

# MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

# 1990

<b>Manufacturer</b> Mitsubishi Motors Corporation	<b>Vehicle Line</b> Mitsubishi Eclipse FWD	
<b>Mailing Address</b> 33-8, Shiba 5-chome, Minato-ku, Tokyo, 108, Japan	<b>Issued</b> 1988-8	<b>Revised</b>

Direct questions concerning these specifications to the manufacturer listed above.

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



Motor Vehicle Manufacturers Association  
of the United States, Inc.

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# MVMA Specifications Form

METRIC (U.S. Customary)

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### NOTE:

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

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

Vehicle Line Mitsubishi Eclipse  
Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

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

Model Description & Drive (FWD/RWD/4WD/4WD)*	Introduction Date	Make, Vehicle Models, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load—Kilograms (Pounds)
2 DOOR Coupe (FWD)		D21AMNJEL 4M/9M D21AMRJEL 4M/9M D21AMNHEL 4M/9M D21AMRHEL 4M/9M D22AMNHML 4M/9M D22AMRHML 4M/9M D22AMNHFL 4M/9M	4 (2/2)	28 Kg (62 lbs)

☐ FWD - Front Wheel Drive      AWD - Rear Wheel Drive  
 AWD - All Wheel Drive      4WD - Four Wheel Drive

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

Vehicle Line Mitsubishi Eclipse

Model Year 1990

Issued 1988-8

Revised (●)

**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.

[illegible]

- **Single / Dual**

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METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse

Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

Engine Description/Carb.  
Engine Code

4G37 (1.755 Liters)		4G63 (1.997 Liters)		4G63 with Turbo (1.997 Liters)
MT	AT	MT	AT	

## ENGINE - GENERAL

Type & description (In line, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	In line, Front, Transverse, SOHC	In line, Front, Transverse, DOHC		
Manufacturer	Mitsubishi Motors Corp.			
No. of cylinders	4			
Bore	80.6	85.0		
Stroke	86.0	88.0		
Bore spacing (C/L to C/L)	87.5	93		
Cylinder block material & mass kg (lbs.) (machined)	Cast iron, 34.2 (75.4)	Cast iron, 37.5 (82.7)		
Cylinder block deck height	230.2	229		
Cylinder block length	385.5	439		
Deck clearance (minimum) (above or below block)	Above 0.5 mm	0.0 mm		
Cylinder head material & mass kg (lbs.)	Aluminum alloy, 6.2 (13.6)	Aluminum alloy, 12.6 (27.8)		
Cylinder head volume (cm³)	57.9	45.5		
Cylinder liner material	N.A.			
Head gasket thickness (compressed)	1.35	1.25		
Minimum combustion chamber total volume (cm³)	54.1	61.7	72.7	
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, 5.3 (11.7)	Aluminum alloy, 5.5 (12.1)		
Exhaust manifold material & mass [kg (lbs.)]**	Cast iron, 5.7 (12.6)	Cast iron, 7.37 (16.25)	Cast iron, 5.0 (11)	
Fuel required unleaded, diesel, etc.	Unleaded			
Fuel antiknock index (R + M) ÷ 2	No less than 91			No less than 95 or 91 with knock control
Engine mounts	Number	4		
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Rubber (Elastomeric)		
	Added isolation (sub-frame, crossmember, etc.)	Crossmember and Centermember		
Total dressed engine mass (wt) dry***	122.7	114.7	151.3	144.3 158.7

## Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum alloy, 322 (11.4)	Aluminum alloy, 343 (12.1)	Aluminum alloy, 362 (12.8)
------------------------------------------------	----------------------------	----------------------------	----------------------------

## Engine - Camshaft

Location	Center of IN. and EX. valve on cylinder-head	Above each IN. and EX. valve on cylinder-head		
Material & mass kg (weight, lbs.)	Cast iron, 2.32 (5.27)	Cast iron, IN:1.9 (4.2), EX:1.9 (4.2)		
Drive type	Chain / belt	Belt		
	Width / pitch	19.05/9.525	29/9.525	

\* 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)	Std.	
Valves	Number intake / exhaust	4/4
	Head O.D. intake / exhaust	42/34
		8/8
		34/30.5

### Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))*	Forged iron, 0.612(1.35)	Forged iron, 0.69 (1.52)
Length (axes & bore) mm	153.7	150.0

### Engine - Crankshaft

Material & mass (kg., (weight, lbs.))*	Forged iron, 12.4(27.3)	Forged iron, 16.3 (35.9)
End thrust taken by bearing (no.)	3	
Length & number of main bearings	23mm, 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)	280 (40.6) at 2000	
Type oil intake (floating, stationary)	Stationary	
Oil filter system (full flow, part, other)	Full flow	
Capacity of oil case, less filter-refill-L (qt.)	3.9	4.4

### 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.	Mitsubishi Heavy Industries Ltd.
Super charger - manufacturer	N.A.	N.A.
Intercooler	N.A.	Std.

\*Finished State

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MT	AT	MT	AT	

## Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		With condenser tank				
Coolant fill location (rad., bottle)		Thermostat case & condenser tank				
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	Roller & 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 (5.3)	7.0 (7.4)			
	With air cond.-L (qt.)	5.0 (5.3)	7.0 (7.4)			
	Opt. equipment (specify-L (qt.))	-				
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	N.A.				
	Type (cross-flow, etc.)	Down-flow				
	Construction (fin & tube mechanical, brazes, etc.)	Tube and corrugated fin, Solder				
	Material, mass (kg (wgt. lbs.))	Copper & Brass 1.7	Copper & Brass 4.05	Copper & Brass 5.35	Copper & Brass 5.7	Copper & Brass 5.35
	Width	668				
	Height	350				
	Thickness	16		32		
	Fins per inch	20		17		
Radiator end tank material		Plastic				
Fan	Std., elec., opt.	Electric				
	Number of blades & type (flex, solid, material)	4, Polypropylene				
	Diameter & projected width	320				
	Ratio (fan to crankshaft rev.)	N.A.				
	Fan cutout type	N.A.				
	Drive type (direct, remote)	N.A.				
	RPM at idle (elec.)	2150	2080			
	Motor rating (wattage) (elec.)	80	120			
	Motor switch (type & location) (elec.)	Thermo Type in radiator				
	Switch point (temp., pressure) (elec.)	85°C ± 3°C				
	Fan shroud (material)	Plastic				

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4G63 (1.997 Liters)

4G63 with Turbo  
(1.997 Liters)

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		Nippon Injector Co., Ltd.	
<input checked="" type="checkbox"/> Carburetor no. of barrels	-		
Idle A/F mix.		14.7	
Fuel injection	Point of injection (no.)	Inlet port (4)	
	Constant pulse flow	6.07mm <sup>3</sup> / 2.5 msec	6.09 mm <sup>3</sup> / 2.2 msec
	Control (electronic, mech.)	Electronic	
	System pressure (kPa (psi))	329 (47.71)	250 (36.25)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	700 rpm	750 rpm
	Automatic	700rpm(650rpm Drive)	750rpm(650rpm Drive)
			-
Intake manifold heat control (exhaust or water thermostatic or fixed)		N.A.	
Air cleaner type		Dry non-woven cloth	
Fuel filter (type/location)		Paper, Engine room	
<input checked="" type="checkbox"/> Fuel pump	Type (elec. or mech.)	Electric	
	Location (eng. tank)	In tank	
	Pressure range (kPa (psi))	177 to 588 (26 to 85)	
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	90 L/hr (23.8 gal/hr) @ 250kPa (36psi)	

## Fuel Tank

Capacity (refill L (gallons))		60 (15.9)
Location (describe)		Under rear seatpan
Attachment		Strap
Material & Mass (kg (weight lbs))		Steel, 13.2
Filler pipe	Location & material	Left, 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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4G37 (1.755 Liters)	4G63 (1.997 Liters)	4G63 with Turbo (1.997 Liters)
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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 (Calif. only: and electronic)		
		Exhaust source			
	Catalytic Converter	Point of exhaust injection (spacer, carburetor, manifold, other)	Exhaust manifold Port No.2 Intake manifold	Exhaust Manifold Port No.4 Intake manifold	Exhaust Manifold Port No.4 Single tank
		Type	Three-way		
		Number of	1		
		Location(s)	Under floor		
		Volume [L (in <sup>3</sup> )]	Calif.: 1.0 (61.02) + 0.7 (42.71), Fed: 1.7 (103.7)		
		Substrate type	Monolith		
		Noble metal type	-		
		Noble metal concentration (g/cm <sup>2</sup> )	-		
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 cleaner		
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister		
		Carburetor	-		
Electronic system	Vapor storage provision		Canister		
	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, 5.6 (12.3)	One (Reverse flow) Stainless steel, 6.3 (13.9)	One (Reverse flow) Stainless steel, 6.4 (14.1)
Resonator no. & type		Two (Straight thru), Stainless steel, 2.4 (5.3)		-
Exhaust pipe	Branch o.d., wall thickness	42.7 X 2.0 (Dual)		54 X 1.5
	Main o.d., wall thickness	48.6 X 1.5, 54 X 1.5	54 X 1.5	
	Material & Mass [kg (weight lbs)]	Stainless steel tube, 4.3 (9.5)	Stainless steel tube, 4.4 (9.7)	Stainless steel tube, 4.2 (9.3)
Intermediate pipe	o.d. & wall thickness	48.6 X 1.5, 48.6 X 2.0	54 X 1.5, 54 X 2.0	54 X 1.5
	Material & Mass [kg (weight lbs)]	Stainless steel tube, 4.7 (10.4)	Stainless steel tube, 5.2 (11.5)	Stainless steel tube, 5.8 (12.8)
Tail pipe	o.d. & wall thickness	48.6 X 1.2	38.1 X 1.2 (Dual)	42.7 X 1.2 (Dual)
	Material & Mass [kg (weight lbs)]	Stainless steel tube, 0.5 (1.1)	Stainless steel tube, 0.8 (1.8)	Stainless steel tube, 1.0 (2.2)

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Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

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Engine Description/Carb.  
Engine Code

4G37 (1.755 Liters)

4G63 (1.997 Liters)

4G63 with Turbo  
(1.997 Liters)

### 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)	N.A.	
Automatic overdrive (manufacturer/country)	Std., Mitsubishi Motors Corp./Japan	N.A.

### Manual Transmission/Transaxle

Number of forward speeds		5	
Gear ratios	1st	3.363	3.083
	2nd	1.947	1.833
	3rd	1.285	1.217
	4th	0.939	0.888
	5th	0.756	0.741
	Reverse	3.083	3.166
Synchronous meshing (specify gears)		1,2,3,4,5	
Shift lever location		Floor	
Trans. case mat'l. & mass kg (lbs)*		Aluminum alloy, 9.9 (21.8)	Aluminum alloy 11.5 (25.4)
Lubricant	Capacity [L (pt.)]	1.8 (3.8)	2.2 (4.6)
	Type recommended	Multipurpose gear oil conforming to API GL-4	

### Clutch (Manual Transmission)

Clutch manufacturer		Aishin Seiki Co., Ltd.	Daikin Manufacturing Co., Ltd.
Clutch type (dry, wet; single, multiple disc)		Dry single plate	
Linkage (hydraulic, cable, rod, lever, other)		Hydraulic	
Max. pedal effort (nom. spring load, new) N (lbs)	Depressed	123 (27.7)	
	Released	83 (18.7)	
Assist (spring, power/percent, nominal)		No	Spring
Type pressure plate springs		Diaphragm	
Total spring load (nominal, new) N (lbs)		4168 (937)	4511 (1014) 6178 (1389)
Clutch facing	Facing mfg. & material coding	Hitachi Chemical Co., Ltd.	
	Facing material & construction	Woven (Asbestos)	Woven (Non-Asbestos)
	Rivets per facing	16	
	Outside x inside dia. (nominal)	200 X 130 (mm)	215 X 140 (mm) 225 X 150 (mm)
	Total eff. area (cm <sup>2</sup> (in. <sup>2</sup> ))	363 (56.3)	418 (64.8) 442 (68.5)
	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)	1.3/1.3 (mm)
	Engagement cushion method	Flat-wave spring	
Release bearing type & method lub.		Ball bearing, permanently lubricated	
Torsional damping method, springs, hysteresis		Damper rubbers and Friction washers	Damper rubbers-coil springs and Friction washers

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

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METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse

Model Year 1990 Issued 1988-8 Revised (e) \_\_\_\_\_

Engine Description/Carb.  
Engine Code

D21A

D22A

## Automatic Transmission/Transaxle

Trade name		Mitsubishi Motors Corp. F4A22	
Type and special features (describe)		Torque converter with automatically operated Planetary gear Transmission Electronic control F4A22	
Selector	Location	Lever : Console mounted	
	Ltr./No. designation	P.R.N.D.2.L / 6	
Gear ratios	1st	2.846	
	2nd	1.581	
	3rd	1.000	
	4th	0.685	
	Reverse	2.176	
Max. upshift speed - drive range (km/h (mph)) *		1-2 48/41 (30/26), 2-3 90/77 (56/48), 3-4 159/145 (99/91), 1-2 59/50 (37/31), 2-3 111/94 (69/59), 3-4 187/156 (117/99)	
Max. kickdown speed - drive range (km/h (mph)) **		2-1 43/35 (27/22), 3-2 84/69 (53/43), 4-3 143/120 (89/75), 2-1 48/35 (29/22), 3-2 100/85 (63/53), 4-3 168/141 (105/89)	
Min. overdrive speed (km/h (mph))		28 (18)	29 (18)
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	224
Lubricant	Capacity (refill L (pt.))	6.1 (13.0)	
	Type Recommended	DEXRON II or DEXRON automatic Trans.fluid	
Oil cooler (std., opt., NA, internal, external, air, liquid)		Std., External liquid	
Transmission case material & mass kg (lbs)**		Aluminum alloy, 13.7 (30.2)	

## Axle or Front Wheel Drive Unit

\* Power/Economy

Type (front, rear)		Front	
Description		Separable	
Limited slip differential (type)		-	
Drive pinion offset		-	
Drive pinion (type)		-	
No. of differential pinions		2	
Pinion/differential adjustment (shim, other)		Shim	
Pinion/differential bearing adjustment (shim, other)		Shim	
Driving wheel bearing (type)		Double row angular contact ball bearing	
Lubricant	Capacity (L (pt.))	Refer to transmission Spec.	
	Type recommended	Refer to transmission Spec.	
		4G37 (1.755 Liters) and 4G63 (1.997 Liters)	4G63 with Turbo (1.997 Liters)
		MT	AT

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

Axle ratio (or overall top gear ratio)				
No. of teeth	Pinion	17	16	
	Ring gear or gear	67	57	55
Ring gear o.d.		179.26	175.73	187.69
Transaxle	Transfer gear ratio	1.096	1.125	1.208
	Final drive ratio	3.941	3.562	3.437

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

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

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4G63 (1.997 Liters)

4G63 with Turbo  
(1,997 Liters)

### Axle Shafts - Front Wheel Drive

Manufacturer and number used

Toyo Bearing Co., Ltd.

Type (straight, solid bar,  
tubular, etc.)

Left

Straight bar

Right

Straight bar

Outer  
diam. x  
length\* x  
wall  
thickness

Manual transaxle

Left

26 X 708

26 X 706

30 X 706

Right

23.2 X 368

24 X 366

24 X 366

Automatic transaxle

Left

26 X 708

26 X 706

-

Right

23.2 X 368

24 X 366

-

Optional transaxle

Left

-

Right

-

Slip  
yoke

Type

None

Number of teeth

-

Spline o.d.

-

Universal  
joints

Make and mtg. no.

Inner

Toyo Bearing Co., Ltd.

Outer

Toyo Bearing Co., Ltd.

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

### All Wheel/4 Wheel Drive

Description and type (part-time, full-time, 2/4 shift  
while moving, mechanical, elect., chain/gear, etc.)

-

Transfer  
case

Manufacturer

-

Type

-

Model

-

Low-range gear ratio

-

System disconnect (describe)

-

Center  
differential

Type (bevel, planetary, w or w/o  
viscous bias, torsen, etc.)

-

Torque split (% front/rear)

-

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

# MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse  
Model Year 1990 Issued 1988-8 Revised (e) \_\_\_\_\_

Body Type And/Or  
Engine Displacement

D21A

D22A

## Ø 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 controls	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.
	<div> <div>s</div> <div>e</div> <div>n</div> <div>s</div> <div>o</div> <div>r</div> <div>s</div> </div> Lateral acceleration	N.A.
	Deceleration	N.A.
	Acceleration	N.A.
	Road surface	N.A.
Shock absorber (front & rear)	Type	Front : Strut Type      Rear : Telescopic Type
	Make	Front/Rear : Kayaba Industry Co., Ltd.
	Piston diameter	Front : 32      Rear : 25 (mm)
	Rod diameter	Front : 22      Rear : 12.5 (mm)

## Ø Suspension - Front

Type and description		Independent Strut Type	
Travel*	Full jounce	92 (mm)	83 (mm)
	Full rebound	78 (mm)	87 (mm)
Spring	Type (coil, leaf, other) & material	Coil (9254 Steel, Specified in SAE)	
	Insulators (type & material)	-	
	Size (coil design height & i.d., bar length x dia.)	327 X 146.6 or 335 X 146.4	314 X 146.3 or 322 X 146.1
	Spring rate [N/mm (lb./in.)]	21.6 (123.2)	23.5 (134.4)
	Rate at wheel [N/mm (lb./in.)]	20.3 (116.0)	22.1 (126.3)
Stabilizer	Type (link, linkless, frameless)	Link	
	Material & bar diameter	ASB 25N, Ø17.3 (mm)	Spring steel, Ø19 (mm)

## Ø Suspension - Rear

Type and description		3-Link torsion axle	
Travel*	Full jounce	110 (mm)	100 (mm)
	Full rebound	75 (mm)	
Spring	Type (coil, leaf, other) & material	Coil (9254 Steel, Specified in SAE)	
	Size (length x width, coil design height & i.d., bar length x dia.)	337 X 84.9	317 X 84.8
	Spring rate [N/mm (lb./in.)]	19.6 (112.0)	22.5 (128.8)
	Rate at wheel [N/mm (lb./in.)]	19.6 (112.0)	22.5 (128.8)
	Insulators (type & material)	Rubber pad	
	<div> <div>#</div> <div>leaf</div> </div> No. of leaves	-	
	Shackle (comp. or tens.)	-	
Stabilizer	Type (link, linkless, frameless)	Bar	
	Material & bar diameter	S38C, Ø20 (mm)	S38C, Ø25 (mm)
Track bar (type)		-	

\* Define load condition:

# MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse

Model Year 1990 Issued 1988-8 Revised (\*)

Body Type And/Or  
Engine Displacement

4G37  
(1.755 Liters)

4G63  
(1.997 Liters)

4G63 with Turbo  
(1.997 Liters)

## Brakes - Service

Description		-	
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)	Akebono Brake Industry Co., Ltd., Disc	
	Rear (disc or drum)	Akebono Brake Industry Co., Ltd., Disc	
Valving type (proportion, delay, metering, other)		Proportion 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. <sup>3</sup> ) and source	-	
	Pump-type (elec. gear driven, belt driven)	-	
Traction control	Operational speed range	-	
	Type engine intervention (electronic, mech.)	-	
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. mtr., pwr. srg.)	-	
Effective area (cm <sup>2</sup> (in. <sup>2</sup> ))*		F: 200 (31.0) / R: 120 (18.6)	
Gross lining area (cm <sup>2</sup> (in. <sup>2</sup> ))* (F/R)		F: 206 (31.9) / R: 120 (18.6)	
Swept area (cm <sup>2</sup> (in. <sup>2</sup> ))* (F/R)		F: 1281 (198.6) / R: 1177 (182.5)	
Rotor	Outerworking diameter	F/R	F: 264 / R: 263 (mm)
	Inner working diameter	F/R	F: 170 / R: 178 (mm)
	Thickness	F/R	F: 24 / R: 10 (mm)
	Material & type (vented/solid)	F/R	F: Cast iron vented / R: Cast iron solid
Drum	Diameter & width	F/R	-
	Type and material	F/R	-
Wheel cylinder bore		F: 53.97 / R: 30.16 (mm)	
Master cylinder	Bore/stroke	F/R	Bore: 22.22 / Stroke: Primary: 13, Secondary: 15 (mm) / Bore: 23.81 / Stroke: Primary: 13, Secondary: 15 (mm)
Pedal arc ratio		4.4	
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]		12162 (1773) / 12656 (1844)	
Lining clearance		F/R	F: No major adjustment required / R: No major adjustment required
Brake lining	Front wheel	Bonded or riveted (rivets/sec.)	Bonded
		Rivet size	-
		Manufacturer	Hitachi Chemical Co., Ltd.
		Lining code*****	Hitachi MH102 EE
		Material	Molded
		Size Primary or out-board	116 X 43.1 X 10.5 (mm)
		Size Secondary or in-board	116 X 43.1 X 10.5 (mm)
		Shoe thickness (no lining)	5.0 (mm)
	Rear wheel	Bonded or riveted (rivets/sec.)	Bonded
		Manufacturer	Akebono Brake Industry Co., Ltd.
		Lining code*****	AKS 26 GF
		Material	Molded
		Size Primary or out-board	72 X 41.6 X 9.5 (mm)
		Size Secondary or in-board	72 X 41.6 X 9.5 (mm)
	Shoe thickness (no lining)	5.0 (mm)	

\*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

METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse

Model Year 1990

Issued 1988-8

Revised (e)

Body Type And/Or  
Engine Displacement

4G37 (1.755 Liters)

4G63 (1.997 Liters)

4G63 with Turbo  
(1.997 Liters)

## Tires And Wheels (Standard)

Tires	Size (load range, ply)		P185/70R14, Std load	P205/55HR16, Std load	P205/55VR16, Std load
	Type (bias, radial, steel, nylon, etc.)		Radial		
	Inflation pressure (cold) for recommended max. vehicle load	Front (kPa (psi))	200 (29)		
		Rear (kPa (psi))	180 (26)		
Wheels	Rev./mile—at 70 km/h (45 mph)		858	754	
	Type & material		Disc, Steel		Disc, Aluminum
	Rim (size & flange type)		14 X 5 1/2JJ	16 X 6JJ	
	Wheel offset		46		
	Attachment	Type (bolt or stud)	Stud		
		Circle diameter	114.3		
		Number & size	5, M12 X 1.5		
Spare	Tire and wheel		T125/70D15, 4T X 15 High pressure tire		
	Storage position & location (describe)		On cargo Floor		

## Tires And Wheels (Optional)

Tire size (load range, ply)	-	P205/55VR16, Std load	-
Type (bias, radial, steel, nylon, etc.)	-	Radial	-
Wheel (type & material)	-	Disc, Steel or Aluminum	-
Rim (size, flange type and offset)	-	16 X 6JJ	-
Tire size (load range, ply)	-	205/55VR16, Load range C	-
Type (bias, radial, steel, nylon, etc.)	-	Radial	-
Wheel (type & material)	-	Disc, Steel or Aluminum	-
Rim (size, flange type and offset)	-	16 X 6JJ	-
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)	-	-	-
<input checked="" type="checkbox"/> Spare tire and wheel size (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)	-	-	-

## Brakes - Parking

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

# MVMA Specifications Form

Vehicle Line Mitsubishi Eclipse

Model Year 1990

Issued 1988-8

Revised (#) \_\_\_\_\_

## METRIC (U.S. Customary)

Body Type And/Or  
Engine Displacement

D21A

D22A

### Steering

Manual (std., opt., n.a.)			Std.		N.A.	
Power (std., opt., n.a.)			Opt.		Std.	
Adjustable steering wheel/column (tilt, telescope, other)		Type	Tilt			
		Manufacturer	Mitsubishi Motors Corp.			
		(Std., opt., n.a.)	Std.			
Wheel diameter** (WB) SAE J1100		Manual	372		-	
		Power	-		372	
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	M/S: 11.2 (36.7) P/S: 11.6 (38.1)		11.6 (38.1)	
		Curb to curb (l. & r.)	M/S: 10.4 (34.1) P/S: 10.8 (35.4)		10.8 (35.4)	
	Inside rear	Wall to wall (l. & r.)	M/S: 6.0 (19.7) P/S: 6.4 (21.0)		6.4 (21.0)	
		Curb to curb (l. & r.)	M/S: 6.2 (20.3) P/S: 6.6 (21.7)		6.6 (21.7)	
Scrub Radius*			-10.9		-14.3	
Manual	Gear	Type	Rack & pinion		N.A.	
		Manufacturer	Koyo Seiko Co., Ltd.		N.A.	
		Ratio	Gear	-		N.A.
	Overall	23.8		N.A.		
		No. wheel turns (stop to stop)		4.2		N.A.
Power	Type (coaxial, elec., hyd., etc.)		Integral			
	Manufacturer		Koyo Seiko Co., Ltd.			
	Gear	Type	Rack & Pinion			
		Ratio	Gear	-		
		Overall	15.8			
	Pump (drive)		V-belt			
No. wheel turns (stop to stop)		2.7				
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.)		14°06'		14°20'	
	Bearings (type)	Upper	Ball bearing			
		Lower	Ball joint			
		Thrust	N.A.			
Steering spindle & joint type			Ball			
Wheel spindle/hub	Diameter	Inner bearing	40.0		(mm)	
		Outer bearing	40.0		(mm)	
	Thread (size)		M22 X 1.5 (Metric)			
	Bearing (type)		Ball			

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

\*\*See Page 22



# MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse  
Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

Body Type And/Or  
Engine Displacement

D21A		D22A
MNJEL, MRJEL	MNHEL, MRHEL	

## Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	2°20' ± 30'	
		Camber (deg.)	0°15' ± 30'	0°05' ± 30'
		Toe-in (outside track-mm (in.))	0 ± 3 (0 ± 0.118)	
	Service reset*	Caster	-	
		Camber	-	
		Toe-in	-	
	Periodic M.V. inspection	Caster	-	
		Camber	-	
		Toe-in	-	
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	-0°45' ± 30'	
		Toe-in (outside track-mm (in.))	0 ± 3 (0 ± 0.118)	
	Service reset*	Camber	-	
		Toe-in	-	
	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	
Oil pressure indicator	Type	Pressure switch and Electric Thermal	
	Warning device (light, audible)	Light	
Fuel indicator	Type	Cross coil and Thermistor	
	Warning device (light, audible)	Driving pointer & Light	
Wind-shield wiper	Type (standard)	Electric two speed with variable intermittent	
	Type (optional)	N.A.	
	Blade length	500 (DR. Side, AS. Side) (mm)	
	Swept area (cm²(in.²))	6427 (996)	
Wind-shield 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, Coolant level warning light.	

# MVMA Specifications Form

Vehicle Line Mitsubishi Eclipse

Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

## METRIC (U.S. Customary)

Engine Description/Carb.  
Engine Code

4G37 (1,755 Liters)		4G63 (1,997 Liters)		4G63 with Turbo (1,997 Liters)
MT	AT	MT	AT	

### Electrical - Supply System

Battery	Manufacturer	JOHNSON CONTROLS			
	Model, std., (opt.)	BCI Size GROUP 86			
	Voltage	12			
	Amps at 0°F cold crank	430			
	Minutes-reserve capacity	90			
	Amp/hrs. - 20 hr. rate	60			
	Location	Front, right side of engine compartment			
Alternator	Manufacturer	Mitsubishi Electric Corp.			
	Rating (idle/max. rpm)	65	75	65	75
	Ratio (alt. crank/rev.)	2.65	2.43	2.29	
	Output at idle (rpm, park)	-			
	Optional (type & rating)	N.A.			
Regulator	Type	Voltage control			

### Electrical - Starting System

Start, motor	Manufacturer	Mitsubishi Electric Corp.			
	Current drain at 0°F	-			
	Power rating [kw (hp)]	0.7	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		N.A.	Mitsubishi Electric Corp.
	Model		N.A.	H4T00172
	Current	Engine stopped - A	N.A.	0
		Engine idling - A	N.A.	1.4
Spark plug	Manufacturer		NGK Spark Plug Co., Ltd., Champion Spark Plug Co., Ltd. or Nippon Denso	
	Model		BPR6ES-11, RN9YC4 or W20EPR-S11	BPR6ES, RN9YC or W20EPR
	Thread (mm)		14	
	Tightening torque [N-m (lb. ft)]		20 to 30 (15 to 22)	
	Gap		1.0 to 1.1	(mm)   0.7 to 0.8 (mm)
	Number per cylinder		1	
Distributor	Manufacturer		Mitsubishi Electric Corp.	N.A.
	Model		T6T 57071	N.A.

### Electrical - Suppression

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

# MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Models Mitsubishi Eclipse

Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

Body Type

D21A, D22A

Body

Structure

Monocock body

☒ Bumper system  
front - rear

Impact absorbing system  
Fascia (Polyurethane)  
Energy absorber (Fluid type)  
Reinforcement (Steel)

Anti-corrosion treatment

Cathodic ED Paint  
Extended use of galvanized  
Wax injection  
Stone chipping resistance coating

## ☒ Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)		Heat setting acrylic enamel
Hood	Material & mass	Steel, 17.2 kg
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	-
	Release control (internal, external)	Internal
Trunk lid	Material & mass	-
	Type (counterbalance, other)	-
	Internal release control (elec., mech., n.a.)	-
Hatch-back lid	Material & mass	Steel, 10.1 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, Foam
	Rear	Bench, Foam
	3rd seat	-
Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Bucket, Spring
	Rear	Bench, Foam
	3rd seat	-

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

Vehicle Line Mitsubishi Eclipse  
 Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

Body Type

D21A, D22A

☒ **Restraint System**

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

Glass	SAS Ref. No.	
Windshield glass exposed surface area (cm <sup>2</sup> (in. <sup>2</sup> ))	S1	10291 (1595)
Side glass exposed surface area (cm <sup>2</sup> (in. <sup>2</sup> )) - total 2-sides	S2	9393 (1456)
Backlight glass exposed surface area (cm <sup>2</sup> (in. <sup>2</sup> ))	S3	8839 (1370)
Total glass exposed surface area (cm <sup>2</sup> (in. <sup>2</sup> ))	S4	28523 (4421)
Windshield glass (type)		Curved-laminated plate
Side glass (type)		Curved-Tempered plate
Backlight glass (type)		Curved-tempered plate

☒ **Lamps and Headlamp Locations**

Headlamps	Description - sealed beam, halogen, replaceable bulb, etc.	Sealed beam, Halogen
	Shape	Rectangular
	Lo-beam type (2A1, 2B1, 2C1, etc.)	2E1
	Quantity	Two
	Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	2E1
	Quantity	Two

**Frame**

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

# MVMA Specifications Form

## METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse  
 Model Year 1990 Issued 1988-8 Revised (e) \_\_\_\_\_

Body Type

D21A		D22A	
MNJEL, MRJEL	MNHEL, MRHEL	MNHML, MRHML	MNHFI

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

Air conditioning (manual, auto, temp control)		Opt. (Manual temp control)	
Clock (digital, analog)		Std. (Digital)	
Compass / thermometer		N.A.	
Console (floor, overhead)		Floor console	
Defroster, elec. backlight		Std.	
Electronic	Diagnostic monitor (integrated, individual)	Integrated	
	Instrument cluster (list instruments)	Std. (Speedometer, Tachometer, Tripmeter, Fuel Ind. Eng. Coolant Ind., Oil pressure Ind., Battery Ind., Brake Ind.)	
		-	Boost Meter
	Keyless entry	N.A.	
	Tripminder (avg. spd., fuel)	N.A.	
	Voice alert (list items)	N.A.	
	Other	-	
Fuel door lock (remote, key, electric)		Remote	
Lamps	Auto head on/off delay, dimming	N.A.	
	Cornering	N.A.	
	Courtesy (map, reading)	Room, Map, Foot	
	Door lock, ignition	Ignition	
	Engine compartment	N.A.	
	Fog	N.A.	
	Glove compartment	Std.	
	Trunk	Std.	
	Illuminated entry system (list lamps, activation)	N.A.	
	Other	-	
	Mirrors	Day/night (auto, man.)	Std. (Man)
L.H. (remote, power, heated)		Std. (Direct remote)	Std. (power)
R. H. (convex, remote, power, heated)		Std. (Direct remote)	Std. (power)
Visor vanity (RH / LH, illuminated)		RH/LH	
Navigation system (describe)		N.A.	
Parking brake-auto release (warning light)		N.A.	

# MVMA Specifications Form

## METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse  
 Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

Body Type

D21A		D22A	
MNJEI	MRJEI	MNHEI	MRHEI

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

Power equipment	Deck lid (release, pull down)		N.A.	
	Door locks (manual, automatic, describe system)		Single Action Key Less Lock	
			-	Opt. (Center Door Lock)
	Seats	2 - 4 - 6 way, etc.	N.A.	
		Reclining (R.H., L.H.)	N.A.	
		Memory (R.H., L.H., preset, recline)	N.A.	
		Lumber, hip, thigh, support	N.A.	
		Heated (R.H., L.H., other)	N.A.	
	Side windows		N.A.	Opt. (Power Window)
	Vent windows		N.A.	
Rear windows		N.A.		
Radio systems	Antenna (location, whip, w/ shield, power)		Rear Quarter, Whip.	
	Standard	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	AM/FM MPX ETR	AM/FM MPX ETR & Casset Stereo
	Optional		AM/FM (MPX) ETR & Casset Stereo	-
			Audio System (AM/FM MPX ETR & Casset Stereo with Graphic equalizer)	
			Audio System (AM/FM ETR with Casset Stereo & CD Player)	
	Speaker (number, location)		Std. (I/pan...2, Rear Seat Side...2) Opt. (Front Door...2)	
Roof open air fixed (flip-up, sliding, "T")		N.A.		
Speed control device		Opt.		
Speed warning device (light, buzzer, etc.)		N.A.		
Tachometer (rpm)		Std.		
Telephone system (describe)		N.A.		
Theft deterrent system		N.A.		

# MVMA Specifications Form

Vehicle Model Mitsubishi Eclipse

Model Year 1990 Issued 1988-8 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.	D21A	D22A	
			MNHML, MRHML	MNHFL
Width				
Tread (front)	W101	1465	57.7	
Tread (rear)	W102	1450	57.1	
Vehicle width	W103	1690	66.5	
Body width at Sg RP (front)	W117	1690		
Vehicle width (front doors open)	W120	1690		
Vehicle width (rear doors open)	W121	-		
Front fender overall width	W106	1675		
Rear fender overall width	W107	1660		
Tumble-home (deg.)	W122	30°		
Vehicle width including mirrors		-		

### Length

Wheelbase	L101	2470	97.2
Vehicle length	L103	4330	170.5
Overhang (front)	L104	950	
Overhang (rear)	L105	910	
Upper structure length	L123	2560	
Rear wheel C/L "X" coordinate	L127	2470	
Cowl point "X" coordinate	L125	410	
Front end length at centerline	L126	1285	
Rear end length at centerline	L129	325	

### Height\*

Passenger distribution (front/rear)	PD1.2.3	Front: 2, Rear: 2	
Trunk/cargo load		-	
Vehicle height	H101	1306	51.4
Cowl point to ground	H114	920	
Deck point to ground	H138	985	
Rocker panel-front to ground	H112	216	
Bottom of door closed-front to ground	H133	364	
Rocker panel-rear to ground	H111	218	
Bottom of door closed-rear to ground	H135	-	
Windshield slope angle	H122	63°	
Backlight slope angle	H121	72°	

### Ground Clearance\*

Front bumper to ground	H102	201	161
Rear bumper to ground	H104	298	
Bumper to ground (front at curb mass (wt.))	H103	242	202
Bumper to ground (rear at curb mass (wt.))	H105	347	
Angle of approach (degrees)	H108	16.5°	13.5°
Angle of departure (degrees)	H107	19.0°	
Ramp breakover angle (degrees)	H147	16°	
Axle differential to ground (front / rear)	H153	Front 195	
Min. running ground clearance	H156	160	
Location of min. run. grd. clear.		Flexible 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 Form

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Vehicle Models Mitsubishi Eclipse

Model Year 1990 Issued 1988-8 Revised (\*)

Body Type

D21A, D22A

## Front Compartment

	SAE Ref. No.	
Sg RP front, "X" coordinate	L31	1410
Effective head room	H61	962 37.9
Max. eff. leg room (accelerator)	L34	1114 43.9
SgRP to heel point	H30	197
SgRP to heel point	L53	910
Back angle	L40	25°
Hip angle	L42	101°
Knee angle	L44	141°
Foot angle	L46	95°
Design H-point front travel	L17	260
Normal driving & riding seat track trvl.	L23	260
Shoulder room	W3	1370 53.9
Hip room	W5	1400 55.1
Upper body opening to ground	H50	1190
Steering wheel maximum diameter*	W9	370
Steering wheel angle	H18	19°
Accel. heel pt. to steer. whl. ctr	L11	420
Accel. heel pt. to steer. whl. ctr	H17	760
Steering wheel to C/L of thigh	H13	123
Steering wheel torso clearance	L7	410
Headlining to roof panel (front)	H37	20
Undepressed floor covering thickness	H67	20

## Rear Compartment

Sg RP Point couple distance	L50	635
Effective head room	H63	867 34.1
Min. effective leg room	L51	724 28.5
Sg RP (second to heel)	H31	285
Knee clearance	L48	0
Compartment room	L3	525
Shoulder room	W4	1330 52.4
Hip room	W6	1160 45.7
Upper body opening to ground	H51	1180
Back angle	L41	27°
Hip angle	L43	88°
Knee angle	L45	72°
Foot angle	L47	102°
Headlining to roof panel (second)	H38	20
Depressed floor covering thickness	H73	20

## Luggage Compartment

Usable luggage capacity (L (cu. ft.))	V1	N.A.
Liftover height	H196	935

## Interior Volumes (EPA Classification)

Vehicle class		Sub compact cars
Interior volume index (cu. ft.)		91
Trunk / cargo index (cu. ft.)		10.201

\* See Page 14.



# MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Vehicle Line Mitsubishi Eclipse

Model Year 1990

Issued 1988-8

Revised (e)

Body Type

D21A	D22A	
	MNHML, MRHML	MNHFL

## Station Wagon - Third Seat

SAE  
Ref.  
No.

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 <sup>3</sup> (ft. <sup>3</sup> ))	V2	-
Hidden cargo volume index (m <sup>3</sup> (ft. <sup>3</sup> ))	V4	-
Cargo volume, index-rear of 2-seat	V10	-

## Hatchback - Cargo Space

Cargo length at front seatback height	L208	840
Cargo length at floor (front)	L209	1405
Cargo length at second seatback height	L210	424
Cargo length at floor (second)	L211	755
Front seatback to load floor height	H197	488
Second seatback to load floor height	H198	368
Cargo volume index (m <sup>3</sup> (ft. <sup>3</sup> ))	V3	0.729 (25.7)
Hidden cargo volume index (m <sup>3</sup> (ft. <sup>3</sup> ))	V4	-
Cargo volume index-rear of 2-seat	V11	0.288 (10.2)

## Aerodynamics\*

Wheel lip to ground, front	680	
Wheel lip to ground, rear	690	
Frontal area (m <sup>2</sup> (ft <sup>2</sup> ))	-	
Drag coefficient (Cd)	0.331	0.294

\* EPA Loaded Vehicle Weight, Loading Conditions

# MVMA Specifications Form

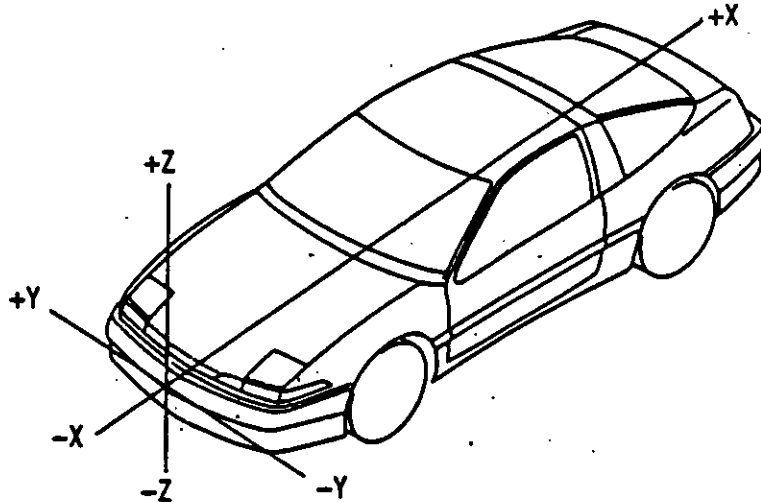
## METRIC (U.S. Customary)

Vehicle Line Mitsubishi Eclipse  
 Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

Body Type

D21A, D22A

### Vehicle Fiducial Marks

Fiducial Mark Number*	Define Coordinate Location										
<p>Front</p> <p>Rear</p> <p>Fiducial Mark Number</p>	 <p>Datum plane definition - Vertical longitudinal plane through the longitudinal center of the car.</p> <p>Vertical transverse plane through the front wheel center.</p> <p>Horizontal plane through the lower surface of the front floor panel.</p>										
Front	<table> <tr><td>W21°</td><td>480</td></tr> <tr><td>L54°</td><td>- 405</td></tr> <tr><td>H81°</td><td>195</td></tr> <tr><td>H181°</td><td>410</td></tr> <tr><td>H183°</td><td>-</td></tr> </table>	W21°	480	L54°	- 405	H81°	195	H181°	410	H183°	-
W21°	480										
L54°	- 405										
H81°	195										
H181°	410										
H183°	-										
Rear	<table> <tr><td>W22°</td><td>480</td></tr> <tr><td>L55°</td><td>2975</td></tr> <tr><td>H82°</td><td>196</td></tr> <tr><td>H182°</td><td>414</td></tr> <tr><td>H184°</td><td>-</td></tr> </table>	W22°	480	L55°	2975	H82°	196	H182°	414	H184°	-
W22°	480										
L55°	2975										
H82°	196										
H182°	414										
H184°	-										

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

**METRIC (U.S. Customary)**Model Year 1990 Issued 1988-8 Revised (•)

**SHIPPING MASS (weight) = Curb Weight Less Kg. (lbs.)** \_\_\_\_\_

\*\* ETWC - Equivalent Test Weight Class - U.S. Environmental Protection Agency emission certifications are based on the ETWC's shown.

Page 25

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

Model Year 1990 Issued 1988-8 Revised (•) \_\_\_\_\_

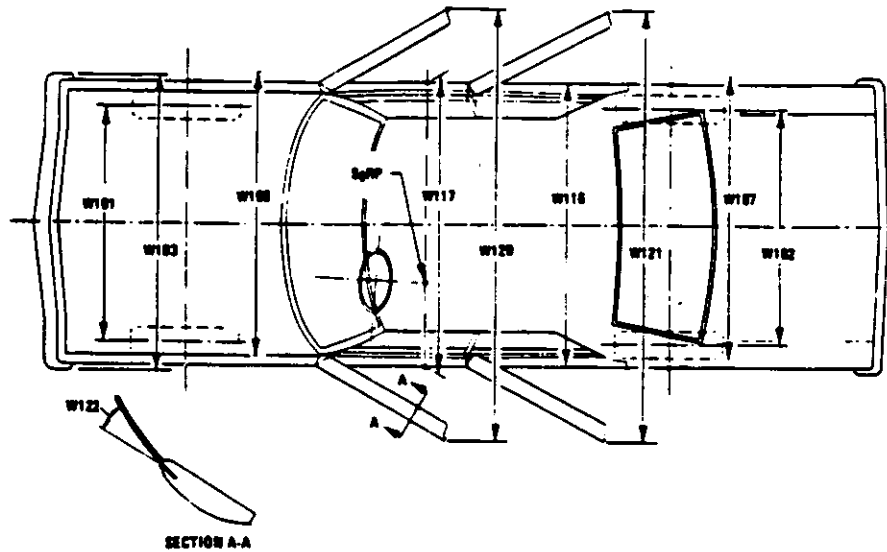
\* Also see Engine - General Section for dressed engine mass (weight).

# MVMA Specifications Form

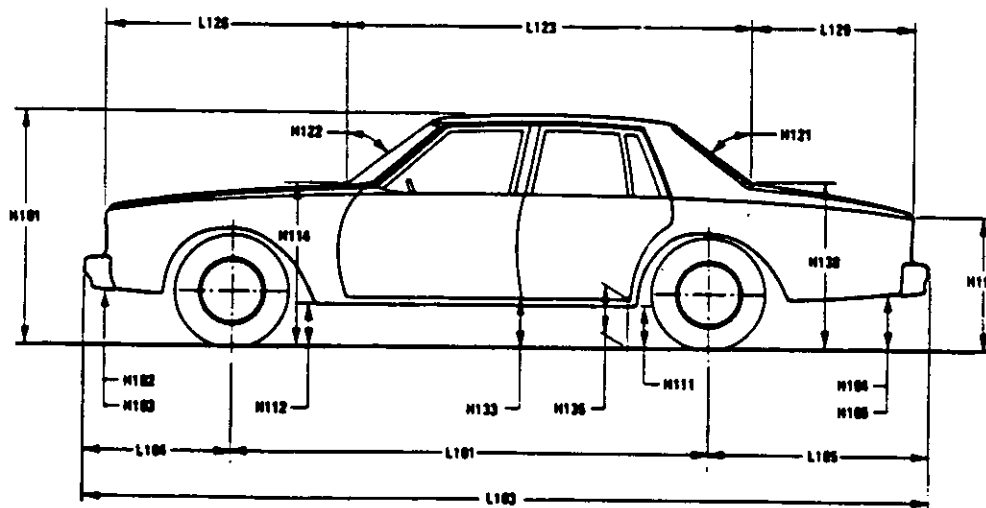
METRIC (U.S. Customary)

## Exterior Vehicle And Body Dimensions – Key Sheet

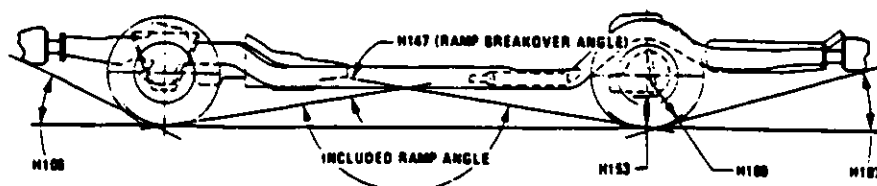
### Exterior Width



### Exterior Length & Height



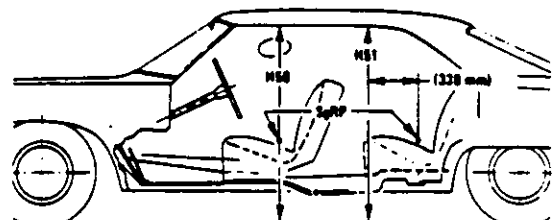
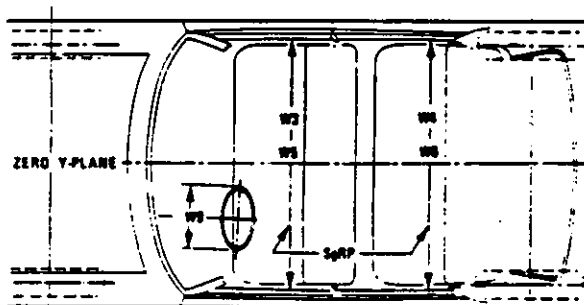
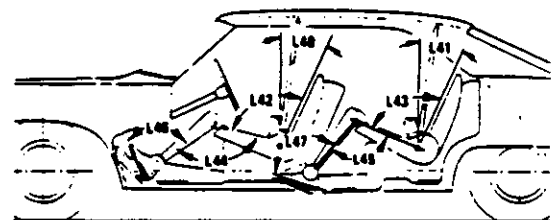
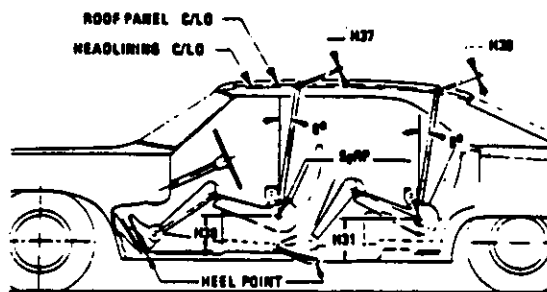
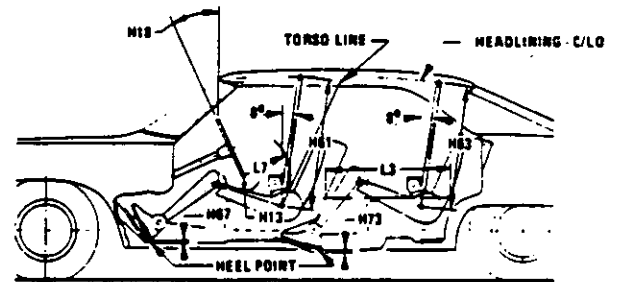
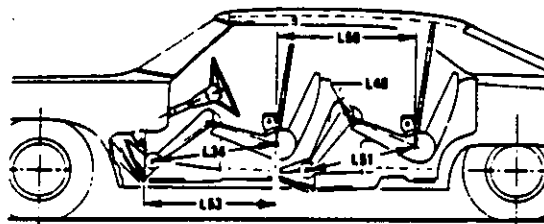
### Exterior Ground Clearance



# MVMA Specifications Form

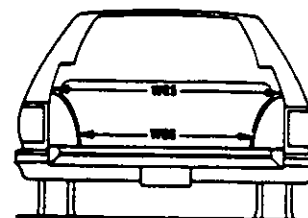
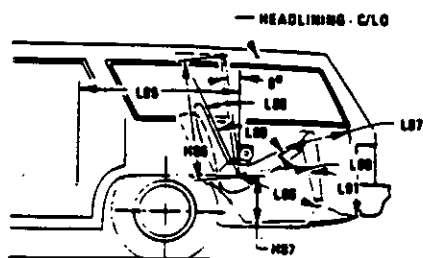
METRIC (U.S. Customary)

## Interior Vehicle And Body Dimensions - Key Sheet

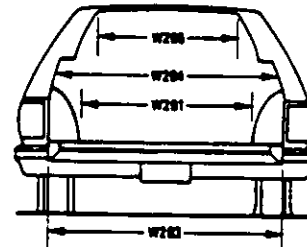
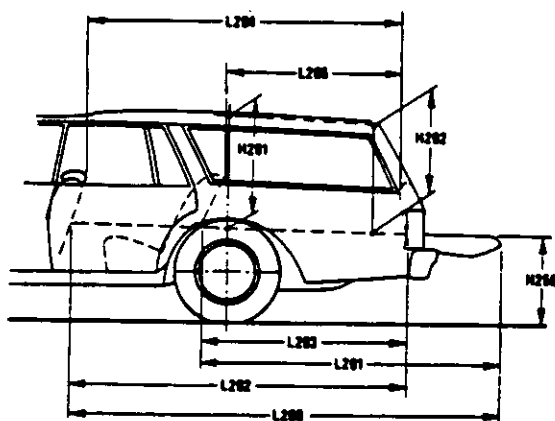


**METRIC (U.S. Customary)**

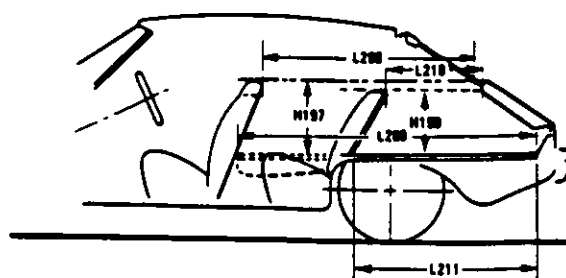
### Third Seat



## Cargo Space



## Station Wagon



## Hatchback

# MVMA Specifications Form

## 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.
- 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.
- 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.
- 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.



# MVMA Specifications Form

## METRIC (U.S. Customary)

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

- L31 SgRP-FRONT. "X" COORDINATED.
- L34 MAXIMUM EFFECTIVE LEG ROOM-ACCELERATOR. The dimension measured along a line from the ankle pivot center to the SgRP-front plus 254 mm (10.0 in) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.
- L40 BACK ANGLE-FRONT. The angle measured between a vertical line through the SgRP-front and the torso line. If the seatback is adjustable, use the normal driving and riding position specified by the manufacturer.
- L42 HIP ANGLE-FRONT. The angle measured between torso line and thigh centerline.
- L44 KNEE ANGLE-FRONT. The angle measured between thigh centerline and lower leg centerline measured on the right leg.
- L46 FOOT ANGLE-FRONT. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref SAE J826.
- L53 SgRP-FRONT TO HEEL. The dimension measured horizontally from the SgRP-front to the accelerator heel point.
- W3 SHOULDER ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front at height between the belt line and 254 mm (10.0 in.) above the SgRP-front, excluding the door assist strap and attaching parts.
- W5 HIP ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front within 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP-front and 76 mm (3.0 in.) fore and aft of the SgRP-front.
- W9 STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. Define if other than round.
- 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.

#### Rear Compartment Dimensions

- L3 COMPARTMENT ROOM-SECOND. The dimension measured horizontally from the back of the front seat to the front of the second seatback at a height tangent to the top of the second seat cushion.

# MVMA Specifications Form

## METRIC (U.S. Customary)

### Interior Vehicle 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 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 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.
- H83 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.

#### 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.
- 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. 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 wheelhouseings at floor level. For any vehicle not trimmed, measure to the sheet metal.

# MVMA Specifications Form

## METRIC (U.S. Customary)

### Interior Vehicle 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 undeepressed floor covering.
- H201 CARGO HEIGHT.** The dimension measured vertically from the top of the undeepressed floor covering to the headlining at the rear wheel "X" coordinate on the zero "Y" plane.
- H202 REAR OPENING HEIGHT.** The dimension measured vertically from the top of the undeepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door fully open.
- H250 TAILGATE TO GROUND CURB MASS (WT.).** The dimension measured vertically from the top of the undeepressed floor covering on the lowered tailgate to ground on the zero "Y" plane.
- 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 undeepressed floor covering.
- H198 SECOND SEATBACK TO LOAD FLOOR HEIGHT:** The dimension measured vertically from the second seat back to the undeepressed 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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