

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1991

| | | |
|---|----------------------------|----------------|
| Manufacturer TOYOTA MOTOR CORPORATION | Vehicle Line MR2 | |
| Mailing Address Toyota Motor Sales, U.S.A., Inc. 19001S, Western Avenue, Torrance, CA 90509 | Issued 1990-01 | 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

METRIC (U.S. Customary)

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NOTE:

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

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (*)

Vehicle Origin

| | |
|--|---------------------------------|
| Design & development (company) | Toyota Motor Corporation |
| Where built (country) | Japan |
| Authorized U.S. sales marketing representative | Toyota Motor Sales, U.S.A. Inc. |

Vehicle Models

| Model Description & Drive (FWD / RWD / AWD / 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) kg (Front/Rear) |
|--|----------------------|--|--|--|
| 2.0L turbo 5-sp. man., RWD | | 2dr-coupe SW20L-ACMZZA | (2/0) | 15/30 |
| | | 2dr-coupe w/T-bar roof SW20L-AJMZZA | (2/0) | 15/30 |
| 2.2L 5-sp. man., RWD | | 2dr-coupe SW21L-ACMZKA | (2/0) | 15/30 |
| | | 2dr-coupe w/T-bar roof SW21L-AJMZKA | (2/0) | 15/30 |
| 4-sp. auto., RWD | | 2dr-coupe SW21L-ACPZKA | (2/0) | 15/30 |

* 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 | | 3S-GTE | 5S-FE | 5S-FE | |
| | Displacement Liters (in ³) | | 1.998 (122) | 2.164 (132) | 2.164 (132) | |
| | Induction system (FI, Carb. etc.) | | FI w/turbo | FI | FI | |
| | Compression ratio | | 8.8 | 9.5 | 9.5 | |
| | SAE Net at RPM | Power kW (bhp) | 149 (200)/6000 | 97 (130)/5400 | 97 (130)/5400 | |
| | | Torque N · m (lb. ft.) | 271 (200)/3200 | 190 (140)/4400 | 190 (140)/4400 | |
| | Exhaust single, dual | | Single | Single | Single | |
| TRANS | Transmission/ Transaxle | | 5-speed manual | 5-speed manual | 4-speed automatic | |
| | Axle Ratio (std. first) | | 4.285 | 4.176 | 3.034 | |

[illegible]

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METRIC (U.S. Customary)

Engine Description
 Engine Code

3S-GTE, 1.998L Turbo

5S-FE, 2.164L

ENGINE - GENERAL

| | | |
|--|---|------------------------------------|
| Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.) | Midship, transverse, in-line 4, 16 valve DOHC, pentroof | |
| Manufacturer | TOYOTA | |
| No. of cylinders | 4 | |
| Bore | 86.0 | 87.0 |
| Stroke | 86.0 | 91.0 |
| Bore spacing (C/L to C/L) | 93.5-96.5-93.5 | |
| Cylinder block material & mass kg (lbs.) (machined) | FC23, 36.3 | Gray cast iron, 42.0 |
| Cylinder block deck height | 216 | |
| Cylinder block length | 409.5 | |
| Deck clearance (minimum) (above or below block) | 0.1 | 0.40 |
| Cylinder head material & mass kg (lbs.) | Aluminum alloy, 12.5 | Aluminum alloy, 12.1 |
| Cylinder head volume (cm ³) | 50.8 | 38.5 |
| Cylinder liner material | N.A. | N.A. |
| Head gasket thickness (compressed) | 1.25 | 1.20 |
| Minimum combustion chamber total volume (cm ³) | 64.1 | 63.6 |
| Cyl. no. system (front to rear)* | L Bank | 1, 2, 3, 4 |
| | R Bank | |
| Firing order | 1-3-4-2 | |
| Intake manifold material & mass (kg (lbs.))** | Aluminum alloy, 4.1 | Aluminum alloy, 4.1 |
| Exhaust manifold material & mass (kg (lbs.))** | SCH1A (cast steel), 4.56 | Spheroidal graphite cast iron, 6.9 |
| Fuel required unleaded, diesel, etc. | Unleaded premium gasoline only | Unleaded gasoline |
| Fuel antiknock index (R + M) - 2 | 91 | 87 |
| Engine mounts | Quantity | 4 |
| | Material and type (elastomeric, hydroelastic, hydraulic damper, etc.) | Elastomeric |
| | Added isolation (sub-frame, crossmember, etc.) | |
| Total dressed engine mass (wt) dry*** | 173 | M/T=139, A/T=130 |

Engine - Pistons

| | | |
|--|---------------------|---------------------|
| Material & mass, g (weight, oz.) - piston only | Aluminum alloy, 393 | Aluminum alloy, 354 |
|--|---------------------|---------------------|

Engine - Camshaft

| | | |
|-----------------------------------|--------------------|--|
| Location | Overhead | |
| Material & mass kg (weight, lbs.) | Cast iron, 1.7 x 2 | Alloy cast iron, Intake=2.1 Exhaust=1.6 |
| Drive type | Chain / belt | Belt Gear |
| | Width / pitch | 25.4/8 26.7/8.0 14/1.9 (module) |

* 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 Code

3S-GTE, 1.998L Turbo

5S-FE, 2.164L

Engine - Valve System

Hydraulic lifters (std., opt., NA)

N.A.

Valves

Number intake / exhaust

8/8

Head O.D. intake / exhaust

33.5/29.0

32/27

Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))*

Steel, 0.770

Alloy steel, 0.690

Length (axes to to) mm

Engine - Crankshaft

Material & mass (kg., (weight, lbs.))*

Steel, 18.6

Alloy steel, 19.4

End thrust taken by bearing (no.)

No.3

No.3

Length & number of main bearings

, 5

, 5

Seal (material, one, two
piece design, etc.)

Front

Fluorocarbon rubber, one piece

Fluorocarbon rubber, one piece

Rear

Fluorocarbon rubber, one piece

Silicone rubber, one piece

Engine - Lubrication System

Normal oil pressure (kPa (psi) at engine rpm)

275 at 2500

343 at 2500

Type oil intake (floating, stationary)

Stationary

Stationary

Oil filter system (full flow, part, other)

Full flow

Full flow

Capacity of c/case, less filter-refill-L (qt.)

3.6

3.7

Engine - Diesel Information

Diesel engine manufacturer

Glow plug, current drain at OFF

Injector
nozzle

Type

Opening pressure (kPa (psi))

Pre-chamber design

Fuel in-
jection 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

TOYOTA

Super charger - manufacturer

-

Intercooler

Air cooled

* Finished State

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Engine Description
Engine Code

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5S-FE, 2.164L

Engine - Cooling System

| | | | |
|--|---|---|------------------------------|
| Coolant recovery system (std., opt., n.a.) | | Std. | |
| Coolant fill location (rad., bottle) | | Filler neck near LH rear suspension tower | |
| Radiator cap relief valve pressure (kPa (psi)) | | 88 | |
| Circulation thermostat | Type (choke, bypass) | Bypass | |
| | Starts to open at °C (°F) | 82° | |
| Water pump | Type (centrifugal, other) | Centrifugal | |
| | GPM 1000 pump rpm | 0.6L/sec. | 0.54L/sec. |
| | Number of pumps | 1 | |
| | Drive (V-belt, other) | Timing belt | |
| | Bearing type | Prepacked ball bearing | |
| | Impeller material | Stainless steel | Steel |
| | Housing material | Aluminum | |
| By-pass recirculation (type (inter., ext.)) | | External | |
| Cooling system capacity | With heater - L(qt.) | 13.6 | 13.0 |
| | With air conditioner - L(qt.) | - | |
| | Opt. equipment (specify - L(qt.)) | - | |
| Water jackets full length of cyl. (yes, no) | | No | |
| Water all around cylinder (yes, no) | | No | |
| Water jackets open at head face (yes, no) | | No | |
| Radiator core | Std., A/C, HD | Std. | |
| | Type (cross-flow, etc.) | Cross-flow | |
| | Construction (fin & tube mechanical, braze, etc.) | Corrugated fin and tube, braze | |
| | Material, mass (kg (wt., lbs.)) | Copper alloy, 5.3 | Copper alloy, M/T=5.0, A/T=5 |
| | Width | 675 | M/T=575, A/T=675 |
| | Height | 318 | |
| | Thickness | 32 | |
| Radiator end tank material | Fins per inch | 17 | 20 |
| | | Copper alloy | |
| Fan | Std., elec., opt. | Electric | |
| | Number of blades & type (flex, solid, material) | 4, solid | 4, solid, plastics |
| | Diameter & projected width | 300, 47 | M/T=280, 54, A/T=300, 55 |
| | Ratio (fan to crankshaft rev.) | - | |
| | Fan cutout type | - | |
| | Drive type (direct, remote) | - | |
| | RPM at idle (elec.) | 2100 | M/T=2100, A/T=2050 |
| | Motor rating (wattage) (elec.) | 80 | 80 120 |
| | Motor switch (type & location) (elec.) | Temperature controlled, radiator | |
| | Switch point (temp., pressure) (elec.) | 90°C | |
| | Fan shroud (material) | Steel plate | |

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5S-FE, 2.164L

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 system | |
| Manufacturer | | NIPPONDENSO | |
| Carburetor no. of barrels | | - | |
| Idle A/F mix. | | Preset at manufacturer | |
| Fuel injection | Point of injection (no.) | 4 | |
| | Constant, pulse, flow | Pulse | |
| | Control (electronic, mech.) | Electronic | |
| | System pressure (kPa (psi)) | 250 | 284 |
| Idle spd.-rpm (spec. neutral or drive and propane if used) | Manual | 800 | ISC |
| | Automatic | - | ISC |
| | | | |
| Intake manifold heat control (exhaust or water thermostatic or fixed) | | N.A. | |
| Air cleaner type | | Dry | |
| Fuel filter (type/location) | | | |
| Fuel pump | Type (elec. or mech.) | Electro-magnetic | |
| | Location (eng., tank) | In tank | |
| | Pressure range (kPa (psi)) | 250 | 284 |
| | Flow rate at regulated pressure (L (gal)/hr @ kPa (psi)) | | |

Fuel Tank

| | | |
|------------------------------------|--------------------------|--|
| Capacity (refill L (gallons)) | | 54 |
| Location (describe) | | Underfloor, at front floor tunnel |
| Attachment | | Bands and attached to cross-member. |
| Material & Mass (kg (weight lbs.)) | | Terneplate, |
| Filler pipe | Location & material | Left quarter panel, copper plated steel pipe |
| | Connection to tank | Rubber hose |
| Fuel line (material) | | Copper plated steel pipe |
| Fuel hose (material) | | Internally braided rubber hose |
| Return line (material) | | Copper plated steel pipe w/powder coating |
| Vapor line (material) | | Copper plated steel pipe w/powder coating |
| Extended range tank | Opt., n.a. | N.A. |
| | Capacity (L (gallons)) | |
| | Location & material | |
| | Attachment | |
| Auxiliary tank | Opt., n.a. | N.A. |
| | Capacity (L (gallons)) | |
| | Location & material | |
| | Attachment | |
| | Selector switch or valve | |
| | Separate fill | |

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Engine Description
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5S-FE, 2.164L

Vehicle Emission Control

| | | | | | | |
|------------------------------|--|--|--------------------------------------|------------------|------------------------------|--|
| Exhaust Emission Control | Type (air injection, engine modifications, other) | | MPI, ERG, O ₂ S, TWC | | | |
| | Air Injection | Pump or pulse | N.A. | | | |
| | | Driven by | - | | | |
| | | Air distribution (head, manifold, etc.) | - | | | |
| | | Point of entry | - | | | |
| | Exhaust Gas Recirculation | Type (controlled flow, open orifice, other) | Back pressure control | | | |
| | | Exhaust source Point of exhaust injection (spacer, carburetor, manifold, other) | No.4 exhaust port Intake manifold | | | |
| | Catalytic Converter | Type | 3-way | | | |
| | | Number of | 2 | Fed. 1 | Cal. 2 | |
| | | Location(s) | Exhaust manifold under floor | Exhaust manifold | Exhaust manifold under floor | |
| | | Volume [L (in ³)] | 1.3 + 0.5 | 1.3 | 1.3 + 0.5 | |
| | | Substrate type | Monolith | | | |
| | | Noble metal type | - | | | |
| | | Noble metal concentration (g/cm ³) | - | | | |
| Crankcase Emission Control | Type (ventilates to atmosphere, induction system, other) | | Sealed | | | |
| | Energy source (manifold vacuum, carburetor, other) | | Manifold vacuum | | | |
| | Discharges (to intake manifold, other) | | Intake manifold | | | |
| | Air inlet (breather cap, other) | | N.A. | | | |
| Evaporative Emission Control | Vapor vented to (crankcase, canister, other) | Fuel tank | Canister | | | |
| | | Carburetor | - | | | |
| | Vapor storage provision | | Canister | | | |
| Electronic system | Closed loop (yes/no) | | Yes | | | |
| | Open loop (yes/no) | | No | | | |

Engine - Exhaust System

| | | | | |
|--|-----------------------------------|----------------------|---|--------------|
| Type (single, single with cross-over, dual, other) | | Single | | |
| Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)] | | 1, reverse flow | | |
| Resonator no. & type | | N.A. | | |
| Exhaust pipe | Branch o.d., wall thickness | N.A. | | |
| | Main o.d., wall thickness | 60.5/54.0, 1.2 | Fed. 54, 1.2 | Cal. 54, 1.2 |
| | Material & Mass [kg (weight lbs)] | Stainless steel, 1.8 | Stainless steel, 1.8 Stainless steel, 1.2 | |
| Intermediate pipe | o.d. & wall thickness | N.A. | | |
| | Material & Mass [kg (weight lbs)] | N.A. | | |
| Tail pipe | o.d. & wall thickness | 60.5, 1.2 | 54, 1.2 | |
| | Material & Mass [kg (weight lbs)] | Stainless steel, 2.2 | Stainless steel 2.1 | |

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METRIC (U.S. Customary)

Engine Description
Engine Code

3S-GTE, 1.998L Turbo

5S-FE, 2.164L

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) | TOYOTA/Japan |
| Automatic (manufacturer/country) | N.A. |
| Automatic overdrive (manufacturer/country) | N.A. AISIN AW/Japan |

Manual Transmission/Transaxle

| | | | |
|-------------------------------------|--------------------|--------------------------------|------------------|
| Number of forward speeds | | 5 | |
| Gear ratios | 1st | 3.230 | 3.285 |
| | 2nd | 1.913 | 1.960 |
| | 3rd | 1.258 | 1.322 |
| | 4th | 0.918 | 1.028 |
| | 5th | 0.731 | 0.820 |
| | Reverse | 3.545 | 3.153 |
| Synchronous meshing (specify gears) | | All forward=1st through to 5th | |
| Shift lever location | | Floor | |
| Trans. case mat'l. & mass kg (lbs)* | | - | |
| Lubricant | Capacity [L (pt.)] | 4.2 | 2.6 |
| | Type recommended | Multi-purpose, API GL-5 | ATF, "DEXRON II" |

Clutch (Manual Transmission)

| | | | |
|---|---|------------------------------------|-----------|
| Clutch manufacturer | | AISIN SEIKI. | |
| Clutch type (dry, wet; single, multiple disc) | | Single dry | |
| Linkage (hydraulic, cable, rod, lever, other) | | Hydraulic | |
| Max. pedal effort (nom. spring load, new) N (lbs) | Depressed | - | |
| | Released | - | |
| Assist (spring, power/percent, nominal) | | Turn-over spring | N.A. |
| Type pressure plate springs | | Diaphragm | |
| Total spring load (nominal, new) N (lbs) | | 7350 | 4900 |
| Clutch facing | Facing mfg. & material coding | AISIN CHEMICAL | |
| | Facing material & construction | Semi-mold | |
| | Rivets per facing | 16 | |
| | Outside x inside dia. (nominal) | 236 x 150 | 224 x 150 |
| | Total eff. area (cm ² (in. ²)) | 261 | 217 |
| | Thickness (pressure plate side/fly wheel side) | 3.5/3.5 | |
| | Rivet depth (pressure plate side/fly wheel side) | - | |
| | Engagement cushion method | Cushion spring | |
| Release bearing type & method lub. | | Single row ball bearing, prepacked | |
| Torsional damping method, springs, hysteresis | | Rubber | |

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

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Engine Description
Engine Code

5S-FE, 2.164L

☒ Automatic Transmission/Transaxle

| | | |
|--|-------------------------------------|---|
| Trade Name | | A241E |
| Type and special features (describe) | | 4-speed, electronic controlled planetary gear, lock-up clutch converter |
| Gear selector | Location (column, floor, other) | Floor |
| | Ltr./No. designation (e.g. PRND21) | PRND2L |
| | Shift interlock (yes, no, describe) | No |
| Gear ratios | 1st | 3.643 |
| | 2nd | 2.008 |
| | 3rd | 1.296 |
| | 4th | 0.892 |
| | Reverse | 2.977 |
| Max. upshift speed - drive range [km/h (mph)] | | 137 |
| Max. kickdown speed - drive range [km/h (mph)] | | 131 |
| Min. overdrive speed [km/h (mph)] | | 21 |
| Torque converter | Number of elements | 3 |
| | Max. ratio at stall | 2.1 |
| | Type of cooling (air, liquid) | Liquid |
| | Nominal diameter | 241 |
| | Capacity factor "K" | - |
| Lubricant | Capacity (refill L[pt.]) | 8.0 including differential |
| | Type recommended | ATF, "DEXRON II" |
| Oil cooler (std., opt., N.A., internal, external, air, liquid) | | Std, external, integral to the radiator |
| Transmission mass [kg (lbs)] & case material ** | | - |

☒ 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 - , Torque

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

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Engine Description
Engine Code

| | | |
|----------------------|----------------|--------------------|
| 3S-GTE, 1.998L Turbo | 5S-FE, 2.164L | |
| 5-speed manual | 5-speed manual | 4-speed, automatic |

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

| | | | | |
|--|-----------|-------|-------|-------|
| Axle ratio (or overall top gear ratio) | | 4.285 | 4.176 | 3.034 |
| Ring gear o.d. | | - | | |
| No. of teeth | Pinion | 14 | 17 | 29 |
| | Ring gear | 40 | 71 | 88 |

⊗ Rear Axle Unit

| | | | | |
|----------------------------------|-------------------------|-----------------------------|---|---------------------------|
| Description | | Integral to transmission | | |
| Limited slip differential (type) | | N.A. | | |
| Drive pinion | Type | Helical gear | | |
| | Offset | - | | |
| No. of differential pinions | | 4 | 2 | 2 |
| Pinion / differential | Adjustment (shim, etc.) | - | | |
| | Bearing adjustment | - | | Pinion=collapsible sleeve |
| Driving wheel bearing (type) | | Double angular ball bearing | | |
| Lubricant | Capacity [L (pt.)] | Included in transmission | | |
| | Type recommended | - | | |
| | | | | |
| | | | | |
| | | | | |

⊗ Propeller Shaft - Rear Wheel Drive NOT APPLICABLE See next page

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

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METRIC (U.S. Customary)

Engine Description
Engine Code

| | | |
|----------------------|----------------|-------------------|
| 3S-GTE, 1.998L Turbo | 5S-FE, 2.164L | |
| 5-speed manual | 5-speed manual | 4-speed automatic |

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

| | | | |
|---|----------------|-----------|---------------------|
| Effective final drive ratio (or overall top gear ratio) | | | See preceding page. |
| Transfer ratio and method (chain, gear, etc.) | | | |
| Front drive unit | Ring gear o.d. | | |
| | No. of teeth | Pinion | |
| | | Ring gear | |

⊗ Front Drive Unit

| | | |
|--|-------------------------|---------------------|
| Description (integral to trans., etc.) | | See preceding page. |
| Limited slip differential (type) | | |
| Drive pinion | Type | |
| | Offset | |
| No. of differential pinions | | |
| Pinion / differential | Adjustment (shim, etc.) | |
| | Bearing adjustment | |
| Driving wheel bearing (type) | | |
| Lubricant | Capacity [L (pt.)] | |
| | Type recommended | |
| | | |
| | | |
| | | |

⊗ Axle Shafts - Rear Wheel Drive

| | | | | |
|---|-----------------------------|--------------------------------|------------------------|---------------|
| Manufacturer and number used | | | TOYOTA, 2 | |
| Type (straight, solid bar, tubular, etc.) | | Left | Solid | |
| | | Right | Solid | |
| Outer diam. x length* x wall thickness | Manual transaxle | Left | 28.5 x 323.7 | 23.5 x 340.0 |
| | | Right | 28.5 x 323.7 | 26.0 x 608.0 |
| | Automatic transaxle | Left | N.A. | |
| | | Right | N.A. | |
| | Optional transaxle | Left | N.A. | |
| | | Right | N.A. | |
| Slip yoke | Type | | N.A. | |
| | Number of teeth | | | |
| | Spline o.d. | | | |
| Universal joints | Make and mfg. no. | Inner | TOYOTA | |
| | | Outer | TOYOTA | |
| | Number used | | 4 | |
| | Type, size, plunge | Inner | Cross groove plunge | Tripod plunge |
| | | Outer | Rzeppa fixed | |
| | Attach (u-bolt, clamp, etc) | | Snap ring | |
| | Bearing | Type (plain, anti-friction) | Ball bearing | N.A. |
| | | Lubrication (lifting, prepack) | Prepacked | N.A. |
| Drive taken through (torque tube, arms or springs) | | | MacPherson strut | |
| Torque taken through (torque tube, arms or springs) | | | Engine mounting system | |

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

MVMA Specifications

Vehicle Line MR2
 Model Year 1991 Issued 90-01 Revised (+) _____

METRIC (U.S. Customary)

Body Type And/Or
 Engine Displacement

| | | |
|----------------------|----------------|-------------------|
| 3S-GTE, 1.998L Turbo | 5S-FE, 2.164L | |
| 5-speed manual | 5-speed manual | 4-speed automatic |

Suspension - General Including Electronic Controls

| | | | |
|---------------------------------|---|-------------------------|--|
| Car leveling | Standard/optional/not avail. | Not available | |
| | Manual/automatic control | | |
| | Type (air/hydraulic) | | |
| | Primary/assist spring | | |
| | Rear only/4 wheel leveling | | |
| | Single/dual rate spring | | |
| | Single/dual ride heights | | |
| | Provision for jacking | | |
| Shock absorber damping controls | Standard/option/not avail. | Not available | |
| | Manual/automatic control | | |
| | Number of damping rates | | |
| | Type of actuation (manual/electric motor/air, etc.) | | |
| | s e n s o r s | Lateral acceleration | |
| | | Deceleration | |
| | | Acceleration | |
| Shock absorber (front & rear) | | Road surface | |
| | Type | Double acting tube type | |
| | Make | TOYOTA | |
| | Piston diameter | 32/32 | |
| | Rod diameter | 22/22 | |

Suspension - Front

| | | | |
|----------------------|-------------------------------------|---|--------------|
| Type and description | | MacPherson strut | |
| Travel* | Full jounce | 75 | |
| | Full rebound | 90 | |
| Spring | Type (coil, leaf, other) & material | Coil, SUP7NV | |
| | Insulators (type & material) | Upper, rubber | |
| | Size (coil design height & i.d.) | 249.0, 157.2 | 264.0, 157.6 |
| | Spring rate (N/mm (lb./in.)) | 24.5 | 20.6 |
| | Rate at wheel (N/mm (lb./in.)) | 27.0 | 22.6 |
| Stabilizer | Type (link, linkless, frameless) | Link | |
| | Material & bar diameter | SVd48-M, manual steering=16.5, opt. power steering=17.0 | |

Suspension - Rear

| | | | | | |
|----------------------|--|--------------------------|-------------|---------------|-------------|
| Type and description | | MacPherson strut | | | |
| Travel* | Full jounce | 80 | | | |
| | Full rebound | 90 | | | |
| Spring | Type (coil, leaf, other) & material | | Coil, SUP7 | | |
| | Size (length x width, coil design height & i.d.) | | 322.7, 96.7 | 315.7, 97.1 | 322.2, 96.9 |
| | Spring rate (N/mm (lb./in.)) | | 39.2 | 37.2 | |
| | Rate at wheel (N/mm (lb./in.)) | | 43.1 | 41.0 | |
| | Insulators (type & material) | | - | | |
| | If leaf | No. of leaves | - | | |
| | | Shackle (comp. or tens.) | - | | |
| Stabilizer | Type (link, linkless, frameless) | | Link | | |
| | Material & bar diameter | | Svd48-M, 18 | SVD48-M, 17.5 | |
| Track bar (type) | | N.A. | | | |

* Define load condition:

MVMA Specifications

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (•) _____

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

3S-GTE, 1.998L Turbo

5S-FE, 2.164L

Brakes - Service

| | | | | | |
|--|--|---------------------------------|---|---------------------------------------|---------------------|
| Description | | | Four wheel hydraulic actuated system | | |
| Manufacturer and brake type (std., opt., n.a.) | | Front (disc or drum) | Disc | | |
| | | Rear (disc or drum) | Disc | | |
| Valving type (proportion, delay, metering, other) | | | P&B valve | | |
| Power brake (std., opt., n.a.) | | | Std. | | |
| Booster type (remote, integral, vac., hyd., etc.) | | | Integral, vacuum | | |
| Vacuum | Source (inline, pump, etc.) | | Inline | | |
| | Reservoir (volume in. ³) | | - | | |
| | Pump-type (elec. gear driven, belt driven) | | - | | |
| Traction control | Operational speed range | | N.A. | | |
| | Type engine intervention (electronic, mech.) | | - | | |
| Anti-lock device | Front / rear (std., opt., n.a.) | | Opt/opt. | | |
| | Manufacturer | | TOYOTA | | |
| | Type (electronic, mech.) | | Electronic | | |
| | Number sensors or circuits | | 4 | | |
| | Number anti-lock hydraulic circuits | | 3 | | |
| | Integral or add-on system | | Integral | | |
| | Yaw control (yes, no) | | No | | |
| Hydraulic power source (elec., vac. mtr., pwr. strg.) | | | Electric motor | | |
| Effective area [cm ² (in. ²)]* (F/R) | | | 196/142 | 168/142 | |
| Gross Lining area [cm ² (in. ²)]**(F/R) | | | 196/142 | 168/142 | |
| Swept area [cm ² (in. ²)]*** (F/R) | | | 1204/1199 | 1190/1199 | |
| Rotor | Outerworking diameter | F/R | 258/263 | | |
| | Inner working diameter | F/R | 162/169 | | |
| | Thickness | F/R | 25/16 | | |
| | Material & type (vented/solid) | F/R | Cast iron ventilated/Cast iron ventilated | | |
| Drum | Diameter & width | F/R | N.A. | | |
| | Type and material | F/R | N.A. | | |
| Wheel cylinder bore | | F/R | 36.51/36.51, two each | 51.10/41.30 | |
| Master cylinder | Bore-stroke | F/R | Bore=22.22/22.22, Stroke=15/12 | | |
| Pedal arc ratio | | | 3.7 | | |
| Line pressure at 445 N(100 lb.) pedal load [kPa (psi)] | | | 12180 | 10170 | |
| Lining clearance | | F/R | Self adjusted/self adjusted | | |
| Brake lining | Front wheel | Bonded or riveted (rivets/seg.) | | Bonded | |
| | | Rivet size | | - | |
| | | Manufacturer | | AKEBONO, SUMITOMO, NISSHINBO or AISIN | |
| | | Lining code***** | | | |
| | | Material | | Resin molded | |
| | | **** | Primary or out-board | 122.5 x 50.0 x 10.0 | 102.7 x 43.5 x 10.0 |
| | | Size | Secondary or in-board | 122.5 x 50.0 x 10.0 | 102.7 x 43.5 x 10.0 |
| | | Shoe thickness (no lining) | | 5.5 | 5.0 |
| | Rear wheel | Bonded or riveted (rivets/seg.) | | Bonded | |
| | | Manufacturer | | AKEBONO, SUMITOMO, NISSHINBO or AISIN | |
| | | Lining code***** | | | |
| | | Material | | Resin molded | |
| | | **** | Primary or out-board | 82.0 x 44.5 x 10.0 | |
| | | Size | Secondary or in-board | 94.0 x 42.9 x 10.0 | |
| | | Shoe thickness (no lining) | | Out-board=5.5, in-board=6.0 | |

* 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 MR2
Model Year 1991 Issued 90-01 Revised (+) _____

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

| | |
|----------------------|---------------|
| 3S-GTE, 1.998L Turbo | 5S-FE, 2.164L |
|----------------------|---------------|

Tires And Wheels (Standard)

| | | | | |
|--------|---|---------------------|--------------------------------|-----------------------------|
| Tires | Size (load range, ply) | F/R | 195/60R1485V//205/160R1488V | 195/60R1485H//205/60R1487H |
| | Type (bias, radial, steel, nylon, etc.) | | Radial | |
| | Inflation pressure (cold) for recommended max. vehicle load | Front (kPa (psi)) | 200 | |
| | | Rear (kPa (psi)) | 230 | |
| | Rev./mile-at 70 km/h (45 mph) | | 886 | |
| Wheels | Type & material | | Full drop center rim, aluminum | Full drop center rim, steel |
| | Rim (size & flange type) | F/R | 14 x 6JJ/14 x 7JJ | |
| | Wheel offset | F/R | 45/45 | |
| | Attachment | Type (bolt or stud) | Stud | |
| | | Circle diameter | 114.3 | |
| | | Number & size | 5, M12 x1.5 | |
| Spare | Tire and wheel | | T135/70D15, 15 x 4T | |
| | Storage position & location (describe) | | Front luggage room | |

Tires And Wheels (Optional)

| | | | |
|---|-----|------|--------------------------------|
| Tire size (load range, ply) | F/R | N.A. | 195/60R1485H//250/60R1487H |
| radial, steel, nylon, etc.) | | | Radial |
| Wheel (type & material) | | | Full drop center rim, aluminum |
| Rim (size, flange type and offset) | F/R | | 14x6JJ/14x7JJ |
| 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) | | | |

Brakes - Parking

| | | |
|---------------------------------|--|---------------------|
| Type of control | | Hand operated |
| Location of control | | Floor |
| Operates on | | Rear service brakes |
| If separate from service brakes | Type (internal or external) | |
| | Drum diameter | |
| | Lining size (length x width x thickness) | |

MVMA Specifications

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (+) _____

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

Standard=Manual

Option=Power

Steering

| | | | | | | | |
|---|---|------------------------|-----------------------------|------|------|--|------|
| Manual (std., opt., n.a.) | | | Std. | | - | | |
| Power (std., opt., n.a.) | | | - | | Opt. | | |
| Adjustable steering wheel/column (tilt, telescope, other) | Type | Tilt | | | | | |
| | Manufacturer | TOYOTA | | | | | |
| | (std., opt., n.a.) | Std. | | | | | |
| Wheel diameter** (W9) SAE J1100 | Manual | 380 | | | - | | |
| | Power | - | | | 380 | | |
| Turning diameter m (ft.) | Outside front | Wall to wall (l. & r.) | 10.4 | | | | |
| | | Curb to curb (l. & r.) | 9.8 | | | | |
| | Inside rear | Wall to wall (l. & r.) | 5.2 | | | | |
| | | Curb to curb (l. & r.) | 5.5 | | | | |
| Steering Radius* | | | | | | | |
| Manual | Gear | Type | Rack and pinion | | | - | |
| | | Manufacturer | KOYO SEIKO | | | | |
| | | Ratios | Gear | - | | | |
| | | | Overall | 20.5 | | | |
| | No. wheel turns (stop to stop) | 3.7 | | | | | |
| Power | Type (coaxial, elec., hyd., etc.) | | - | | | Integral, hydraulic | |
| | Manufacturer | | | | | Pump=TOYOTA MACHINE WORKS, gear=KOYO SEIKO | |
| | Gear | Type | | | | Rack and pinion | |
| | | Ratios | Gear | | | | - |
| | | | Overall | | | | 18.2 |
| | Pump (drive) | | | | | Electric motor | |
| | No. wheel turns (stop to stop) | | | | | 3.3 | |
| Linkage | Type | | Ackermann | | | | |
| | Location (front or rear of wheels, other) | | Front of wheels | | | | |
| | Tie rods (one or two) | | 2 | | | | |
| Steering axis | Inclination at camber (deg.) | | 13°50' | | | | |
| | Bearings (type) | Upper | Ball bearing | | | | |
| | | Lower | Ball joint | | | | |
| | | Thrust | - | | | | |
| Steering spindle/knuckle & joint type | | | MacPherson strut | | | | |
| Wheel spindle/hub | Diameter | Inner bearing | 30.0 | | | | |
| | | Outer bearing | 63.0 | | | | |
| | Thread (size) | | M20x1.5 | | | | |
| | Bearing (type) | | Double angular ball bearing | | | | |

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

** See Page 22.

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (*) _____

Body Type And/Or
Engine Displacement

3S-GTE, 1.998L Turbo

5S-FE, 2.164L

Wheel Alignment

| | | | |
|--------------------------------|--------------------------|---------------------------------|------------|
| Front wheel at curb mass (wt.) | Service checking | Caster (deg.) | 2°45'±45' |
| | | Camber (deg.) | -55'±45' |
| | | Toe-in (outside track-mm (in.)) | 1±2 |
| | Service reset* | Caster | Pre-set |
| | | Camber | Pre-set |
| | | Toe-in | 1±1 |
| | Periodic M.V. inspection | Caster | 2°45'±45' |
| | | Camber | -55'±45' |
| | | Toe-in | 1±2 |
| Rear wheel at curb mass (wt.) | Service checking | Camber (deg.) | -1°20'±45' |
| | | Toe-in (outside track-mm (in.)) | 5±2 |
| | Service reset* | Camber | Pre-set |
| | | Toe-in | 5±1 |
| | Periodic M.V. inspection | Camber | -1°20'±45' |
| | | Toe-in | 5±2 |

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

Electrical - Instruments and Equipment

| | | | |
|--|--|------------------------|-----------|
| Speedometer | Type (analog, digital, std., opt.) | Analog | |
| | Trip odometer (std., opt., n.a.) | Std. | |
| EGR maintenance indicator | | N.A. | |
| Charge indicator | Type | Tell-tale | Voltmeter |
| | Warning device (light, audible) | Light | |
| Temperature indicator | Type | Electric gauge | |
| | Warning device (light, audible) | N.A. | |
| Oil pressure indicator | Type | Tell-tale | |
| | Warning device (light, audible) | Light | |
| Fuel indicator | Type | Electric gauge | |
| | Warning device (light, audible) | Light | |
| Windshield wiper | Type (standard) | 3 speed electric motor | |
| | Type (optional) | N.A. | |
| | Blade length | LH=500mm, RH=475mm | |
| | Swept area (cm ² (in. ²)) | 6599cm ² | |
| Windshield washer | Type (standard) | Electric motor | |
| | Type (optional) | N.A. | |
| | Fluid level indicator (light, audible) | N.A. | |
| Rear window wiper, wiper/washer (std., opt., n.a.) | | N.A. | |
| Horn | Type | Electric, disc | |
| | Number used | 2 | |
| Other | | | |

MVMA Specifications

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (*)

METRIC (U.S. Customary)

Engine Description
Engine Code

All models

Electrical - Supply System

| | | |
|------------|----------------------------|--|
| Battery | Manufacturer | JAPAN STORAGE BATTERY, YUASA BATTERY, SHIN-KOBE ELECTRIC, NATIONAL, FURUKAWA |
| | Model, std., (opt.) | 55D23L |
| | Voltage | 12 |
| | Amps at 0°F cold crank | 310 |
| | Minutes-reserve capacity | 90 |
| | Amps/hrs. 20 hr. rate | 60 |
| | Location | Center of front luggage room |
| Alternator | Manufacturer | NIPPONDENSO |
| | Rating (idle/max. rpm) | 70A |
| | Ratio (alt. crank/rev.) | 2.36 |
| | Output at idle (rpm, park) | - |
| | Optional (type & rating) | - |
| Regulator | Type | IC |

Electrical - Starting System

| | | |
|-------------|-----------------------------------|-------------|
| Motor | Manufacturer | NIPPONDENSO |
| | Current drain _____ °F | - |
| | Power rating (kw (hp)) | - |
| Motor drive | Engagement type | Shift |
| | Pinion engages from (front, rear) | Front |

Electrical - Ignition System

| | | |
|-------------|----------------------------------|-----------------------|
| Type | Electronic (std., opt., n.s.) | Std. |
| | Other (specify) | - |
| Coil | Manufacturer | NIPPONDENSO |
| | Model | - |
| | Current | Engine stopped - A 0 |
| | | Engine Idling - A 0.8 |
| Spark plug | Manufacturer | NIPPONDENSO NGK |
| | Model | PK20R8 BKR6EPB |
| | Thread (mm) | M14x19 |
| | Tightening torque (N-m (lb. ft)) | 17.7 |
| | Gap | 0.8 |
| | Number per cylinder | 1 |
| Distributor | Manufacturer | NIPPONDENSO |
| | Model | |

Electrical - Suppression

| | |
|------------------|--|
| Locations & type | Flame sprayed distributor rotor Resistive high tension cord Resistive spark plug |
|------------------|--|

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (+) _____

Body Type

All models

Body

| | |
|-------------------------------|---|
| Structure | Monocoque construction |
| Bumper system front - rear | Front = Urethane fascia + energy absorber foam + steel reinforcement Rear = Urethane fascia + energy absorber foam + plastic reinforcement |
| Anti-corrosion treatment | Extensive use of galvanealed steel sheet Full dipped pretreatment Cathodic ED Chip resistant coat on lower exterior sides Application of rust resistant sealer to sheet edge Application of PVC under-coat |

Body - Miscellaneous Information

| | | |
|---|---|--|
| Type of finish (lacquer, enamel, other) | | Acrylic or alkyd enamel |
| Hood | Material & mass | Steel sheet |
| | Hinge location (front, rear) | Front |
| | Type (counterbalance, prop) | Prop |
| | Release control (internal, external) | Internal |
| Trunk lid | Material & mass | Steel sheet |
| | Type (counterbalance, other) | Front=prop, rear=counterbalance clock spring |
| | Internal release control (elec., mech., n.a.) | Mechanical |
| Hatch-back lid | Material & mass | None |
| | Type (counterbalance, other) | |
| | Internal release control (elec., mech., n.a.) | |
| Tailgate | Material & mass | None |
| | Type (drop, lift, door) | |
| | Internal release control (elec., mech., n.a.) | |
| Vent window control (crank, friction, pivot, power) | Front | None |
| | Rear | - |
| Window regulator type (cable, tape, flex drive, etc.) | Front | Sector gear and arm |
| | Rear | - |
| Seat cushion type (e.g., 60/40 bucket, bench, wire, foam, etc.) | Front | Bucket, panel frame + spring + foam pad |
| | Rear | None |
| | 3rd seat | None |
| Seat back type (e.g., 60/40, bucket, bench, wire, foam, etc.) | Front | Bucket, pipe frame + spring + foam pad |
| | Rear | None |
| | 3rd seat | None |
| | | |

MVMA Specifications

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (+) _____

METRIC (U.S. Customary)

Body Type

All models

Restraint System

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

| Glass | SAB Ref. No. | |
|---|--------------|-----------|
| Windshield glass exposed surface area (cm ² (in. ²)) | S1 | 8350 |
| Side glass exposed surface area (cm ² (in. ²)) - total 2-sides | S2 | 6208 |
| Backlight glass exposed surface area (cm ² (in. ²)) | S3 | 1734 |
| Total glass exposed surface area (cm ² (in. ²)) | S4 | 16292 |
| Windshield glass (type) | | Laminated |
| Side glass (type) | | Tempered |
| Backlight glass (type) | | Tempered |

Headlamps

| | |
|--|-------------|
| Description - sealed beam, halogen, replaceable bulb, etc. | Sealed beam |
| Shape | Rectangular |
| Lo-beam type (2A1, 2B1, 2C1, etc.) | N.A. |
| Quantity | 2, combined |
| Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.) | N.A. |
| Quantity | N.A. |

Frame

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

MVMA Specifications

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (*)

METRIC (U.S. Customary)

Body Type

All model

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

| | | |
|---|---|---|
| Air conditioning (manual, auto, temp control) | | Opt., automatic temperature control |
| Clock (digital, analog) | | Std., digital |
| Compass / thermometer | | N.A. |
| Console (floor, overhead) | | Std., floor |
| Defroster, elec. backlight | | Std. |
| Electronic | Diagnostic monitor (integrated, individual) | |
| | Instrument cluster (list instruments) | N.A. |
| | Keyless entry | N.A. |
| | Trip/finder (avg. spd., fuel) | N.A. |
| | Voice alert (list items) | N.A. |
| | Other | |
| Fuel door lock (remote, key, electric) | | Std., remote |
| Lamps | Auto head on / off delay, dimming | Auto head on/off=opt, dimming=N.A. |
| | Cornering | N.A. |
| | Courtesy (map, reading) | Opt. map lamp=std. |
| | Door lock, ignition | Ignition lock lamp=std. |
| | Engine compartment | N.A. |
| | Fog | Opt. for 2L turbo |
| | Glove compartment | N.A. |
| | Trunk | Std. |
| | Illuminated entry system (list lamps, activation) | Opt. ignition lock lamp, door lock cylinder lamp, room lamp |
| | Other | |
| Mirrors | Day / night (auto, man.) | Std.,=manual |
| | L.H. (remote, power, heated) | Power=std. for 2L turbo, opt. for 2.2L |
| | R.H. (convex, remote, power, heated) | Power=std. for 2L turbo, opt. for 2.2L |
| | Visor vanity (RH / LH, illuminated) | Std.=vanity for RH w/o lamp |
| Navigation system (describe) | | N.A. |
| Parking brake-auto release (warning light) | | Auto release=N.A., warning light=std. |

MVMA Specifications

Vehicle Line MR2
 Model Year 1991 Issued 90-01 Revised (*) _____

METRIC (U.S. Customary)

Engine Description
 Engine Code

All models

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

| | | | | |
|--|---|---|--|--|
| Power equipment | Deck lid (release, pull down) | | N.A. | |
| | Door locks (manual, automatic, describe system) | | Opt.=manual, both doors with either LH/RH switch | |
| | 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 | | Opt. | |
| | Vent windows | | None | |
| Rear windows | | None | | |
| Radio systems | Antenna (location, whip, w / shield, power) | | Std.=2.2L, standard roof, front pillar: others, rear quarter, power Opt.=rear quarter, power + windshield AM/FM MPX ETR (1 din) 4 speakers | |
| | Standard | AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc. | AM/FM MPX ETR with cassette (1 din) 6 speaker | |
| | Optional | | AM/FM MPX ETR with cassette and acoustic flavor, theft deterrent (2 din) 7 | |
| | | | AM/FM MPX ETR with cassette and acoustic flavor, theft deterrent (1 din) 7 | |
| | | | AM/FM MPX ETR with cassette (2 din) 6 | |
| | Speaker (number, location) | | 4=doors + outside mirror brackets 6=4 + rear sides, 7=6 + behind left seat | |
| | Roof: open air or fixed (flip-up, sliding, "T") | | "T"-std. for some models. See page 2, Detachable & flip up=opt. for others | |
| Speed control device | | Opt. | | |
| Speed warning device (light, buzzer, etc.) | | N.A. | | |
| Tachometer (rpm) | | Std. | | |
| Telephone system (describe) | | - | | |
| Theft deterrent system | | Opt. | | |

MVMA Specifications

Vehicle Line MR2

Model Year 1991 Issued 90-01 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. | |
|---|--------------|------------|
| | | All models |
| <input checked="" type="checkbox"/> Width | | |
| Tread (front) | W101 | 1470 |
| Tread (rear) | W102 | 1450 |
| Vehicle width | W103 | 1700 |
| Body width at Sq RP (front) | W117 | 1695 |
| Vehicle width (front doors open) | W120 | 3685 |
| Vehicle width (rear doors open) | W121 | - |
| Tumble-home (deg.) | W122 | 30.0° |
| Outside mirror width | W410 | |

| | | |
|--|------|------|
| <input checked="" type="checkbox"/> Length | | |
| Wheelbase | L101 | 2400 |
| Vehicle length | L103 | 4170 |
| Overhang (front) | L104 | 865 |
| Overhang (rear) | L105 | 905 |
| Upper structure length | L123 | 1657 |
| Rear wheel C/L "X" coordinate | L127 | 2400 |

| | | |
|---|---------|-------|
| <input checked="" type="checkbox"/> Height* | | |
| Passenger distribution (front/rear) | PD1.2.3 | 2 |
| Trunk/cargo load | Fr/Rr | 0/0 |
| Vehicle height | H101 | 1240 |
| Cowl point to ground | H114 | 805 |
| Deck point to ground | H138 | 925 |
| Rocker panel-front to ground | H112 | 160 |
| Rocker panel-rear to ground | H111 | 270 |
| Windshield slope angle | H122 | 60.0° |
| Backlight slope angle | H121 | 15.0° |

Ground Clearance*

| | | |
|---|------|-----------------------------|
| Front bumper to ground | H102 | 405/235 |
| Rear bumper to ground | H104 | 360 |
| Bumper to ground (front at curb mass (wt.)) | H103 | 385/215 |
| Bumper to ground (rear at curb mass (wt.)) | H105 | 350 |
| Angle of approach (degrees) | H106 | 14° |
| Angle of departure (degrees) | H107 | 18° |
| Ramp breakover angle (degrees) | H147 | 14.5° |
| Axle differential to ground (front/rear) | H153 | 165 (Rear) |
| Min. running round clearance | H156 | 135 |
| Location of min. run. grd. clear. | | Exhaust pipe heat insulator |

* All vehicle height and ground clearances are measured at the Manufacturer's Design Load Weight. Manufacturer's 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

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (*) _____

Body Type

All models

SAE
Ref.
No.

Front Compartment

| | | |
|--|-----|---|
| SgRP front, "X" coordinate | L31 | 1353 |
| Effective head room | H61 | Standard roof=933.4, Standard roof w/op. Sun roof=935.1, T-bar Roof=934.4 |
| Max. eff. leg room (accelerator) | L34 | 1102.1 |
| SgRP to heel point | H30 | 195 |
| SgRP to heel point | L53 | 921.1 |
| Back angle | L40 | 21° |
| Hip angle | L42 | 94.5° |
| Knee angle | L44 | 136° |
| Foot angle | L46 | 87° |
| Design H-point front travel | L17 | Driver=208.4, Passenger=164.8 |
| Normal driving & riding seat track trvl. | L23 | Driver=208.4, Passenger=164.8 |
| Shoulder room | W3 | 1371 |
| Hip room | W5 | 1326 |
| Upper body opening to ground | H50 | 327 |
| Steering wheel maximum diameter* | W9 | 380 |
| Steering wheel angle | H18 | 21° |
| Accel. heel pt. to steer. whl. cntr | L11 | |
| Accel. heel pt. to steer. whl. cntr | H17 | |
| Undepressed floor covering thickness | H67 | 12 |

Rear Compartment

None

| | | |
|------------------------------------|-----|--|
| SgRP point couple distance | L50 | |
| Effective head room | H63 | |
| Min. effective leg room | L51 | |
| SgRP (second to heel) | H31 | |
| Knee clearance | L48 | |
| Shoulder room | W4 | |
| Hip room | W6 | |
| Upper body opening to ground | H51 | |
| Back angle | L41 | |
| Hip angle | L43 | |
| Knee angle | L45 | |
| Foot angle | L47 | |
| Depressed floor covering thickness | H73 | |

Luggage Compartment

| | | |
|---------------------------------------|------|-----------------------|
| Usable luggage capacity [L (cu. ft.)] | V1 | 184 (Fr.=29, Rr.=155) |
| Liftover height | H195 | 767 |

Interior Volumes (EPA Classification)

| | | |
|-----------------------------------|--|--|
| Vehicle class | | |
| Interior volume index (cu. ft.)** | | |
| Trunk / cargo index (cu. ft.) | | |

* See page 14.

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

MVMA Specifications

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (*) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Body Type

None

SAE
Ref.
No.

Station Wagon - Third Seat

| | | |
|-----------------------|-----|--|
| Seat facing direction | SD1 | |
| SgRP couple distance | L85 | |
| Shoulder room | W85 | |
| Hip room | W86 | |
| Effective leg room | L86 | |
| Effective head room | H86 | |
| SgRP to heel point | H87 | |
| Knee clearance | L87 | |
| Back angle | 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

| | | |
|--|------|--|
| Cargo length at front seatback height | L208 | |
| Cargo length at floor (front) | L209 | |
| Cargo length at second seatback height | L210 | |
| Cargo length at floor (second) | L211 | |
| Front seatback to load floor height | H197 | |
| Second seatback to load floor height | H198 | |
| Cargo volume index (m ³ (ft. ³)) | V3 | |
| Hidden cargo volume index (m ³ (ft. ³)) | V4 | |
| Cargo volume index-rear of 2-seat | V11 | |

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line MR2
 Model Year 1991 Issued 90-01 Revised (+) _____

Body Type

All model

Vehicle Fiducial Marks

Number*

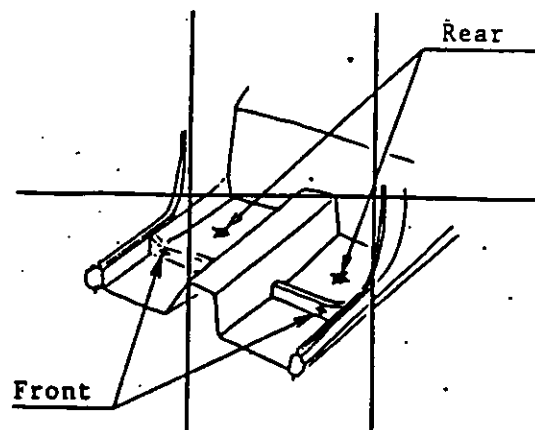
Define Coordinate Location

Front 2

Center of installed hole for outer seat track
in front floor cross-member

Rear 2

Center of paint drain hole
in front floor



Fiducial
Mark
Number

| | | |
|-------|-------|------------|
| Front | W21* | W5 + 84.4 |
| | L54* | L19 + 78.4 |
| | H81* | H10 + 43.2 |
| | H181* | |
| | H183* | |

| | | |
|------|-------|------------|
| Rear | W22* | W4 + 55.0 |
| | L55* | L23 + 50.0 |
| | H82* | H9 + 89.2 |
| | H182* | |
| | H184* | |

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

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line MR2
Model Year 1991 Issued 90-01 Revised (•) _____

[illegible]

* 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

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

SHIPPING MASS (weight) Calculation (Kg. (lbs.))

Shipping Mass (weight) = Curb Weight Less:

34.9 kg

MVMA Specifications

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

MR2

Model Year

1991

Issued

90-01

Revised (-)

[illegible]

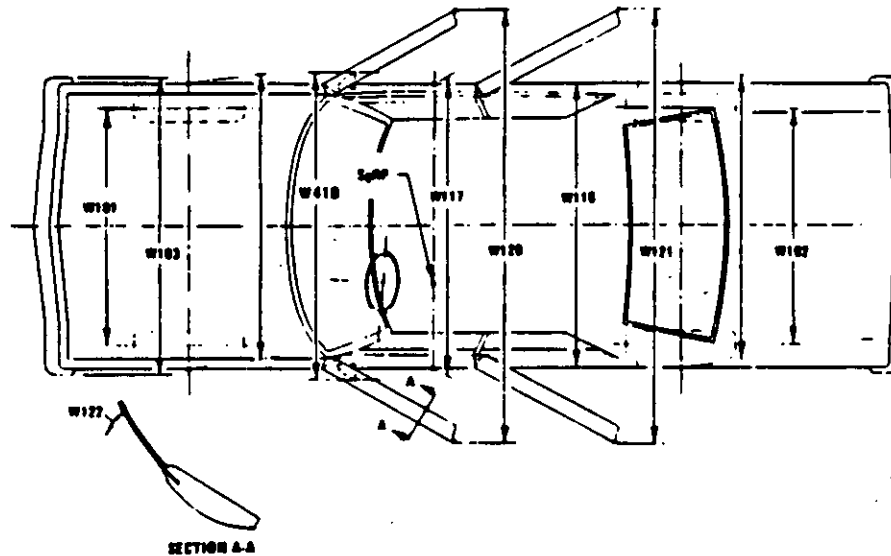
* Also see Engine - General Section for dressed engine mass (weight).

MVMA Specifications

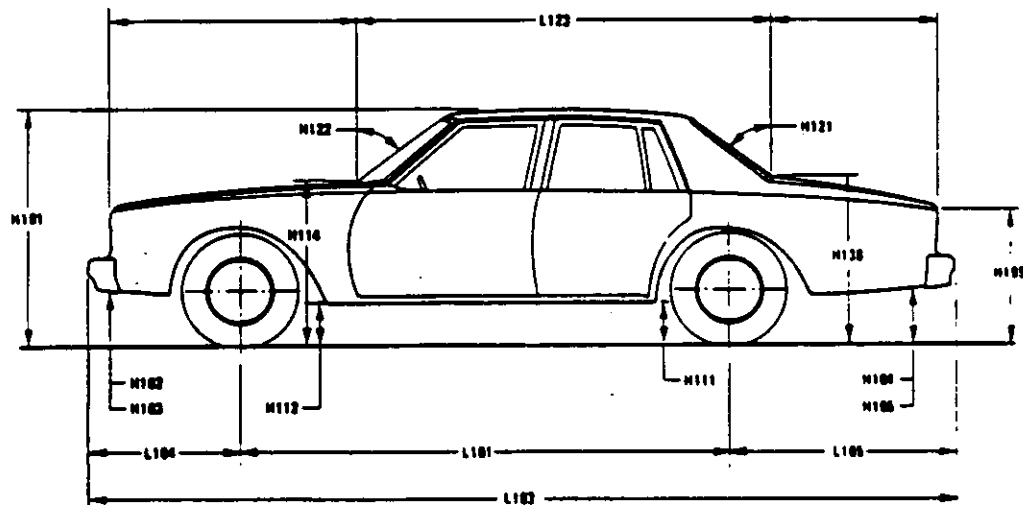
METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions – Key Sheet

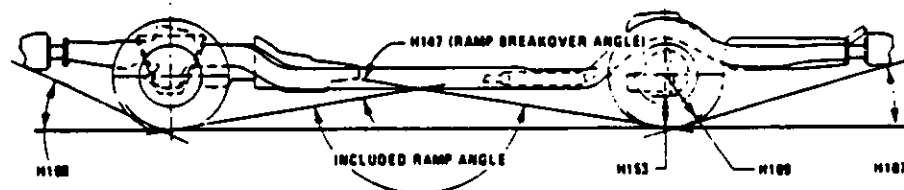
Exterior Width



Exterior Length & Height



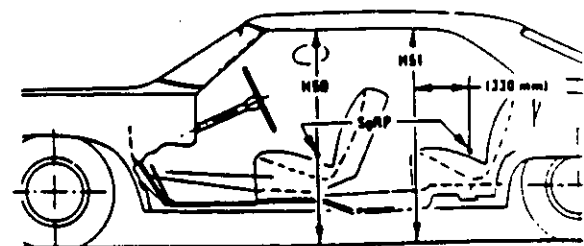
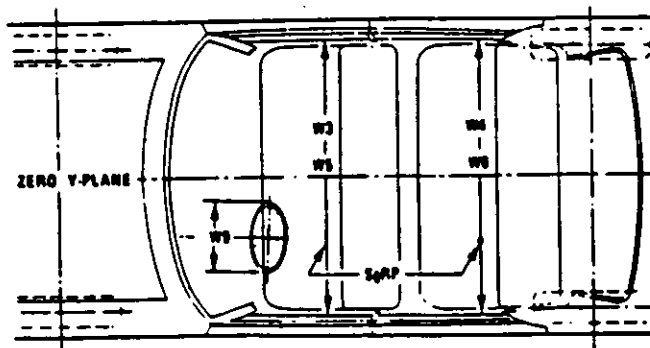
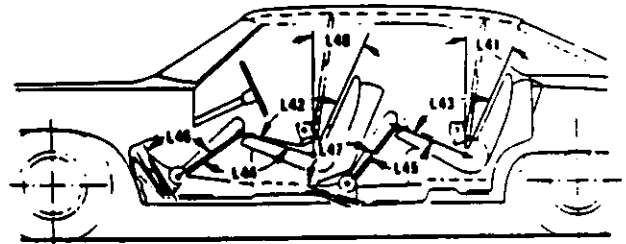
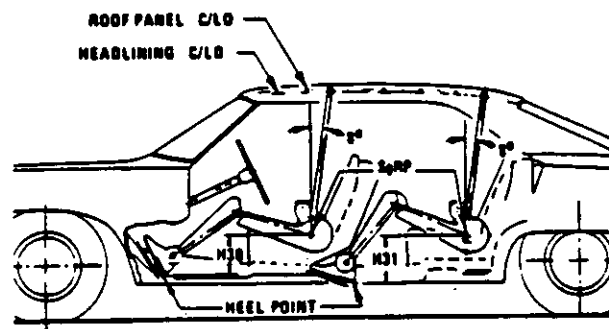
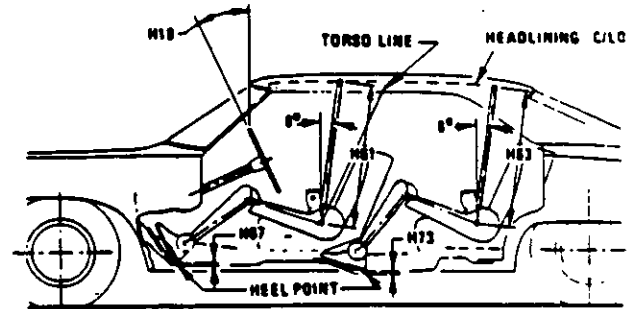
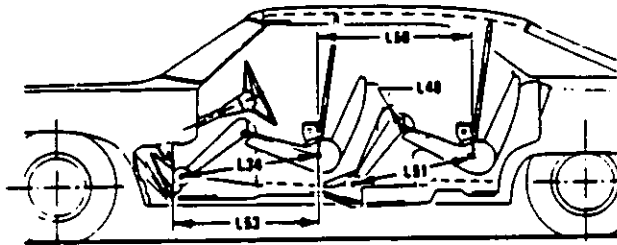
Exterior Ground Clearance



MVMA Specifications Form

METRIC (U.S. Customary)

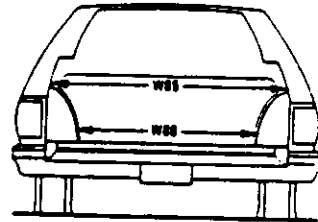
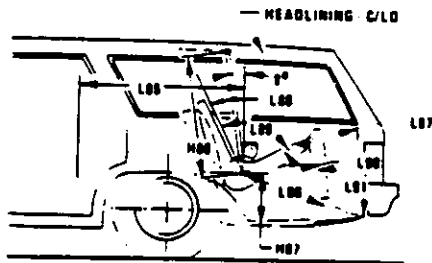
Interior Vehicle And Body Dimensions - Key Sheet



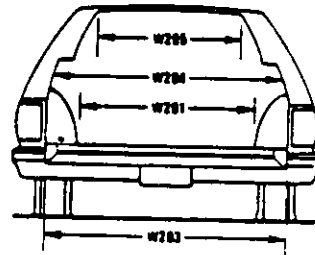
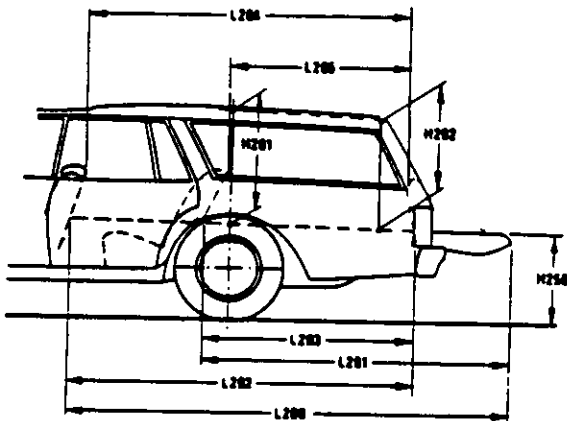
METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet

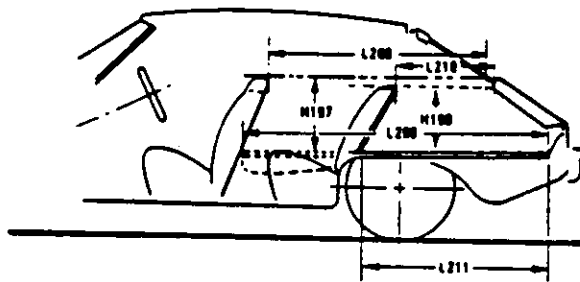
Third Seat



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 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

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

- L202 **CARGO LENGTH - CLOSED - FRONT**. The minimum dimension measured horizontally from the back of the front seat at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L203 **CARGO LENGTH - CLOSED - SECOND**. The dimension measured horizontally from the back of the second seat at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L204 **CARGO LENGTH AT BELT - FRONT**. The minimum dimension measured horizontally from the back of the front seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab backpan 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 wheelhoussings 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 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:

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

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:

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

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 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:

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

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:

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

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