

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC(U.S. Customary)

Passenger Car

1987

Manufacturer Dr. Ing. h. c. F. Porsche Aktiengesellschaft	Car Line 4-cylinder (944 turbo)
Mailing Address Porschestraße 42 D-7000 Stuttgart-40	Issued
	Revised

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

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

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Motor Vehicle Manufacturers Association
of the United States, Inc.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

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NOTE:

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

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Car Models

Model Description & Drive (FWD/RWD)	Introduction Date	Make, Car Line, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load—Kilograms (Pounds)
*) 944 turbo	5/85	951	2/2	
*) rear wheel drive (front engine, rear transaxle)				

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Power Teams (Indicate whether standard or optional)

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

SERIES AVAILABILITY	ENGINE					E x h a u s t S/D	TRANSMISSION/ TRANSAXLE	AXLE RATIO (std. first)
	Displ. Liters (in³)	Carb. (Barrels, FI, etc.)	Compr. Ratio	SAE Net at RPM				
				Power kW (bhp)	Torque N · m (lb. ft.)			
944 turbo	2.5 1	DME	8.0	162 (217) 5800	330 3500	1)	manual 5-speed	3.375:1
944 turbo sport package	2.5 1	DME		184 (250) 6000	350 4000	1)	manual 5-speed	3.375:1
1) unleaded	RON/MON	95/85						

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Engine Description/Carb.
Engine Code

944 turbo

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	4-stroke 4-cylinder SI engine, inclined, longitudinally, front
Manufacturer	Porsche
No. of cylinders	4
Bore	100
Stroke	78.9
Bore spacing (C/L to C/L)	122
Cylinder block material & mass kg (lbs.) (machined)	lower part: GD-AlSi8Cu3 / upper part: GK-AlSi17Cu4MG
Cylinder block deck height	235, upper part
Cylinder block length	
Deck clearance (minimum) (above or below block)	
Cylinder head material & mass kg (lbs.)	GK-AlSi6Cu4 Al-alloy
Cylinder head volume (cm ³)	58 ± 1
Cylinder liner material	
Head gasket thickness (compressed)	1.0
Minimum combustion chamber total volume (cm ³)	88.54
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.))**	
Exhaust manifold material & mass (kg (lbs.))**	
Recommended fuel (leaded, unleaded, diesel)	unleaded
Fuel antiknock index (R + M) 2	RON/MON 95/85
Total dressed engine mass (wt) dry***	182

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Al-alloy 523
--	-----------------

Engine - Camshaft

Location	ohc
Material & mass kg (weight, lbs.)	clear chill casting 4,5
Drive type	Chain / belt toothed belt
	Width / pitch 19.0 / 9.525

* 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: complete equipment

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Engine - Valve System

Hydraulic lifters (std., opt., NA)	std.
Valves	Number intake / exhaust
	4/4
	Head O.D. intake / exhaust
	45/40

Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))	steel, sintered, forged, 0.8
---------------------------------------	------------------------------

Engine - Crankshaft

Material & mass (kg., (weight, lbs.))	49 Mn VS 3, forged, 24.2
End thrust taken by bearing (no.)	
Number of main bearings	5
Seal (material, one, two piece design, etc.)	Front
	Rear

Engine - Lubrication System

Normal oil pressure [kPa (psi) at engine rpm]	80-800 min, 350 at 6000 min ⁻¹ and T = 90°C
Type oil intake (floating, stationary)	forced-feed lubrication with gear pump
Oil filter system (full flow, part, other)	full flow
Capacity of c/case, less filter-refill-L (qt.)	6.5 including filter

Engine - Diesel Information

n.a.

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	KKK
Super charger - manufacturer	
Charge cooler	Längerer & Reich

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Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		std.
Coolant fill location (rad., bottle)		bottle
Radiator cap relief valve pressure [kPa (psi)]		150
Circulation thermostat	Type (choke, bypass)	bypass
	Starts to open at °C (°F)	83°C
Water pump	Type (centrifugal, other)	centrifugal
	GPM 1000 pump rpm	
	Number of pumps	1
	Drive (V-belt, other)	toothed belt
	Bearing type	roller bearing
	Impeller material	
Housing material		Al-alloy
By-pass recirculation (type (inter., ext.))		internal
Cooling system capacity	With heater-L[qt.]	
	With air cond.-L[qt.]	8.5
	Opt. equipment [specify-L[qt.]]	
Water jackets full length of cyl. (yes, no)		yes
Water all around cylinder (yes, no)		yes
Water jackets open at head face (yes, no)		
Radiator core	Std., A/C, HD	air condition
	Type (cross-flow, etc.)	cross-flow
	Construction (fin & tube mechanical, braze, etc.)	tubes and fins
	Material, mass (kg (wgt. lbs.))	Aluminum
	Width	355.2
	Height	500
	Thickness	45
Fins per inch		
Radiator end tank material		
Fan	Std., elec., opt.	2 electric
	Number of blades & type (flex, solid, material)	2x6
	Diameter & projected width	dia: 280
	Ratio (fan to crankshaft rev.)	n.a.
	Fan cutout type	
	Drive type (direct, remote)	remote
	RPM at idle (elec.)	
	Motor rating (wattage) (elec.)	
	Motor switch (type & location) (elec.)	bottom of radiator core
	Switch point (temp., pressure) (elec.)	87°C - 92°C
Fan shroud (material)		plastic (PPN)

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944 Turbo

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

Induction type: carburetor, fuel injection system, etc.		digital engine electronics (DME) (L-Jetronic)	
Carburetor	Mfgr.	n.a.	
	Choke (type)	n.a.	
	Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	n.a.
			n.a.
		Automatic	n.a.
		n.a.	
Idle A/F mix.		$\lambda = 1$	
Fuel injection	Point of injection (no.)	cylinder head	
	Constant, pulse, flow	pulse	
	Control (electronic, mech.)	electronic	
	System pressure (kPa (psi))	pressure difference approx. 250 minus manifold vacuum	
Intake manifold heat control (exhaust or water thermostatic or fixed)		fixed	
Air cleaner type	Standard	paper filter	
	Optional	n.a.	
Fuel pump	Type (elec. or mech.)	electric	
	Location (eng., tank)	tank	
	Pressure range (kPa (psi))	300	

Fuel Tank

Capacity (refill L (gallons))		80
Location (describe)		on rear axle
Attachment		4 clamping straps with plate
Material & Mass (kg (weight lbs))		plastic
Filler pipe	Location & material	rear quarter panel
	Connection to tank	plastic
Fuel line (material)		steel
Fuel hose (material)		rubber with fabric insert
Return line (material)		steel
Vapor line (material)		steel/rubber
Extended range tank	Opt., n.a.	n.a.
	Capacity [L (gallons)]	n.a.
	Location & material	n.a.
	Attachment	n.a.
Auxiliary tank	Opt., n.a.	n.a.
	Capacity [L (gallons)]	n.a.
	Location & material	n.a.
	Attachment	n.a.
	Selector switch or valve	n.a.
	Separate fill	n.a.

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Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		3-way catalyst with heated oxygen sensor	
	Air Injection	Pump or pulse	n.a.	
		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)	n.a.	
		Exhaust source	n.a.	
		Point of exhaust injection (spacer, carburetor, manifold, other)	n.a.	
	Catalytic Converter	Type	3-way	
		Number of	1	
		Location(s)	underfloor	
		Volume [L (in³)]	4	
	Crankcase Emission Control	Substrate type		ceramic monolith
		Type (ventilates to atmosphere, induction system, other)		above oil separator between throttle housing and air flow meter
Energy source (manifold vacuum, carburetor, other)		manifold vacuum		
Discharges (to intake manifold, other)		see above		
Evaporative Emission Control	Air inlet (breather cap, other)			
	Vapor vented to (crankcase, canister, other)	Fuel tank	char coal filter	
		Carburetor	n.a.	
Electronic system	Vapor storage provision		char coal filter	
	Closed loop (yes/no)		yes	
	Open loop (yes/no)		no	

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		dual-tube manifold, catalyst, back muffler
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		1 (straight thru)
Resonator no. & type		
Exhaust pipe	Branch o.d., wall thickness	48x1.5
	Main o.d., wall thickness	65x1.5
	Material & Mass [kg (weight lbs)]	stainless steel (1.4512)
Inter- mediate pipe	o.d. & wall thickness	65x1.5
	Material & Mass [kg (weight lbs)]	see above
Tail pipe	o.d. & wall thickness	65x1.5
	Material & Mass [kg (weight lbs)]	see above

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Engine Description/Carb.
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Transmissions/Transaxle

rear transmission

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

Manual Transmission/Transaxle

Number of forward speeds		5	
Transmission ratios	In first	3.500	
	In second	2.059	
	In third	1.400	
	In fourth	1.034	
	In fifth	0.829	
	In overdrive	n.a.	
	In reverse	3.500	
Synchronous meshing (specify gears)		all forward speeds and reverse	
Shift lever location		at "transaxle" tube	
Lubricant	Capacity [L (pt.)]		2.0, differential included
	Type recommended		hypoid oil SAE 80 according to MIL-L 2105
	SAE viscosity number	Summer	80
		Winter	80
		Extreme cold	80

Clutch (Manual Transmission)

Make, type, engagement (describe) - (hydraulic, cable, rod)		dry single-plate clutch, engine-end
Assist (yes, no / percent)		
Type pressure plate springs		diaphragm spring, drawn
Total spring load [N (lb.)]		8700 - 9500
No. of clutch driven discs		1
Clutch facing	Material	Thermoid 505, non-asbestos *)
	Manufacturer	Porter
	Part number	
	Rivets/plate	8/plate
	Rivet size	
	Outside & inside dia.	240/160
	Total eff. area [cm ² (in. ²)]	251.3
	Thickness	
Release bearing	Engagement cushion method	hydraulic via clutch lever and clutch release bearing - diaphragm spring tongues
	Type & method of lubrication	centered on guide tube, deep groove ball bearing, permanent lubrication, sealed
Torsional damping	Method: springs, friction material	steel spring

*) thermoid 505 optional

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Automatic Transmission/Transaxle n.a.

Trade name		
Type and special features (describe)		
Selector	Location	
	Ltr./No. designation	
Gear ratios	1st	
	2nd	
	3rd	
	4th	
	Reverse	
Max. upshift speed - drive range [km/h (mph)]		
Max. kickdown speed - drive range [km/h (mph)]		
Min. overdrive speed [km/h (mph)]		
Torque converter	Number of elements	
	Max. ratio at stall	
	Type of cooling (air, liquid)	
	Nominal diameter	
Lubricant	Capacity (refill L (pt.))	
	Type Recommended	
Oil cooler (std., opt., NA, internal, external, air, liquid)		

Axle or Front Wheel Drive Unit

Type (front, rear)		rear	
Description		integrated with gear box	
Limited slip differential (type)		40 % locking ratio (option)	
Drive pinion offset			
Drive pinion (type)		spiral gears (Palloid)	
No. of differential pinions		2	
Pinion / differential adjustment (shim, other)			
Pinion / differential bearing adjustment (shim, other)			
Driving wheel bearing (type)		taper roller bearing	
Lubricant	Capacity (L (pt.))	see manual transmission	
	Type recommended	see manual transmission	
	SAE viscosity number	Summer	see manual transmission
		Winter	
		Extreme cold	see manual transmission

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

Axle ratio (or overall top gear ratio)		n.a.
No. of teeth	Pinion	8
	Ring gear or gear	27
Ring gear o.d.		188
Transaxle	Transfer gear ratio	n.a.
	Final drive ratio	3.375:1

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Propeller Shaft – Rear Wheel Drive *)

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

*) All types front engine and rear transaxle, connected by a central tube with inner central shaft
* Centerline to centerline of universal joints, or to centerline of rear attachment.

Dimensions: central tube 85 x 4 (mm)
central shaft 25 Ø (mm)

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Body Type And/Or
Engine Displacement

944 turbo

944 turbo
sport package

Suspension - General

Car leveling	Std./opt./n.a.	n.a.
	Type (air, hyd., etc.)	n.a.
	Manual/auto. controlled	n.a.
Provision for brake dip control		n.a.
Provision for accel. squat control		n.a.
Provisions for car jacking		2 mountings for jacking 4 mountings for lift platform
Shock absorber (front & rear)	Type	hydraulic shock absorbers rebound and compression adjustable
	Make	front/rear: F&S front/rear: Koni
	Piston diameter	front: 32 / rear: 30
	Rod diameter	front: 22 / rear: 1 front: 22 / rear: 15,7

Suspension - Front

Type and description		Mc Pherson	
Travel	Full jounce	85 mm	adjustable
	Full rebound	90 mm	adjustable
Spring	Type (coil, leaf, other) & material	coil, 55 Cr3	coil, 55 Cr3
	Insulators (type & material)	rubber	
	Size (coil design height & i.d., bar length x dia.)	wire diameter: 12.0 mm coil diameter: 110.0 mm	Ø 8.52 - Ø 14.0 mm Ø 103.64 - Ø 123.7mm
	Spring rate (N/mm (lb./in.))	21.8	35 - 65
	Rate at wheel (N/mm (lb./in.))	21.6	32.3 - 60
Stabilizer	Type (link, linkless, frameless)		
	Material & bar diameter	tube 24x3.7	tube 30x4.5

Suspension - Rear

Type and description		independent wheel suspension at semi-trailing arms	
Travel	Full jounce	109 mm	adjustable
	Full rebound	80 mm	adjustable
Spring	Type (coil, leaf, other) & material	torsion bar, 50 CrV4	Ø 25.5
	Size (length x width, coil design height & i.d., bar length & dia.)	torsion bar: 676x23.5	with additional coil spring Ø 8.02 - Ø 10.5
	Spring rate (N/mm (lb./in.))		torsion bar 31.0 coil spring 34-65
	Rate at wheel (N/mm (lb./in.))	22.5	45.5 - 58.5
	Insulators (type & material)	rubber	
	if leaf	No. of leaves Shackle (comp. or tens.)	n.a.
Stabilizer	Type (link, linkless, frameless)		
	Material & bar diameter	18.0	Ø 21 strength adjustable
Track bar (type)		n.a.	

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Body Type And/Or
Engine Displacement

944 turbo

944 turbo
sport package

Brakes - Service

Description		hydraulic dual circuit brake system, one circuit per axle		
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)	disc		
	Rear (disc or drum)	disc		
Self-adjusting (std., opt., n.a.)		std.		
Special valving	Type (proportion, delay, metering, other)	pressure-proportioning brake force regulator		
Power brake (std., opt., n.a.)		vacuum booster		
Booster type (remote, integral, vac., hyd., etc.)		manifold vacuum		
Vacuum source (inline, pump, etc.)				
Vacuum reservoir (volume in. ³)				
Vacuum pump-type (elec. gear driven, belt driven, if other so state)				
Anti-lock device type (std., opt., n.a.) (F/R)		ABS-system option		
Effective area [cm ² (in. ²)]*		164/164		
Gross lining area [cm ² (in. ²)]** (F/R)				
Swept area [cm ² (in. ²)]*** (F/R)		3.190		
Rotor	Outerworking diameter	F/R	298/299	
	Inner working diameter	F/R	195/196.5	
	Thickness	F/R	28/24	
	Material & type (vented/solid)	F/R	cast iron - internally vented	
Drum	Diameter & width	F/R	n.a.	
	Type and material	F/R		
Wheel cylinder bore		F: 38/36 / R: 30/28 F: 40/36 / R: 30/28		
Master cylinder	Bore/stroke	F/R	23.81/19.05-15/17	
Pedal arc ratio		4.93		
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]		9800		
Lining clearance		F/R		
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		bonded
		Rivet size		
		Manufacturer		Jurid altern. Jurid Jurid
		Lining code*****		238 502 238
		Material		asbest.-cont. non-asbestos asbest.-cont.
		****	Primary or out-board *	95.8x49.2x12.6
		Size	Secondary or in-board	
		Shoe thickness (no lining)		5.00 mm
		Rear wheel	Bonded or riveted (rivets/seg.)	
	Manufacturer		Jurid altern. Jurid Jurid	
	Lining Code*****		238 502 238	
	Material		asbest.-cont. non asbestos asbest.-cont.	
	****		Primary or out-board *	95.8x49.2x12.6
	Size		Secondary or in-board	
	Shoe thickness (no lining)		5.00 mm	

*Excludes rivet holes, grooves, chamfers, etc.

**Includes rivet holes, grooves, chamfers, etc.

***Total swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact circumference.)
(Disc brake: Square of Outer Working Dia. minus Square of inner Working Dia. multiplied by $\pi/2$ for each brake.)

****Size for drum brakes includes length x width x thickness.

*****Manufacturer I.D., catalog or formulation designation and coefficient of friction classification.

*) Lining dimensions: carrier and damping foil not included

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Body Type And/Or
Engine Displacement

944 turbo

944 turbo
sport package

Tires And Wheels (Standard)

Tires	Size (load range, ply)	F:205/55VR16 / R:225/50VR16	
	Type (bias, radial, etc.)	steel belted radials	
	Inflation pressure (cold) for recommended max. vehicle load	Front (kPa (psi))	2.5 bar
		Rear (kPa (psi))	2.5 bar
	Rev./mile—at 70 km/h (45 mph)		
Wheels	Type & material	Al-alloy castings	
	Rim (size & flange type)	F: 7Jx16 / R: 8Jx16	
	Wheel offset	52.3 mm	
	Attachment	Type (bolt or stud)	stud/anti-theft locking
		Circle diameter	130 mm
		Number & size	5 (M14x1.5)
Spare	Tire and wheel (same, if other describe)	collapsible spare tire 165-15 4 PR 83 P on 5 1/2 Jx15	
	Storage position & location (describe)	upright in front of rear end panel	

Tires And Wheels (Optional)

Size (load range, ply)	205/55VR16 / 225/50VR16		
Type (bias, radial, etc.)	steel belted radials		
Wheel (type & material)	Aluminum forging		
Rim (size, flange type and offset)	7Jx16 / 8Jx16		
Size (load range, ply)		225/50VR16 / 245/45VR16	
Type (bias, radial, etc.)		steel belted radials	
Wheel (type & material)		8Jx16 / 9Jx16	
Rim (size, flange type and offset)		Aluminum forging	
Size (load range, ply)	205/55VR16 / 225/50VR16	225/50VR16 / 245/45VR16	
Type (bias, radial, etc.)	steel belted radials		
Wheel (type & material)	Aluminum-alloy castings	Magnesium castings	
Rim (size, flange type and offset)	7Jx16 / 8Jx16	8Jx16 / 9Jx16	
Size (load range, ply)	205/55 VR 16 / 225/50VR16		
Type (bias, radial, etc.)	steel belted radials		
Wheel (type & material)	Aluminum forging		
Rim (size, flange type and offset)	7Jx16 / 8Jx16		
Spare tire and wheel			
(if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)			

Brakes - Parking

Type of control	manual		
Location of control	left of driver seat		
Operates on			
If separate from service brakes	Type (internal or external)	separate drums at rear wheels	
	Drum diameter	180	
	Lining size (length x width x thickness)	lining area: 85 cm ²	

Body Type And/Or
Engine Displacement

944 turbo

944 turbo
sport package

Steering

Manual (std., opt., n.a.)		std.	
Power (std., opt., n.a.)		n.a.	
Adjustable steering wheel/column (tilt, telescope, other)	Type		
	Manufacturer		
	(Std., opt., n.a.)	n.a.	
Wheel diameter** (W9) SAE J1100	Manual	380	
	Power	380	
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	10.3 10.8
		Curb to curb (l. & r.)	9.5 10.0
	Inside rear	Wall to wall (l. & r.)	
		Curb to curb (l. & r.)	
Scrub Radius*		+ 24.6 mm	
Manual	Gear	Type	rack and pinion
		Manufacturer	ZF
		Ratios	
		Overall	22.39:1 22.39:1 / 18.85:1
	No. wheel turns (stop to stop)		3.84
Power	Type (coaxial, linkage, etc.)		rack and pinion, degressive
	Manufacturer		ZF
	Gear	Type	rack and pinion
		Ratios	
		Overall	18.85:1
Pump (drive)		belt-driven via crankshaft pulley	
No. wheel turns (stop to stop)		3.24	
Linkage	Type		rack and pinion
	Location (front or rear of wheels, other)		in front of front axle
	Tie rods (one or two)		2
Steering axis	Inclination at camber (deg.)		
	Bearings (type)	Upper	ball bearing
		Lower	spherical joint
		Thrust	
Steering spindle & joint type		3-piece steering shaft with 2 universal joints	
Wheel spindle/hub	Diameter	Inner bearing	
		Outer bearing	
	Thread (size)		
	Bearing (type)		ball bearing

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

**See Page 21.

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line 4-cylinder (944 turbo)

Model Year 1987

Issued

Revised (e)

Body Type And/Or
Engine Displacement

944 turbo

944 turbo
sport package

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	-2.5° + 30 min - 15 min
		Camber (deg.)	- 20 min + 15 min max - 2° 30 min
		Toe-in (outside track-mm (in.))	+ 10 min + 5 min (overall)
	Service reset*	Caster	
		Camber	
		Toe-in	
	Periodic M.V. inspection	Caster	
		Camber	
		Toe-in	
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	- 1° + 20 min max - 2° 30 min
		Toe-in (outside track-mm (in.))	0° + 10 min (per wheel)
	Service reset*	Camber	
		Toe-in	
	Periodic M.V. inspection	Camber	
		Toe-in	

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

Electrical – Instruments and Equipment

Speedometer	Type (analog, digital, std., opt.)	electric pointer instrument *)
	Trip odometer (std., opt., n.a.)	std.
EGR maintenance indicator		n.a.
Charge indicator	Type	electric pointer instrument, 45° segment
	Warning device (light, audible)	low-charge warning light
Temperature indicator	Type	electric pointer instrument, 45° segment
	Warning device (light, audible)	high-temperature warning light
Oil pressure indicator	Type	electric pointer instrument, 45° segment
	Warning device (light, audible)	low-pressure warning light
Fuel indicator	Type	electric pointer instrument, 45° segment
	Warning device (light, audible)	low-level warning light
Windshield wiper	Type (standard)	3-speed with variable interval wiping
	Type (optional)	n.a.
	Blade length	475 mm
	Swept area (cm² (in.²))	5630 (65.6 %)
Windshield washer	Type (standard)	electric pump
	Type (optional)	n.a.
	Fluid level indicator (light, audible)	n.a.
Rear window wiper, wiper/washer (std., opt., n.a.)		
Horn	Type	two-tone system
	Number used	1
Other		clock LCD instrument automatic transmission with designation of P-R-N-D-2-1

*) with double scale (mph/km/h)

**MVMA Specifications Form
Passenger Car**

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

Car Line 4-cylinder (944 turbo)

Model Year 1987

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Revised (e) _____

944 turbo

tachometer with charge
pressure indicator

central diagnostic warning device with warning letter
for:

- brake lining wear
- parkbrake engaged
- parking lights
- brake fluid level

fog lights

central warning light

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line 4-cylinder (944 turbo)

Model Year 1987

Issued _____

Revised (•) _____

Engine Description/Carb.
Engine Code

944 turbo

944 turbo
sport package

Electrical - Supply System

Battery	Make	Deta/Varta	
	Model, std., (opt.)	std.	
	Voltage	12 V	
	Amps at 0°F cold crank	300 A at -18°C (DIN 53539)	
	Minutes-reserve capacity		
	Amp/hrs. - 20 hr. rate	63 Ah	
	Location	behind front and plate	
Generator or alternator	Type and rating	14 V-115A-1610 W A.C.	90A - 1260 W
	Ratio (a/t. crank/rev.)	2.3:1	
	Optional (type & rating)	n.a.	
Regulator	Type	Bosch E1 14Y4C	

Electrical - Starting System

Start, motor	Current drain at 0°F	12 V-1.4 kW
Motor drive	Engagement type	positive locking (reduction gear)
	Pinion engages from (front, rear)	from behind, pushing pinion to front

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	std. (Digital Engine Electronics - DME)	
	Other (specify)		
Coil	Make	Bosch	
	Model	no. 0221 188	
	Current	Engine stopped - A	
		Engine idling - A	< 8
Spark plug	Make	Bosch/Champion	
	Model	WR 7 DC/RN 9 YC	
	Thread (mm)	M 14x1.25	
	Tightening torque (N-m (lb. ft))	25-30 Nm	
	Gap	0.7 mm + 0.1 mm	
	Number per cylinder	1	
Distributor	Make	Bosch	
	Model	no. 1235 522	

Electrical - Suppression

Locations & type	Resistor spark plugs
	3 kΩ spark plug connector
	1 kΩ distributor cap domes
	1 kΩ distributor rotor
	1 kΩ distributor cap center dome

MVMA Specifications Form Passenger Car

METRIC (U.S. Customary)

Car Line 4-cylinder (944 turbo)
Model Year 1987 Issued _____ Revised (•) _____

Body Type

944 turbo

Body

Structure	Unitized body construction
Bumper system front - rear	front: Aluminum cross member, PUR soft nose rear: Al-alloy
Anti-corrosion treatment	Hot-dip galvanized steel sheet

Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	acrylic enamel
Hood	Hinge location (front, rear) rear
	Type (counterbalance, prop) counterbalance, gas cylinder assisted
	Release control (internal, external) bowden cable, inner / release key, outer
Trunk lid	Type (counterbalance, other) n.a.
	Internal release control (elec., mech., n.a.) n.a.
Hatch-back lid	Type (counterbalance, other) counterbalance, gas cylinder assisted
	Internal release control (elec., mech., n.a.) electric
Vent window control (crank, friction, pivot, power)	Front n.a. Rear n.a.
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front integrated sheet steel frame, coil springs, foam Rear foam padding 3rd seat n.a.
Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front see seat cushion Rear foam padding 3rd seat n.a.

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

Car Line 4-cylinder (944 turbo)
 Model Year 1987 Issued _____ Revised (•) _____

Body Type

944 turbo

944 turbo
sport package

Restraint System

Active restraint system	Standard/optional	std.
	Type and description	front: 3-point automatic safety belts rear: automatic lap belts
	Location	2 front, 2 rear
Passive seat belts	Standard/optional	std. Airbag n.a.
	Power/manual	system for driver and codriver
	2 or 3 point	n.a.
	Knee bar/lap belt	n.a.

Frame

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

Glass	SAE Ref. No.	
Windshield glass exposed surface area (cm ² (in. ²))	S1	8.400
Side glass exposed surface area (cm ² (in. ²)) - total 2-sides	S2	6.200 (both sides)
Backlight glass exposed surface area (cm ² (in. ²))	S3	13.500
Total glass exposed surface area (cm ² (in. ²))	S4	28.100
Windshield glass (type)		tinted laminated glass, green
Side glass (type)		tinted tempered glass, green
Backlight glass (type)		tinted tempered glass, green

MVMA Specifications Form
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Car Line _____ Model Year 1987 Issued _____ Revised (•) _____

Body Type

944 turbo 944 turbo
sport package

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

Air conditioning (manual, auto, temp control)		std., fully automatic, electronic control	manual heating
Clock (digital, analog)		digital	
Compass / thermometer		n.a.	
Console (floor, overhead)		floor	
Defroster, elec. backlight			
Electronic	Diagnostic monitor (integrated, individual)	see page 15a	
	Instrument cluster (list instruments)	see page 15a	
	Keyless entry	see page 15a	
	Trupminder (avg. spd., fuel)	see page 15a	
	Voice alert (list items)	see page 15a	
	Other	see page 15a	
Fuel door lock (remote, key, electric)		n.a. (cap lockable)	
Lamps	Auto head on / off delay, dimming	n.a.	
	Cornering	n.a.	
	Courtesy (map, reading)	std.	
	Door lock, ignition		
	Engine compartment	std.	
	Fog	std.	
	Glove compartment	std.	
	Trunk	std.	
	Other		
Mirrors	Day/night (auto, man.)	manual	
	L.H. (remote, power, heated)	power, heated	manual
	R. H. (convex, remote, power, heated)	power, heated	manual
	Visor vanity (RH / LH, illuminated)	RH / LH	
Parking brake-auto release (warning light)		n.a.	
Power equipment	Door locks / deck lid - specify	opt. / std.	n.a.
	Seat (2-4-6 way) heated (driver, pass, other) lumbar, hip, thigh support (power, manual) reclining (driver, pass) memory (1-2 preset, recline)	std.: 2-way seat-ver- tical adjustment; opt.: 4-way/sports seat, heating	opt. racing seat
	Side windows	std.	n.a.
	Vent windows	n.a.	
	Rear window	n.a.	
Radio systems	Antenna (location, whip, w shield, power)	windshield antenna	
	AM, FM, stereo, tape, CB	option	n.a.
	Speaker (number, location) Premium sound	2 front, 2 rear	n.a.
Roof open air fixed (flip-up, sliding)		option:	n.a.
Speed control device		opt.: power flip-up, det.	n.a.
Speed warning device (light, buzzer, etc.)		n.a.	
Tachometer (rpm)		std.	
Telephone system - mobile		optional	n.a.
Theft protection-type			

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Car and Body Dimensions See Key Sheets for definitions

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

Body Type

Width

SAE Ref. No.	944 turbo	944 turbo sport package
--------------	-----------	-------------------------

Tread (front)	W101	1477
Tread (rear)	W102	1451
Vehicle width	W103	1735
Body width at Sg RP (front)	W117	1724
Vehicle width (front doors open)	W120	3424
Vehicle width (rear doors open)	W121	n.a.
Front fender overall width	W106	
Rear fender overall width	W107	
Tumble-home (deg.)	W122	

Length

Wheelbase	L101	2400
Vehicle length	L103	4289
Overhang (front)	L104	860
Overhang (rear)	L105	1029
Upper structure length	L123	n.a.
Rear wheel C L "X" coordinate	L127	n.a.
Cowl point "X" coordinate	L125	n.a.
Front end length at centerline	L126	
Rear end length at centerline	L129	

Height*

Passenger distribution (front rear)	PD1.2.3	2/2
Trunk cargo load		n.a.
Vehicle height	H101	1275 (DIN curb weight) adjustable
Cowl point to ground	H114	878
Deck point to ground	H138	n.a.
Rocker panel-front to ground	H112	163
Bottom of door closed-front to grd.	H133	n.a.
Rocker panel-rear to ground	H111	194
Bottom of door closed-rear to grd.	H135	n.a.
Windshield slope angle	H122	
Backlight slope angle	H121	

Ground Clearance*

Front bumper to ground	H102	502
Rear bumper to ground	H104	527
Bumper to ground [front at curb mass (wt.)]	H103	
Bumper to ground [rear at curb mass (wt.)]	H105	
Angle of approach (degrees)	H106	14° 05'
Angle of departure (degrees)	H107	17° 30'
Ramp breakover angle (degrees)	H147	
Axle differential to ground (front rear)	H153	
Min. running ground clearance	H156	120 (at perm. total weight) adjustable
Location of min. run. grd. clear.		

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

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Car and Body Dimensions See Key Sheets for definitions

Car Line 4-cylinder (944 turbo)

Model Year 1987

Issued

Revised (•)

Body Type

SAE
Ref.
No.

944 turbo

Front Compartment

Sg RP front, "X" coordinate	L31	1530
Effective head room	H61	970
Max. eff. leg room (accelerator)	L34	1144
Sg RP to heel point	H30	143
Sg RP to heel point	L53	
Back angle	L40	25°
Hip angle	L42	
Knee angle	L44	
Foot angle	L46	
Design H-point front travel	L17	
Normal driving & riding seat track trvl.	L23	
Shoulder room	W3	1402
Hip room	W5	1338
Upper body opening to ground	H50	1152
Steering wheel maximum diameter	W9	
Steering wheel angle	H18	16° 15'
Accel. heel pt. to steer. whl. cntr	L11	
Accel. heel pt. to steer. whl. cntr	H17	
Steering wheel to C/L of thigh	H13	
Steering wheel torso clearance	L7	
Headlining to roof panel (front)	H37	
Undepressed floor covering thickness	H67	

Rear Compartment

Sg RP Point couple distance	L50	520
Effective head room	H63	826
Min. effective leg room	L51	605
Sg RP (second to heel)	H31	279
Knee clearance	L48	266
Compartment room	L3	385
Shoulder room	W4	1384
Hip room	W6	371 1)
Upper body opening to ground	H51	1153
Back angle	L41	15°
Hip angle	L43	
Knee angle	L45	
Foot angle	L47	
Headlining to roof panel (second)	H38	
Depressed floor covering thickness	H73	

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	184/282 (according to VDA) ²⁾
Liftover height	H195	893

Interior Volumes (EPA Classification)

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

1) up to central tunnel!

2) seat back upright/folded, measured at lower window edge level

MVMA Specifications Form

Passenger Car

METRIC (U.S. Customary)

Car and Body Dimensions

See Key Sheets for definitions

Car Line 4-cylinder (944 turbo)

Model Year 1987

Issued

Revised (•)

Body Type

SAE
Ref.
No.

944 turbo

Station Wagon – Third Seat

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

Station Wagon – Cargo Space

Cargo length (open front)	L200	n.a.
Cargo length (open second)	L201	n.a.
Cargo length (closed front)	L202	1015
Cargo length (closed second)	L203	677
Cargo length at belt (front)	L204	1202
Cargo length at belt (second)	L205	783
Cargo width (wheelhouse)	W201	914
Rear opening width at floor	W203	1200
Opening width at belt	W204	1200
Max. rear opening width above belt	W205	1150
Cargo height	H201	529
Rear opening height	H202	528
Tailgate to ground height	H250	637
Front seat back to load floor height	H197	161
Cargo volume index [m ³ (ft. ³)]	V2	n.a.
Hidden cargo volume [m ³ (ft. ³)]	V4	n.a.
Cargo volume, index-rear of 2-seat	V10	

Hatchback – Cargo Space

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

Aerodynamics*

Wheel tip to ground, front		
Wheel tip to ground, rear		
Frontal area [m ² (ft. ²)]	m ²	1.89
Drag coefficient (Cd)		0.33

* EPA Loaded Vehicle Weight, Loading Conditions

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

MVMA Specifications Form
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METRIC (U.S. Customary)

Car Line 4-cylinder (944 turbo)

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Issued _____

Revised (•) _____

Body Type

944 turbo

Vehicle Fiducial Marks

Fiducial Mark
Number*

Define Coordinate Location

Front

n.a.

Rear

Fiducial
Mark
Number

Front	W21	
	L54	
	H81	
	H161	
	H163	

Rear	W22	
	L55	
	H82	
	H162	
	H164	

* Reference - SAE Recommended Practice, J182, Motor Vehicle Fiducial Marks.
 All linear dimensions are in millimeters (inches).

MVMA Specifications Form
Passenger Car
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Car Line 4-cylinder (944 turbo)
 Model Year 1987 Issued _____ Revised (●) _____

Body Type

944 turbo

Lamps and Headlamp Shape*

Height above ground to center of bulb or marker	Headlamp (SAE - H127)	Highest**	671
		Lowest	
	Taillamp (SAE - H128)	Highest**	659
		Lowest	
	Sidemarker	Front	476
		Rear	514
Distance from C/L of car to center of bulb	Headlamp	Inside	515
		Outside**	
	Taillamp	Inside	500
		Outside**	
	Directional	Front	
		Rear	
Halogen headlamp (std., opt., n.a.)	Lo beam		std.
	Hi beam		std.
	Replaceable bulb		std.
	Shape		round, pop-up
Headlamp other than above	Lo beam		
	Hi beam		
	Replaceable		
	Shape		
	Type		additional: rectangular lamp under bumper (parking, hi beam)

* Measured at curb mass (weight).

** If single lamps are used enter here.

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

METRIC (U.S. Customary)

Car Line 4-cylinder (944 turbo)
Model Year 1987 Issued _____ Revised (e) _____

[illegible]

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

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