

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. CUSTOMARY)

1996

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

Direct questions concerning these specifications to the manufacturer listed above.

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

AAMA

American Automobile Manufacturers Association

Blank Forms Provided by Technical Affairs Division

METRIC (U.S. Customary)

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NOTE:

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

MVMA Specifications

Vehicle Line LUMINA MINIVAN
 Model Year 1996 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Vehicle Origin

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

Vehicle Models

Model Description & Drive (FWD / RWD / AWD / 4WD)*	Introduction Date	Make, Vehicle Models, Series, Body Type (Mfg's Model Code)	No. of Designated Seating Positions (Front / Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)	EPA Fuel Economy (City/Hwy)
LUMINA					
3-Door Cargo Minivan FWD	12/95	1UM05	2 (2/-)		19/26
3-Door Minivan		1UM06	7 (2/3/2), STD		19/26

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

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Power Teams

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

		A	B	C	D	
E N G I N E	Engine Code	LA1				
	Displacement Liters (in ³)	3.4 (207)				
	Induction system (FI, Carb, etc.)	Sequential Fuel Injection				
	Compression ratio	9.5:1				
	SAE Net at RPM	Power kW (bhp)	180 @ 5200			
		Torque N • m (lb. ft.)	205 @ 4000			
Exhaust single, dual	Single					
T R A N S	Transmission/ Transaxle	M13 Auto Transaxle 4-Speed				
	Effective Final Drive / Axle Ratio (std. first)	3.29				

Series Availability		Power Teams (A - B - C - D)		
Model	Code	Standard	Optional	
LUMINA				
3-Dr. Cargo Minivan	1UM05	A		
3-Dr. Minivan	1UM06	A		

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METRIC (U.S. Customary)

Engine Description
 Engine Code

3.4 LITER V6 (207 CID)
 SEQUENTIAL FUEL INJECTION RPO LA1

Engine - General

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)	60 deg. V, Front, Transverse, OHV, Front Wheel Drive	
Manufacturer	General Motors Powertrain Division	
No. of cylinders	6	
Bore	92 mm (3.62 in.)	
Stroke	84 mm (3.31 in.)	
Bore Spacing (C / L to C / L)	111.76 mm (4.4 in.)	
Cylinder block material & mass kg. (lbs.) (machined)	Cast Iron	
Cylinder block deck height		
Cylinder block length	435.5 mm (17.4 in.)	
Deck clearance (minimum) (above or below block)		
Cylinder head material & mass kg. (lbs.)	Aluminum	
Cylinder head volume cm ³ (inches ³)		
Cylinder liner material	Not Applicable	
Head gasket thickness (compressed)		
Minimum combustion chamber total volume cm ³ (inches ³)		
Cyl. no. system (front to rear)*	L. Bank	2-4-6
	R. Bank	1-3-5
Firing order	1-2-3-4-5-6	
Intake manifold material & mass kg. (lbs.)**	Aluminum	
Exhaust manifold material & mass kg. (lbs.)**	Cast Iron	
Knock sensor (number & location)	1, Left Side Center of Block	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) + 2	87	
Engine Mounts	Quantity	4(1 Engine, 2 Transmission)
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	2 - Elastomeric, 1 - Hydraulic, 1 - Torque Strut
	Added isolation (sub-frame, crossmember, etc.)	Isolated Engine Cradle
Total dressed engine mass (wt) dry***		

Engine - Pistons

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

Engine - Camshaft

Location	Above Crankshaft at Center of "V"	
Material & mass kg (weight, lbs.)	Assembled Steel	
Drive type	Chain / belt	Chain
	Width / pitch	

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

** Finished state.

*** Dressed engine mass (weight) includes the following: All those items necessary to make the engine a complete ready-to-run unit.

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3.4 LITER V6 (207 CID)
 SEQUENTIAL FUEL INJECTION RPO LA1

Engine - Valve System

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

Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Forged Steel; 592 (1.30)
Length (axes C/L to C/L)	144.78 mm (5.79 in.)

Engine - Crankshaft

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

Engine - Lubrication System

Normal oil pressure kPa (psi) at engine rpm	345-448 (50-65) @ 1200
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)

Engine - Diesel Information

(NOT APPLICABLE)

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

Engine - Intake System

(NOT APPLICABLE)

Turbo charger - manufacturer
Super charger - manufacturer
Intercooler

* Finished State

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Engine Description
 Engine Code

3.4 LITER V6 (207 CID)
 SEQUENTIAL FUEL INJECTION RPO LA1

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard
Coolant fill location (rad., bottle)		
Radiator cap relief valve pressure kPa (psi)		103 (15)
Circulation thermostat	Type (choke, bypass)	Bypass
	Starts to open at °C (°F)	91 (195)
Water pump	Type (centrifugal, other)	Centrifugal
	GMP 1000 pump rpm	
	Number of pumps	1
	Drive (V-belt, other)	Serpentine
	Bearing type	
	Impeller material	Cast Iron
Housing material		Aluminum
By-pass recirculation type (inter., ext.)		Internal
Cooling System capacity	With heater - L (qt.)	Not Applicable
	With air conditioner - L (qt.)	11.23 L (c67), 12.73 (c67/c34)
	Opt. equipment specify - L (qt.)	11.67 (c67 & v08), 13.17 (c67/c34 & v08)
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.)	Tube & Center, Brazed
	Material, mass kg (wgt., lbs.)	Aluminum, 6.0 (13.1)
	Width	668 mmm (26.3 in.)
	Height	438 mm (17.2 in.)
	Thickness	34 mm (1.33 in.)
Fins per inch		17.0
Radiator end tank material		Plastic
Fan	Std., elec., opt.	Front A/C Electric
	Number of blades & type (flex, solid, material)	5, Solid, Plastic
	Number & location (front, rear of radiator)	1-Rear of Radiator, 1 - Forward of Radiator
	Diameter & projected width	415 (16.3)
	Ratio (fan to crankshaft rev.)	-
	Fan cutout type	None
	Drive type (direct, remote)	Direct
	RPM at idle (elec.)	1750-1800
	Motor rating (wattage/elec.)	150 w Puller, 125 w Pusher
	Motor switch (type & location/elec.)	Remote, Behind Radiator
	Switch point (temp./pressure/elec.)	223 deg. F/200 psi
Fan shroud (material)		Plastic

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Engine Description
 Engine Code

3.4 LITER V6 (207 CID)
 SEQUENTIAL FUEL INJECTION RPO LA1

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

Induction type: carburetor, fuel injection system, etc.		Sequential Fuel Injection
Manufacturer		Delphi
Carburetor no. of barrels		Not Applicable
Idle A/F mix.		PCM Controlled
Fuel injection	Point of injection (no.)	Intake Port (6)
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	Electronic
	System pressure kPa (psi)	
Idle speed-rpm (spec. neutral or drive and propane if used)	Manual	PCM Controlled
	Automatic	PCM Controlled
Intake manifold heat control (exhaust or water thermostatic or fixed)		Fixed
Air cleaner type		Replaceable Paper Element
Fuel filter (type/location)		
Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Tank
	Pressure range kPa (psi)	
	Flow rate at regulated pressure L (gal)/hr @ kPa (psi)	

Fuel Tank

Capacity refill L (gallons)		75.7 (20.0)
Location (describe)		Left Center of Vehicle Between Rails
Attachment		Steel Straps -Cross Car
Material & Mass kg. (weight lbs.)		High Density Polyethylene
Filler pipe	Location & material	Behind Left Rear Wheel - Steel
	Connection to tank	Hose and Clamp
Fuel line (material)		Nylon
Fuel hose (material)		Low Permeation/Kevlar Reinforced
Return line (material)		Nylon
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	Not Applicable
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
	Selector switch or valve	"
	Separate fill	"

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METRIC (U.S. Customary)

Engine Description **3.4 LITER V6 (207 CID)**
 Engine Code **SEQUENTIAL FUEL INJECTION RPO LA1**

Vehicle Emission Control

Type (air injection, engine modifications, other)		Closed Loop, PCM Controlled	
Exhaust Emission Control	Air injection	Pump or pulse	Not Applicable
		Driven by	"
		Air distribution (head, manifold, etc.)	"
		Point of entry	"
	Exhaust Gas	Type (controlled flow, open orifice, other)	Controlled Flow Linear
		Exhaust source	Right Side Exhaust Manifold
		Recirculation	Intake Manifold
	Catalytic Converter	Type	Bed Monolith
		Number of	1
		Locations(s)	Underbody
Volume L (in ³)			
Substrate type			
Noble metal concentration (g/cm ³)			
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges to (intake manifold, other)		Intake Manifold
	Air inlet (breather cap, other)		Right rear rocker arm cover
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel Tank	Fuel Tank to Canister
		Carburetor	Not Applicable
	Vapor storage provision		Charcoal
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single W/Cross Over
∅	Muffler no. & type (reverse flow, straight thru, separate resonator), Muffler volume (liters), Material & Mass kg. (weight lbs.)	1, Reverse Flow, 15.6 Liters, Stainless Steel
∅	Resonator no., type, & volume (liters)	1, Straight Thru, 4.9 Liters
Exhaust pipe	Branch o.d., wall thickness	57.2 mm (2.25 in.), Diameter
	Main o.d., wall thickness	57.2 x 1.52 mm (2.25 x .060 in.)
	Material & Mass kg. (weight lbs.)	Stainless Steel
Intermediate pipe	o.d. & wall thickness	57.2 x 1.22 mm (2.25 x .048 in.)
	Material & Mass kg. (weight lbs.)	Stainless Steel
Tail pipe	o.d. & wall thickness	57.2 x 1.40 mm (2.25 x .055 in.)
	Material & Mass kg. (weight lbs.)	Stainless Steel

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 SEQUENTIAL FUEL INJECTION RPO LA1

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

Manual 4-speed (manufacturer/country)	Not Applicable
Manual 5-speed (manufacturer/country)	"
Manual 6-speed (manufacturer/country)	"
Automatic (manufacturer/country)	"
Automatic overdrive (manufacturer/country)	GMPT U.S.A

Manual Transmission/Transaxle (NOT APPLICABLE)

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

Clutch (Manual Transmission) (NOT APPLICABLE)

Clutch manufacturer		
Clutch type (dry, wet, single, multiple disc)		
Linkage (hydraulic, cable, rod, lever, other)		
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	
	Released	
Assist (spring, power/percent, nominal)		
Type pressure plate springs		
Total spring load (nominal) N (lbs.)		
Clutch facing	Facing mfr. & 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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METRIC (U.S. Customary)

Engine Description Engine Code	3.4 LITER V6 (207 CID) SEQUENTIAL FUEL RPO LA1
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Automatic Transmission/Transaxle

Trade Name	4T60-E (M13) Transaxle	
Type and special features (describe)	4-Speed Automatic W/Torque Converter Clutch	
Shift mechanics	Hydraulic Clutches/Electronic Controls	
Gear selector	Location (column, floor, other)	Column (Mechanical)
	Ltr./No. designation (e.g. PRND21)	P-R-N- D -D-2-1
	Shift interlock (yes, no, describe)	Yes-Brake, Ignition Key
Gear ratios	1st	2.92
	2nd	1.57
	3rd	1.00
	4th	.70
	5th	Not Applicable
	6th	"
	Reverse	2.38
	Final drive ratio	3.29
Max. upshift vehicle speed - drive range km/h (mph)	1 - 2 = 64.5 (40) 2 - 3 = 120.9 (75) 3 - 4 = 170.8 (106)	
Max. upshift engine speed RPM	5400 RPM	
Max. kickdown speed - drive range km/h (mph)	3 - 2 = 108 (67) 2 - 1 = 46.7 (29)	
Min. overdrive speed km/h (mph)	48.3 (30)	
Torque converter	Type	Lock-Up
	Torus design	Yes
	Number of elements	3
	Max. ratio at stall	1.73
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 mm (9.65 in.)
Capacity factor "K"	163 K	
Pump type	Variable Displacement Vane	
Lubricant	Capacity refill L (pt.)	9.5 (20), Dry Transmission
	Type recommended	Dexron III
Oil cooler (std., opt., N.A., internal, external, air, liquid)	Standard - Liquid	
Transmission mass kg (lbs.) & case material**	81.0 (178.5), 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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Engine Description
 Engine Code

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

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

Effective final drive ratio (or overall top gear ratio)		3.29
Transfer ratio and method (chain, gear, etc.)		1 / 1, Chain
Front drive unit	Ring gear o.d.	Not Applicable
	No. of teeth	"
	Pinion	"
	Ring gear	"

Front Drive Unit

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

Axle Shafts - Front Wheel Drive

Manufacturer and number used		Delphi Saginaw (2)	
Type (straight, solid bar, tubular, etc.)	Left	Straight, Solid	
	Right	Straight, Solid	
Outer diam. x length* x wall thickness	Manual Transaxle	Left	Not Applicable
		Right	"
	Automatic transaxle	Left	27.1 x 300 mm (1.07 x 11.81 in.)
		Right	27.1 x 418 mm (1.07 x 16.46 in.)
	Optional transaxle	Left	Not Applicable
		Right	"
Slip yoke	Type	Not Applicable	
	Number of teeth	"	
	Spline o.d.	"	
Universal joints	Make and mfg. no.	Inner	Delphi Saginaw
		Outer	Delphi Saginaw
	Number used	Inbrd. & Outbrd. on Each Axle	
	Type, size, plunge	Inner	Tripot - 66.0 mm Stroke - Plunge
		Outer	Rzeppa - Fixed Center
	Attach (u-bolt, clamp, etc.)	Retaining Ring	
	Bearing	Type (plain, anti-friction)	Inner - Ball & Needle Outer - Ball
Lubrication (fitting, prepack)		Prepacked	
Drive taken through (torque tube, arms or springs)		Wishbone Lower Control Arm, Upper MacPherson Strut	
Torque taken through (torque tube, arms or springs)		Engine Mounting System	

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

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METRIC (U.S. Customary)

Model Code/Description And/Or
 Engine Code/Description

ALL

Suspension - General Including Electronic Controls

Car leveling	Standard/optional/not available		Optional	
	Manual/automatic control		Automatic	
	Type (air/hydraulic)		Air	
	Primary/assist spring		Assist	
	Rear only/4 wheel leveling		Rear Only	
	Single/dual rate spring		Single	
	Single/dual ride heights		Single	
Shock absorber damping controls	Standard/option/not available		Not Available	
	Manual/automatic control		"	
	Number of damping rates		"	
	Type of actuation (manual/ electric motor/air, etc.)		"	
	Sensors	Lateral acceleration		"
		Deceleration		"
		Acceleration		"
Road surface		"		
Shock absorber (front & rear)	Type		Front: MacPherson Strut, Rear: Direct, Double Action	
	Make		Delphi Chassis	
	Piston diameter		Frt. 32 (1.26); Rear 25 (1.00)	
	Rod diameter		Frt. 20 (.80); Rear 12.5 (.50)	

Suspension - Front

Type and description		MacPherson Strut with Coil Springs, Stamped Lower Control Arms and Nodular Iron Steering Knuckles
Travel	Full jounce (define load condition)	97 from Curb
	Full rebound	77 from Curb
Spring	Type (coil, leaf, other & material)	Coil, Steel
	Insulators (type & material)	Upper, Natural Rubber
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)	
	Spring rate N/mm (lb./in.)	27.0 (239)
	Rate at wheel N/mm (lb./in.)	27.0 (239)
Stabilizer	Type (link, linkless, frameless)	Linkless
	Material & O.D. bar/tube, wall thickness	27.0 mm (1.06 in.)

Suspension - Rear

Type and description		Trailing Arm with Stamped Control Arms and Open Section Transverse Beam	
Travel	Full jounce (define load condition)	95 from Curb	
	Full rebound	92 from Curb	
Spring	Type (coil, leaf, other & material)	Coil, Steel	
	Size (Leaf: length & width; Coil: design height & i.d.; Bar: length & diameter)		
	Spring rate N/mm (lb./in.)	48.3 (275), Standard; 48.0/57.0 (277/326) , Optional	
	Rate at wheel N/mm (lb./in.)	28.5 (162)	
	Insulators (type & material)		Upper & Lower, Natural Rubber
	If leaf	No. of leaves	Not Applicable
Shackle (comp. or tens.)		"	
Stabilizer	Type (link, linkless, frameless)	Linkless	
	Material & O.D. bar/tube, wall thickness	25.4 mm (1.0 in.)	
Track bar (type)		Transverse Link - Open Section	

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METRIC (U.S. Customary)

Model Code/Description And/Or
 Engine Code/Description

ALL

Brakes - Service

Description		Single Piston Caliper Disc Front; Leading-Trailing Drum Rear			
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)	Disc			
	Rear (disc or drum)	Drum			
Valving type (proportion, delay, metering, other)		Proportioning			
Power brake (std., opt., n.a.)		Standard			
Booster type (remote, integral, vac., hyd., etc.)		Vacuum			
Vacuum	Source (inline, pump, etc.)	Inline			
	Reservoir (volume in. ³)	None			
	Pump-type (elec., gear or belt driven)	Not Available			
Traction assist	Operational speed range	All Speeds			
	Type (engine or brake intervention)	Brake and Powertrain Torque Management			
Antilock device	Front/rear (std., opt., n.a.)	Standard			
	Manufacturer	Delphi Chassis			
	Type (electronic, mech.)	Electronic			
	Number sensors or circuits	Four			
	Number antilock hydraulic circuits	Four			
	Integral or add-on system	Add-On Mounted to Master Cylinder			
	Yaw control (yes, no)	Yes			
Hyd. power source (elec., vac., mtr., pwr., strg.)		Not Applicable			
Effective area cm ² (in. ²)*		F 243.6 (37.8)/R 383.0 (59.4)			
Gross Lining area cm ² (in. ²)** (F/R)		F 243.6 (37.8)/R 394.7 (61.2)			
Swept area cm ² (in. ²)***(F/R)		F 1552 (240.6)/R 620.6 (96.2)			
Rotor	Outer working diameter	F/R	278 mm (10.94 in.)		
	Inner working diameter	F/R	167 mm (6.57 in.)		
	Thickness	F/R	32.2 mm (1.27 in.)		
	Material & type (vented/solid)	F/R	Cast Iron, Vented		
Drum	Diameter & width	F/R	225 x 45 mm (8.86 x 1.77 in.)		
	Type and material	F/R	Composite Cast Iron, Finned		
Wheel cylinder bore		F 64 mm (2.52 in.)/R 23.8 mm (.94 in.)			
Master cylinder	Bore/stroke	F/R	24.0 mm (.94 in.)/35.5 mm (1.40 in.)		
Pedal arc ratio		3.4:1			
Line press. at 445 N (100 lb.) pedal load [kPa (psi)]		14944 kPa (2167 psi)			
Lining clearance		F/R	Self-Adjusting 0/.381 mm		
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		Integrally Molded	
		Rivet Size		Not Applicable	
		Manufacturer		Delphi Chassis	
		Lining code *****		DM 131 EE	
		Material		Semi-Metallic	
		****	Primary or out-board	136 x 46.7 x 11.2 mm (5.35 x 1.84 x .44 in.)	
		Size	Secondary or in-board	124 x 48.6 x 12.4 mm (4.88 x 1.91 x .49 in.)	
	Shoe thickness (no lining)		4.85 mm		
	Rear wheel	Bonded or riveted (rvts/seg.)		Riveted	
		Manufacturer		Delphi Chassis	
		Lining code *****		245 FF	
		Material		Semi-Metallic	
		****	Primary or out-board	224.8 x 43.9 x 6.4 mm (8.85 x 1.73 x .25 in.)	
		Size	Secondary or in-board	224.8 x 43.9 x 6.4 mm (8.85 x 1.73 x .25 in.)	
Shoe thickness (no lining)		2 mm (.079 in.)			

* Excludes rivet holes, grooves, chamfers, etc.

** Includes rivet holes, grooves, chamfers, etc.

*** Total swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact circumference.)
 (Disc brake: Square of Outer Working Dia. minus Square of inner Working Dia. multiplied by Pi/2 for each brake.)

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

MVMA Specifications

Vehicle Line LUMINA MINIVAN
 Model Year 1996 Issued _____ Revised (®) _____

METRIC (U.S. Customary)

Model Code/Description And/Or
 Engine Code/Description

ALL

Tires And Wheels (Standard)

Tires	Size (service description)		P205/70R15 All Season 95S
	Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
	Inflation pressure (cold) for recommended max. vehicle load	Front kPa (psi)	240 (35)
		Rear kPa (psi)	240 (35)
Rev./mile at 70 km/h (45 mph)			
Wheels	Type & material		Steel
	Rim (size & flange type)		15 x 6.0 J
	Wheel offset		36 mm
	Attachment	Type (bolt or stud & nut)	Stud/Nut
		Circle diameter	115 mm (4.53 in.)
Number & size		5, M12 x 1.5	
Spare	Tire and wheel		T125/70R15 B.W. Compact Spare, Radial, Wheel Dia. x Width 15 x 4, Inflation Pressure (60 psi/415 kPa)
	Storage position & location (describe)		Horizontal, Under Floor

Tires And Wheels (Optional)

Tire size (service description)		P205/70R15 Touring 95S
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial
Wheel (type & material)		Cast Aluminum or Steel
Rim (size, flange type and offset)		15 x 6.0 J x 36
Tire size (service description)		P205/70R15 95S
Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial Touring
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 Pedal Application
Location of control		Under Instrument Panel, Left of Steering Column
Operates on		Rear Service Brakes
If separate from service brakes	Type (internal or external)	--
	Drum diameter	--
	Lining size (length x width x thickness)	--

MVMA Specifications

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ALL

Steering

Manual (std., opt., n.a.)		Not Applicable	
Power (std., opt., n.a.)		Standard	
Speed-sensitive (std., opt., n.a.)		N/A	
4-wheel steering (std., opt., n.a.)		N/A	
Adjustable steering wheel/column (tilt, telescope, other)	Type	Tilt Column	
	Manufacturer	Saginaw Division	
	(std., opt., n.a.)	Optional	
Wheel diameter** (W9) SAE J1100	Manual	N/A	
	Power	OD 380.0 mm (15.1 in.)	
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	13.79 (45.2) / 13.90 (45.6)
		Curb to curb (l. & r.)	13.1 (43.0) / 13.2 (43.3)
	Inside rear	Wall to wall (l. & r.)	8.24 (27.0) / 8.30 (27.2)
		Curb to curb (l. & r.)	8.32 (27.3) / 8.40 (27.6)
Scrub Radius*		2.0 mm (.079 in.)	
Manual	Gear	Type	Not Applicable
		Manufacturer	"
		Ratios	Gear Overall
	No. wheel turns (stop to stop)		"
Power	Type (coaxial, elec. hyd., etc.)		Hydraulic
	Manufacturer		Delphi Saginaw
	Gear	Type	Rack and Pinion with Integral Power Unit
		Ratios	Gear Overall
	Pump (drive)		Belt Off Crankshaft Pulley
	No. wheel turns (stop to stop)		15.70:1/2.74
Linkage	Type		End Take-Off Tie Rods
	Location (front or rear of wheels, other)		Rear of Front Wheel Centerline
	Tie rods (one or two)		2
Steering axis	Inclination at camber (deg.)		14.6
	Bearings (type)	Upper	Ball Bearing
		Lower	Ball Joint
		Thrust	Ball Bearing
Steering spindle/knuckle & joint type		MacPherson Strut with Lower Ball Joint	

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

** See Page 23.

MVMA Specifications

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METRIC (U.S. Customary)

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ALL

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	3.0 (±) .7; Left and Right Should be Within .7
		Camber (deg.)	0.0 (±) .5; Left and Right Should be Within .7
		Toe-in outside track mm (in.)	0.0 (±) 0.2 Total
	Service reset*	Caster (deg.)	Not Adjustable
		Camber (deg.)	0.0 (±) .5; Left and Right Should be Within .7
		Toe-in mm (in.)	0.0 (±) 0.2 Total
Periodic M.V. inspection	Caster (deg.)	Not Adjustable	
	Camber (deg.)	0.0 (±) .5	
	Toe-in mm (in.)	0.0 (±) 0.2 Total	
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	-0.1 (±) 0.3
		Toe-in outside track mm (in.)	-0.0 (±) 0.3 Total (Thrust = ± .15)
	Service reset*	Camber (deg.)	Not Adjustable
		Toe-in mm (in.)	"
	Periodic M.V. insp.	Camber (deg.)	-0.1 (±) 0.3
		Toe-in mm (in.)	0.0 (±) 0.3 Total

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

Electrical - Instruments and Equipment

Speedometer	Type (analog, digital, std., opt.)	Analog Standard
	Trip odometer (std., opt., n.a.)	Standard
	Standard, optional, not available	Not Available
	Type	Secondary, opto-electronic
		"
Head-up display	Speedometer	Digital
	Status/warning indicators	Turn signals, high beam, low fuel, check gauges
	Brightness control	Day / night mode, adjustable
		"
	EGR maintenance indicator	"
Charge indicator	Type	Analog
	Warning device (light, audible)	Not Available
Temperature indicator	Type	Analog
	Warning device (light, audible)	Not Available
Oil pressure indicator	Type	Light
	Warning device (light, audible)	Light
Fuel indicator	Type	Analog
	Warning device (light, audible)	Not Available
	Type (standard)	Pulse Wipe NDP
Windshield wiper	Type (optional)	-
	Blade length	24 in. (600 mm)
	Swept area cm ² (in. ²)	9052 (1403)
	Type (standard)	Wet-Arm System
Windshield washer	Type (optional)	Not Available
	Fluid level indicator (light, audible)	Not Available
Rear window wiper, wiper/washer (std., opt., n.a.)		Standard (Delay Wipe/Demand Wash)
	Type	Air Tone
Horn	Number used	2
ABS Fault / Active Indicator	Type	Light
	Warning Device	Not Available

MVMA Specifications

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METRIC (U.S. Customary)

Engine Code/Description

3.4 LITER V6 (207 CID)
 SEQUENTIAL FUEL INJECTION RPO LA1

Electrical - Supply System

Battery	Manufacturer	Delphi - E
	Model, std., (opt.)	75-525
	Voltage	12
	Amps at 0° F. cold crank	525
	Minutes-reserve capacity	90
	Amps/hrs.-20 hr. rate	--
	Location	Engine Compartment
Bruce Lyons Alternator	Manufacturer	Delphi - E
	Rating (idle/max. rpm)	50/140
	Ratio (alt. crank/rev.)	2:65:1
	Output at idle (rpm, park)	80 Amps w/AC
	Optional (type & rating)	
Regulator	Type	Integral W/Alternator

Electrical - Starting System

Motor	Manufacturer	
	Current drain _____ °C (°F)	
	Power rating kw (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)	--	
Coil	Manufacturer	Delphi	
	Model	Direct Ignition System	
	Current	Engine stopped - A	
		Engine idling - A	
Spark plug	Manufacturer	Delphi	
	Model	41-900 Series	
	Thread (mm)	14 x 1.25	
	Tightening torque N-m (lb. ft.)	9-20 (7-15)	
	Gap		
	Number per cylinder	1	
Distributor	Manufacturer	Not Applicable	
	Model		

Electrical - Suppression

Locations & type	Internal Alternator Capacitor, Non-Metallic High Tension Ignition Cables, Resistor Spark Plugs, Ignition Coil By-Pass Capacitor, Internal AC Blower Motor By-Pass Capacitor & A/C Compressor Diode, Internal Capacitors for Cooling Fan and Windshield Wiper Motor.
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MVMA Specifications

Vehicle Line LUMINA MINIVAN
 Model Year 1996 Issued _____ Revised (●) _____

METRIC (U.S. Customary)

Model Code/Description

ALL

Body

Structure	Full Unitized Steel Spaceframe Construction. Roof, Body Sides and Rear Surround SMC Panels are Adhesively Attached to Form Body Shell. Doors, Hood and Liftgate Features Double Panel Construction.
Bumper system front - rear	Foam Energy Absorber-Front & Rear, SRIM Front Impact Beam, Glass Reinforced Polypropylene Rear Impact Beam, TPO Fascia-Front & Rear
Anti-corrosion treatment	Galvanized Metals, Zinc Rich Primers and Wax Coatings Used Throughout

Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	Base Coat/Clear Coat High Solids Enamel	
Hood	Material & mass	SMC
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Four Bar Link with a Prop Rod at the Front
	Release control (internal, external)	Body Interior Release of Primary Latch with Lever Operation Secondary
Trunk lid	Material & mass	Not Applicable
	Type (counterbalance, other)	"
	Internal release control (elec., mech., n.a.)	"
Hatchback lid	Material & mass	"
	Type (counterbalance, other)	"
	Internal release control (elec., mech., n.a.)	"
Tailgate	Material & mass	SMC
	Type (drop, lift, door)	Liftgate One Piece with Fixed Glass
	Internal release control (elec., mech., n.a.)	External Key Operated Unlatch
Vent window control (crank, friction, pivot, power)	Front	Not Applicable
	Rear	"
Window regulator type (cable, tape, flex drive, etc.)	Front	Single Arm Crank Type
	Rear	Rear Side Glass is Flip Out Hinged at the Front Over Center Latch at Rear
Seat cushion type (e.g., 60/40 bucket, bench, wire, foam, etc.)	Front	Buckets with Full Foam Cushions
	Rear	Std. - Bench w/Full Foam Cushion Easy Removal Opt. - Buckets w/Full Foam Cushions Flip Up or Easy Remove for Stowage
	3rd seat	Buckets w/Full Foam Cushions Flip Up or Easy Remove for Stowage
Seat back type (e.g., 60/40 bucket, bench, wire, foam, etc.)	Front	Bucket Full Foam
	Rear	Bucket Full Foam; Bench Full Foam
	3rd seat	Bucket Full Foam

Frame

Type and description (separate frame, unitized frame, partially-unitized frame)	Unitized Space Frame. Separate Engine/Front Suspension Cradle.
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MVMA Specifications

Vehicle Line LUMINA MINIVAN
 Model Year 1996 Issued _____ Revised (#) _____

METRIC (U.S. Customary)

Model Code/Description

ALL

Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.)	First seat	Lap & Shoulder Belt		Lap & Shoulder Belt
	Standard / Optional	Second seat	Lap & Shoulder Belt	Lap Belt	Lap & Shoulder Belt
		Third seat	Lap & Shoulder Belt		Lap & Shoulder Belt
Passive	Type & description (air bag, motorized-2-point belt, fixed belt, knee bolster, manual-lap belt)	First seat	Air Bag & Knee Bolster		
	Standard / Optional	Second seat			
		Third seat			
Glass		SAE Ref.No.			
Windshield glass exposed surface area cm ² (in. ²)		S1	16169 (2506.2)		
Side glass exposed surface area cm ² (in. ²) - total 2 sides		S2	27250 (4223.8)		
Backlight glass exposed surface area cm ² (in. ²)		S3	9886 (1532.3)		
Total glass exposed surface area cm ² (in. ²)		S4	53305 (8262.3)		
Windshield glass (type/thickness)			Laminated Glass, 5.4 mm		
Side glass (type/thickness)			Tempered Glass, 4.0 mm		
Backlight glass (type/thickness)			Tempered Glass, 4.0 mm		
Tinted (yes/no, location)			Yes, Front Doors		
Solar control (yes/no, coated/batched, location)			Yes, Coated, Windshield: Batched, Sides and Liftgate		

Headlamps

Description (sealed beam, halogen, replaceable bulb, etc.)	Halogen Replaceable Bulb; 9005-9006
Shape	Rectangular
Lo-beam type (2A1, 2B1, 2C1, etc.)	9006 Bulb
Quantity	2 - 1 On Each Side (Outboard)
Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	9005 Bulb
Quantity	2 - 1 On Each Side (Inboard C/C)

MVMA Specifications

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METRIC (U.S. Customary)

Engine Code/Description

3.4 LITER V6

Climate Control System

Air conditioning (std., opt., man., auto.)		STD C67 Front A/C
Condenser	Type	Header Tube Aluminum
	Eff. face area (sq. mm.)	268,787
	Fins per inch	17
Evaporator	Type	Plate & Center
	Eff. face area (sq. mm.)	61,300
	Fins per inch	14
Heater core	Material	Copper-Brass
	Eff. face area (sq. mm.)	39,700
	Fins per inch	11
Compressor	Type	Variable Disp. 5 Cylinder Axial
	Displacement (cc.)	150.7
	Manufacturer	Harrison Divison
	A/C pulley ratio	1.23
Accumulator	Type	Aluminum
	Height (mm.)	232.2
	Diameter (mm.)	88.8
Receiver	Type	Not Applicable
	Height (mm.)	"
	Diameter (mm.)	"
Refrigerant control (CCOT, TVS, etc.)		VDOT (Variable Displacement Orifice Tube)
Heater water valve (yes / no)		No
Refrigerant (R - 12, R - 134a, etc.)		R-134a
Charge level (lbs. - oz.)		2 lbs. 4 oz.
Cold engine lockout switch (yes / no)		No
Wide open throttle cutout switch (yes / no)		Yes

MVMA Specifications

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METRIC (U.S. Customary)

Model Code/Description

ALL

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

Clock (digital, analog)	Digital Standard, Included W/Standard Radio	
Compass / thermometer	Not Available	
Console (floor, overhead)	Floor - Std. / Overhead - Std. Exc. Cargo Van	
Defroster, electric windshield	Not Available	
Defroster, electric backlight	Optional	
Electronic	Diagnostic monitor (integrated, individual)	Not Available
	Instrument cluster (list instruments)	Speedometer, Temperature Gage, Oil Pressure Gage, Fuel Gage, Odometer, Trip Odometer
	Keyless entry	Optional (Active, 2-Button); (Active 3-Button W/Opt. Pwr.Sliding Dr.)
	Tripminder (avg. spd., fuel)	Not Available
	Voice alert (list items)	"
	Other	
Fuel door lock (remote, key, electric)	Not Available	
Integrated Child Seating	Std./opt. & location in vehicle	Optional; 1 or 2 Child Seats Located 2nd Row Outboard
	Number of occupants	1 Per Seat
	Occupant weight/height (min. & max.)	20-40 Pounds and Less than 40" - Use 5-Point Belt System Plus 40 Pounds - Use 3 Point Belt System
	Restraint system description (3 or 5-point belts/booster seat capability)	
Lamps	Auto head on/off delay, dimming	Not Available
	Cornering	"
	Courtesy (map, reading)	Standard, Not Available Cargo
	Door lock, ignition	Interior Door Lock Switches Lighted (W/Opt. Power Door Locks)
	Engine compartment	Standard, Not Available Cargo
	Fog	Not Available
	Glove compartment	Standard
	Trunk	Not Applicable
	Illuminated entry system (list lamps, activation)	Standard -- I/P Courtesy (2), Center Dome, Sliding Door Stepwell W/Door Jamb Switches, Roof-Console Map Lamps (2), Liftgate Cargo Lamps (2) (Liftgate Cargo Lamps N.A. Cargo Van.)
Other	Rear Area Switchable Dome Reading Lamp Standard	
Mirrors	Day / night (auto., man.)	Standard - Manual
	L.H. (remote, power, heated)	Cable Remote, Standard; Power Optional
	R.H. (convex, remote, power, heated)	Fixed - Convex, Standard; Power Optional
	Visor vanity (RH / LH, illuminated)	RH/LH Non-illum. Standard
Navigation system (describe)	Not Available	
Parking brake-auto release (warning light)	Warning Light Standard; Auto Release Not Available	

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METRIC (U.S. Customary)

Model Code/Description

ALL

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

Power equipment	Deck lid (release, pull down)		Not Applicable
	Door locks (manual, automatic, describe system)		Optional System Provides Lock/Unlock of All Doors Inc. Liftgate Via Front Door Switches, Sliding Door Lock Delay, Auto Lock Out of Park, Customized Feature with RKE
	Seats	2 - 4 - 6 way, etc.	6-Way Power Optional for Driver Seat
		Reclining (R.H., L.H.)	Not Available
		Memory (R.H.,L.H., preset recline)	"
		Support (lumbar, hip, thigh, etc.)	"
		Heated (R.H., L.H., other)	"
	Side windows		Optional - Front Door Windows Only
	Vent windows		Not Available
	Rear windows		Not Available
Radio systems	Antenna (location, whip, w/shield, power)		Integrated Roof Antenna Above Headliner
	Standard	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	AM/FM Stereo/Clock
	Optional		AM/FM Stereo/Cassette - Not Available Cargo AM/FM Stereo/Compact Disc - Not Available Cargo
	Speaker (number, location)		2 - 4x6 Front - Standard 2 - 6 in. Round-Rear-Standard No Optional Speakers Available Cargo Van - 2 - 4 x 6 Front Standard
Roof: open air or fixed (flip-up, sliding, "T")			N/A
Speed control device			Optional, Includes Resume Speed and Acceleration Feature
Speed warning device (light, buzzer, etc.)			Not Available
Tachometer (rpm)			Not Available
Telephone system (describe)			Not Available
Theft deterrent system			Not Available

Trailer Towing

Towing capable	Yes / No	Yes
Engine / transmission / axle	Std. / Opt.	3.4L V6 / 4A / 3.29, Std.
Tow class (I, II, III)*	Std. / Opt.	I (Class II W/Opt. Trailering Provisions (V92))
Max. gross trailer wgt. (lbs.)	Std / Opt.	2000 lbs. (Limited by Max. GCW of 6400 lbs.), Std.; 3000 lbs. (Limited by Max. GCW of 7400 lbs.), Opt.
Max. trailer tongue load (lbs.)	Std. / Opt.	200 lbs., Std.; 300 lbs., Opt.
Towing package available	Yes / No	Yes, Opt. Trailering Provisions (V92) Not Available - Cargo Van.

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

MVMA Specifications

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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	1503 (59.2)
Tread (rear)	W102	1559 (61.4)
Vehicle width	W103	1878 (73.9)
Body width at SgRP (front)	W117	1874 (73.8)
Vehicle width (front doors open)	W120	3364 (132.4)
Vehicle width (rear doors open)	W121	Not Required with Sliding Door
Tumble-home (degrees)	W122	19.5
Outside mirror width	W410	2116 (83.3)

Length

Wheelbase	L101	2788 (109.8)
Vehicle length	L103	4863 (191.5)
Overhang (front)	L104	1047 (41.2)
Overhang (rear)	L105	1028 (40.5)
Upper structure length	L123	-
Rear Wheel C/L "X" coordinate	L127	4583 (180.4)

Height **

Passenger distribution (front/rear)	PD1,2,3		**
Trunk/cargo load			**
Vehicle height	H101	1670 (65.7)	
Cowl point to ground	H114	1096 (43.1)	
Deck point to ground	H138	No Deck	
Rocker panel-front to ground	H112	286 (11.3)	
Rocker panel-rear to ground	H111	301 (11.9)	
Windshield slope angle (degrees)	H122	66.0	
Backlight slope angle (degrees)	H121	22.0	

Ground Clearance **

Front bumper to ground	H102	241 (9.5)
Rear bumper to ground	H104	337 (13.3)
Bumper to ground front at curb mass (wt.)	H103	Not Available
Bumper to ground rear at curb mass (wt.)	H105	"
Angle of approach (degrees)	H106	"
Angle of departure (degrees)	H107	"
Ramp breakover angle (degrees)	H147	"
Axe differential to ground (front/rear)	H153	"
Min. running ground clearance	H156	"
Location of min. running ground clear.		"

** 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.

All linear dimensions are in millimeters (inches).

MVMA Specifications

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METRIC (U.S. Customary) Vehicle Dimensions

See Key Sheets for definitions

Model Code/Description

SAE
 Ref.
 No.

ALL

Front Compartment

SgRP front, "X" coordinate	L31	Height = 912 (35.9), Fore & Aft = 3077.5 (121.16)
Effective head room	H61	996 (39.2)
Max. effective leg room (accelerator)	L34	1016 (40.0)
SgRP to heel point	H30	372 (14.6)
SgRP to heel point	L53	762 (30.0)
Back angle (degrees)	L40	24.0
Hip angle (degrees)	L42	99.0
Knee angle (degrees)	L44	114.0
Foot angle (degrees)	L46	87.0
Design H-point front travel	L17	181 (7.1)
Normal driving & riding seat track trvl.	L23	178 (7.0)
Shoulder room	W3	1540 (60.6)
Hip room	W5	1410 (55.5)
Upper body opening to ground	H50	1236 (48.7)
Steering wheel maximum diameter*	W9	381 (15.0)
Steering wheel angle (degrees)	H18	28.0
Accel. heel pt. to steer. whl. cntr.	L11	395 (15.6)
Accel. heel pt. to steer. whl. cntr.	H17	851 (33.5)
Undepressed floor covering thickness	H67	11.0 (0.433)

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	872 (34.3)	Not Applicable
Effective head room	H63	991 (39.0)	"
Min. effective leg room	L51	917 (36.1)	"
SgRP (second to heel)	H31	288 (11.3)	"
Knee clearance	L48	69 (2.7)	"
Shoulder room	W4	1504 (59.2)	"
Hip room	W6	1402 (55.2)	"
Upper body opening to ground	H51	1250 (49.2)	"
Back angle (degrees)	L41	24.0	"
Hip angle (degrees)	L43	86.0	"
Knee angle (degrees)	L45	92.0	"
Foot angle (degrees)	L47	127.0	"
Depressed floor covering thickness	H73	10 (0.4)	"

Luggage Compartment

Usable luggage capacity L (cu. ft.)	V1	
Liftover height	H195	570 (22.4)

Interior Volumes (EPA Classification)

(NOT APPLICABLE)

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

* See page 14.

** See definition page 33.

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

*** EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications

Vehicle Line LUMINA MINIVAN

Model Year 1996

Issued _____

Revised (*) _____

METRIC (U.S. Customary)

Vehicle Dimensions

See Key Sheets for definitions

Model Code/Description

SAE
Ref.
No.

ALL

Station Wagon/MPV* -Third Seat

Seat facing direction	SD1	FWD	Not Applicable
SgRP couple distance	L85	792 (31.2)	"
Shoulder room	W85	1580 (62.2)	"
Hip room	W86	1060 (41.7)	"
Effective leg room	L86	935 (36.8)	"
Effective head room	H86	960 (37.8)	"
SgRP to heel point	H87	283 (11.1)	"
Knee clearance	L87	25 (0.98)	"
Back angle (degrees)	L88	24.0	"
Hip angle (degrees)	L89	81.5	"
Knee angle (degrees)	L90	79.0	"
Foot angle (degrees)	L91	121.0	"

Station Wagon/MPV* - Cargo Space

Cargo length (open front)	L200	Not Required for Lift Gate	
Cargo length (open second)	L201	Not Required for Lift Gate	
Cargo length (closed front)	L202	2110 (83.1)	
Cargo length (closed second)	L203	1204 (47.4)	
Cargo length at belt (front)	L204	1855 (73.0)	
Cargo length at belt (second)	L205	1054 (41.5)	
Cargo width (wheelhouse)	W201	1024 (40.3)	1079 (42.5)
Rear opening width at floor	W203	1314 (51.7)	
Opening width at belt	W204	1282 (50.5)	
Min. rear opening width above belt	W205	1092 (43.0)	
Cargo height	H201	1143 (45.0)	
Rear opening height	H202	1050 (41.3)	
Tailgate to ground height	H250	Not Required for Lift Gate	
Front seat back to load floor height	H197	710 (28.0)	
Cargo volume index m ³ (ft. ³)	V2	Not Applicable	
Hidden cargo volume index m ³ (ft. ³)	V4		
Cargo volume index-rear of 2-seat	V10		
Cargo volume index*	V6	3187 L (112.6 cu. ft.)	
Cargo width at floor*	W500	1504 (59.3)	
Maximum cargo height*	H505	1143 (45.0)	

Hatchback - Cargo Space

Cargo length at front seatback height	L208	1790 (70.3)	
Cargo length at floor (front)	L209	2107 (83.0)	
Cargo length at second seatback height	L210	1002 (39.4)	
Cargo length at floor (second)	L211	557 (21.9)	
Front seatback to load floor height	H197	710 (28.0)	
Second seatback to load floor height	H198	695 (27.4)	
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

MVMA Specifications

Vehicle Line LUMINA MINIVAN
 Model Year 1996 Issued _____ Revised (#) _____

METRIC (U.S. Customary)

Model Code/
Description

ALL

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.)
NOTE: Provide 3 of 4 Fiducial Mark Locations		
Front	W21**	Not Available
	L54**	2885 (113.6)
	H81**	Not Available
	H161**	"
***	H163**	"
Rear	W22**	Not Available
	L55**	"
	H82**	"
	H162**	"
	H164**	"

* Reference - SAE Recommended Practice, J182a, Motor Vehicle Fiducial Marks.

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

*** EPA Loaded Vehicle Weight, Loading Conditions

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

MVMA Specifications
METRIC (U.S. Customary)

Vehicle Line LUMINA MINIVAN
 Model Year 1996 Issued _____ Revised (*) _____

Code		Model		VEHICLE MASS (WEIGHT)			% PASS MASS DISTRIBUTION					
				CURB MASS, kg. (lb.)*			Shipping Mass kg (lb)***	ETWC** Code	Pass in Front		Pass in Rear	
				Front	Rear	Total			Front	Rear	Front	Rear
LUMINA (1UM05)	LA1, 3400	958	569	1527	1485	V	50.9	49.1	-			
		(2112)	(1254)	(3366)	(3275)							
LUMINA (1UM06)	LA1,3400	1004	668	1672	1630	Y	50.9	49.1	22.9	77.1		
		(2213)	(1473)	(3686)	(3593)							

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

ETWC LEGEND

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

*** Shipping Mass (weight) = Curb Weight Less:
41.6 (91.7)

MVMA Specifications
METRIC (U.S. Customary)

Vehicle Line LUMINA MINIVAN
 Model Year 1996 Issued _____ Revised (●) _____

Code	Equipment	Optional Equipment Differential Mass (weight)*			Remarks Restrictions, Requirements
		MASS, kg. (lb.)			
		Front	Rear	Total	
AB5	Power Door Locks	1.4 (3.1)	.6 (1.3)	2.0 (4.4)	
AD8	7-Passenger Seating - Includes One Integral Child Seat	.8 (1.8)	3.4 (7.5)	4.2 (9.3)	N/A Cargo 1UM05
AD9	7-Passenger Seating - Includes Two Integral Child Seats	1.8 (4.0)	8.6 (18.9)	10.4 (22.9)	N/A Cargo 1UM05
AG9	6-Way Power Adjuster	.6 (1.3)	.4 (.9)	1.0 (2.2)	N/A Cargo 1UM05
AP9	Convenience Net	0 (0)	.4 (.9)	.4 (.9)	N/A Cargo 1UM05
AR9	Front Bucket Seat, Reclining, Cloth	4.2 (9.3)	3.2 (7.1)	7.4 (16.3)	Opt., Cargo 1UM05; Std., Lumina 1UM06
AU0	Remote Keyless Entry	.2 (.4)	0 (0)	.2 (.4)	N/A Cargo 1UM05
A31	Power Window	1.0 (2.2)	.6 (1.3)	1.6 (3.5)	N/A Cargo 1UM05
C34	F/R HVAC	8.8 (19.4)	11.8 (26.0)	20.6 (45.4)	N/A Cargo 1UM05
C49	Rear Window Defogger	0 (0)	.2 (.4)	.2 (.4)	
C54	Sunroof	5.2 (11.5)	3.6 (7.9)	8.8 (19.4)	N/A Cargo 1UM05
DD9	Electric Power Mirrors	1.6 (3.5)	.6 (1.3)	2.2 (4.8)	N/A Cargo 1UM05
D84	Two Tone Paint	.4 (.9)	.4 (.90)	.8 (1.8)	
E58	Power Sliding Door	-1.8 (-4.0)	10.6 (23.3)	8.8 (19.4)	N/A Cargo 1UM05
G67	Auto Level Control	.2 (.4)	3.8 (8.4)	4.0 (8.8)	N/A Cargo 1UM05
K05	Engine Block Heater	.2 (.4)	0 (0)	.2 (.4)	

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

MVMA Specifications
METRIC (U.S. Customary)

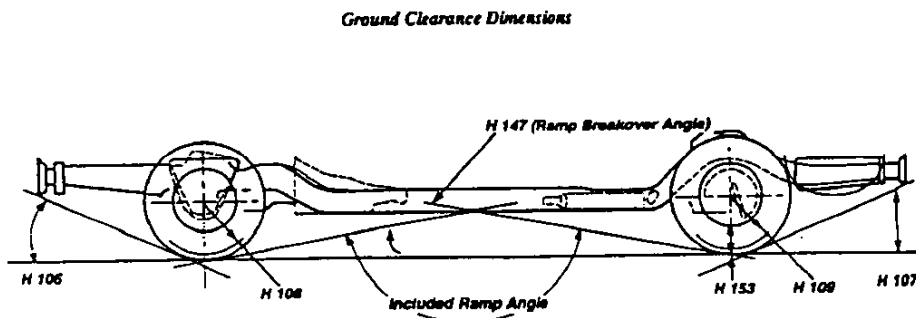
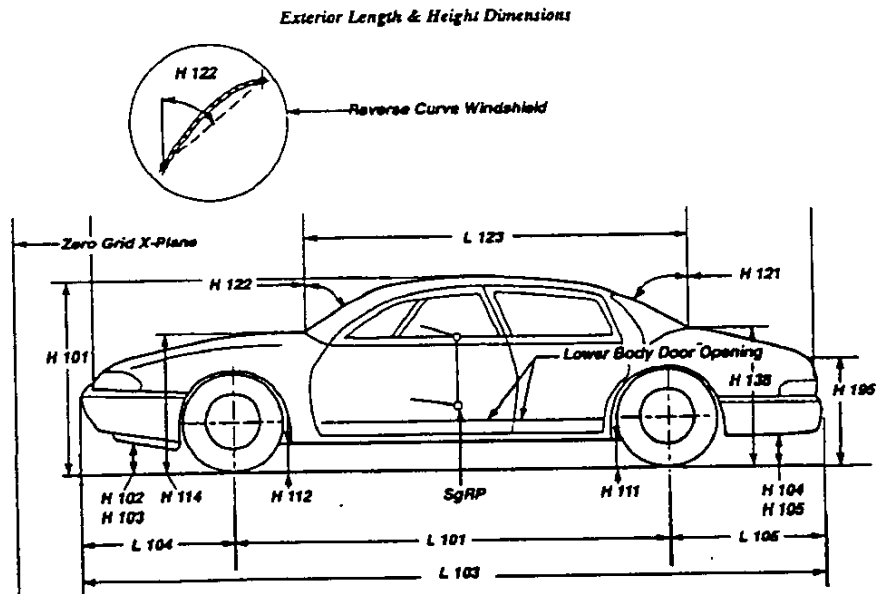
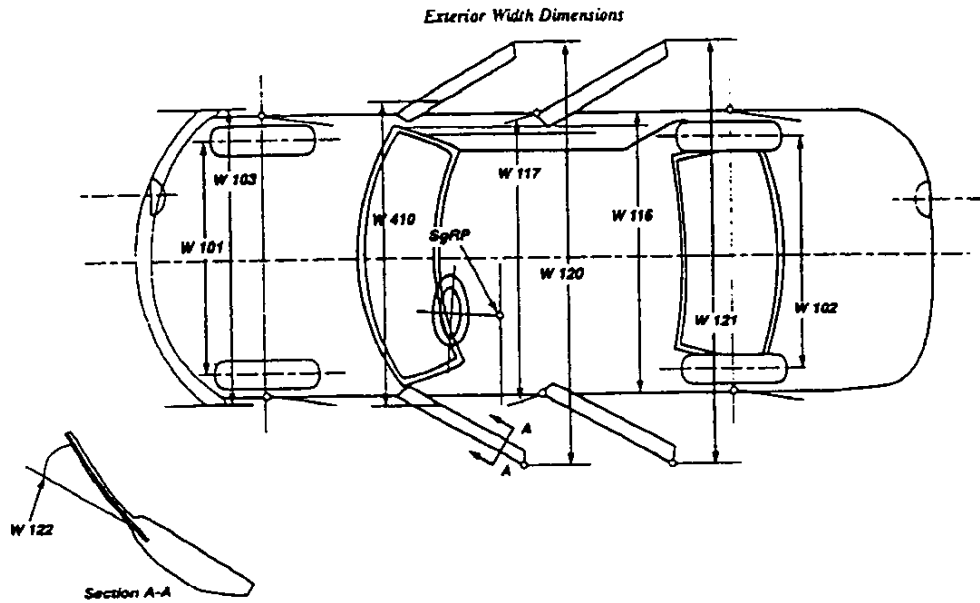
Vehicle Line: LUMINA MINIVAN
 Model Year: 1996 Issued _____ Revised (●) _____

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
K34	Cruise Control	1.0 (2.2)	0 (0)	1.0 (2.2)	
N33	Tilt Steering Column	.8 (1.8)	.2 (.4)	1.0 (2.2)	N/A Cargo 1UM05
PH3	15 x 6 Aluminum Wheels	-1.6 (-3.5)	-1.6 (-3.5)	-3.2 (-7.0)	N/A Cargo 1UM05
UM6	AM/FM Stereo/Cassette	.8 (1.8)	.2 (.4)	1.0 (2.2)	N/A Cargo 1UM05
U1C	AM/FM Stereo/Compact Disc	.8 (1.8)	.2 (.4)	1.0 (2.2)	N/A Cargo 1UM05
VK3	License Plate - Front Mounting Package	.6 (1.3)	-.2 (-.4)	.4 (.9)	
V54	Luggage Rack	.4 (.9)	6.0 (13.2)	6.4 (14.1)	N/A Cargo 1UM05
V92	Trailer Provisions	1.8 (4.0)	-.2 (-.4)	1.6 (3.6)	N/A Cargo 1UM05
XIN	15" Tires Front, Touring	.8 (1.8)	0 (0)	.8 (1.8)	N/A Cargo 1UM05
YIN	15" Tires Rear, Touring	0 (0)	.8 (1.8)	.8 (1.8)	N/A Cargo 1UM05

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

AAMA Specifications
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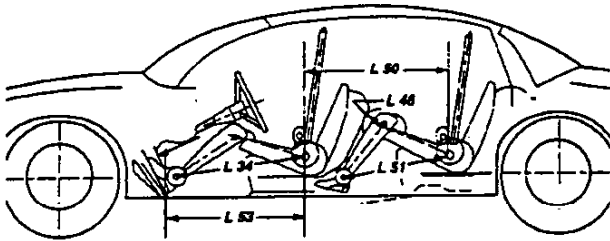
Exterior Vehicle And Body Dimensions - Key Sheet



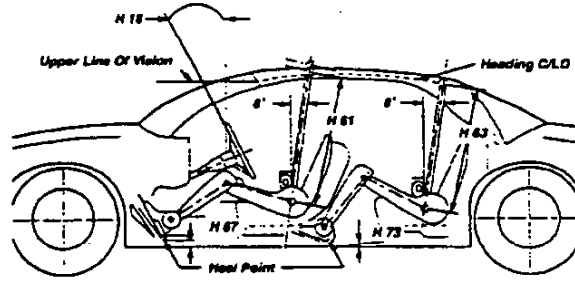
AAMA Specifications METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet

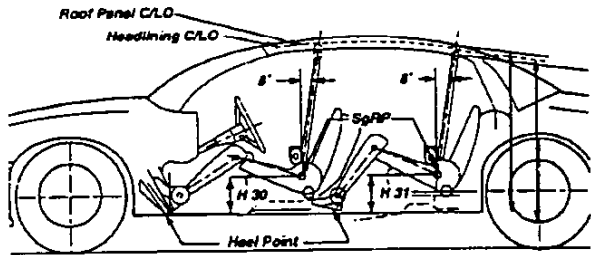
Interior Length Dimensions



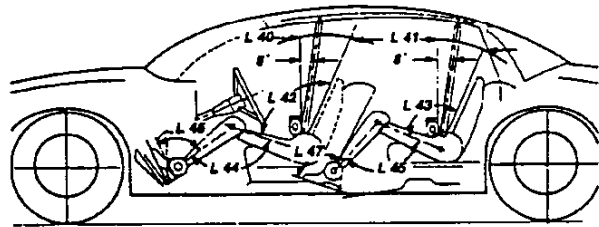
Interior Height Dimensions



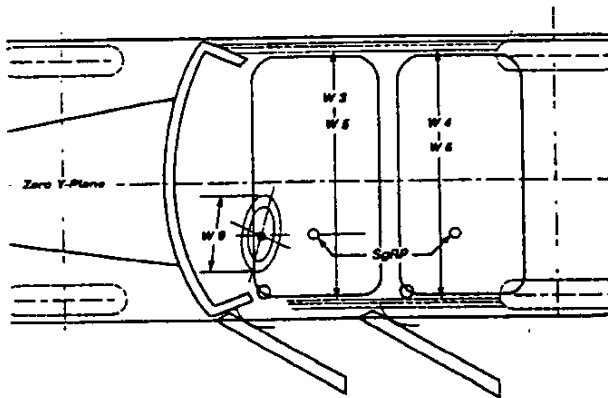
Interior Height Dimensions



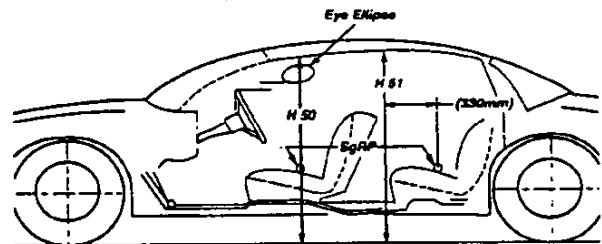
Interior Length Dimensions



Interior Width Dimensions



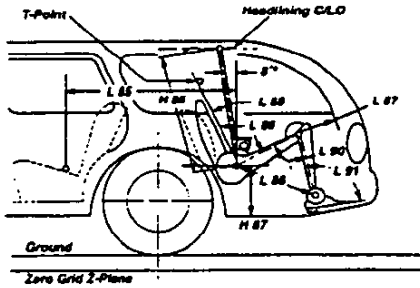
Interior Height Dimensions



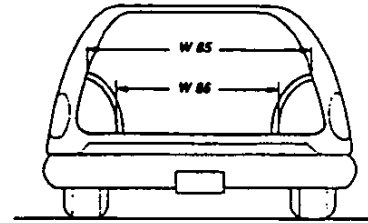
**AAMA Specifications
METRIC (U.S. Customary)**

Interior Vehicle And Body Dimensions - Key Sheet

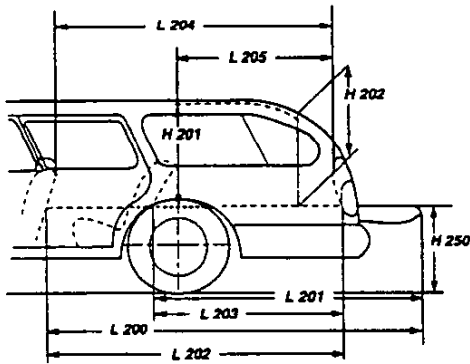
Interior Dimensions, Station Wagon Third Seat



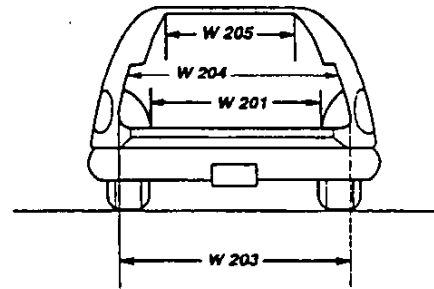
Interior Dimensions



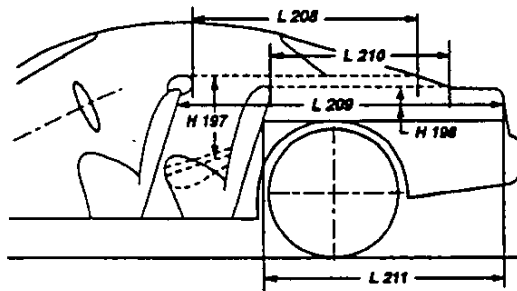
Cargo Space Dimensions



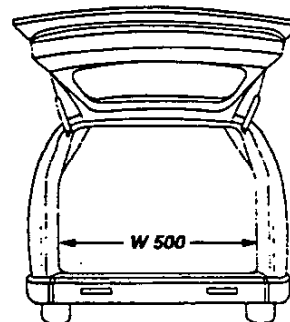
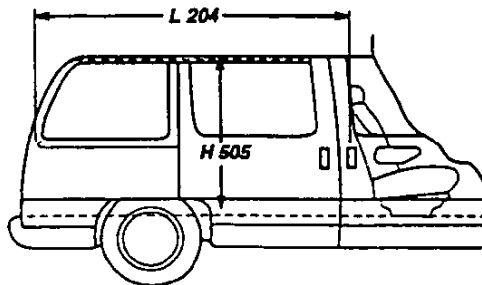
Cargo Space Dimensions



Cargo Space Dimensions



Multipurpose Vehicle Cargo Space



AAMA Specifications

METRIC (U. S. Customary)

Exterior Vehicle And Body Dimensions - Key Sheet

Dimensions Definitions

Seating Reference Point

SEATING REFERENCE POINT means the manufacturer's design reference point which -
 (a) Establishes the rearmost normal design driving or riding position of each designated seating position in a vehicle;
 (b) Has coordinates established relative to the design vehicle structure;
 (c) Simulates the position of the pivot center of the human torso and thigh; and
 (d) is the reference point employed to position the two dimensional templates described in SAE Recommended Practice J826, "Devices for Use in Defining and Measuring Vehicle Seating Accommodations."

Width Dimensions

- W101 TREAD-FRONT. The dimension measured between the tire centerlines at the ground.
- W102 TREAD-REAR. The dimension measured between the tire centerlines at the ground. In case of dual wheels, the dimension will be measured to the centerline of tire and wheel assemblies.
- W103 VEHICLE WIDTH. The maximum dimension measured between the widest point on the vehicle, excluding exterior mirrors, flexible mud flaps, marker lamps, but including bumpers, moldings, sheet metal protrusions or dual wheels, if standard equipment.
- W117 BODY WIDTH AT SgRP-FRONT. The dimension measured laterally between the widest points on the body at the SGRP-front, excluding door handles, applied moldings, or appliques.
- W120 VEHICLE WIDTH-FRONT DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position.
- W121 VEHICLE WIDTH-REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door on only one side, this dimension is to the zero "Y" plane.
- W122 TUMBLE-HOME. STRAIGHT SIDE GLASS. The angle measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane.
 CURVED SIDE GLASS. The angle measured from a vertical to a chord extending from the upper DLO to the lower DLO at the outside surface of the front door glass at the front SgRP "X" plane.
- W410 OUTSIDE MIRROR WIDTH: The dimension between the widest point on the outside mirrors. The standard right and left mirror adjusted for normal driving will be shown unless otherwise noted. When only one outside mirror is standard, the dimension will be to the zero "Y" plane.

Length Dimensions

- L101 WHEELBASE (WB). The dimension measured longitudinally between front and rear wheel centerline. In case of dual rear axles, the dimension shall be to the midpoint of the centerlines of the rear wheels.
- L103 VEHICLE LENGTH. The maximum dimension measured longitudinally between the foremost point and the rearmost point on the vehicle, including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.
- L104 OVERHANG-FRONT. The dimension measured longitudinally from the centerline of the front wheels to the foremost point on the vehicle including bumper, bumper guards, tow hook and/or rub strips, if standard equipment.
- L105 OVERHANG-REAR. The dimension measured longitudinally from the centerline of the rear wheels; or in the case of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.
- L123 UPPER STRUCTURE LENGTH. The dimension measured longitudinally from the cowl point to the deck point.

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

Height Dimensions

- H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.
- H111 ROCKER PANEL-REAR TO GROUND. The dimension measured vertically from the bottom of the rocker or side quarter panel at the front of the rear wheel opening, excluding flanges, to ground.
- H112 ROCKER PANEL-FRONT TO GROUND. The dimension measured vertically from the foremost point on the bottom of the rocker panels, excluding flanges, to ground.
- H114 COWL POINT TO GROUND. Measured at zero "Y" plane.
- H121 BACKLIGHT SLOPE ANGLE. The angle between the vertical reference line and the surface of backlight at vehicle zero "Y" plane. For curve backlight, the angle is to chord of backlight arc from lower DLO to upper DLO.
- H122 WINDSHIELD SLOPE ANGLE. The angle between the vertical reference line and a chord of the windshield arc running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the angle to be measured will be formed by a chord 457 mm (18.0 in.) long drawn from the lower DLO to the intersecting point on the windshield.
- H138 DECK POINT TO GROUND. Measured at zero "Y" plane.
- H109 STATICLOAD-TIRE RADIUS-REAR. Specified by the manufacturer in accordance with composite TIRE SECTION STANDARD.

Ground Clearance Dimensions

- H102 FRONT BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the front bumper to ground, including bumper guards, if standard equipment.
- H103 FRONT BUMPERTO 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 BRAKOVER 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.

AAMA Specifications

METRIC (U. S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet

Dimensions Definitions

Glass Areas

- S1 Windshield area.
- S2 Side windows area. Includes the front door, rear door, vents, and rear quarter windows on both sides of the vehicle.
- S3 Backlight areas.
- S4 Total area. Total of all areas (S1 + S2 + S3).

Fiducial Mark Dimensions

- Fiducial Mark - Number 1
- L54 "X" coordinate.
- W21 "Y" coordinate.
- H81 "Z" coordinate.
- H161 Height "Z" coordinate to ground at curb weight.
- H163 Height "Z" coordinate to ground.
- Fiducial Mark - Number 2
- L55 "X" coordinate.
- W22 "Y" coordinate.
- 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 underdepressed 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 underdepressed 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.

AAMA Specifications

METRIC (U. S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet

Dimensions Definitions

Luggage Compartment Dimensions

V1 USABLE LUGGAGE CAPACITY-Total of volumes of individual pieces of standard luggage set plus H-boxes stowed in the luggage compartment in accordance with the procedure described in paragraph 8.2 of SAE-J1100a.

Interior Volumes (EPA Classification)

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

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

Station Wagon/MPV - Third Seat Dimensions

L85 SgRP COUPLE DISTANCE-THIRD. The dimension measured horizontally from the SgRP-second to the SgRP-third.

L86 EFFECTIVE LEG ROOM-THIRD. The dimension measured along a line from the ankle pivot center to the SgRP-third plus 254 mm (10.0 in).

L87 KNEE CLEARANCE-THIRD. The minimum dimension from the knee pivot center to the back of second seatback minus a constant of 51 mm (2.0in.). With rear-facing third seat, dimension is measured to closure.

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

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

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

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

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

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

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

H87 SgRP-THIRD TO HEEL POINT

SD1 SEAT FACING DIRECTION-THIRD.

Station Wagon/MPV - Cargo Space Dimensions

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

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

L202 CARGO LENGTH-CLOSED-FRONT. The minimum dimension measured horizontally from the back of the front seat at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.

L203 CARGO LENGTH-CLOSED-SECOND. The dimension measured horizontally from the back of the second seat at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.

L204 CARGO LENGTH AT BELT-FRONT. The minimum dimension measured horizontally from the back of the front seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab backpanel at the height of the belt, on the zero "Y" plane.

L205 CARGO LENGTH AT BELT-SECOND. The minimum dimension measured horizontally from the back of the second seatback top to the foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.

W201 CARGO WIDTH-WHEELHOUSE. The minimum dimension measured laterally between the trimmed wheelhousings at floor level. For any vehicle not trimmed, measure to the sheet metal.

W203 REAR OPENING WIDTH AT FLOOR. The minimum dimension measured laterally between the limiting interferences of the rear opening at floor level.

W204 REAR OPENING WIDTH AT BELT. The minimum dimension measured laterally between the limiting interferences of the rear opening at belt height or top of pick up box.

W205 REAR OPENING WIDTH ABOVE BELT. The minimum dimension measured laterally between the limiting interferences of the rear opening above the belt height.

W500 CARGO WIDTH AT FLOOR. The maximum dimension measured laterally between the limiting interferences at the floor level. This dimension shall include ribs and pillars, but will exclude wheelhouses.

H197 FRONT SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undepressed floor covering.

H201 CARGO HEIGHT. The dimension measured vertically from the top of the undepressed floor covering to the headlining at the rear wheel "X" coordinate on the zero "Y" plane.

H202 REAR OPENING HEIGHT. The dimension measured vertically from the top of the undepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door fully open.

H250 TAILGATE TO GROUND CURB MASS (WT.) The dimension measured vertically from the top of the undepressed floor covering on the lowered tailgate to ground on the zero "Y" plane.

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.

AAMA Specifications

METRIC (U. S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet

Dimensions Definitions

<p>V2 STATION WAGON Measured in inches:</p> $\frac{W4 \times H201 \times L204}{1728} = \text{ft.}^3$ <p>Measured in mm:</p> $\frac{W4 \times H201 \times L204}{10^9} = \text{m}^3(\text{cubicmeter})$	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>H198 SECOND SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the second seatback to the undepressed floor covering.</p> <p>V3 HATCHBACK. Measured in inches:</p> $\frac{L208+L209}{2} \times \frac{W4 \times H197}{1728} = \text{ft.}^3$ <p>Measured in mm:</p> $\frac{L208+L209}{2} \times \frac{W4 \times H197}{10^9} = \text{m}^3(\text{cubicmeter})$
<p>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.</p> <p>V5 TRUCKS AND MPV'S WITH OPEN AREA. Measured in inches:</p> $\frac{L506 \times W505 \times H503}{1728} = \text{ft.}^3$ <p>Measured in mm:</p> $\frac{L506 \times W500 \times H503}{10^9} = \text{m}^3(\text{cubicmeter})$	<p>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.</p> <p>V11 HATCHBACK CARGO VOLUME INDEX. Usable luggage (one (1) stand and luggage set) below floor: Measured in inches:</p> $\frac{L210+L211}{2} \times \frac{W4 \times H198}{1728} = \text{ft.}^3$ <p>Measured in mm:</p> $\frac{L210+L211}{2} \times \frac{W4 \times H198}{10^9} = \text{m}^3(\text{cubicmeter})$
<p>V6 TRUCKS AND MPV'S WITH CLOSED AREA. Measured in inches:</p> $\frac{L204 \times W500 \times H505}{1728} = \text{ft.}^3$ <p>Measured in mm:</p> $\frac{L204 \times W500 \times H505}{10^9} = \text{m}^3(\text{cubicmeter})$	<p>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.</p> <p>V10 STATION WAGON CARGO VOLUME INDEX. Measured in inches:</p> $\frac{H201 \times L205 \times \frac{W4+W201}{2}}{1728} = \text{ft.}^3$ <p>Measured in mm:</p> $\frac{H201 \times L205 \times \frac{W4+W201}{2}}{10^9} = \text{m}^3(\text{cubicmeter})$

Hatchback - Cargo Space Dimensions

All Hatchback cargo dimensions are to be taken with the front seat in full down and rear position, and the rear seat folded down. The hatchback door is in the closed position. (For electronically adjusted seats, see the manufacturer's specifications for Design "H" Point).

AAMA Specifications

METRIC (U. S. Customary)

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