# MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

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

## Passenger Car

# 1987

| Manufacturer | Car Line | |
|---|---|---|
| TOYOTA MOTOR CORPORATION | TOYOTA SUPRA | |
| Mailing Address<br>Toyota Motor Sales, U.S.A., Inc.<br>2055 West 190th Street<br>Torrance, California 90504 | Issued<br>1987 | Revised |

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

The information contained herein is prepared, distributed by, and is solely the responsibility of the automobile manufacturing company to whose products it relates. This specification form was developed by the automobile 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 by the manufacturer.

Blank Forms Provided by Technical Affairs Division

Motor Vehicle Manufacturers Association
of the United States, Inc.

MVMA-C-87

# MVMA Specifications Form
# Passenger Car

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

# MVMA Specifications Form
# Passenger Car

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Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

## Car Models

| Model Description & Drive (FWD/RWD) | Introduction Date | Make, Car Line, Series, Body Type (Mfgr's Model Code) | No. of Designated Seating Positions (Front/Rear) | Max. Trunk/Cargo Load–Kilograms (Pounds) |
|---|---|---|---|---|
| Toyota Supra Liftback | | MA70L-BLMVFA | 2/2 | 56 |
| Toyota Supra Liftback | | MA70L-BLPVFA | 2/2 | 56 |
| Toyota Supra Targa roof | | MA70L-BJMVFA | 2/2 | 56 |
| Toyota Supra Targa roof | | MA70L-BJPVFA | 2/2 | 56 |
| Toyota Supra Liftback | | MA70L-BLMVZA | 2/2 | 56 |
| Toyota Supra Liftback | | MA70L-BLPVZA | 2/2 | 56 |
| Toyota Supra Targa roof | | MA70L-BJMVZA | 2/2 | 56 |
| Toyota Supra Targa roof | | MA70L-BJPVZA | 2/2 | 56 |

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**Power Teams** (Indicate whether standard or optional)
SAE J1349 Net bhp (brake horsepower) and net torque corrected to 77°F/25° C and 29.61 in. Hg/100 kPa atmospheric pressure.

| SERIES AVAILABILITY | ENGINE | | | | | Exhaust S/D | TRANSMISSION/ TRANSAXLE | AXLE RATIO (std. first) |
|---|---|---|---|---|---|---|---|---|
| | Displ. Liters ($in^3$) | Carb. (Barrels, FI, etc.) | Compr. Ratio | SAE Net at RPM | | | | |
| | | | | Power kW (bhp) | Torque N·m (lb. ft.) | | | |
| MA70L-BLMVFA | 2.954 | F.I. | 9.2 | 149/ 6000 | 251/ 4800 | *1 | 5-speed Manual | 4.300 |
| MA70L-BLPVFA | 2.954 | F.I. | 9.2 | 149/ 6000 | 251/ 4800 | *1 | 4-speed Automatic | 4.300 |
| MA70L-BJMVFA | 2.954 | F.I. | 9.2 | 149/ 6000 | 251/ 4800 | *1 | 5-speed Manual | 4.300 |
| MA70L-BJPVFA | 2.954 | F.I. | 9.2 | 149/ 6000 | 251/ 4800 | *1 | 4-speed Automatic | 4.300 |
| MA70L-BLMVZA | 2.954 | F.I. | 8.4 | 172/ 5600 | 334/ 4000 | *2 | 5-speed Manual | 3.909 |
| MA70L-BLPVZA | 2.954 | F.I. | 8.4 | 172/ 5600 | 334/ 4000 | *2 | 4-speed Automatic | 3.909 |
| MA70L-BJMVZA | 2.954 | F.I. | 8.4 | 172/ 5600 | 334/ 4000 | *2 | 5-speed Manual | 3.909 |
| MA70L-BJPVZA | 2.954 | F.I. | 8.4 | 172/ 5600 | 334/ 4000 | *2 | 4-speed Automatic | 3.909 |

*1: Single, *2: Semi-dual

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| Engine Description/Carb. Engine Code | | 7M-GE | 7M-GTE |
|---|---|---|---|

## ENGINE – GENERAL

| | | | |
|---|---|---|---|
| Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.) | | Inline, front, longitudinal, DOHC, pentroof | |
| Manufacturer | | TOYOTA MOTOR CORPORATION | |
| No. of cylinders | | 6 | |
| Bore | | 83.0 mm | |
| Stroke | | 91.0 mm | |
| Bore spacing (C/L to C/L) | | 90 mm | |
| Cylinder block material & mass kg (lbs.) (machined) | | Gray cast iron, 52.9 kg | Gray cast iron, 52.5 kg |
| Cylinder block deck height | | 230.5 mm | |
| Cylinder block length | | | |
| Deck clearance (minimum) (above or below block) | | 0 mm | |
| Cylinder head material & mass kg (lbs.) | | Aluminum alloy, 16.5 kg | |
| Cylinder head volume ($cm^3$) | | 40.0 $cm^3$ | |
| Cylinder liner material | | | |
| Head gasket thickness (compressed) | | 1.35 mm | |
| Minimum combustion chamber total volume ($cm^3$) | | 60.05 $cm^3$ | |
| Cyl. no. system (front to rear)* | L. Bank | 1-2-3-4-5-6 | |
| | R. Bank | – | |
| Firing order | | 1-5-3-6-2-4 | |
| Intake manifold material & mass [kg (lbs.)]** | | Aluminum alloy, 7.3 kg | Aluminum alloy, 5.5 kg |
| Exhaust manifold material & mass [kg (lbs.)]** | | Spheroidal graphite cast iron, 8.1 kg | Spheroidal graphite cast iron, 7.0 kg |
| Recommended fuel (leaded, unleaded, diesel) | | Unleaded | |
| Fuel antiknock index | $\frac{(R+M)}{2}$ | 87 | 91 |
| Total dressed engine mass (wt) dry*** * | | 195/187 kg | 208/199 kg |

* M/T / A/T

## Engine – Pistons

| | | |
|---|---|---|
| Material & mass, g (weight, oz.) - piston only | Aluminum alloy, 380 g | Aluminum alloy, 372 g |

## Engine – Camshaft

| | | |
|---|---|---|
| Location | Over cylinder head | |
| Material & mass kg (weight, lbs.) | Alloy cast iron, IN: 2.3 kg, EX: 2.3 kg | |
| Drive type – Chain / belt | Belt | |
| Drive type – Width / pitch | 25.4/8.0 | |

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

** Finished state.

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

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|---|---|---|

## Engine – Valve System

| | | |
|---|---|---|
| Hydraulic lifters (std., opt., NA) | | N.A. |
| Valves | Number intake / exhaust | 2/2 |
| | Head O.D. intake / exhaust | 32 mm/27.5 mm |

## Engine – Connecting Rods

| | |
|---|---|
| Material & mass [kg., (weight, lbs.)]* | Carbon steel, 0.710 kg |

## Engine – Crankshaft

| | | |
|---|---|---|
| Material & mass [kg., (weight, lbs.)]* | | Carbon steel, 24.2 kg |
| End thrust taken by bearing (no.) | | #4 |
| Number of main bearings | | 7 |
| Seal (material, one, two piece design, etc.) | Front | Acryl, one piece |
| | Rear | Silicon, one piece |

## Engine – Lubrication System

| | | |
|---|---|---|
| Normal oil pressure [kPa (psi) at engine rpm] | 265 kPa/2000 rpm | 167 kPa/2000 rpm |
| Type oil intake (floating, stationary) | Staitionary | |
| Oil filter system (full flow, part, other) | Full flow | |
| Capacity of c/case, less filter-refill-L (qt.) | 7M-GE: 3.7 L, 7M-GTE: 3.9 L | |

## 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 | TOYOTA MOTOR CORPORATION |
| Super charger - manufacturer | – |
| Charge cooler | Air cooled |

*Finished State

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|---|---|---|---|---|
| **Engine – Cooling System** | | | | |
| Coolant recovery system (std., opt., n.a.) | | | Std. | |
| Coolant fill location (rad., bottle) | | | Radiator | |
| Radiator cap relief valve pressure [kPa (psi)] | | | 88.3 kPa | |
| Circulation thermostat | Type (choke, bypass) | | Choke | |
| | Starts to open at °C (°F) | | 88°C | |
| Water pump | Type (centrifugal, other) | | Centrifugal | |
| | GPM 1000 pump rpm | | | |
| | Number of pumps | | 1 | |
| | Drive (V-belt, other) | | Belt | |
| | Bearing type | | Sealed oil roller ball | |
| | Impeller material | | Steel plate | |
| | Housing material | | Aluminum alloy | |
| By-pass recirculation [type (inter., ext.)] | | | Ext. | |
| Cooling system capacity | With heater–L(qt.) | * | 8.1/8.0 L | 8.2/8.1 L |
| | With air cond.–L(qt.) | * | 8.1/8.0 L | 8.2/8.1 L |
| | Opt. equipment [specify–L(qt.)] | | N.A. | |
| Water jackets full length of cyl. (yes, no) | | | Yes | |
| Water all around cylinder (yes, no) | | | No | |
| Water jackets open at head face (yes, no) | | | No | |
| Radiator core | Std., A/C, HD | | Std. | |
| | Type (cross-flow, etc.) | | Vertical | |
| | Construction (fin & tube mechanical, braze, etc.) | | Corrugated fin | |
| | Material, mass (kg (wgt. lbs.)) | * | Copper, 4.0 kg/4.6 kg | Copper, 4.2 kg |
| | Width | | 648 mm | |
| | Height | | 375 mm | |
| | Thickness | | 32 mm | |
| | Fins per inch | | 15/20 | 17 |
| Radiator end tank material | | | Resin | |
| Fan | Std., elec., opt. | | Std. | |
| | Number of blades & type (flex, solid, material) | | 7, solid | 10 solid |
| | Diameter & projected width | | 430 mm, 54.5 mm | 430 mm, 64 mm |
| | Ratio (fan to crankshaft rev.) | | 1.25 | |
| | Fan cutout type | | Fluid coupling | |
| | Drive type (direct, remote) | | Belt | |
| | RPM at idle (elec.) | | – | |
| | Motor rating (wattage) (elec.) | | – | |
| | Motor switch (type & location) (elec.) | | – | |
| | Switch point (temp., pressure) (elec.) | | – | |
| | Fan shroud (material) | | Resin | |

* M/T / A/T

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| Engine Description/Carb. Engine Code | 7M-GE | 7M-GTE |
|---|---|---|

## 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 | | | |
| Carburetor | Choke (type) | | |
| | Idle spd.-rpm (spec. neutral or drive and propane if used) | Manual | |
| | | | |
| | | Automatic | |
| | | | |
| Idle A/F mix. | | | Preset at manufacturer |
| Fuel injection | Point of injection (no.) | | 6 |
| | Constant, pulse, flow | | Pulse |
| | Control (electronic, mech.) | | Electronic |
| | System pressure [kPa (psi)] | | 250 kPa |
| Intake manifold heat control (exhaust or water thermostatic or fixed) | | | N.A. |
| Air cleaner type | Standard | | Dry, 1 element, without hot air intake |
| | Optional | | N.A. |
| Fuel pump | Type (elec. or mech.) | | Electro magnetic |
| | Location (eng., tank) | | In fuel tank |
| | Pressure range [kPa (psi)] | | 250 kPa |

## Fuel Tank

| | | |
|---|---|---|
| Capacity [refill L (gallons)] | | 70 L |
| Location (describe) | | Rear part under floor |
| Attachment | | Band |
| Material & Mass [kg (weight lbs)] | | Steel plate, 14 kg |
| Filler pipe | Location & material | Right rear, steel pipe |
| | Connection to tank | Screw tightening |
| 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)] | – |
| | 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/Carb. Engine Code | 7M-GE | 7M-GTE |
|---|---|---|

## Vehicle Emission Control

| | | | | |
|---|---|---|---|---|
| Exhaust Emission Control | Type (air injection, engine modifications, other) | | EFI + $O_2$ sensor + EGR + TWC | |
| | Air Injection | Pump or pulse | - | |
| | | Driven by | - | |
| | | Air distribution (head, manifold, etc.) | - | |
| | | Point of entry | - | |
| | Exhaust Gas Recirculation | Type (controlled flow, open orifice, other) | Ex. back pressure | |
| | | Exhaust source | Cylinder head | |
| | | Point of exhaust injection (spacer, carburetor, manifold, other) | Intake manifold | |
| | Catalytic Converter | Type | 3 way | |
| | | Number of | 1 | 2 |
| | | Location(s) | Forward under floor area | |
| | | Volume [L ($in^3$)] | 1.7 L | 1.3 L |
| | | Substrate type | Monolith | |
| 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 | Charcoal canister | |
| | | Carburetor | N.A. | |
| | Vapor storage provision | | Charcoal canister | |
| Electronic system | Closed loop (yes/no) | | Yes | |
| | Open loop (yes/no) | | No | |

## Engine – Exhaust System

| | | | |
|---|---|---|---|
| Type (single, single with cross-over, dual, other) | | Semi dual | Single |
| Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)] | | 1, reverse flow<br>1, straight thru | |
| Resonator no. & type | | N.A. | |
| Exhaust pipe | Branch o.d., wall thickness | ϕ42.7 mm, t 1.5 mm | |
| | Main o.d., wall thickness | ϕ60.5 mm, t 1.5 mm | |
| | Material & Mass [kg (weight lbs)] | Stainless steel, 2.6 kg | Stainless steel, 2.0 kg |
| Intermediate pipe | o.d. & wall thickness | ϕ54 mm, t 1.6 mm, t 1.4 mm | ϕ60.5 mm t 1.6 mm, t 1.4 mm |
| | Material & Mass [kg (weight lbs)] | Aluminum coated steel, 2.6 kg | Aluminum coated steel, 3.0 kg |
| Tail pipe | o.d. & wall thickness | ϕ42.7 mm, t 1.0 mm | |
| | Material & Mass [kg (weight lbs)] | Stainless steel, 0.2 kg | |

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|---|---|---|

## Transmissions/Transaxle

| | |
|---|---|
| Manual 3-speed (std., opt., n.a.) (mfr.) | |
| Manual 4-speed (std., opt., n.a.) (mfr.) | |
| Manual 5-speed (std., opt., n.a.) (mfr.) | |
| Manual overdrive (std., opt., n.a.) (mfr.) | |
| Automatic (std., opt., n.a.) (mfr.) | |
| Automatic overdrive (std., opt., n.a.) (mfr.) | |

## Manual Transmission/Transaxle

| | | | | |
|---|---|---|---|---|
| Number of forward speeds | | | 5 | |
| Transmission ratios | In first | | 3.285 | 3.251 |
| | In second | | 1.894 | 1.955 |
| | In third | | 1.275 | 1.310 |
| | In fourth | | 1.000 | 1.000 |
| | In fifth | | 0.783 | 0.753 |
| | In overdrive | | - | |
| | In reverse | | 3.768 | 3.180 |
| Synchronous meshing (specify gears) | | | 1st ~ 5th | |
| Shift lever location | | | Floor | |
| Lubricant | Capacity (L (pt.)) | | 2.4 L | 3.0 L |
| | Type recommended | | Multi purpose API GL-4 | |
| | SAE viscosity number | Summer | SAE 75W-90 | |
| | | Winter | SAE 75W-90 | |
| | | Extreme cold | SAE 75W-90 | |

## Clutch (Manual Transmission)

| | | | |
|---|---|---|---|
| Make, type, engagement (describe) – (hydraulic, cable, rod) | | AISIN, dry, single plate | |
| Assist (yes, no, percent) | | No | |
| Type pressure plate springs | | Diaphragm | |
| Total spring load (N (lb.)) | | 6370N | 7940N |
| No. of clutch driven discs | | 1 | |
| Clutch facing | Material | Semi mold | |
| | Manufacturer | AISIN KAKO | |
| | Part number | 31256-30190 | 31256-14040 |
| | Rivets/plate | 16 | |
| | Rivet size | ϕ4 mm | |
| | Outside & inside dia. | ϕ236 x ϕ150 mm | ϕ240 x ϕ160 mm |
| | Total eff. area (cm²(in.²)) | 260 cm² | 251 cm² |
| | Thickness | 3.5 mm | |
| | Engagement cushion method | Cushion spring | |
| Release bearing | Type & method of lubrication | Single row ball bearing, sealed grease | |
| Torsional damping | Method: springs, friction material | Torsion rubber | Coil spring |

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|---|---|---|

## Automatic Transmission/Transaxle

| | | | | |
|---|---|---|---|---|
| Trade name | | | A340E | |
| Type and special features (describe) | | | Electronic controlled planetary gear | |
| Selector | Location | | Floor | |
| | Ltr./No. designation | | P-R-N-D-2-L | |
| Gear ratios | 1st | | 2.804 | |
| | 2nd | | 1.531 | |
| | 3rd | | 1.000 | |
| | 4th | | 0.705 | |
| | Reverse | | 2.393 | |
| Max. upshift speed - drive range [km/h (mph)] * | | | 1→2: 46/50, 42/49 2→3: 96/106, 98/107 3→4: 151/170, 154/178 | |
| Max. kickdown speed - drive range [km/h (mph)] * | | | 2→1: 41/44, 36/43 3→2: 89/100, 90/99 4→3: 145/164, 148/172 | |
| Min. overdrive speed [km/h (mph)] | | | 3→4: 36, 4→3: 27 | 3→4: 40, 4→3: 30 |
| Torque converter | Number of elements | | 3 elements, 1 step, 2 phases | |
| | Max. ratio at stall | | 2.100: 1 | 2.000: 1 |
| | Type of cooling (air, liquid) | | Water cooled | |
| | Nominal diameter | | 254 mm | |
| Lubricant | Capacity [refill L (pt.)] | | 7.2 L | |
| | Type Recommended | | Dexron II | |
| Oil cooler (std., opt., NA, internal, external, air, liquid) | | | | |

* Normal/Power

## Axle or Front Wheel Drive Unit

| | | | |
|---|---|---|---|
| Type (front, rear) | | | Rear |
| Description | | | Hypoid gear |
| Limited slip differential (type) | | | Pre-load |
| Drive pinion offset | | | 31.75 mm |
| Drive pinion (type) | | | Hypoid gear |
| No. of differential pinions | | | 4 |
| Pinion / differential adjustment (shim, other) | | | Shim |
| Pinion / differential bearing adjustment (shim, other) | | | Collapsible sleeve |
| Driving wheel bearing (type) | | | Double row angular ball bearing |
| Lubricant | Capacity [L (pt.)] | | 1.3 L |
| | Type recommended | | Hypoid gear oil, SAE 90, API GL-5 |
| | SAE viscosity number | Summer | SAE 90 |
| | | Winter | SAE 90 |
| | | Extreme cold | SAE 80W-90 (below 0°F) |

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

| | | | |
|---|---|---|---|
| Axle ratio (or overall top gear ratio) | | 4.300 | 3.909 |
| No. of teeth | Pinion | 10 | 11 |
| | Ring gear or gear | 43 | |
| Ring gear o.d. | | 205 mm | |
| Transaxle | Transfer gear ratio | | |
| | Final drive ratio | | |

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| Engine Description/Carb. Engine Code | 7M-GE | 7M-GTE |
|---|---|---|

## Propeller Shaft – Rear Wheel Drive

| | | | | |
|---|---|---|---|---|
| Manufacturer Type (straight tube, tube-in-tube, internal-external damper, etc.) | | | No.1 Tubular shaft<br>No.2 Inner damper | |
| Outer diam. x length* x wall thickness | Manual 3-speed trans. | | – | |
| | Manual 4-speed trans. | | – | |
| | Manual 5-speed trans. | | No.1 65 x 541.5 x 1.6 mm<br>No.2 75 x 558 x 1.6 mm | No.1 75 x 513 x 2.3 mm<br>No.2 82.6 x 558 x 1.8 mm |
| | Overdrive | | – | |
| | Automatic transmission | | No.1 75 x 467 x 1.6 mm<br>No.2 75 x 558 x 1.6 mm | No.1 75 x 467 x 2.3 mm<br>No.2 82.6 x 558 x 1.8 mm |
| Inter-mediate bearing | Type (plain, anti-friction) | | Ball bearing | |
| | Lubrication (fitting, prepack) | | Sealed grease | |
| Slip yoke | Type | | Spline | |
| | Number of teeth | | 23 | |
| | Spline o.d. | | 30.48 mm, 27.94 mm (7M-GE, M/T) | |
| Universal joints | Make and mfg. no. | Front | TOYOTA MOTOR CORPORATION | |
| | | Rear | TOYOTA MOTOR CORPORATION | |
| | Number used | | 3 | |
| | Type (ball and trunnion, cross) | | Hooke's joint | |
| | Rear attach (u-bolt, clamp, etc.) | | Flange | |
| | Bearing | Type (plain, anti-friction) | Needle roller bearing | |
| | | Lubrication (fitting, prepack) | Sealed grease | |
| Drive taken through (torque tube, arms or springs) | | | Control arm | |
| Torque taken through (torque tube, arms or springs) | | | Control arm | |

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

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**Engine Description/Carb.**
**Engine Code**

## Axle Shafts – Front Wheel Drive

| | | | |
|---|---|---|---|
| Manufacturer and number used | | | |
| Type (straight, solid bar, tubular, etc.) | | Left | |
| | | Right | |
| Outer diam. x length* x wall thickness | Manual transmission | Left | |
| | | Right | |
| | Automatic transmission | Left | |
| | | Right | |
| | Optional transmission | Left | |
| | | Right | |
| Slip yoke | Type | | |
| | Number of teeth | | |
| | Spline o.d. | | |
| Universal joints | Make and mfg. no. | Inner | |
| | | Outer | |
| | Number used | | |
| | Type, size, plunge | Inner | |
| | | Outer | |
| | Attach (u-bolt, clamp, etc.) | | |
| | Bearing – Type (plain, anti-friction) | | |
| | Bearing – Lubrication (fitting, prepack) | | |
| Drive taken through (torque tube, arms or springs) | | | |
| Torque taken through (torque tube, arms or springs) | | | |

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

# MVMA Specifications Form
# Passenger Car

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (●) _____

| Body Type And/Or Engine Displacement | All models |
|---|---|

## Suspension – General

| | | |
|---|---|---|
| Car leveling | Std./opt./n.a. | N.A. |
| | Type (air, hyd., etc.) | N.A. |
| | Manual/auto. controlled | N.A. |
| Provision for brake dip control | | Front suspension geometry |
| Provision for acc. squat control | | Rear suspension geometry |
| Provisions for car jacking | | |
| Shock absorber (front & rear) | Type | Twin tube |
| | Make | KAYABA or TOKIKO |
| | Piston diameter | Fr: ϕ30.2 mm, Rr: ϕ25 mm |
| | Rod diameter | ϕ12.5 mm |

## Suspension – Front

| | | |
|---|---|---|
| Type and description | | Double wishbone |
| Travel | Full jounce | 85 mm |
| | Full rebound | 100 mm |
| Spring | Type (coil, leaf, other) & material | Coil, SUP7 NV |
| | Insulators (type & material) | N.A. |
| | Size (coil design height & i.d., bar length x dia.) | |
| | Spring rate [N/mm (lb./in.)] | |
| | Rate at wheel [N/mm (lb./in.)] | |
| Stabilizer | Type (link, linkless, frameless) | Torsion bar |
| | Material & bar diameter | ϕ27.2 mm |

## Suspension – Rear

| | | | |
|---|---|---|---|
| Type and description | | | Double wishbone |
| Travel | Full jounce | | 85 mm |
| | Full rebound | | 110 mm |
| Spring | Type (coil, leaf, other) & material | | Coil, SUP7 NV |
| | Size (length x width, coil design height & i.d., bar length & dia.) | | |
| | Spring rate [N/mm (lb./in.)] | | |
| | Rate at wheel [N/mm (lb./in.)] | | |
| | Insulators (type & material) | | N.A. |
| | If leaf | No. of leaves | N.A. |
| | | Shackle (comp. or tens.) | N.A. |
| Stabilizer | Type (link, linkless, frameless) | | Torsion bar |
| | Material & bar diameter | | ϕ21 mm |
| Track bar (type) | | | N.A. |

# MVMA Specifications Form
# Passenger Car

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| **Body Type And/Or Engine Displacement** | All models |
|---|---|

## Brakes - Service

| Description | | | | |
|---|---|---|---|---|
| Manufacturer and brake type (std., opt., n.a.) | | | Front (disc or drum) | Disc, std. |
| | | | Rear (disc or drum) | Disc, std. |
| Self-adjusting (std., opt., n.a.) | | | | Std. |
| Special valving | Type (proportion, delay, metering, other) | | | P & B valve |
| Power brake (std., opt., n.a.) | | | | Std. |
| Booster type (remote, integral, vac., hyd., etc.) | | | | Direct vacuum |
| Vacuum source (inline, pump, etc.) | | | | Direct vacuum |
| Vacuum reservoir (volume in.$^3$) | | | | N.A. |
| Vacuum pump-type (elec, gear driven, belt driven, if other so state) | | | | N.A. |
| Anti-lock device type (std., opt., n.a.) (F/R) | | | | Opt./Opt. |
| Effective area [cm$^2$(in.$^2$)]* | | | | 200 cm2/144 cm2 |
| Gross lining area [cm$^2$(in.$^2$)]**(F/R) | | | | 200 cm2/144 cm2 |
| Swept area [cm$^2$(in.$^2$)]***(F/R) | | | | 1566 cm2/1187 cm2 |
| Rotor | Outer working diameter | | F/R | 299 mm/290 mm |
| | Inner working diameter | | F/R | 198 mm/215 mm |
| | Thickness | | F/R | 22.0 mm/18.0 mm |
| | Material & type (vented/solid) | | F/R | Cast iron, ventilated/Cast iron, ventilated |
| Drum | Diameter & width | | F/R | - |
| | Type and material | | F/R | - |
| Wheel cylinder bore | | | | 60.33/38.10 |
| Master cylinder | Bore/stroke | | F/R | Bore: 25.40/25.40 mm, Stroke: 16.60/12.00 mm |
| Pedal arc ratio | | | | 4.01 |
| Line pressure at 445 N(100 lb.) pedal load [kPa (psi)] | | | | 11700 kPa |
| Lining clearance | | | F/R | Self adjusting/Self adjusting |
| Brake lining | Front wheel | Bonded or riveted (rivets/seg.) | | Bonded |
| | | Rivet size | | - |
| | | Manufacturer | | SUMITOMO |
| | | Lining code***** | | - |
| | | Material | | Resin molded |
| | | **** Primary or out-board | | 112.5 x 51.5 x 10.0 mm |
| | | Size Secondary or in-board | | 112.5 x 51.5 x 10.0 mm |
| | | Shoe thickness (no lining) | | 5.5 mm |
| | Rear wheel | Bonded or riveted (rivets/seg.) | | Bonded |
| | | Manufacturer | | SUMITOMO |
| | | Lining Code***** | | - |
| | | Material | | Resin molded |
| | | **** Primary or out-board | | 109.0 x 35.5 x 10.0 mm |
| | | Size Secondary or in-board | | 109.0 x 35.5 x 10.0 mm |
| | | Shoe thickness (no lining) | | 5.5 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
# Passenger Car

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| Body Type And/Or Engine Displacement | All models |
|---|---|

## Tires And Wheels (Standard)

| | | | |
|---|---|---|---|
| Tires | Size (load range, ply) | | 225/50 VR16 |
| | Type (bias, radial, etc.) | | Radial |
| | Inflation pressure (cold) for recommended max. vehicle load | Front (kPa (psi)) | 200 kPa |
| | | Rear (kPa (psi)) | 200 kPa |
| | Rev./mile–at 70 km/h (45 mph) | | 848.8 |
| Wheels | Type & material | | Aluminum alloy |
| | Rim (size & flange type) | | 7-JJx16 |
| | Wheel offset | | 37 mm |
| | Attachment | Type (bolt or stud) | Nut |
| | | Circle diameter | 114.3 mm |
| | | Number & size | 5-M12x1.5 |
| Spare | Tire and wheel (same, if other describe) | | Tire: 205/55R16<br>Wheel: 7-JJx16 |
| | Storage position & location (describe) | | Trunk room |

## Tires And Wheels (Optional)

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

## Brakes – Parking

| | | |
|---|---|---|
| Type of control | | - |
| Location of control | | - |
| Operates on | | - |
| If separate from service brakes | Type (internal or external) | Internal |
| | Drum diameter | 190.0 mm |
| | Lining size (length x width x thickness) | 182.3 x 25.0 x 2.5 mm |

# MVMA Specifications Form
# Passenger Car

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| Body Type And/Or Engine Displacement | All models |
|---|---|

## Steering

| | | | | | |
|---|---|---|---|---|---|
| Manual (std., opt., n.a.) | | | | | N.A. |
| Power (std., opt., n.a.) | | | | | Std. |
| Adjustable steering wheel/column (tilt, telescope, other) | | | Type | | Tilt & Telescopic |
| | | | Manufacturer | | |
| | | | (Std., opt., n.a.) | | Std. |
| Wheel diameter** (W9) SAE J1100 | | | Manual | | – |
| | | | Power | | 382 mm |
| Turning diameter m (ft.) | Outside front | | Wall to wall (l. & r.) | | 11.6 m |
| | | | Curb to curb (l. & r.) | | 10.8 m |
| | Inside rear | | Wall to wall (l. & r.) | | 6.2 m |
| | | | Curb to curb (l. & r.) | | 6.4 m |
| Scrub Radius* | | | | | |
| Manual | Gear | | Type | | – |
| | | | Manufacturer | | – |
| | | Ratios | | Gear | – |
| | | | | Overall | – |
| | No. wheel turns (stop to stop) | | | | – |
| Power | Type (coaxial, linkage, etc.) | | | | Hydraulic integral |
| | Manufacturer | | | | TOYOTA MOTOR CORPORATION |
| | Gear | Type | | | R & P |
| | | Ratios | | Gear | ∞ |
| | | | | Overall | 16.5 |
| | Pump (drive) | | | | V belt |
| | No. wheel turns (stop to stop) | | | | 3.0 |
| Linkage | Type | | | | R & P |
| | Location (front or rear of wheels, other) | | | | Front of wheels |
| | Tie rods (one or two) | | | | Two |
| Steering axis | Inclination at camber (deg.) | | | | 10° 50' |
| | Bearings (type) | | Upper | | Ball joint |
| | | | Lower | | Ball joint |
| | | | Thrust | | – |
| Steering spindle & joint type | | | | | Ball joint |
| Wheel spindle/hub | Diameter | | Inner bearing | | ø77 mm |
| | | | Outer bearing | | |
| | Thread (size) | | | | M24 x 1.5 mm |
| | Bearing (type) | | | | Double row ball bearing |

*The horizontal distance in the front elevation between wheel centerline and kingpin (ball joint) axis at ground.
**See Page 21.

# MVMA Specifications Form
# Passenger Car

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| Body Type And/Or Engine Displacement | 7M-GE | 7M-GTE |
|---|---|---|

## Wheel Alignment

| | | | |
|---|---|---|---|
| Front wheel at curb mass (wt.) | Service checking | Caster (deg.) | 7°30' ± 45' |
| | | Camber (deg.) | -5' ± 45' |
| | | Toe-in [outside track-mm (in.)] | 0 ± 2 mm |
| | Service reset* | Caster | 7°30' ± 30' |
| | | Camber | -5' ± 30' |
| | | Toe-in | 0 ± 1 mm |
| | Periodic M.V. inspection | Caster | - |
| | | Camber | - |
| | | Toe-in | - |
| Rear wheel at curb mass (wt.) | Service checking | Camber (deg.) | -15' ± 45' |
| | | Toe-in [outside track-mm (in.)] | in 3 ± 2 mm |
| | Service reset* | Camber | -15' ± 30' |
| | | Toe-in | in 3 ± 1 mm |
| | 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 | |
| | Trip odometer (std., opt., n.a.) | Std. | |
| EGR maintenance indicator | | N.A. | |
| Charge indicator | Type | Electrical gauge | Electrical |
| | Warning device (light, audible) | Light | |
| Temperature indicator | Type | Electrical gauge | |
| | Warning device (light, audible) | N.A. | |
| Oil pressure indicator | Type | Electrical gauge | |
| | Warning device (light, audible) | N.A. | |
| Fuel indicator | Type | Electrical gauge | |
| | Warning device (light, audible) | Light | |
| Windshield wiper | Type (standard) | Electrical, 3-speed | |
| | Type (optional) | N.A. | |
| | Blade length | Dr: 500 mm, Pa: 458 mm | |
| | Swept area ($cm^2$(in.$^2$)] | 6400 $cm^2$ | |
| Windshield washer | Type (standard) | Electrical | |
| | Type (optional) | N.A. | |
| | Fluid level indicator (light, audible) | N.A. | |
| Rear window wiper, wiper/washer (std., opt., n.a.) | | | |
| Horn | Type | | |
| | Number used | | |
| Other | | | |

# MVMA Specifications Form
# Passenger Car

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (e) _____

| Engine Description/Carb. Engine Code | 7M-GE | 7M-GTE |
|---|---|---|

## Electrical – Supply System

| | | |
|---|---|---|
| Battery | Manufacturer | NIPPON DENCHI, YUASA DENCHI |
| | Model, std., (opt.) | 75D31L (N70ZL) |
| | Voltage | 12V 90 plates |
| | Amps at 0°F cold crank | 390 |
| | Minutes-reserve capacity | 115 |
| | Amp/hrs. - 20 hr. rate | 70 |
| | Location | Left front of the engine room |
| Alternator | Manufacturer | |
| | Rating | 70A |
| | Ratio (alt. crank/rev.) | 2.55 : 1 |
| | Optional (type & rating) | - |
| Regulator | Type | IC |

## Electrical – Starting System

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

## Electrical – Ignition System

| | | | | |
|---|---|---|---|---|
| Type | Electronic (std., opt., n.a.) | | Std. | |
| | Other (specify) | | N.A. | |
| Coil | Make | | NIPPON DENSO | |
| | Model | | - | |
| | Current | Engine stopped – A | 0 | |
| | | Engine idling – A | 1.1 | 1.2 |
| Spark plug | Make | | NIPPON DENSO: ND, NIHON TOKUSHU TOGYO: NGK | |
| | Model ND/NGK | | PQ16R/BCPR5EP11 | PQ20R-P8/BCPR6EP-NB |
| | Thread (mm) | | M14.0 - 19.0 mm | |
| | Tightening torque [N-m (lb, ft)] | | 17.7 N.m | |
| | Gap | | 1.1 mm | 0.8 mm |
| | Number per cylinder | | 1 | |
| Distributor | Make | | NIPPON DENSO | N.A. |
| | Model | | - | |

## Electrical – Suppression

| | |
|---|---|
| Locations & type | Resistive plug, registive high-tension cord, frame spray coating rotor (7M-GE only) |

# MVMA Specifications Form
# Passenger Car

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| Body Type | All models |
|---|---|

## Body

| | | |
|---|---|---|
| Structure | | |
| Bumper system front - rear | Bar Material & Mass | Urethane 5.9 kg/6.9 kg |
| | Reinforcement Material & Mass | Steel 11.2 kg/13.2 kg |
| Anti-corrosion treatment | | |

## Body – Miscellaneous Information

| | | |
|---|---|---|
| Type of finish (lacquer, enamel, other) | | Acryl |
| Hood | Hinge location (front, rear) | Rear |
| | Type (counterbalance, prop) | Prop |
| | Release control (internal, external) | Internal |
| Trunk lid | Type (counterbalance, other) | |
| | Internal release control (elec., mech., n.a.) | |
| Hatch-back lid | Type (counterbalance, other) | Counterbalance |
| | Internal release control (elec., mech., n.a.) | Mechanical |
| Station wagon | | |
| | | |
| | | |
| | | |
| Vent window control (crank, friction, pivot, power) | Front | |
| | Rear | |
| Seat cushion type (e.g., 60/40, bucket, bench, wire, foam etc.) | Front | Spring + foam pad |
| | Rear | Wire frame + foam pad |
| | 3rd seat | - |
| Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.) | Front | Spring + foam pad |
| | Rear | Panel frame + foam pad |
| | 3rd seat | - |
| | | |

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| Body Type | All models |
|---|---|

### Restraint System

| | | |
|---|---|---|
| Active restraint system | Standard/optional | Standard |
| | Type and description | 3-point & 2-point, Fr: w/retractor (ELR), Rr: w/retractor (ALR) |
| | Location | Fr: 3-point, 2 seats, Rr: 2-point, 2 seats |
| Passive seat belts | Standard/optional | N.A. |
| | Power/manual | N.A. |
| | 2 or 3 point | N.A. |
| | Knee bar/lap belt | N.A. |

### Frame

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

| Glass | SAE Ref. No. | |
|---|---|---|
| Windshield glass exposed surface area [$cm^2$($in.^2$)] | S1 | 8819 $cm^2$ |
| Side glass exposed surface area [$cm^2$($in.^2$)] - total 2-sides | S2 | 3885 $cm^2$ |
| Backlight glass exposed surface area [$cm^2$($in.^2$)] | S3 | 9464 $cm^2$ |
| Total glass exposed surface area [$cm^2$($in.^2$)] | S4 | 22168 $cm^2$ |
| Windshield glass (type) | | Laminated, tinted, curved |
| Side glass (type) | | Tempered, curved |
| Backlight glass (type) | | Tempered, curved |

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| Body Type | All models |
|---|---|

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

| | | |
|---|---|---|
| Air conditioning (manual, auto. temp control) | | Std. |
| Clock (digital, analog) | | Std. |
| Compass - thermometer | | |
| Console (floor, overhead) | | |
| Defroster, elec. backlight | | |
| Electronic | Diagnostic monitor (integrated, individual) | |
| | Instrument cluster (list instruments) | |
| | Keyless entry | |
| | Tripminder (avg. spd., fuel) | |
| | Voice alert (list items) | |
| | Other | |
| | | |
| Fuel door lock (remote, key, electric) | | |
| Lamps | Auto head on / off delay, dimming | |
| | Cornering | N.A. |
| | Courtesy (map, reading) | Std. |
| | Door lock, ignition | Std. |
| | Engine compartment | |
| | Fog | |
| | Glove compartment | N.A. |
| | Trunk | Std. |
| | Other | |
| | | |
| Mirrors | Day/night (auto, man.) | |
| | L.H. (remote, power, heated) | |
| | R. H. (convex, remote, power, heated) | |
| | Visor vanity (RH / LH, illuminated) | |
| Parking brake-auto release (warning light) | | |
| Power equipment | Door locks - deck lid - specify | |
| | Seat (2-4-6 way) heated (driver, pass, other) lumbar, hip, thigh support (power, manual) reclining (driver, pass) memory (1-2 preset, recline) | Opt. |
| | Side windows | Std. |
| | Vent windows | - |
| | Rear window | - |
| | | |
| Radio systems | Antenna (location, whip, w/shield, power) | Power antenna: Std. |
| | AM, FM, stero, tape, CB | AM/FM ETR w/cassette: Std. |
| | Speaker (number, location) Premium sound | Rear seat speaker: N.A., Premium sound: N.A. |
| Roof open air fixed (flip-up, sliding, "T") | | |
| Speed control device | | Std. |
| Speed warning device (light, buzzer,etc.) | | N.A. |
| Tachometer (rpm) | | |
| Telephone system - mobile | | |
| Theft protection-type | | Steering lock |

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (●) _____

See Key Sheets for definitions

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

| Body Type | SAE Ref. No. | All models |
|---|---|---|
| **Width** | | |
| Tread (front) | W101 | 1485 mm |
| Trear (rear) | W102 | 1485 mm |
| Vehicle width | W103 | 1745 mm |
| Body width at Sg RP (front) | W117 | 1676 mm |
| Vehicle width (front doors open) | W120 | 4023 mm |
| Vehicle width (rear doors open) | W121 | - |
| Front fender overall width | W106 | |
| Rear fender overall width | W107 | |
| Tumble-home (deg.) | W122 | 31.5° |
| **Length** | | |
| Wheelbase | L101 | 2595 mm |
| Vehicle length | L103 | 4620 mm |
| Overhang (front) | L104 | 960 mm |
| Overhang (rear) | L105 | 1065 mm |
| Upper structure length | L123 | 2681 mm |
| Rear wheel C.L. "X" coordinate | L127 | 2595 mm |
| Cowl point "X" coordinate | L125 | 599.6 mm |
| Front end length at centerline | L126 | |
| Rear end length at centerline | L129 | |
| **Height*** | | |
| Passenger distribution (front/rear) | P01 2,3 | Fr: 2, Rr: 1 |
| Trunk cargo load | | 0 kg |
| Vehicle height | H101 | 1310 mm |
| Cowl point to ground | H114 | 910 mm |
| Deck point to ground | H138 | 915 mm |
| Rocker panel-front to ground | H112 | 180 mm |
| Bottom of door closed-front to grd. | H133 | 310 mm |
| Rocker panel-rear to ground | H111 | 175 mm |
| Bottom of door closed-rear to grd. | H135 | - |
| Windshield slope angle | H122 | 62.5° |
| Backlight slope angle | H121 | 72.5° |
| **Ground Clearance*** | | |
| Front bumper to ground | H102 | 405 mm |
| Rear bumper to ground | H104 | 365 mm |
| Bumper to ground [front at curb mass (wt.)] | H103 | 415 mm |
| Bumper to ground [rear at curb mass (wt.)] | H105 | 405 mm |
| Angle of approach (degrees) | H106 | 12.5° |
| Angle of departure (degrees) | H107 | 18.5° |
| Ramp breakover angle (degrees) | H147 | 12° |
| Axle differential to ground (front rear) | H153 | 160 mm |
| Min. running ground clearance | H156 | 140 mm |
| Location of min. run. grd. clear. | | Fr: Exhaust pipe |

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

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

See Key Sheets for definitions

Car Line TOYOTA SUPRA

Model Year 1987 Issued _____ Revised (•) _____

| Body Type | SAE Ref. No. | All models |
|---|---|---|

### Front Compartment

| | | |
|---|---|---|
| Sg RP front, "X" coordinate | L31 | 1570 mm |
| Effective head room | H61 | 953 mm (Liftback), 954 (Targa roof) |
| Max. eff. leg room (accelerator) | L34 | 1107 mm |
| SgRP to heel point | H30 | 189.5 mm |
| SgRP to heel point | L53 | 918 mm |
| Back angle | L40 | 23° |
| Hip angle | L42 | 96.5° |
| Knee angle | L44 | 137.5° |
| Foot angle | L46 | 93° |
| Design H-point front travel | L17 | 238.2 mm, Opt. power seat: 236.4 mm |
| Normal driving & riding seat track trvl. | L23 | 288.2 mm, Opt. power seat: 236.4 mm |
| Shoulder room | W3 | 1344 mm |
| Hip room | W5 | 1340 mm |
| Upper body opening to ground | H50 | 1191.5 mm (Liftback), 1188.5 mm (Targa roof) |
| Steering wheel maximum diameter* | W9 | - |
| Steering wheel angle | H18 | 21°03' |
| Accel. heel pt. to steer. whl. cntr | L11 | - |
| Accel. heel pt. to steer. whl. cntr | H17 | - |
| Steering wheel to C / L of thigh | H13 | - |
| Steering wheel torso clearance | L7 | - |
| Headlining to roof panel (front) | H37 | 8 mm |
| Undepressed floor covering thickness | H67 | 44 mm |

### Rear Compartment

| | | |
|---|---|---|
| Sg RP Point couple distance | L50 | 5.50 mm |
| Effective head room | H63 | 860.5 mm (Liftback), 861.5 mm (Targa roof) |
| Min. effective leg room | L51 | 627 mm |
| Sg RP (second to heel) | H31 | 251 mm |
| Knee clearance | L48 | -185 mm |
| Compartment room | L3 | 500.5 mm |
| Shoulder room | W4 | 1281.5 mm |
| Hip room | W6 | 1206 mm |
| Upper body opening to ground | H51 | 1192.5 mm (Liftback), 1189.6 mm (Targa roof) |
| Back angle | L41 | 27° |
| Hip angle | L43 | 73.2° |
| Knee angle | L45 | 48.1° |
| Foot angle | L47 | 99.3° |
| Headlining to roof panel (second) | H38 | 7 mm |
| Depressed floor covering thickness | H73 | 25.5 mm |

### Luggage Compartment

| | | |
|---|---|---|
| Usable luggage capacity [L (cu. ft.)] | V1 | - |
| Liftover height | H195 | 830 mm |

### Interior Volumes (EPA Classification)

| | | |
|---|---|---|
| Vehicle class (subcompact, compact, etc.) | | |
| Interior volume index (cu. ft.) | | |
| Trunk cargo index (cu. ft.) | | |

* See page 14.

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

# MVMA Specifications Form
# Passenger Car

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

**METRIC (U.S. Customary)**
**Car and Body Dimensions** See Key Sheets for definitions

| Body Type | SAE Ref. No. | All models |
|---|---|---|
| **Station Wagon – Third Seat** | | |
| Sg RP couple distance | L85 | – |
| Shoulder room | W85 | – |
| Hip room | W86 | – |
| Effective leg room | L86 | – |
| Effective head room | H86 | – |
| Sg RP to heel point | H87 | – |
| Knee clearance | L87 | – |
| Seat facing direction | SD1 | – |
| Back angle | L88 | – |
| Hip angle | L89 | – |
| Knee angle | L90 | – |
| Foot angle | L91 | – |
| **Station Wagon – Cargo Space** | | |
| Cargo length (open front) | L200 | – |
| Cargo length (open second) | L201 | – |
| Cargo length (closed front) | L202 | – |
| Cargo length (closed second) | L203 | – |
| Cargo length at belt (front) | L204 | – |
| Cargo length at belt (second) | L205 | – |
| Cargo width (wheelhouse) | W201 | – |
| Rear opening width at floor | W203 | – |
| Opening width at belt | W204 | – |
| Max. rear opening width above belt | W205 | – |
| Cargo height | H201 | – |
| Rear opening height | H202 | – |
| Tailgate to ground height | H250 | – |
| Front seat back to load floor height | H197 | – |
| Cargo volume index [$m^3(ft.^3)$] | V2 | – |
| Hidden cargo volume [$m^3(ft.^3)$] | V4 | – |
| Cargo volume, index-rear of 2-seat | V10 | – |
| **Hatchback – Cargo Space** | | |
| Cargo length at front seatback height | L208 | 1475 |
| Cargo length at floor (front) | L209 | 1525 |
| Cargo length at second seatback height | L210 | 567 |
| Cargo length at floor (second) | L211 | 948 |
| Front seatback to load floor height | H197 | 188.5 |
| Second seatback to load floor height | H198 | 320 |
| Cargo volume index [$m^3(ft.^3)$] | V3 | 0.362 |
| Hidden cargo volume [$m^3(ft.^3)$] | V4 | 0.311 |
| Cargo volume index-rear of 2-seat | V11 | 0.311 |
| **Aerodynamics*** | | |
| Wheel lip to ground, front | | |
| Wheel lip to ground, rear | | |
| Frontal area [$m^2(ft^2)$] | | |
| Drag coefficient (Cd) | | |

* EPA Loaded Vehicle Weight, Loading Conditions
All linear dimensions are in millimeters (inches) unless otherwise noted.

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

**Body Type**

All models

**Vehicle Fiducial Marks**

| Fiducial Mark Number* | | Define Coordinate Location |
|---|---|---|
| Front | | Flange part front end location for jack-up under rocker. |
| Rear | | Flange part rear end location for jack-up under rocker. |
| Fiducial Mark Number | | |
| Front | W21* | W7 - 34.2 mm |
| | L54* | L17 + 8 mm |
| | H81* | H10 - 30 mm |
| | H161* | 200 mm |
| | H163* | 180 mm |
| Rear | W22* | W7 - 27.8 mm |
| | L55* | L31 + 2 mm |
| | H82* | H10 - 30 mm |
| | H162* | 205 mm |
| | H164* | 175 mm |

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

All linear dimensions are in millimeters (inches).

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

| Body Type | All models |
|---|---|

**Lamps and Headlamp Shape***

| | | | |
|---|---|---|---|
| Height above ground to center of bulb or marker | Headlamp (SAE - H127) | Highest** | 750 mm |
| | | Lowest | – |
| | Taillamp (SAE - H128) | Highest** | 765 mm |
| | | Lowest | – |
| | Sidemarker | Front | 585 mm |
| | | Rear | 630 mm |
| Distance from C'L of car to center of bulb | Headlamp | Inside | – |
| | | Outside** | 543 mm |
| | Taillamp | Inside | 471 mm |
| | | Outside** | 585 mm |
| | Directional | Front | 449 mm |
| | | Rear | 700 mm |
| | | | |
| Halogen headlamp (std., opt., n.a.) | Lo beam | | |
| | Hi beam | | |
| | Replaceable bulb | | |
| | Shape | | |
| Headlamp other than above | Lo beam | | |
| | Hi beam | | |
| | Replaceable | | |
| | Shape | | |
| | Type | | |

* Measured at curb mass (weight).
** If single lamps are used enter here.
All linear dimensions are in millimeters (inches) unless otherwise noted.

# MVMA Specifications Form
# Passenger Car

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

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (●) _____

| Model | Vehicle Mass (weight) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | CURB MASS, kg. (weight, lb.)* | | | % PASS. MASS DISTRIBUTION | | | | SHIPPING MASS, kg (weight, lb.)** |
| | | | | Pass in Front | | Pass in Rear | | |
| | Front | Rear | Total | Front | Rear | Front | Rear | |
| MA70L - BLMVFA | 816 | 757 | 1573 | 54 | 82 | 25 | 111 | 1527 |
| MA70L - BLPVFA | 834 | 761 | 1595 | 54 | 82 | 25 | 111 | 1549 |
| MA70L - BJMVFA | 827 | 784 | 1611 | 54 | 82 | 25 | 111 | 1565 |
| MA70L - BJPVFA | 843 | 791 | 1634 | 54 | 82 | 25 | 111 | 1588 |
| MA70L - BLMVZA | 846 | 755 | 1601 | 54 | 82 | 25 | 111 | 1555 3428 |
| MA70L - BLPVZA | 853 | 760 | 1613 | 54 | 82 | 25 | 111 | 1567 |
| MA70L - BJMVZA | 857 | 782 | 1639 | 54 | 82 | 25 | 111 | 1593 3511 |
| MA70L - BJPVZA | 864 | 787 | 1651 | 54 | 82 | 25 | 111 | 1605 |

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

# MVMA Specifications Form
# Passenger Car

Car Line TOYOTA SUPRA
Model Year 1987 Issued _____ Revised (•) _____

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

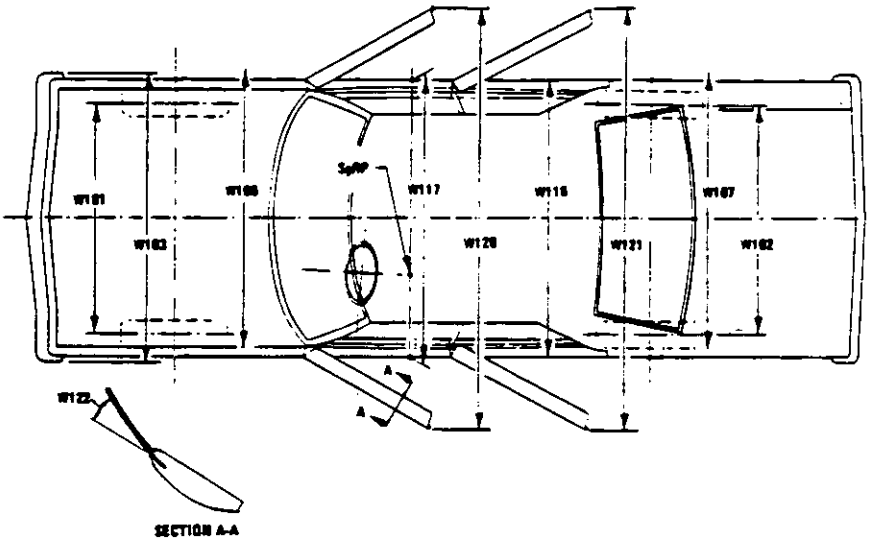
**Optional Equipment Differential Mass (weight)***

| Equipment | MASS, kg. (weight, lb.) | | | Remarks |
|---|---|---|---|---|
| | Front | Rear | Total | |
| A.B.S. (Anti-lock Brake System) | 7 | 2 | 9 | |
| Power seat | 3.4 | 3.4 | 6.8 | |
| TEMS | 2 | 1.8 | 3.8 | |
| Leather seat | 2 | 1.5 | 3.5 | |
| Head lamp cleaner | 3.5 | 0 | 3.5 | |

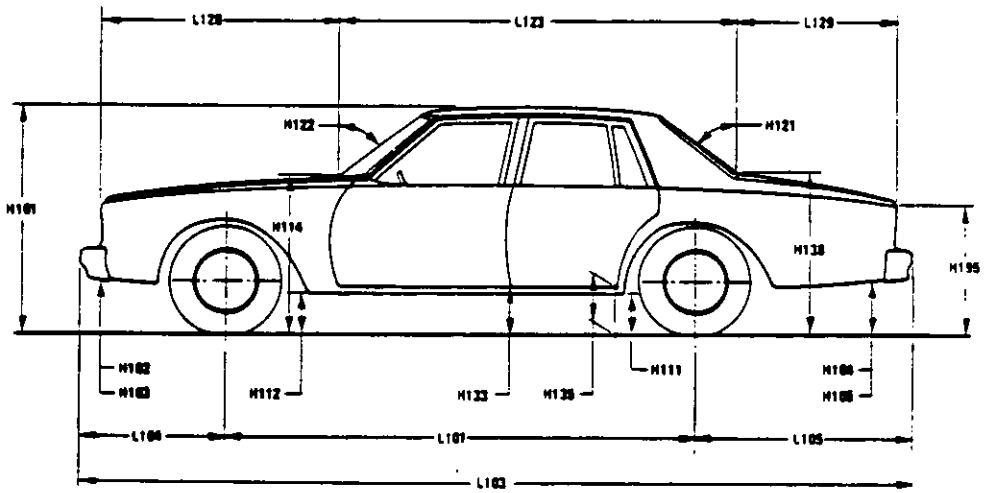
*Also see Engine - General Section for dressed engine mass (weight).

**Exterior Car And Body Dimensions – Key Sheet**

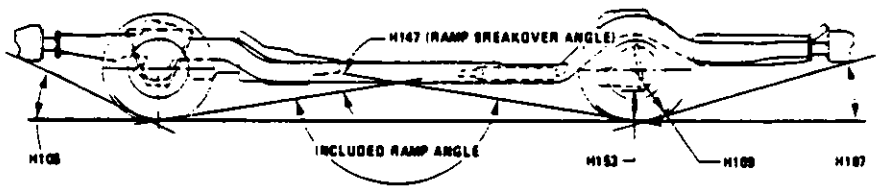
## Exterior Width




## Exterior Length & Height

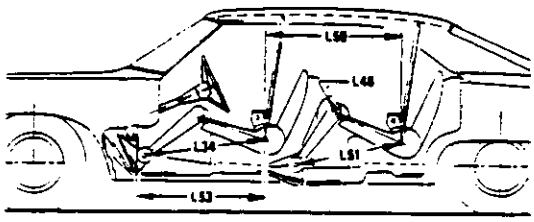


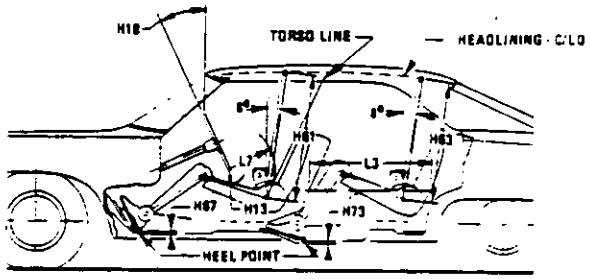

## Exterior Ground Clearance

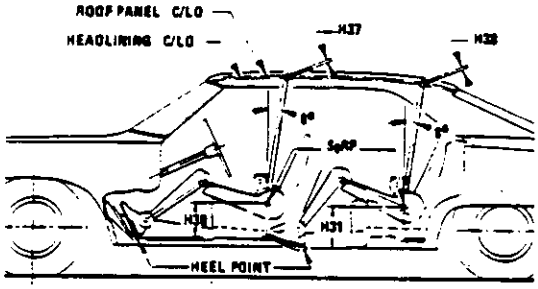


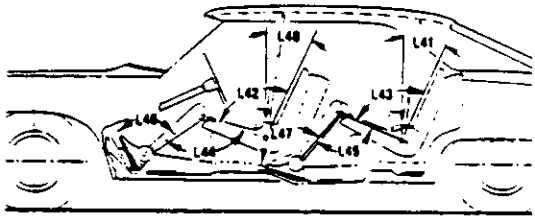
# MVMA Specifications Form
# Passenger Car
**METRIC (U.S. Customary)**

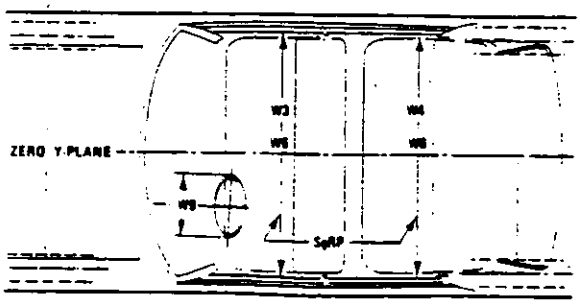
## Interior Car And Body Dimensions – Key Sheet

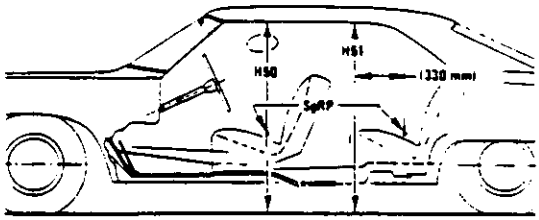


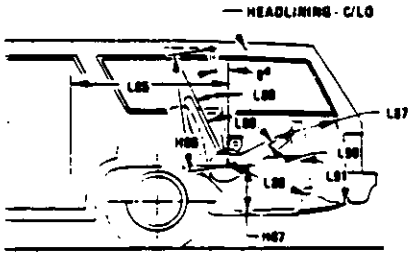



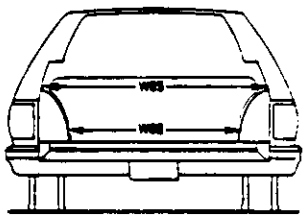



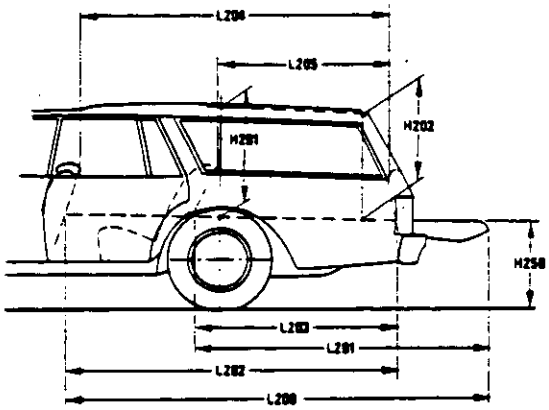
**Interior Car And Body Dimensions – Key Sheet**

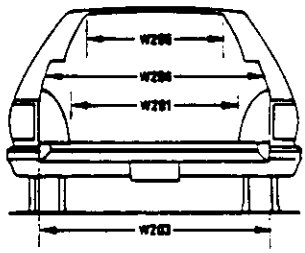
**Third Seat**



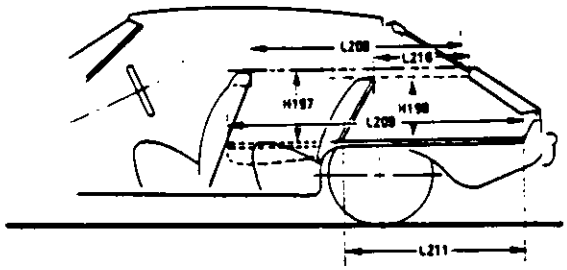



## Cargo Space



## Station Wagon




## Hatchback

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

**Exterior Car And Body Dimensions – Key Sheet**
**Dimensions Definitions**

### Seating Reference Point

SEATING REFERENCE POINT means the manufacturer s design reference point which –

(a) Establishes the rearmost normal design driving or nding position of each designated seating position in a vehicle:

(b) Has coordinates established relative to the design vehicle structure:

(c) Simulates the position of the pivot center of the human torso and thigh: and

(d) Is the reference point employed to position the two dimensional templates described in SAE Recommended Practice J826, "Devices for Use in Defining and Measuring Vehicle Seating Accommodations."

### Width Dimensions

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

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

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

W106 FRONT FENDER WIDTH. The dimension measured between the widest points at the front wheel centerline, excluding moldings.

W107 REAR FENDER WIDTH. The dimension measured between the widest points at the rear wheel centerline, excluding moldings.

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

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

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

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

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

### Length Dimensions

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

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

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

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

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

L125 COWL POINT "X" COORDINATE.

L126 FRONT END LENGTH. The dimension measured longitudinally from the cowl point to the foremost point on the vehicle at the zero "Y" plane excluding ornamentation or bumpers. In cases where bumpers and/or grills are integrated with the profile, measurement is made at the foremost point of front end contour.

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

L129 REAR END LENGTH. The dimension measured longitudinally from the deck point to the rearmost visible point of the body sheet metal at the zero "Y" plane, excluding ornamentation or bumpers.

### Height Dimensions

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

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

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

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

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

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

H127 HEADLAMP TO GROUND–CURB MASS (WT.). The dimension measured vertically from the centerline of the lowest headlamp lens to ground.

H128 TAILLAMP TO GROUND–CURB MASS (WT.). The dimension measured vertically from the centerline of the upper bulb to ground.

H133 BOTTOM OF DOOR CLOSED–FRONT TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.

H135 BOTTOM OF DOOR CLOSED–REAR TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.

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

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
# Passenger Car
## METRIC (U.S. Customary)

**Interior Car And Body Dimensions – Key Sheet**
**Dimensions Definitions**

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

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

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

H107 ANGLE OF DEPARTURE. The angle measured between a line tangent to the rear tire static loaded radius arc and the initial point of structural interference rearward of the rear tire to ground. The limiting component shall be designated.

H147 RAMP BREAKOVER ANGLE. The angle measured between two lines tangent to the front and rear tire static loaded radius and intersecting at a point on the underside of the vehicle which defines the largest ramp over which the vehicle can roll.

H153 REAR AXLE DIFFERENTIAL TO GROUND. The minimum dimension measured from the rear axle differential to ground.

H156 MINIMUM RUNNING GROUND CLEARANCE. The minimum dimension measured from the sprung vehicle to ground. Specify location.

**Glass Areas**

S1 Windshield area.

S2 Side windows area. Includes the front door, rear door, vents, and rear quarter windows on both sides of the vehicle.

S3 Backlight areas.

S4 Total area. Total of all areas (S1 + S2 + S3).

**Fiducial Mark Dimensions**

**Fiducial Mark – Number 1**

L54 "X" coordinate.

W21 "Y" coordinate.

H81 "Z" coordinate.

H161 Height "Z" coordinate to ground at curb weight.

H163 Height "Z" coordinate to ground.

**Fiducial Mark – Number 2**

L55 "X" coordinate.

W22 "Y" coordinate.

W82 "Z" coordinate.

H162 Height "Z" coordinate to ground at curb weight.

H164 Height "Z" coordinate to ground.

**Front Compartment Dimensions**

L7 STEERING WHEEL TORSO CLEARANCE. The minimum dimension measured in the side view from the rearmost edge of the steering wheel, with front wheels in the straight ahead position, to the torso line.

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

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

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

PD1 PASSENGER DISTRIBUTION–FRONT.

**Rear Compartment Dimensions**

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

**Interior Car And Body Dimensions – Key Sheet**
**Dimensions Definitions**

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 254mm (10.0 in.).

W4 SHOULDER ROOM–SECOND. The minimum dimension measured laterally between door or quarter trimmed surfaces on the "X" plane through the SgRP–second at height between 254-406 mm (10.0-16.0 in.) above the SgRP–second, excluding the door assist straps and attaching parts.

W6 HIP ROOM–SECOND. Measured in the same manner as W5.

H31 SgRP–SECOND TO HEEL. The dimension measured vertically from the SgRP–second to the two dimensional device heel point on the depressed floor covering.

H38 HEADLINING TO ROOF PANEL–SECOND. The dimension measured from the intersection of the headlining and the extended effective head room line normally to the roof sheet metal.

H51 UPPER BODY OPENING TO GROUND–SECOND. The dimension measured vertically from the trimmed body opening to the ground on the "X" plane 330 mm (13.0 in.) forward of the SgRP–second.

H63 EFFECTIVE HEAD ROOM–SECOND. The dimension measured along a line 8 deg. rear of vertical from the SgRP to the headlining, plus 102 mm (4.0 in.).

H73 FLOOR COVERING–DEPRESSED–SECOND. The dimesnion measured vertically from the heel point to the underbody sheet metal.

PD2 PASSENGER DISTRIBUTION–SECOND.

### Luggage Compartment Dimensions

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

PD3 PASSENGER DIRECTION–THIRD.

SD1 SEAT FACING DIRECTION–THIRD.

### Station Wagon – Cargo Space Dimensions

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

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

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

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

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

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

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

# MVMA Specifications Form
# Passenger Car

## METRIC (U.S. Customary)

**Interior Car And Body Dimensions – Key Sheet**
**Dimensions Definitions**

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

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

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

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

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

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

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

V2 STATION WAGON
Measured in inches:

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

Measured in mm:

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

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

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

$$\frac{L506 \times W500 \times H503}{1728} = ft^3$$

Measured in mm:

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

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

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

Measured in mm:

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

V8 HIDDEN LUGGAGE CAPACITY–REAR OF SECOND SEAT. The total volume of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the second seat.

V10 STATION WAGON CARGO VOLUME INDEX.
Measured in inches:

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

Measured in mm:

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

**Hatchback – Cargo Space Dimensions**

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

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

L209 CARGO LENGTH AT FLOOR–FRONT–HATCHBACK. The minimum horizontal dimension measured at floor level from the rear of the front seatback to the normal limiting interference of the hatchback door on the vehicle zero "Y" plane.

L210 CARGO LENGTH AT SECOND SEATBACK HEIGHT–HATCHBACK. The minimum dimension measured from the "X" plane tangent to the rearmost surface of second seatback or the load floor which is stowed at least one half of the H198 dimension height above the rear load floor, to the rearmost inside limiting interference on the zero "Y" plane.

L211 CARGO LENGTH AT FLOOR–SECOND HATCHBACK. The minimum horizontal dimension measured at floor level from the rear of the second seatback or load floor panel to the normal limiting interference of the hatchback door on the vehicle zero "Y" plane.

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

H198 SECOND SEATBACK TO LOAD FLOOR HEIGHT: The dimension measured vertically from the second seat back to the undepressed floor covering.

V3 HATCHBACK.
Measured in inches:

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

Measured in mm:

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

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

V11 HATCHBACK CARGO VOLUME INDEX. Usable luggage (one (1) stand and luggage set) below floor:
Measured in inches:

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

Measured in mm:

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

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