MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC(U.S. Customary)

Passenger Car

1986

Manufacturer	Car Line	
Mazda Motor Corporation	Mazda RX-7	
Mailing Address 3-1, Shinchi, Fuchu-cho Aki-gun, Hiroshima, Japan	Issued Dec. / 85	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

MVMA

Motor Vehicle Manufacturers Association
of the United States, Inc.

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.

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Car Line: Mazda RX-7
Model Year: 1986 Issued: Dec./85 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)
Mazda RX-7	2 Door Coupe	JM1FC331	2 / 0	40 lb.
			2 / 2	80 lb.

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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						TRANSMISSION TRANSAXLE	AXLE RATIO (std. first)
	Displ. Liters (in^3)	Carb. (Barrels, FI, etc.)	Compr. Ratio	SAE Net at RPM		Exhaust S/D		
				kW (bhp)	Torque N•m (lb. ft.)			
Mazda RX-7	0.654 x 2	FI	9.4	146 @ 6500 rpm	138 @ 3500 rpm	S	Manual	4.100
							Automatic	3.909

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Engine Description/Carb. Engine Code	0.654 x 2 Liters

ENGINE – GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)		Type: Rotor Engine Location: Front Engine installation position: Longitudinal
Manufacturer		Mazda
No. of cylinders		2 rotors
Bore		105 x 115 x 80 mm
Stroke		–
Bore spacing (C/L to C/L)		–
Cylinder block material & mass kg (lbs.)		–
Cylinder block deck height		–
Deck clearance (minimum) (above or below block)		–
Cylinder head material & mass kg (lbs.)		Rotor housing: Aluminum Alloy
Cylinder head volume (cm^3)		–
Head gasket thickness (compressed)		–
Minimum combustion chamber total volume (cm^3)		78
Cyl. no. system (front to rear)*	L. Bank	–
	R. Bank	–
Firing order		1 – 2
Intake manifold material & mass [kg (weight, lbs.)]		–
Exhaust manifold material & mass [kg (weight, lbs.)]		–
Recommended fuel (leaded, unleaded, diesel)		Unleaded (Regular)
Fuel antiknock index $\frac{(R+M)}{2}$		–
Total dressed engine mass (wt) dry**		–

Engine – Pistons

Material & mass, g (weight, oz.) - piston only	Rotor material: Cast iron

Engine – Camshaft

Location		–
Material & mass kg (weight, lbs.)		–
Drive type	Chain / belt	–
	Width / pitch	–

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

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

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Engine – Valve System

Hydraulic lifters (std., opt., NA)		–
Valves	Number intake / exhaust	–
	Head O.D. intake / exhaust	–

Engine – Connecting Rods

NA

Material & mass [kg., (weight, lbs.)]	–

Engine – Crankshaft

Material & mass [kg., (weight, lbs.)]		Special Steel
End thrust taken by bearing (no.)		2
Number of main bearings		–
Seal (material, one, two piece design, etc.)	Front	–
	Rear	–

Engine – Lubrication System

Normal oil pressure [kPa (psi) at engine rpm]	–
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full flow cartridge
Capacity of c'case, less filter-refill-L (qt.)	4.4 Liters

Engine – Diesel Information

NA

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	–
Super charger - manufacturer	–
Charge cooler	–

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Engine Description/Carb. Engine Code: 0.654 x 2 Liters

Engine – Cooling System

Coolant recovery system (std., opt., n.a.)		NA
Coolant fill location (rad., bottle)		–
Radiator cap relief valve pressure [kPa (psi)]		0.9
Circulation thermostat	Type (choke, bypass)	Bottom by-pass
	Starts to open at °C (°F)	82 over 95°C
Water pump	Type (centrifugal, other)	Centrifugal impeller
	GPM 1000 pump rpm	–
	Number of pumps	1
	Drive (V-belt, other)	V-belt
	Bearing type	Ball bearing
	Impeller material	–
	Housing material	–
By-pass recirculation [type (inter., ext.)]		External
Cooling system capacity	With heater–L(qt.)	7.3
	With air cond.–L(qt.)	7.3
	Opt. equipment [specify–L(qt.)]	NA
Water jackets full length of cyl. (yes, no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes, no)		–
Radiator core	Std., A/C, HO	–
	Type (cross-flow, etc.)	Vertical flow
	Construction (fin & tube mechanical, braze, etc.)	Tube & fin
	Material, mass [kg (wgt. lbs.)]	–
	Width	561.8 mm
	Height	430 mm
	Thickness	32 mm
	Fins per inch	12.7
Radiator end tank material		Resin
Fan	Std., elec., opt.	–
	Number of blades & type (flex, solid, material)	8
	Diameter & projected width	390 mm
	Ratio (fan to crankshaft rev.)	1.23
	Fan cutout type	Fluid coupling
	Drive type (direct, remote)	Belt drive
	RPM at idle (elec.)	–
	Motor rating (wattage) (elec.)	–
	Motor switch (type & location) (elec.)	–
	Switch point (temp., pressure) (elec.)	–
	Fan shroud (material)	–

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Engine Description/Carb. Engine Code

0.654 x 2 Liters

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

Induction type: carburetor, fuel injection system, etc.			Fuel Injection
Carburetor	Mfgr.		–
	Choke (type)		–
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	–
			–
		Automatic	–
			–
Idle A/F mix.			–
Fuel injection	Point of injection (no.)		2
	Constant, pulse, flow		Pulse
	Control (electronic, mech.)		–
	System pressure [kPa (psi)]		–
Intake manifold heat control (exhaust or water thermostatic or fixed)			–
Air cleaner type	Standard		Element: Long life dry
	Optional		N.A.
Fuel pump	Type (elec. or mech.)		Electric
	Location (eng., tank)		Tank
	Pressure range [kPa (psi)]		441 – 488

Fuel Tank

Capacity [refill L (gallons)]			63
Location (describe)			–
Attachment			–
Material & Mass [kg (weight lbs)]			–
Filler pipe	Location & material		–
	Connection to tank		–
Fuel line (material)			–
Fuel hose (material)			–
Return line (material)			–
Vapor line (material)			–
Extended range tank	Opt., n.a.		–
	Capacity [L (gallons)]		–
	Location & material		–
	Attachment		–
Auxiliary tank	Opt., n.a.		–
	Capacity [L (gallons)]		–
	Location & material		–
	Attachment		–
	Selector switch or valve		–
	Separate fill		–

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Engine Description/Carb. Engine Code	0.654 x 2 Liters

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Air injection , Catalyst & EGR
	Air Injection	Pump or pulse	Vane type
		Driven by	Air pump drive belt
		Air distribution (head, manifold, etc.)	Rotor housing & Catalyst
		Point of entry	Ex. port & Catalist
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled flow
		Exhaust source	Ex. manifold
		Point of exhaust injection (spacer, carburetor, manifold, other)	I. M. housing
	Catalytic Converter	Type	3 Way & Oxd.
		Number of	3
		Location(s)	Under floor
		Volume [L (in^3)]	2.2 , 1.4
		Substrate type	Monolith
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Closed 2 way system with control valve
	Energy source (manifold vacuum, carburetor, other)		Ported vacuum
	Discharges (to intake manifold, other)		Intake manifold
	Air inlet (breather cap, other)		Air cleaner
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Crank case & Charcoal canister
		Carburetor	Crank case & Charcoal canister
	Vapor storage provision		Crank case & Charcoal canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		yes

Engine – Exhaust System

Type (single, single with cross-over, dual, other)		Single
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		1
Resonator no. & type		–
Exhaust pipe	Branch o.d., wall thickness	–
	Main o.d., wall thickness	–
	Material & Mass [kg (weight lbs)]	–
Intermediate pipe	o.d. & wall thickness	–
	Material & Mass [kg (weight lbs)]	–
Tail pipe	o.d. & wall thickness	–
	Material & Mass [kg (weight lbs)]	–

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Transmissions/Transaxle

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

Manual Transmission/Transaxle

Number of forward speeds			5-Speed
Transmission ratios	In first		3.475
	In second		2.002
	In third		1.366
	In fourth		1.000
	In fifth		0.711
	In overdrive		–
	In reverse		3.493
Synchronous meshing (specify gears)			All forward gear
Shift lever location			Floor
Lubricant	Capacity [L (pt.)]		2.0
	Type recommended		A.P.I. Service GL-4 or GL-5
	SAE viscosity number	Summer	Above-18°C: SAE 90
		Winter	Below -18°C: SAE 80W
		Extreme cold	All seasons: SAE 80W-90

Clutch (Manual Transmission)

Make, type, engagement (describe) – (hydraulic, cable, rod)		DAIKIN MANUFACTURING CO. LTD. / Dry single plate
Assist (yes, no percent)		–
Type pressure plate springs		Diaphragm
Total spring load [N (lb.)]		490 lb.
No. of clutch driven discs		1
Clutch facing	Material	Semimold
	Manufacturer	ASAHI SEKIMEN
	Part number	N204 16 460A
	Rivets plate	16
	Rivet size	–
	Outside & inside dia.	225 x 150 mm
	Total eff. area [cm²(in.²)]	220
	Thickness	3.5 / 4.1 mm
	Engagement cushion method	Cushion spring
Release bearing	Type & method of lubrication	S. row ball bearing
Torsional damping	Method: springs, friction material	Coil spring

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Automatic Transmission/Transaxle

Trade name		L4N71B (4AT)
Type and special features (describe)		Oil pressure control
Selector	Location	Floor change
	Ltr./No. designation	–
Gear ratios	R	R : 2.400
	D	1st : 2.841
	L_2	2nd : 1.541
	L_1	3rd : 1.000
		4th : 0.720
Max. upshift speed - drive range [km/h (mph)]		(1-2): 56, (2-3): 101
Max. kickdown speed - drive range [km/h (mph)]		(2-1): 43, (3-2): 95
Min. overdrive speed [km/h (mph)]		27 (4AT)
Torque converter	Number of elements	3
	Max. ratio at stall	1.90 : 1
	Type of cooling (air, liquid)	Water
	Nominal diameter	236
Lubricant	Capacity [refill L (pt.)]	7.5 (4AT)
	Type Recommended	ATF M2C33F
Oil cooler (std., opt., NA, internal, external, air, liquid)		–

Axle or Front Wheel Drive Unit

Type (front, rear)			Rear
Description			Hypoid gear
Limited slip differential (type)			L.O.M. Type
Drive pinion offset			35
Drive pinion (type)			Hypoid gear
No. of differential pinions			2 (LSD4)
Pinion / differential adjustment (shim, other)			Shim
Pinion / differential bearing adjustment (shim, other)			Collapsible sleeve
Driving wheel bearing (type)			–
Lubricant	Capacity [L (pt.)]		1.3
	Type recommended		A.P.I. GL-5
	SAE viscosity number	Summer	SAE 90
		Winter	SAE 90
		Extreme cold	SAE 80W or 80W-90

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

Axle ratio (or overall top gear ratio)		(5MT): 4.100 /	(4AT): 3.909
No. of teeth	Pinion	10	11
	Ring gear or gear	41	43
Ring gear o.d.		183 mm	183 mm
Transaxle	Transfer gear ratio	–	
	Final drive ratio	–	

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Engine Description/Carb.
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Axle Shafts – Front Wheel Drive

N.A.

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.

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Propeller Shaft – Rear Wheel Drive

Type (straight tube, tube-in-tube, internal-external damper, etc.)			Straight tube
Outer diam. x length* x wall thickness	Manual 3-speed trans.		N.A.
	Manual 4-speed trans.		N.A.
	Manual 5-speed trans.		57 x 782 x 1.6 mm
	Overdrive		N.A.
	Automatic transmission		57 x 733 x 1.6 mm
Intermediate bearing	Type (plain, anti-friction)		N.A.
	Lubrication (fitting, prepack)		N.A.
Slip yoke	Type		Spline
	Number of teeth		(M/T): 22 , (A/T): 25
	Spline o.d.		(M/T): 25.19 , (A/T): 28.05 mm
Universal joints	Make and mfg. no.	Front	NTN, TOYO Bearing / M002 25 060
		Rear	NTN, TOYO Bearing / M002 25 060
	Number used		2
	Type (ball and trunnion, cross)		Hooks joint
	Rear attach (u-bolt, clamp, etc.)		Flange
	Bearing	Type (plain, anti-friction)	Needle bearing
		Lubrication (fitting, prepack)	Sealed grease
Drive taken through (torque tube, arms or springs)			Arms
Torque taken through (torque tube, arms or springs)			Arms

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

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Body Type And/Or Engine Displacement	0.654 X 2 Liters

Suspension – General

Car leveling	Std., opt./n.a.	N.A.
	Type (air, hyd., etc.)	–
	Manual/auto. controlled	–
Provision for brake dip control		Front suspention geometry
Provision for accl. squat control		Rear suspention geometry
Provisions for car jacking		None
Shock absorber (front & rear)	Type	Cylindrical double-acting
	Make	F: KAYABA R: TOKIKO
	Piston diameter	–
	Rod diameter	–

Suspension – Front

Type and description		Independent, Strut coil spring
Drive and torque taken through		–
Travel	Full jounce	–
	Full rebound	–
Spring	Type (coil, leaf, other) & material	Coil spring
	Insulators (type & material)	–
	Size (coil design height & i.d., bar length x dia.)	RH: 355.5x147x12 (327x146.8x11.8) LH: 366x 147.2x12.2 (336.5x147x12) ( ): For harder sus.
	Spring rate [N/mm (lb./in.)]	–
	Rate at wheel [N/mm (lb./in.)]	–
Stabilizer	Type (link, linkless, frameless)	Torsion bar
	Material & bar diameter	ϕ 22 mm (ϕ24 mm)

Suspension – Rear

Type and description			Multilink semi-trailing
Drive and torque taken through			–
Travel	Full jounce		–
	Full rebound		–
Spring	Type (coil, leaf, other) & material		Coil spring
	Size (length x width, coil design height & i.d., bar length & dia.)		367x84.6x9.9 (355x84.4x10.1)
	Spring rate [N/mm (lb./in.)]		–
	Rate at wheel [N/mm (lb./in.)]		–
	Insulators (type & material)		–
	If leaf	No. of leaves	–
		Shackle (comp. or tens.)	–
Stabilizer	Type (link, linkless, frameless)		Torsion bar
	Material & bar diameter		ϕ13 mm
Track bar (type)			

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Body Type And/Or Engine Displacement	0.654 x 2 Liters

Brakes - Service

Description			
Brake type (std., opt., n.a.)	Front (disc or drum)		Disc
	Rear (disc or drum)		Disc
Self-adjusting (std., opt., n.a.)			Std.
Special valving	Type (proportion, delay, metering, other)		Defferential proportioning valve
Power brake (std., opt., n.a.)			Std.
Booster type (remote, integral, vac., hyd., etc.)			Integral
Vacuum source (inline, pump, etc.)			–
Vacuum reservoir (volume in.³)			–
Vacuum pump-type (elec. gear driven, belt driven, if other so state)			–
Anti-skid device type (std., opt., n.a.) (F/R)			N.A.
Effective area [cm²(in.²)]*			–
Gross lining area [cm²(in.²)]**(F/R)			–
Swept area [cm²(in.²)]***(F/R)			–
Rotor	Outer working diameter	F/R	F: 250 mm R: 257 mm
	Inner working diameter	F/R	–
	Thickness	F/R	F: 22 mm R: 20 mm
	Material & type (vented/solid)	F/R	Cast iron
Drum	Diameter & width	F/R	N.A.
	Type and material	F/R	–
Wheel cylinder bore			F: 50.8 mm R: 34.9 mm
Master cylinder	Bore×stroke	F/R	22.2 x 15 mm
Pedal arc ratio			–
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]			–
Lining clearance		F/R	F: 0.1 mm R: 0.1 mm
Brake lining — Front wheel	Bonded or riveted (rivets/seg.)		Integral molded
	Rivet size		N.A.
	Manufacturer		JAPAN BRAKE KOGYO
	Lining code*****		–
	Material		Molded asbestos
	---- Primary or out-board		–
	Size Secondary or in-board		–
	Shoe thickness (no lining)		14 mm
Brake lining — Rear wheel	Bonded or riveted (rivets/seg.)		Integral molded
	Manufacturer		JAPAN BRAKE KOGYO
	Lining Code*****		–
	Material		Molded asbestos
	---- Primary or out-board		–
	Size Secondary or in-board		–
	Shoe thickness (no lining)		–

*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.

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Body Type And/Or Engine Displacement	

Tires And Wheels (Standard)

Tires	Size (load range, ply)		185/70 HR14
	Type (bias, radial, etc.)		Radial
	Inflation pressure (cold) for recommended max. vehicle load	Front [kPa (psi)]	32 psi
		Rear [kPa (psi)]	32 psi
	Rev./mile–at 70 km/h (45 mph)		–
Wheels	Type & material		Aluminum alloy
	Rim (size & flange type)		5 1/2-JJ x 14
	Wheel offset		40
	Attachment	Type (bolt or stud)	Nut
		Circle diameter	114.3
		Number & size	M12 x 1.5 / 4
Spare	Tire and wheel (same, if other describe)		T135/70 D15 Tubeless
	Storage position & location (describe)		Trunk room

Tires And Wheels (Optional)

Size (load range, ply)	205/60 VR15
Type (bias, radial, etc.)	Radial
Wheel (type & material)	Aluminum alloy
Rim (size, flange type and offset)	6-JJ x 15 (M12 x 1.5 / 5)
Size (load range, ply)	185/70 HR14
Type (bias, radial, etc.)	Radial
Wheel (type & material)	Steel
Rim (size, flange type and offset)	5 1/2-JJ x 14
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)	T135/70 D16 Tubeless Trunk room

Brakes – Parking

Type of control		Hand operated parking lever
Location of control		Right side of driver's seat on the floor
Operates on		Rear wheel
If separate from service brakes	Type (internal or external)	–
	Drum diameter	–
	Lining size (length x width x thickness)	–

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Passenger Car
METRIC (U.S. Customary)

Car Line: Mazda RX-7
Model Year: 1986 Issued: Dec./85 Revised (•):

Body Type And/Or Engine Displacement	0.654 x 2 Liters

Steering

Manual (std., opt., n.a.)					Std.
Power (std., opt., n.a.)					Opt.
Adjustable steering wheel (tilt, swing, other)			Type and description		–
			(Std., opt., n.a.)		N.A.
Wheel diameter (W9) SAE J1100			Manual		Urethane: 380 mm, leather: 382 mm
			Power		Urethane: 380 mm, leather: 382 mm
Turning diameter m (ft.)	Outside front		Wall to wall (l. & r.)		–
			Curb to curb (l. & r.)		–
	Inside rear		Wall to wall (l. & r.)		–
			Curb to curb (l. & r.)		–
Scrub Radius*					–
Manual	Gear		Type		Rack & pinion
			Make		KOYO JIDOKI
			Ratios	Gear	
				Overall	–
	No. wheel turns (stop to stop)				3.6
Power	Type (coaxial, linkage, etc.)				–
	Make				NIPPON SEIKO
	Gear		Type		Rack & pinion
			Ratios	Gear	
				Overall	–
	Pump (drive)				–
	No. wheel turns (stop to stop)				2.7
Linkage	Type				–
	Location (front or rear of wheels, other)				–
	Tie rods (one or two)				–
Steering axis	Inclination at camber (deg.)				–
	Bearings (type)		Upper		–
			Lower		–
			Thrust		–
Steering spindle & joint type					–
Wheel spindle	Diameter		Inner bearing		–
			Outer bearing		–
	Thread (size)				–
	Bearing (type)				–

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

MVMA Specifications Form
Passenger Car

METRIC (U.S. Customary)

Car Line: Mazda RX-7
Model Year: 1986 Issued: Dec./85 Revised (*):

Body Type And/Or Engine Displacement

0.654 x 2 Liters

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	–
		Camber (deg.)	–
		Toe-in [outside track-mm (in.)]	–
	Service reset*	Caster	4° 40'
		Camber	0° 20'
		Toe-in	3 ± 3 mm
	Periodic M.V. inspection	Caster	–
		Camber	–
		Toe-in	–
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	–
		Toe-in [outside track-mm (in.)]	–
	Service reset*	Camber	–
		Toe-in	–
	Periodic M.V. inspection	Camber	=
		Toe-in	=

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

Electrical – Instruments and Equipment

Speedometer	Type	Magnetic torque drive
	Trip odometer (std., opt., n.a.)	Std.
EGR maintenance indicator		–
Charge indicator	Type	Light
	Warning device	–
Temperature indicator	Type	Bi-metal
	Warning device	–
Oil pressure indicator	Type	Light
	Warning device	–
Fuel indicator	Type	Bi-metal
	Warning device	–
Windshield wiper	Type (standard)	Electric, 2 speed with intermit.
	Type (optional)	–
	Blade length	–
	Sweot area [cm^2(in.^{2})]	–
Windshield washer	Type (standard)	Electric pump
	Type (optional)	–
	Fluid level indicator	–
Horn	Type	Electric
	Number used	2
Other		

MVMA Specifications Form
Passenger Car

METRIC (U.S. Customary)

Car Line Mazda RX-7
Model Year 1986 Issued Dec./85 Revised (•) ____

Engine Description/Carb. Engine Code	0.654 X 2 Liters

Electrical – Supply System

Battery	Make	–
	Model, std., (opt.)	50D20L , 65D23L
	Voltage	12V
	Amps at 0°F cold crank	–
	Minutes-reserve capacity	–
	Amp/hrs. - 20 hr. rate	50Ah , 55Ah
	Location	Left front engine comp.
Generator or alternator	Type and rating	12V-70A
	Ratio (alt. crank/rev.)	1 : 2.08
	Optional (type & rating)	–
Regulator	Type	–

Electrical – Starting System

Start. motor	Current drain at 0°F	–
Motor drive	Engagement type	Pre-engaged drive
	Pinion engages from (front, rear)	Rear

Electrical – Ignition System

Type	Electronic (std., opt., n.a.)		Std.
	Other (specify)		–
Coil	Make		NIPPON DENSO
	Model		029700-6320
	Current	Engine stopped – A	–
		Engine idling – A	–
Spark plug	Make		NGK NIPPON DENSO
	Model		SD10A, SD11A S-29A, S-31A
	Thread (mm)		–
	Tightening torque (N-m (lb. ft))		13-18 N-m
	Gap		2.0 ± 0.3
	Number per cylinder		–
Distributor	Make		–
	Model		–

Electrical – Suppression

Locations & type	High tension cord, Spark plug

MVMA Specifications Form
Passenger Car

METRIC (U.S. Customary)

Car Line: Mazda RX-7
Model Year: 1986 Issued: Dec./85 Revised (•):

Body Type	2 door Coupe

Body

Structure	–
Bumper system front - rear	–
Anti-corrosion treatment	–

Body – Miscellaneous Information

Type of finish (lacquer, enamel, other)			–
Hood	Hinge location (front, rear)		Rear
	Type (counterbalance, prop)		–
	Release control (internal, external)		Internal
Trunk lid	Type (counterbalance, other)		–
	Internal release control (elec., mech., n.a.)		Mech.
Hatch-back lid	Type (counterbalance, other)		–
	Internal release control (elec., mech., n.a.)		Mech.
			–
			–
			–
			–
Vent window control (crank, friction, pivot, power)		Front	N.A.
		Rear	N.A.
Seat cushion type (e.g., 60:40, bucket, bench, wire, foam etc.)		Front	Spring
		Rear	Foamed urethane
		3rd seat	N.A.
Seat back type (e.g., 60:40, bucket, bench, wire, foam etc.)		Front	Spring
		Rear	Foamed urethane
		3rd seat	N.A.

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

Car Line Mazda RX-7
Model Year 1986 Issued Dec./85 Revised (•) _____

Body Type	2 door Coupe

Restraint System

Active restraint system	Standard/optional	Std.
	Type and description	Type 1 & Type 2 seat belt assembly
	Location	Front : Type 2 seat belt ass'y Rear : Type 1 seat belt ass'y
Passive seat belts	Standard/optional	N.A.
	Power/manual	–
	2 or 3 point	–
	Knee bar/lap belt	–

Frame

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

Glass	SAE Ref. No.	
Windshield glass exposed surface area [cm^2 ($in.^2$)]	S1	–
Side glass exposed surface area [cm^2 ($in.^2$)] - total 2-sides	S2	–
Backlight glass exposed surface area [cm^2 ($in.^2$)]	S3	–
Total glass exposed surface area [cm^2 ($in.^2$)]	S4	–
Windshield glass (type)		–
Side glass (type)		–
Backlight glass (type)		–

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

Car Line: Mazda RX-7
Model Year: 1986 Issued: Dec./85 Revised (•):

Body Type: 2 door Coupe

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

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

MVMA Specifications Form
Passenger Car

Car Line Mazda RX-7
Model Year 1986 Issued Dec./85 Revised (•)

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

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

Body Type	SAE Ref. No.	2 door Coupe
Width		
Tread (front)	W101	1450 mm
Tread (rear)	W102	1440 mm
Vehicle width	W103	1690 mm
Body width at Sg RP (front)	W117	
Vehicle width (front doors open)	W120	
Vehicle width (rear doors open)	W121	
Front fender overall width	W106	
Rear fender overall width	W107	
Tumble-home (deg.)	W122	
Length		
Wheelbase	L101	2430 mm
Vehicle length	L103	4290 mm
Overhang (front)	L104	
Overhang (rear)	L105	
Upper structure length	L123	
Rear wheel C/L "X" coordinate	L127	
Cowl point "X" coordinate	L125	
Front end length at centerline	L126	
Rear end length at centerline	L129	
Height*		
Passenger distribution (front/rear)	PD1,2,3	
Trunk/cargo load		
Vehicle height	H101	1265 mm
Cowl point to ground	H114	
Deck point to ground	H138	
Rocker panel-front to ground	H112	
Bottom of door closed-front to grd.	H133	
Rocker panel-rear to ground	H111	
Bottom of door closed-rear to grd.	H135	
Windshield slope angle	H122	
Backlight slope angle	H121	
Ground Clearance*		
Front bumper to ground	H102	
Rear bumper to ground	H104	
Bumper to ground (front at curb mass (wt.))	H103	
Bumper to ground (rear at curb mass (wt.))	H105	
Angle of approach (degrees)	H106	
Angle of departure (degrees)	H107	
Ramp breakover angle (degrees)	H147	
Axle differential to ground (front / rear)	H153	
Min. running ground clearance	H156	
Location of min. run. grd. clear.		

* 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.

MVMA Specifications Form
Passenger Car

Car Line Mazda RX-7
Model Year 1986 Issued Dec./85 Revised (•) _____

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

	SAE Ref. No.	
Body Type		2 door Coupe

Front Compartment

Sg RP front, "X" coordinate	L31	
Effective head room	H61	
Max. eff. leg room (accelerator)	L34	946 (934) mm ( ) with S/R
SgRP to heel point	H30	1105 mm
SgRP to heel point	L53	
Back angle	L40	
Hip angle	L42	
Knee angle	L44	
Foot angle	L46	
Design H-point front travel	L17	
Normal driving & riding seat track trvl.	L23	
Shoulder room	W3	1340 mm
Hip room	W5	1380 mm
Upper body opening to ground	H50	
Steering wheel maximum diameter	W9	
Steering wheel angle	H18	
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	
Undepressed floor covering thickness	H67	

Rear Compartment

Sg RP Point couple distance	L50	507 mm
Effective head room	H63	839 mm
Min. effective leg room	L51	
Sg RP (second to heel)	H31	
Knee clearance	L48	
Compartment room	L3	
Shoulder room	W4	
Hip room	W6	
Upper body opening to ground	H51	
Back angle	L41	
Hip angle	L43	
Knee angle	L45	
Foot angle	L47	
Headlining to roof panel (second)	H36	
Depressed floor covering thickness	H73	

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	104 Liters
Liftover height	H195	

Interior Volumes (EPA Classification)

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

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

Car Line Mazda RX-7
Model Year 1986 , Issued Dec./85 Revised (•) _____

See Key Sheets for definitions

Body Type	SAE Ref. No.	2 Door Coupe

Station Wagon – Third Seat

N.A.

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

N.A.

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

N.A.

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 [$m^3(ft.^3)$]	V4	
Cargo volume index-rear of 2-seat	V11	

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

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

Car Line Mazda RX-7
Model Year 1986 Issued Dec./85 Revised (•) _____

Body Type 2 Door Coupe

Vehicle Fiducial Marks

Fiducial Mark Number*	Define Coordinate Location
Front	
Rear	

Fiducial Mark Number		
Front	W21	
	L54	
	H81	
	H161	
	H163	
Rear	W22	
	L55	
	H82	
	H162	
	H164	

* 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: Mazda RX-7
Model Year: 1986 Issued: Dec./85 Revised (•):

Body Type	2 door Coupe

Lamps and Headlamp Shape*

Height above ground to center of bulb or marker	Headlamp (SAE - H127)	Highest**	697 - 707 mm
		Lowest	–
	Taillamp (SAE - H128)	Highest**	763 - 770 mm
		Lowest	–
	Sidemarker	Front	464 - 474 mm
		Rear	494 - 501 mm
Distance from C'L of car to center of bulb	Headlamp	Inside	–
		Outside**	–
	Taillamp	Inside	–
		Outside**	–
	Directional	Front	–
		Rear	–
Halogen headlamp (std., opt., n.a.)	Lo beam		Opt.
	Hi beam		Opt.
	Replaceable bulb		–
	Shape		–
Headlamp other than above	Lo beam		–
	Hi beam		–
	Replaceable		–
	Shape		–
	Type		Type 2B1

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

MVMA Specifications Form
Passenger Car

METRIC (U.S. Customary)

Car Line: Mazda RX-7

Model Year: 1986 Issued: Dec./85 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	
RX-7 2 Seater				41.7	58.3			
M5	610	580	1190					
A4	635	590	1225					
2+2 Seater				41.7	58.3	16.7	83.3	
M5	610	580	1190					
A4	640.	595	1235					

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

MVMA Specifications Form
Passenger Car

METRIC (U.S. Customary)

Car Line: Mazda RX-7

Model Year: 1986 Issued: Dec./85 Revised (•):

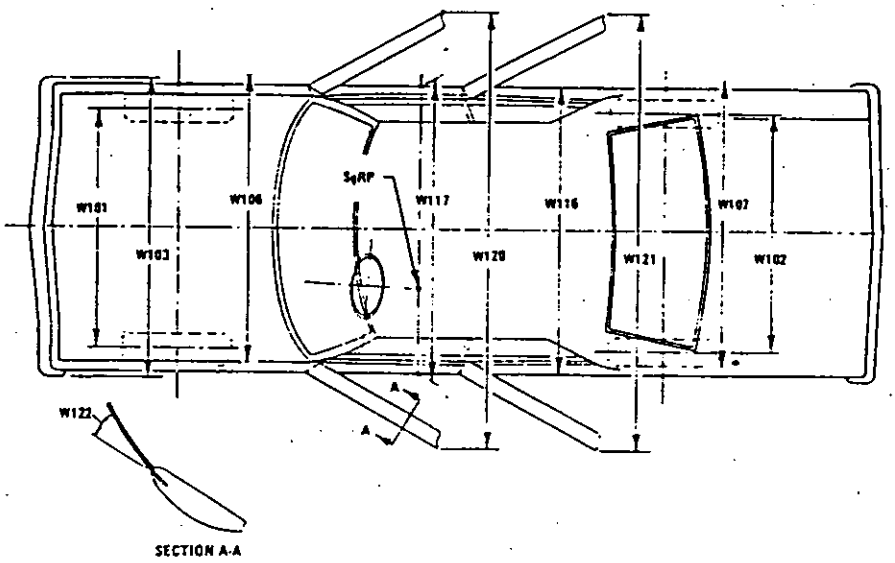
Equipment	Optional Equipment Differential Mass (weight)*			Remarks
	MASS, kg. (weight, lb.)			
	Front	Rear	Total	
Air conditioning	39	0	39	
Power steering	28.2	-0.2	28	
Headlamp cleaner	19	-3	16	
Tilt steering	2.7	1.3	4	
Side protector	1.3	1.7	3	
Sun roof	9	21	30	
Storage box	2	7	9	
205 Tire, 15" Wheel, 15" Brake & Master V.	10.5	17.5	28	
Rear wiper	-1.3	7.3	6	
Power window	1	1	2	
Auto-speed control	2.3	0.7	3	
Low-back sea & trim	1.5	3.5	5	

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

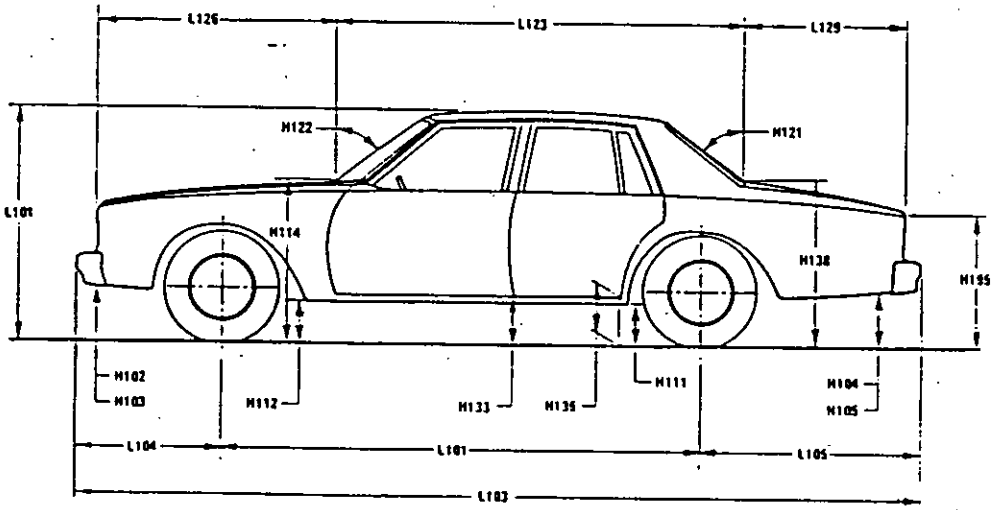
MVMA Specifications Form
Passenger Car
METRIC (U.S. Customary)

Exterior Car And Body Dimensions – Key Sheet

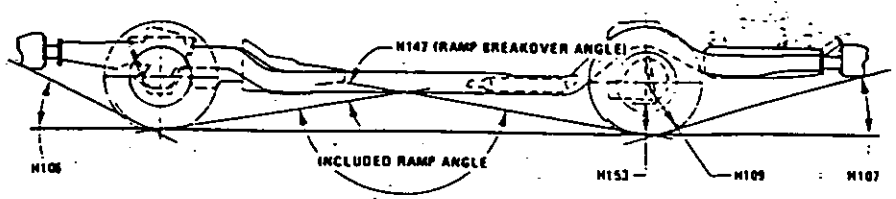
Exterior Width



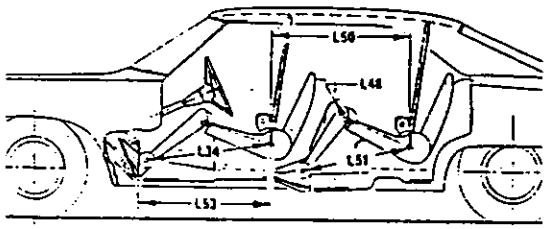
Exterior Length & Height

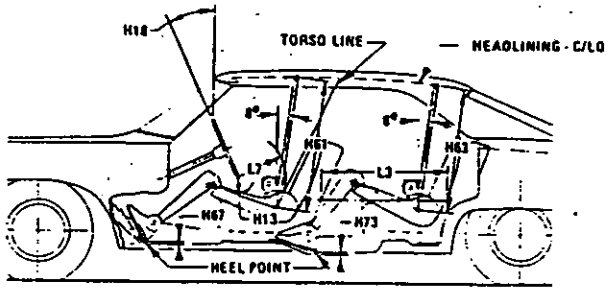


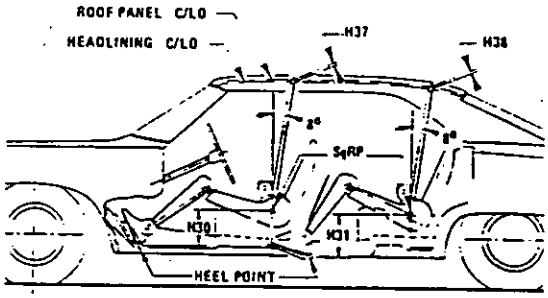
Exterior Ground Clearance

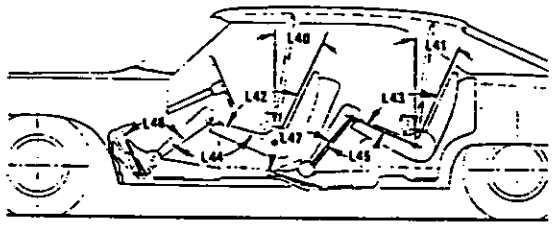


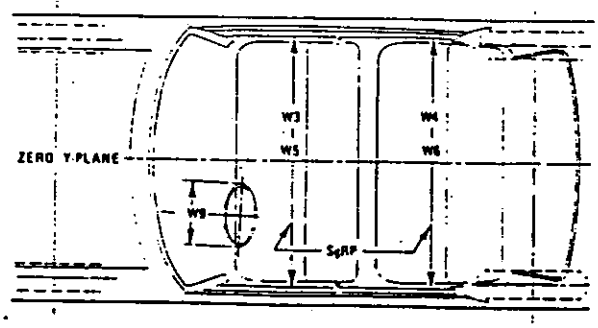
Interior Car And Body Dimensions – Key Sheet

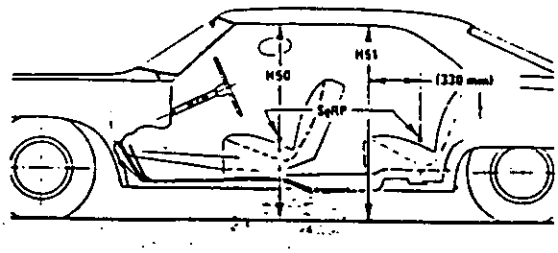






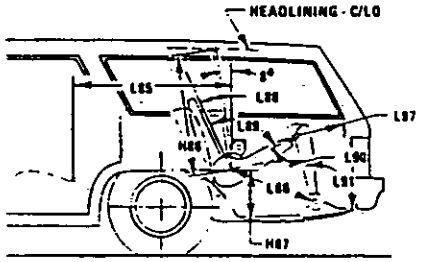


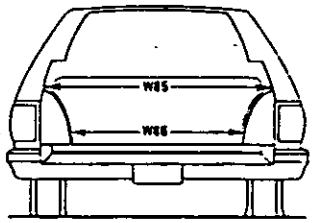




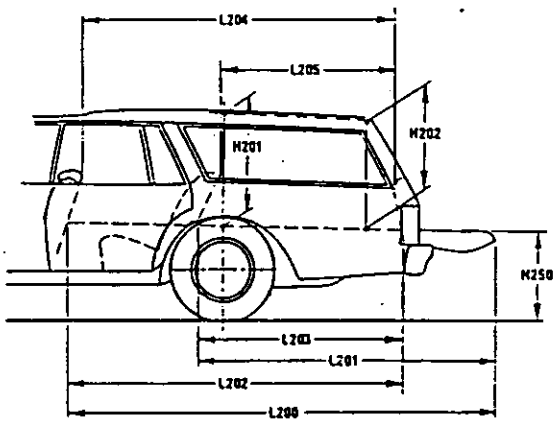
Interior Car And Body Dimensions – Key Sheet

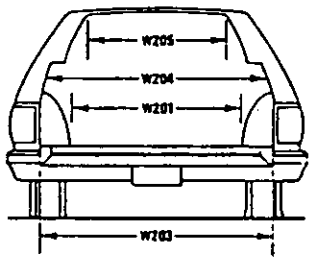
Third Seat



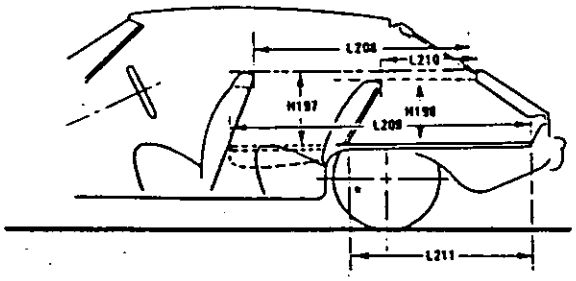


Cargo Space





Station Wagon



Hatchback

Exterior Car And Body Dimensions – Key Sheet
Dimensions Definitions

Seating Reference Point

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

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

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

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

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

Width Dimensions

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

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

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

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

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

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

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

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

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

Length Dimensions

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

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

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

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

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

L125 COWL POINT "X" COORDINATE.

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

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

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

Height Dimensions

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

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

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

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

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

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

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

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

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

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

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

Ground Clearance Dimensions

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

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

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

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

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

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

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

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

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

Glass Areas

S1 Windshield area.

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

S3 Backlight areas.

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

Fiducial Mark Dimensions

Fiducial Mark – Number 1

L54 "X" coordinate.

W21 "Y" coordinate.

H81 "Z" coordinate.

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

H163 Height "Z" coordinate to ground.

Fiducial Mark – Number 2

L55 "X" coordinate.

W22 "Y" coordinate.

W82 "Z" coordinate.

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

H164 Height "Z" coordinate to ground.

Front Compartment Dimensions

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

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

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

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

L31 SgRP–FRONT, "X" COORDINATED.

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

L40 BACK ANGLE–FRONT. The angle measured between a vertical line through the SgRP–front and the torso line. If the seatback is adjustable, use the normal driving and riding position specified by the manufacturer.

L42 HIP ANGLE–FRONT. The angle measured between torso line and thigh centerline.

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

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

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L41 BACK ANGLE–SECOND. The angle measured between a vertical line through the SgRP – second and the torso line.

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

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

L47 FOOT ANGLE–SECOND. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the three-dimensional devices bare foot flesh line (Reference J826).

L48 KNEE CLEARANCE–SECOND. The minimum dimension measured from the knee pivot center to the back of front seatback minus 51 mm (2.0 in.).

L50 SgRP COUPLE DISTANCE–SECOND. The dimension measured horizontally from the driver SgRP–front to the SgRP–second.

L51 MINIMUM EFFECTIVE LEG ROOM–SECOND. The dimension measured along a line from the ankle pivot center to the SgRP–second plus 254mm (10.0 in).

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

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

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

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

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

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

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

PD2 PASSENGER DISTRIBUTION–SECOND.

Luggage Compartment Dimensions

V1 USABLE LUGGAGE CAPACITY–Total of volumes of individual pieces of standard luggage set plus H-boxes stowed in the luggage compartment in accordance with the procedure described in paragraph 8.2 of SAE-J1100.

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

Interior Volumes (EPA Classification)

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

The Trunk/Cargo Index is an estimate of the size of the trunk/cargo space. In station wagons and hatchbacks it is an estimate of the space behind the second seat.

Station Wagon – Third Seat Dimensions

L85 SgRP COUPLE DISTANCE–THIRD. The dimension measured horizontally from the SgRP–second the 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. Mesured in the same manner as L41.

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

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

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

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

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

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

PD3 PASSENGER DISTRIBUTION–THIRD.

SD1 SEAT FACING DIRECTION–THIRD.

Station Wagon – Cargo Space Dimensions

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

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

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

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

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

L205 CARGO LENGTH AT BELT–SECOND. The minimum dimension measured horizontally from the back of the second seatback at the seatback top to 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.

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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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