

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1991

Manufacturer CHRYSLER MOTORS CORPORATION	Vehicle Line DODGE SHADOW	
Mailing Address 12000 CHRYSLER DRIVE CIMS 418-05-30 DETROIT, MICHIGAN 48288 - 1118	Issued 9-15-90	Revised

Direct questions concerning these specifications to the manufacturer listed above.

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

MVMA Specifications Form

METRIC (U.S. Customary)

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NOTE:

1. This form uses both SI metric units and U.S. Customary units. The metric unit of measure is presented first, and the U.S. Customary 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

Vehicle Line **DODGE SHADOW**Model Year **1991** Issued **9-15-90** Revised (●) _____

METRIC (U.S. Customary)

Vehicle Origin

Design & Development (company)	Chrysler Motors Corporation
Where built (country)	U.S.A. / Mexico
Authorized U.S. sales marketing representative	Dodge Division of Chrysler Motors Corporation

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)	EPA Fuel Economy (City/Hwy)
Shadow America 2-Door Hatchback FWD	October, 1990	APDL24	5 (2/3)	52 (115)	See Page 2
Shadow America 4-Door Hatchback FWD	"	APDL44	5 (2/3)	52 (115)	"
Shadow 2-Door Hatchback FWD	"	APDH24	5 (2/3)	52 (115)	"
Shadow 4-Door Hatchback FWD	"	APDH44	5 (2/3)	52 (115)	"
Shadow 2-Door Convertible FWD	"	APDH27	4 (2/2)	52 (115)	"
Shadow ES 2-Door Hatchback FWD	"	APDS24	5 (2/3)	52 (115)	"
Shadow 4-Door Hatchback FWD	"	APDS44	5 (2/3)	52 (115)	"
Shadow 2-Door Convertible FWD	"	APDS27	4 (2/2)	52 (115)	"

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

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Power Teams

SAE J1349 Net bhp (brake horsepower) and net torque corrected to 77°F (25 °C) and 29.61 in. Hg (100 kPa) atmospheric pressure.

			A		B		C	D
ENGINE	Engine Code		EDF		EDM		EDT	←
	Displacement Liters (in³)		2.2 (135.0)		2.5 (153.0)		2.5 (153.0)	←
	Induction system (FI, Carb., etc.)		TBI-EFT		←		SMPI Turbo	←
	Compression ratio		9.5:1		8.9:1		7.8:1	←
	SAE Net at RPM	Power kW (bhp)	69 (93) @ 4800		75 (100) @ 4800		112 (150) @ 5000	114 (152) @ 4800
		Torque N·m (lb.-ft.)	165 (122) @ 3200		183 (135) @ 2800		244 (180) @ 2000	285 (210) @ 2400
	Exhaust single, dual		single		←		←	←
TRANSS	Transmission/ Transaxle		a 5-sp. man	b 3-sp. auto	a 5-sp. man	b 3-sp. auto	5-sp. man	3-sp. auto.
	Axle Ratio (std. first) (a)		2.76:1	3.02:1	2.51:1	3.02:1	2.51:1	3.02:1
EPA Fuel Economy MPG (City / Hwy)			23 / 30	23 / 27	24 / 34	23 / 28	20 / 26	19 / 23

[illegible]

(a) Overall top gear ratio

METRIC (U.S. Customary)

Vehicle Line **DODGE SHADOW**Model Year **1991**Issued **9-15-90**

Revised (●)

Engine Description

Engine Code

2.5L (153.0 in³), EFI
EDM2.5L (153.0 in³)
SMPI Turbo I, EDT**ENGINE - GENERAL**

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	Four-cylinder, in-line, SOHC, front, transverse	
Manufacturer	Chrysler	
No. of cylinders	4	
Bore	87.5 (3.44)	
Stroke	104.0 (4.09)	
Bore Spacing (C/L to C/L)	96.0 (3.78)	
Cylinder block material & mass kg (lbs.) (machined)	Cast Iron 40.55 (89.4)	
Cylinder block deck height	237.8 (9.36)	
Cylinder block length	418 (16.46)	
Deck clearance (minimum) (above or below block)	0.00	
Cylinder head material & mass kg (lbs.)	Aluminum 9.71 (21.4)	0.1 (0.004), above
Cylinder head volume (cm ³)	Aluminum 10.66 (23.5)	
Cylinder liner material	48.94 to 51.94	
Head gasket thickness (compressed)	N.A.	
Minimum combustion chamber total volume (cm ³)	1.78 (0.070)	
Cyl. no. system	73.815	92.24
(front to rear)*	R to L as installed - 1, 2, 3, 4	
Firing order	1, 3, 4, 2	
Intake manifold material & mass [kg (lbs.)]**	Aluminum 2.86 (6.3)	Aluminum 5.67 (12.5)
Exhaust manifold material & mass [kg (lbs.)]**	Cast Iron 6.08 (13.4)	Cast iron 5.17 (11.4)
Knock sensor (number & location)		
Fuel required, unleaded, diesel, etc.	Regular unleaded	Premium unleaded
Fuel antiknock index (R + M) ÷ 2	87 octane or higher	87 or 91 octane or higher (a)
Quantity	3	
Engine mounts	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	
	Natural Rubber	
	Added isolation (sub-frame, crossmember, etc.)	
	None	
Total dressed engine mass (wt) dry***	153.18 (337.0)	161.36 (355.0)

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum 322 (11.4)	Aluminum 367 (13.0)
--	---------------------	---------------------

Engine - Camshaft

Location	Overhead	
Material & mass kg (weight, lbs.)	Post-hardened nodular iron	
Drive type	Chain/belt	2.68 (5.9)
	Width/pitch	Belt
	23.8/9.52 (0.937/0.375)	

* 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: starter, alternator, manifolds, water pump, engine mounted emissions controls, power steering pump, drive belts, oil filter, right engine mount, and throttle controls as required.

(a) 91 octane or higher recommended for improved performance

MVMA Specifications

Vehicle Line **DODGE SHADOW**
 Model Year **1991** Issued **9-15-90** Revised (●)

METRIC (U.S. Customary)

Engine Description
 Engine Code

**2.2 L (135.0 in³), EFI
 EDF**

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)

Four-cylinder, In-line, SOHC, front, transverse

Manufacturer	Chrysler
No. of cylinders	4
Bore	87.5 (3.44)
Stroke	92.0 (3.62)
Bore Spacing (C/L to C/L)	96.0 (3.78)
Cylinder block material & mass kg (lbs.) (machined)	Cast Iron 44.23 (97.5)
Cylinder block deck height	237.8 (9.36)
Cylinder block length	418 (16.46)
Deck clearance (minimum) (above or below block)	0.00
Cylinder head material & mass kg (lbs.)	Aluminum alloy 9.71 (21.4)
Cylinder head volume (cm ³)	48.5 to 51.5
Cylinder liner material	N.A.
Head gasket thickness (compressed)	1.78 (.070)
Minimum combustion chamber total volume (cm ³)	65.31
Cyl. no. system (front to rear)*	R to L as installed - 1, 2, 3, 4
L. Bank	--
R. Bank	1, 3, 4, 2
Firing order	Aluminum 2.86 (6.3)
Intake manifold material & mass [kg (lbs.)]**	Cast iron 6.08 (13.4)
Exhaust manifold material & mass [kg (lbs.)]**	
Knock sensor (number & location)	Regular unleaded
Fuel required, unleaded, diesel, etc.	87 octane or higher
Fuel antiknock index (R + M) ÷ 2	3
Quantity	Natural Rubber
Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)	
Added isolation (sub-frame, crossmember, etc.)	None
Total dressed engine mass (wt) dry***	142.26 (313.0)

Engine - Pistons

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

Aluminum
 445 (15.7)

Engine - Camshaft

Location

Overhead
 Post-hardened nodular iron

Material & mass kg (weight, lbs.)

2.68 (5.9)
 Belt

Drive type

Chain/belt

23.8/9.52 (0.937/0.375)

Width/pitch

- * 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: starter, alternator, manifolds, water pump, engine mounted emissions controls, power steering pump, drive belts, oil filter, right engine mount, and throttle controls as required.

MVMA Specifications

Vehicle Line **DODGE SHADOW**Model Year **1991**Issued **9-15-90**

Revised (●)

METRIC (U.S. Customary)

Engine Description

Engine Code

**2.5L (153.0 in³), SMPI
Turbo, EDT****2.5L (153.0 in³), EFI
EDM**

Engine - Valve System

Hydraulic lifters (std., opt., n.a.)

Std.

Valves

Number intake/exhaust

4/4

Head O.D. intake/exhaust

40.6 / 35.4 (1.60 / 1.39)

Engine - Connecting Rods

Material & Mass [kg., (weight lbs.)]*

Forged steel 0.71 (1.6)

Forged steel 0.41 (0.90)

Length (axes ϕ to ϕ) mm

151 (5.94)

Engine - Crankshaft

Material & Mass [kg., (weight lbs.)]*

High-hardness ductile iron 15.92 (35.1)

Nodular iron 15.88 (35.0)

End thrust taken by bearing (no.)

Three

Length & number of main bearings

487.1 (19.2) / Five

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

Front

Polyacrylic / One piece

Rear

Fluorocarbon / One piece

Engine - Lubrication System

Normal oil pressure [kPa (psi) at eng. rpm]

172-552(25-80) @ 3000 rpm(a)

Type of intake (floating, stationary)

Stationary

Oil filter system (full flow, part, other)

Full flow

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

3.8 (4.0)

Engine - Diesel Information

Diesel engine manufacturer

Glow plug, current drain at 0° F

Injector

Type

nozzle

Opening pres.[kPa (psi)]

Pre-chamber design

Fuel inj.

Manufacturer

pump

Type

Fuel inj. 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

Intercooler

* Finished State

(a) Fully warmed

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Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued **9-15-90**

Revised (●)

METRIC (U.S. Customary)

Engine Description

Engine Code

2.2L (135.0in³), EFI

EDF

Engine - Valve System

Hydraulic lifters (std., opt., n.a.)	Std.
Valves	4/4
Number intake/exhaust	40.6 / 35.4 (1.60/1.39)
Head O.D. intake/exhaust	

Engine - Connecting Rods

Material & Mass [kg., (weight lbs.)]*	Forged steel, SAE 1141, 0.41 (0.90)
Length (axes ϕ to ϕ) mm	151 (5.94)

Engine - Crankshaft

Material & Mass [kg., (weight lbs.)]*	Nodular iron 15.10 (33.2)
End thrust taken by bearing (no.)	Three
Length & number of main bearings	487.1 (19.2) / Five
Seal (material, one, two piece design, etc.)	Polyacrylic / One piece
Front	Fluorocarbon / One piece
Rear	

Engine - Lubrication System

Normal oil pressure [kPa (psi) at eng. rpm]	172 - 552 (25-80) @ 3000/Fully warmed
Type of intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full flow
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)

Engine - Diesel Information

Diesel engine manufacturer	
Glow plug, current drain at 0° F	
Injector nozzle	Type
	Opening pres. [kPa (psi)]
Pre-chamber design	
Fuel inj. pump	Manufacturer
	Type
Fuel inj. 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	
Intercooler	

* Finished State

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Vehicle Line **DODGE SHADOW / SHADOW AMERICA**

Model Year **1991**

Issued **9-15-90**

Revised (•)

Engine Description

Engine Code

2.5 L (153.0 IN.³) EFI, EDM

2.2 L (135.0 IN.³) EFI, EDF

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard	
Coolant fill location (rad. bottle)		Bottle	
Radiator cap relief valve pressure [kPa (psi)]		96-124 (14-18)	
Circulation thermostat	Type (choke, bypass)	Choke, Pellet Operated	
	Starts to open at °C (°F)	90.6 (195)	
Water pump	Type (centifugal, other)	Centrifugal	
	GPM 1000 pump rpm	--	
	Number of pumps	One	
	Drive (V-belt, other)	Multi-Groove Belt	
	Bearing type	Integral Ball Bearing	
	Impeller material	Steel	
	Housing material	Cast Aluminum	
By-pass recirculation [type (inter., ext.)]		External in series with heater	
Cooling system capacity	With heater - L (qt.)	8.5 (9.0)	
	With air cond. - L (qt.)	8.5 (9.0)	
Opt. equipment [specify - L (qt.)]		--	
Water jackets full length of cyl. (yes, no)		Yes	
Water all around cylinder (yes, no)		No	
Water jackets open at head face (yes, no)		No	
Radiator core	Std. A/C, HD	Standard	A/C
	Type (cross-flow, etc.)	Cross Flow	
	Construction (fin & tube mechanical, braze, etc.)	Tube & Fin Spacer, Soldered, 1 Row	
	Material, mass [kg (wgt. lbs.)] (a)	4.14 (9.1) MTX / 4.45 (9.8) Auto ^(b)	4.36 (9.6) MTX / 4.59 (10.1) Auto ^(b)
	Width	566.4 (22.3)	
	Height	377.1 (14.8)	
	Thickness	17.8 (0.7)	
	Fins per inch	13	18 Man / 16 Auto
	Radiator end tank material	Nylon 66	
Fan	Std., elec., opt.	Electric	
	Number of blades & type (flex, solid, material)	8 Blade - Plastic	
	Diameter & projected width	361 x 33 (14.2 x 1.3)	
	Ratio (fan to crankshaft rev.)	--	
	Fan cutout type	Electric Motor	
	Drive type (direct, remote)	--	
	RPM at idle (elec.)	1165	1740
	Motor rating (wattage) (elec.)	53	165
	Motor switch (type & location) (elec.)	Thermistor, Water Box & AC Clutch	
	Switch point (temp., pressure) (elec.)	99°C (210°F) < 40 mph; 110°C (230°F) > 40 mph	
	Fan shroud (material)	Plastic	

(a) Mass (weight) shown is for assembly as purchased.

(b) Radiator Material - Copper/Brass

MVMA Specifications

Vehicle Line **DODGE SHADOW**
 Model Year **1991** Issued **9-15-90** Revised (*)

METRIC (U.S. Customary)

Engine Description
 Engine Code

**2.5 L (153.0 IN.3), SMPI Turbo
 EDT**

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)	Standard	
Coolant fill location (rad, bottle)	Bottle	
Radiator cap relief valve pressure [kPa (psi)]	96-124 (14-18)	
Circulation	Type (choke, bypass)	Choke, Pellet Operated
thermostat	Starts to open at °C (°F)	90.6 (195)
	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	--
	Number of pumps	One
Water pump	Drive (V-belt, other)	Multi-Groove Belt
	Bearing type	Integral Ball Bearing
	Impeller material	Steel
	Housing material	Cast Aluminum
By-pass recirculation [type (inter., ext.)]	External in series with heater	
Cooling system capacity	With heater - L(qt.)	8.5 (9.0)
	With air cond. - L(qt.)	8.5 (9.0)
	Opt. equipment [specify - L(qt.)]	--
Water jackets full length of cyl. (yes, no)	Yes	
Water all around cylinder (yes, no)	No	
Water jackets open at head face (yes, no)	No	
Radiator core	Std. A/C, HD	Standard A/C
	Type (cross-flow, etc.)	Cross Flow
	Construction (fin & tube mechanical, braze, etc.)	Tube & Fin Spacer, Soldered, 1 Row
	Material, mass [kg (wgt.lbs.)] (a)	4.14 (9.1) MTX / 4.45 (9.8) Auto(b) 4.55 (10.0) MTX / 4.77(10.5) Auto(b)
	Width	566.4 (22.3)
	Height	377.1 (14.8)
	Thickness	17.8 (0.7)
	Fins per inch	13 20
Radiator end tank material		Nylon 66
Fan	Std., elec., opt.	Electric
	Number of blades & type (flex, solid, material)	8 Blade - Plastic
	Diameter & projected width	361 x 33 (14.2 x 1.3)
	Ratio (fan to crankshaft rev.)	--
	Fan cutout type	Electric Motor
	Drive type (direct, remote)	--
	RPM at idle (elec.)	1740 1990
	Motor rating (wattage) (elec.)	165 222
	Motor switch (type & location) (elec.)	Thermistor, Water Box & AC Clutch
	Switch point (temp., pressure) (elec.)	99°C (210°F) <40 mph; 104°C (220°F) >40 mph
	Fan shroud (material)	Plastic

(a) Mass (weight) shown is for assembly as purchased.

(b) Radiator Material - Copper/Brass

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1990**

Issued **9-15-90**

Revised (•)

METRIC (U.S. Customary)

Engine Description

Engine Code

**2.5L (153.0 in³) TBI-EFI,
EDM**

**2.5L (153.0 in³), SMPI Turbo
EDT**

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

Induction type: carburetor, fuel injection system, etc.		Fuel injection	
Manufacturer		Holley/Bosch	(b)
Carburetor no. of barrels		N.A.	
Idle A/F mix.		N.A.	
Fuel Injection	Point of injection (no.)	Throttle body (1)	Intake ports (4)
	Constant, pulse, flow	Pulse	
	Control (electronic, mech.)	Electronic	
	System pressure [kPa (psi)]	270 (39.1)	379.6 (55.1)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	850	950
	Automatic	850 / Neutral	900 / Neutral
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water, fixed	None
Air cleaner type		Oil wetted paper element	
Fuel filter (type/location)		Paper element; Stainless steel canister; Inline underbody	
Fuel pump	Type (elec. or mech.)	Electric	
	Location (eng., tank)	In fuel tank	
	Pressure range [kPa (psi)]	N.A.	
	Flow rate at regulated pressure (L (gal) / hr @ kPa (psi))	81-161 (21-42) @ 12V & 15psi	92-180 (24-48) @ 12V & 55psi

Fuel Tank

Capacity refill L (gallons)		53 (14)
Location (describe)		Forward of axle
Attachment		Galvanized or terne plated steel strap to floor pan
Material & Mass [kg (weight lbs.)]		Terne plated steel 10.20 (22.5) (a)
Filler pipe	Location & material	Right rear quarter panel, lead dipped steel tube
	Connection to tank	Rubber grommet
Fuel line (material)		Duplex coated steel
Fuel hose (material)		Fuel resistant rubber
Return line (material)		Duplex coated steel
Vapor line (material)		Duplex coated steel
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	

(a) Includes tank-mounted fuel pump

(b) Holly/Bosch/Seimens Bendix/McGuane

MVMA Specifications

Vehicle Line **DODGE SHADOW / SHADOW AMERICA**
 Model Year **1991** Issued **9-15-90** Revised (•)

METRIC (U.S. Customary)

Engine Description
 Engine Code

**2.2L (135.0 in³) TBI-EFI
 EDF**

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

Induction type: carburetor, fuel injection system, etc.		Fuel injection
Manufacturer		Holley/Bosch
Carburetor no. of barrels		N.A.
Idle A/F mix.		N.A.
Fuel Injection	Point of injection (no.)	Throttle body (1)
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	Electronic
	System pressure [kPa (psi)]	270 (39.1)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	850
	Automatic	850 / Neutral
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water, unregulated
Air cleaner type		Oil wetted paper element
Fuel filter (type/location)		Paper element; Stainless steel canister; Inline underbody
Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	In fuel tank
	Pressure range [kPa (psi)]	N.A.
	Flow rate at regulated pressure (L (gal) / hr @ kPa (psi))	96-179 (25-47) @ 12V & 39psi

Fuel Tank

Capacity refill L (gallons)		53 (14)
Location (describe)		Forward of axle
Attachment		Galvanized or terne plated steel strap to floor pan
Material & Mass [kg (weight lbs.)]		Terne plated steel 10.20 (22.5) (a)
Filler pipe	Location & material	Right rear quarter panel, lead dipped steel tube
	Connection to tank	Rubber grommet
Fuel line (material)		Duplex coated steel
Fuel hose (material)		Fuel resistant rubber
Return line (material)		Duplex coated steel
Vapor line (material)		Duplex coated steel
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	

(a) Includes tank-mounted fuel pump

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Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised (●)

METRIC (U.S. Customary)

Engine Description

Engine Code

2.2L (135.0in³) TBI-EFI, EDF

49 states, man.

49 states, auto.

Cal., manual

Cal., automatic

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		exhaust gas recirculation, engine modifications, catalytic converter		
	Air injection		aspirator		
		Pump or pulse	pulse	N.A.	
		Driven by	exhaust pressure	N.A.	
		Air distribution (head, manifold, etc.)	fixed	N.A.	
		Point of entry	catalytic converter	N.A.	
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	exh. backpressure -controlled flow	N.A.	exhaust backpressure-controlled flow
		Exhaust source	exhaust manifold branch		
		Point of exhaust injection (spacer, carburetor manifold, other)	intake manifold plenum	N.A.	intake manifold plenum
	Catalytic Converter	Type	3 - way + oxidation	3-way	
		Number of	one		
		Location(s)	below exhaust manifold		
		Volume [L(in. ³)]	1.23 + 0.74 (75 + 45)	1.23 + 0.9 (75 + 55)	
		Substrate type	monolithic		
		Noble metal type	Pt:Rh + Pd (a)	Platinum:Rhodium	
		Noble metal concentration (g/cm ³)	0.00061:0.00009 + 0.00085	0.00061:0.00009 + 0.00061:0.00007	0.00061:0.00018
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		closed induction system		
	Energy source (manifold vacuum, carburetor, other)		manifold vacuum		
	Discharges (to intake maifold, other)		intake manifold		
	Air inlet (breather cap, other)		air cleaner		
Evaporative emission control	Vapor vented to (crank-case, canister, other)	Fuel tank	canister		
		Carburetor	--		
	Vapor storage provision		canister		
Electronic system	Closed loop (yes/no)		yes - hot engine		
	Open loop (yes/no)		yes - cold engine		

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.)]		one, reverse flow aluminized steel 5.62 (12.4) - includes tail-pipe below		
Resonator no. & type		none		
Exhaust pipe	Branch o. d., wall thickness	N.A.		
	Main o. d., wall thickness	50.8 × 1.4 (2.00 × 0.055)		
	Material & mass [kg. (weight lbs.)]	4.63 (10.2) ^(b)	6.03 (13.3) ^(b)	5.67 (12.5) ^(b)
Intermediate pipe	o. d., & wall thickness	47.8 × 1.4 (1.88 × 0.055)		
	Material & mass [kg. (weight lbs.)]	aluminized steel 2.86 (6.3) (includes resonator)		
Tail pipe	o. d., & wall thickness	47.8 × 1.4 (1.88 × 0.055)		
	Material & mass [kg. (weight lbs.)]	aluminized steel (see muffler assembly)		

(a) Pt = Platinum; Rh = Rhodium; Pd = Palladium

(b) stainless steel (Includes catalytic converter)

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued **9-15-90**

Revised (●)

METRIC (U.S. Customary)

Engine Description

Engine Code

2.5L (153.0in³) TBI-EFI, EDM

49 states, man.

49 states, auto.

Cal., manual

Cal., automatic

Vehicle Emission Control

Vehicle Emission Control						
Exhaust Emission Control	Type (air injection, engine modifications, other)		exhaust gas recirculation, engine modifications, catalytic converter			
			aspirator			
	Air injection	Pump or pulse	pulse		N.A.	
		Driven by	exhaust pressure		N.A.	
		Air distribution (head, manifold, etc.)	fixed		N.A.	
		Point of entry	catalytic converter		N.A.	
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	exh. backpressure -controlled flow	N.A.	exhaust backpressure-controlled flow	
		Exhaust source	exhaust manifold branch			
		Point of exhaust injection (spacer, carburetor manifold, other)	intake manifold plenum	N.A.	intake manifold plenum	
		Catalytic Converter	Type	3 - way + oxidation	3-way	
	Number of		one			
	Location(s)		below exhaust manifold			
	Volume [L(in. ³)]		1.23 + 0.74 (75 + 45)	1.23 + 0.9 (75 + 55)		
	Substrate type		monolithic			
	Noble metal type		Pt:Rh + Pd (a)	Platinum:Rhodium		
		Noble metal concentration (g/cm ³)	0.00061:0.00009 + 0.00085	0.00061:0.00009 + 0.00061:0.00007		0.00061:0.00018
		Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		closed induction system	
Energy source (manifold vacuum, carburetor, other)			manifold 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	canister			
		Carburetor	--			
	Vapor storage provision		canister			
Electronic system	Closed loop (yes/no)		yes - hot engine			
	Open loop (yes/no)		yes - cold engine			

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.)]		one, reverse flow			
Resonator no. & type		aluminized steel 5.62 (12.4) - includes tail-pipe below			
Exhaust pipe	Branch o. d., wall thickness		one, straight through		
	Main o. d., wall thickness		Into catalyst 50.8 x 1.4 (2.00 x 0.055)		
	Material & mass [kg. (weight lbs.)]		Out of catalyst 50.8 x 1.4 (2.00 x 0.055)		
			6.03 (13.3) (b)	4.63 (10.2) (b)	5.67 (12.5) (b)
Intermediate pipe	o. d., & wall thickness		47.8 x 1.2 (1.88 x 0.047)		
	Material & mass [kg. (weight lbs.)]		aluminized steel 2.86 (6.3) (includes resonator)		
Tail pipe	o. d., & wall thickness		47.8 x 1.1 (1.88 x 0.043)		
	Material & mass [kg. (weight lbs.)]		aluminized steel (see muffler assembly)		

(a) Pt = Platinum; Rh = Rhodium; Pd = Palladium

(b) stainless steel (includes catalytic converter)

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised (●)

METRIC (U.S. Customary)

Engine Description

Engine Code

2.5 L (153.0 in ³) Turbo, EDT	
49 States	California

Vehicle Emission Control

Vehicle Emission Control					
Exhaust Emission Control	Type (air injection, engine modifications, other)		engine modifications, catalytic converter	engine mod's, catalytic converter, exhaust gas recirculation	
	Air injection	Pump or pulse	none		
		Driven by	N.A.		
		Air distribution (head, manifold, etc.)	N.A.		
		Point of entry	N.A.		
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	none	exhaust back pressure controlled flow	
		Exhaust source	N.A.	turbine housing outlet , above flange	
		Point of exhaust injection (spacer, carburetor, manifold, other)	N.A.	intake manifold	
	Catalytic Converter	Type	3-way		
		Number of	one		
		Location(s)	under floor		
		Volume [L(in. ³)]	1.80 (110)		
		Substrate type	monolithic		
		Noble metal type	Platinum: Rhodium		
		Noble metal concentration (g/cm ³)	0.00061: 0.00011	0.00061: 0.00018	
	Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		closed induction system	
		Energy source (manifold vacuum, carburetor, other)		intake manifold 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	canister		
		Carburetor	N.A.		
	Vapor storage provision		canister		
Electronic system	Closed loop (yes/no)		yes - hot engine		
	Open loop (yes/no)		yes - cold engine		

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.)]		one, reverse flow aluminized steel 7.48 (16.5)
Resonator no. & type		none
Exhaust pipe	Branch o. d., wall thickness	N.A.
	Main o. d., wall thickness	63.5 x 1.4 (2.5 x 0.055)
	Material & mass [kg. (weight lbs.)]	aluminized steel 2.63 (5.8)
Intermediate pipe	o. d., & wall thickness	57.2 x 1.4 (2.25 x 0.055)
	Material & mass [kg. (weight lbs.)]	stainless steel 6.03 (13.3) (includes catalytic converter)
Tail pipe	o. d., & wall thickness	50.8 x 1.4 (2.0 x 0.055)
	Material & mass [kg. (weight lbs.)]	aluminized steel (see muffler assembly)

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised(*)

METRIC (U.S. Customary)

Engine Description
Engine Code

2.2 L (135.0 in ³) / EFI EDF	2.2 L (135.0 in ³) / EFI EDM	2.5L (153.0 in ³) / TURBO I EDT
---	---	--

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

Manual 3-speed (manufacturer/country)	N.A.
Manual 4-speed (manufacturer/country)	N.A.
Manual 5-speed manufacturer/country)	Std./ New Venture Gear/U.S.
Automatic (manufacturer/country)	Opt./Chrysler/U.S.
Automatic overdrive (manufacturer/country)	N.A.

Manual Transmission/Transaxle

Manual Transmission/Transaxle		
Number of forward speeds		5
Gear ratios	1st	3.29
	2nd	2.08
	3rd	1.45
	4th	1.04
	5th	0.72
	Reverse	3.14
Synchronous meshing (specify gears)		All Forward Gears
Shift lever location		Floor
Trans. case mat'l. & mass kg.(lbs.)*		46.36 (102.0) 380 Aluminum Die Cast
Lubricant	Capacity [L (pt.)]	2.1 (4.3)
	Type recommended	API SG/CC SAE 5W-30

Clutch (Manual Transmission)

Clutch (Manual Transmission)		LUK (2.2L)	Fichtel & Sachs	
Clutch manufacturer				
Clutch type (dry, wet; single,multiple disc)		Dry Disc, single		
Linkage (hydraulic,cable,rod,lever,other)		Cable		
Max. pedal effort (nom.	Depressed**	116 (26)	100 (23)	116 (26)
spring load, new) N (lbs.)	Released***	125 (28)	112 (25)	125 (28)
Assist (spring, power/percent, nominal)		None		
Type pressure plate springs		Belleville		
Total spring load (nominal, new) N (lbs.)		4400 (989)	4700(1057)	5750 (1292)
Clutch facing	Facing mfg. & material coding	Valeo F-202		
	Facing material & construction	Fiberglass, Woven		
	Rivets per facing	8		
	Outside x inside dia. (nominal)	215 x 154 (8.46 x 6.06)	228 x 150 (8.98 x 5.91)	
	Total eff. area [cm ² (in ²)]****	353.6 (54.8)	463.13 (71.8)	
	Thickness (pressure plate side/ fly wheel side)	3.15/3.15 (0.124/0.124)	3.4/3.4 (0.13/0.13)	
	Rivet depth (pressure plate side/ fly wheel side)	1.2/1.2 (0.047/0.047 min	1.1/1.1 (0.043/0.043) min.	
	Engagement cushion method	Wave spring segments		
	Release bearing type & method lub.	Angular contact ball bearing permanently lubed with grease		
Torsional damping method, springs, hysteresis		Coil springs and friction fiber washers		

* Dry weight, includes shift linkage

** Hold down effort

*** Maximum effort at clutch release point of travel.

**** Includes both clutch facings.

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued **9-15-90**

Revised (•)

METRIC (U.S. Customary)

Engine Description
Engine Code

**2.5L (153.0 in.³), SMPI Turbo
EDT**

**2.5L (153.0 in.³), EFI, EDM
2.2 L (153.0 in.³), EFI, EDF**

Automatic Transmission/Transaxle

Trade name		Torqueflite	
Type and special features (describe)		Automatically-operated planetary gear transmission and parallel axis final drive	
		Non-lock up torque converter	electronic lock up torque converter
Gear selector	Location (column, floor, other)	Floor	
	Ltr./No. designation (e.g. PRND21)	PRND21	
	Shift interlock (yes, no, describe)	No	
Gear ratios	1st	2.69	
	2nd	1.55	
	3rd	1.00	
	4th	--	
	Reverse	2.10	
Max. upshift speed - drive range [km/h (mph)]		129 (80)	113 (70)
Max. kickdown speed - drive range [km/h (mph)]		119 (74)	105 (65)
Min. overdrive speed [km/h (mph)]		--	
Torque converter	Number of elements	Three	
	Max. ratio at stall	2.00	2.25
	Type of cooling (air, liquid)	Liquid	
	Nominal diameter	241 (9.5)	
	Capacity factor "K"	260	205
Lubricant	Capacity [refill L (pt.)]	8.40 (17.75) - torque converter, transmission and differential	
	Type recommended	Mopar ATF Plus (Auto trans. fluid - Type 7176) (a)	
Oil cooler (std,opt,n.a.,internal,external,air,liquid)		Std. - liquid, in radiator	
Transmission case material & mass [kg. (lbs.)]**		Die cast aluminum - 58.06 (128.0) (b) w/o T.C.	

All Wheel / 4 Wheel Drive

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

* Input speed ÷ √ torque

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

(a) Dexron II ATF may be used, only if Mopar ATF is not available.

(b) Dry weight, includes shift linkage

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised (●)

METRIC (U.S. Customary)

Engine Description

Engine Code

2.2L (135.0 in ³) - EFI, EDF		2.5L (153.0 in ³) - EFI, EDM	
Manual	Automatic	Manual	Automatic

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

Effective final drive ratio (or overall top gear ratio)		2.76	3.02	2.51	3.02
Transfer ratio and method (chain, gear, etc.)		--	1.06, gear	--	1.06, gear
Front drive unit	Ring gear o.d.	202.36 (7.97)	184.5 (7.26)	197.76 (7.79)	184.5 (7.26)
	No. of teeth	13	21	14	21
	Pinion	50	60	49	60

Front Drive Unit

Description (integral to trans., etc.)		Integral with transmission			
Limited slip differential (type)		N.A.			
Drive pinion	Type	Helical			
	Offset	--			
No. of differential pinions		Two			
Pinion / differential	Adjustment (shim, etc.)	--			
	Bearing adjustment	Shim			
Driving wheel bearing (type)		See Wheel Spindle Hub, p. 14			
Lubricant	Capacity[L (pt.)]	See transaxle			
	Type recommended	See transaxle			

Axle Shafts - Front Wheel Drive

Manufacturer and number used			SSG-2			
Type (straight, solid bar, tubular, etc.)		Left	Solid Bar			
		Right	Tube		Solid Bar	
Outer diam. x length* x wall thickness	Manual transaxle	Left	24.1 x 321.5 (0.95 x 12.66)		24.1 x 321.5 (0.95 x 12.66)	
		Right	40.5 x 585.1 (1.59 x 23.04)		40.5 x 585.1 (1.59 x 23.04)	
	Automatic transaxle	Left	23.9 x 332.4 (0.94 x 13.09)		23.9 x 332.4 (0.94 x 13.09)	
		Right	23.9 x 586 (0.94 x 23.07)		23.9 x 332.4 (.094 x 23.07)	
	Optional transaxle	Left	--			
		Right	--			
Slip yoke	Type		--			
	Number of teeth		--			
	Spline o.d.		--			
Universal joints	Make and mfg. no.	Inner	S-24	S-22	S-24	S-22
		Outer	S-24	S-22	S-24	S-22
	Number used		Two			
	Type, size, plunge	Inner	Tripod plunge			
		Outer	Rzeppa - fixed			
	Attach (u-bolt, clamp, etc.)		--			
	Bearing	Type (plain, anti-friction)	--			
		Lubrication (fitting, prepack)	Prepack			
Drive taken through (torque tube, arms or springs)			--			
Torque taken through (torque tube, arms or springs)			--			

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

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued **9-15-90**

Revised (●)

METRIC (U.S. Customary)

Engine Description

2.5L (153.0 in³) - Turbo I, EDT

Engine Code

Manual

Automatic

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

Effective final drive ratio (or overall top gear ratio)			2.51	3.02
Transfer ratio and method (chain, gear, etc.)			--	1.06, gear
Front drive unit	Ring gear o.d.		197.76 (7.79)	184.5 (7.26)
	No. of teeth	Pinion	14	21
		Ring gear	49	60

Front Drive Unit

Description (integral to trans., etc.)		Integral with transmission
Limited slip differential (type)		N.A.
Drive pinion	Type	Helical
	Offset	--
No. of differential pinions		Two
Pinion / differential	Adjustment (shim, etc.)	--
	Bearing adjustment	Shim
Driving wheel bearing (type)		See Wheel Spindle Hub, p. 14
Lubricant	Capacity[L (pt.)]	See transaxle
	Type recommended	See transaxle

Axle Shafts - Front Wheel Drive

Manufacturer and number used			SSG-2	
Type (straight, solid bar, tubular, etc.)		Left	Solid bar	Solid bar
		Right	Solid bar	Tube
Outer diam. x length* x wall thickness	Manual transaxle	Left	27.15 x 330.5 (1.08 x 13.01)	--
		Right	27.15 x 330.5 (1.08 x 13.01)	--
	Automatic transaxle	Left	--	24.1 x 321.5 (0.95 x 12.66)
		Right	--	40.5 x 585.1 (1.59 x 23.04)
	Optional transaxle	Left	--	--
		Right	--	--
Slip yoke	Type		--	
	Number of teeth		--	
	Spline o.d.		--	
Universal joints	Make and mfg. no.	Inner	SSG # 26	SSG # 24
		Outer	SSG # 24	SSG # 24
	Number used		Two	
	Type, size, plunge	Inner	Tripod plunge	
		Outer	Rzeppa - fixed	
	Attach (u-bolt, clamp, etc.)		--	
	Bearing	Type (plain, anti-friction)	--	
		Lubrication (fitting, prepack)	Prepack	
Drive taken through (torque tube, arms or springs)			--	
Torque taken through (torque tube, arms or springs)			--	

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

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued

9-15-90

Revised (•)

METRIC (U.S. Customary)

Body Type

Std. - AP/D-L, H-All
(SDC Suspension)

Std. - AP/D-S-All
(SDE Suspension)

Suspension - General Including Electronic Controls

Car leveling	Standard / optional / not avail.	
	Manual / automatic control	
	Type (air / hydraulic)	
	Primary / assist spring	
	Rear only / 4 wheel leveling	
	Single / dual rate spring	
	Single / dual ride heights	
	Provision for jacking	
Shock absorber damping controls	Standard / optional / not avail.	
	Manual / automatic control	
	Number of damping rates	
	Type of actuation (manual / electric motor / air, etc.)	
	<u>sensors</u>	
	Lateral acceleration	
	Deceleration	
	Acceleration	
Shock absorber (front & rear)	Type	Direct - Hydraulic
	Make	Monroe
	Piston diameter	Front: 32 (1.26) Rear: 30.2 (1.19)
	Rod diameter	Front: 20 (0.79) Rear: 12.7 (0.50)

Suspension - Front

Type & description		Iso-strut	
Travel*	Full jounce	72.7 (2.86)	61.3 (2.41)
	Full rebound	99.2 (3.91)	100.3 (3.95)
Spring	Type (coil, leaf, other) & material	Coil, AISI 5160 H Chromium steel	
	Insulators (type & material)	Compression: Rubber	
	Size (coil design height & i.d., bar length x dia.)	216 x 152 I.D. (8.5 x 6.0 I.D.)	
	Spring rate [N/mm (lb./in.)]	16.7 (95)	18.4 (105)
	Rate at wheel [N/mm (lb./in.)]	20.2 (115)	21.9 (125)
Stabilizer	Type (link, linkless, frameless)	Linkless	
	Material & bar diameter	AISI 1090 Spring steel 28.6 (1.125)	

Suspension - Rear

Type & description		Trailing flex-arm with track bar	
Travel*	Full jounce	56.1 (2.21)	34.3 (1.35)
	Full rebound	134.1 (5.28)	130.3 (5.13)
Spring	Type (coil, leaf, other) & material	Coil: AISI 5160 H Chromium steel	
	Size (length x width, coil design height & i.d., bar length & dia.)	229 x 102 I.D. (9.0 x 4.01)	
	Spring rate [N/mm (lb./in.)]	31.5 (180)	35 (200)
	Rate at wheel [N/mm (lb./in.)]	20.2 (116)	22.6 (129)
	Insulators (type & material)	Compression: Rubber	
	If leaf	No. of leaves	--
Stabilizer		Shackle (comp. or tens.)	--
	Type (link, linkless, frameless)	Frameless ERW Tube	
Track bar (type)	Material & bar diameter	80 KSI HSLA steel 28.6 (1.13) O.D.	
		Channel	

* Define load condition: Passenger Seating - 2 Front - 3 - Rear - Full tank of gas

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised (●)

METRIC (U.S. Customary)

Body Type And / Or
Engine Displacement

Standard - All

Brakes - Service

Description			Four-wheel hydraulic-actuated system	
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)		Disc	
	Rear (disc or drum)		Drum	
Valving type (proportion, delay, metering, other)			Dual proportioning valve	
Power brake (std., opt., n.a.)			Standard	
Booster type (remote, integral, vac., hyd., etc.)			Vacuum, single or tandem	
Vacuum	Source (inline, pump, etc.)		Intake manifold or throttle body	
	Reservoir (volume in. ³) and source		--	
	Pump-type (elec., gear driven, belt driven)		--	
Traction control	Operational speed range			
	Type engine intervention (electronic, mech.)			
Anti-lock device	Front/rear (std., opt., n.a.)			
	Manufacturer			
	Type (electronic, mech.)			
	Number sensors or circuits			
	Number anti-lock hydraulic circuits			
	Integral or add-on system			
	Yaw control (yes, no)			
	Hydraulic power source (elec., vac. mtr., pwr. strg.)			
Effective area [cm ² (in. ²)]* (F/R)			F: 203.93 (31.61) / R: 242.7 (37.6)	
Gross lining area [cm ² (in. ²)]** (F/R)			F: 222.6 (34.5) / R: 258.1 (40.0)	
Swept area [cm ² (in. ²)]*** (F/R)			F: 1329 (206) / R: 4119 (63.8)	
Rotor	Outer working diameter	F/R	F: 258.5 (10.18) / R: N.A.	
	Inner working diameter	F/R	F: 158.0 (6.22) / R: N.A.	
	Thickness	F/R	F: 24.0 (0.945) / R: N.A.	
	Material Type (vented/solid)	F/R	F: damped cast iron, vented / R: N.A.	
Drum	Diameter & Width	F/R	R: 200 (7.87) x 37.62 (1.48) / R: N.A.	
	Type & Material	F/R	F: N.A. / R: Cast composite	
Wheel cylinder bore			F: N.A. / R: 15.87 (0.625)	
Master cylinder	Bore/stroke	F/R	21.0 (0.827) / 32.79 (1.291)	
Pedal arc ratio			3.28 : 1	
Line pressure at 445 N(100lb.) pedal load [kPa (psi)]			Single: 9584 (1390), Tandem: 12750 (1850)	
Lining clearance		F/R	No major adjustment	
Brake lining	Front Wheel	Bonded or riveted (rivets/seq.)		Riveted, 6 / shoe
		Rivet size		7.54 (0.297) dia. x 8.48 (0.334)
		Manufacturer		Bendix
		Lining code *****		BX - HH - EE
		Material		Semi - metallic, non - asbestos
		****	Primary or outboard	5918 mm ² x 11.3 (9.17 in ² x 0.445)
		Size	Secondary or inboard	5211 mm ² x 12.95 (8.08 in ² x 0.510)
		Shoe thickness (no lining)		Outer: 4.83 (0.190); Inner: 5.2 (0.205)
	Rear Wheel	Bonded or riveted (rivets/seq.)		Riveted, 10 / shoe
		Manufacturer		Bendix
		Lining code *****		BX-MO-FF
		Material		Rolled asbestos
		****	Primary or outboard	198.56 x 32.5 x 6.65 (7.82 x 1.28 x 0.262)
		Size	Secondary or inboard	198.56 x 32.5 x 6.65 (7.82 x 1.28 x 0.262)
		Shoe thickness (no lining)		2.17 (0.0854)

* 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 & coefficient of friction classification.

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued **9-15-90**

Revised (•) _____

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

APD
L, H

APD
S

Tires And Wheels (Standard)

Tires	Size (load range, ply)		P185/70 R 14, SL	P195/60 R 15, SL
	Type (bias, radial, steel, nylon, etc.)		Steel radial	Steel radial
	Inflation pressure (cold) for recommended max. vehicle load	Front [kPa (psi)]	220 (32)	240 (35)
		Rear [kPa (psi)]	220 (32)	240 (35)
		Rev./mile - at 70 km/h (45 mph)	862	862
Wheels	Type & material		Steel disc	Cast Aluminum
	Rim (size & flange type)		14 x 5.5JJ	15 x 6.0JJ
	Wheel offset		40 (1.6)	40 (1.6)
	Attachment	Type (bolt or stud)	Stud	Stud
		Circle diameter	100 (3.94)	100 (3.94)
		Number & size	5 - M12 x 1.5	5 - M12 x 1.5
Spare	Tire and wheel		T115/70 D14 compact spare 14 x 4.0 T steel disc wheel	
	Storage position & location (describe)		Horizontal - Rear floor pan under cargo floor	

Tires And Wheels (Optional)

Tire size (load range, ply)		
Type (bias, radial, steel, nylon, etc.)		
Wheel (type & material)		Cast aluminum
Rim (size, flange, type and offset)		14 x 6.0, JJ, 40 (1.6)
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)		Same as road tire and wheel Storage same as standard ^(a)

Brakes - Parking

Type of control		Foot operated pedal/hand release lever
Location of control		Lower left end of instrument panel
Operates on		Rear service brake - Std.
If separate from service brakes	Type (internal or external)	
	Drum diameter	
	Lining size (length x width x thickness)	

(a) Not available on convertible

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised(*)

METRIC (U.S. Customary)

Body Type And/ Or
Engine Displacement

14" Wheels

15" Wheels

Steering

Manual (std., opt., n.a.)				N.A.			
Power Steering (std., opt., n.a.)				Std.			
Adjustable steering wheel column (tilt, telescope, other)		Type	Tilt				
		Manufacturer		Chrysler Motors			
		(Std., opt., n.a.)		Opt.			
Wheel diameter** (W9) SAE J1100		Manual		N.A.			
		Power		381 (15)			
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)		--			
		Curb to curb (l. & r.)		11.0 (36.1)	11.03 (36.2)		
	Inside rear	Wall to wall (l. & r.)		--			
		Curb to curb (l. & r.)		--			
Scrub Radius*				- 48.3 (- 1.9)			
Manual	Gear	Type					
		Manufacturer					
		Ratios					Gear
							Overall
No. wheel turns (stop to stop)							
Power	Type (coaxial, elec., hyd., etc.)		Integral power gear				
	Manufacturer		T.R.W.				
	Gear	Type	Rack & pinion with integral power unit				
		Ratios	Gear	45.9 mm / Rev.			
			Overall	16.1:1			
	Pump (drive)		Pulley and belt, off crankshaft				
	no. wheel turns (stop to stop)		2.70				
Linkage	Type		Rack & Pinion (Rod & ball directly attached to gear)				
	Location (front or rear of wheels, other)		Rear of wheels				
	Tie rods (one or two)		Two (tie rod inners integral with rack & pinion gear)				
Steering axis	Inclination at camber (deg.)		12.4° @ .3°				
	Bearings (type)	Upper	Ball bearing				
		Lower	Ball joint				
		Thrust	Ball bearing				
Steering spindle & joint type				ISO strut with lower ball joint			
Wheel spindle/hub	Diameter	Inner bearing		N.A.			
		Outer bearing		N.A.			
	Thread (size)		M22 x 1.5				
	Bearing (type)		Bolt-on, integral hub & bearing unit, double row angular contact ball				

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

**See page 21

ØMVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised (•) _____

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

All

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	Not adjustable; Ref. + 3.0°; Max. side to side differential 1.5°
		Camber (deg.)	- 0.2° - + 0.8°
		Toe-in [outside track - mm(in)]	0.4° Toe-in to 0.2° Toe-out (a)
	Service reset*	Caster	Same as Service Checking
		Camber	+ 0.3° to ± 0.3°
		Toe-in	0.1° toe-in ± 0.1° (a)
Rear wheel at curb mass (wt.)	Periodic M.V. inspection	Caster	Same as Service Checking
		Camber	Same as Service Checking
		Toe-in	Same as Service Checking
	Service checking	Camber (deg.)	- 1.3° to + 0.3°
		Toe-in [outside track - mm(in)]	0.6° Toe-out to 0.6° Toe-in (a)
			- 0.5° ± 0.8° (Shim)
	Service reset*	Toe-in	0° ± 0.6° (shim) (a)
	Periodic M.V. inspection	Camber	Same as Service Checking
		Toe-in	Same as Service Checking

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

ØElectrical - Instruments and Equipment

Speed-ometer	Type (Analog, digital, std., opt.)	Electric/Analog
	Trip odometer (std., opt., n.a.)	Std.
Head-up display	Standard, optional, not available	
	Type	Secondary, opto-electronic
	Speedometer	Digital
	Status/Warning indicators	Turn signals, high beam, low fuel, check gauges
	Brightness control	Day / night mode, adjustable
EGR maintenance indicator		--
Charge indicator	Type	Voltmeter
	Warning device (light, audible)	--
Temp. indicator	Type	Magnetic gage
	Warning device (light, audible)	--
Oil pressure indicator	Type	Light
	Warning device (light, audible)	--
Fuel indicator	Type	Magnetic gage
	Warning device (light, audible)	Light - Opt. with message center - Std. with turbo
Wind-shield wiper	Type (standard)	Electric 2 speed, non-depressed park
	Type (optional)	Electric 2 speed, intermittent wipe
	Blade length	457 (18)
	Swept area [cm ² (in ²)]	5658 (877)
Wind-shield washer	Type (standard)	Electric (arm mounted)
	Type (optional)	Opt.
	Fluid level indicator (light, audible)	--
Rear window wiper, wiper/washer (std., opt., n.a.)		N.A.
Horn	Type	Seashell
	Number used	1
Other		

(a) Measurements in degrees, not inches

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised(•)

METRIC (U.S. Customary)

Engine Description
Engine Code

**2.2L(135.0 in³), TBI-EFI
EDF**

**2.5L (153.0in³), TBI-EFI
EDM**

Electrical - Supply System

Battery	Manufacturer	GNB, Delco, Exide, Johnson Controls	
	Model, std., (opt.)	GRP 34	
	Voltage	12V	
	Amps at 0°F cold crank	500	600
	Minutes-reserve capacity	110	120
	Amp/hrs. - 20 hr. rate	66	
Alternator	Location	Left front fender side shield	
	Manufacturer	Denso	Bosch
	Rating (idle/max. rpm)	90 HS	90 RS
	Ratio (alt. crank/rev.)	2.60 : 1	2.53 : 1
	Output at idle (rpm, park)	N.A.	
	Optional (type & rating)	none	
Regulator	Type	Engine control computer	

Electrical - Starting System

Motor	Manufacturer	Bosch
	Current drain at 0°F	175 - 225 A
	Power rating (kW (hp))	1.1 (1.475)
Motor drive	Engagement type	Solenoid shift
	Pinion engages from (front, rear)	Front

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	N.A.	
	Other (specify)	Engine control computer w/ electronic spark advance	
Coil	Manufacturer	UTC	Diamond
	Model	5234952	5234652
	Current	0.0 A	
		1.9 A	
Spark plug	Manufacturer	Champion	
	Model	RN12YC	
	Thread (mm)	14 mm	
	Tightening torque (N•m (lb-ft))	28 (20)	
	Gap	0.9 (0.035)	
	Number per cylinder	One	
Distributor	Manufacturer	Chrysler	
	Model	5226575	

Electrical Suppression

Locations & type	Resistor spark plugs; Resistance ignition wire, Capacitor - Alternator; Diode - A/C clutch, Horn relay, Starter relay, wiper motor Suppression filter; Ground cable - Engine to dash, Engine mount, A/C evaporator valve to dash, Internal fuel pump filter, Blocking Diode-Clutch relay; Suppression filter-blower motor, radiator fan motor; electric door locks (ring resistor), power mirror (ring varistor).
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MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised(*)

METRIC (U.S. Customary)

Engine Description
Engine Code

**2.5 L (153.0in³), SMPI Turbo
EDT**

Electrical - Supply System

Battery	Manufacturer	Delco, Exide, GNB, Johnson Controls	
	Model, std., (opt.)	GRP 34	
	Voltage	12V	
	Amps at 0°F cold crank	600	
	Minutes-reserve capacity	120	
	Amp/hrs. - 20 hr. rate	66	
	Location	Left front corner of engine compartment	
Alternator	Manufacturer	Denso	Bosch
	Rating (idle/max. rpm)	90 HS	90RS
	Ratio (alt. crank/rev.)	2.60:1	2.53:1
	Output at idle (rpm, park)	N.A.	
	Optional (type & rating)	none	
Regulator	Type	Engine control computer	

Electrical - Starting System

Motor	Manufacturer	Bosch
	Current drain at 0 °F	175 - 225 A
	Power rating [kW (hp)]	1.1 (1.475)
Motor drive	Engagement type	Solenoid shift
	Pinion engages from (front, rear)	Front

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	N.A.
	Other (specify)	Engine control computer w/ electronic spark advance
Coil	Manufacturer	Toyodenso
	Model	5234952
	Current	Engine stopped - A
		Engine idling - A
Spark plug	Manufacturer	Champion
	Model	RN12YC
	Thread (mm)	14 mm
	Tightening torque [N•m (lb-ft)]	28 (20)
	Gap	0.9 (0.035)
	Number per cylinder	One
Distributor	Manufacturer	Chrysler
	Model	5226525

Electrical Suppression

Locations & type	Resistor spark plugs; Resistance ignition wire; Capacitor - Alternator; Diode - A/C clutch, Horn relay, Internal fuel pump filter, Starter relay; Ground cable - Engine to dash, Engine mount, Blocking Diode-Clutch relay; Suppression filter-wiper motor, blower motor, radiator fan motor; electric door lock (ring resistor), power mirror (ring varistor).
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MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued **9-15-90**

Revised(*)

Body Type

All

Body

Structure	Unibody unitized construction with bolt on front suspension crossmember
Bumper system front - rear	Front: TPO fascia Ultra high strength steel reinforcement w/elastomeric energy absorbers Rear: TPO fascia Ultra high strength steel reinforcement w/elastomeric energy absorbers
Anti-corrosion treatment	Full immersion zinc phosphate conversion coating Full immersion, high build, epoxy cathodic-electrocoat primer Extensive use of galvanized steel Urethane chip resistant primer on lower exterior surfaces

Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	Enamel - Universal base coat / Clear coat	
Hood	Material & mass	19.3 (42.6)
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Counterbalance, clockspring
	Release control (internal, external)	Internal cable
Trunk lid	Material & mass	--
	Type (counterbalance, other)	--
	Internal release control (elec., mech., n.a.)	--
Hatch-back lid	Material & Mass	15.7 (34.7)
	Type (counterbalance, other)	Gas pressurized struts
	Internal release control (elec., mech., n.a.)	External key,all; internal mechanical cable, all except "America"
Tailgate	Material & mass	--
	Type (drop, lift, door)	--
	Internal release control (elec., mech., n.a.)	--
Vent window control (crank, friction, pivot, power)	Front	None
	Rear	None
Window Regulator type (cable, tape, flex, drive, etc.)	Front	Manual & Electric arm & sector
	Rear	Manual arm & sector / Electric - Flex Drive
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam, etc.)	Front	Bucket - Flex-O-Lator Mat
	Rear	Bench - Full volume Foam
	3 rd seat	--
Seat back type (e.g., 60/40, bucket, bench, wire, foam, etc.)	Front	Bucket - Flex-O-Lator Mat
	Rear	50/50 full foam - std. 24/44 :Bench- full foam- Std. 27& " America"
	3 rd seat	--

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued **9-15-90**

Revised (●)

METRIC (U.S. Customary)

Body Type

All

Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.)	First seat	Lap & shoulder belt Std.	N.A.	Lap & shoulder belt Std.
		Second seat	Lap & Shoulder belt Std.	Lap belt Std. (J-21) N. A. (J-27)	Lap & Shoulder belt Std.
	Standard/Optional	Third seat	N.A.	N.A.	N.A.
Passive	Type & description (air bag, motorized - 2-point belt, fixed belt, knee bolster, manual - lap belt)	First seat	Air bag & Knee bolster Std.	N.A.	N.A.
		Second seat	N.A.	N.A.	N.A.
	Standard/Optional	Third seat	N.A.	N.A.	N.A.

Glass	SAE Ref. No.	24 - 2 Door	44 - 4 Door	27 - 2 Convertible
Windshield glass exposed surface area [cm ² (in ²)]	S1	7595 (1177)		
Side glass exposed surface area [cm ² (in ²)] - total 2 sides	S2	9352 (1450)	9952 (1543)	5367 (832)
Backlight glass exposed surface area [cm ² (in ²)]	S3	4462 (692)	4462 (692)	1845 (286)
Total glass exposed surface area [cm ² (in ²)]	S4	21409 (3318)	22009 (3411)	14431(2237) Glass only 16276 (2523) Total
Windshield glass (type)		Laminated safety glass		
Side glass (type)		Heat treated safety glass		
Backlight glass (type)		Heat treated safety glass		ULTRALITE® Plastic

Lamps and Headlamps Locations

Headlamps	Description - sealed beam, halogen, replaceable bulb, etc.	Replaceable bulb	
	Shape	Aero	
	Lo-beam type (2A1, 2B1, 2C1, etc.)	9004	
	Quantity	2	
	Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	9004	
	Quantity	2	(part of low beam)

Frame

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

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised (●)

METRIC (U.S. Customary)

Body Type

All

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

Air conditioning (manual, auto. temp control)

Manual - Opt.

Clock (digital, analog)

Digital (In radio) - Std. (H & S), Opt on lowline

Compass/thermometer

In overhead console, Opt. on H24/44, S24/44

Console (floor, overhead)

Floor - Mini - Std.; Full - Opt. N. A. on lowline

Defroster, elec. backlight

Opt. N. A. on lowline

Diagnostic monitor (integrated, individual)

N.A.

Instrument cluster (list instruments)

N.A.

Keyless entry

N.A.

Electronic Tripminder (avg. spd., fuel)

N.A.

Voice alert (list items)

N.A.

Other

N.A.

N.A.

Fuel door lock (remote, key, electric)

N.A.

Auto head on / off delay, dimming

N.A.

Cornering

N.A.

Courtesy (map, reading)

N.A.

Door lock, ignition

Door lock - N.A.; Ignition - Std.

Engine compartment

Opt.

Lamps

Fog

Opt.

Glove compartment

Opt.

Trunk

Opt.

Illuminated entry system (list lamps, activation)

N.A.

Other

Ash receiver - Opt.

Day / night (auto. man.)

Manual - Std.

L.H. (remote, power, heated)

Remote manual - Std. / Power - Opt. N. A. on lowline

R.H. (convex, remote, power, heated)

Remote manual - Opt. / Power - Opt. N. A. on lowline

Visor vanity (RH/LH, illuminated)

RH/LH Non-illuminated - Std. / RH/LH illuminated - Opt. N. A. on lowline

Navigation system (describe)

N.A.

Parking brake-auto release (warning light)

Warning light - Std.

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991**

Issued **9-15-90**

Revised (●)

METRIC (U.S. Customary)

Model Code

All

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

Power Equipment	Deck lid (release, pull down)		N.A.
	Door locks (manual, automatic, describe system)		Manual - Opt. H, S; N.A. L
	Seats	2 - 4 - 6 way, etc.	6 way - Opt. H, S; N.A. L
		Reclining (R.H., L.H.)	N.A.
		Memory (R.H., L.H., preset, recline)	N.A.
		Lumbar, hip, thigh, support	N.A.
		Heated (R.H., L.H., other)	N.A.
	Side windows		Opt. H, S; N.A. L
	Vent windows		N.A.
	Rear windows		Opt. on 4-door only, N.A. L
Radio systems	Antenna (location, whip, w/shield, power)		Whip - Right front fender - Std. AM/FM/MX/ETR, H, S only
	Std.		
	Opt.	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep pkg., headphone jacks, etc.	AM/FM/MX/ETR, L only FM/MX/ETR w/Cassette Infinity I - Premium AM stereo/FM/MX w/Cassette - H, S only
	Speaker (number, location)		2, front doors - Std. H, S; Opt. L 2, front doors / 2, rear shelf - Opt. 2 ea., coaxial, equalized, front doors and rear shelf - Opt. w/ Infinity I
	Roof open air fixed (flip-up, sliding, "T")		Flip-up - removable - Opt., N.A. on lowline
Speed control device		Opt. H, S; N.A. L	
Speed warning device (light buzzer, etc.)		N.A.	
Tachometer (rpm)		Opt.	
Telephone system (describe)		N.A.	
Theft deterrent system		Inside hood release, Anti-theft labels- Std.	

Trailer Towing

Towing capable (Yes / No)	Yes (1)	Yes (1)	Yes (1)	Yes (1)	No (1)(2)
Engine/ transmission / axle	2.2 MTX	2.2 ATX	2.5 MTX	2.5 ATX	2.5 Turbo MTX & ATX
Tow Class (I, II, III)*	I	I	I	I	--
Max. Gross trailer wgt. (lbs.)	1,000	1,500	1,000	2,000	--
Max. trailer tongue load (lbs.)	100	150	100	200	--
Towing Package available (Yes / NO)	No	No	No	No	No

*Class I 2,000 lbs.
Class II 3,500 lbs.
Class III 5,000 lbs.

(1) Trailer towing not permitted on Convertible.
(2) Trailer Towing not permitted with Turbocharged engines.

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised(•) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for Definitions

All dimensions to ground are for comparative purposes only. Dimensions are to be shown for all base body models of each 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.	24	44
-----------	--------------	----	----

ØWidth

Tread (front)	W101	1462 (57.6)	
Tread (rear)	W102	1453 (57.2)	
Vehicle width	W103	1710 (67.3)	
Body width at SgRP (front)	W117	1708 (67.2)	
Vehicle width (front doors open)	W120	4074 (160.4)	3431 (135.1)
Vehicle width (rear doors open)	W121		3297 (129.8)
Tumble-home (deg.)	W122	24°	
Outside mirror width	W410	1838 (72.4)	

ØLength

Wheelbase	L101	2469 (97.2)	
Vehicle length	L103	4361 (171.7)	
Overhang (front)	L104	968 (38.1)	
Overhang (rear)	L105	924 (36.4)	
Upper structure length	L123	2413 (95)	
Rear wheel C/L "X" coordinate	L127	2552 (100.5)	

ØHeight*

Passenger distribution (front/rear)	PD 1,2,3	2 - Front 3 - Rear	
Trunk/cargo load		--	
Vehicle height	H101	1346 (53.0)	
Cowl point to ground	H114	935 (36.8)	
Deck point to ground	H138	933 (36.7)	
Rocker panel front to ground	H112	211 (8.3)	
Rocker panel rear to ground	H111	182 (7.2)	
Windshield slope angle	H122	56°	
Backlight slope angle	H121	54°	

Ground Clearance

Front bumper to ground	H102	251 (9.9)	
Rear bumper to ground	H104	249 (9.8)	
Bumper to ground (front at curb mass (wt.))	H103	267 (10.5)	
Bumper to ground (rear at curb mass (wt.))	H105	320 (12.6)	
Angle of approach (degrees)	H106	16°	
Angle of departure (degrees)	H107	16°	
Ramp breakover angle (degrees)	H147	12°	
Axle differential to ground (front/rear)	H153	Front 141 (5.6)	
Min. running ground clearance	H156	117 (4.6)	
Location of min. run. ground clearance		Frnt. Susp. C'mbr. Brkt. (left hand side)	

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

Manufacturer's Design Load Weight is defined with indicated passenger distribution and trunk/cargo load, unless otherwise specified.

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

MVMA Specifications

Vehicle Line **DODGE SHADOW**

Model Year **1991** Issued **9-15-90** Revised(*)

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for Definitions

All dimensions to ground are for comparative purposes only. Dimensions are to be shown for all base body models of each 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.	27
-----------	--------------	----

ØWidth

Tread (front)	W101	1462 (57.6)
Tread (rear)	W102	1453 (57.2)
Vehicle width	W103	1710 (67.3)
Body width at SgRP (front)	W117	1708 (67.2)
Vehicle width (front doors open)	W120	4074 (160.4)
Vehicle width (rear doors open)	W121	N.A.
Tumble-home (deg.)	W122	24°
Outside mirror width	W410	--

ØLength

Wheelbase	L101	2469 (97.2)
Vehicle length	L103	4361 (171.7)
Overhang (front)	L104	968 (38.1)
Overhang (rear)	L105	924 (36.4)
Upper structure length	L123	2413 (95)
Rear wheel C/L "X" coordinate	L127	2552 (100.5)

ØHeight*

Passenger distribution (front/rear)	PD 1,2,3	2 - Front 2 - Rear
Trunk/cargo load		--
Vehicle height	H101	1373 (54.1)
Cowl point to ground	H114	938 (36.9)
Deck point to ground	H138	940 (37.0)
Rocker panel front to ground	H112	214 (8.4)
Rocker panel rear to ground	H111	188 (7.4)
Windshield slope angle	H122	56°
Backlight slope angle	H121	54°

Ground Clearance

Front bumper to ground	H102	252 (9.9)
Rear bumper to ground	H104	257 (10.1)
Bumper to ground [front at curb mass (wt.)]	H103	267 (10.5)
Bumper to ground [rear at curb mass (wt.)]	H105	320 (12.6)
Angle of approach (degrees)	H106	16°
Angle of departure (degrees)	H107	16°
Ramp breakover angle (degrees)	H147	12°
Axle differential to ground (front/rear)	H153	Front 117 (4.6) / Rear 100 (3.9)
Min. running ground clearance	H156	116 (4.6)
Location of min. run. ground clearance		Frt. Susp. C'mbr. Brkt. (left hand side)

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

Manufacturer's Design Load Weight is defined with indicated passenger distribution and trunk/cargo load, unless otherwise specified.

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

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Vehicle Dimensions See Key Sheets for definitions

Body Type

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Ø Front Compartment

SAE
Ref.
No.

SgRP front, "X" coordinate	L31	1398 (55.0)	←
Effective head room	H61	973 (38.3)	←
Max. eff. leg room (accelerator)	L34	1055 (41.5)	←
SgRP to heel point	H30	271 (10.7)	←
SgRP to heel point	L53	841 (33.1)	←
Back angle	L40	24.5°	←
Hip angle	L42	96°	←
Knee angle	L44	123°	←
Foot angle	L46	87°	←
Design H-point front travel	L17	197 (7.8)	←
Normal driving & riding seat track trvl.	L23	178 (7.0)	←
Shoulder room	W3	1382 (54.4)	1390 (54.7)
Hip room	W5	1404 (55.3)	1408 (55.4)
Upper body opening to ground	H50	1229 (48.4)	←
Steering wheel maximum diameter*	W9	381 (15.0)	←
Steering wheel angle	H18	25.8°	←
Accelerator heel pt. to steer. whl. cntr.	L11	497 (19.6)	←
Accelerator heel pt. to steer. whl. cntr.	H17	637 (25.1)	←
Undepressed floor covering thickness	H67	22 (0.9)	←

Ø Rear Compartment

SgRP couple distance	L50	740 (29.1)	←
Effective head room	H63	949 (37.4)	←
Min. effective leg room	L51	864 (34.0)	←
SgRP (second to heel)	H31	281 (11.1)	←
Knee clearance	L48	-25 (-1.0)	-24 (-0.9)
Shoulder room	W4	1334 (52.5)	1384 (54.5)
Hip room	W6	1206 (47.5)	1136 (44.7)
Upper body opening to ground	H51	NA	1226 (48.3)
Back angle	L41	25°	←
Hip angle	L43	83°	←
Knee angle	L45	84°	←
Foot angle	L47	119°	←
Depressed floor covering thickness	H73	13 (0.5)	←

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	NA
Liftover height	H195	751 (29.6)

Interior Volumes (EPA Classification)

Vehicle Class	Compact	←
Interior volume index (cu. ft.)**	101.9	101.8
Trunk / cargo index (cu. ft.)	13.2	13.1

* See p. 14

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

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Vehicle Dimensions: See Key Sheets for definitions

Body Type

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Ø Front Compartment

SAE
Ref.
No.

SgRP front, "X" coordinate	L31	1398 (55.0)
Effective head room	H61	1013 (39.9)
Max. eff. leg room (accelerator)	L34	1055 (41.5)
SgRP to heel point	H30	271 (10.7)
SgRP to heel point	L53	841 (33.1)
Back angle	L40	24°
Hip angle	L42	96°
Knee angle	L44	123°
Foot angle	L46	87°
Design H-point front travel	L17	197 (7.8)
Normal driving & riding seat track trvl.	L23	178 (7.0)
Shoulder room	W3	1384 (54.5)
Hip room	W5	1344 (52.9)
Upper body opening to ground	H50	1246 (49.1)
Steering wheel maximum diameter*	W9	381 (15.0)
Steering wheel angle	H18	25.8°
Accelerator heel pt. to steer. whl. cntr.	L11	497 (19.6)
Accelerator heel pt. to steer. whl. cntr.	H17	637 (25.1)
Undepressed floor covering thickness	H67	22 (0.9)

Ø Rear Compartment

SgRP couple distance	L50	685 (27.0)
Effective head room	H63	955 (37.6)
Min. effective leg room	L51	998 (39.3)
SgRP (second to heel)	H31	276 (10.9)
Knee clearance	L48	- 57 (-2.2)
Shoulder room	W4	1082 (42.6)
Hip room	W6	1087 (48.8)
Upper body opening to ground	H51	N.A.
Back angle	L41	11°
Hip angle	L43	64.5°
Knee angle	L45	70°
Foot angle	L47	110°
Depressed floor covering thickness	H73	13 (0.5)

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	N.A.
Liftover height	H195	751 (29.6)

Interior Volumes (EPA Classification)

Vehicle Class		Compact
Interior volume index (cu. ft.)**		8.7
Trunk / cargo index (cu. ft.)		91.2

* See p. 14

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

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Vehicle Dimensions See Key Sheets for Definitions

Body Type

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Station Wagon - Third Seat

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

Station Wagon - Cargo Space

Cargo length (open front)	L200	
Cargo length (open second)	L201	
Cargo length (closed front)	L202	
Cargo length (closed second)	L203	
Cargo length at belt (front)	L204	
Cargo length at belt (second)	L205	
Cargo width (wheelhouse)	W201	
Rear opening width at floor	W203	
Opening width at belt	W204	
Min. rear opening width above belt	W205	
Cargo height	H201	
Rear opening height	H202	
Tailgate to ground height	H250	
Front seat back to load floor height	H197	
Cargo volume index [m ³ (ft. ³)]	V2	
Hidden cargo volume [m ³ (ft. ³)]	V4	
Cargo volume index-rear of 2 nd -seat	V10	

Hatchback - Cargo Space

Cargo length at front seatback height	L208	928 (36.5)	
Cargo length at floor (front)	L209	1602 (63.1)	
Cargo length at second seatback height	L210	270 (10.6)	
Cargo length at floor (second)	L211	880 (34.6)	
Front seatback to load floor height	H197	560 (22.0)	
Second seatback to load floor height	H198	489 (19.3)	
Cargo volume index[m ³ (ft. ³)]	V3	0.943 (33.29)	0.935 (33.03)
Hidden cargo volume [m ³ (ft. ³)]	V4		
Cargo volume index-rear of 2 nd -seat	V10	0.375 (13.25)	0.372 (13.15)

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Body Type

All

Vehicle Fiducial Marks

Fiducial Mark Number*		Define Coordinate Location
Front		The center of gauge holes located in front / rear longitudinal approximately 836 mm (32.9 in.) from centerline of front wheels.
Rear		The center of gauge holes located in rear longitudinal approximately 3057 mm (120.4 in) from the centerline of front wheels.
Front	W21	433.5 (17.1)
	L54	925 (36.4)
	H81	-9 (-0.35) Bottom surface of Longitudinal
	H161	
	H163	
Rear	W22	527.6 (20.8)
	L55	3146 (123.9)
	H82	235 (9.3) Bottom Surface of Longitudinal
	H162	
	H164	

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

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[illegible]

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

****ETWC - Equivalent Test Weight Class - basis for U.S. Environmental Protection Agency emission certification.**

Refer to ETWC code legend below for test weight class.

ETWC LEGEND

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

***Shipping Mass (weight) = Curb Weight less:

30 kg. (66 lbs.)

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Estimated**Optional Equipment Differential Mass (weight)***[illegible]

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