mm. (12.6 in.), Shroud width = 649 mm. (25.6 in.)
	Ratio (fan to crankshaft rev.)	N/A
	Fan cutout type	N/A
	Drive type (direct, remote)	Remote
	RPM at idle (elec.)	High speed: 2100 RPM - Left, 1700 RPM - Right
	Motor rating (wattage/elec.)	200 W total
	Motor switch (type & location/elec.)	Relay
	Switch point (temp./pressure/elec.)	Low = 106C, High = 111C Coolant; Low = 153 PSI, High 224 PSI A/C Head
	Fan shroud (material)	Nylon 66

AAMA Specifications

METRIC (U.S. Customary)

Vehicle Line MALIBU

Model Year 1997

Issued 9-96

Revised (●)

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)		Surge Tank
Radiator cap relief valve pressure kPa (psi)		103 kPa (15 psi)
Circulation thermostat	Type (choke, bypass)	Bypass
	Starts to open at °C (°F)	91°C (195°F)
Water pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	12
	Number of pumps	One
	Drive (V-belt, other)	Serpentine
	Bearing type	Ball Roller
	Impeller material	Cast Iron
	Housing material	Cast Aluminum
By-pass recirculation type (inter., ext.)		External
Cooling System capacity	With heater - L (qt.)	12.5 L. (13.2 qts.)
	With air conditioner - L (qt.)	12.5 L. (13.2 qts.)
	Opt. equipment specify - L (qt.)	N/A
Water jackets full length of cyl. (yes, no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes, no)		Yes
Radiator core	Std., A/C, HD	A/C
	Type (cross-flow, etc.)	Cross-Flow
	Construction (fin & tube mechanical, braze, etc.)	Header Tube and Center Brazed
	Material, mass kg (wgt., lbs.)	1.53 kg (3.4 lbs)
	Width	660 mm (26 in)
	Height	360 mm (14.2 in)
	Thickness	16 mm (0.63 in)
Radiator end tank material	Fins per inch	16.9 fpi (3.0 K)
		Glass filled Nylon (33%)
Fan	Std., elec., opt.	Electric
	Number of blades & type (flex, solid, material)	7 Blade Solid Nylon 66
	Number & location (front, rear of radiator)	2 - Rear of Radiator
	Diameter & projected width	320 mm (12.6 in) Shroud width = 649 mm (26.6 in)
	Ratio (fan to crankshaft rev.)	N/A
	Fan cutout type	N/A
	Drive type (direct, remote)	Remote
	RPM at idle (elec.)	High Speed; 2100 RPM - Left, 1700 RPM Right
	Motor rating (wattage/elec.)	200 W total
	Motor switch (type & location/elec.)	Relay
	Switch point (temp./pressure/elec.)	low = 108C, High 111C Coolant; Low = 153 psi, High = 224 psi A/C Head
	Fan shroud (material)	Nylon 66

Specifications**METRIC (U.S. Customary)**Vehicle Line MALIBUModel Year 1997Issued 9-96

Revised (●) _____

Engine Description**Engine Code****2.4 LITER L4 (133 CID)****SEQUENTIAL FUEL INJECTION RPO LD9****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		N/A
Idle A/F mix.		PCM Controlled
Fuel injection	Point of injection (no.)	Cylinder Head (Four)
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	Electronic
	System pressure kPa (psi)	300 (44)
Idle speed-rpm (spec. neutral or drive and propane if used)	Manual	900 RPM (neutral)
	Automatic	600 RPM
Intake manifold heat control (exhaust or water thermostatic or fixed)		N/A
Air cleaner type		Replacement Paper Element
Fuel filter (type/location)		Inline/Replaceable Rearward of fuel tank
Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Tank
	Pressure range kPa (psi)	250 - 300 kPa (36 - 44 psi)
	Flow rate at regulated pressure	62.5 L. (16.4 gal.) @ 300 kPa (43.5 psi) @ Wide Open Throttle
	L (gal)/hr @ kPa (psi)	

Fuel Tank

Capacity refill L (gallons)		57.5 L. (15.2 gal.)
Location (describe)		Under Rear Seat, Forward of Rear Axle
Attachment		Underbody Straps (2)
Material & Mass kg. (weight lbs.)		Steel 9.775 kg. (21.54 lbs.)
Filler pipe	Location & material	Right Rear Quarter Panel - Steel
	Connection to tank	Hoses and Clamps
Fuel line (material)		Steel/Nylon
Fuel hose (material)		Rubber
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

Specifications
METRIC (U.S. Customary)

 Vehicle Line **MALIBU**

 Model Year **1997**

 Issued **9-96**

Revised (●)

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		None
Idle A/F mix.		PCM Controlled
Fuel injection	Point of injection (no.)	Intake Port (6)
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	Electronic
	System pressure kPa (psi)	300 kPa (43.5 psi)
Idle speed-rpm (spec. neutral or drive and propane if used)	Manual	N/A
	Automatic	PCM Controlled
Intake manifold heat control (exhaust or water thermostatic or fixed)		Fixed
Air cleaner type		Replaceable Paper Element
Fuel filter (type/location)		Chassis mounted, Inline, Rearward of Fuel Tank, Replaceable
Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Tank
	Pressure range kPa (psi)	250 - 300 kPa (36 - 44 psi)
	Flow rate at regulated pressure	62.5 L. (16.4 gal) @ 300 kPa (43.5 psi)
	L (gal)/hr @ kPa (psi)	

Fuel Tank

Capacity refill L (gallons)		57.5 L. (15.2 gal.)
Location (describe)		Under Rear Seat, Forward of Rear Axle
Attachment		Underbody Straps (2)
Material & Mass kg. (weight lbs.)		Steel 9.775 kg. (21.51 lbs.)
Filler pipe	Location & material	Right Rear Quarter Panel - Steel
	Connection to tank	Hoses and Clamps
Fuel line (material)		Steel/Nylon
Fuel hose (material)		Rubber
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

Specifications
METRIC (U.S. Customary)

 Vehicle Line MALIBU

 Model Year 1997

 Issued 9-96

Revised (●) _____

Engine Description
Engine Code

2.4 LITER L4 (133 CID)

SEQUENTIAL FUEL INJECTION RPO LD9

Vehicle Emission Control

Type (air injection, engine modifications, other)			Engine Modifications
Exhaust Emission Control	Air injection	Pump or pulse	N/A
		Driven by	N/A
		Air distribution (head, manifold, etc.)	N/A
		Point of entry	N/A
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled Flow
		Exhaust source	# 4 Cylinder Exhaust Runner
		Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet Manifold
	Catalytic Converter	Type	Three - Way Monolith
		Number of	One
		Locations(s)	Underfloor
		Volume L (in³)	2.67 (163)
		Substrate type	Ceramic
		Noble metal type	Platinum (Pt.), Rhodium (Rh.)
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Positive Vent System w/ Orifice Metering to Intake
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges to (intake manifold, other)		Intake Manifold
	Air inlet (breather cap, other)		N/A
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel Tank	Canister
		Carburetor	N/A
	Vapor storage provision		Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single
Ø Muffler no. & type (reverse flow, straight thru, separate resonator) , Muffler volume (liters), Material & Mass kg. (weight lbs.)	409 Aluminum Stainless Steel Muffler 8.9 kg. (19.6 lbs.) 1, Reverse Flow	
Ø Resonator no., type, & volume (liters)	One (2.0 L.)	
Exhaust pipe	Branch o.d., wall thickness	Not Applicable
	Main o.d., wall thickness	43.8, 1.9 mm. (1.75, .076 in.)
	Material & Mass kg. (weight lbs.)	409 Stainless Steel 7.2 kg. (15.9 lbs.)
Intermediate pipe	o.d. & wall thickness	50.0, 1.35 mm. (2.0, .054 in.)
	Material & Mass kg. (weight lbs.)	409 SAE Stainless Steel 5.9 kg. (13.0 lbs.)
Tail pipe	o.d. & wall thickness	50.0, 1.08 mm. (2.0, .043 in.)
	Material & Mass kg. (weight lbs.)	409 Aluminum Stainless Steel

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Engine Description

Engine Code

**3.1 LITER V6 (191 CID)
SEQUENTIAL FUEL INJECTION RPO L82**
Vehicle Emission Control

Type (air injection, engine modifications, other)		Not Used
Exhaust Emission Control	Air injection	Pump or pulse
		Not Used
		Driven by
		Not Used
	Exhaust Gas Recirculation	Air distribution (head, manifold, etc.)
		Not Used
		Point of entry
		Not Used
	Catalytic Converter	Type (controlled flow, open orifice, other)
		Controlled Flow Digital
		Exhaust source
		Right Side Exhaust Manifold
		Point of exhaust injection (spacer, carburetor, manifold, other)
		Intake Manifold
		Type
		Single Bed Monolith
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)
Evaporative Emission Control	Intake Manifold	Intake Manifold
		Air inlet (breather cap, other)
		Right Rear Rocker Arm Cover
Electronic system	Fuel Tank	Canister
		Carburetor
		None
		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
Muffler no. & type (reverse flow, straight thru, separate resonator), Muffler volume (liters), Material & Mass kg. (weight lbs.)	409 Aluminum Stainless Steel	
	Muffler 8.9 kg. (19.6 lbs.)	
Resonator no., type, & volume (liters)	One, Reverse Flow	
	One (2.0 L.)	
Exhaust pipe	Branch o.d., wall thickness	Not Applicable
	Main o.d., wall thickness	50.0, 1.5 mm. (2.0, .060 in.)
	Material & Mass kg. (weight lbs.)	409-Stainless Steel 7.5 kg. (16.5 lbs.)
Intermediate pipe	o.d. & wall thickness	50.0, 1.35 mm. (2.0, .054 in.)
	Material & Mass kg. (weight lbs.)	409 Stainless Steel 5.9 kg. (13.0 lbs.)
Tail pipe	o.d. & wall thickness	50.0, 1.08 mm. (2.0, .043 in.)
	Material & Mass kg. (weight lbs.)	409 Stainless Steel

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

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2.4 LITER L4 (133 CID)

SEQUENTIAL FUEL INJECTION RPO LD9

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

Manual 4-speed (manufacturer/country)	N/A
Manual 5-speed (manufacturer/country)	N/A
Manual 6-speed (manufacturer/country)	N/A
Automatic (manufacturer/country)	N/A
Automatic overdrive (manufacturer/country)	GM Powertrain Group/Canada (MN4) Std

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 mfgr. & material coding	
	Facing material & construction	
	Rivets per facing	
	Outside x inside dia. (nominal)	
	Total eff. area cm ² (in. ²)	
	Thickness (pressure plate side/fly wheel side)	
	Rivet depth (pressure plate side/fly wheel side)	
	Engagement cushion method	
Release bearing type & method lub.		
Torsional damping method, springs, hysteresis		

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

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Engine Description

Engine Code

2.4 LITER L4 (133 CID)

SEQUENTIAL FUEL INJECTION RPO LD9

Automatic Transmission/Transaxle

Trade Name		GMPT 4T40-E Transmission Assembly (MN4)
Type and special features (describe)		Four Speed, Front Wheel Drive, Electronically Controlled, Automatic Overdrive Transaxle w/ Viscous Torque Converter Clutch
Shift mechanics		Hydraulic Clutches/Electronic Controls
Gear selector	Location (column, floor, other)	Floor
	Ltr./No. designation (e.g. PRND21)	P-R-N-(D)-D-2-1
	Shift interlock (yes, no, describe)	Yes - brake interlock
Gear ratios	1st	2.96
	2nd	1.63
	3rd	1.00
	4th	.68
	5th	Not Applicable
	6th	Not Applicable
	Reverse	2.13
	Final drive ratio	3.05
Max. upshift vehicle speed - drive range km/h (mph)		168 (104)
Max. upshift engine speed RPM		6350
Max. kickdown speed - drive range km/h (mph)		119 (74)
Min. overdrive speed km/h (mph)		57 (35)
Torque converter	Type	Electronically Controlled Converter Clutch
	Torus design	Yes
	Number of elements	Three
	Max. ratio at stall	2.48
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 mm
Capacity factor "K" *		203
Pump type		Variable Displacement Vane
Lubricant	Capacity refill L (pt.)	7 (bottom pan service) 10 (complete overhaul)
	Type recommended	Dexron III
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard, Integral w/ Radiator Liquid
Transmission mass kg (lbs.) & case material **		74.7 (Dry) 85.1 (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 $\div \sqrt{\text{torque}}$

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

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METRIC (U.S. Customary)
Engine Description
Engine Code

3.1 LITER V6 (191 CID)

SEQUENTIAL FUEL INJECTION RPO L82

Automatic Transmission/Transaxle

Trade Name		4T40-E Transmission Assembly (MN4)
Type and special features (describe)		Four Speed Front Wheel Drive Electronically Controlled Automatic Overdrive Transaxle with Viscous Torque Converter Clutch
Shift mechanics		Hydraulic Clutches/Electronic Controls
Gear selector	Location (column, floor, other)	Floor
	Ltr./No. designation (e.g. PRND21)	P-R-N-(D)-D-2-1
	Shift interlock (yes, no, describe)	Yes, Brake Interlock
Gear ratios	1st	2.96
	2nd	1.63
	3rd	1.00
	4th	0.68
	5th	N/A
	6th	N/A
	Reverse	2.13
Final drive ratio		3.05
Max. upshift vehicle speed - drive range km/h (mph)		Dependent on Engine Speed Only
Max. upshift engine speed RPM		5625
Max. kickdown speed - drive range km/h (mph)		151 (94)
Min. overdrive speed km/h (mph)		77 (48)
Torque converter	Type	Electronically Controlled Converter Clutch
	Torus design	Yes
	Number of elements	Three
	Max. ratio at stall	
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 mm
	Capacity factor "K" *	140
Pump type		Variable Displacement Vane
Lubricant	Capacity refill L (pt.)	7 (Bottom Pan Service) 10 (Complete Overhaul)
	Type recommended	Dexron III
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard, Integral with Radiator Liquid
Transmission mass kg (lbs.) & case material **		74.7 (Dry) 85.1 (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.

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 .Vehicle Line MALIBU
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Engine Description
Engine Code

2.4 LITER L4 (133 CID)

SEQUENTIAL FUEL INJECTION RPO LD9

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

Effective final drive ratio (or overall top gear ratio)			MN 4 (FW6)	(4 Speed Automatic) (3.42)
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.)		
Limited slip differential (type)		
Drive pinion	Type	
	Offset	
No. of differential pinions		
Pinion / differential	Adjustment (shim, etc.)	
	Bearing adjustment	
Driving wheel bearing (type)		
Lubricant	Capacity L (pt.)	
	Type recommended	

Axle Shafts - Front Wheel Drive

Manufacturer and number used			Delphi Saginaw Steering		
Type (straight, solid bar, tubular, etc.)		Left	Straight	Solid	
		Right	Straight	Solid	
Outer diam. x length* x wall thickness	Manual Transaxle	Left			
		Right			
	Automatic transaxle	Left	27.1 x 330.1 mm.		
		Right	27.1 x 330.1 mm.		
	Optional transaxle	Left			
		Right			
Slip yoke	Type				
	Number of teeth				
	Spline o.d.				
Universal joints	Make and mfg. no.		Inner	Delphi Saginaw Steering	
			Outer	Delphi Saginaw Steering	
	Number used		2	(Inboard and Outboard on each axle shaft)	
	Type, size, plunge		Inner	Free Motion Tripot 61.8 stroke	
			Outer	Rzeppa	Fixed Center
	Attach (u-bolt, clamp, etc)		Retaining Ring Inner	Washer and Nut Outer	
	Bearing	Type (plain, anti-friction)	Inner - Ball and Roller	Outer - Ball	
		Lubrication (fitting, prepack)	Prepacked		
Drive taken through (torque tube, arms or springs)			Wishbone Lower Control Arm Upper MacPherson		
Torque taken through (torque tube, arms or springs)			Engine Mounting System		

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

Specifications

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**3.1 LITER V6 (191 CID)
SEQUENTIAL FUEL INJECTION RPO L82**
Axle Ratio and Tooth Combinations (See 'Power Teams' for axle ratio usage)

Effective final drive ratio (or overall top gear ratio)			MN4 (F83)	4 Speed Automatic (3.05)
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.)		
Limited slip differential (type)		
Drive pinion	Type	
	Offset	
No. of differential pinions		
Pinion / differential	Adjustment (shim, etc.)	
	Bearing adjustment	
Driving wheel bearing (type)		Integral Double Row Ball
Lubricant	Capacity L (pt.)	See Auto Trans Spec
	Type recommended	See Auto Trans Spec

Axle Shafts - Front Wheel Drive

Manufacturer and number used			Delphi Saginaw Steering Systems		
Type (straight, solid bar, tubular, etc.)		Left	Straight	Solid	
		Right	Straight	Solid	
Outer diam. x length* x wall thickness	Manual Transaxle	Left			
		Right			
	Automatic transaxle	Left	27.1 x 330.1 mm.		
		Right	27.1 x 330.1 mm.		
	Optional transaxle	Left			
		Right			
Slip yoke	Type				
	Number of teeth				
	Spline o.d.				
Universal joints	Make and mfg. no.		Inner	Delphi Saginaw Steering	
			Outer	Delphi Saginaw Steering	
	Number used		2	Inboard and Outboard on Each Axle Shaft	
	Type, size, plunge		Inner	Free Motion Tripot 61.8 Stroke	
			Outer	Rzeppa	Fixed Center
	Attach (u-bolt, clamp, etc.)		Retaining Ring Inner	Washer and Nut Outer	
	Bearing	Type (plain, anti-friction)	Inner - Ball and Roller	Outer - Ball	
		Lubrication (fitting, prepack)	Prepacked		
Drive taken through (torque tube, arms or springs)			Wishbone Lower Control Arm Upper MacPherson		
Torque taken through (torque tube, arms or springs)			Engine Mounting System		

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

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Engine Code/Description**

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Suspension - General Including Electronic Controls

Car leveling	Standard/optional/not available		N/A
	Manual/automatic control		N/A
	Type (air/hydraulic)		N/A
	Primary/assist spring		N/A
	Rear only/4 wheel leveling		N/A
	Single/dual rate spring		N/A
	Single/dual ride heights		N/A
	Provision for jacking		N/A
Shock absorber damping controls	Standard/option/not available		N/A
	Manual/automatic control		N/A
	Number of damping rates		N/A
	Type of actuation (manual/ electric motor/air, etc.)		N/A
	Sensors	Lateral acceleration	N/A
		Deceleration	N/A
		Acceleration	N/A
		Road surface	N/A
Shock absorber (front & rear)	Type		Twin Tube - MacPherson Struts
	Make		Delphi Chassis Systems
	Piston diameter		32 mm
	Rod diameter		22 mm

Suspension - Front

Type and description		MacPherson Strut
Travel	Full jounce (define load condition)	93.0 mm Max. Eff. from Design
	Full rebound	89.0 mm Max. Eff. from Design
Spring	Type (coil, leaf, other & material)	Coil Steel
	Insulators (type & material)	Top & Bottom Rubber
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)	Design Height: 195.2 mm ID: 146 mm
	Spring rate N/mm (lb./in.)	31.5 N/mm
	Rate at wheel N/mm (lb./in.)	34.2 N/mm from Design
Stabilizer	Type (link, linkless, frameless)	Natural Rubber Multi-Piece Link
	Material & O.D. bar/tube, wall thickness	Tubular Steel 24 mm / 15% wall

Suspension - Rear

Type and description			Tri-Link	
Travel	Full jounce (define load condition)		118.0 mm	Max. Eff. from Design
	Full rebound		101.0 mm	Max. Eff. from Design
Spring	Type (coil, leaf, other & material)		Coil - Steel	
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)		Design Height: 262.7 mm ID: 105 mm	
	Spring rate N/mm (lb./in.)		17.5 N/mm	
	Rate at wheel N/mm (lb./in.)		20.18 N/mm at Design	
	Insulators (type & material)		Top - Rubber	
	If leaf	No. of leaves		
		Shackle (comp. or tens.)		
Stabilizer	Type (link, linkless, frameless)		Link	
	Material & O.D. bar/tube, wall thickness		Solid Steel 15.3 mm OD	
Track bar (type)				

Specifications

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Brakes - Service

Description			Power Assisted Hydraulic Brakes		
Manufacturer and brake type (std., opt., n.a.)		Front (disc or drum)	Standard Disc		
		Rear (disc or drum)	Standard Drum		
Valving type (proportion, delay, metering, other)			Proportioning, diagonal split circuit		
Power brake (std., opt., n.a.)			Standard		
Booster type (remote, integral, vac., hyd., etc.)			Tandem Vacuum		
Vacuum	Source (inline, pump, etc.)		Inline		
	Reservoir (volume in. ³)		None		
	Pump-type(elec., gear or belt driven)		N/A		
Traction assist	Operational speed range		N/A		
	Type (engine or brake intervention)		N/A		
Antilock device	Front/rear (std., opt., n.a.)		Standard		
	Manufacturer		Delphi Chassis Division - ABSVI		
	Type (electronic, mech.)		Electronic		
	Number sensors or circuits		4		
	Number antilock hydraulic circuits		3		
	Integral or add-on system		Add On		
	Yaw control (yes, no)		Yes		
Hyd. power source (elec., vac., mtr., pwr., strg.)		Electric Motor for Each Circuit			
Effective area cm ² (in. ²) *			164.8 (25.5)	336.4 (52.1)	
Gross Lining area cm ² (in. ²) ** (F/R)			170.4 (26.4)	358.2 (55.5)	
Swept area cm ² (in. ²) *** (F/R)			1344.0 (208.3)	631.8 (97.9)	
Rotor	Outer working diameter		F/R	273.9 mm(10.8 in)	N/A
	Inner working diameter		F/R	172.0 mm(6.8 in)	N/A
	Thickness		F/R	26.0 mm (1.0 in)	N/A
	Material & type (vented/solid)		F/R	Vented Cast Iron	N/A
Drum	Diameter & width		F/R	N/A	225x45 mm (8.8x1.8 in)
	Type and material		F/R	N/A	Cast Iron
Wheel cylinder bore			60 mm (2.4 in)	22.2 mm (0.8 in)	
Master cylinder	Bore/stroke		F/R	Bore - 25.4 mm (1.0 in)	Stroke - 34.6 mm (1.4 in)
Pedal arc ratio			3.50:1		
Line press. at 445 N (100 lb.) pedal load [kPa (psi)]			1600 psi Max		
Lining clearance			F/R	Both - Self Adjusting	
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		Molded	
		Rivet Size		N/A	
		Manufacturer		Delphi Chassis Systems	
		Lining code *****		DC - 136 EE	
		Material		Non-Asbestos Organic	
		****	Primary or outboard	99.0 mm X 40.4 mm x 11.6 mm	
		Size	Secondary or inboard	99.0 mm x 40.4 mm x 10.6 mm	
		Shoe thickness (no lining)		Outboard - 5 mm	Inboard - 6 mm
	Rear wheel	Bonded or riveted (rvts/seg.)		Riveted 10 rvts/seg	
		Manufacturer		Delphi Chassis Systems	
		Lining code *****		DC 245FF	
		Material		DC 9103	
		****	Primary or out-board	227.1 mm x 44.2 mm x 5.7 mm	
		Size	Secondary or in-board	227.1 mm x 44.2 mm x 5.7 mm	
Shoe thickness (no lining)		1.98 mm Nominal			

*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.

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Tires And Wheels (Standard)

Tires	Size (service description)		P215/60R15 (QGE)
	Type (bias, radial, steel, nylon, etc.)		Radial
	Inflation pressure (cold) for recommended max. vehicle load	Front kPa (psi)	(29)
		Rear kPa (psi)	(26)
	Rev./mile at 70 km/h (45 mph)		858
Wheels	Type & material		Stamped Steel
	Rim (size & flange type)		15 x 6
	Wheel offset		42 mm.
	Attachment	Type (bolt or stud & nut)	Stud
		Circle diameter	115 mm.
		Number & size	5 - 12 mm.
Spare	Tire and wheel		T125/70 D14, 15 x 4, Inflation 420 kPa (60 psi)
	Storage position & location (describe)		Under deck of luggage compartment

Tires And Wheels (Optional)

Tire size (service description)		P215/60R15
Type (bias, radial, steel, nylon, etc.)		Radial
Wheel (type & material)		Aluminum
Rim (size, flange type and offset)		15 x 6J x 42 mm
Tire size (service description)		
Type (bias, radial, steel, nylon, etc.)		
Wheel (type & material)		
Rim (size, flange type and offset)		
Tire size (service description)		
Type (bias, radial, steel, nylon, etc.)		
Wheel (type & material)		
Rim (size, flange type and offset)		
Tire size (service description)		
Type (bias, radial, steel, nylon, etc.)		
Wheel (type & material)		
Rim (size, flange type and offset)		
Spare tire and wheel size		
(if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)		

Brakes - Parking

Type of control		Foot park brake lever - Self adjusting mechanism
Location of control		Hinge pillar - Under I.P.
Operates on		Rear brakes
If separate from service brakes	Type (internal or external)	N/A
	Drum diameter	N/A
	Lining size (length x width x thickness)	N/A

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ALL

Steering

Manual (std., opt., n.a.)			N/A		
Power (std., opt., n.a.)			Standard		
Speed-sensitive (std., opt., n.a.)			Not Applicable		
4-wheel steering (std., opt., n.a.)			"		
Adjustable steering wheel/column (tilt, telescope, other)		Type	Tilt (N33)		
		Manufacturer	Delphi Saginaw Steering System		
		(std., opt., n.a.)	Standard		
Wheel diameter** (W9) SAE J1100		Manual	None		
		Power	Not Applicable		
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	"		
		Curb to curb (l. & r.)	11.0 (36.3)		
	Inside rear	Wall to wall (l. & r.)	"		
		Curb to curb (l. & r.)	"		
Scrub Radius*			-4.2		
Manual	Gear	Type	Not Applicable		
		Manufacturer	"		
		Ratios	Gear	"	
		Overall	"		
	No. wheel turns (stop to stop)		"		
Power	Type (coaxial, elec. hyd., etc.)		Hydraulic Pump		
	Manufacturer		Delphi Saginaw Steering Systems		
	Gear	Type	Rack and Pinion		
		Gear	45.13 mm/rev		
		Ratios	Overall	16.4:1	
	Pump (drive)		4 Cyl - Direct drive off cam shaft; 6 Cyl - Belt drive off crankshaft		
No. wheel turns (stop to stop)		2.9			
Linkage	Type		End take off tie rods, rack and pinion		
	Location (front or rear of wheels, other)		Rear of Wheels		
	Tie rods (one or two)		Two		
Steering axis	Kingpin Inclination (deg.)		13.11		
	Bearings (type)	Upper	Ball Bearing		
		Lower	Ball Joint		
		Thrust	Incorporated in Upper Bearing		
Steering spindle/knuckle & joint type			MacPherson Strut		

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

** See Page 23.

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Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	4.3° ± 70°
		Camber (deg.)	-.30° ± .70°
		Toe-in outside track mm (in.)	+ .10° ± 1/4°
	Service reset *	Caster (deg.)	N/A
		Camber (deg.)	-.30°
		Toe-in mm (in.)	+ .10°
	Periodic M.V. in- spection	Caster (deg.)	Not Adjustable
		Camber (deg.)	-1.0° to +.40°
		Toe-in mm (in.)	-.15° to +.35°
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	-.40° ± .70°
		Toe-in outside track mm (in.)	0° ± 1/4°
	Service reset *	Camber (deg.)	-.40° (Not Adjustable)
		Toe-in mm (in.)	0°
	Periodic M.V. insp.	Camber (deg.)	-.40° (Not Adjustable)
		Toe-in mm (in.)	0

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

Electrical - Instruments and Equipment Gage

Speed-ometer	Type (analog, digital, std., opt.)	Analog Electric
	Trip odometer (std., opt., n.a.)	Standard
Head-up display	Standard, optional, not available	Not Applicable
	Type	Secondary, opto-electronic
	Speedometer	Digital
	Status/warning indicators	Turn signals, high beam, low fuel, check gauges
	Brightness control	Day / night mode, adjustable
EGR maintenance indicator		Not Applicable
Charge indicator	Type	Tell Tale
	Warning device (light, audible)	LED
Temperature indicator	Type	Gage
	Warning device (light, audible)	LED Tell Tale
Oil pressure indicator	Type	Tell Tale
	Warning device (light, audible)	Tell Tale Standard
Fuel indicator	Type	Gage
	Warning device (light, audible)	LED Tell Tale
Windshield wiper	Type (standard)	Variable Intermittent
	Type (optional)	N/A
	Blade length	Driver side: 22" Passenger side: 19"
	Swept area cm ² (in. ²)	7610.9 cm ²
Windshield washer	Type (standard)	Wet Arm Nozzle
	Type (optional)	N/A
	Fluid level indicator (light, audible)	Tell Tale
Rear window wiper, wiper/washer (std., opt., n.a.)		N/A
Horn	Type	
	Number used	
Other		Cluster includes: A Tachometer, PRNDL Tell Tale includes: Check Oil, Theft System, Low Wash, Service Vehicle Soon, ABS, Brake, Seat Belt, High Beam, Right and Left Turn, Cruise, Low Coolant, Door Ajar, Air Bag, Check Engine.

Specifications
METRIC (U.S. Customary)

Vehicle Line

MALIBU

Model Year

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Engine Code/Description

2.4 LITER L4 (133 CID)

SEQUENTIAL FUEL INJECTION RPO LD9

Electrical - Supply System

Battery	Manufacturer	Delphi - E	
	Model, std., (opt.)	Standard - 1900670	Optional - 19000672
	Voltage	12	
	Amps at 0° F. cold crank	525	600
	Minutes-reserve capacity	90	
	Amps/hrs.-20 hr. rate	54	
	Location	Engine Compartment - Front	
Alternator	Manufacturer	Delphi	
	Rating (idle/max. rpm)	48/103 @ 14V, 27°C, 1600/6500 GRPM	
	Ratio (alt. crank/rev.)	2.77:1	
	Output at idle (rpm, park)	53A @ 650 ERPM, 93°C, 12.2V	
	Optional (type & rating)	None	
Regulator	Type	Integral With Alternator	

Electrical - Starting System

Motor	Manufacturer	Delco Remy America	
	Current drain _____ °C (°F)	450 Amps	
	Power rating kw (hp)	1.7 (2.3)	
Motor drive	Engagement type	Solenoid with Positive Shift	
	Pinion engages from (front, rear)	Front	

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)		Electronic Standard
	Other (specify)		Up Integrated Direct Ignition
Coil	Manufacturer		Delphi Automotive Systems
	Model		1104001
	Current	Engine stopped - A	Less than 500 mA
		Engine idling - A	Less than 1.0 A
Spark plug	Manufacturer		Delphi
	Model		41-192
	Thread (mm)		14 mm
	Tightening torque N-m (lb. ft.)		18.0 (13)
	Gap		1.5 mm
	Number per cylinder		One
Distributor	Manufacturer		N/A
	Model		N/A

Electrical - Suppression

Locations & type	
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Specifications

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METRIC (U.S. Customary)
Engine Code/Description

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

Electrical - Supply System

Battery	Manufacturer	Delphi - E
	Model, std., (opt.)	Standard - 19000672
	Voltage	12
	Amps at 0° F. cold crank	600
	Minutes-reserve capacity	90
	Amps/hrs.-20 hr. rate	54
	Location	Engine Compartment - Front
Alternator	Manufacturer	Delphi
	Rating (idle/max. rpm)	48/103
	Ratio (alt. crank/rev.)	2.75:1
	Output at idle (rpm, park)	56A @ 713 RPM, 93° C 12.2V
	Optional (type & rating)	None
Regulator	Type	Integral with Alternator

Electrical - Starting System

Motor	Manufacturer	Delco Remy America
	Current drain _____ °C (°F)	318 @ -30°C
	Power rating kw (hp)	1.5 kw (2.0 hp)
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
	Model		Direct Ignition
	Current	Engine stopped - A	Less Than 100 mA
		Engine idling - A	Less Than 1.5 A
Spark plug	Manufacturer		Delphi
	Model		41-940
	Thread (mm)		14 x 1.25
	Tightening torque N·m (lb. ft.)		10 - 2- (7 - 15)
	Gap		1.52 mm
	Number per cylinder		One
Distributor	Manufacturer		Not Applicable
	Model		Not Applicable

Electrical - Suppression

Locations & type	
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Specifications
METRIC (U.S. Customary)

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Model Code/Description

ALL

Body

Structure	Unitized Body Construction including Front End Structure with Bolted - on Fenders and Hood
Bumper system front - rear	The front bumper fascia is attached to a plastic bumper beam which functions as the energy absorber as well as the beam the rear fascia is attached to a steel impact bar and utilizes a foam energy absorber. Both bumpers meet the 5 mph incorporated bumper labeling requirement.
Anti-corrosion treatment	Metal Body Uses Double Sided Galvanized Metal On All Exposed Metal Surfaces. The Paint Shop Process Includes Phosphate, ELPO, Sealers, Anti-Chip, Primers and TopCoat.

Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	High Solids Base Coat/Clear Coat Paint System	
Hood	Material & mass	Outer GM 6093 m Grade 210 Type B, Inner Type A Mass ASM 15.52 kg
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Prop Rod
	Release control (internal, external)	Internal
Trunk lid	Material & mass	Inner GM 6185 m Outer GM 6093 m Grade 180 Type A Mass ASM 11.53 kg
	Type (counterbalance, other)	Goose Neck Torque Rod
	Internal release control (elec., mech., n.a.)	Electric
Hatchback lid	Material & mass	N/A
	Type (counterbalance, other)	N/A
	Internal release control (elec., mech., n.a.)	N/A
Tailgate	Material & mass	N/A
	Type (drop, lift, door)	N/A
	Internal release control (elec., mech., n.a.)	N/A
Vent window control (crank, friction, pivot, power)	Front	Not Applicable
	Rear	Not Applicable
Window regulator type (cable, tape, flex drive, etc.)	Front	Cross Arm
	Rear	Cable
Seat cushion type (e.g., 60/40 bucket, bench, wire, foam, etc.)	Front	Bucket
	Rear	Bench
	3rd seat	N/A
Seat back type (e.g., 60/40 bucket, bench, wire, foam, etc.)	Front	Bucket
	Rear	Bench
	3rd seat	N/A

Frame

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

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Model Code/Description

ALL

Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.)		Lap/Shoulder Belt Combination	N/A	Lap/Shoulder Belt Combination
	Standard / Optional	Second seat	Lap/Shoulder Belt Combination	Lap Belt	Lap/Shoulder Belt Combination
		Third seat			
Passive	Type & description (air bag, motorized-2- point belt, fixed belt, knee bolster, manual-lap belt)	First seat	Air Bag/Knee Bolster		Air Bag/Knee Bolster
	Standard / Optional	Second seat			
		Third seat			
Glass		SAE Ref.No.	69		
Windshield glass exposed surface area cm ² (in. ²)		S1	12306 cm ² (1912 in. ²)		
Side glass exposed surface area cm ² (in. ²) - total 2 sides		S2	11,001.5 cm ² (1760.2 in. ²)		
Backlight glass exposed surface area cm ² (in. ²)		S3	9650 cm ² (1736 in. ²)		
Total glass exposed surface area cm ² (in. ²)		S4	32,957.5 cm ² (5273.2in. ²)		
Windshield glass (type/thickness)			Laminated 4.8 mm		
Side glass (type/thickness)			Curved Tempered (Front) 4.0 mm (Rear) 3.5 mm		
Backlight glass (type/thickness)			Tempered 3.6 mm		
Tinted (yes/no, location)			Solex - All		
Solar control (yes/no, coated/batched, location)			Batched		

Headlamps

Description (sealed beam, halogen, replaceable bulb, etc.)	Replaceable - 3 Bulbs Per Headlamp
Shape	Oval
Lo-beam type (2A1, 2B1, 2C1, etc.)	HB4 - 9006
Quantity	2
Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	HB3 - 9005
Quantity	2
Park Signal	3157 N/A (2)

AAMA Specifications

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Engine Code/Description

ALL

Climate Control System

Air conditioning (std., opt., man., auto.)		Standard
Condenser	Type	StC
	Eff. face area (sq. mm.)	2096.4
	Fins per inch	18
Evaporator	Type	Plate - Round Tank
	Eff. face area (sq. mm.)	450.3
	Fins per inch	14
Heater core	Material	Aluminum
	Eff. face area (sq. mm.)	340.8
	Fins per inch	38
Compressor	Type	V5
	Displacement (cc.)	151
	Manufacturer	Delphi Harrison
	A/C pulley ratio	LD9 = 1.29:1
Accumulator	Type	Cylindrical Bottle
	Height (mm.)	205.8
	Diameter (mm.)	92.8
Receiver	Type	N/A
	Height (mm.)	N/A
	Diameter (mm.)	N/A
Refrigerant control (CCOT, TVS, etc.)		VDOT
Heater water valve (yes / no)		No
Refrigerant (R - 12, R - 134a, etc.)		R134a
Charge level (lbs. - oz.)		1.75 lbs
Cold engine lockout switch (yes / no)		Yes (based on compressor out pressure of 33psi or lower)
Wide open throttle cutout switch (yes / no)		No

Specifications

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

Clock (digital, analog)		Digital - Part of Radio Package
Compass / thermometer		Not Available
Console (floor, overhead)		Standard Full Floor
Defroster, electric windshield		Not Available
Defroster, electric backlight		Optional (C49) Standard on LS
Electronic	Diagnostic monitor (integrated, individual)	Not Available
	Instrument cluster (list instruments)	Standard (UH8): Tach, Fuel, Coolant Temp, Speedo, Trip Odometer
	Keyless entry	Optional (AU0) Standard on LS
	Tripmarker (avg. spd., fuel)	Not Available
	Voice alert (list items)	Not Available
	Other	Standard Chime: Key Left In / Hdip On / Turn Signal On / Seatbelt / Park Brake / Check Gages
Fuel door lock (remote, key, electric)		Not Available
Integrated Child Seating	Std./opt. & location in vehicle	Not Applicable
	Number of occupants	Not Applicable
	Occupant weight/height (min. & max.)	Not Applicable
	Restraint system description (3 or 5-point belts/booster seat capability)	Not Applicable
Lamps	Auto head on/off delay, dimming	Standard Daytime Running Lamps (T61) with Automatic Light Control
	Cornering	Not Available
	Courtesy (map, reading)	Standard: Dome, Footwell Optional: Pass Visor Mirror, Dual reading Lights (DC4)
	Door lock, ignition	Not Available
	Engine compartment	Not Available
	Fog	Standard on LS
	Glove compartment	Standard
	Trunk	Standard
	Illuminated entry system (list lamps, activation)	Standard: Dome, Footwell Delayed Entry (door open/close) / Illuminated Exit (ign key removal)
	Other	Standard Ashtray Lamp, Battery Rundown protection from interior lamps left on
Mirrors	Day / night (auto., man.)	Optional (DC4) with dual reading lamps - Standard on LS
	L.H. (remote, power, heated)	Standard (D37) Remote/Optional (DD9) power
	R.H. (convex, remote, power, heated)	Standard (D37) Manual/Optional (DD9) power
	Visor vanity (RH / LH, illuminated)	Standard: LH/RH covered mirror Optional RH Illuminated
Navigation system (describe)		Not Available
Parking brake-auto release (warning light)		Standard (foot operation) Warning Lights and Chime

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METRIC (U.S. Customary)

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

Power equipment	Deck lid (release, pull down)		Standard: Electric release with valet switch		
	Door locks (manual, automatic, describe system)		Optional (AU3) Power Door Lock Standard on LS		
	Seats	2 - 4 - 6 way, etc.	2 Way Standard on Base	Optional (AG1) 6 way Power Seat Standard on LS	
		Reclining (R.H., L.H.)	Not Available		
		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 (A31) Power Windows with Driver Auto Down and Passenger Switch Lockout Standard on LS		
	Vent windows		Not Available		
	Rear windows		Not Available		
Radio systems	Antenna (location, whip, w/shield, power)		Standard: Fixed RH Rear Quarter (US6)		
	Standard	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	(UM7): AM/FM Stereo Seek/Scan & Clock		
	Optional		(UL0): AM/FM Stereo Cassette with Auto Tone Control and Speed Comp Volume (UN0): AM/FM Stereo CD with ATC/SCV and Theft Lock (UN8): AM/FM Stereo CD with ATC/SCV and Theft Lock with Remote Cassette		
	Speaker (number, location)		Standard (U79): Dual 4x6 Coax Front Door / Dual 6x9 Extended Range Rear Shelf		
	Roof: open air or fixed (flip-up, sliding, "T") N/A on Base		Optional (CF5): Power Sunroof - spoiler design with express open;		
Speed control device		Optional (K34) Standard on LS			
Speed warning device (light, buzzer, etc.)		Optional (UD4) 120 Km/Hr Warning Chime - Export Only			
Tachometer (rpm)		Standard			
Telephone system (describe)		Power Outlet for accessories			
Theft deterrent system		Standard: Passlock II vehicle theft deterrent system			

Trailer Towing

Towing capable	Yes / No	Yes
Engine / transmission / axle	Std. / Opt.	Optional (L82/MN4/F83): 3.1 V6 / 4 Speed Auto / 3.05 axle
Tow class (I, II, III) *	Std. / Opt.	
Max. gross trailer wgt. (lbs.)	Std / Opt.	1000 lbs
Max. trailer tongue load (lbs.)	Std. / Opt.	100 lbs
Towing package available	Yes / No	No

* Class I - 2,000 lbs.

Class II - 3,500 lbs.

Class III - 5,000 lbs.

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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.

ALL

Width

Tread (front)	W101	1499 (59.0)
Tread (rear)	W102	1505 (59.3)
Vehicle width	W103	1763 (69.4)
Body width at SgRP (front)	W117	1762 (69.4)
Vehicle width (front doors open)	W120	3398 (133.8)
Vehicle width (rear doors open)	W121	3383 (133.2)
Tumble-home (degrees)	W122	25.1°
Outside mirror width	W410	1956 (77.0)

Length

Wheelbase	L101	2719
Vehicle length	L103	4837 (190.4)
Overhang (front)	L104	1006
Overhang (rear)	L105	1111
Upper structure length	L123	2845 (112.0)
Rear Wheel C/L "X" coordinate	L127	4485 (176.6)

Height **

Passenger distribution (front/rear)	PD1 .2,3	2/3
Trunk/cargo load		
Vehicle height	H101	1432 (56.4)
Cowl point to ground	H114	948 (37.3)
Deck point to ground	H138	1063 (41.9)
Rocker panel-front to ground	H112	222 (8.7)
Rocker panel-rear to ground	H111	228 (9.0)
Windshield slope angle (degrees)	H122	59°
Backlight slope angle (degrees)	H121	65.2°

Ground Clearance **

Front bumper to ground	H102	211.7 (8.3)
Rear bumper to ground	H104	226.2 (9.0)
Bumper to ground front at curb mass (wt.)	H103	211.7 (8.3)
Bumper to ground rear at curb mass (wt.)	H105	226.2 (8.9)
Angle of approach (degrees)	H106	N/A
Angle of departure (degrees)	H107	N/A
Ramp breakover angle (degrees)	H147	13
Axle differential to ground (front/rear)	H153	N/A
Min. running ground clearance	H156	145
Location of min. running ground clear.		Front Suspension

** All Vehicle Height And Ground Clearance Are Made Using EPA Loaded Vehicle Weight, Loading Conditions.

EPA loaded vehicle weight is the base vehicle weight plus all coolant and fluids necessary for operation plus 100% of the fuel capacity, plus the weight of all options and accessories which weigh three pounds or more and which are sold on at least 33% of the car line, plus two occupants.

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Vehicle Dimensions

See Key Sheets for definitions

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Front Compartment

SgRP front, "X" coordinate	L31	3147 (123.9)
Effective head room	H61	1000 (39.4)
Max. effective leg room (accelerator)	L34	1063 (41.9)
SgRP to heel point	H30	268 (10.6)
SgRP to heel point	L53	852 (33.5)
Back angle (degrees)	L40	24°
Hip angle (degrees)	L42	96.3°
Knee angle (degrees)	L44	124.3°
Foot angle (degrees)	L46	87°
Design H-point front travel	L17	238 (9.4)
Normal driving & riding seat track trvl.	L23	198 (7.8)
Shoulder room	W3	1415 (55.7)
Hip room	W5	1323 (52.1)
Upper body opening to ground	H50	1280 (50.4)
Steering wheel maximum diameter*	W9	386 (15.2)
Steering wheel angle (degrees)	H18	22.1°
Accel. heel pt. to steer. whl. cntr.	L11	459 (18.1)
Accel. heel pt. to steer. whl. cntr.	H17	647 (25.5)
Undepressed floor covering thickness	H67	11 (.43)

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	845 (33.3)
Effective head room	H63	955 (37.6)
Min. effective leg room	L51	965 (38.0)
SgRP (second to heel)	H31	300 (11.8)
Knee clearance	L48	70 (2.80)
Shoulder room	W4	1404 (55.3)
Hip room	W6	1322 (52.0)
Upper body opening to ground	H51	1300 (51.2)
Back angle (degrees)	L41	27°
Hip angle (degrees)	L43	92.7°
Knee angle (degrees)	L45	102°
Foot angle (degrees)	L47	125.4°
Depressed floor covering thickness	H73	15 (.59)

Luggage Compartment

Usable luggage capacity L (cu. ft.)	V1	464 (16.4)
Liftover height	H195	723 (28.5)

Interior Volumes (EPA Classification)

Vehicle class	Midsize
Interior volume index including trunk/cargo (cu. ft.)**	115.3
Trunk/cargo index (cu. ft.)	16.4

* See page 14.

** See definition page 33.

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

*** EPA Loaded Vehicle Weight, Loading Conditions

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Vehicle Dimensions See Key Sheets for definitions

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Station Wagon/MPV*
-Third Seat

(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	H197	
Cargo volume index m ³ (ft. ³)	V2	
Hidden cargo volume index m ³ (ft. ³)	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	H197	
Second seatback to load floor height	H198	
Cargo volume index m ³ (ft. ³)	V3	
Hidden cargo volume index m ³ (ft. ³)	V4	
Cargo volume index - rear of 2-seat	V11	

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

* MPV - Multipurpose Vehicle

** EPA Loaded Vehicle Weight, Loading Conditions

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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.
Rear		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.
		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**	435 (17.1)
	L54**	2325 (91.5)
	H81**	131 (5.2)
	H161**	174.6 (6.9)
	H163**	160.2 (6.3)
Rear	W22**	563 (22.2)
	L55**	3975 (456.5)
	H82**	227.3 (8.9)
	H162**	280.5 (11.0)
	H164**	260.6 (10.3)

* 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.

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* 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												
Shipping Mass (weight) = Curb Weight Less:												
A	=	1000	I	=	2000	Q	=	3000	Y	=	4000	33.8kgs_____
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	

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
AM9	Split Second Seat Back	1.0 (2.2)	4.0 (8.8)	5.0 (11.0)	
AP9	Convenience Net	.0 (.0)	.2 (.4)	.2 (.4)	
A31	Power Windows	2.5 (5.5)	1.5 (3.3)	4.0 (8.8)	
B37	Floor Mats - Front & Rear	1.6 (3.5)	1.2 (2.6)	2.8 (6.1)	
CF5	Electric Sun Roof	6.0 (13.2)	6.0 (13.2)	12.0 (26.4)	
C60	Air Conditioning	16.0 (35.2)	-1.0 (-2.2)	15.0 (33.0)	
K34	Cruise Control	1.9 (4.2)	0.0 (0)	1.9 (4.2)	
L82	3.1 L V6	0 (0)	0 (0)	0 (0)	
PF7	15" Aluminum Cast Wheel	-5.4 (-11.9)	-5.4 (-11.9)	-10.8 (-23.8)	
AU0	Lock Control - Remote Entry	.2 (.4)	0 (0)	.2 (.4)	
ULO	AM/FM Radio, Cass	.6 (1.3)	.2 (.4)	.8 (8.0)	
K05	Engine Block Heater	.2 (.4)	0 (0)	.2 (.4)	
AU3	Electric Door Side Lock	0.8 (1.7)	0.4 (0.9)	1.2 (2.6)	
UN8	AM/FM with CD, Clock	1.8 (4.0)	.2 (.4)	2.0 (4.4)	

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

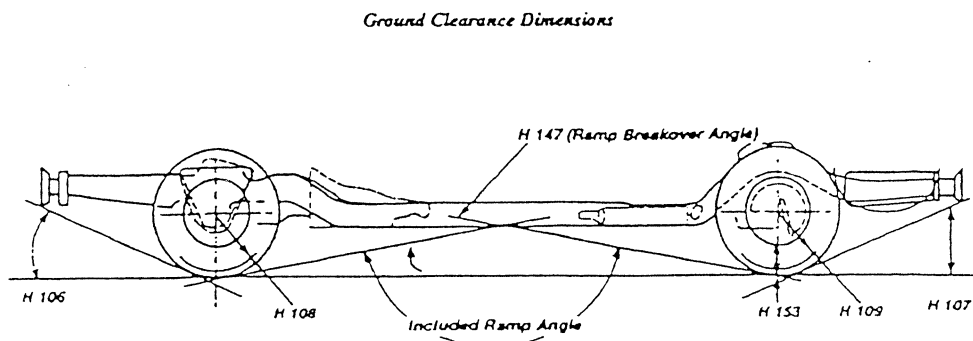
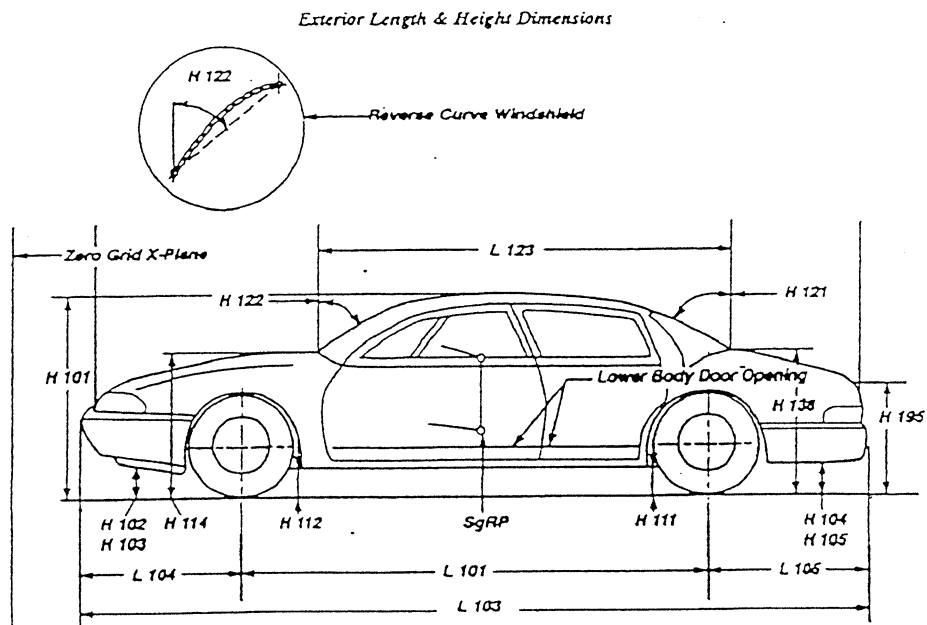
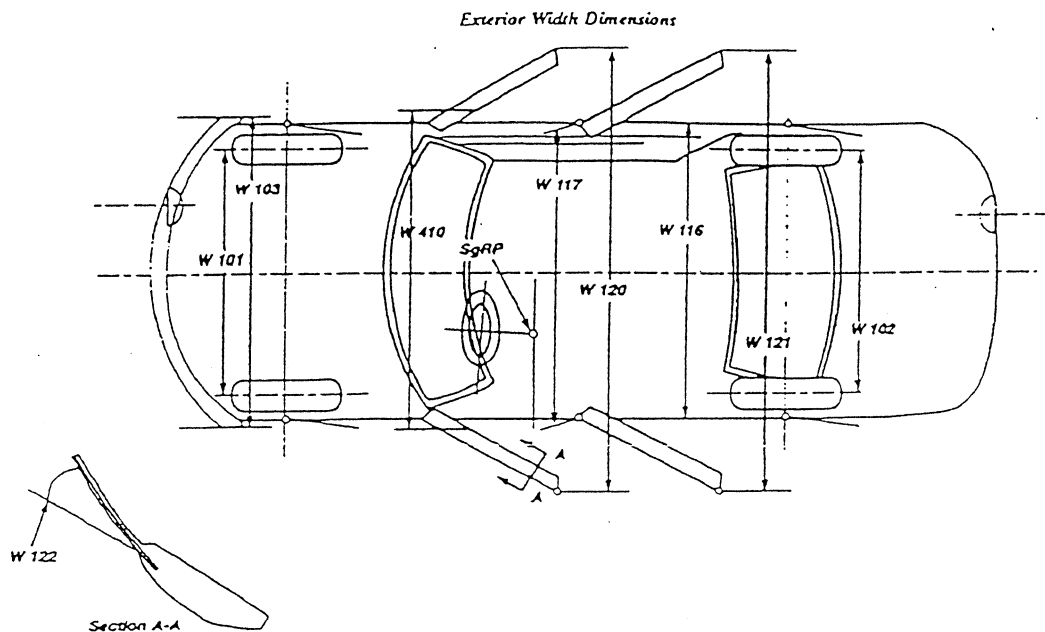
Vehicle Line	MALIBU			
Model Year	1997	Issued	9-96	Revised (●)

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

Specifications

METRIC

Exterior Vehicle And Body Dimensions - Key Sheet

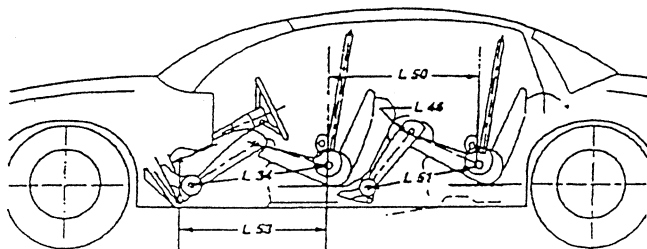


Specifications

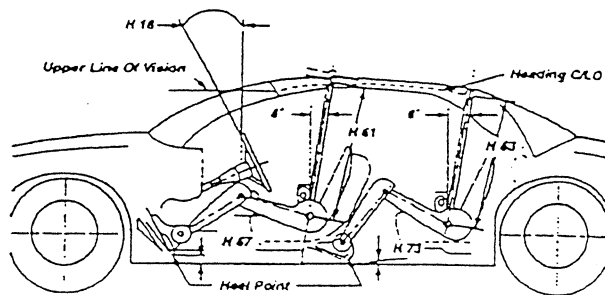
METRIC

Interior Vehicle And Body Dimensions - Key Sheet

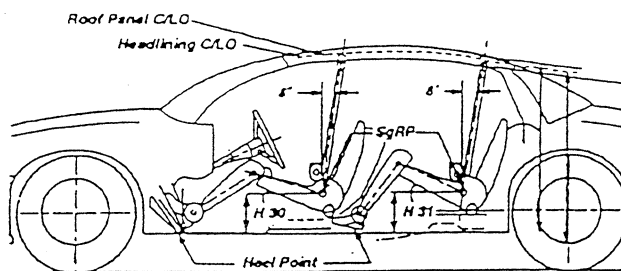
Interior Length Dimensions



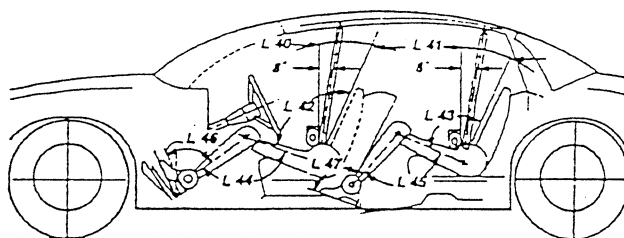
Interior Height Dimensions



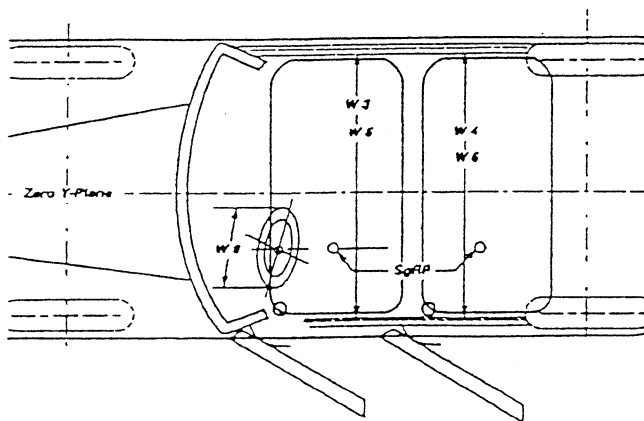
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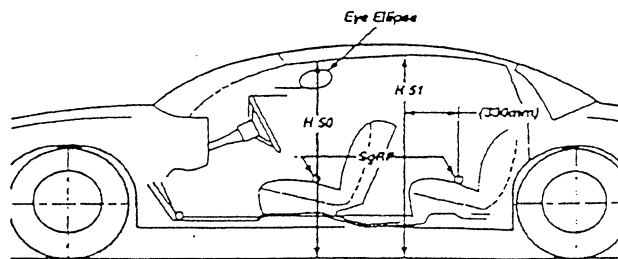
Interior Length Dimensions



Interior Width Dimensions



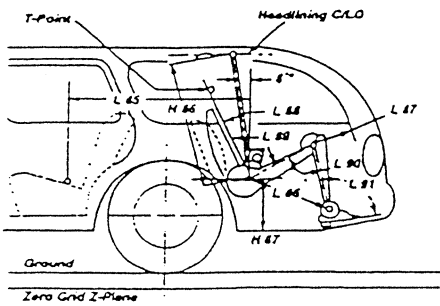
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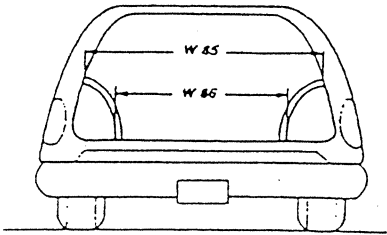
Specifications
METRIC

Interior Vehicle And Body Dimensions - Key Sheet

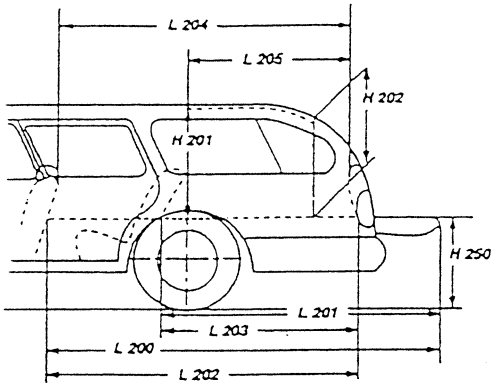
Interior Dimensions, Station Wagon Third Seat



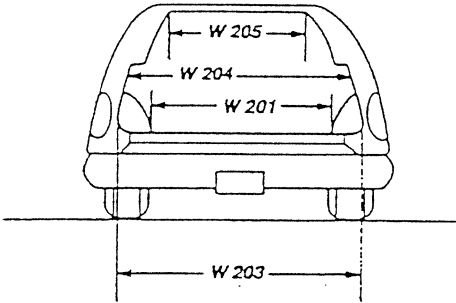
Interior Dimensions



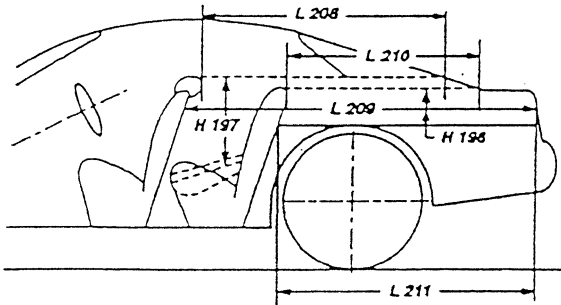
Cargo Space Dimensions



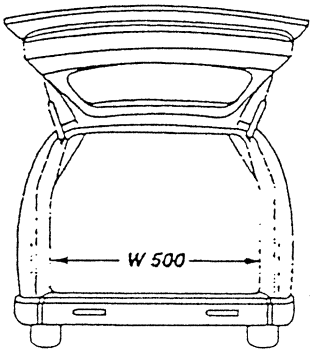
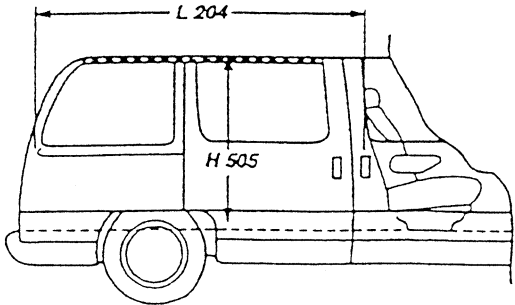
Cargo Space Dimensions



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 STATIC LOAD-TIRE RADIUS-REAR. Specified by the manufacturer in accordance with composite TIRE SECTION STANDARD.

Ground Clearance Dimensions

- H102 FRONT BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the front bumper to ground, including bumper guards, if standard equipment.
- H103 FRONT BUMPER TO GROUND-CURB MASS (WT.). Measured in the same manner as H102.
- H104 REAR BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment.
- H105 REAR BUMPER TO GROUND-CURB MASS (WT.). Measured in the same manner as H104.
- H106 ANGLE OF APPROACH. The angle measured between a line tangent to the front tire static loaded radius arc and the initial point of structural interference forward of the front tire to ground. The limiting structural component shall be designated.
- H107 ANGLE OF DEPARTURE. The angle measured between a line tangent to the rear tire static loaded radius arc and the initial point 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 underpressed 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 undeepressed 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 (2.0 in.). With rear-facing third seat, dimension is measured to closure.

L88 BACK ANGLE-THIRD. Measured in the same manner as L41.

L89 HIP ANGLE-THIRD. Measured in the same manner as L43.

L90 KNEE ANGLE-THIRD. Measured in the same manner as L45.

L91 FOOT ANGLE-THIRD. Measured in the same manner as L47.

W85 SHOULDER ROOM-THIRD. Measured in the same manner as W4.

W86 HIP ROOM-THIRD. Measured in the same manner as W5.

H86 EFFECTIVE HEAD ROOM-THIRD. The dimension, measured along a line 8 deg. from the SgRP-third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).

H87 SgRP-THIRD TO HEEL POINT

SD1 SEAT FACING DIRECTION-THIRD.

Station Wagon/MPV - Cargo Space Dimensions

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

L201 CARGO LENGTH-OPEN-SECOND. The dimension measured longitudinally from the back of the second seatback at the height of the undeepressed floor covering 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 wheelhouseings 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:

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

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:

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

V6 TRUCKS AND MPV'S WITH CLOSED AREA.
Measured in inches:

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

Measured in mm:

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

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:

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

Measured in mm:

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

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:

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

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:
Measured in inches:

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

Measured in mm:

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

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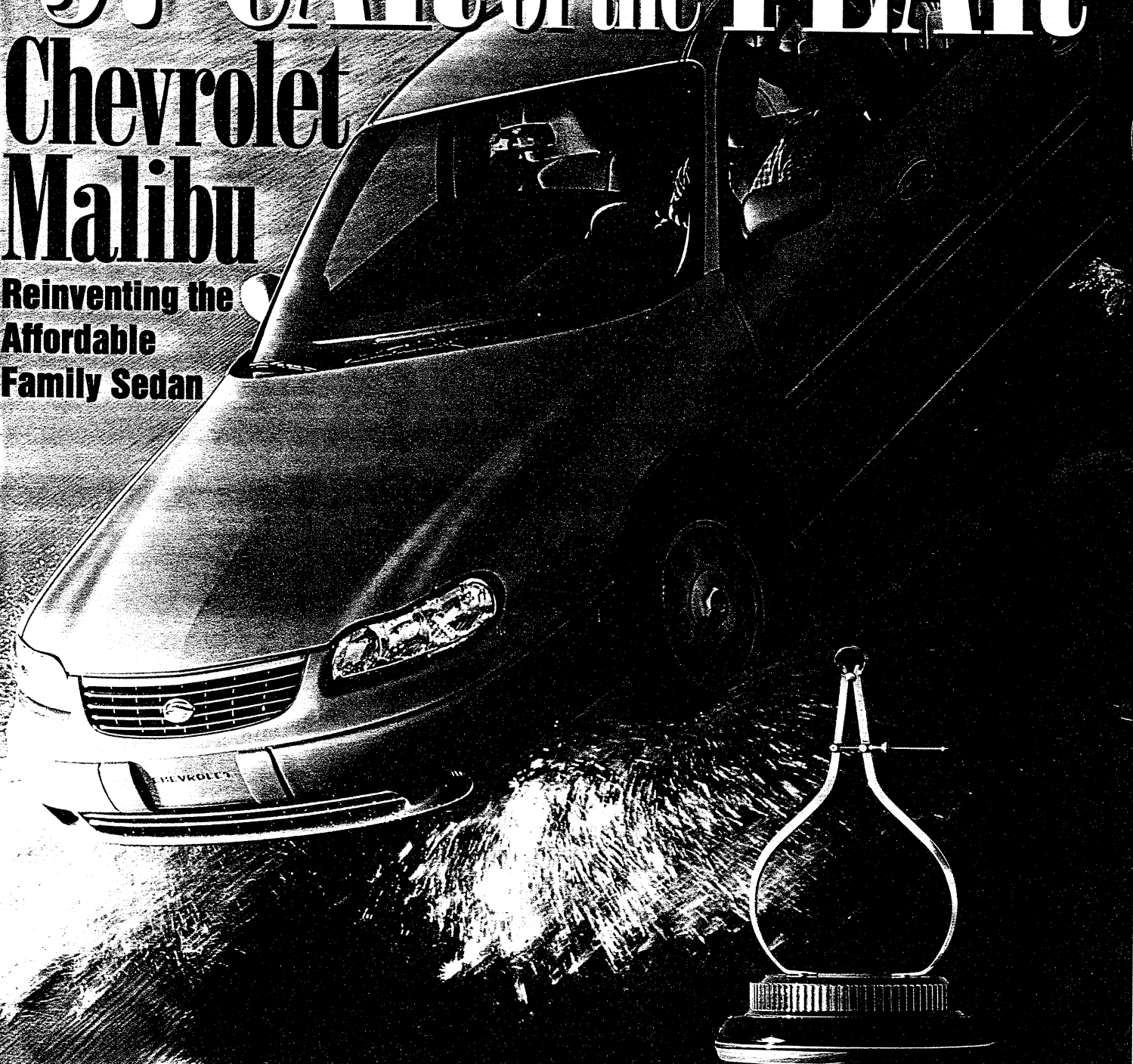
Testing America's Best Sellers: Camry vs. Taurus vs. Accord

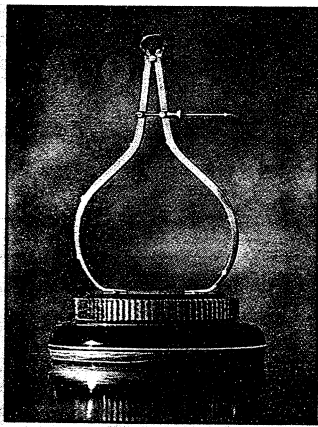
MOTOR TREND

'97 CAR of the YEAR

Chevrolet Malibu

Reinventing the
Affordable
Family Sedan





Malibu is a golden model name that resonates powerfully in the memories of not only *Motor Trend* staff members but also millions of people nationwide.

As 1960s rug rats, many of us rode on the back seats of rear-drive Malibu models, scribbling pictures of Rat Fink or playing license-plate poker. Later as teens, many of us owned a used version of this ubiquitous GM born in '64 as the uplevel version of the all-new Chevelle line. That year's offerings were designed (as were all Malibus yet to come) as honest, high-value, youthful transportation, with a wide range of options to fulfill the varied lifestyles of its customers.

Fourteen years have passed since the last Malibu was produced, but now a new version continues in its predecessor's well-known tradition of providing solid family-car value. The new Malibu's styling, like the original's, isn't flashy and pretentious; it's tasteful and contemporary. Inside you'll find big-car comfort and refinement plus a knockout combination of first-class room, safety and structural enhancements, and a dazzling number of standard convenience features—all at a starting price of less than \$16,000.

To help simplify the buying (and building) procedure, there are only two models: Malibu and Malibu LS. The roster of standards in the base-level car include niceties such as air conditioning, a tilt steering wheel, rear heating

ducts, adjustable-height shoulder belts, a center console, and an electric trunk release. The uplevel LS version gets all that plus a smooth, powerful V-6 engine, a six-way power driver's seat, an AM/FM/cassette stereo, cruise control, power windows, remote keyless entry, 15-inch aluminum wheels, floor-mats, power mirrors, and foglamps. To say the LS is well equipped is simply gross understatement—and at its base of \$18,715 (including \$525 destination), the car is a certified raging bargain.

All safety bases were covered, as well, with dual airbags, anti-lock brakes, a PassLock theft-deterrent system, and battery run-down protection standard on all models.

Our evaluation regimen of track testing, urban commuting, and mountain driving revealed that with either the base 2.4-liter/150-horsepower four or the premium 3.1-liter/155-horsepower V-6 there's never a power shortage. And refinement, a word rarely associated with a car in the "affordable" price class, can be used with abandon in describing the '97 Malibu. From nose to tail, inside and out, the new Chevy family sedan looks, feels, and drives like a more expensive car. It's for these reasons, and many more, that we named the Chevrolet Malibu *Motor Trend's* 1997 Car of the Year.

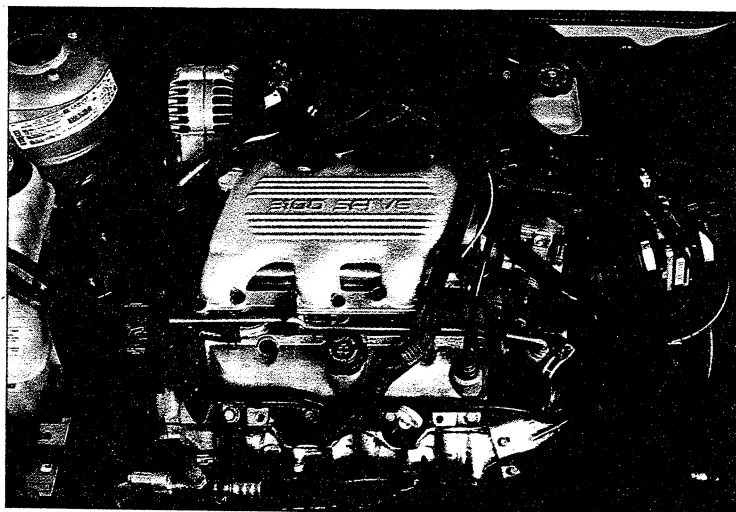
A TOUGH FIELD OF COMPETITORS

In almost 50 years of Car of the Year evaluations, there rarely has been a field of better, more evenly matched competitors for MT's Golden Caliper award. To begin our selection process for Car of the Year, we considered every all-new or substantially changed 1997 EPA-rated domestic car and minivan on sale by January 1, 1997. We carefully evaluated each vehicle on several important points, such as design, ergonomics, engineering, quality, value, and market significance.

We then tested the field of vehicles in every conceivable manner an owner would drive—and then some. We cruised rough concrete highways and blasted up twisty two-lane mountain passes. We rode in back seats. We examined design and manufacturing details. We even loaded and unloaded cargo and luggage. The final hurdles in our litany of inspections included comparisons of dimensions, standard and optional equipment specifications, and our usual battery of instrumented acceleration, braking, and handling tests.

Somewhat surprisingly it wasn't the most powerful, most expensive, or best-handling vehicle that took home the laurels. Rather we're convinced that Chevrolet's Malibu establishes a new benchmark within the domestic midsize market based on its comfort, quietness, handling, balanced power, attention to quality and safety, and its tremendous value.

Chevrolet expects the new Malibu to become its highest-volume passenger car. To achieve that goal, it must



Chevrolet's top Malibu powertrain choice is a 3.1-liter/155-horsepower OHV V-6 mated with a sophisticated four-speed automatic. The standard 2.4-liter/150-horsepower DOHC four is surprisingly refined, and delivers near-V-6 performance.

successfully engage in a dogfight with some of Japan's best-designed and -built vehicles, such as the Toyota Camry, Honda Accord, and Nissan Altima (all of which are made in America). Chrysler and Ford also have recently launched some outstanding midsize models into the fray, with the Chrysler Cirrus/Dodge Stratus/Plymouth Breeze and the Ford Contour/Mercury Mystique platforms, and the larger midsize Ford Taurus/Mercury Sable.

It's worth noting that despite huge buyer shifts into pickups, sport/utilities, and minivans, the midsize segment remains the largest (at 30 percent) passenger-car market segment in North America. Further, Chevrolet predicts that by 2000, this sector will swell to a whopping 4 million units.

The bottom line: The Malibu is a strategic weapon designed to capture a healthy 250,000 to 300,000 wedge of new-car buyers each year. Chevrolet thus is primed and ready to lay some premium vanilla ice cream on that big slice of American pie.

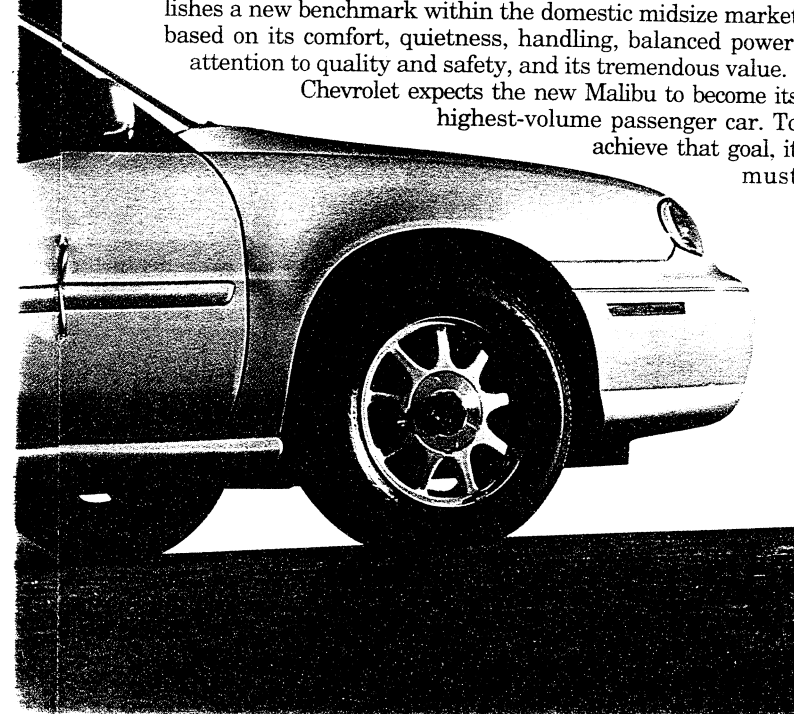
BIG-CAR RIDE. BIG-CAR QUIET

Remember this: A car's steel unibody literally is the foundation upon which the rest of the vehicle is built.

Examine closely the '97 Malibu's high-strength-steel roof pillars, beefy rocker sills, and front and rear subframes. This sedan is engineered to provide the solidity, ride, and quietness of a full-size car, while maintaining the crisp handling and parking-lot maneuverability of a compact.

Within the '97 Chevy lineup, the Malibu slots in to replace the Corsica sedan, but in reality the Malibu is larger inside and out and stretches far beyond the Corsica in mechanical sophistication and ability. While the Corsica rode on a 103.4-inch wheelbase, the Malibu sits atop a 107.0-inch wheelbase stretch. The Malibu is also seven inches longer overall, with a healthy seven more cubic feet of interior room and a generous three additional cubic feet of trunk space.

To achieve its big-car-ride goal, Chevrolet attacked traditional unibody ride, noise, and vibration problems with several different approaches. One of the most important roadblocks to noise and vibration is a separate steel subframe that hard-mounts to the front end of the Malibu's underbody. It's to this framelike tubular structure that the powertrain, front suspension system, and even the power-steering rack are attached. This body system prevents vibration generated by the engine from filtering into the passenger cabin. It also neatly isolates most of the road-surface pounding from the front MacPherson struts and the steering rack—which normally would feed that harshness directly into the unibody. Because of such a design's expense and extra weight, this isolation strategy





usually is limited to larger, more expensive vehicles.

But Chevrolet didn't rely on just a single noise-abatement tactic. Body cavities in the rocker panels and engine compartment are plugged with seals that expand when exposed to the paint-oven heat. Sound-deadening panels also are oven-baked onto the inside of the roof. Foam is pumped into the spaces between the floor's steel panels. And a high-frequency-sound attenuation mat is installed in the engine bay to quell any powertrain clamors.

SMALL-CAR NIMBLENESS

While the Malibu enjoys a tranquility index of a much larger vehicle, the platform engineering team endowed it with exceptional agility and handling prowess. Along with isolation duties, the forward subframe also helps smooth the ride. The tail of the vehicle rolls on a fully independent tri-link rear suspension attached to its own subframe. An independent rear suspension of this type effectively disconnects the right and left side of the car from road bumps, letting each corner's suspension unit react separately and accurately to differing surface conditions.

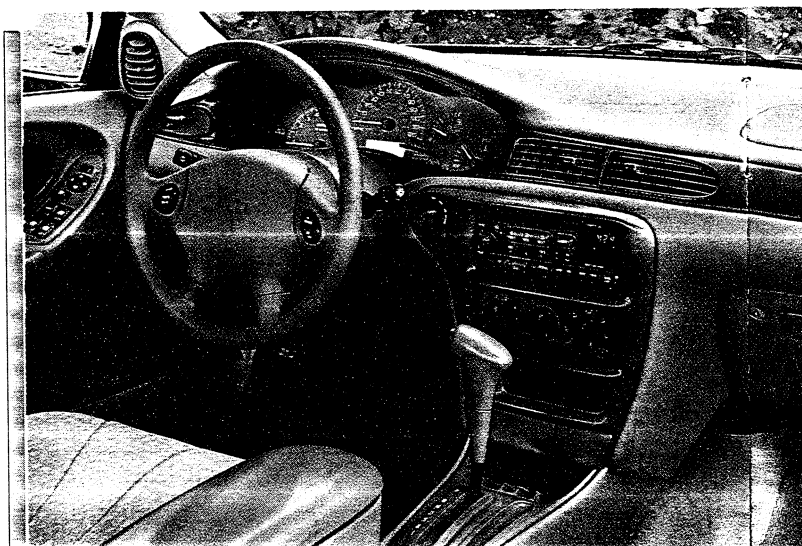
The advantages of this setup were particularly noticeable as we drove the Malibu at a variety of speeds across a series of uneven road surfaces. While the typical, trailer-style beam axles (like the Corsica's) of compact and midsize domestics have a tendency to let tire-contact patches skip and bounce, creating rear-end instability, the Malibu's rear axle stayed planted and allowed the tires to track cleanly. This encouraged drivers to push the car hard, tossing it into tight corners


with more verve than usual in an affordable family sedan.

Contributing greatly to this secure handling feel are aluminum front and rear suspension knuckles and aluminum front disc brake calipers. Frankly, the Malibu's ride and handling acumen—0.75 g of lateral grip and a slalom speed of 62.5 mph generated on highly wear-resistant tires—sets new standards of finesse for cars in this price category.

A "HOLISTIC" DESIGN

Chevrolet decided that unlike its crosstown rivals at Ford and Chrysler, it wasn't interested in pushing the styling envelope





with its new sedan. In fact, the original design decision was actually easy to make. Target customers closely questioned in clinic sessions said they weren't interested in zoomy looks. And for a company steered by scientific marketing analysis rather than emotion or big-shot executive opinions, the customer is always right.

"A strong visual personality just wasn't a foundation requirement for these people," explained Pat Henyon, assistant brand manager for the Malibu. "We were told they wanted a longer lasting, more enduring design with an import flavor. It can't be embarrassing. It has to say, it was a good purchase decision. And we think we achieved what we set out to do."

Actually, the Malibu's subdued styling and minimal chrome reflect a design philosophy more like that of Toyota, Honda, and Nissan. Like the mid-size sedans from those companies, the Malibu's individual styling elements don't jump out to dazzle or impress. Chevy focused on creating a timeless, even holistic, design with tightly integrated features such as rub strips recessed into the door panels, flush oval door handles, body-color exterior mirrors, gracefully arched wheel-opening flares, and minimal brightwork. The sole bits of exterior razzle-dazzle are the chrome-laced full covers on Malibu's standard 15-inch wheels, a bright strip across the top of the grille, and chrome, wavelike Malibu badges.

Two final factors contribute to the Malibu's well-detailed look. The first is the standard base-coat/clear-coat paint system. The benefits of the two-part finish are a glossy, wet-look shine and extra-tough protection from airborne environmental damage. The second contributor to the car's neat, buttoned-down appearance is its tight body seams. Thanks to a gauging process called "net gauge hole body-side," the door seals fit into the body sides like corks in a bottle.

CABIN COMFORT PAR EXCELLENCE

Considering the new Malibu's tidy exterior dimensions, its interior actually is quite roomy—a feat also accomplished by Chrysler's JA-platform sedans (Chrysler Cirrus, Dodge Stratus, and Plymouth Breeze). For comparison's sake, the Malibu's wheelbase is actually an inch shorter than that of the JA-platform sedans, but the Chevrolet's overall length is greater by four inches. And with its tall, upright greenhouse, the Malibu has more front and rear headroom and considerably more shoulder room than those competitors. Legroom is

virtually the same as in the JA models, though the Chrysler cars provide a few tenths of an inch more front and rear hiproom. But if you have stuff to tote in the trunk, the JA-platform holds only 15.7 cubic feet, while the Malibu swallows 16.4 cubic feet of real-world cargo.

All that notwithstanding, everyone knows that long-term comfort and convenience mean more than large, raw numbers. Smaller drivers of previous-generation large General Motors sedans frequently felt shortchanged when attempting to find a comfortable seating position, read the instruments, and reach various controls. With the adjustable steering column, the Malibu's elliptically shaped analog instrument cluster, featuring big needles and wide gauge faces, is a snap to read for drivers of all sizes and shapes. Another thoughtful interior-design item is the left-side position of the glovebox door handle, where it's easily reached by the driver. The cruise-control switches are located on the steering-wheel spokes, and the ignition switch has found its way back to the old handy spot just to the right of the column. There it's easy to eyeball the cylinder and target the slot for a quick start.

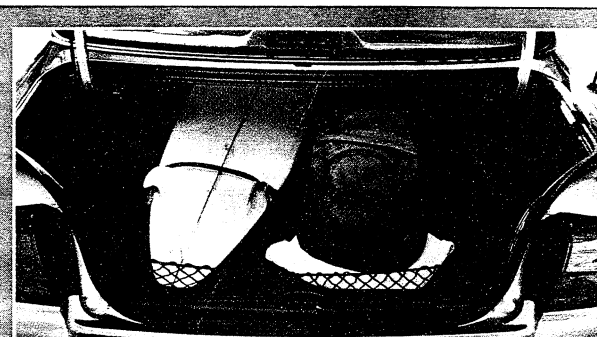
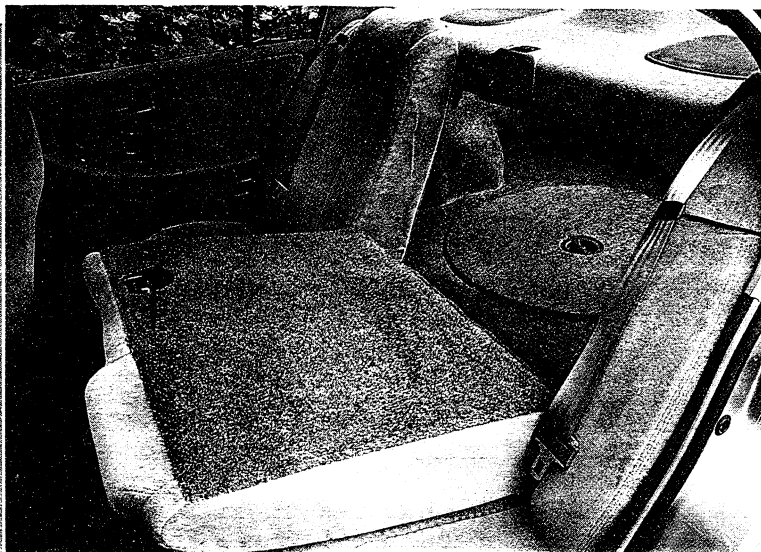
The Malibu's nicely contoured standard reclining cloth buckets hold riders comfortably in place for everything but racetrack workouts. In the Malibu LS, these seats feature six-way power adjustment. The standard LS rear bench is a split-folding type, allowing long items to stretch through from the trunk.

RESPONSIVE POWER— IN FOUR-CYLINDER OR V-6 STYLE

Today's sedan buyer wants performance, and Chevrolet delivers responsive powertrains for the Malibu. The standard engine is an eager 2.4-liter/150-horsepower DOHC four-cylinder. And with the car's low curb weight and this engine's low- and midrange gusto, the base-level Malibu is a great performer. Zero to 60 mph zips by in 9.3 seconds, and the quarter mile passes in 16.9 seconds at 81.9 mph.

There's also considerable refinement in the four-cylinder. One noise and vibration attenuation strategy was to mount the air-conditioner compressor and alternator directly on the block. (Normally mounted on long brackets that can flex, these heavy rotating components often result in noticeable vibrations at idle and at high rpm.) Other smoothness and idle-stability secrets include an engine-driven counter-rotating balance shaft spooling inside the oil pan, hydraulic engine mounts, sequential multipoint fuel injection, and some downright clever ignition electronics. All this may be enough to send some competitors back to the drawing board.

Standard in the Malibu LS and optional in the base-level Malibu is a 3.1-liter OHV V-6. Unquestionably, its



Split-folding rear-seat backrests significantly enhance the usefulness of the Malibu's already capacious trunk. The cargo area offers 16.4 cubic feet of volume, a low liftover, and a flat load floor.

pushrod design means fewer parts and lower manufacturing costs, relative to the overhead cam V-6 engines found in the Malibu's import competition. That definitely helps Chevy provide its price advantage. Mechanical simplicity doesn't put you in second place in power or quietness, however: With a 9.0-second sprint to 60 mph and strong part-throttle torque delivery, the Malibu has no trouble keeping up with traffic or pulling a long, steep grade with four adults on board. Fuel economy is another Malibu strong suit, with 24/38 city/highway mpg for the four-cylinder, and 22/36 mpg for the V-6. Combined with its 15-gallon fuel tank, the V-6 Malibu up to 540 miles of highway cruising range.

Both the four-cylinder and the V-6 are mated exclusively with the corporation's 4T40-E electronic automatic transaxle. This is a new-generation transmission designed exclusively for use in light, front-drive GM cars. We found gear shifts to be nearly seamless, thanks to a powertrain computer that monitors the engine, transaxle, and environmental conditions to provide precise control of the various functions and help reduce harshness.

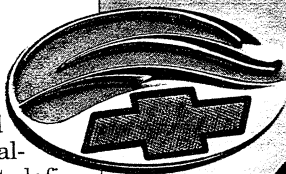
The Malibu's good power-to-weight ratio—with either the four-cylinder or V-6 engine—and well-tuned suspension endow this slick four-door with a well-rounded dynamic personality. It offers solid proof that “family sedan” and “fun to drive” need not be mutually exclusive targets.

ALL THIS, PLUS THE MALIBU'S LEGENDARY VALUE

Can Chevrolet convince buyers that it's finally offering a right-size family sedan that really challenges the midsize imports? That challenge seems to be. Before you buy an import, drive a Malibu. It's a challenge that shouldn't be taken lightly by any of Malibu's competitors.

We selected the Chevrolet Malibu as the 1997 *Motor Trend* Car of the Year because it embodies quality, performance, fuel economy, precise driving dynamics, smooth ride, attention to comfort, top-notch safety engineering, and a level of standard luxury features previously unheard of in this price class. At just above \$18,915 fully loaded, the top-line Malibu LS offers standard goodies that push most midsize pricetags well above \$20,000.

Behold the new standard in affordable domestic family sedans: Welcome to Malibu.



TECH DATA

Chevrolet Malibu LS

GENERAL

Manufacturer.....	Chevrolet Motor Division, Warren, Mich.
Location of final assembly plant.....	Oklahoma City, Okla., and Wilmington, Del.
EPA size class.....	Midsize
Body style.....	4-door, 5-passenger
Drivetrain layout.....	Front engine, front drive
Airbag.....	Dual
Base price.....	\$18,190
Price as tested.....	\$18,915
Options included.....	CD player, \$200
Ancillary charges.....	Destination, \$525
Typical market competition.....	Chrysler Cirrus, Dodge Stratus, Ford Contour, Honda Accord, Mercury Mystique, Nissan Altima, Plymouth Breeze, Toyota Camry

DIMENSIONS

Wheelbase, in./mm.....	107.0/2718
Track, f/r, in./mm.....	59.1/59.3/1501/1506
Length, in./mm.....	190.4/4836
Width, in./mm.....	69.4/1763
Height, in./mm.....	56.4/1433
Ground clearance, in./mm.....	5.7
Manufacturer's base curb weight, lb.....	3107
Weight distribution, f/r, %.....	65/35
Cargo capacity, cu ft.....	16.4
Fuel capacity, gal.....	15.0
Weight/power ratio, lb/hp.....	20.0

ENGINE

Type.....	60° V-6, liquid-cooled, cast iron block, cast aluminum heads
Bore x stroke, in./mm.....	3.51 x 3.31/89.0 x 84.0
Displacement, ci/cc.....	191/3136
Compression ratio.....	9.6:1
Valve gear.....	OHV, 2 valves/cylinder
Fuel/induction system.....	Sequential multipoint EFI
Horsepower, hp @ rpm, SAE net.....	155 @ 5200
Torque, lb-ft @ rpm, SAE net.....	185 @ 4000
Horsepower/liter.....	50.0
Redline, rpm.....	5500
Recommended fuel.....	Unleaded regular

DRIVE LINE

Transmission type.....	4-speed automatic
Gear ratios.....	
(1st).....	2.96:1
(2nd).....	1.63:1
(3rd).....	1.00:1
(4th).....	0.68:1
Axle ratio.....	2.33:1
Final-drive ratio.....	3.42:1
Engine rpm, 60 mph in top gear.....	2300

CHASSIS

Suspension.....	
Front.....	MacPherson struts, coil springs, anti-roll bar
Rear.....	Independent, tri-links, coil springs, anti-roll bar
Steering.....	
Type.....	Rack and pinion, power assist
Ratio.....	16.3:1
Turns, lock to lock.....	3.0
Turning circle.....	36.3
Brakes.....	
Front, type/dia., in.....	Vented discs/10.8
Rear, type/dia., in.....	Vented drums/8.8
Anti-lock.....	Standard
Wheels and tires.....	
Wheel size, in.....	15 x 6.0
Wheel type/material.....	Cast aluminum
Tire size.....	215/60SR15
Tire mfr. and model.....	Firestone Affinity

INSTRUMENTATION

Instruments.....	120-mph speedo; 7000-rpm tach; fuel level; coolant temp
Warning lamps.....	Seatbelt; door ajar; check engine; oil pressure; battery; low radiator; ABS; theft system; low washer fluid; service vehicle soon; brake

PERFORMANCE AND TEST DATA

Acceleration, sec.....	
0-30 mph.....	3.0
0-40 mph.....	4.5
0-50 mph.....	6.5
0-60 mph.....	9.0
0-70 mph.....	11.7
0-80 mph.....	15.6
Standing quarter mile.....	
sec @ mph.....	16.6 @ 83.7
Braking, ft.....	
30-0 mph.....	33
60-0 mph.....	136
Handling.....	
Lateral acceleration, g.....	0.75
Speed through 600-ft slalom, mph.....	62.5
Speedometer error, mph.....	
Indicated.....	Actual
30.....	30
40.....	40
50.....	50
60.....	60

FUEL ECONOMY

EPA, city/hwy., mpg.....	22/36
Est. range, city/hwy., miles.....	330/540

