MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1990

Manufacturer	Vehicle Line	
Mitsubishi Motors Corporation	Mitsubishi Mirage	
Mailing Address		
33-8, Shiba 5-chome, Minato-ku, Tokyo, 108, Japan	Issued 1989-4	Revised

Direct questions concerning these specifications to the manufacturer listed above.

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

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.

Motor Vehicle Manufacturers Association of the United States, Inc.

Forms Provided by Technical Affairs Division

MVMA Specifications

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Ø **Indicates Format Change From Previous Year**

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.

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METRIC (U.S. Customary)

Vehicle Origin

Design & development (company)	Mitsubishi Motors Corporation.
Where built (country)	Japan
Authorized U.S. sales marketing representative	Mitsubishi Motor Sales of America, Inc.

Vehicle Models

Model Description & Drive (FWD / RWD / AWD / 4WD)*	Introduction Date	Make, Vehicle Models, Series, Body Type (Mfgr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)
2 DOOR HATCH BACK (FWD)		C52AMNMEL 2/7	5 (2/3)	
		C52AMKMEL 2/7	5 (2/3)	35 kg
		C52AMNDEL 2/7	5 (2/3)	(77 lbs)
		C52AMKDEL 2/7	5 (2/3)	

* 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
ENGINE	Engine Code		4G15	4G15	-	-
	Displacement Liters (in^3)		1.468 (90)	1.468 (90)	-	-
	Induction system (FI, Carb, etc.)		F.I.	F.I.	-	-
	Compression ratio		9.4	9.4	-	-
	SAE Net at RPM	Power kW (bhp)	60(81) at 5500	60(81) at 5500	-	-
		Torque N · m (lb. ft.)	126(91) at 3000	126(91) at 3000	-	-
	Exhaust single, dual		Dual	Dual	-	-
TRANS	Transmission/ Transaxle		Manual 5-speed	Automatic 3-speed	-	-
	Axle Ratio (std. first)		4.021	3.600	-	-

Series Availability		Power Teams (A - B - C - D)	
Model	Code	Standard	Optional
2DOOR HATCH BACK	C52AMNMEL	A	-
	C52AMKMEL	B	-
	C52AMNDEL	A	-
	C52AMKDEL	B	-

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Engine Description / Engine Code	4G15 (1.468 Liters)	
	MT	AT

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	
Manufacturer		Mitsubishi Motors Corporation	
No. of cylinders		4	
Bore		75.5	
Stroke		82	
Bore spacing (C / L to C / L)		82	
Cylinder block material & mass kg (lbs.) (machined)		Cast iron, 27.1 (59.7)	
Cylinder block deck height		201	
Cylinder block length		362	
Deck clearance (minimum) (above or below block)		0	
Cylinder head material & mass kg (lbs.)		Aluminum alloy, 6.5 (14.3)	
Cylinder head volume (cm^3)		31.0	
Cylinder liner material		N.A.	
Head gasket thickness (compressed)		1.25	
Minimum combustion chamber total volume (cm^3)		43.7	
Cyl. no. system (front to rear)*	L. Bank	N.A.	
	R. Bank	N.A.	
Firing order		1-3-4-2	
Intake manifold material & mass [kg (lbs.)]**		Aluminum alloy, 4.4 (9.9)	
Exhaust manifold material & mass [kg (lbs.)]**		Cast iron, 5.2 (11.6)	
Fuel required unleaded, diesel, etc.		Unleaded	
Fuel antiknock index (R + M) ÷ 2		No less than 87	
Engine mounts	Quantity	4	
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.	Elastomeric	
	Added isolation (sub-frame, crossmember, etc.)	Crossmember	
Total dressed engine mass (wt) dry***		106	100

Engine – Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum alloy, 242 (9)

Engine – Camshaft

Location		Cylinder Head	
Material & mass kg (weight, lbs.)		Cast iron, 2.39 (5.27)	
Drive type	Chain / belt	Belt	
	Width / pitch	19.1/9.525	(mm)

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

** Finished state.

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

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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	35 / 30

Engine – Connecting Rods

Material & mass [kg., (weight, lbs.)]*	Forged iron 0.490 (1.08)
Length (axes℄ to℄) mm	130

Engine – Crankshaft

Material & mass [kg., (weight, lbs.)]*		Cast iron, 10.1 (22.27)
End thrust taken by bearing (no.)		3
Length & number of main bearings		19mm, 5
Seal (material, one, two piece design, etc.)	Front	Synthetic rubber, One piece
	Rear	Synthetic rubber, One piece

Engine – Lubrication System

Normal oil pressure [kPa (psi) at engine rpm]	300 (42.6) at 2000
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full flow
Capacity of c/case, less filter-refill-L (qt.)	3.0 (2.6)

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.
Intercooler	N.A.

*Finished State

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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)]		88 (12.8)	
Circulation thermostat	Type (choke, bypass)	Choke pellet	
	Starts to open at °C (°F)	88 (190.4)	
Water pump	Type (centrifugal, other)	Centrifugal	
	GPM 1000 pump rpm	-	
	Number of pumps	1	
	Drive (V-belt, other)	V ribbed belt	
	Bearing type	Ball, integral shaft permanently sealed	
	Impeller material	Cold-rolled carbon steel sheet	
	Housing material	Aluminum die casting	
By-pass recirculation [type (inter., ext.)]		External	
Cooling system capacity	With heater–L(qt.)	5.0 (4.4)	
	With air cond.–L(qt.)	5.0 (4.4)	
	Opt. equipment [specify–L(qt.)]	N.A.	
Water jackets full length of cyl. (yes, no)		Yes	
Water all around cylinder (yes, no)		No	
Water jackets open at head face (yes, no)		No	
Radiator core	Std., A/C, HD	Std. and A/C	
	Type (cross-flow, etc.)	Down-flow	
	Construction (fin & tube mechanical, braze, etc.)	Tube and corrugated fin brazed	
	Material, mass [kg (wgt. lbs.)]	Copper & Brass 2.6 (5.7)	Copper & Brass 5.2 (11.5)
	Width	668 (mm)	
	Height	375 (mm)	
	Thickness	16 (mm)	
	Fins per inch	15	20
Radiator end tank material		Brass	
Fan	Std., elec., opt.	Electric	
	Number of blades & type (flex, solid, material)	4	
	Diameter & projected width	300 (mm)	
	Ratio (fan to crankshaft rev.)	N.A.	
	Fan cutout type	N.A.	
	Drive type (direct, remote)	N.A.	
	RPM at idle (elec.)	1800	
	Motor rating (wattage) (elec.)	45	
	Motor switch (type & location) (elec.)	Thermo switch, RAD	
	Switch point (temp., pressure) (elec.)	82°C-85°C	
	Fan shroud (material)	Plastic	

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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.		Fuel injection	
Manufacturer		Mitsubishi Electric Co., Ltd.	
Carburetor no. of barrels		-	
Idle A/F mix.		14.7	
Fuel injection	Point of injection (no.)	Air Intake port (Four)	
	Constant, pulse, flow	5.76 mm³/2.5m sec	
	Control (electronic, mech.)	Electronic	
	System pressure [kPa (psi)]	329	
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	750	A/C ON: 850
	Automatic	N position 750	A/C ON: 850
		D position 700	A/C ON: 700
Intake manifold heat control (exhaust or water thermostatic or fixed)		N.A.	
Air cleaner type		Dry, non-woven cloth	
Fuel filter (type/location)		Paper filter, Engine room	
Fuel pump	Type (elec. or mech.)	Electric	
	Location (eng., tank)	Tank	
	Pressure range [kPa (psi)]	190-340 (28-50)	
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	0.36 L/hr	

Fuel Tank

Capacity [refill L (gallons)]		50 (132)
Location (describe)		Underneath rear seat pan
Attachment		Weld bolt & nut
Material & Mass [kg (weight lbs)]		Steel, 10.0 (22.0)
Filler pipe	Location & material	Right, rear quarter panel, Steel
	Connection to tank	Rubber hose
Fuel line (material)		Steel
Fuel hose (material)		Rubber
Return line (material)		Steel
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	N.A.
	Capacity [L (gallons)]	N.A.
	Location & material	N.A.
	Attachment	N.A.
Auxiliary tank	Opt., n.a.	N.A.
	Capacity [L (gallons)]	N.A.
	Location & material	N.A.
	Attachment	N.A.
	Selector switch or valve	N.A.
	Separate fill	N.A.

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Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Three-way catalyst with feedback control. Exhaust gas recirculation
	Air Injection	Pump or pulse	N.A.
		Driven by	N.A.
		Air distribution (head, manifold, etc.)	N.A.
		Point of entry	N.A.
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled flow
		Exhaust source Point of exhaust injection (spacer, carburetor, manifold, other)	Exhaust port No. 2 Intake manifold
	Catalytic Converter	Type	Three-way
		Number of	1
		Location(s)	Under floor
		Volume [L (in^3)]	0.8 (48.8) + 0.6 (36.6)
		Substrate type	Monolith
		Noble metal 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)		Intake manifold vacuum
	Discharges (to intake manifold, other)		To intake manifold
	Air inlet (breather cap, other)		Air intake hose
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	-
	Vapor storage provision		Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		Yes

Engine – Exhaust System

Type (single, single with cross-over, dual, other)		Single with cross over
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		One (Reverse flow), Stainless steel plate, 5.45 (12.02)
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	42.7 x 1.2
	Main o.d., wall thickness	42.7 x 1.2
	Material & Mass [kg (weight lbs)]	Stainless steel tube, 1.78 (3.92)
Intermediate pipe	o.d. & wall thickness	42.7 x 1.5
	Material & Mass [kg (weight lbs)]	Stainless steel tube, 3.89 (8.58)
Tail pipe	o.d. & wall thickness	42.7 x 1.2
	Material & Mass [kg (weight lbs)]	Stainless steel tube, 0.65 (1.43)

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

Manual 3-speed (manufacturer/country)	N.A.
Manual 4-speed (manufacturer/country)	N.A.
Manual 5-speed (manufacturer/country)	Std., Mitsubishi Motors Corp./Japan
Automatic (manufacturer/country)	Std., Mitsubishi Motors Corp./Japan
Automatic overdrive (manufacturer/country)	N.A.

Manual Transmission/Transaxle

Number of forward speeds		5
Gear ratios	1st	3.363
	2nd	1.947
	3rd	1.285
	4th	0.939
	5th	0.777
	Reverse	3.083
Synchronous meshing (specify gears)		1, 2, 3, 4, 5
Shift lever location		Floor
Trans. case mat'l. & mass kg (lbs)*		Aluminum alloy, 9.8 (21.5)
Lubricant	Capacity [L (pt.)]	1.8
	Type recommended	Multipurpose gear oil conforming to API GL-4

Clutch (Manual Transmission)

Clutch manufacturer		Aisin Seiki Co., Ltd.	
Clutch type (dry, wet; single, multiple disc)		Dry single plate	
Linkage (hydraulic, cable, rod, lever, other)		Hydraulic	
Max. pedal effort (norm. spring load, new) N (lbs)	Depressed	118 (27)	
	Released	78 (18)	
Assist (spring, power/percent, nominal)		No	
Type pressure plate springs		Diaphragm	
Total spring load (nominal, new) N (lbs)		3481 (783)	
Clutch facing	Facing mfgr. & material coding	Hitachi Chemical Co., Ltd.	
	Facing material & construction	Woven	
	Rivets per facing	16	
	Outside x inside dia. (nominal)	200 x 130	(mm)
	Total eff. area [cm^2 ($in.^2$)]	363 (56.3)	
	Thickness (pressure plate side/ fly wheel side)	3.5/3.5	(mm)
	Rivet depth (pressure plate side/ fly wheel side)	1.6/1.6	(mm)
	Engagement cushion method	Flat-wave springs	
Release bearing type & method lub.		Ball bearing, permanently lubricated	
Torsional damping method, springs, hysteresis		Damper rubbers	

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

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∅ Automatic Transmission/Transaxle

Trade Name		Mitsubishi Motors Corp. F3A21
Type and special features (describe)		Lock up torque converter with automatically operated planetary gear transmission. F3A21
Gear selector	Location (column, floor, other)	Lever: Console mounted
	Ltr./No. designation (e.g. PRND21)	P, R, N, D, 2, L/6
	Shift interlock (yes, no, describe)	Yes, Shift lock with Key inter lock
Gear ratios	1st	2.846
	2nd	1.581
	3rd	1.000
	4th	–
	Reverse	2.176
Max. upshift speed - drive range [km/h (mph)]		1-2 51 (32), 2-3 97 (60)
Max. kickdown speed - drive range [km/h (mph)]		2-1 48 (30), 3-2 91 (57)
Min. overdrive speed [km/h (mph)]		–
Torque converter	Number of elements	Three
	Max. ratio at stall	2.17 : 1
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	240
	Capacity factor "K"*	245
Lubricant	Capacity [refill L(pt.)]	6.1 (12.9)
	Type recommended	DEXRON II or DEXRON automatic trans. fluid
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Std., External liquid
Transmission mass [kg (lbs)] & case material **		Aluminum alloy, 11.4 (25.1)

∅ All Wheel / 4 Wheel Drive

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			4G15 (1.468 Liters)	
Axle Ratio and Tooth Combinations (See 'Power Teams' for axle ratio usage)			MT	AT
Effective final drive ratio (or overall top gear ratio)			3.666	3.200
Transfer ratio and method (chain, gear, etc.)			1.096	1.125
Front drive unit	Ring gear o.d.		176.7	171.6
	No. of teeth	Pinion	18	20
		Ring gear	66	64

Front Drive Unit

Description (integral to trans., etc.)			Separable
Limited slip differential (type)			–
Drive pinion	Type		–
	Offset		–
No. of differential pinions			2
Pinion / differential	Adjustment (shim, etc.)		Shim
	Bearing adjustment		Shim
Driving wheel bearing (type)			Ball bearing
Lubricant	Capacity [L (pt.)]		Refer to transmission spec.
	Type recommended		Refer to transmission spec.

Axle Shafts – Front Wheel Drive

Manufacturer and number used			Mitsubishi Motors Corp., Two
Type (straight, solid bar, tubular, etc.)		Left	Straight bar
		Right	Straight bar
Outer diam. x length* x wall thickness	Manual transaxle	Left	24 x 695
		Right	24 x 368
	Automatic transaxle	Left	24 x 695
		Right	24 x 368
	Optional transaxle	Left	–
		Right	–
Slip yoke	Type		None
	Number of teeth		–
	Spline o.d.		–
Universal joints	Make and mfg. no.	Inner	Mitsubishi Motors Corp.
		Outer	Mitsubishi Motors Corp.
	Number used		Two x Two
	Type, size, plunge	Inner	C.V. joint
		Outer	C.V. joint
	Attach (u-bolt, clamp, etc)		–
	Bearing	Type (plain, anti-friction)	–
		Lubrication (fitting, prepack)	–
Drive taken through (torque tube, arms or springs)			Lower arm & Strut
Torque taken through (torque tube, arms or springs)			Lower arm & Strut

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

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Body Type And/Or Engine Displacement	C52A

Suspension - General Including Electronic Controls

Car leveling	Standard/optional/not avail.		N.A.
	Manual/automatic control		N.A.
	Type (air/hydraulic)		N.A.
	Primary/assist spring		N.A.
	Rear only/4 wheel leveling		N.A.
	Single/dual rate spring		N.A.
	Single/dual ride heights		N.A.
	Provision for jacking		N.A.
Shock absorber damping contols	Standard/option/not avail.		N.A.
	Manual/automatic control		N.A.
	Number of damping rates		N.A.
	Type of actuation (manual/electric motor/air, etc.)		N.A.
	sensors: Lateral acceleration		N.A.
	sensors: Deceleration		N.A.
	sensors: Acceleration		N.A.
	sensors: Road surface		N.A.
Shock absorber (front & rear)	Type		Front: Strut type Rear: Telescopic type
	Make		Kayaba Industry Co., Ltd.
	Piston diameter		Front: ø32 Rear: ø25 (mm)
	Rod diameter		Front: ø22 Rear: ø12.5 (mm)

Suspension – Front

Type and description		Independent strut type
Travel*	Full jounce	110 (mm)
	Full rebound	60 (mm)
Spring	Type (coil, leaf, other) & material	Spring steel
	Insulators (type & material)	–
	Size (coil design height & i.d.)	390 or 394 145.6 or 147.4
	Spring rate [N/mm (lb./in.)]	15.69 (90) or 16.08 (92)
	Rate at wheel [N/mm (lb./in.)]	14.46 (83) or 14.82 (85)
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	S45C or S48C, ø16 (mm)

Suspension – Rear

Type and description			3 Link torsionaxle
Travel*	Full jounce		130 (mm)
	Full rebound		60 (mm)
Spring	Type (coil, leaf, other) & material		Spring steel
	Size (length x width, coil design height & i.d.)		349 85.2
	Spring rate [N/mm (lb./in.)]		16.17 (92)
	Rate at wheel [N/mm (lb./in.)]		15.68 (90)
	Insulators (type & material)		Rubber pad
	If leaf: No. of leaves		–
	If leaf: Shackle (comp. or tens.)		–
Stabilizer	Type (link, linkless, frameless)		–
	Material & bar diameter		–
Track bar (type)			

* Define load condition:

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Body Type And/Or Engine Displacement	C52A

Brakes – Service

Description				–
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)			Sumitomo Electric Industry Co., Ltd., Disc
	Rear (disc or drum)			AKEBONO Brake Industry Co., Ltd., Drum
Valving type (proportion, delay, metering, other)				Proportioning Valve
Power brake (std., opt., n.a.)				Std.
Booster type (remote, integral, vac., hyd., etc.)				Integral
Vacuum	Source (inline, pump, etc.)			Inline
	Reservoir (volume in.³)			–
	Pump-type (elec, gear driven, belt driven)			N.A.
Traction control	Operational speed range			N.A.
	Type engine intervention (electronic, mech.)			N.A.
Anti-lock device	Front / rear (std., opt., n.a.)			–
	Manufacturer			–
	Type (electronic, mech.)			–
	Number sensors or circuits			–
	Number anti-lock hydraulic circuits			–
	Integral or add-on system			–
	Yaw control (yes, no)			–
	Hydraulic power source (elec., vac. mfr., pwr. stng.)			–
Effective area [cm²(in.²)]*				F: 160 (24.8) / R: 208(32.2)
Gross Lining area [cm²(in.²)]**(F/R)				F: 165 (25.6) / R: 208(32.2)
Swept area [cm²(in.²)]***(F/R)				F: 1099(170.3) / R: 396(61.4)
Rotor	Outerworking diameter		F/R	F: 241 / R: –
	Inner working diameter		F/R	F: 152 / R: –
	Thickness		F/R	F: 13 / R: –
	Material & type (vented/solid)		F/R	F: Cast iron (Solid) / R: –
Drum	Diameter & width		F/R	F: – /R: 180 & 39.5
	Type and material		F/R	F: – / R: Cast iron
Wheel cylinder bore				F: 51.1 / R: 19.05
Master cylinder	Bore/stroke		F/R	Bore 20.64 / Stroke (Pri : 13, Sec : 15)
Pedal arc ratio				4.5
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]				11033 (1608)
Lining clearance			F/R	F:No major adjustment required, R:0.15-0.35(Self adjusting)
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		Bonded
		Rivet size		–
		Manufacturer		Sumitomo Electric Industry Co., Ltd.
		Lining code*****		SUMITOMO M9207H EE
		Material		Molded
		****	Primary or out-board	98 x 40.9 x 10
		Size	Secondary or in-board	98 x 40.9 x 10
		Shoe thickness (no lining)		5.0
	Rear wheel	Bonded or riveted (rivets/seg.)		Bonded
		Manufacturer		AKEBONO Brake Industry Co., Ltd.
		Lining code*****		AKP 330 FF
		Material		Molded
		****	Primary or out-board	148.6 x 35 x 4.3
		Size	Secondary or in-board	148.6 x 35 x 4.3
		Shoe thickness (no lining)		1.6

* 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 Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•) _____

METRIC (U.S. Customary)

Body Type And/Or Engine Displacement	C52A	
	MNMEL, MKMEL	MNDEL, MKDEL

Tires And Wheels (Standard)

Tires	Size (load range, ply)		P155/80R13, B	
	Type (bias, radial, steel, nylon, etc.)		Radial	
	Inflation pressure (cold) for recommended max. vehicle load	Front [kPa (psi)]	200 (29)	
		Rear [kPa (psi)]	200 (29)	
	Rev./mile–at 70 km/h (45 mph)		915	
Wheels	Type & material		Disc, Steel	
	Rim (size & flange type)		13 x 4 1/2-J	13 x 5-J
	Wheel offset		46	
	Attachment	Type (bolt or stud)	Stud	
		Circle diameter	114.3	
		Number & size	Four M12 x 1.5 (Metric)	
Spare	Tire and wheel		T105/70D14 High pressure tire	
	Storage position & location (describe)		On cargo floor	

Tires And Wheels (Optional)

Tire size (load range, ply)		–	
Type (bias, radial, steel, nylon, etc.)		–	–
Wheel (type & material)	*1	–	Disc, Aluminum
Rim (size, flange type and offset)	*1	–	13 x 5J, 46
Tire size (load range, ply)		–	
Type (bias, radial, steel, nylon, etc.)		–	
Wheel (type & material)		–	
Rim (size, flange type and offset)		–	
Tire size (load range, ply)		–	
Type (bias, radial, steel, nylon, etc.)		–	
Wheel (type & material)		–	
Rim (size, flange type and offset)		–	
Tire size (load range, ply)		–	
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)		–	

*1: C52AMKDEL 2

Brakes – Parking

Type of control		1 Handle, Hand-operated
Location of control		Between front seats
Operates on		Rear wheels
If separate from service brakes	Type (internal or external)	–
	Drum diameter	–
	Lining size (length x width x thickness	–

MVMA Specifications

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•)

METRIC (U.S. Customary)

Body Type And/Or Engine Displacement	C52A	
	MNMEL, MKMEL	MNDEL, MKDEL

Steering

Manual (std., opt., n.a.)				Std.	
Power (std., opt., n.a.)				Opt.	
Adjustable steering wheel/column (tilt, telescope, other)		Type		Tilt & Telescopic	
		Manufacturer		Mitsubishi Motors Corporation	
		(std., opt., n.a.)		N.A.	Opt.
Wheel diameter** (W9) SAE J1100		Manual		370	370,376(Opt.)
		Power		370	370,376(Opt.)
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)		10.0	
		Curb to curb (l. & r.)		9.2	
	Inside rear	Wall to wall (l. & r.)		–	
		Curb to curb (l. & r.)		–	
Scrub Radius*				-2	
Manual	Gear	Type		Rack & Pinion	
		Manufacturer		Koyo Seiko Co.,Ltd.	
		Ratios	Gear	∞	
			Overall	22	
	No. wheel turns (stop to stop)			4.28	
Power	Type (coaxial, elec., hyd., etc.)			Coaxial	
	Manufacturer			Koyo Seiko Co.,Ltd.	
	Gear	Type		Rack & Pinion	
		Ratios	Gear	∞	
			Overall	16	
	Pump (drive)			V-belt	
	No. wheel turns (stop to stop)			3.15	
Linkage	Type			Trailing equal length tie rods	
	Location (front or rear of wheels, other)			Rear	
	Tie rods (one or two)			Two	
Steering axis	Inclination at camber (deg.)			12°30'	
	Bearings (type)	Upper		Ball bearing	
		Lower		Ball joint	
		Thrust		N.A.	
Steering spindle/knuckle & joint type				Ball	
Wheel spindle/hub	Diameter	Inner bearing		38.100	
		Outer bearing		38.100	
	Thread (size)			M22 x 1.5 (Metric)	
	Bearing (type)			Tapered roller	

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

MVMA Specifications

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•) _____

METRIC (U.S. Customary)

Body Type And/Or Engine Displacement	C52A	
	MNMEL, MKMEL	MNDEL, MKDEL

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	2°20'
		Camber (deg.)	0°
		Toe-in [outside track-mm (in.)]	0 ± 3 (0 ± 0.118)
	Service reset*	Caster	Set as above
		Camber	Set as above
		Toe-in	Set as above
	Periodic M.V. inspection	Caster	–
		Camber	–
		Toe-in	–
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	-40' ± 30'
		Toe-in [outside track-mm (in.)]	2 ± 3 (0.079 ± 0.118)
	Service reset*	Camber	Set as above
		Toe-in	Set as above
	Periodic M.V. inspection	Camber	–
		Toe-in	–

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

Electrical – Instruments and Equipment

Speedometer	Type (analog, digital, std., opt.)	Analog (Std.)	
	Trip odometer (std., opt., n.a.)	Std.	
EGR maintenance indicator		N.A.	
Charge indicator	Type	Voltage relay	
	Warning device (light, audible)	Light	
Temperature indicator	Type	Cross coil	
	Warning device (light, audible)	Driving pointer (N.A.)	
Oil pressure indicator	Type	Pressure switch	
	Warning device (light, audible)	Light	
Fuel indicator	Type	Cross coil	
	Warning device (light, audible)	Driving pointer & Light	
Windshield wiper	Type (standard)	Electric two speed	
	Type (optional)	N.A.	with intermittent
	Blade length	500/425	
	Swept area [cm²(in.²)]	6340 (983)	
Windshield washer	Type (standard)	Electric	
	Type (optional)	N.A.	
	Fluid level indicator (light, audible)	N.A.	
Rear window wiper, wiper-washer (std., opt., n.a.)		Opt.	
Horn	Type	80 diameter	
	Number used	One	Two
Other		Brake system and parking brake warning light, Fasten belts warning light.	

MVMA Specifications

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•) _____

METRIC (U.S. Customary)

Engine Description		4G15 (1.468 Liters)	
Engine Code		MT	AT
Electrical – Supply System		Yuasa Battery Co., Ltd., Japan Storage Battery Co., Ltd.,	
Battery	Manufacturer	Matsushita Battery Ind. Co., Ltd. or Shin-Kobe Electric Machinery Co., Ltd.	
	Model, std., (opt.)	55D23R	
	Voltage	12	
	Amps at 0°F cold crank	356	
	Minutes-reserve capacity	99	
	Amp/hrs. - 20 hr. rate	60	
	Location	Front, right side of engine compartment	
Alternator	Manufacturer	Mitsubishi Electric Corp.	
	Rating (idle/max. rpm)	75A	
	Ratio (alt. crank/rev.)	2.25	
	Output at idle (rpm, park)	–	
	Optional (type & rating)	N.A.	
Regulator	Type	Voltage control	
Electrical – Starting System			
Motor	Manufacturer	Mitsubishi Electric Corp.	
	Current drain _____ °F		
	Power rating [kw (hp)]	0.7 (0.9)	0.9 (1.2)
Motor drive	Engagement type	Solenoid	
	Pinion engages from (front, rear)	Front	
Electrical – Ignition System			
Type	Electronic (std., opt., n.a.)	Std.	
	Other (specify)	–	
Coil	Manufacturer	Diamond Electric Manufacturing Co., Ltd.	
	Model	F-088	
	Current – Engine stopped – A	0	
	Current – Engine idling – A	1.4	
Spark plug	Manufacturer	NGK Spark Plug Co., Ltd., Champion Spark Plug Co., Ltd. or Nippon Denso	
	Model	BPR6ES-11, W20EPR-11, RN9YC4	
	Thread (mm)	14	
	Tightening torque [N•m (lb. ft)]	20 to 30 (15 to 22)	
	Gap	1.0 to 1.1 (mm)	
	Number per cylinder	1	
Distributor	Manufacturer	Mitsubishi Electric Corp.	
	Model	T3T64173	
Electrical – Suppression			
Locations & type			

MVMA Specifications

Vehicle Models Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•) _____

METRIC (U.S. Customary)

Body Type	C52A

Body

Structure	Monocock body
Bumper system front - rear	Impact absorbing system Fascia (polyurethane) Front : Energy absorber (polyurethane), Rear : Shock absorber Reinforcement (Steel)
Anti-corrosion treatment	Cathodic ED paint Extended use of galvanized steel Wax injection Stone chipping resistance coating

Body – Miscellaneous Information

Type of finish (lacquer, enamel, other)		Heat setting acrylic enamel
Hood	Material & mass	Steel, 13.3 (kg)
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	–
	Release control (internal, external)	Internal
Trunk lid	Material & mass	– (kg)
	Type (counterbalance, other)	–
	Internal release control (elec., mech., n.a.)	–
Hatch-back lid	Material & mass	Steel, 15.1 (Include Glass & Others) (kg)
	Type (counterbalance, other)	Gas spring
	Internal release control (elec., mech., n.a.)	Mech
Tailgate	Material & mass	–
	Type (drop, lift, door)	–
	Internal release control (elec., mech., n.a.)	–
Vent window control (crank, friction, pivot, power)	Front	–
	Rear	–
Window regulator type (cable, tape, flex, drive, etc.)	Front	Cable
	Rear	–
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Bucket, Spring
	Rear	Bench, Foam
	3rd seat	–
Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Bucket, Spring
	Rear	50/50, Foam
	3rd seat	–

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•) _____

Body Type	C52A

Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.) Standard / optional	First seat	–	–	–
		Second seat	3 point seat belt with ELR	2 point seat belt with manual adjusting device	3 point seat belt with ELR
		Third seat	–	–	–
Passive	Type & description (air bag, motorized - 2-point belt, fixed belt, knee bolster, manual - lap belt) Standard / optional	First seat	Motorized 2 point belt with ELR, Knee bolster & manual lap belt with ELR	–	Motorized 2 point belt with ELR, Knee bolster & manual lap belt with ELR/ALR
		Second seat	–	–	–
		Third seat	–	–	–

Glass	SAE Ref. No.	
Windshield glass exposed surface area [cm^2($in.^2$)]	S1	9740 (1510)
Side glass exposed surface area [cm^2($in.^2$)] - total 2-sides	S2	14564 (1129)
Backlight glass exposed surface area [cm^2($in.^2$)]	S3	5200 (806)
Total glass exposed surface area [cm^2($in.^2$)]	S4	29504 (4573)
Windshield glass (type)		Curved-laminated plate
Side glass (type)		Curved-tempered plate
Backlight glass (type)		Curved-tempered plate

Headlamps

Description - sealed beam, halogen, replaceable bulb, etc.	Halogen, Replaceable bulb
Shape	Proper Type
Lo-beam type (2A1, 2B1, 2C1, etc.	#9006
Quantity	2
Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	#9005
Quantity	2

Frame

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

MVMA Specifications

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•)

METRIC (U.S. Customary)

Body Type	C52A

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

Air conditioning (manual, auto, temp control)		Opt. (Manual temp control)
Clock (digital, analog)		Opt. (Digital)
Compass / thermometer		N.A.
Console (floor, overhead)		Floor console
Defroster, elec. backlight		Std.
Electronic	Diagnostic monitor (integrated, individual)	Integrated
	Instrument cluster (list instruments)	N.A.
	Keyless entry	N.A.
	Tripminder (avg. spd., fuel)	N.A.
	Voice alert (list items)	N.A.
	Other	N.A.
Fuel door lock (remote, key, electric)		Remote & Key
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	N.A.
	Illuminated entry system (list lamps, activation)	N.A.
	Other	N.A.
Mirrors	Day / night (auto. man.)	Std. (Man.)
	L.H. (remote, power, heated)	Std. (Remote), Opt. (Power)
	R.H. (convex, remote, power, heated)	Std. (Remote), Opt. (Power)
	Visor vanity (RH / LH, illuminated)	N.A.
Navigation system (describe)		N.A.
Parking brake-auto release (warning light)		N.A.

MVMA Specifications

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•)

METRIC (U.S. Customary)

Engine Description / Engine Code	C52A	
	MNMEL, MKMEL	MNDEL, MKDEL

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

Power equipment	Deck lid (release, pull down)		N.A.	
	Door locks (manual, automatic, describe system)		N.A.	
	Seats	2 - 4 - 6 way, etc.	N.A.	
		Reclining (R.H., L.H.)	N.A.	
		Memory (R.H., L.H., present, recline)	N.A.	
		Lumbar, hip, thigh, support	N.A.	
		Heated (R.H., L.H., other)	N.A.	
	Side windows		N.A.	
	Vent windows		N.A.	
	Rear windows		N.A.	
Radio systems	Antenna (location, whip, w / shield, power)		Opt. (Whip on Front Fender)	
	Standard	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	N.A.	
	Optional		Opt. (AM/FM MPX ETR)	
			N.A.	Opt. (AM/FM MPX ETR, Cassette Stereo)
	Speaker (number, location)		Opt. (4 speakers, I/PNL R/SHELF)	Opt. (6 speakers, I/PNL R/SHELF, F/DOOR)
Roof: open air or fixed (flip-up, sliding, "T")			N.A.	
Speed control device			N.A.	
Speed warning device (light, buzzer, etc.)			N.A.	
Tachometer (rpm)			N.A.	
Telephone system (describe)			N.A.	
Theft deterrent system			Disc tumbler, Key locks on ignition switch, Doors, Fuel lid, Luggage compartment & Lockable steering.	

MVMA Specifications

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•) _____

METRIC (U.S. Customary)
Vehicle Dimensions See Key Sheets for definitions

All dimensions to ground are for comparative purposes only. Dimensions are to be shown for all base body models of each vehicle line.
SAE Ref. no. refers to the definition published in SAE Recommended Practice J1100 "Motor Vehicle Dimensions," unless otherwise specified.

Body Type	SAE Ref. No.	C52A
∅ Width		
Tread (front)	W101	1430
Tread (rear)	W102	1430
Vehicle width	W103	1670
Body width at Sg RP (front)	W117	1650
Vehicle width (front doors open)	W120	4004
Vehicle width (rear doors open)	W121	-
Tumble-home (deg.)	W122	22.5°
Outside mirror width	W410	1950
∅ Length		
Wheelbase	L101	2385
Vehicle length	L103	4030
Overhang (front)	L104	900
Overhang (rear)	L105	745
Upper structure length	L123	2660
Rear wheel C/L "X" coordinate	L127	2380
∅ Height*		
Passenger distribution (front/rear)	PD1,2,3	Front : 2, Rear :3
Trunk/cargo load		-
Vehicle height	H101	1320
Cowl point to ground	H114	883
Deck point to ground	H138	865
Rocker panel-front to ground	H112	153
Rocker panel-rear to ground	H111	136
Windshield slope angle	H122	60.5°
Backlight slope angle	H121	41.5°
Ground Clearance*		
Front bumper to ground	H102	216
Rear bumper to ground	H104	222
Bumper to ground (front at curb mass (wt.))	H103	247
Bumper to ground (rear at curb mass (wt.))	H105	296
Angle of approach (degrees)	H106	18.5°
Angle of departure (degrees)	H107	14°
Ramp breakover angle (degrees)	H147	9°
Axle differential to ground (front/rear)	H153	170
Min. running round clearance	H156	90
Location of min. run. grd. clear.		Exhaust Pipe

* All vehicle **height** and **ground** clearances are measured at the Manufacturer's Design Load Weight.
Manufacturers Design Load Weight is defined with indicated passenger distribution and trunk/cargo load, unless otherwise specified.
All linear dimensions are in millimeters (inches) unless otherwise noted.

MVMA Specifications

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•)

METRIC (U.S. Customary)
Vehicle Dimensions See Key Sheets for definitions

Body Type		C52A
∅ **Front Compartment**	**SAE Ref. No.**	
SgRP front, "X" coordinate	L31	1310
Effective head room	H61	972
Max. eff. leg room (accelerator)	L34	1065
SgRP to heel point	H30	250
SgRP to heel point	L53	830
Back angle	L40	25°
Hip angle	L42	94°
Knee angle	L44	118°
Foot angle	L46	87°
Design H-point front travel	L17	220
Normal driving & riding seat track trvl.	L23	220
Shoulder room	W3	1360
Hip room	W5	1340
Upper body opening to ground	H50	1214
Steering wheel maximum diameter*	W9	376
Steering wheel angle	H18	25.3°
Accel. heil pt. to steer. whl. cntr	L11	416
Accel. heel pt. to steer. whl. cntr	H17	628
Undepressed floor covering thickness	H67	10
∅ **Rear Compartment**		
SgRP point couple distance	L50	700
Effective head room	H63	937
Min. effective leg room	L51	825
SgRP (second to heel)	H31	320
Knee clearance	L48	-26
Shoulder room	W4	1324
Hip room	W6	1080
Upper body opening to ground	H51	-
Back angle	L41	26°
Hip angle	L43	86°
Knee angle	L45	77°
Foot angle	L47	106°
Depressed floor covering thickness	H73	10
Luggage Compartment		
Usable luggage capacity [L (cu. ft.)]	V1	-
Liftover height	H195	-
Interior Volumes (EPA Classification)		
Vehicle class		Subcompact
Interior volume index (cu. ft.)**		95.8
Trunk / cargo index (cu. ft.)		11.5

* See page 14.
** Includes passenger and trunk / cargo index - see definition page 32.

MVMA Specifications

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Body Type	SAE Ref. No.	C52A
Station Wagon – Third Seat		
Seat facing direction	SD1	–
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	–
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 belt	W204	–
Min. rear opening width above belt	W205	–
Cargo height	H201	–
Rear opening height	H202	–
Tailgate to ground height	H250	–
Front seat back to load floor height	H197	–
Cargo volume index [$m^3(ft.^3)$]	V2	–
Hidden cargo volume index [$m^3(ft.^3)$]	V4	–
Cargo volume. index-rear of 2-seat	V10	–
Hatchback – Cargo Space		Normal Seat
Cargo length at front seatback height	L208	1082
Cargo length at floor (front)	L209	1243
Cargo length at second seatback height	L210	451
Cargo length at floor (second)	L211	638
Front seatback to load floor height	H197	639
Second seatback to load floor height	H198	455
Cargo volume index [$m^3(ft.^3)$]	V3	0.98 (34.7)
Hidden cargo volume index [$m^3(ft.^3)$]	V4	–
Cargo volume index-rear of 2-seat	V11	0.33 (11.5)

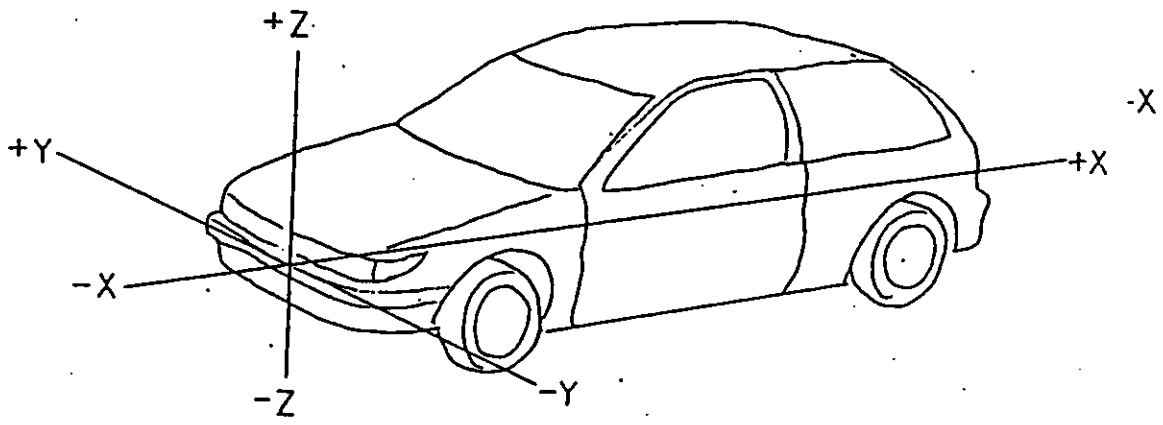
MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line Mitsubishi Mirage
Model Year 1990 Issued 1989-4 Revised (•) _____

Body Type	C52A

Vehicle Fiducial Marks

Fiducial Mark Number*		Define Coordinate Location
Front		
Rear		Datum plane definition – Vertical longitudinal plane through the longitudinal center of the car. Vertical transverse plane through the front wheel center. Horizontal plane through the lower surface of the front floor panel.
Fiducial Mark Number		
Front	W21*	363.3
	L54*	30.5
	H81*	-18.3
	H161*	191.0
	H163*	–
Rear	W22*	472.0
	L55*	2910.0
	H82*	224.5
	H162*	443.8
	H164*	–

* Reference – SAE Recommended Practice. J182, Motor Vehicle Fiducial Marks.

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line Mitsubishi Mirage

Model Year 1990 Issued 1989-4 Revised (•) _____

Code	Model	Vehicle Mass (weight)							
		CURB MASS, kg. (lb.)*			% PASS MASS DISTRIBUTION				
					Pass in Front		Pass in Rear		
		Front	Rear	Total	Front	Rear	Front	Rear	ETWC** Code
C52AMNMEL	2/7	615 (1356)	385 (849)	1000 (2205)	50	50	18	82	M
C52AMKMEL	2/7	630 (1389)	385 (849)	1015 (2238)	50	50	18	82	N
C52AMNDEL	2/7	615 (1356)	385 (849)	1000 (2205)	50	50	18	82	M
C52AMKDEL	2/7	630 (1389)	385 (849)	1015 (2238)	50	50	18	82	N

* 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) Calculation (Kg. (lbs.)

Shipping Mass (weight) = Curb Weight Less:

35kg (77 lbs.)

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line Mitsubishi Mirage

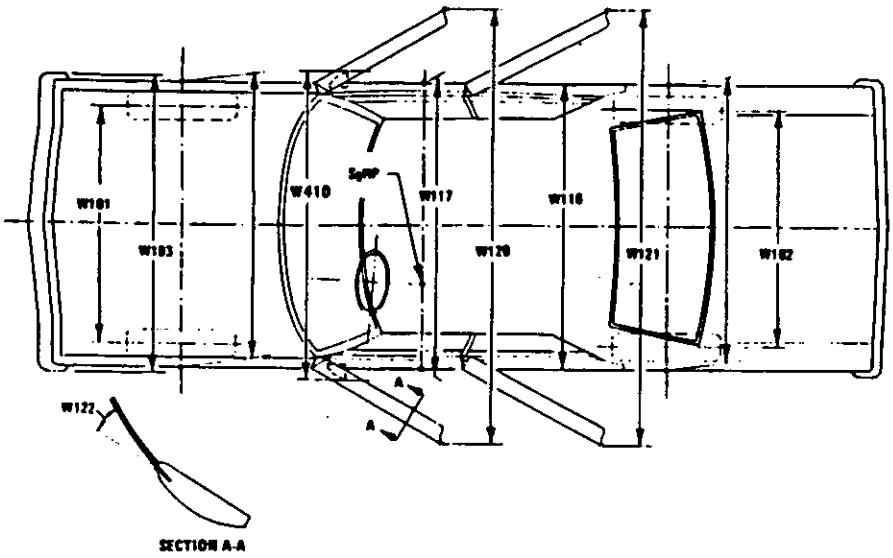
Model Year 1990 Issued 1989-4 Revised (•) _____

Code	Equipment	Optional Equipment Differential Mass (weight)* MASS, kg. (lb.) Front	Rear	Total	Remarks Restrictions, Requirements
	AM/FM & Cassette	5.0	1.5	6.5	
		(11)	(3)	(14)	
	Power Steering	6.0	0	6.0	
		(13)	0	(13)	
	Rear Wiper	-0.2	2.0	1.8	
		(-0.4)	(4)	(3.6)	
	Air Conditioner	20.0	0	20.0	
		(44)	0	(44)	
	Power Window	2.5	2.1	4.6	
		(5.5)	(4.5)	(10)	

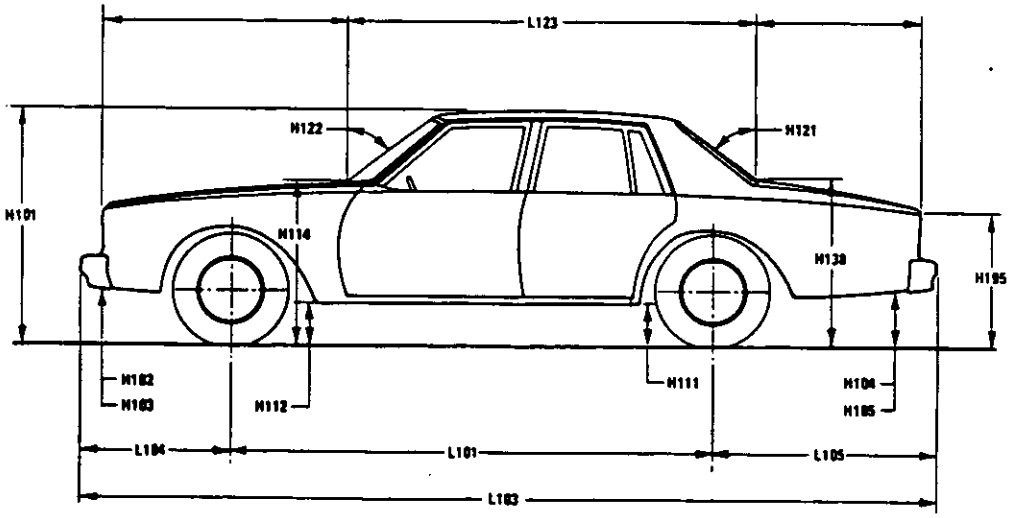
* Also see Engine - General Section for dressed engine mass (weight).

Exterior Vehicle And Body Dimensions – Key Sheet

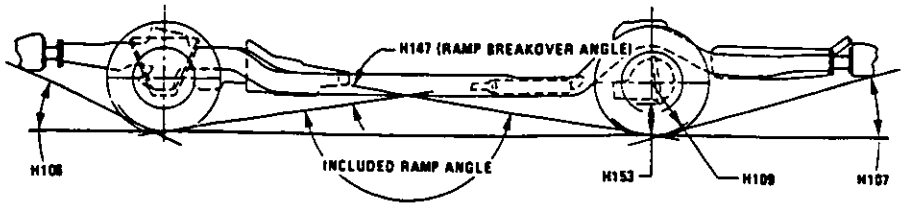
Exterior Width



Exterior Length & Height



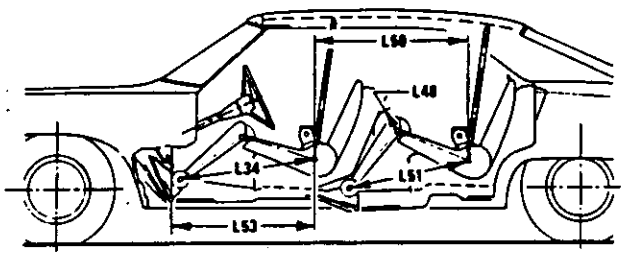
Exterior Ground Clearance

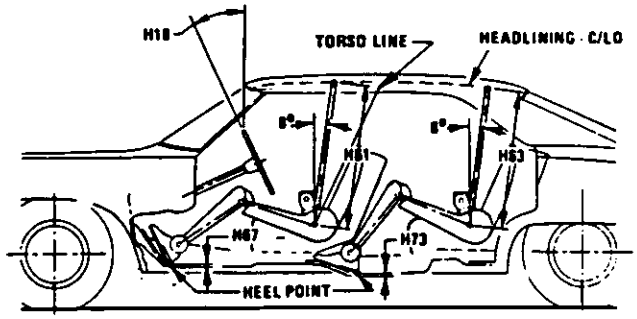


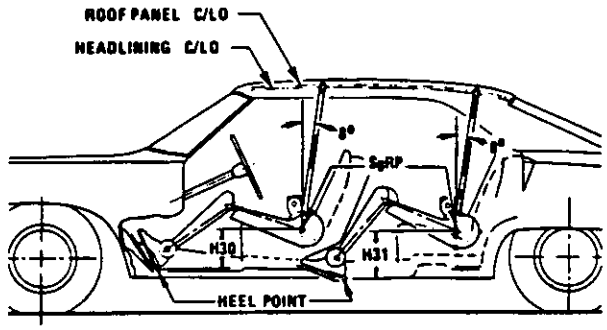
MVMA Specifications Form

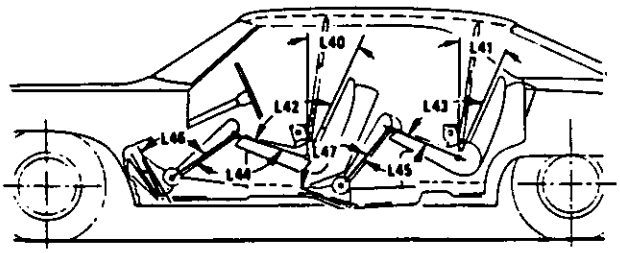
METRIC (U.S. Customary)

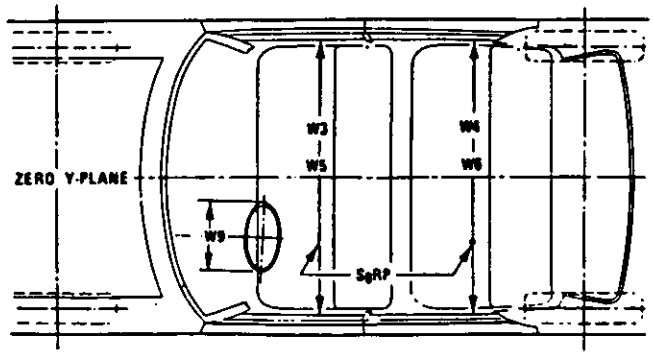
Interior Vehicle And Body Dimensions – Key Sheet

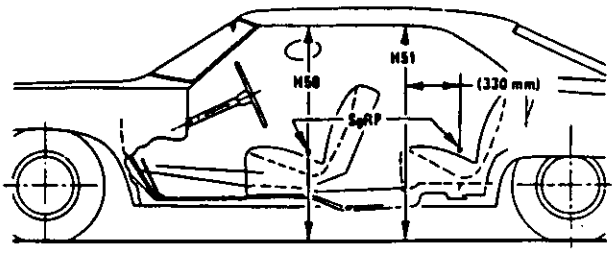










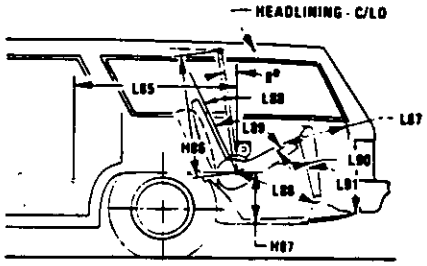


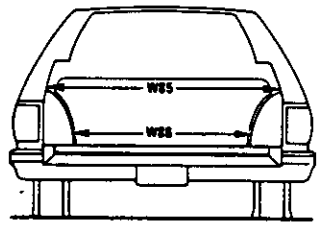
MVMA Specifications Form

METRIC (U.S. Customary)

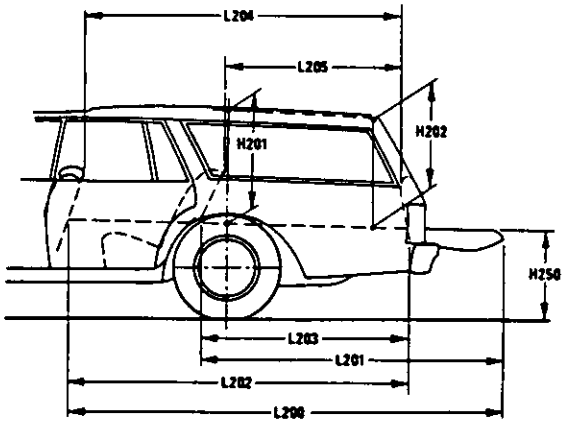
Interior Vehicle And Body Dimensions – Key Sheet

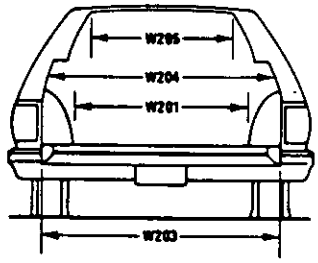
Third Seat



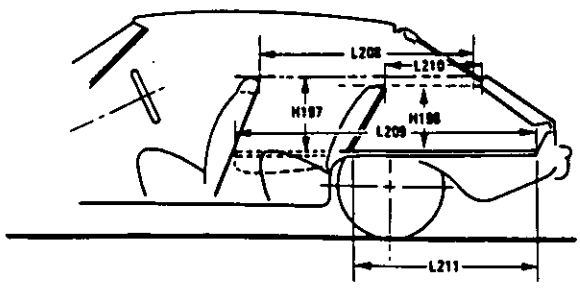


Cargo Space





Station Wagon



Hatchback

MVMA Specifications

METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

Seating Reference Point

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

Width Dimensions

W101 TREAD – FRONT. The dimension measured between the tire centerlines at the ground.

W102 TREAD – REAR. The dimension measured between the tire centerlines at the ground. In case of dual wheels, the dimension will be measured to the centerline of tire and wheel assemblies.

W103 VEHICLE WIDTH. The maximum dimension measured between the widest point on the vehicle, excluding exterior mirrors, flexible mud flaps, marker lamps, but including bumpers, moldings, sheet metal protrusions or dual wheels, if standard equipment.

W117 BODY WIDTH AT SgRP – FRONT. The dimension measured laterally between the widest points on the body at the SgRP-front, excluding door handles, applied moldings, or appliques.

W120 VEHICLE WIDTH – FRONT DOORS OPEN. The dimension measured between the widest point on the front doors in maximum hold-open position.

W121 VEHICLE WIDTH – REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door on only one side, this dimension is to the zero "Y" plane.

W122 TUMBLE – HOME. STRAIGHT SIDE GLASS. The angle measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane.
CURVED SIDE GLASS. The angle measured from a vertical to a chord extending from the upper DLO to the lower DLO at the outside surface of the front door glass at the front SgRP "X" plane.

W410 OUTSIDE MIRROR WIDTH: The dimension between the widest point on the outside mirrors. The standard right and left mirror adjusted for normal driving will be shown unless otherwise noted. When only one outside mirror is standard, the dimension will be to the zero "Y" plane.

Length Dimensions

L101 WHEELBASE (WB). The dimension measured longitudinally between front and rear wheel centerlines. In case of dual rear axles, the dimension shall be to the midpoint of the centerlines of the rear wheels.

L103 VEHICLE LENGTH. The maximum dimension measured longitudinally between the foremost point and the rearmost point on the vehicle, including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.

L104 OVERHAND – FRONT. The dimension measured longitudinally from the centerline of the front wheels to the foremost point on the vehicle including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.

L105 OVERHANG – REAR. The dimension measured longitudinally from the centerline of the rear wheels; or in the case of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

L123 UPPER STRUCTURE LENGTH. The dimension measured longitudinally from the cowl point to the deck point.

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

Height Dimensions

H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.

H111 ROCKER PANEL – REAR TO GROUND. The dimension measured vertically from the bottom of the rocker or side quarter panel at the front of the rear wheel opening, excluding flanges, to ground.

H112 ROCKER PANEL – FRONT TO GROUND. The dimension measured vertically from the foremost point on the bottom of the rocker panels, excluding flanges, to ground.

H114 COWL POINT TO GROUND. Measured at zero "Y" plane.

H121 BACKLIGHT SLOPE ANGLE. The angle between the vertical reference line and the surface of backlight at vehicle zero "Y" plane. For curve backlight, the angle is to chord of backlight arc from lower DLO to upper DLO.

H122 WINDSHIELD SLOPE ANGLE. The angle between the vertical reference line and a chord of the windshield arc running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the angle to be measured will be formed by a chord 457 mm (18.0 in.) long drawn from the lower DLO to the intersecting point on the windshield.

H138 DECK POINT TO GROUND. Measured at zero "Y" plane.

H109 STATIC LOAD – TIRE RADIUS – REAR. Specified by the manufacturer in accordance with composite TIRE SECTION STANDARD.

Ground Clearance Dimensions

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

H103 FRONT BUMPER TO GROUND – CURB MASS (WT.). Measured in the same manner as H102.

H104 REAR BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment.

H105 REAR BUMPER TO GROUND – CURB MASS (WT.). Measured in the same manner as H104.

H106 ANGLE OF APPROACH. The angle measured between a line tangent to the front tire static loaded radius arc and the initial point of structural interference forward of the front tire to ground. The limiting structural component shall be designated.

H107 ANGLE OF DEPARTURE. The angle measured between a line tangent to the rear tire static loaded radius arc and the initial point 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.

MVMA Specifications

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

Glass Areas

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

Fiducial Mark Dimensions

Fiducial Mark – Number 1

L54 "X" coordinate.
W21 "Y" coordinate.
H81 "Z" coordinate.
H161 Height "Z" coordinate to ground at curb weight.
H163 Height "Z" coordinate to ground.

Fiducial Mark – Number 2

L55 "X" coordinate.
W22 "Y" coordinate.
W82 "Z" coordinate.
H162 Height "Z" coordinate to ground at curb weight.
H164 Height "Z" coordinate to ground.

Front Compartment Dimensions

L11 ACCELERATOR HEEL POINT TO STEERING WHEEL CENTER. The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering wheel rim.

L17 DESIGN H-POINT – FRONT TRAVEL. The dimension measured horizontally between the design H-point – front in the foremost and rearmost seat track positions. (See SAE J1100)

L23 NORMAL DRIVING AND RIDING SEAT TRACK TRAVEL. The dimension measured horizontally between a point on the design H-point travel line from the SgRP to the displaced point on the design H-point travel line with the seat moved to the foremost seat position, but not to include seat track travel used for purposes other than normal driving and riding positions. (See SAE J1100).

L31 SgRP – FRONT. "X" COORDINATED.

L34 MAXIMUM EFFECTIVE LEG ROOM – ACCELERATOR. The dimension measured along a line from the ankle pivot center to the SgRP – front plus 254 mm (10.0 in.) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.

L-40 BACK ANGLE – FRONT. The angle measured between a vertical line through the SgRP – front and the torso line. If the seatback is adjustable, use the normal driving and riding position specified by the manufacturer.

L-42 HIP ANGLE – FRONT. The angle measured between torso line and thigh centerline.

L44 KNEE ANGLE – FRONT. The angle measured between thigh centerline and lower leg centerline measured on the right leg.

L46 FOOT ANGLE – FRONT. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref SAE J826.

L53 SgRP – FRONT TO HEEL. The dimension measured horizontally from the SgRP – front to the accelerator heel point.

W3 SHOULDER ROOM – FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP – front at height between the belt line and 254 mm (10.0 in.) above the SgRP – front, excluding the door assist strap and attaching parts.

W5 HIP ROOM – FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP – front within 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP – front and 76 mm (3.0 in.) fore and aft of the SgRP – front.

W9 STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. Define if other than round.

H7 ACCELERATOR HEEL POINT TO THE STEERING WHEEL CENTER. The dimension measured vertically from the AHP – front to the intersection of the steering column centerline to a plane tangent to the upper surface of the steering wheel rim.

H18 STEERING WHEEL ANGLE. The angle measured from a vertical to the surface plane of the steering wheel.

H30 SgRP – FRONT TO HEEL. The dimension measured vertically from the SgRP – front to the accelerator heel point.

H50 UPPER BODY OPENING TO GROUND – FRONT. The dimension measured vertically from the trimmed body opening to the ground on the SgRP – front "X" plane.

H61 EFFECITVE HEAD ROOM – FRONT. The dimension measured along a line 8 deg. rear of vertical from the SgRP – front to the headlining plus 102 mm (4.0in.).

H67 FLOOR COVERING THICKNESS – UNDEPRESSED – FRONT. The dimension measured vertically from the surface of the undepressed floor covering to the underbody sheet metal at the accelerator heel point.

Rear Compartment Dimensions

L-41 BACK ANGLE – SECOND. The angle measured between a vertical line through the SgRP – second and the torso line.

L43 HIP ANGLE – SECOND. The angle measured between torso line and thigh centerline.

L45 KNEE ANGLE – SECOND. The angle measured between thigh centerline and lower leg centerline.

L47 FOOT ANGLE – SECOND. The angle measured between 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.

MVMA Specifications

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

Luggage Compartment Dimensions

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

Interior Volumes (EPA Classification)

The Interior Volume Index is listed for each body style except two seaters. The Interior Volume Index estiamtes 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 51 mm (2.0 in.). With rear-facing third seat, dimension is measured to closure.

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

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

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

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

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

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

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

H87 SgRP – THIRD TO HEEL POINT.

SD1 SEAT FACING DIRECTION – THIRD.

Station Wagon – 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 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.

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:

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

Measured in mm:

$$\frac{W4 \times H201 \times L204}{10^9} = m^3 \text{ (cubic meter)}$$

MVMA Specifications

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

V4 HIDDEN LUGGAGE CAPACITY – REAR OF FRONT SEAT. The total volumes of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the front seat.

V5 TRUCKS AND MPV'S WITH OPEN AREA.
Measured in inches:

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

Measured in mm:

$$\frac{L506 \times W500 \times H503}{10^9} = m^3 \text{ (cubic meter)}$$

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

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

Measured in mm:

$$\frac{L204 \times W500 \times H505}{10^9} = m^3 \text{ (cubic meter)}$$

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:

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

Measured in mm:

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

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

L208 CARGO LENGTH AT FRONT SEATBACK HEIGHT. The minimum horizontal dimension from the "X" plane tangent to the rearmost surface of the driver's seatback to the inside limiting interference of the hatchback door on the vehicle zero "Y" plane.

L209 CARGO LENGTH AT FLOOR – FRONT – 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 "X" 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 seatback to the undepressed floor covering.

V3 HATCHBACK.
Measured in inches:

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

Measured in mm:

$$\frac{\frac{L208 + L209}{2} \times W4 \times H197}{10^9} = m^3 \text{ (cubic meter)}$$

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:

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

Measured in mm:

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

MVMA Specifications

METRIC (U.S. Customary)

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