

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1989

Manufacturer NISSAN MOTOR CO., LTD.	Vehicle Line NISSAN SENTRA	
Mailing Address 560-2, OKATSUKOKU, ATSUGI-SHI, KANAGAWA, 243-01, JAPAN	Issued '88-9	Revised

Direct questions concerning these specifications to the manufacturer listed above.

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

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



Motor Vehicle Manufacturers Association
of the United States, Inc.

Blank Forms Provided by Technical Affairs Division

MVMA Specifications Form

METRIC (U.S. Customary)

Table of Contents

Ø	1	Vehicle Models/Origin	Ø Indicates Format Change From Previous Year
	2	Power Teams	
Ø	3-6	Engine	
	4	Lubrication System	
	4	Diesel Information	
	5	Cooling System	
	6	Fuel System	
Ø	7	Vehicle Emission Control	
	7	Exhaust System	
Ø	8-10	Transmission, Axles and Shafts	
Ø	11	Suspension	
	12-13	Brakes	
	13	Tires and Wheels	
	14-15	Steering	
Ø	15-16	Electrical	
Ø	17	Body – Miscellaneous Information	
Ø	18	Restraint System	
	18	Glass	
Ø	18	Headlamps	
	18	Frame	
Ø	19-20	Convenience Equipment	
	21-23	Vehicle Dimensions	
	24	Vehicle Fiducial Marks	
Ø	25	Vehicle Mass (Weight)	
	26	Optional Equipment Differential Mass (Weight)	
	27-33	Vehicle Dimensions Definitions - Key Sheets	
Ø	34	Index	

NOTE:

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

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

☒ Vehicle Origin

Design & development (company)	NISSAN MOTOR CO., LTD.
Where built (country)	JAPAN/U.S.A.
Authorized U.S. sales marketing representative	NISSAN MOTOR CORPORATION in U.S.A.

☒ Vehicle Models

Model Description & Drive (FWD/RWD/AWD/4WD)*		Introduction Date	Make, Vehicle Models, Series, Body Type (Mfr's Model Code)		No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load—Kilograms (Pounds)
Non-California Model	2 DOOR Sedan	GA16I	STD	GLB12RSIU	5 (2/3)	35 kg (75 lb)
			E	GLB12RFIU		
			E	GLB12RAIU		
			XE	GLB12RHFIU		
			XE	GLB12RHAIU		
	4 DOOR Sedan	GA16I	E	GLB12FIU		
			E	GLB12AIU		
			XE	GLB12HFIU		
			XE	GLB12HAIU		
			GXE	GLB12JFIU		
	Coupe	GA16I	GXE	GLB12JAIU		
			XE	KGLB12HFIU		
			XE	KGLB12HAIU		
			SE	KGLB12JFIU		
	Wagon	GA16I	SE	KGLB12JAIU		
			E	WGLB12FIU		
			E	WGLB12AIU		
			XE	WGLB12HFIU		
	Wagon 4WD	GA16I	XE	WGLB12HAIU		
			XE	WGLNB12HFIU		
				XE	WGLNB12HAIU	

- To be continued -

- To be continued -

☒ FWD - Front Wheel Drive RWD - Rear Wheel Drive
AWD - All Wheel Drive 4WD - Four Wheel Drive

MVMA Specifications Form

METRIC (U.S. Customary)

SUPPLEMENTAL PAGE

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

California Model	2 DOOR Sedan	GA16I	STD	GLB12RSIV	5 (2/3)	34 kg (75 lb)
			E	GLB12RFIV		
			E	GLB12RAIV		
			XE	GLB12RHFIV		
			XE	GLB12RHAIV		
	4 DOOR Sedan	GA16I	E	GLB12FIV		
			E	GLB12AIV		
			XE	GLB12HFIV		
			XE	GLB12HAIV		
			GXE	GLB12JFIV		
			GXE	GLB12JAIV		
	Coupe	GA16I	XE	KGLB12HFIV	4 (2/2)	
			XE	KGLB12HAIV		
			SE	KGLB12JFIV		
			SE	KGLB12JAIV		
	Wagon	GA16I	E	WGLB12FIV	5 (2/3)	
			E	WGLB12AIV		
XE			WGLB12HFIV			
XE			WGLB12HAIV			
Wagon 4WD	GA16I	XE	WGLNB12HFIV			
		XE	WGLNB12HAIV			

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

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						E x h a u s t S/D*	TRANSMISSION/ TRANSAXLE	AXLE RATIO (std. first)
	Code	Displ. Liters (in ³)	Induction (FI, CARB/ BBL, etc.)	Compr. Ratio	SAE Net at RPM				
					Power kW (bhp)	Torque N·m (lb. ft.)			
GLB12RSIU	GA16I	1.597	N.A.	9.4	65.3 /6000	131.4 /3200	S	RN4F31A	3.650
GLB12RFIU								RS5F31A	3.895
GLB12RAIU								RL3F01A	3.600
GLB12RHFIU								RS5F31A	3.895
GLB12RHAIU								RL3F01A	3.600
GLB12FIU								RS5F31A	3.895
GLB12AIU								RL3F01A	3.600
GLB12HFIU								RS5F31A	3.895
GLB12HAIU								RL3F01A	3.600
GLB12JFIU								RS5F31A	3.895
GLB12JAIU								RL3F01A	3.600
KGLB12HFIU								TS5F31A	4.167
KGLB12HAIU								RL3F01A	3.600
KGLB12JFIU								RS5F31A	4.167
KGLB12JAIU								RL3F01A	3.600
WGLB12FIU								RS5F31A	3.895
WGLB12AIU								RL3F01A	3.600
WGLB12HFIU								RS5F31A	3.895
WGLB12HAIU								RL3F01A	3.600
GLB12RSIV								RN4F31A	3.650
GLB12RFIV								RS5F31A	3.895
GLB12RAIV								RL3F01A	3.600
GLB12RHFIV								RS5F31A	3.895
GLB12RHAIV								RL3F01A	3.600
GLB12FIV								RS5F31A	3.895
GLB12AIV								RL3F01A	3.600
GLB12HFIV								RS5F31A	3.895
GLB12HAIV								RL3F01A	3.600
GLB12JFIV								RS5F31A	3.895
GLB12JAIV								RL3F01A	3.600
KGLB12HFIV								RS5F31A	4.167
KGLB12HAIV								RL3F01A	3.600
KGLB12JFIV								RS5F31A	4.167
KGLB12JAIV								RL3F01A	3.600
WGLB12FIV								RS5F31A	3.895
WGLB12AIV								RL3F01A	3.600
WGLB12HFIV								RS5F31A	3.895
WGLB12HAIV								RL3F01A	3.600
WGLNB12HFIU								RS5F31A	4.171
WGLNB12HFIV								RS5F31A	4.171
WGLNB12HAIII								RL3F01A	3.600
WGLNB12HAIV								RL3F01A	3.600

MVMA Specifications Form

Vehicle Line NISSAN SENTRA
Model Year '89 Issued 58-9 Revised (e) _____

METRIC (U.S. Customary)

Engine Description/Cerb.
Engine Code

GA16I

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	Inline Front Transverse	
Manufacturer	AICHI	
No. of cylinders	4	
Bore	76 mm	
Stroke	88 mm	
Bore spacing (C/L to C/L)	85.5 mm	
Cylinder block material & mass kg (lbs.) (machined)	Cast Iron 35.4 kg	
Cylinder block deck height	214 mm	
Cylinder block length	369 mm	
Deck clearance (minimum) (above or below block)	0 mm	
Cylinder head material & mass kg (lbs.)	Aluminum Alloy 8.5 kg	
Cylinder head volume (cm³)	30.9 cm³	
Cylinder liner material	Cast Iron	
Head gasket thickness (compressed)	1.2 mm	
Minimum combustion chamber total volume (cm³)	41.5 cm³	
Cyl. no. system (front to rear)*	L. Bank	1-2-3-4
	R. Bank	-
Firing order	1-3-4-2	
Intake manifold material & mass [kg (lbs.)]**	Aluminum Alloy 2.7 kg	
Exhaust manifold material & mass [kg (lbs.)]**	Cast Iron 4.3 kg	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) + 2	No Less Than 87	
Engine mounts	Number	Attachment
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric
	Added isolation (sub-frame, crossmember, etc.)	
Total dressed engine mass (wt) dry***		

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum Alloy 240 g
--	----------------------

Engine - Camshaft

Location		Cylinder Head
Material & mass kg (weight, lbs.)		Cast Iron 2.4 kg
Drive type	Chain / belt	CHAIN
	Width / pitch	14 mm/9.525 mm

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

** Finished state.

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

MVMA Specifications Form

METRIC (U.S. Customary)

SUPPLEMENTAL PAGE

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

	M/T	A/T
2WD	MAIN MOUNTS 3	MAIN MOUNTS 3
	BUFFER RODS 2	BUFFER ROD 1
4WD	MAIN MOUNTS 3	MAIN MOUNTS 3
	BUFFER ROD 1	BUFFER ROD 1
	STOPPER 1	STOPPER 1

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

Engine Description/Car
Engine Code

GA16I

Engine - Valve System

Hydraulic lifters (std., opt., NA)	Std.
Valves	Number intake / exhaust
	2/1
Valves	Head O.D. intake / exhaust
	29 mm/32.8 mm

Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))*	Forged Steel 0.494 kg
☒ Length (axle-to-axle) mm	140.5 mm

Engine - Crankshaft

Material & mass (kg., (weight, lbs.))*	Forged Steel 12.8 kg
End thrust taken by bearing (no.)	3
Length & number of main bearings	465.5 mm 5
Seal (material, one, two piece design, etc.)	Front
	Acrylic Rubber One Piece
Seal (material, one, two piece design, etc.)	Rear
	Silicon Rubber One Piece

Engine - Lubrication System

Normal oil pressure (kPa (psi) at engine rpm)	392 kPa at 2000 rpm
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.0 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	N.A.
Super charger - manufacturer	N.A.
Intercooler	N.A.

*Finished State

MVMA Specifications Form

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

GA16I							
SED				COUPE / WAGON			
2WD				2WD		4WD	
M/T	A/T	M/T	A/T	M/T	A/T	M/T	A/T

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Std. (Reserve Tank)					
Coolant fill location (rad., bottle)		Bottle					
Radiator cap relief valve pressure (kPa (psi))		90					
Circulation thermostat	Type (choke, bypass)	Bypass					
	Starts to open at °C (°F)	76.5 °C					
Water pump	Type (centrifugal, other)	Centrifugal					
	GPM 1000 pump rpm	-					
	Number of pumps	1					
	Drive (V-belt, other)	V-Belt					
	Bearing type	Ball Bearing					
	Impeller material	Cold Rolled Carbon Steel					
	Housing material	Aluminum Alloy					
By-pass recirculation (type (inter., ext.))		Internal					
Cooling system capacity	With heater-L (qt.)	5.8					
	With air cond.-L (qt.)	5.8					
	Opt. equipment (specify-L (qt.))	N.A.					
Water jackets full length of cyl. (yes, no)		Yes					
Water all around cylinder (yes, no)		Yes					
Water jackets open at head face (yes, no)		Yes					
Radiator core	Std., A/C, HD	Std. A/C					
	Type (cross-flow, etc.)	Cross Flow					
	Construction (fin & tube mechanical, brazed, etc.)	Corrugated					
	Material, mass (kg (wtg. lbs.))	5.1	5.3	5.1	5.3	5.1	7.3
	Width	590 mm					
	Height	349 mm					
	Thickness	16					32
	Fins per inch	19					17
Radiator end tank material		Resin					
Fan	Std., elec., opt.	Elect.					
	Number of blades & type (flex, solid, material)	N.A.					
	Diameter & projected width	ø320					
	Ratio (fan to crankshaft rev.)	N.A.					
	Fan cutout type	N.A.					
	Drive type (direct, remote)	N.A.					
	RPM at idle (elec.)	2100 rpm		2200 rpm			
	Motor rating (wattage) (elec.)	70W		160W			
	Motor switch (type & location) (elec.)	THERMO SWITCH / ENG					
	Switch point (temp., pressure) (elec.)	90 °C					
Fan shroud (material)		Resin		Steel	Resin	Steel	

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e)

Engine Description/Carb.
Engine Code

GA16I

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

Induction type: carburetor, fuel injection system, etc.		Electronic Fuel Injection
Manufacturer		NISSAN
Carburetor no. of barrels		N.A.
Idle A/F mix.		Present and Sealed at Factor
Fuel injection	Point of injection (no.)	1
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	Electronic
	System pressure (kPa (psi))	299.2 kPa
Idle spd.-rpm (spec. neutral or drive and propens if used)	Manual	800 rpm
	Automatic	700 rpm (D Range)
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water
Air cleaner type		Paper Element
Fuel filter (type/location)		Paper Element/Engine Room
Fuel pump	Type (elec. or mech.)	Electrical
	Location (eng., tank)	In Tank
	Pressure range (kPa (psi))	299 kPa
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	95 L/hr at 299 kPa
Fuel Tank		2WD 4WD
Capacity (refill L (gallons))		50 47
Location (describe)		Under Rear Floor
Attachment		Fastend with bolts Fastend with belts
Material & Mass (kg (weight lbs))		Carbon Steel Tin-Lead Coat 11kg
Filler pipe	Location & material	At the Left Rear Fender, Carbon Steel
	Connection to tank	Rubber Hose
Fuel line (material)		Carbon Steel & Rubber
Fuel hose (material)		Rubber
Return line (material)		Carbon Steel & Rubber
Vapor line (material)		Carbon Steel & Rubber
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		

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA

Model Year '89 Issued '88-9 Revised (e) _____

Engine Description/Carb.
Engine Code

GA161	
2WD	4WD

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		TBI/EGR/AIV/TWC/CL
	Air Injection	Pump or pulse	Pulse
		Driven by	N.A.
		Air distribution (head, manifold, etc.)	Exhaust Manifold
		Point of entry	Air Clear
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Controlled
		Exhaust source	Exhaust Manifold
		Point of exhaust injection (spacer, carburetor, manifold, other)	Intake Manifold
	Catalytic Converter	Type	Three Way
		Number of	1
		Location(s)	Under Floor
		Volume [L (in ³)]	1.7 L 2.0 L
		Substrate type	Monolith
		Noble metal type	
		Noble metal concentration (g/cm ³)	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges (to intake manifold, other)		To Intake Manifold
	Air inlet (breather cap, other)		Air Cleaner
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Carbon Canister
		Carburetor	N.A.
	Vapor storage provision		Carbon Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		Yes

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single with Converter
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass (kg (weight lbs))		Muffler 1 One Reverse Flow with Resonator
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	None
	Main o.d., wall thickness	Front Half: $\phi 42.7$ t1.5 Rear Half: $\phi 43$ t1.5 $\phi 42.7$ t1.5
	Material & Mass (kg (weight lbs))	Stainless Steel Tube 3.3 kg Stainless Steel Tube 2.4 kg
Inter-mediate pipe	o.d. & wall thickness	$\phi 42.7$ t1.6 $\phi 42.7$ t1.4
	Material & Mass (kg (weight lbs))	Al Coat Steel Tube 3.8 kg Al Coat Steel Tube 2.3 kg
Tail pipe	o.d. & wall thickness	$\phi 38.1$ t1.5 $\phi 35$ t1.5
	Material & Mass (kg (weight lbs))	Stainless Steel Tube *1 Stainless Steel Tube 0.4 kg

*1: 0.5 kg (SED), 0.3 kg (COUPE), 0.6 kg (WAG)

MVMA Specifications Form

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

GA16I	
2WD	4WD
SEDAN	SEDAN, COUPE, WAGON
	WAGON

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

Manual 3-speed (manufacturer/country)	N.A.
Manual 4-speed (manufacturer/country)	Std.
Manual 5-speed (manufacturer/country)	Std.
Automatic (manufacturer/country)	Std.
Automatic overdrive (manufacturer/country)	N.A.

Manual Transmission/Transaxle

Number of forward speeds		4	5	5
Gear ratios	1st	3.333	3.333	3.063
	2nd	1.955	1.955	1.826
	3rd	1.286	1.286	1.207
	4th	0.902	0.902	0.902
	5th	-	0.756	0.756
	Reverse	3.417	3.417	3.417
Synchronous meshing (specify gears)		1, 2, 3, 4	1, 2, 3, 4, 5	1, 2, 3, 4, 5
Shift lever location		Floor Mounted		
Trans. case mat'l. & mass kg (lbs)*		Aluminum Alloy 29.7	Aluminum Alloy 32.1	Aluminum Alloy 36
Lubricant	Capacity [L (pt.)]	2.7	2.8	2.8
	Type recommended	NISSAN Elephant MP Gear Oil		

Clutch (Manual Transmission)

Clutch manufacturer		ATSUGI
Clutch type (dry, wet; single, multiple disc)		Drv Single Disc
Linkage (hydraulic, cable, rod, lever, other)		Cable
Max. pedal effort (nom. spring load, new) N (lbs)	Depressed	
	Released	
Assist (spring, power/percent, nominal)		
Type pressure plate springs		Diaphragm
Total spring load (nominal, new) N (lbs)		330 kg 355 kg
Clutch facing	Facing mfg. & material coding	HITACHI, H815Z2
	Facing material & construction	Spiral Wound Asbestos
	Rivets per facing	16
	Outside x inside dia. (nominal)	190 x 132 200 x 130
	Total eff. area (cm ² [in. ²])	147 cm ² 181 cm ²
	Thickness (pressure plate side/fly wheel side)	3.5/3.5
	Rivet depth (pressure plate side/fly wheel side)	1.3~1.8/1.3~1.8
	Engagement cushion method	Flat Wave Springs
Release bearing type & method lub.		Ball Bearing Sealed Type
Torsional damping method, springs, hysteresis		Coil Springs and Friction Washers

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

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

Engine Description/Carb.
Engine Code

GA16I

Automatic Transmission/Transaxle

Trade name	NISSAN Matic (RL3F01A)
Type and special features (describe)	Lock up Torque Converter with Automatically Operated Planetary Gear
Selector	Location Floor Mounted
	Ltr./No. designation P. R. N. D. 2. 1
Gear ratios	1st 2.826
	2nd 1.543
	3rd 1.000
	4th -
	Reverse 2.364
Max. upshift speed - drive range (km/h (mph))	98
Max. kickdown speed - drive range (km/h (mph))	92
Min. overdrive speed (km/h (mph))	N.A.
Torque converter	Number of elements 3
	Max. ratio at stall 2.3 : 1
	Type of cooling (air, liquid) Liquid
	Nominal diameter 236
	Capacity factor "K"™
Lubricant	Capacity (refill L (pt.)) 6.3
	Type Recommended Dexron Automatic Transmission Fluid
Oil cooler (std., opt., NA, internal, external, air, liquid)	Std.
Transmission case material & mass kg (lbs)™	Aluminum Alloy (61.9)

Axle or Front Wheel Drive Unit

Type (front, rear)	
Description	
Limited slip differential (type)	
Drive pinion offset	
Drive pinion (type)	
No. of differential pinions	
Pinion/differential adjustment (shim, other)	
Pinion/differential bearing adjustment (shim, other)	
Driving wheel bearing (type)	
Lubricant	Capacity (L (pt.))
	Type recommended

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

Axle ratio (or overall top gear ratio)	3.650	4.167	3.895	4.471	3.600	3.889
No. of teeth	Pinion 20	18	19	17	20	19
	Ring gear or gear 73	75	74	76	72	70
Ring gear o.d.	194.4	198.9	196.7	201.3	202.4	196.9
Transaxle	Transfer gear ratio N.A.	N.A.	N.A.	1.0	N.A.	N.A.
	Final drive ratio 3.650	4.167	3.895	4.471	3.600	3.889

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

™ Includes shift linkage, lubricant, & clutch housing. (Lower capacity)

4 Speed

2WD M/T

COUPE EXCEPT COUPE

5 Speed

4WD M/T

2WD A/T

4WD A/T

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

Engine Description/Car's
Engine Code

GA16I		
SEDAN	WAGON	COUPE

Axle Shafts – Front Wheel Drive

Manufacturer and number used		2	
Type (straight, solid bar, tubular, etc.)		Left	Solid Bar
		Right	Tubular
Outer diam. x length* x wall thickness	Manual transaxle	Left	25 x 379.2
		Right	40 x 643 x 3.5
	Automatic transaxle	Left	25 x 379.2
		Right	40 x 643 x 3.5
	Optional transaxle	Left	28 x 372.4
		Right	45 x 635.9 x 3.5
Slip yoke	Type		
	Number of teeth		
	Spine o.d.		
Universal joints	Make and mtg. no.	Inner	NISSAN
		Outer	NISSAN
	Number used		2 Inner & 2 Outer
	Type, size, plunge	Inner	TS70C
		Outer	TS79C
	Attach (u-bolt, clamp, etc.)		ZF80
Bearing	Type (plain, anti-friction)	ZF90	
	Lubrication (fitting, prepack)		
Drive taken through (torque tube, arms or springs)			
Torque taken through (torque tube, arms or springs)			

All Wheel/4 Wheel Drive

Description and type (part-time, full-time, 2/4 shift while moving, mechanical, elect., chain/gear, etc.)	
Transfer case	Manufacturer
	Type
	Model
Low-range gear ratio	
System disconnect (describe)	
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)
	Torque split (% front/rear)

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

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (#) _____

Body Type And/Or
Engine Displacement

	2WD	
COUPE	EXCEPT COUPE	4WD

☐ Suspension - General Including Electronic Controls

Car leveling	Standard/optional/not avail.	N.A.
	Manual/automatic control	N.A.
	Type (air/hydraulic)	N.A.
	Primary/assist spring	-
	Rear only/4 wheel leveling	-
	Single/dual rate spring	-
	Single/dual ride heights	-
	Provision for jacking	-
Shock absorber damping controls	Standard/option/not avail.	-
	Manual/automatic control	-
	Number of damping rates	-
	Type of actuation (manual/electric motor/air, etc.)	-
	s e n s o r s	-
	Lateral acceleration Deceleration Acceleration Road surface	- - - -
Shock absorber (front & rear)	Type	Hydraulic
	Make	Atsugi, Kayaba and Tokiko
	Piston diameter	ø25
	Rod diameter	ø18

☐ Suspension - Front

Type and description		Independent Strut Type	
Travel*	Full jounce	67 mm	75 mm
	Full rebound	93.5 mm	85.5 mm
Spring	Type (coil, leaf, other) & material	Coil, Spring Steel	
	Insulators (type & material)	Rubber Seat	
	Size (coil design height & I.d., bar length & dia.)	*1 (Attachment)	LH 356x117, 2675x12.9 RH 348x117, 2555x12.9
	Spring rate (N/mm (lb./in.))	19.6 N/mm	24.5 N/mm
	Rate at wheel (N/mm (lb./in.))	19.2 N/mm	24.0 N/mm
Stabilizer	Type (link, linkless, frameless)	Link	
	Material & bar diameter	Carbon Steel, ø24.2	Carbon Steel, ø21

☐ Suspension - Rear

Type and description		Independent Strut Type	
Travel*	Full jounce	100 mm	102.5 mm
	Full rebound	100 mm	97.5 mm
Spring	Type (coil, leaf, other) & material	Coil, Spring Steel	
	Size (length x width, coil design height & I.d., bar length & dia.)	*2 (Attachment)	377 x 87~117
	Spring rate (N/mm (lb./in.))	COUPE SEDAN	2900 x 11.7
	Rate at wheel (N/mm (lb./in.))	17.6 N/mm	15.7~24.0 N/mm
	Rate at wheel (N/mm (lb./in.))	15.9 N/mm	14.2~21.7 N/mm
	Insulators (type & material)	Rubber Seat	
	# leaf	No. of leaves	N.A.
Stabilizer	Type (link, linkless, frameless)	Link	
	Material & bar diameter	Carbon Steel, ø24.2	Carbon Steel, ø18
Track bar (type)		N.A.	

* Define load condition:

MVMA Specifications Form

METRIC (U.S. Customary)
SUPPLEMENTAL PAGE

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

*1

	COUPE M/T	COUPE A/T SED. WAG. M/T COUPE M/T (w/AC)	SED. WAG. A/T SED. WAG. M/T (w/AC)	SED. WAG. A/T (w/AC)
LH	343 x 117 2445 x 11.8	351 x 117 2505 x 11.9	358 x 117 2630 x 12.1	366 x 117 2695 x 12.2
RH	336 x 117 2385 x 11.7	343 x 117 2445 x 11.8	351 x 117 2505 x 11.9	358 x 117 2630 x 12.1

*2

COUPE	SEDAN	WAGON
323 x 117 2250 x 11.2	331 x 117 2300 x 11.3	349 x 117 2670 x 10.1~11.8

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

Body Type And/Or
Engine Displacement

SEDAN	COUPE	WAGON
	2WD	4WD

Brakes - Service

Description					
Manufacturer and brake type (std., opt., n.a.)		Front (disc or drum)	Disc: Std.		
		Rear (disc or drum)	Drum: Std.		
Valving type (proportion, delay, metering, other)		Front: Std. Rear: Std.			
Power brake (std., opt., n.a.)		Std.			
Booster type (remote, integral, vac., hyd., etc.)		Integral			
Vacuum	Source (inline, pump, etc.)		Inline		
	Reservoir (volume in. ³) and source		112.9		
	Pump-type (elec. gear driven, belt driven)		N.A.		
Traction control	Operational speed range				
	Type engine intervention (electronic, mech.)				
Anti-lock device	Front/rear (std., opt., n.a.)		N.A.		
	Manufacturer				
	Type (electronic, mech.)				
	Number sensors or circuits				
	Number anti-lock hydraulic circuits				
	Integral or add-on system				
	Yaw control (yes, no)				
Hydraulic power source (elec., vac. mtr., pwr. strg.)					
Effective area (cm ² (in. ²)) ^a			*1 132/272	*1 148/272	*1 148/348
Gross lining area (cm ² (in. ²)) ^b (F/R)			*1 132/272	*1 148/272	*1 148/348
Swept area (cm ² (in. ²)) ^c (F/R)			1391	1525	1653
Rotor	Outer working diameter	F/R	*1 238/N.A.	*1 238/N.A.	
	Inner working diameter	F/R	*1 164/N.A.	*1 149.5/N.A.	
	Thickness	F/R	12	18	
	Material & type (vented/solid)	F/R	*2	*1 Cast Iron Vented/N.A.	
Drum	Diameter & width	F/R	*1 N.A./203.2		*1 N.A./228.6
	Type and material	F/R	*1 N.A./Cast Iron		
Wheel cylinder bore			*1 48.1/15.88		*1 48.1/11.46
Master cylinder	Bore/stroke	F/R	25.4 - 20.64/31		
Pedal arc ratio			4.21		
Line pressure at 445 N(100 lb.) pedal load (kPa (psi))			11091		
Lining clearance			*1 No Major Adjustment Required/0.3-0.5 (Pri + Sec)		
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)	Bonded		
		Rivet size	N.A.		
		Manufacturer	HITACHI		
		Lining code ^{****}	HITACHI HP12FE		
		Material	Molded Semi Metallic		
		Size Primary or out-board	94 x 37 x 10	100.8 x 44.3 x 10	
		Size Secondary or in-board	94 x 37 x 10	100.8 x 44.3 x 10	
	Shoe thickness (no lining)		6	6	
	Rear wheel	Bonded or riveted (rivets/seg.)	Bonded		
		Manufacturer	AKEBONO		
		Lining code ^{****}	AKEBONO AKP330 FF		
		Material	Molded Asbestos		
		Size Primary or out-board	195 x 35 x 4.5	219.4 x 40.0 x 4.	
		Size Secondary or in-board	195 x 35 x 4.5	219.4 x 40.0 x 4.	
Shoe thickness (no lining)		1.6	2		

^aExcludes rivet holes, grooves, chamfers, etc.

^bIncludes rivet holes, grooves, chamfers, etc.

*1: Front/Rear

^cTotal swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact circumference.)

*2: Front: Cast Iron Solid

(Disc brake: Square of Outer Working Diameter Square of inner Working Dia. multiplied by PV2 for each brake.)

Rear: N.A.

^{****}Size for drum brakes includes length x width x thickness. ^{****}Manufacturer I.D., catalog or formulation designation and coefficient of friction classification.

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

Body Type And/Or
Engine Displacement

2WD				4WD
WAGON	SEDAN	WAGON	COUPE	
E	STD E	XE GXE	SE	

Tires And Wheels (Standard)

Tires	Size (load range, ply)		P155/80R13 B 1Ply	P175/70R13 B 1Ply	185/60R14 82H B 2Ply	P175/70R13 B 1Ply
	Type (bias, radial, steel, nylon, etc.)		Radial			
	Inflation pressure (cold) for recommended max. vehicle load	Front (kPa (psi))	200 (29)	200 (29)		200 (29)
		Rear (kPa (psi))	200 (29)	180 (26)		200 (29)
	Rev./mile—at 70 km/h (43 mph)		921 rpm	915 rpm	925 rpm	915 rpm
Wheels	Type & material		Disc-Stamped Steel		Aluminum Casting	Disc-Stamped Steel
	Rim (size & flange type)		13 x 5 - J		14x5-1/2-JJ	13x5-J
	Wheel offset		40		45	40
	Attachment	Type (bolt or stud)	Stud			
		Circle diameter	100.0			
Spare	Tire and wheel		T115/70D14 14 x 4T			T135/70D15 15 x 4T
	Storage position & location (describe)					

Tires And Wheels (Optional)

Tire size (load range, ply)		N.A.
Type (bias, radial, steel, nylon, etc.)		N.A.
Wheel (type & material)		Aluminum Casting
Rim (size, flange type and offset)		13 x 5 - J
Tire size (load range, ply)		
Type (bias, radial, steel, nylon, etc.)		
Wheel (type & material)		
Rim (size, flange type and offset)		
Tire size (load range, ply)		
Type (bias, radial, steel, nylon, etc.)		
Wheel (type & material)		
Rim (size, flange type and offset)		
Tire size (load range, ply)		
Type (bias, radial, steel, nylon, etc.)		
Wheel (type & material)		
Rim (size, flange type and offset)		
Spare tire and wheel size		
(If configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)		

Brakes - Parking

Type of control		Center Lever Hand Operated
Location of control		Between Front Seats
Operates on		Rear Wheels
If separate from service brakes	Type (internal or external)	N.A.
	Drum diameter	N.A.
	Lining size (length x width x thickness)	N.A.

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

Body Type And/Or
Engine Displacement

2WD		4WD
EXCEPT SE	SE	

Steering

Manual (std., opt., n.a.)		Std.		N.A.	
Power (std., opt., n.a.)		Opt.		Std.	
Adjustable steering wheel/column (tilt, telescope, other)	Type	Tilt			
	Manufacturer	F.K.K.			
	(Std., opt., n.a.)	Std. GREAD STD: Opt.			
Wheel diameter** (W9) SAE J1100	Manual	ø380			
	Power	ø380			
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	5.1	5.3	5.4
		Curb to curb (l. & r.)	4.6	4.8	4.9
	Inside rear	Wall to wall (l. & r.)			
		Curb to curb (l. & r.)			
Scrub Radius*					
Manual	Gear	Type	Rack & Pinion		
		Manufacturer	NISSAN		
		Ratios	∞		
	No. wheel turns (stop to stop)	23.1		23.1	N.A.
		4.28		4.08	N.A.
Power	Type (coaxial, elec., hyd., etc.)	Integral Gear & Power Piston with Vane Type Pump			
	Manufacturer	NISSAN			
	Gear	Type	Rack & Pinion		
		Ratios	∞		
		Overall	16.5	16.5	16.0
	Pump (drive)	Belt from Crank-Shaft Pulley			
No. wheel turns (stop to stop)	3.07	2.92	2.73		
Linkage	Type	Parallelogram			
	Location (front or rear of wheels, other)	Rear			
	Tie rods (one or two)	Two			
Steering axis	Inclination at camber (deg.)				
	Bearings (type)	Upper			
		Lower			
Steering spindle & joint type	Knuckle with Upper Strut and Lower Spherical Joint				
	Diameter	Inner bearing	ø38		
		Outer bearing	ø38		
	Thread (size)	M22 x 1.5			
Bearing (type)	Angular Ball				

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

**See Page 22

MVMA Specifications Form

Vehicle Line NISSAN SENTRA
 Model Year '89 Issued '88-9 Revised (e) _____

METRIC (U.S. Customary)

Body Type And/Or
 Engine Displacement

2WD		4WD
EXCEPT COUPE	COUPE	

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	1°30' ± 45'	1°40' ± 45'	0°55' ± 45'
		Camber (deg.)	-0°10' ± 45'	-0°20' ± 45'	-0°05' ± 45'
		Toe-in (outside track-mm (in.))	0.5 ± 1 (mm)	0.3 ± 1 (mm)	0.5 ± 1 (mm)
	Service reset*	Caster	1°30' ± 45'	1°40' ± 45'	0°55' ± 45'
		Camber	-0°10' ± 45'	-0°20' ± 45'	-0°05' ± 45'
		Toe-in	0.5 ± 1 (mm)	0.3 ± 1 (mm)	0.5 ± 1 (mm)
	Periodic M.V. inspection	Caster	1°30' ± 45'	1°40' ± 45'	0°55' ± 45'
		Camber	-0°10' ± 45'	-0°20' ± 45'	-0°05' ± 45'
		Toe-in	0.5 ± 1 (mm)	0.3 ± 1 (mm)	0.5 ± 1 (mm)
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	-1°05' ± 45'	-1°10' ± 45'	-0°55' ± 45'
		Toe-in (outside track-mm (in.))	-2 ± 2 (mm)	-1 ± 2 (mm)	-2 ± 2 (mm)
	Service reset*	Camber	-1°05' ± 45'	1°10' ± 45'	0°55' ± 45'
		Toe-in	-2 ± 2 (mm)	-1 ± 2 (mm)	-2 ± 2 (mm)
	Periodic M.V. inspection	Camber	-1°05' ± 45'	-1°10' ± 45'	-0°55' ± 45'
		Toe-in	-2 ± 2 (mm)	-1 ± 2 (mm)	-2 ± 2 (mm)

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

Electrical - Instruments and Equipment

Speedometer	Type (analog, digital, std., opt.)	Dial with Pointer	
	Trip odometer (std., opt., n.a.)	Std.	
EGR maintenance indicator		None	
Charge Indicator	Type	Warning Light	
	Warning device (light, audible)	Light	
Temperature Indicator	Type	Electric Gauge	
	Warning device (light, audible)	None	
Oil pressure Indicator	Type	Warning Light	
	Warning device (light, audible)	Light	
Fuel Indicator	Type	Electric Gauge, Warning Light (Opt.)	
	Warning device (light, audible)	Light (Opt.)	
Windshield wiper	Type (standard)	Electric 2 Speed Intermittent	
	Type (optional)	N.A.	
	Blade length	475mm (LH)	450mm (RM)
	Swept area (cm ² (in. ²))	5950cm ²	
Windshield washer	Type (standard)	Electric	
	Type (optional)	N.A.	
	Fluid level indicator (light, audible)	Warning Light	
Rear window wiper, wiper/washer (std., opt., n.a.)		Std. (Coupe, Wagon XE) Opt. (Wagon E)	
Horn	Type	Vibrator	
	Number used	1	
Other			

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

Engine Description/Carb.
Engine Code

All Models

Electrical - Supply System

Battery	Manufacturer	SHIN-KOBE, YUASA, MATSUSHITA, NIHON-DENCHI, FURUKAWA
	Model, std., (opt.)	55D23L
	Voltage	12V
	Amps at 0°F cold crank	356
	Minutes-reserve capacity	99
	Amp/hrs. - 20 hr. rate	60
	Location	ENG Room L/H Front
Alternator	Manufacturer	HITACHI MITSUBISHI
	Rating (idle/max. rpm)	65A
	Ratio (std. crank/rev.)	2.42
	Output at idle (rpm, park)	25A
	Optional (type & rating)	N.A.
Regulator	Type	IC REGURATOR

Electrical - Starting System

Start, motor	Manufacturer	HITACHI/MITSUBISHI
	Current drain at 0°F	N.A.
	Power rating [kw (hp)]	0.8 KW (CAL 2WD M/T)/1.2 KW (OTHERS)
Motor drive	Engagement type	Solenoid
	Pinion engages from (front, rear)	Rear

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	Std.
	Other (specify)	N.A.
Coil	Manufacturer	HANSHIN
	Model	SMC-103
	Current	Engine stopped - A 0A
		Engine idling - A 0.4A
Spark plug	Manufacturer	NGK
	Model	BCPR5ES-11
	Thread (mm)	14 mm
	Tightening torque (N-m (lb. ft))	2.0 - 3.0 kg·m
	Gap	1.0 - 1.1 mm
Distributor	Number per cylinder	1
	Manufacturer	HITACHI/MITSUBISHI
	Model	D4P86 - 05/T4T74271

Electrical - Suppression

Locations & type	Resistance Type Spark Plug
------------------	----------------------------

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Models NISSAN SENTRA
 Model Year '89 Issued '88-9 Revised (e) _____

Body Type

SEDAN			
4 DOOR 1 2 DOOR		COUPE	WAGON

Body

Structure	Monocoque Body
☒ Bumper system front - rear	
Anti-corrosion treatment	Surface Treatment Steel Seat Anti corrosion Sealand Anti Corrosion Wax

☒ Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)			
Hood	Material & mass	Steel 13.2 kg	
	Hinge location (front, rear)	Rear	
	Type (counterbalance, prop)	Prop	
	Release control (internal, external)	Internal	
Trunk lid	Material & mass		
	Type (counterbalance, other)	Torsion	
	Internal release control (elec., mech., n.a.)	Mech	
Hatch-back lid	Material & mass		
	Type (counterbalance, other)	Gas Spring	
	Internal release control (elec., mech., n.a.)	Mech	
Tailgate	Material & mass		
	Type (drop, lift, door)	Life	
	Internal release control (elec., mech., n.a.)	Mech	
Vent window control (crank, friction, pivot, power)	Front		
	Rear		
Window regulator type (cable, tape, flex, drive, etc.)	Front	Cable	
	Rear	Cable	
Seat cushion type (e.g., 60/40, bucket, bench, wvs, foam etc.)	Front	Spring + Urethane Foam	
	Rear	Urethane Foam	
	3rd seat	N.A.	
Seat back type (e.g., 60/40, bucket, bench, wvs, foam etc.)	Front	Spring + Urethane Foam	
	Rear	Urethane Foam	
	3rd seat	N.A.	

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
 Model Year '89 Issued '88-9 Revised (e) _____

Body Type

All Models

Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.) Standard/optional	First seat	Std. 3 Point with (ELR), Retractor (Only SED & WAG)	None	Std. 3 Point with (ELR), Retractor (Only SED & WAG)
		Second seat	Std. 2 Point with (ALR), Retractor Opt. 3 Point with (ELR), Retractor	Std. 2 Point (Only SED & WAG)	Std. 2 Point with (ALR), Retractor Opt. 3 Point with (ELR), Retractor
		Third seat	None	None	None
Passive	Type & description (air bag, motorized - 2-point belt, fixed belt, knee bolster, manual - lap belt) Standard/optional	First seat	Std. Motorized 2 Point Belt & Lap Belt, Knee Bolster (Only Coupe)	None	Std. Motorized 2 Point Belt & Lap Belt, Knee Bolster (Only Coupe)
		Second seat	None	None	None
		Third seat	None	None	None

Glass	SAE Ref. No.	SEDAN		WAGON	COUPE
		4 DOOR	2 DOOR		
Windshield glass exposed surface area (cm ² (in. ²))	S1				
Side glass exposed surface area (cm ² (in. ²)) - total 2-sides	S2	9893	9659	11893	6559
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)		Curved Tempered Plate			
Backlight glass (type)					

Lamps and Headlamp Locations

Headlamps	Description - sealed beam, halogen, replaceable bulb, etc.	Replaceable Bulb
	Shape	Aero Dynamic Head Lamp
	Lo-beam type (2A1, 2B1, 2C1, etc.)	9004
	Quantity	2
	Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	9004
	Quantity	2

Frame

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

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
 Model Year '89 Issued '88-9 Revised (e) _____

Body Type

All Models

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

☒	Air conditioning (manual, auto, temp control)	
	Clock (digital, analog)	Std. (Digital) in Radio
	Compass/thermometer	None
	Console (floor, overhead)	
	Defroster, elec. backlight	
Electronic	Diagnostic monitor (integrated, individual)	
	Instrument cluster (list instruments)	
	Keyless entry	None
	Tripmeter (avg. spd., fuel)	None
	Voice alert (list items)	None
	Other	
	Fuel door lock (remote, key, electric)	
Lamps	Auto head on/off delay, dimming	
	Cornering	
	Courtesy (map, reading)	
	Door lock, ignition	
	Engine compartment	
	Fog	
	Glove compartment	
	Trunk	
	Illuminated entry system (list lamps, activation)	
	Other	
Mirrors	Day/night (auto, man.)	
	L.H. (remote, power, heated)	
	R. H. (convex, remote, power, heated)	
	Visor vanity (RH / LH, illuminated)	
☒	Navigation system (describe)	None
	Parking brake-auto release (warning light)	

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
 Model Year '89 Issued '88-9 Revised (e) _____

Body Type

All Models

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

Power equipment	Deck lid (release, pull down)		
	Door locks (manual, automatic, describe system)		Opt. (Auto Door Lock) 4 Door SEDAN
	Seats	2 - 4 - 6 way, etc.	None
		Reclining (R.H., L.H.)	None
		Memory (R.H., L.H., preset, recline)	None
		Lumber, hip, thigh, support	None
		Heated (R.H., L.H., other)	None
	Side windows		Opt. (Power Window) 4 Door SEDAN
Vent windows			
Rear windows			
Radio systems	Antenna (location, whip, w/shield, power)		Opt. SED. WAGON: Front Fender Whip & w/Shield, COUPE: Rear Whip & Rear Glass
	Standard	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	
	Optional		
	Speaker (number, location)		Opt: 4 Speakers (Front: Door, Rear: Rear Parcel Shelf)
Roof open air fixed (flip-up, sliding, "T")		SED. WAGON. Sliding (Opt.) COUPE-Flip-up (Opt.)	
Speed control device		None	
Speed warning device (light, buzzer, etc.)		None	
Tachometer (rpm)		Std.	
Telephone system (describe)		None	
Theft deterrent system		Steering Lock	

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

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

Vehicle Models **NISSAN SENTRA**
Model Year '89 Issued '88-9 Revised (*)

Body Type	SAE Ref. No.	SEDAN		COUPE		WAGON	
		4 Door	2 Door	SE	XE	2WD	4WD
Width							
Tread (front)	W101	1430		1425	1435	1430	
Tread (rear)	W102	1430		1425	1435	1430	1415
Vehicle width	W103	1640		1665		1640	
Body width at Sg RP (front)	W117	1635					
Vehicle width (front doors open)	W120	3280	3760			3280	
Vehicle width (rear doors open)	W121	3330	N.A.			3330	
Front fender overall width	W106	1640		1665		1640	
Rear fender overall width	W107	1640		1665		1640	
Tumble-home (deg.)	W122	21°		24°		21°	
Vehicle width including mirrors							

Length

Wheelbase	L101	2430					
Vehicle length	L103	4285		4230		4375	
Overhang (front)	L104	855		930		855	
Overhang (rear)	L105	1000		870		1090	
Upper structure length	L123	2430		2650		2935	
Rear wheel C/L "X" coordinate	L127	2430					
Cowl point "X" coordinate	L125						
Front end length at centerline	L128	1178		1267		1178	
Rear end length at centerline	L129	513		187		93	

Height*

Passenger distribution (front/rear)	P01.2.3	2/3		2/2		2/3	
Trunk/cargo load		34 kg					
Vehicle height	H101	1380		1325		1380	1395
Cowl point to ground	H114	898		891		898	903
Deck point to ground	H138	862		851		812	830
Rocker panel-front to ground	H112	187		181		187	181
Bottom of door closed-front to ground	H133	257	253	254		257	297
Rocker panel-rear to ground	H111	156		158		156	180
Bottom of door closed-rear to ground	H135	246					270
Windshield slope angle	H122	60°					
Becklight slope angle	H121	45°		20°		32°	

Ground Clearance*

Front bumper to ground	H102	252		242		252	246
Rear bumper to ground	H104	210		222		210	212
Bumper to ground (front at curb mass (wt.))	H103	260		252		260	
Bumper to ground (rear at curb mass (wt.))	H105	304		297		304	329
Angle of approach (degrees)	H106	20.6°		19°		20.6°	20.5°
Angle of departure (degrees)	H107	15° *1		17° *1		13° *1	12.5°
Ramp breakover angle (degrees)	H147	17.9°		16.8°		17.9°	18.4°
Axle differential to ground (front / rear)	H153						
Min. running ground clearance	H156	130		118		130	128
Location of min. run. grd. clear.		Exhaust Pipe					Exhaust Mounting

* All vehicle height and ground clearances are measured at the Manufacturer's Design Load Weight. *1: Passenger
Manufacturers Design Load Weight is defined with indicated passenger distribution and trunk/cargo load, unless otherwise specified.
All linear dimensions are in millimeters (inches) unless otherwise noted.

Front Seat 2
Rear Seat 2

MVMA Specifications Form

Vehicle Models NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Body Type

SEDAN		COUPE	WAGON	
4 Door	2 Door		2WD	4WD

SAE
Ref.
No.

Front Compartment

Sg RP front, "X" coordinate	L31	1348		
Effective head room	H61	970	940	970
Max. eff. leg room (accelerator)	L34	1062	1057	1062
SgRP to heel point	H30	269	254	269
SgRP to heel point	L53	853		
Back angle	L40	25°		
Hip angle	L42	97°	96°	97°
Knee angle	L44	123°	122.5°	123°
Foot angle	L46	84°	85°	84°
Design H-point front travel	L17	226.8		
Normal driving & riding seat track trvl.	L23	226.8		
Shoulder room	W3	1323	1328	1323
Hip room	W5	1372	1262	1372
Upper body opening to ground	H50			
Steering wheel maximum diameter*	W9	ø380 mm		
Steering wheel angle	H18	24.4°		
Accel. heel pt. to steer. whl. cnt	L11	451		
Accel. heel pt. to steer. whl. cnt	H17	647		
Steering wheel to C/L of thigh	H13	68	73	68
Steering wheel torso clearance	L7	376	382	376
Headlining to roof panel (front)	H37			
Undepressed floor covering thickness	H67			

Rear Compartment

Sg RP Point couple distance	L50	692	592	692	682
Effective head room	H63	935	742	998	978
Min. effective leg room	L51	797			795
Sg RP (second to heel)	H31	298	263	298	318
Knee clearance	L48	0			
Compartment room	L3	583	628	583	
Shoulder room	W4	1323	1303	1278	1323
Hip room	W6	1369	1333	1001	1372
Upper body opening to ground	H51				
Back angle	L41	27°	22°	27°	
Hip angle	L43	84°	72.5°	84°	86°
Knee angle	L45	72°	47°	72°	
Foot angle	L47	112°	93.5°	112°	110°
Headlining to roof panel (second)	H38				
Depressed floor covering thickness	H73	22			

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1			
Liftover height	H195	795	865	585

Interior Volumes (EPA Classification)

Vehicle class	Compact Cars	Subcompact Cars	Small Station Wagons
Interior volume index (cu. ft.)	99.6	87.9	115.0
Trunk/cargo index (cu. ft.)	12.3	16.2	24.4

* See Page 14.

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e)

Body Type

SEDAN		WAGON		COUPE
2 Door	4 Door	2WD	4WD	

SAE
Ref.
No.

Station Wagon - Third Seat

Seat facing direction	SD1	N.A.
Sq RP couple distance	L85	N.A.
Shoulder room	W85	N.A.
Hip room	W86	N.A.
Effective leg room	L86	N.A.
Effective head room	H86	N.A.
Sq RP to heel point	H87	N.A.
Knee clearance	L87	N.A.
Back angle	L88	N.A.
Hip angle	L89	N.A.
Knee angle	L90	N.A.
Foot angle	L91	N.A.

Station Wagon - Cargo Space

Cargo length (open front)	L200	N.A.		
Cargo length (open second)	L201	N.A.		
Cargo length (closed front)	L202	N.A.		
Cargo length (closed second)	L203	N.A.	977	983
Cargo length at belt (front)	L204	N.A.	1487.8	
Cargo length at belt (second)	L205	N.A.	736.8	
Cargo width (wheelhouse)	W201	N.A.	940.0	
Rear opening width at floor	W203	N.A.	-	
Opening width at belt	W204	N.A.	1298.7	
Min. rear opening width above belt	W205	N.A.	-	
Cargo height	H201	N.A.	692.7	
Rear opening height	H202	N.A.	692.7	
Tailgate to ground height	H250	N.A.	-	
Front seat back to load floor height	H197	N.A.	312	
Cargo volume index (m ³ (ft. ³))	V2	N.A.	1.38	
Hidden cargo volume index (m ³ (ft. ³))	V4	N.A.	-	
Cargo volume, index-rear of 2-seat	V10	N.A.	-	

Hatchback - Cargo Space

Cargo length at front seatback height	L208	N.A.		12510
Cargo length at floor (front)	L209	N.A.		13400
Cargo length at second seatback height	L210	N.A.		-
Cargo length at floor (second)	L211	N.A.		-
Front seatback to load floor height	H197	N.A.		347
Second seatback to load floor height	H198	N.A.		365
Cargo volume index (m ³ (ft. ³))	V3	N.A.		4.50
Hidden cargo volume index (m ³ (ft. ³))	V4	N.A.		
Cargo volume index-rear of 2-seat	V11	N.A.		

Aerodynamics*

Wheel lip to ground, front	628	628	645	518
Wheel lip to ground, rear	607	607	669	604
Frontal area (m ² (ft. ²))	1.82	1.82	1.83	1.78
Drag coefficient (Cd)	0.36	0.37	0.36	0.32

* EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications Form
METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA
 Model Year '89 Issued '88-9 Revised (e) _____

Body Type

Vehicle Fiducial Marks

Fiducial Mark Number*	Define Coordinate Location
Front	The Center of the Drain Hole (ø14) on the 1st Cross Member.
Rear	The Center of the Hole (ø16) on the Left Hand Rear Side Member.
Fiducial Mark Number	
Front	W21°
	L54°
	H81°
	H161°
	H163°
Rear	W22°
	L55°
	H82°
	H162°
	H164°

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

MVMA Specifications Form

Vehicle Line NISSAN SENTRA
Model Year '89 Issued '88-9 Revised (e) _____

METRIC (U.S. Customary)

		Vehicle Mass (weight)							
Code	Model	CURB MASS, kg. (lb.)*			% PASS. MASS DISTRIBUTION				ETWC**
		Front	Rear	Total	Pass in Front		Pass in Rear		
					Front	Rear	Front	Rear	
GLB12RSIU	(STD)	600	387	987	44.4	55.6	16.0	84.0	951
GLB12RFIU	(E)	618	389	1007	"	"	"	"	971
GLB12RAIU	(E)	638	389	1027	"	"	"	"	991
GLB12RHFIU	(XE)	623	392	1015	"	"	"	"	979
GLB12RHAIU	(XE)	643	392	1035	"	"	"	"	999
GLB12FIU	(E)	621	399	1020	"	"	"	"	984
GLB12AIU	(E)	641	399	1040	"	"	"	"	1004
GLB12HFIU	(XE)	626	401	1027	"	"	"	"	991
GLB12HAIU	(XE)	646	401	1047	"	"	"	"	1011
GLB12JFIU	(GXE)	631	405	1036	"	"	"	"	1000
GLB12JAIU	(GXE)	645	404	1049	"	"	"	"	1013
KGLB12HFIU	(XE)	635	406	1041	"	"	"	"	1005
KGLB12HAIU	(XE)	655	406	1061	"	"	"	"	1025
KGLB12JFIU	(SE)	650	420	1070	"	"	"	"	1034
KGLB12JAIU	(SE)	670	420	1090	"	"	"	"	1054
WGLB12FIU	(E)	618	446	1064	"	"	"	"	1028
WGLB12AIU	(E)	638	446	1084	"	"	"	"	1048
WGLB12HFIU	(XE)	623	445	1068	"	"	"	"	1032
WGLB12HAIU	(XE)	643	445	1088	"	"	"	"	1052
WGLNB12HFIU	(XE)	681	520	1201	"	"	16.5	83.5	1167
WGLNB12HAIU	(XE)	701	520	1221	"	"	"	"	1187
GLB12RSIV	(STD)	600	387	987	"	"	16.0	84.0	951
GLB12RFIV	(E)	618	389	1007	"	"	"	"	971
GLB12RAIV	(E)	638	389	1027	"	"	"	"	991
GLB12RHFIV	(XE)	623	392	1015	"	"	"	"	979
GLB12RHAIV	(XE)	643	392	1035	"	"	"	"	999
GLB12FIV	(E)	621	399	1020	"	"	"	"	984
GLB12AIV	(E)	641	399	1040	"	"	"	"	1004
GLB12HFIV	(XE)	626	401	1027	"	"	"	"	991
GLB12HAIV	(XE)	646	401	1047	"	"	"	"	1011
GLB12JFIV	(GXE)	631	405	1036	"	"	"	"	1000
GLB12JAIV	(GXE)	645	404	1049	"	"	"	"	1013
KGLB12HFIV	(XE)	635	406	1041	"	"	"	"	1005
KGLB12HAIV	(XE)	655	406	1061	"	"	"	"	1025
KGLB12JFIV	(SE)	650	420	1070	"	"	"	"	1034
KGLB12JAIV	(SE)	670	420	1090	"	"	"	"	1054
WGLB12FIV	(E)	618	446	1064	"	"	"	"	1028
WGLB12AIV	(E)	638	446	1084	"	"	"	"	1048
WGLB12HFIV	(XE)	623	445	1068	"	"	"	"	1032
WGLB12HAIV	(XE)	643	445	1088	"	"	"	"	1052
WGLNB12HFIV	(XE)	681	520	1201	"	"	16.5	83.5	1167
WGLNB12HAIV	(XE)	701	520	1221	"	"	"	"	1187

SHIPPING MASS (weight) = Curb Weight Less Kg. (lbs.) _____

* Reference - SAE J1100 Motor vehicle dimensions, curb weight definition.

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

NA - Not Applicable - applies to model/series combinations not requiring testing.

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line NISSAN SENTRA

Model Year '89 Issued '88-9 Revised (•)

[illegible]

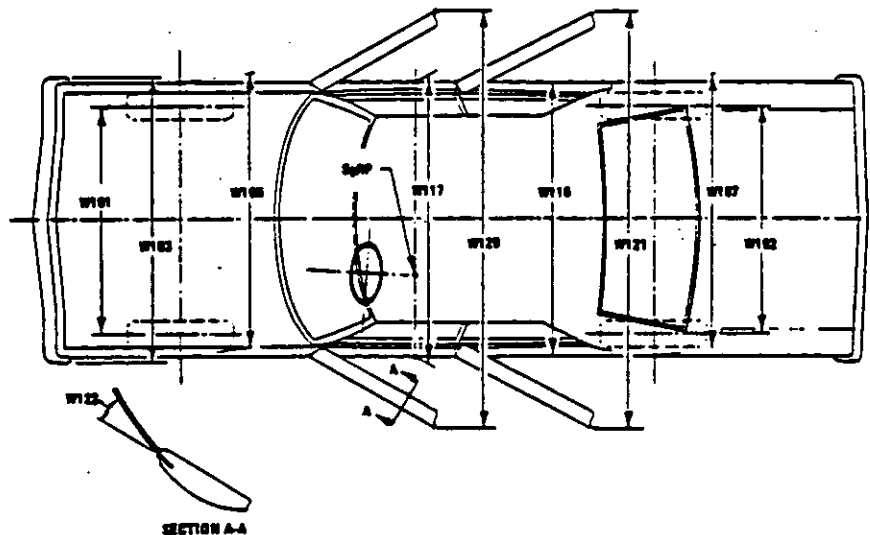
* Also see Engine - General Section for dressed engine mass (weight).

MVMA Specifications Form

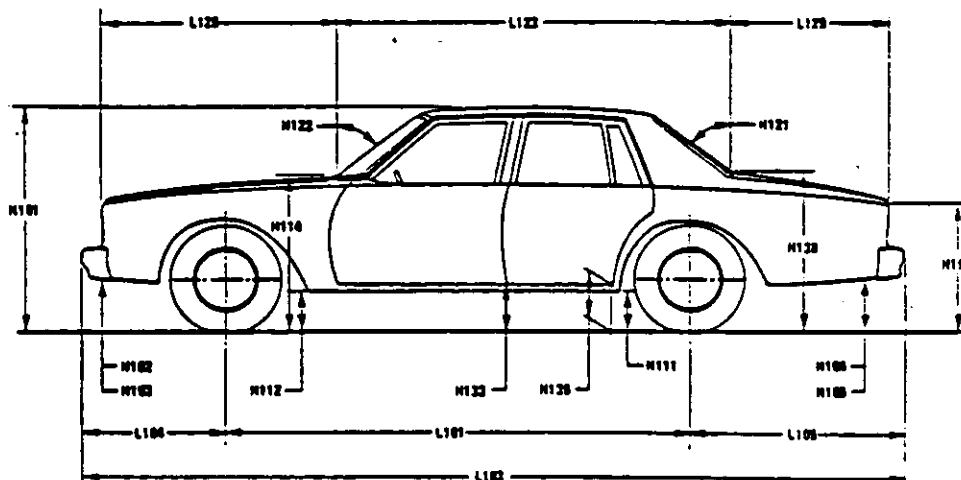
METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions - Key Sheet

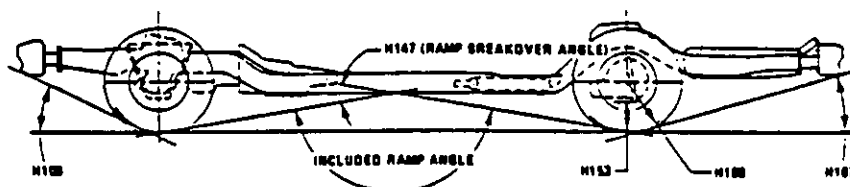
Exterior Width



Exterior Length & Height



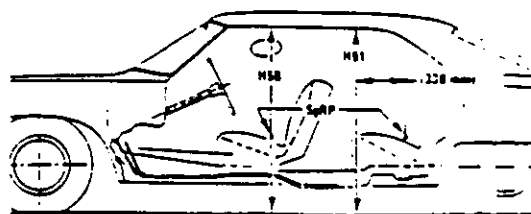
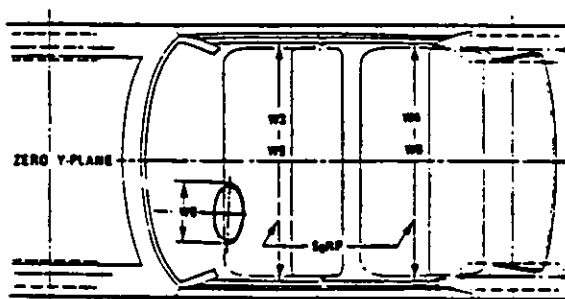
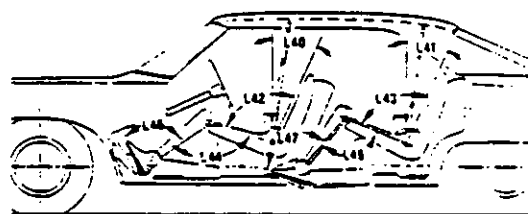
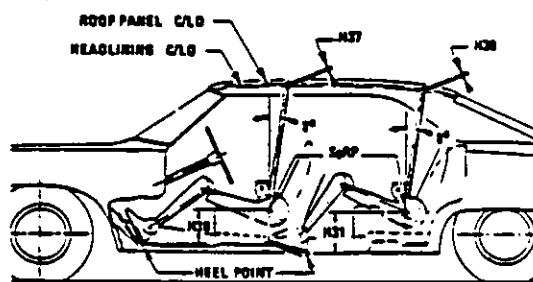
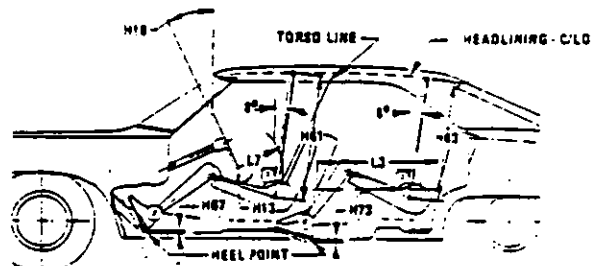
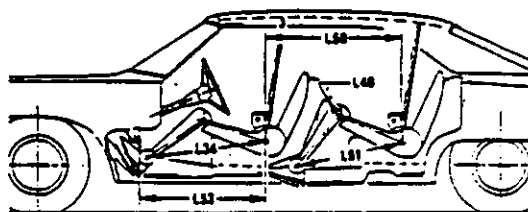
Exterior Ground Clearance



MVMA Specifications Form

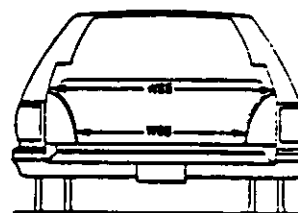
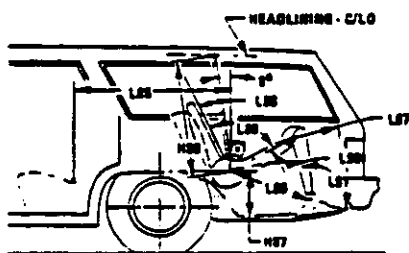
METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions — Key Sheet

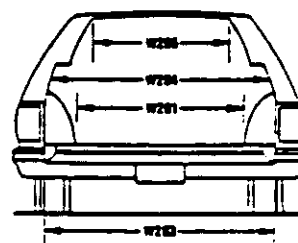
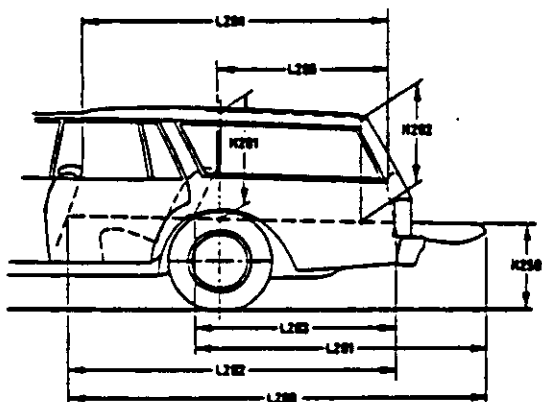


METRIC (U.S. Customary)

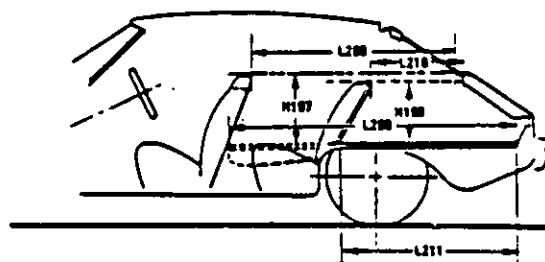
Third Seat



Cargo Space



Station Wagon



Hatchback

MVMA Specifications Form

METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

Seating Reference Point

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

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

Width Dimensions

- W101 TREAD-FRONT. The dimension measured between the tire centerlines at the ground.
- W102 TREAD-REAR. The dimension measured between the tire centerlines at the ground. In case of dual wheels, the dimension will be measured to the centerline of tire and wheel assemblies.
- W103 VEHICLE WIDTH. The maximum dimension measured between the widest point on the vehicle, excluding exterior mirrors, flexible mud flaps, marker lamps, but including bumpers, moldings, sheet metal protrusions or dual wheels, if standard equipment.
- W106 FRONT FENDER WIDTH. The dimension measured between the widest points at the front wheel centerline, excluding moldings.
- W107 REAR FENDER WIDTH. The dimension measured between the widest points at the rear wheel centerline, excluding moldings.
- W117 BODY WIDTH AT SgRP-FRONT. The dimension measured laterally between the widest points on the body at the SgRP-front, excluding door handles, applied moldings, or appliques.
- W120 VEHICLE WIDTH-FRONT DOORS OPEN. The dimension measured between the widest point on the front doors in maximum hold-open position.
- W121 VEHICLE WIDTH-REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door on only one side, this dimension is to the zero "Y" plane.
- W122 TUMBLE-HOME, STRAIGHT SIDE GLASS. The angle measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane.
CURVED SIDE GLASS. The angle measured from a vertical to a chord extending from the upper DLO to the lower DLO at the outside surface of the front door glass at the front SgRP "X" plane.

Length Dimensions

- L101 WHEELBASE (WB). The dimension measured longitudinally between front and rear wheel centerlines. In case of dual rear axles, the dimension shall be to the midpoint of the centerlines of the rear wheels.
- L103 VEHICLE LENGTH. The maximum dimension measured longitudinally between the foremost point and the rearmost point on the vehicle, including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.
- L104 OVERHANG-FRONT. The dimension measured longitudinally from the centerline of the front wheels to the foremost point on the vehicle including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.
- L105 OVERHANG-REAR. The dimension measured longitudinally from the centerline of the rear wheels; or in the case

of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

- L123 UPPER STRUCTURE LENGTH. The dimension measured longitudinally from the cowl point to the deck point.
- L125 COWL POINT "X" COORDINATE.
- L126 FRONT END LENGTH. The dimension measured longitudinally from the cowl point to the foremost point on the vehicle at the zero "Y" plane excluding ornamentation or bumpers. In cases where bumpers and/or grills are integrated with the profile, measurement is made at the foremost point of front end contour.
- L127 REAR WHEEL CENTERLINE "X" COORDINATE or in the case of dual rear axles, the coordinate shall be the midpoint of the distance between the rear axle centerlines.
- L129 REAR END LENGTH. The dimension measured longitudinally from the deck point to the rearmost visible point of the body sheet metal at the zero "Y" plane, excluding ornamentation or bumpers.

Height Dimensions

- H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.
- H111 ROCKER PANEL-REAR TO GROUND. The dimension measured vertically from the bottom of the rocker or side quarter panel at the front of the rear wheel opening, excluding flanges, to ground.
- H112 ROCKER PANEL-FRONT TO GROUND. The dimension measured vertically from the foremost point on the bottom of the rocker panels, excluding flanges, to ground.
- H114 COWL POINT TO GROUND. Measured at zero "Y" plane.
- H121 BACKLIGHT SLOPE ANGLE. The angle between the vertical reference line and the surface of backlight at vehicle zero "Y" plane. For curve backlight, the angle is to chord of backlight arc from lower DLO to upper DLO.
- H122 WINDSHIELD SLOPE ANGLE. The angle between the vertical reference line and a chord of the windshield arc running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the angle to be measured will be formed by a chord 457 mm (18.0 in) long drawn from the lower DLO to the intersecting point on the windshield.
- H133 BOTTOM OF DOOR CLOSED-FRONT TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- H135 BOTTOM OF DOOR CLOSED-REAR TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- H138 DECK POINT TO GROUND. Measured at zero "Y" plane.
- H109 STATIC LOAD-TIRE RADIUS-REAR. Specified by the manufacturer in accordance with composite TIRE SECTION STANDARD.

Ground Clearance Dimensions

- H102 FRONT BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the front bumper to ground, including bumper guards, if standard equipment.
- H103 FRONT BUMPER TO GROUND-CURB MASS (WT.). Measured in the same manner as H102.

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

- H104 REAR BUMPER TO GROUND.** The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment.
- H105 REAR BUMPER TO GROUND - CURB MASS (WT.).** Measured in the same manner as H104.
- H106 ANGLE OF APPROACH.** The angle measured between a line tangent to the front tire static loaded radius arc and the initial point of structural interference forward of the front tire to ground. The limiting structural component shall be designated.
- H107 ANGLE OF DEPARTURE.** The angle measured between a line tangent to the rear tire static loaded radius arc and the initial point of structural interference rearward of the rear tire to ground. The limiting component shall be designated.
- H147 RAMP BREAKOVER ANGLE.** The angle measured between two lines tangent to the front and rear tire static loaded radius and intersecting at a point on the underside of the vehicle which defines the largest ramp over which the vehicle can roll.
- H153 REAR AXLE DIFFERENTIAL TO GROUND.** The minimum dimension measured from the rear axle differential to ground.
- H156 MINIMUM RUNNING GROUND CLEARANCE.** The minimum dimension measured from the sprung vehicle to ground. Specify location.

Glass Areas

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

Fiducial Mark Dimensions

- Fiducial Mark - Number 1**
- L54** "X" coordinate.
- W21** "Y" coordinate.
- H81** "Z" coordinate.
- H161** Height "Z" coordinate to ground at curb weight.
- H163** Height "Z" coordinate to ground.
- Fiducial Mark - Number 2**
- L55** "X" coordinate.
- W22** "Y" coordinate.
- W82** "Z" coordinate.
- H162** Height "Z" coordinate to ground at curb weight.
- H164** Height "Z" coordinate to ground.

Front Compartment Dimensions

- L7** **STEERING WHEEL TORSO CLEARANCE.** The minimum dimension measured in the side view from the rearmost edge of the steering wheel, with front wheels in the straight ahead position, to the torso line.
- L11** **ACCELERATOR HEEL POINT TO STEERING WHEEL CENTER.** The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering wheel rim.
- L17** **DESIGN H-POINT-FRONT TRAVEL.** The dimension measured horizontally between the design H-point-front in the foremost and rearmost seat track positions. (See SAE J1100)
- L23** **NORMAL DRIVING AND RIDING SEAT TRACK TRAVEL.** The dimension measured horizontally between a point on the design H-point travel line from the SgRP to the displaced point on the design H-point travel line with the seat moved to the foremost seat position, but not to include seat track travel used for purposes other than normal driving and riding positions. (See SAE J1100)

- L31** **SgRP-FRONT, "X" COORDINATED.**
- L34** **MAXIMUM EFFECTIVE LEG ROOM-ACCELERATOR.** The dimension measured along a line from the ankle pivot center to the SgRP-front plus 254 mm (10.0 in) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.
- L40** **BACK ANGLE-FRONT.** The angle measured between a vertical line through the SgRP-front and the torso line, if the seatback is adjustable, use the normal driving and riding position specified by the manufacturer.
- L42** **HIP ANGLE-FRONT.** The angle measured between torso line and thigh centerline.
- L44** **KNEE ANGLE-FRONT.** The angle measured between thigh centerline and lower leg centerline measured on the right leg.
- L46** **FOOT ANGLE-FRONT.** The angle measured between the lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref SAE J826.
- L53** **SgRP-FRONT TO HEEL.** The dimension measured horizontally from the SgRP-front to the accelerator heel point.
- W3** **SHOULDER ROOM-FRONT.** The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front at height between the belt line and 254 mm (10.0 in.) above the SgRP-front, excluding the door assist strap and attaching parts.
- W5** **HIP ROOM-FRONT.** The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front within 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP-front and 76 mm (3.0 in.) fore and aft of the SgRP-front.
- W9** **STEERING WHEEL MAXIMUM OUTSIDE DIAMETER.** Define if other than round.
- H13** **STEERING WHEEL TO CENTERLINE OF THIGH.** The minimum dimension measured from the bottom of steering wheel, with front wheels in the straight position, to the thigh centerline.
- H17** **ACCELERATOR HEEL POINT TO THE STEERING WHEEL CENTER.** The dimension measured vertically from the AHP-front to the intersection of the steering column centerline to a plane tangent to the upper surface of the steering wheel rim.
- H18** **STEERING WHEEL ANGLE.** The angle measured from a vertical to the surface plane of the steering wheel.
- H30** **SgRP-FRONT TO HEEL.** The dimension measured vertically from the SgRP-front to the accelerator heel point.
- H37** **HEADLINING TO ROOF PANEL-FRONT.** The dimension measured from the intersection of the headlining and the extended effective head room line normal to the sheet metal.
- H50** **UPPER BODY OPENING TO GROUND-FRONT.** The dimension measured vertically from the trimmed body opening to the ground on the SgRP-front "X" plane.
- H61** **EFFECTIVE HEAD ROOM-FRONT.** The dimension measured along a line 8 deg. rear of vertical from the SgRP-front to the headlining plus 102 mm (4.0 in.).
- H67** **FLOOR COVERING THICKNESS-UNDEPRESSED-FRONT.** The dimension measured vertically from the surface of the undepressed floor covering to the underbody sheet metal at the accelerator heel point.

Rear Compartment Dimensions

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

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

- 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 J825).
- 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 dimension measured vertically from the heel point to the underbody sheet metal.

Luggage Compartment Dimensions

- V1 USABLE LUGGAGE CAPACITY-Total of volumes of individual pieces of standard luggage set plus H-boxes stowed in the luggage compartment in accordance with the procedure described in paragraph 8.2 of SAE-J1100a.
- H195 LIFTOVER HEIGHT. The dimension measured vertically from the luggage compartment lower opening at the zero "Y" plane to ground.

Interior Volumes (EPA Classification)

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

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

Station Wagon - Third Seat Dimensions

- L85 SgRP COUPLE DISTANCE-THIRD. The dimension measured horizontally from the SgRP-second to the SgRP-third.
- L86 EFFECTIVE LEG ROOM-THIRD. The dimension measured along a line from the ankle pivot center to the SgRP-third plus 254 mm (10.0 in.).
- L87 KNEE CLEARANCE-THIRD. The minimum dimension from the knee pivot center to the back of second seatback minus a constant of 51mm (2.0 in.). With rear-facing third seat, dimension is measured to closure.
- L88 BACK ANGLE-THIRD. Measured in the same manner as L41.
- L89 HIP ANGLE-THIRD. Measured in the same manner as L43.
- L90 KNEE ANGLE-THIRD. Measured in the same manner as L45.
- L91 FOOT ANGLE-THIRD. Measured in the same manner as L47.
- W85 SHOULDER ROOM-THIRD. Measured in the same manner as W4.
- W86 HIP ROOM-THIRD. Measured in the same manner as W5.
- H86 EFFECTIVE HEAD ROOM-THIRD. The dimension, measured along a line 8 deg. from the SgRP-third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- H87 SgRP-THIRD TO HEEL POINT.
- SD1 SEAT FACING DIRECTION-THIRD.

Station Wagon - Cargo Space Dimensions

- L200 CARGO LENGTH-OPEN-FRONT. The minimum dimension measured longitudinally from the back of the front seatback at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the open tailgate or cargo surface if the rear closure is a conventional door type tailgate at the zero "Y" plane.
- L201 CARGO LENGTH-OPEN-SECOND. The dimension measured longitudinally from the back of the second seatback at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the open tailgate or cargo floor surface if the rear closure is a conventional door type tailgate, at the zero "Y" plane.
- L202 CARGO LENGTH-CLOSED-FRONT. The minimum dimension measured horizontally from the back of the front seat at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L203 CARGO LENGTH-CLOSED-SECOND. The dimension measured horizontally from the back of the second seat at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L204 CARGO LENGTH AT BELT-FRONT. The minimum dimension measured horizontally from the back of the front seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab backpanel at the height of the belt, on the zero "Y" plane.
- L205 CARGO LENGTH AT BELT-SECOND. The minimum dimension measured horizontally from the back of the second seatback at the seatback top to the foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.
- W201 CARGO WIDTH-WHEELHOUSE. The minimum dimension measured laterally between the trimmed wheelhouseings at floor level. For any vehicle not trimmed, measure to the sheet metal.

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

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

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

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

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

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

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

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

V2 STATION WAGON

Measured in inches:

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

Measured in mm:

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

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

V5 TRUCKS AND MPV'S WITH OPEN AREA.

Measured in inches:

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

Measured in mm:

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

V6 TRUCKS AND MPV'S WITH CLOSED AREA.

Measured in inches:

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

Measured in mm:

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

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

V10 STATION WAGON CARGO VOLUME INDEX.

Measured in inches:

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

Measured in mm:

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

Hatchback - Cargo Space Dimensions

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

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

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

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

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

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

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

V3 HATCHBACK.

Measured in inches:

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

Measured in mm:

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

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

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

Measured in inches:

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

Measured in mm:

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

MVMA Specifications Form

METRIC (U.S. Customary)

Index

Subject	Page No.
Aerodynamics	23
All Wheel Drive	10
Alternator	18
Automatic Transmission / Transaxle	8, 9
Axle, Steering	14
Axle, Drive, Front, Rear, All, Four	2, 9, 10
Axle Shafts	10
Battery	18
Body and Miscellaneous Information	17
Brakes-Parking, Service	12, 13
Camber	15
Camshaft	3
Capacities	
Cooling System	5
Fuel Tank	8
Lubricants	
Engine Crankcase	4
Transmission / Transaxle	8, 9
Rear Axle	10
Carburetor	2, 6
Caster	15
Clutch - Pedal Operated	8
Coil, Ignition	16
Connecting Rods	4
Convenience Equipment	19-20
Cooling System	5
Crankshaft	4
Cylinders and Cylinder Head	3
Diesel Information	4
Dimension Definitions	
Key Sheet - Exterior	27, 30, 31
Key Sheet - Interior	28, 29, 31, 32, 33
Electrical System	15, 18
Emission Controls	7
Engine-General	
Bore, Stroke, Type	3
Compression Ratio	2
Displacement	2, 3
Firing Order, Cylinder Numbering	3
General Information, Power & Torque	2
Intake System	4
Power Teams	2
Exhaust System	7
Equipment Availability, Convenience	19
Fan, Cooling	5
Filters - Engine Oil, Fuel System	4
Four Wheel Drive	10
Frame	18
Front Suspension	11
Front Wheel Drive Unit	10
Fuel System	6
Fuel Injection	6
Fuel Tank	6
Glass	18
Headlamps	18
Headroom - Body	22, 23
Height	21
Horns	15
Horsepower - Brake	2
Ignition System	16
Inflation - Tires	13
Interior Volume	22
Instruments	15
Legroom	22, 23
Length	21
Leveling, Suspension	11
Lifters, Valve	4
Linings - Clutch, Brake	8, 12
Lubrication - Engine Transmission / Transaxle	4, 8, 9
Luggage Compartment	22
Models	1
Motor Starting	18
Muffler	7

Subject	Page No.
Origin	1
Passenger Capacity	1
Passenger Mass Distribution	25
Pistons	3
Power Brakes	12
Power, Engine	2
Power Steering	14
Power Teams	2
Propeller Shaft, Universal Joints	10
Pumps - Fuel	6
Water	5
Radiator - Cap, Hoses, Core	5
Ratios - Axle, Transaxle	2, 9
Compression	2
Steering	14
Transmission / Transaxle	2, 8, 9
Rear Axle	2, 9, 10
Regulator - Alternator	18
Restraint System	18
Rims	13
Rods - Connecting	4
Scrub Radius	14
Sests	17
Shock Absorbers, Front & Rear	11
Spark Plugs	16
Speedometer	15
Springs - Front & Rear Suspension	11
Stabilizer (Sway Bar) - Front & Rear	11
Starting System	18
Steering	14
Suppression - Ignition, Radio	16
Suspension - Front & Rear	11
Tail Pipe	7
Theft Protection	20
Thermostat, Cooling	5
Tires	13
Toe-In	15
Torque Converter	9
Torque - Engine	2, 8, 9
Transaxle	9
Transmission - Types	2, 8, 9
Transmission - Automatic	2, 8, 9
Transmission - Manual	2, 8, 9
Transmission - Ratios	2, 9
Tread	21
Trunk Cargo Load	1
Trunk Luggage Capacity	22
Turning Diameter	14
Unitized Construction	18
Universal Joints, Propeller Shaft	10
Valve System	4
Vehicle Dimensions	
Width	21
Length	21
Height	21
Ground Clearance	21
Front Compartment	22
Rear Compartment	22
Luggage Compartment	22
Station Wagon - Third Seat	23
Station Wagon - Cargo Space	23
Hatchback - Cargo Space	23
Fiducial Marks	24
Voltage Regulator	16
Water Pump	5
Weights	25, 26
Wheel Alignment	15
Wheelbase	21
Wheels & Tires	13
Wheel Spindle	14
Widths	21
Windshield	18
Windshield Wiper and Washer	15