

MOTOR VEHICLE

Specifications

METRIC (U.S. Customary)

Passenger Car

1986

Manufacturer ISUZU MOTORS LIMITED	Car Line SPECTRUM	
Mailing Address 22-10 Minami-oi 6-chome, Shinagawa-ku, Tokyo, Japan	Issued July, 1985	Revised

Questions concerning these specifications should be directed to the manufacturer whose address is shown above.

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

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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 completion and are subject to change without notice by the manufacturer.
4. Additional Car and Body Dimensions (based in part on SAE J1100 "Motor Vehicle Dimensions") may be available from the manufacturer.

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Passenger Car**

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (#) _____

METRIC (U.S. Customary)

Car Models

Model Description & Drive (FWD/RWD)	Introduction Date	Make, Car Line, Series, Body Type (Mfg's Model Code)	No. of Designated Seating Positions (Front/Rear)		Max. Trunk/Cargo Load-Kilograms (Pounds)
FRONT WHEEL DRIVE		MODEL NUMBER	FRONT / REAR		
3-Door Hatchback		JT150FU	2	2	56.7 (125)
4-Door Notchback		JT150NU	2	2	56.7 (125)

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Power Teams (Indicate whether standard or optional)

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

SERIES AVAILABILITY	ENGINE					E x h a u s t S/D	TRANSMISSION TRANSAXLE	AXLE RATIO (std. first)
	Displ. Liters (in ³)	Carb. (Barrels, Fl, etc.)	Compr. Ratio	SAE Net at RPM				
				kW (bhp)	Torque N·m (lb. ft.)			
Base	1.471 (90)	2BRL	9.6:1	51.5 (70)	118. (87)	S	Manual 5-Spd. Base	3.578
				@ 5400	@ 3400		Auto 3-Spd. Avail	

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METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

4XC1-U

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	In-line Front Transverse, SOHC, Hemisphere	
Manufacturer	Isuzu Motors Ltd.	
No. of cylinders	4	
Bore	77 (3.03)	
Stroke	79 (3.11)	
Bore spacing (C/L to C/L)	87 (3.4)	
Cylinder block material & mass kg (lbs.)	Cast iron	
Cylinder block deck height	190 (7.48)	
Deck clearance (minimum) (above or below block)	0	
Cylinder head material & mass kg (lbs.)	Aluminum alloy	
Cylinder head volume (cm ³)	37.4 (2.28)	
Head gasket thickness (compressed)	1.2 (0.05)	
Minimum combustion chamber total volume (cm ³)	42.76 (2.61)	
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 (weight, lbs.))	Aluminum alloy	
Exhaust manifold material & mass (kg (weight, lbs.))	Vermicular cast iron (FCV)	
Recommended fuel (leaded, unleaded, diesel)	Unleaded	
Fuel antiknock index (R + M) 2	87	
Total dressed engine mass (wt) dry**	88 (194), M/T / 83 (183), A/T	

Engine - Pistons

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

Engine - Camshaft

Location	Over cylinder head	
Material & mass kg (weight, lbs.)	Cast iron	
Drive type	Chain / belt	Belt
	Width / pitch	17.0 (0.67) / 8.0 (0.31)

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

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

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Engine - Valve System

Hydraulic lifters (std., opt., NA)	N. A.	
Valves	Number intake / exhaust	4/4
	Head O.D. intake / exhaust	36 (1.42) / 31 (1.22)

Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))	Forged steel,
---------------------------------------	---------------

Engine - Crankshaft

Material & mass (kg., (weight, lbs.))	Cast iron,	
End thrust taken by bearing (no.)	No. 2	
Number of main bearings	5	
Seal (material, one, two piece design, etc.)	Front	Acryl Rubber, one piece design
	Rear	Silicon Rubber, one piece design

Engine - Lubrication System

Normal oil pressure (kPa (psi) at engine rom)	44/5200
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part. over)	Full flow
Capacity of cr.case, less filter-refill-L (qt.)	2.8 (3.0)

Engine - Diesel Information

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

Turbo charger - manufacturer	N. A.
Super charger - manufacturer	N. A.
Charge cooler	N. A.

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Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Std.	
Coolant fill location (rad., bottle)		Bottle	
Radiator cap relief valve pressure (kPa (psi))		103	
Circulation thermostat	Type (choke, bypass)	Bypass	
	Starts to open at °C (°F)	82 (180)	
Water pump	Type (centrifugal, other)	Centrifugal	
	GPM 1000 auto rpm	17 liter/minute at 1000 rpm	
	Number of pumps	1	
	Drive (V-belt, other)	Timing belt	
	Bearing type	Sealed type ball bearing	
	Impeller material	Steel	
Housing material		Aluminum alloy	
By-pass recirculation (type inter., ext.)		External	
Cooling system capacity	With heater—L (qt.)	6.4 (6.8)	
	With air cond.—L (qt.)	N.A.	
	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)		NO	
Radiator core	Std., A/C, HD	Standard	
	Type (cross-flow, etc.)	Cross-flow	
	Construction (fin & tube mechanical, braze, etc.)	Tube & corrugated fin	
	Material, mass (kg (wt. lbs.))	Brass & copper	
	Width	410 (16.1), M/T/ 475 (18.7), A/T	
	Height	358 (14.1)	
	Thickness	17.3 (0.68)	
Fins per inch		10 (M/T), 15 (A/T)	
Radiator end tank material		Brass	
Fan	Std., elec., opt.	Std. Elec.	A/C Elec.
	Number of blades & type (flex, solid, material)	-	-
	Diameter & projected width	294 (11.6)	320 (12.6)
	Ratio (fan to crankshaft rev.)	N.A.	N.A.
	Fan cutout type	-	-
	Drive type (direct, remote)	-	-
	RPM at idle (elec.)	2200	2000
	Motor rating (wattage) (elec.)	100	100
	Motor switch (type & location) (elec.)	water temperature	Radiator tank
	Switch point (temp., pressure) (elec.)	85°C (185°F)	85°C (185°F)
	Fan shroud (material)	None	Steel

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

Induction type: carburetor, fuel injection system, etc.

Carburetor

Carburetor	Mfr.	NIPPON KIKAKI Co., Ltd.		
	Choke (type)	Electric heating		
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	750 (neutral)	
		Automatic	1000 (neutral)	

Idle A/F mix. Preset at Mfr.

Fuel injection	Point of injection (no.)	-
	Constant, pulse, flow	-
	Control (electronic, mech.)	-
	System pressure (kPa (psi))	-

Intake manifold heat control (exhaust or water thermostatic or fixed) Water

Air cleaner type	Standard	<u>Dry: 1 element, hot air intake</u>
	Optional	<u>N.A.</u>

Fuel pump	Type (elec. or mech.)	<u>Diaphragm</u>
	Location (eng., tank)	<u>Cylinder head, rear</u>
	Pressure range (kPa (psi))	<u>29.4</u>

Fuel Tank

Capacity (refill L (gallons)) 42 (11.1)

Location (describe) Under rear seat floor

Attachment Bolted

Material & Mass (kg (weight lbs)) Lead-tin plating steel 8.8(19.4)

Filler pipe	Location & material	<u>Rear-left wheel house, painted steel pipe</u>
	Connection to tank	<u>Rubber hose</u>

Fuel line (material) Copper plating steel pipe

Fuel hose (material) Rubber hose with intermediate blade

Return line (material) Copper plating steel pipe

Vapor line (material) Copper plating steel pipe

Opt. n.a. N.A.

Extended range tank	Capacity (L (gallons))	-
	Location & material	-
	Attachment	-
	Selector switch or valve	-

Auxiliary tank	Opt. n.a.	<u>N.A.</u>
	Capacity (L (gallons))	-
	Location & material	-
	Attachment	-
	Selector switch or valve	-
	Separate fill	-

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Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		EGR + AS + O ₂ S + TWC
	Air Injection	Pump or pulse	Pulse
		Driven by	-
		Air distribution (head, manifold, etc.)	Exh. mfd.
		Point of entry	No. 4 Port of exh. mfd.
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Open orifice
		Exhaust source	Cylinder head (Exhaust port)
		Point of exhaust injection (spacer, carburetor, manifold, other)	Intake manifold
	Catalytic Converter	Type	TWC
		Number of	1
Location(s)		Under floor	
Volume [L (in ³)]		1.8 (110)	
	Substrate type	Monolith	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Closed
	Energy source (manifold vacuum, carburetor, other)		Manifold vacuum Crankcase Pressure
	Discharges (to intake manifold, other)		Intake manifold
	Air inlet (breather cap, other)		Air cleaner
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	Canister
	Vapor storage provision		Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass (kg (weight lbs))		1, Separate resonator, 3.5 (7.7)
Resonator no. & type		-
Exhaust pipe	Branch o.d., wall thickness	Outer: 54-1.6 (2.1-0.06), Inner: 42.7-1.5 (1.7-0.06)
	Main o.d., wall thickness	-
	Material & Mass (kg (weight lbs))	Aluminized Steel, Stainless steel 6.7 (14.8)
Inter-mediate pipe	o.d. & wall thickness	42.7-1.6 (1.7-0.06)
	Material & Mass (kg (weight lbs))	Aluminized Steel 3.9 (8.6)
Tail pipe	o.d. & wall thickness	Ft half: 42.7-1.2(1.7-0.05), Rr half: 38.1-1.2(1.5-0.05)
	Material & Mass (kg (weight lbs))	Aluminized Steel 4.2 (9.2)

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Transmissions/Transaxle

Manual 3-speed (std., opt., n.a.) (mfr.)	N. A.
Manual 4-speed (std., opt., n.a.) (mfr.)	N. A.
Manual 5-speed (std., opt., n.a.) (mfr.)	Standard, ISUZU Motors Ltd.
Manual overdrive (std., opt., n.a.) (mfr.)	N. A.
Automatic (std., opt., n.a.) (mfr.)	Optional, JAPAN AUTOMATIC TRANSMISSION CO.
Automatic overdrive (std., opt., n.a.) (mfr.)	N. A.

Manual Transmission/Transaxle

Number of forward speeds	5	
Transmission ratios	In first	3.727
	In second	2.043
	In third	1.333
	In fourth	0.923
	In fifth	0.744
	In overdrive	-
	In reverse	3.583

Synchronous meshing (specify gears) | All forward gears (1st, 2nd, 3rd, 4th, 5th)

Shift lever location | Floor

Lubricant	Capacity (L (pt.))	2.75	
	Type recommended	API GL-1	
	SAE viscosity number	Summer	SAE 5W-30
		Winter	SAE 5W-30
Extreme cold		SAE 5W-30	

Clutch (Manual Transmission)

Make, type, engagement (describe) - (hydraulic, cable, rod) | DAIKIN, dry single, cable

Assist (yes, no, percent) | No

Type pressure plate springs | Diaphragm

Total spring load (N (lb.)) | 3626 (815)

No. of clutch driven discs | 1

Clutch facing	Material	Semi-mold
	Manufacturer	ASAHI SEKIMEN
	Part number	94147483
	Rivets/plate	16
	Rivet size	Ø4
	Outside & inside dia.	184 x 127 (7.2 x 5.0)
	Total eff. area (cm ² (in. ²))	139 (21.5)
	Thickness	3.2 (0.13)
Engagement cushion method	Cushion spring	

Release bearing | Type & method of lubrication | Self centering single row ball bearing, sealed grease

Torsional damping | Method: springs, friction material | Rubber

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Automatic Transmission/Transaxle

Trade name		KF100
Type and special features (describe)		Torque converter with automatically operated planetary gear
Selector	Location	Floor
	Ltr. No. designation	P-R-N-D-2-1
Gear ratios	R	2.400
	D	2.841, 1.541, 1.000
	L ₃	-
	L ₂	1.541
	L ₁	2.841
Max. upsift speed - drive range (km/h (mph))		58 (1-2), 107 (2-3), [36 mph(1-2), 67 mph(2-3)]
Max. kickdown speed - drive range (km/h (mph))		43 (2-1), 98 (3-2), [27 mph(2-1), 61 mph(3-2)]
Min. overdrive speed (km/h (mph))		-
Torque converter	Number of elements	3
	Max. ratio at stall	2.0
	Type of cooling (air, liquid)	Water
	Nominal diameter	224 (8.8)
Lubricant	Capacity (refill L (pt.))	6
	Type Recommended	ATF DEXRON-II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Std., External, Water

Axle or Front Wheel Drive Unit

Type (front, rear)		Front wheel drive	
Description		Helical Gear	
Limited slip differential (type)		N.A.	
Drive pinion offset		-	
Drive pinion (type)		Helical Gear	
No. of differential pinions		2	
Pinion / differential adjustment (shim, other)		None	
Pinion / differential bearing adjustment (shim, other)		N.A.	
Driving wheel bearing (type)		Double row, angular ball bearing	
Lubricant	Capacity (L (pt.))	N.A. part of transmission assembly	
	Type recommended	Transmission lub.	
	SAE viscosity number	Summer	Transmission lub.
		Winter	Transmission lub.
		Extreme cold	

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

Axle ratio (or overall top gear ratio)		3.578 (M/T)	3.526 (A/T)
No. of teeth	Pinion	19	19
	Ring gear or gear	68	67
Ring gear o.d.		203.6 (8.0)	194.8 (7.7)
Transaxle	Transfer gear ratio	-	-
	Final drive ratio	-	-

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Engine Description/Carb.
 Engine Code

Propeller Shaft – Rear Wheel Drive **N.A.**

Type (straight tube, tube-in-tube, internal-external damper, etc.)			
Outer diam. x length* x wall thickness	Manual 3-speed trans.		
	Manual 4-speed trans.		
	Manual 5-speed trans.		
	Overdrive		
	Automatic transmission		
Inter-mediate bearing	Type (plain, anti-friction)		
	Lubrication (fitting, prepack)		
Slip yoke	Type		
	Number of teeth		
	Spline o.d.		
Universal joints	Make and mfg. no.	Front	
		Rear	
	Number used		
	Type (ball and trunnion, cross)		
	Rear attach (u-bolt, clamp, etc.)		
Bearing	Type (plain, anti-friction)		
	Lubrication (fitting, prepack)		
Drive taken through (torque tube, arms or springs)			
Torque taken through (torque tube, arms or springs)			

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

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Axle Shafts – Front Wheel Drive

Number used		2	
Type (straight, solid bar, tubular, etc.)		Left	Straight solid bar
		Right	Straight solid bar
Outer diam. x length x wall thickness	Manual transmission	Left	22 x 377 (0.87 x 14.8)
		Right	22 x 646 (0.87 x 25.4)
	Automatic transmission	Left	22 x 335 (0.87 x 13.2)
		Right	22 x 688 (0.87 x 27.1)
	Optional transmission	Left	None
		Right	None
Silo yoke	Type	None	
	Number of teeth	-	
	Spine o.d.	-	
Universal joints	Make and mfg. no.	Inner	NTN 94147572
		Outer	NTN 94147571
	Number used	4	
	Type, size, plunge	Inner	Double offset 00J 82 plunging
		Outer	Berfield BJ 82 fixed
	Attach (u-bolt, clamp, etc.)	Snapping	
	Bearing	Type (plain, anti-friction)	None
Lubrication (fitting, prepack)		-	
Drive taken through (torque tube, arms or springs)		-	
Torque taken through (torque tube, arms or springs)		-	

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

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Body Type And/Or
Engine Displacement

HATCHBACK	NOTCHBACK
------------------	------------------

Suspension - General

Car leveling	Std. opt. n.a.	N. A.
	Type (air, hyd., etc.)	-
	Manual/auto. controlled	-
Provision for brake dip control		
Provision for accel. squat control		
Provisions for car jacking		None

Shock absorber (front & rear)	Type	Double acting hydraulic telescopic
	Make	KAYABA
	Piston diameter	Ft: 30 (1.18), Rr: 20 (0.79)
	Rod diameter	Ft: 18 (0.71), Rr: 10 (0.39)

Suspension - Front

Type and description		MacPherson strut
Drive and torque taken through		813 Nm
Travel	Full jounce	89 (3.5)
	Full rebound	73 (2.9)
Spring	Type (coil, leaf, other) & material	Coil, SUP 7 or SAE 9254
	Insulators (type & material)	Seat rubbers (top & bottom)
	Size (coil design height & i.d., bar length x dia.)	342.5 (13.5) x 115 (4.5) x 11.7 (0.46), M/T 347.5 (13.7) x 115 (4.5) x 11.7 (0.46), M/T with A/C or A/T 352.5 (13.9) x 115 (4.5) x 11.8 (0.46), A/T with A/C
	Spring rate (N/mm (lb./in.))	19.6 (112)
	Rate at wheel (N/mm (lb./in.))	14.8 (84.5)
Stabilizer	Type (link, linkless, frameless)	None
	Material & bar diameter	

Suspension - Rear

Type and description		Trailing arm with stamped control arms and open section transverse beam
Drive and torque taken through		
Travel	Full jounce	122 (4.80)
	Full rebound	67 (2.64)
Spring	Type (coil, leaf, other) & material	Progressive - rate coil, SUP 7 or SAE 9254
	Size (length x width, coil design height & i.d., bar length & dia.)	221.5 (8.7) x 154 (6.1) x 8.2 (0.3) x 13.5 (0.53) HATCHBACK 224.0 (8.8) x 154 (6.1) x 8.2 (0.3) x 13.5 (0.53) NOTCHBACK
	Spring rate (N/mm (lb./in.))	25.5-51.0 (146-291)
	Rate at wheel (N/mm (lb./in.))	12.7-25.4 (72.5-145)
	Insulators (type & material)	Seat rubbers (top)
	if leaf	No. of leaves Shackle (comp. or tens.)
Stabilizer	Type (link, linkless, frameless)	None
	Material & bar diameter	-
Track bar (type)		None

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Body Type And/Or
Engine Displacement

HATCHBACK

NOTCHBACK

Brakes - Service

Description		Hydraulic, front disc, rear leading trailing, self-adjusting			
Brake type (std., opt., n.a.)	Front (disc or drum)	Disc			
	Rear (disc or drum)	Drum			
Self-adjusting (std., opt., n.a.)		Standard			
Special valving	Type (proportion, delay, metering, other)		Proportioning valve		
Power brake (std., opt., n.a.)		Standard			
Booster type (remote, integral, vac., hyd., etc.)		Integral vacuum servo			
Vacuum source (inline, pump, etc.)		In-line			
Vacuum reservoir (volume in. ³)		None			
Vacuum pump-type (elec. gear driven, belt driven, if other so state)		None			
Anti-skid device type (std., opt., n.a.) (F/R)		N.A.			
Effective area [cm ² (in. ²)]*		Ft: 125.6 (19.5), Rr: 172 (26.7)			
Gross lining area [cm ² (in. ²)]**(F/R)		Ft: 125.6 (19.5), Rr: 172 (26.7)			
Swept area [cm ² (in. ²)]*** (F/R)		Ft: 957 (148.3), Rr: 283 (43.9)			
Rotor	Outerworking diameter	F/R	225 (8.86)/--		
	Inner working diameter	F/R	142 (5.59)/--		
	Thickness	F/R	11.0 (0.43)/--		
	Material & type (vented/solid)	F/R	Cast iron, solid/--		
Drum	Diameter & width	F/R	--/180 (7.09) x 25 (0.98)		
	Type and material	F/R	--/Cast iron		
Wheel cylinder bore		Ft: 54 (2.1), Rr: 17.5 (0.7)			
Master cylinder	Bore-stroke	F/R	20.6 (0.81) / 31.0 (1.22)		
Pedal arc ratio		4.2:1			
Line pressure at 445 N(100 lb.) pedal load (kPa (psi))		8679 kPa at 66.7 kPa vacuum			
Lining clearance		F/R	Self-adjusting		
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		Bonded	
		Rivet size		-	
		Manufacturer		SUMITOMO	
		Lining code*****		M2237EF	
		Material		Resin molded	
		****	Primary or out-board	82.0 (3.2) x 41.5 (1.6) x 10.0 (0.4)	
		Size	Secondary or in-board	82.0 (3.2) x 41.5 (1.6) x 10.0 (0.4)	
	Shoe thickness (no lining)		4.5 (0.18)		
	Rear wheel	Bonded or riveted (rivets/seg.)		Bonded	
		Manufacturer		AKEBONO	
		Lining Code*****		AKM22FE	
		Material		Resin molded	
		****	Primary or out-board	172 (26.7) x 25 (0.98) x 4.1 (0.16)	
		Size	Secondary or in-board	172 (26.7) x 25 (0.98) x 4.1 (0.16)	
Shoe thickness (no lining)		1.4 (0.06)			

*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 or formulation designation and coefficient of friction classification.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line SPECTRUM
Model Year 1986 Issued _____ Revised (*) _____

Body Type And/Or
Engine Displacement

HATCHBACK	NOTCHBACK
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Tires And Wheels (Standard)

Tires	Size (load range, ply)	P155/80 R 13		
	Type (bias, radial, etc.)	Radial (Mud&Snow)		
	Inflation pressure (cold) for recommended max. vehicle load	Front (kPa (psi))	240	
		Rear (kPa (psi))	240	
	Rev./mile—at 70 km/h (45 mph)	919		
Wheels	Type & material	Wide rim with deep bottom, steel		
	Rim (size & flange type)	4 1/2 J-13		
	Wheel offset	49 (1.93)		
	Attachment	Type (bolt or stud)	Nut	
		Circle diameter	100 (3.94)	
Number & size		4, M12 x 1.5		
Spare	Tire and wheel (same, if other describe)	Tire: P155/80 D13 Wheel: 4 1/2 J-13		
	Storage position & location (describe)	Flat under rear load floor		

Tires And Wheels (Optional)

N. A.

Size (load range, ply)	
Type (bias, radial, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Size (load range, ply)	
Type (bias, radial, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Size (load range, ply)	
Type (bias, radial, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Size (load range, ply)	
Type (bias, radial, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Spare tire and wheel	
(if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)	

Brakes - Parking

Type of control	Grip handle	
Location of control	In console between front seats	
Operates on	Rear service brakes	
# separate from service brakes	Type (internal or external)	N. A.
	Drum diameter	-
	Lining size (length x width x thickness)	-

MVMA Specifications Form Passenger Car

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (e) _____

METRIC (U.S. Customary)

Body Type And/OR
Engine Displacement

HATCHBACK	NOTCHBACK
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Steering

Manual (std., opt., n.a.)		Standard		
Power (std., opt., n.a.)		Optional		
Adjustable steering wheel (tilt, swing, other)	Type and description	Tilt		
	(Std., opt., n.a.)	Optional		
Wheel diameter (W9) SAE J1100	Manual	382 (15.0)		
	Power	382 (15.0)		
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	10.6 (34.78)	
		Curb to curb (l. & r.)	10.0 (32.81)	
	Inside rear	Wall to wall (l. & r.)	-	
		Curb to curb (l. & r.)	-	
Screw Radius*		-4.1 (-0.16)		
Manual	Gear	Type	Rack and pinion	
		Make	JIDOSHA KIKI	
	Ratios	Gear	∞	
		Overall	20:1	
	No. wheel turns (stop to stop)		3.52	
Power	Type (coaxial, linkage, etc.)		Coaxial	
	Make		JIDOSHA KIKI and SAGINAW	
	Gear	Type	Rack and pinion	
		Ratios	Gear	∞
	Overall		16:1	
	Pump (drive)		Belt	
No. wheel turns (stop to stop)		2.88		
Linkage	Type		Accar man	
	Location (front or rear of wheels, other)		Rear of wheels	
	Tie rods (one or two)		Two	
Steering axis	Inclination at camber (deg.)		16°	
	Bearings (type)	Upper	Ball bearing	
		Lower	Needle bearing	
		Thrust	N.A.	
Steering spindle & joint type		N.A.		
Wheel spindle	Diameter	Inner bearing	34.0 (1.34)	
		Outer bearing	64.0 (2.52)	
	Thread (size)		M20 x 1	
	Bearing (type)		Double row, angular ball bearing	

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

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (#) _____

Body Type And/Or
Engine Displacement

HATCHBACK	NOTCHBACK
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Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	$2^{\circ}15' \pm 30'$
		Camber (deg.)	$+20' \pm 1^{\circ}$
		Toe-in (outside track-mm (in.))	0 ± 2
	Service reset*	Caster	$2^{\circ}15' \pm 30'$
		Camber	$+20' \pm 1^{\circ}$
		Toe-in	0 ± 2
	Periodic M.V. inspection	Caster	$2^{\circ}15' \pm 30'$
		Camber	$+20' \pm 1^{\circ}$
		Toe-in	0 ± 2
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	$-10' \pm 1^{\circ}$
		Toe-in (outside track-mm (in.))	2 ± 2
	Service reset*	Camber	$-10' \pm 1^{\circ}$
		Toe-in	2 ± 2
	Periodic M.V. inspection	Camber	$-10' \pm 1^{\circ}$
		Toe-in	2 ± 2

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

Electrical - Instruments and Equipment

Speedometer	Type	Analogue, round
	Trip odometer (std., opt., n.a.)	Standard
EGR maintenance indicator		None
Charge indicator	Type	Tell-Tale Warning light
	Warning device	
Temperature indicator	Type	Electrical gauge with pointer
	Warning device	
Oil pressure indicator	Type	Tell-Tale warning light
	Warning device	
Fuel indicator	Type	Electrical gauge with pointer
	Warning device	
Windshield wiper	Type (standard)	Electric 2-speed
	Type (optional)	Intermittent windshield wiper system
	Blade length	450 (17.7)
	Swept area (cm ² (in. ²))	5590 (866.5)
Windshield washer	Type (standard)	Electric
	Type (optional)	N.A.
	Fluid level indicator	N.A.
Horn	Type	Vibrator
	Number used	1
Other		

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line SPECTRUM
Model Year 1986 Issued _____ Revised (*) _____

Engine Description/Carb.
Engine Code

4XC1-U

Electrical - Supply System

Battery	Make	FURUKAWA, NIHONDENCHI, MATSUSHITA
	Model, std., (opt.)	50D20L
	Voltage	12
	Amos at 0°F cold crank	300
	Minutes-reserve capacity	75
	Amp/hrs. - 20 hr. rate	50
Location		Engine compartment left front
Generator or alternator	Type and rating	Alternating current 12V-50A
	Ratio (alt. crank/rev.)	133/45
	Optional (type & rating)	Alternating current 12V-60A (with A/C)
Regulator	Type	Non-contact voltage control relay

Electrical - Starting System

Start. motor	Current drain at 0°F	-
Motor drive	Engagement type	Solenoid
	Pinion engages from (front, rear)	Front

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	Standard		
	Citer (specify)	N.A.		
Coil	Make	Nippon Denso (build in distributor asm) (I.I.A)		
	Model	TH1G40 (M/T), TH1G41 (A/T)		
	Current	Engine stooed - A		
Spark plug	Make	NIPPON DENSO	NGK	AC
		Model	W20EXR-V11	BPR6ES-11
	Thread (mm)	14 (0.55)	14 (0.55)	14 (0.55)
	Tightening torque (N-m (lb. ft))	18.6 ± 4.9	18.6 ± (4.9)	18.6 ± (4.9)
	Gap	1.1 (0.04)	1.1 (0.04)	1.1 (0.04)
	Number per cylinder	1	1	1
Distributor	Make	Nippon Denso		
	Model	TH1G40 (M/T), TH1G41 (A/T)		

Electrical - Suppression

Locations & type	Resistive cord Resistive spark plug
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MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (*) _____

Body Type	HATCHBACK		NOTCHBACK	
Body				
Structure	Monocogue body			
Bumper system front - rear	Large plastic type			
Anti-corrosion treatment	Various sealer, wax coat under coat, galvanized steel			
Body - Miscellaneous Information				
Type of finish (lacquer, enamel, other)	Acryl			
Hood	Hinge location (front, rear)	Rear		
	Type (counterbalance, prop)	Prop		
	Release control (internal, external)	Internal		
Trunk lid	Type (counterbalance, other)	Counterbalance		
	Internal release control (elec., mech., n.a.)	N.A.	Optional, mechanical	
Hatch-back lid	Type (counterbalance, other)	Counterbalance		
	Internal release control (elec., mech., n.a.)	N.A.	N.A.	
Vent window control (crank, friction, pivot, power)	Front	N.A.		
	Rear	Crank	N.A.	
Seat cushion type (e.g., 60:40, bucket, bench, wire, foam etc.)	Front	Spring + Foam pad		
	Rear	Wire frame + Foam pad		
	End seat	None		
Seat back type (e.g., 50:40, bucket, bench, wire, foam etc.)	Front	Spring + Foam pad		
	Rear	Panel frame + Foam pad	Wire frame + Foam Pad	
	End seat	None		

MVMA Specifications Form
Passenger Car
 METRIC (U.S. Customary)

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (*) _____

Body Type	HATCHBACK	NOTCHBACK
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Restraint System

Active restraint system	Standard/optional	Standard
	Type and description	Front: 3 point seat belt with emergency locking retractor Rear : 2 point seat belt with automatic locking retractor
	Location	At each seating position
Passive seat belts	Standard/optional	N.A.
	Power/manual	-
	2 or 3 point	-
	Knee barrier belt	-

Frame

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

Glass	SAE Ref. No.		
Windshield glass exposed surface area (cm ² (in. ²))	S1	7479 (1159)	
Side glass exposed surface area (cm ² (in. ²)) - total 2-sides	S2	12240 (1897)	10600 (1643)
Backlight glass exposed surface area (cm ² (in. ²))	S3	7403 (1147)	5144 (797)
Total glass exposed surface area (cm ² (in. ²))	S4	27122 (4204)	23223 (3600)
Windshield glass (type)		Laminated glass	
Side glass (type)		Tempered glass	
Backlight glass (type)		Tempered glass	

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (•) _____

Body Type

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

Air conditioning (manual, auto, temp control)	Optional, manual.	
Clock (digital, analog)	Optional, digital (in radio)	
Compass / thermometer	N.A.	
Console (floor, overhead)	Standard, floor	
Defroster, elec. backlight	Optional, rear electrical defogger	
Electronic	Diagnostic warning (integrated, individual)	Standard, Tell-Tale Warning light in instrument
	Instrument cluster (list instruments)	N.A.
	Keyless entry	N.A.
	Trip/finder (avg. s.d., fuel)	N.A.
	Voice alert (list items)	N.A.
Other	-	
Fuel door lock (remote, key, electric)	N.A. Optional, mechanical	
Lamps	Auto head on / off delay, dimming	N.A.
	Cornering	N.A.
	Courtesy (map, reading)	N.A.
	Door lock, ignition	N.A.
	Engine compartment	N.A.
	Fog	N.A.
	Glove compartment	N.A.
	Trunk	Optional (luggage) N.A.
	Other	Dome lamp-standard
Mirrors	Day/night (auto, man.)	Standard, manual
	L.H. (remote, power, heated)	Standard, manual remote
	R. H. (convex, remote, power, heated)	Optional, convex manual remote
	Visor vanity (RH / LH, illuminated)	Optional, RH
Parking brake-auto release (warning light)	N.A.	
Power equipment	Door locks / deck lid - specify	N.A.
	Seat (2-4-6 way) heated (driver, pass, other) lumbar, hio, thigh support (power, manual) reclining (driver, pass) memory (1-2 preset, recline)	N.A.
	Side windows	N.A.
	Vent windows	N.A.
	Rear window	N.A.
Radio systems	Antenna (location, whip, windshield, power)	Standard, on roof front-left, non-power
	AM, FM, stereo, tape, CS	Optional, AM/FM monaural, AM/FM stereo, AM/FM stereo w/tape
	Speaker (number, location) Premium sound	Standard-Ft 2 speakers, Optional-Rr 2 speakers p/ayer
Roof open air/fixd (flip-up, sliding, "T")	N.A.	
Speed control device	Optional	
Speed warning device (light, buzzer, etc.)	N.A.	
Tachometer (rpm)	Optional	
Theft protection-type	Lock mounted on steering column; locks steering wheel automatic transmission shift lever and ignition	

MVMA Specifications Form

Passenger Car

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (*) _____

METRIC (U.S. Customary)
 Car and Body 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 car line.
 SAE Ref. no. refers to the definition published in SAE Recommended Practice J1100 "Motor Vehicle Dimensions," unless otherwise specified.

Body Type	SAE Ref. No.	HATCHBACK	NOTCHBACK
Width			
Tread (front)	W101	1390 (54.7)	
Tread (rear)	W102	1380 (54.3)	
Vehicle width	W103	1616 (63.6)	
Body width at Sg RP (front)	W117	1600 (63.0)	
Vehicle width (front doors open)	W120	3469 (136.6)	3186 (125.4)
Vehicle width (rear doors open)	W121	-	3056 (120.3)
Front fender overall width	W106	1595 (62.8)	
Rear fender overall width	W107	1598 (62.9)	
Tumble-home (deg.)	W122	21.5°	
Length			
Wheelbase	L101	2400 (94.5)	
Vehicle length	L103	3961 (155.9)	4033 (158.8)
Overhang (front)	L104	795 (31.3)	
Overhang (rear)	L105	766 (30.2)	838 (33.0)
Upper structure length	L123	2657 (104.6)	2413 (95.0)
Rear wheel C.L. "X" coordinate	L127	2226 (87.6)	
Cowl point "X" coordinate	L125	155 (6.1)	
Front end length at centerline	L126	1051 (41.4)	
Rear end length at centerline	L129	106 (4.2)	450 (17.7)
Height*			
Passenger distribution (front/rear)	FD1.2.3	2/2	
Trunk/cargo load		56.7 (125)	
Vehicle height	H101	1320 (52.0)	
Cowl point to ground	H114	915 (36.0)	
Deck point to ground	H138	870 (34.3)	905 (35.6)
Rocker panel-front to ground	H112	172 (6.8)	
Bottom of door closed-front to grd.	H153	242 (9.5)	244 (9.6)
Rocker panel-rear to ground	H111	158 (6.2)	
Bottom of door closed-rear to grd.	H135	-	235 (9.3)
Windshield slope angle	H122	58.1°	
Backlight slope angle	H121	59.4°	50°
Ground Clearance*			
Front bumper to ground	H102	246 (9.7)	
Rear bumper to ground	H104	194 (7.6)	187 (7.4)
Bumper to ground (front at curv mass (wt.))	H103	267 (10.5)	
Bumper to ground (rear at curv mass (wt.))	H105	278 (10.9)	271 (10.7)
Angle of approach (degrees)	H106	20.8°	
Angle of departure (degrees)	H107	16.6°	
Ramp breakover angle (degrees)	H147	13.0°	
Axle differential to ground (front/rear)	H153	-	
Min. running ground clearance	H156	138 (5.4)	
Location of min. run. grd. clear.		Front exhaust pipe	

* All vehicle height and ground clearances are made at the Manufacturer's Design Load Weight, unless otherwise specified.
 Manufacturer's Design Load Weight is defined with indicated passenger distribution and trunk/cargo load.

MVMA Specifications Form
Passenger Car
 METRIC (U.S. Customary)
 Car and Body Dimensions See Key Sheets for definitions

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (e) _____

Body Type	SAE Ref. No.	HATCHBACK	NOTCHBACK
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Front Compartment

Sg RP front "X" coordinate	L31	1095 (43.1)
Effective head room	H61	961 (37.8)
Max. eff. leg room (accelerator)	L34	1060 (41.7)
SgRP to heel point	H30	265 (10.4)
SgRP to heel point	L53	850 (33.5)
Back angle	L40	25°
Hip angle	L42	95°
Knee angle	L44	122°
Foot angle	L46	87°
Design H-point front travel	L17	194 (7.6)
Normal driving & riding seat track trvl.	L23	194 (7.6)
Shoulder room	W3	1340 (52.8)
Hip room	W5	1340 (52.8)
Upper body opening to ground	H50	1219 (48.0)
Steering wheel maximum diameter	W9	382 (15.0)
Steering wheel angle	H18	24°
Accel. heel pt. to steer. whl. cntr	L11	467 (18.4)
Accel. heel pt. to steer. whl. cntr	H17	634 (25.0)
Steering wheel to C/L of thigh	H13	80 (3.1)
Steering wheel torso clearance	L7	364 (14.3)
Headlining to roof panel (front)	H37	16 (0.6)
Undeepressed floor covering thickness	H67	25 (1.0)

Rear Compartment

Sg RP Point couple distance	L50	733 (28.9)
Effective head room	H63	951 (37.4)
Min. effective leg room	LH/RH L51	845 (33.3)/850 (33.5)
Sg RP (second to heel)	LH/RH H31	272 (10.7)/282 (11.1)
Knee clearance	L48	-28 (-1.1)
Compartment room	L3	645 (25.4) 637 (25.1)
Shoulder room	W4	1340 (52.8)
Hip room	W6	1113 (43.8) 1080 (42.5)
Upper body opening to ground	H51	- 1220 (48.0)
Back angle	L41	28°
Hip angle	L43	85°
Knee angle	L45	95°
Foot angle	L47	119°
Headlining to roof panel (second)	H38	18 (0.7)
Depressed floor covering thickness	H73	13 (0.5)

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	- 320 (11.3)
Liftover height	H195	570 (22.4) 567 (22.3)

Interior Volumes (EPA Classification)

Vehicle class (subcompact, compact, etc.)		Subcompact cars	
Interior volume index (cu. ft.)		2.877 m ³ (101.6)	2.713 m ³ (95.8)
Trunk/cargo index (cu. ft.)		0.476 m ³ (16.9)	0.320 m ³ (11.3)

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)
Car and Body Dimensions

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (e) _____

See Key Sheets for definitions

Body Type	SAE Ref. No.	HATCHBACK	NOTCHBACK
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Station Wagon – Third Seat

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

Station Wagon – Cargo Space

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 D-pill	W204	
Max. 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 (m ³ (ft. ³))	V4	
Cargo volume, index-rear of 2-seat	V10	

Hatchback – Cargo Space

Cargo length at front seatback height	L208	1269 (50.0)	
Cargo length at floor (front)	L209	1522 (59.9)	
Cargo length at second seatback height	L210	486 (19.1)	
Cargo length at floor (second)	L211	793 (31.2)	
Front seatback to load floor height	H197	449 (17.7)	
Second seatback to load floor height	H198	555 (21.8)	
Cargo volume index (m ³ (ft. ³))	V3	0.840 (29.7)	
Hidden cargo volume (m ³ (ft. ³))	V4	-	
Cargo volume index-rear of 2-seat	V11	0.476 (16.9)	

Aerodynamics*

(AT THE CURB WEIGHT)

Wheel lip to ground, front		656 (25.8)	
Wheel lip to ground, rear		657 (25.9)	
Frontal area (m ² (ft. ²))		1.81 (19.5)	
Drag coefficient (Cd)		-	

*EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (#) _____

Body Type	HATCHBACK	NOTCHBACK
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Vehicle Fiducial Marks

Fiducial Mark Number*	Define Coordinate Location
Front	The center of the hole (∅ 15) on the front side member.
Rear	The center of the hole (∅ 20) on the rear side member. (Note: The rearmost one of the drain holes.)
Fiducial Mark Number	
Front	W21 - 490
	L54 - 1400
	H81 - 497
	H161 - 335 (13.2)
	H163 - 314 (12.4)
Rear	W22 - 500
	L55 - 4765
	H82 - 548
	H162 - 399 (15.7)
	H164 - 318 (12.5)

* Reference - SAE Recommended Practice, J182, Motor Vehicle Fiducial Marks.
 All linear dimensions are in millimeters (inches).

* At Design Load Weight

MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Car Line SPECTRUM
 Model Year 1986 Issued _____ Revised (*) _____

Body Type

HATCHBACK	NOTCHBACK
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Lamps and Headlamp Shape*

Height above ground to center of bulb or marker	Headlamp (SAE - H127)	Highest**	650 (25.6)	
		Lowest	-	
	Taillamp (SAE - H128)	Highest**	810 (31.9)	
		Lowest	695 (27.4)	
	Sidemarker	Front	455 (17.9)	
		Rear	500 (19.7)	495 (19.5)
Distance from C.L. of car to center of bulb	Headlamp	Inside	-	
		Outside**	563 (22.2)	
	Taillamp	Inside	595 (23.4)	
		Outside**	595 (23.4)	
	Directional	Front	466 (18.3)	
		Rear	618 (24.3)	
Halogen headlamp (std., opt., n.a.)	Lo beam	Optional		
	Hi beam	Optional		
	Replaceable bulb	-		
	Shape	-		
Headlamp other than above	Lo beam	-		
	Hi beam	-		
	Replaceable	-		
	Shape	-		
	Type	-		

* Measured at curb mass (weight).
 ** If single lamps are used enter here.

MVMA Specifications Form Passenger Car

Car Line SPECTRUM
Model Year 1986 Issued _____ Revised (*) _____

METRIC (U.S. Customary)

Vehicle Mass (weight)

Model	CURB MASS, kg. (weight, lb.)*			% PASS. MASS DISTRIBUTION				SHIPPING MASS, kg (weight, lb.)**
	Front	Rear	Total	Pass In Front		Pass In Rear		
				Front	Rear	Front	Rear	
3-Door Hatchback M/T	530 (1169)	322 (709)	852 (1878)	52	48	17	83	822 (1812)
3-Door Hatchback A/T	547 (1205)	318 (700)	864 (1905)	52	48	17	83	834 (1838)
4-Door Notchback M/T	538 (1185)	331 (729)	868 (1913)	52	48	17	83	838 (1847)
4-Door Notchback A/T	553 (1220)	327 (720)	880 (1940)	52	48	17	83	850 (1874)

* Reference - SAE J1100 Motor vehicle dimensions, curb weight definition.
** Shipping mass (weight) definition -

**MVMA Specifications Form
Passenger Car**

METRIC (U.S. Customary)

Car Line SPECTRUM
Model Year 1986 Issued _____ Revised (*) _____

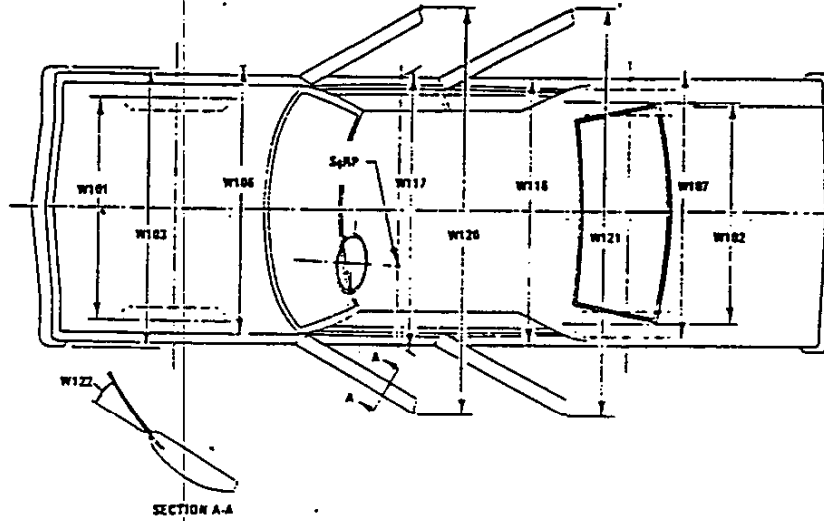
Equipment	Optional Equipment Differential Mass (weight)*			Remarks
	MASS. kg. (weight, lb.)			
	Front	Rear	Total	
Air Conditioning	21.2 (46.7)	-2.5 (-5.5)	18.7 (41.2)	
Power Steering	7.8 (17.2)	-0.4 (-0.9)	7.4 (16.3)	
Trim Rings	0.6 (1.3)	0.6 (1.3)	1.2 (2.6)	
Luggage Cover	-0.7 (-1.5)	5.1 (11.2)	4.4 (9.7)	Hatchback Model
RH Mirror	0.9 (2.0)	0.3 (0.6)	1.2 (2.6)	
AM/FM Monaural Radio				
AM/FM Stereo Radio & 2 Rear Speakers				
AM/FM Cassette Radio & 2 Rear Speakers				
Auto Cruise	1.5 (3.3)	0 (0)	1.5 (3.3)	

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

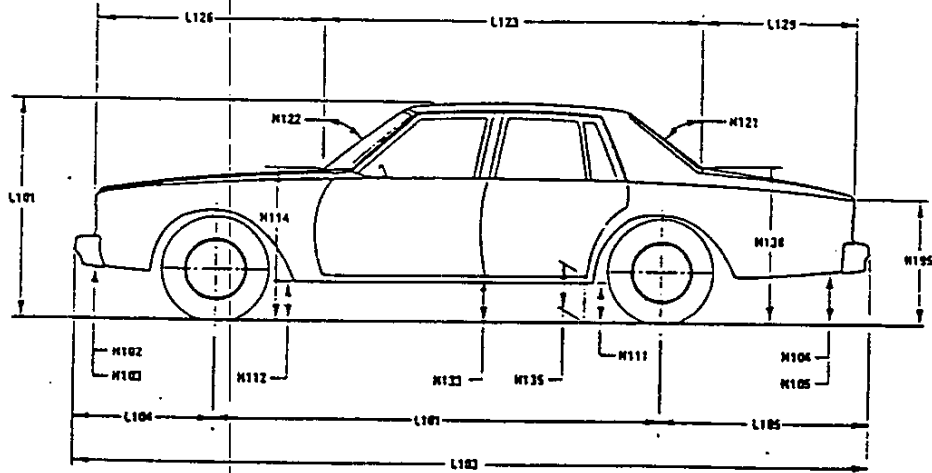
MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Exterior Car And Body Dimensions – Key Sheet

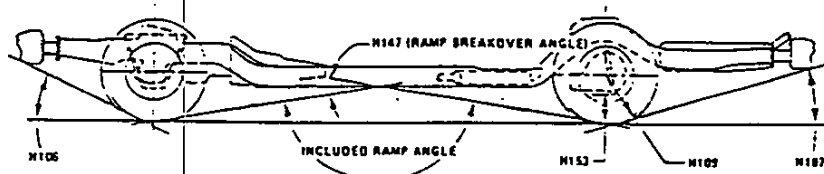
Exterior Width



Exterior Length & Height

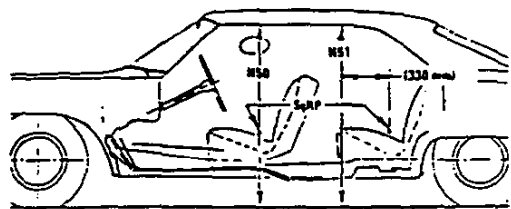
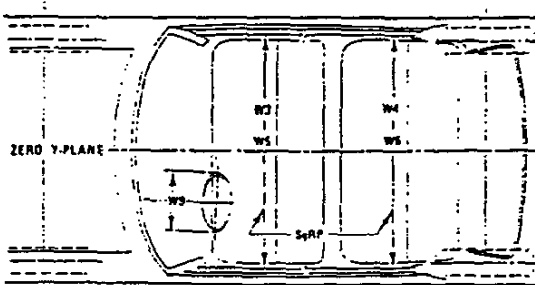
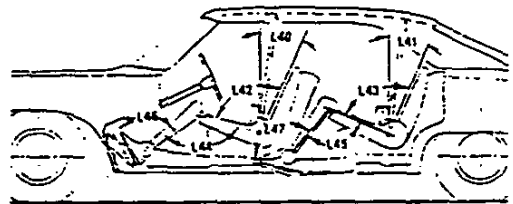
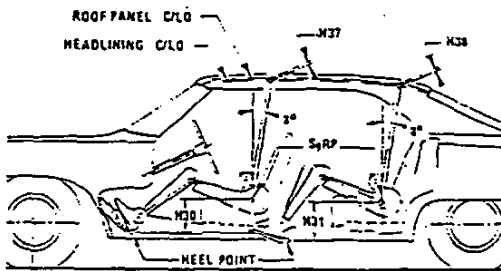
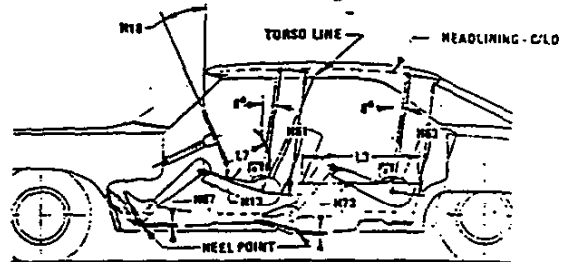
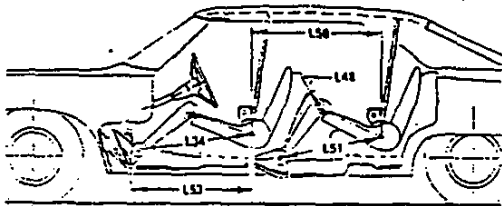


Exterior Ground Clearance



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Passenger Car
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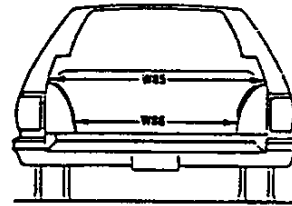
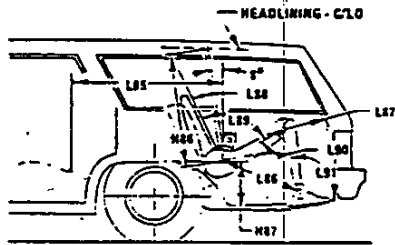
Interior Car And Body Dimensions – Key Sheet



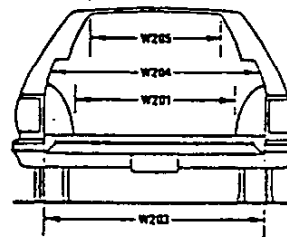
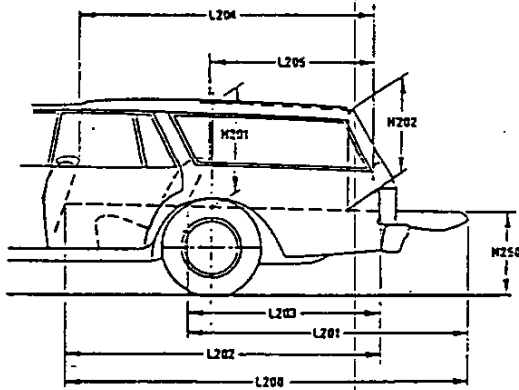
MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Interior Car And Body Dimensions – Key Sheet

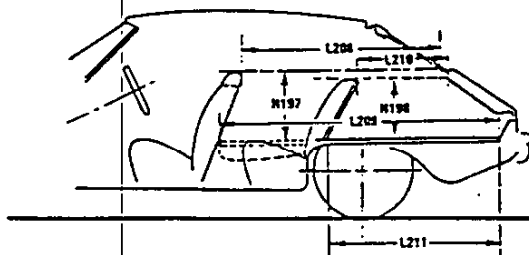
Third Seat



Cargo Space



Station Wagon



Hatchback

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Exterior Car 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.
- W106 FRONT FENDER WIDTH. The dimension measured between the widest points at the front wheel centerline, excluding moldings.
- W107 REAR FENDER WIDTH. The dimension measured between the widest points at the rear wheel centerline, excluding moldings.
- W117 BODY WIDTH AT SgRP—FRONT. The dimension measured laterally between the widest points on the body at the SgRP-front, excluding door handles, applied moldings, or appliques.
- W120 VEHICLE WIDTH—FRONT DOORS OPEN. The dimension measured between the widest point on the front doors in maximum hold-open position.
- W121 VEHICLE WIDTH—REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door on only one side, this dimension is to the zero "Y" plane.
- W122 TUMBLE—HOME. STRAIGHT SIDE GLASS. The angle measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane.
CURVED SIDE GLASS. The angle measured from a vertical to a chord extending from the upper DLO to the lower DLO at the outside surface of the front door glass at the front SgRP "X" plane.

Length Dimensions

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

dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

- L123 UPPER STRUCTURE LENGTH. The dimension measured longitudinally from the cowl point to the deck point.
- L125 COWL POINT "X" COORDINATE.
- L126 FRONT END LENGTH. The dimension measured longitudinally from the cowl point to the foremost point on the vehicle at the zero "Y" plane excluding ornamentation or bumpers. In cases where bumpers and/or grills are integrated with the profile, measurement is made at the foremost point of front end contour.
- 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.
- L129 REAR END LENGTH. The dimension measured longitudinally from the deck point to the rearmost visible point of the body sheet metal at the zero "Y" plane, excluding ornamentation or bumpers.

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.
- H127 HEADLAMP TO GROUND—CURB MASS (WT.). The dimension measured vertically from the centerline of the lowest headlamp lens to ground.
- H128 TAILLAMP TO GROUND—CURB MASS (WT.). The dimension measured vertically from the centerline of the upper bulb to ground.
- H133 BOTTOM OF DOOR CLOSED—FRONT TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- H135 BOTTOM OF DOOR CLOSED—REAR TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- H138 DECK POINT TO GROUND. Measured at zero "Y" plane.

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.

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Interior Car And Body Dimensions - Key Sheet

Dimensions Definitions

- 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.
- Glass Areas**
- S1 Windshield area.
- S2 Side windows area. Includes the front door, rear door, vents, and rear quarter windows on both sides of the vehicle.
- S3 Backlight areas.
- S4 Total area. Total of all areas (S1 + S2 + S3).
- Fiducial Mark Dimensions**
- Fiducial Mark - Number 1**
- L54 "X" coordinate.
- W21 "Y" coordinate.
- H81 "Z" coordinate.
- H161 Height "Z" coordinate to ground at curb weight.
- H163 Height "Z" coordinate to ground.
- Fiducial Mark - Number 2**
- L55 "X" coordinate.
- W22 "Y" coordinate.
- W82 "Z" coordinate.
- H162 Height "Z" coordinate to ground at curb weight.
- H164 Height "Z" coordinate to ground.
- Front Compartment Dimensions**
- L7 STEERING WHEEL TORSO CLEARANCE. The minimum dimension measured in the side view from the rearmost edge of the steering wheel, with front wheels in the straight ahead position, to the torso line.
- L11 ACCELERATOR HEEL POINT TO STEERING WHEEL CENTER. The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering wheel rim.
- L17 DESIGN H-POINT-FRONT TRAVEL. The dimension measured horizontally between the design H-point-front in the foremost and rearmost seat track positions.
- L23 NORMAL DRIVING AND RIDING SEAT TRACK LEVEL. 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.
- L31 SgRP-FRONT. "X" COORDINATED.
- L34 MAXIMUM EFFECTIVE LEG ROOM-ACCELERATOR. The dimension measured along a line from the ankle pivot center to the SgRP-front plus 254 mm (10.0 in) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.
- L40 BACK ANGLE-FRONT. The angle measured between a vertical line through the SgRP-front and the torso line. If the seatback is adjustable, use the normal driving and riding position specified by the manufacturer.
- L42 HIP ANGLE-FRONT. The angle measured between torso line and thigh centerline.
- L44 KNEE ANGLE-FRONT. The angle measured between thigh centerline and lower leg centerline measured on the right leg.
- L46 FOOT ANGLE-FRONT. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref SAE J825.
- 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.
- H13 STEERING WHEEL TO CENTERLINE OF THIGH. The minimum dimension measured from the bottom of steering wheel, with front wheels in the straight position, to the thigh centerline.
- H17 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.
- H37 HEADLINING TO ROOF PANEL-FRONT. The dimension measured from the intersection of the headlining and the extended effective head room line normal to the sheet metal.
- H50 UPPER BODY OPENING TO GROUND-FRONT. The dimension measured vertically from the trimmed body opening to the ground on the SgRP-front "X" plane.
- H61 EFFECTIVE HEAD ROOM-FRONT. The dimension measured along a line 8 deg. rear of vertical from the SgRP-front to the headlining plus 102 mm (4.0 in.).
- H67 FLOOR COVERING THICKNESS-UNDEPRESSED-FRONT. The dimension measured vertically from the surface of the undepressed floor covering to the underbody sheet metal at the accelerator heel point.
- PD1 PASSENGER DISTRIBUTION-FRONT.
- Rear Compartment Dimensions**
- L3 COMPARTMENT ROOM-SECOND. The dimension measured horizontally from the back of front seat to the front of the second seatback at a height tangent to the top of the second seat cushion.

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Passenger Car

METRIC (U.S. Customary)

Interior Car And Body Dimensions – Key Sheet

Dimensions Definitions

- 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 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 254mm (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.
- H38 HEADLINING TO ROOF PANEL-SECOND. The dimension measured from the intersection of the headlining and the extended effective head room line normally to the roof sheet metal.
- 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.
- PD2 PASSENGER DISTRIBUTION-SECOND.

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-J1100.
- H195 LIFTOVER HEIGHT. The dimension measured vertically from the luggage compartment lower opening at the zero "Y" plane to ground.

Interior Volumes (EPA Classification)

The Interior Volume Index is listed for each body style except two seaters. The interior volume index estimates the space in a car. It is based on four measurements – head room, shoulder room, hip room, and leg room – for the front and rear seats, plus trunk capacity. The interior volume index is an estimate of the size of the passenger compartment.

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 – 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 51mm (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 rear from the SgRP-third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- PD3 PASSENGER DISTRIBUTION-THIRD.
- SD1 SEAT FACING DIRECTION-THIRD.

Station Wagon – Cargo Space Dimensions

- L200 CARGO LENGTH-OPEN-FRONT. The minimum dimension measured longitudinally from the back of the front seatback at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the open tailgate or cargo surface if the rear closure is a conventional door type tailgate at the zero "Y" plane.
- L201 CARGO LENGTH-OPEN-SECOND. The dimension measured longitudinally from the back of the second seatback at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the open tailgate or cargo floor surface if the rear closure is a conventional door type tailgate, at the zero "Y" plane.
- L202 CARGO LENGTH-CLOSED-FRONT. The minimum dimension measured horizontally from the back of the 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 at the seatback top to the foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.
- W201 CARGO WIDTH-WHEELHOUSE. The minimum dimension measured laterally between the innermost wheelhouseings at floor level. For any vehicle not trimmed, measure to the sheet metal.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Interior Car And Body Dimensions—Key Sheet Dimensions Definitions

- 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.
- 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.
- V2 STATION WAGON**
Measured in inches:

$$\frac{W4 \times H201 \times L204}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{W4 \times H201 \times L204}{10^9} = \text{m}^3 \text{ (cubic meter)}$$
- V4 HIDDEN LUGGAGE CAPACITY—REAR OF FRONT SEAT.** The total volumes of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the front seat.
- V5 TRUCKS AND MPV'S WITH OPEN AREA.**
Measured in inches:

$$\frac{L506 \times W500 \times H503}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{L506 \times W500 \times H503}{10^9} = \text{m}^3 \text{ (cubic meter)}$$
- V6 TRUCKS AND MPV'S WITH CLOSED AREA.**
Measured in inches:

$$\frac{L204 \times W500 \times H505}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{L204 \times W500 \times H505}{10^9} = \text{m}^3 \text{ (cubic meter)}$$
- V8 HIDDEN LUGGAGE CAPACITY—REAR OF SECOND SEAT.** The total volume of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the second seat.
- V10 STATION WAGON CARGO VOLUME INDEX.**
Measured in inches:

$$\frac{H201 \times L205 \times \frac{W4 + W201}{2}}{1728} = \text{ft}^3$$
 Measured in mm:

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

Hatchback—Cargo Space Dimensions

All hatchback cargo dimensions are to be taken with the front seat in full down and rear position, and the rear seat folded down. The hatchback door is in the closed position. (For electrically 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—HATCHBACK.** 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—HATCHBACK.** The minimum dimension measured from the "X" plane tangent to the rearmost surface of second seatback or the load floor which is stowed at least one half of the H198 dimension height above the rear load floor, to the rearmost inside limiting interference on the zero "Y" plane.
- L211 CARGO LENGTH AT FLOOR—SECOND HATCHBACK.** 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 seat back to the undepressed floor covering.
- V3 HATCHBACK.**
Measured in inches:

$$\frac{\frac{L208 + L209}{2} \times W4 \times H197}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{\frac{L208 + L209}{2} \times W4 \times H197}{10^9} = \text{m}^3 \text{ (cubic meter)}$$
- V4 HIDDEN LUGGAGE CAPACITY—REAR OF FRONT SEAT.** The total volumes of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the front seat.
- V11 HATCHBACK CARGO VOLUME INDEX.** Usable luggage (one (1) stand and luggage set) below floor.
Measured in inches:

$$\frac{\frac{L210 + L211}{2} \times W4 \times H198}{1728} = \text{ft}^3$$
 Measured in mm:

$$\frac{\frac{L210 + L211}{2} \times W4 \times H198}{10^9} = \text{m}^3 \text{ (cubic meter)}$$

MVMA Specifications Form

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