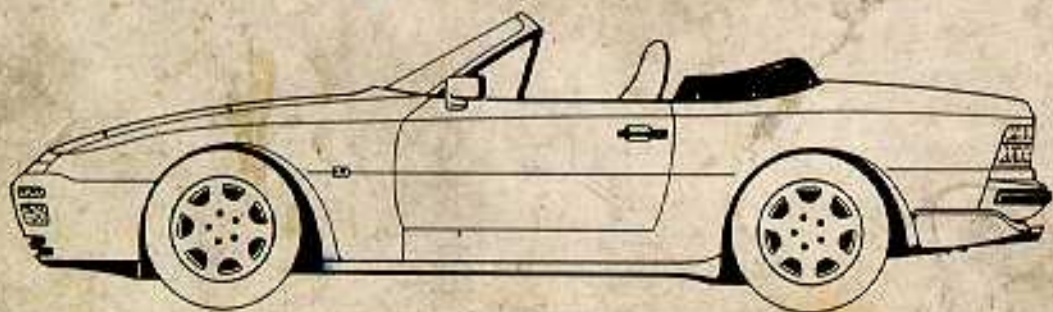


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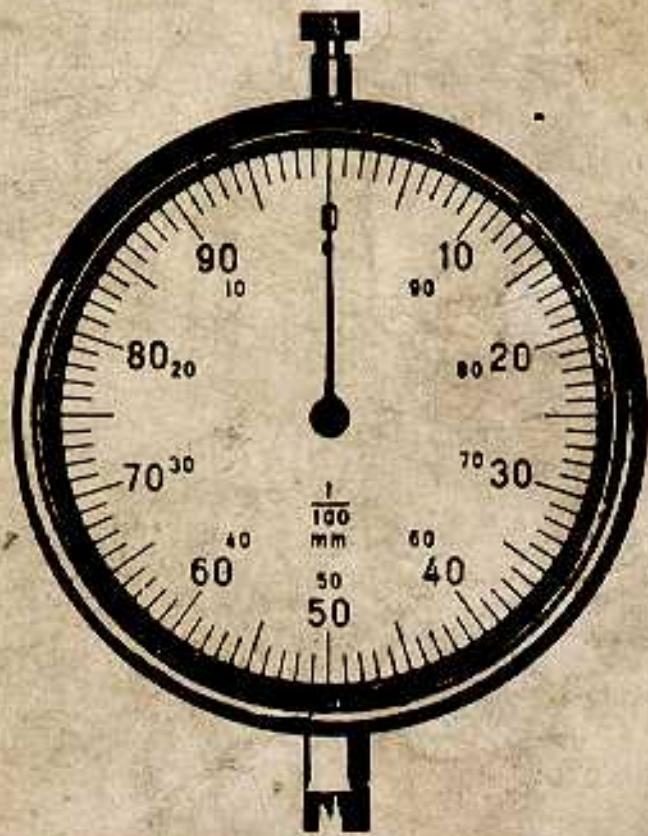
944 S
Models 87, 88

944 S2
Models 89-91

944 Turbo
Models 85-91

944 S
944 S 2
944 Turbo

**Technical
Speci-
fications**



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Important Conversion Factors and New Dimensioning Units

	Former units		Present units
Pressure	Technical atmosphere	at (kp/cm ²)	Bar (bar)
Output	Horsepower	HP	Kilowatt (kW)
Force	Kilopond	kp	Newton (N)
Torque	Kilopondmeter	kpm	Newtonmeter (Nm)

Conversion factors

at (kp/cm ²)	in bar	x 0.981
kp	in N	x 9.81
HP	in kW	x 0.736
kpm	in Nm	x 9.81
m/s	in km/h	x 3.6
at	in mmHg	x 735.56
km/h	in mph (miles)	x 0.621
°F (Fahrenheit)	in °C	(°F-32) x 0.555
l	in U.S. gal	x 0.264
l	in Imp. gal	x 0.22

To convert tightening torques from kpm into Nm, the conversion factor 10 can be used. This is sufficient for workshop applications.

Survey of Type Designations

Model year designation	Vehicle type designation	Engine type designation	Dis- place- ment (HP)	Output DIN-kW	Stroke/ bore (mm)	Com- pression ratio
			(cm ³)			ε
1985	944 Turbo Europe, RoW	M44/50	2479	162(220)	78.9/100	8.0:1
	944 Turbo USA, Canada	M44/51	2479	162(220)	78.9/100	8.0:1
1986	944 Turbo Europe, RoW	M44/51	2479	162(220)	78.9/100	8.0:1
	944 Turbo USA, Canada	M44/51	2479	162(220)	78.9/100	8.0:1
1987	944 S Europe, RoW	M44/40	2479	140(190)	78.9/100	10.9:1
	944 S USA, Canada	M44/40	2479	140(190)	78.9/100	10.9:1
	944 Turbo Europe, RoW	M44/51	2479	162(220)	78.9/100	8.0:1
	944 Turbo USA, Canada	M44/51	2479	162(220)	78.9/100	8.0:1
1988	944 S Europe, RoW	M44/40	2479	140(190)	78.9/100	10.9:1
	944 S Canada	M44/40	2479	140(190)	78.9/100	10.9:1
	944 S USA, Canada with sports package					
	944 S USA with airbag					
	944 Turbo Europe RoW	M44/51	2479	162(220)	78.9/100	8.0:1
	944 Turbo RoW with sports package					
	944 Turbo USA with airbag	M44/51	2479	162(220)	78.9/100	8.0:1
	944 Turbo Canada					
	944 Turbo sports package USA/Canada					
	944 Turbo S Europe, RoW	M44/52	2479	184(250)	78.9/100	8.0:1
944 Turbo S RoW with sports package						
944 Turbo S USA w. airbag	M44/52	2479	184(250)	78.9/100	8.0:1	
944 Turbo S Canada						
944 Turbo S sports package USA/Canada						

Fuel-induc- tion system	Engine numbers	Trans- mis- sion type	Chassis numbers
Pu = Premium unleaded PI = Premium leaded			
DME Pu/PI	44F00001-00398	016R	WP0 ZZZ 95 Z FN1 00001-49999
DME Pu	45F00001-00432	016S	WP0 AA0 95 - FN1 50001-99999
DME Pu/PI	44G00001-00320	016R	WP0 ZZZ 95 Z GN1 00001-49999
	45G00001-20000		
DME Pu	45G00001-20000	016R	WP0 AA0 95 - GN1 50001-99999
DME Pu/PI	42H00001-60000	083D	WP0 ZZZ 94 Z HN4 00001-19999
DME Pu	42H00001-60000	083D	WP0 AA0 94 - HN4 50001-59999
DME Pu/PI	45H00001-10000	016R	WP0 ZZZ 95 Z HN1 00001-49999
DME Pu	45H00001-10000	016R	WP0 AA0 95 - HN1 50001-99999
DME Pu/PI	42J00001-50000	083D	WP0 ZZZ 94 Z JN4 00001-07999
DME Pu	42J00001-50000	083D	WP0 AA0 94 - JN4 50001-59999
			WP0 AA0 94 - JN4 60001-64999
			WP0 AA2 94 - JN4 65001-79999
DME Pu/PI	45J00001-10000	016S/R	WP0 ZZZ 95 Z JN1 00001-03999
			WP0 ZZZ 95 Z JN1 04001-19999
DME Pu	45J00001-10000	016S/R	WP0 AA2 95 - JN1 50001-59999
			WP0 AA0 95 - JN1 60001-64999
			WP0 AA0 95 - JN1 65001-69999
DME Pu/PI	47J00001-10000	016R	WP0 ZZZ 95 Z JN1 00001-03999
			WP0 ZZZ 95 Z JN1 04001-19999
DME Pu	47J00001-10000	016R	WP0 AA2 95 - JN1 50001-59999
			WP0 AA0 95 - JN1 60001-64999
			WP0 AA0 95 - JN1 65001-69999

Model year designation	Vehicle type designation	Engine type designation	Dis- place- ment (HP)	Output DIN-kW	Stroke/ Bore (mm)	Com- pression ratio
			(cm ³)			ε
1989	944S2 Europe, RoW	M44/41	2990	155(211)	88/104	10.9:1
	944S2 Canada	M44/41	2990	155(211)	88/104	10.9:1
	944S2 USA with airbag	M44/41	2990	155(211)	88/104	10.9:1
	944 Turbo Europe, RoW	M44/52	2479	184(250)	78.9/100	8.0:1
	944 Turbo USA with airbag	M44/52	2479	184(250)	78.9/100	8.0:1
	944 Turbo Canada	M44/52	2479	184(250)	78.9/100	8.0:1
1990	944S2 RoW Coupé	M44/41	2990	155(211)	88/104	10.9:1
	944S2 RoW Cabrio					
	944S2 USA, Can. Coupé	M44/41	2990	155(211)	88/104	10.9:1
	944S2 USA, Can. Cabrio					
	944 Turbo RoW	M44/52	2479	184(250)	78.9/100	8.0:1
944 Turbo USA, Canada	M44/52	2479	184(250)	78.9/100	8.0:1	
1991	944S2 RoW Coupé	M44/41	2990	155(211)	88/104	10.9:1
	944S2 RoW Cabrio					
	944 Turbo RoW	M44/52	2479	184(250)	78.9/100	8.0:1
	944S2 USA, Can. Coupé	M44/41	2990	155(211)	88/104	10.9:1
	944S2 USA, Can. Cabrio					

Fuel-induc- tion system	Engine numbers	Trans- mis- sion type	Chassis numbers
Pu = Premium unleaded Pl = Premium leaded			
DME Pu/Pl	42K00001-50000	083F	WP0 ZZZ 94 Z KN4 00001-30000
DME Pu	42K00001-50000	083F	WP0 AB0 94 - KN4 50001-99999
DME Pu	42K00001-50000	083F	WP0 AB2 94 - KN4 50001-99999
DME Pu/Pl	47K00001-10000	016S/R	WP0 ZZZ 95 Z KN1 00001-49999
DME Pu	47K00001-10000	016S/R	WP0 AA2 95 - KN1 50001-99999
DME Pu	47K00001-10000	016S/R	WP0 AA0 95 - KN1 50001-99999
DME Pu/Pl	42L00001-50000	083F	WP0 ZZZ 94 Z LN4 00001-29999
DME Pu	42L00001-50000	083F	WP0 ZZZ 94 Z LN4 30001-49999
DME Pu	42L00001-50000	083F	WP0 AB2 94 - LN4 50001-79999
DME Pu	42L00001-50000	083F	WP0 CB2 94 - LN4 80001-99999
DME Pu/Pl	47L00001-10000	016R	WP0 ZZZ 95 Z LN1 00001-29999
DME Pu	47L00001-10000	016R	WP0 AC2 95 - LN1 50001-79999
DME Pu/Pl	42M00001-50000	083F	WP0 ZZZ 94 Z MN4 00001-05000
DME Pu/Pl	42M00001-50000	083F	WP0 ZZZ 94 Z MN4 30001-35000
DME Pu/Pl	47M00001-01000	016R	WP0 ZZZ 95 Z MN1 00001-01000
DME Pu	42M00001-50000	083F	WP0 AB2 94 - MN4 10001-15000
DME Pu	42M00001-50000	083F	WP0 CB2 94 - MN4 40001-45000

Engine Number Codes

Explanation of digits:

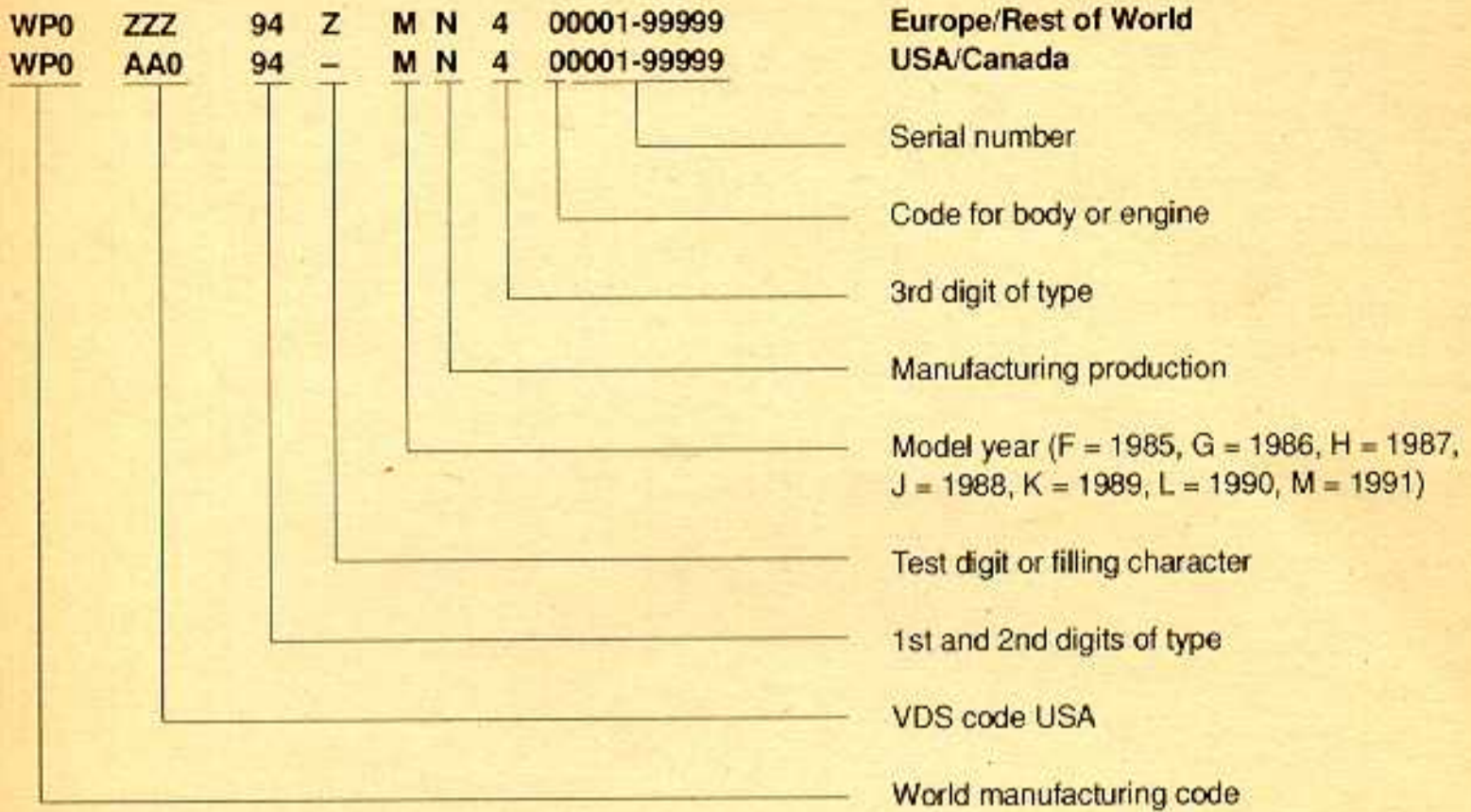
1	2		3	45678
Type of engine	Engine type		Model year	Serial number
4 = 4-cyl. engine	4 = 944 Turbo/2.5 l 5 = 944 Turbo/2.5 l	Europe, RoW USA, Canada	F = 1985	00001-00398 00001-00432
4 = 4-cyl. engine	4 = 944 Turbo/2.5 l 5 = 944 Turbo/2.5 l	Europe, RoW Europe, RoW USA, Canada	G = 1986	00001-00320 00001-20000
4 = 4-cyl. engine	2 = 944 S/2.5 l 5 = 944 Turbo/2.5 l	Europe, RoW USA, Canada Europe, RoW USA, Canada	H = 1987	00001-60000 00001-10000

Engine Number Codes

Explanation of digits:

1	2		3	45678
Type of engine	Engine type		Model year	Serial number
4 = 4-cyl. engine	2 = 944 S/2.5 l 5 = 944 Turbo/2.5 l 7 = 944 TurboS/2.5 l	Europe, RoW USA, Canada, Europe, RoW USA, Canada Europe, RoW USA, Canada	J = 1988	00001-50000 00001-10000 00001-10000
4 = 4-cyl. engine	2 = 944 S2/3.0 l 7 = 944 Turbo/2.5 l	Europe, RoW USA, Canada Europe, RoW USA, Canada	K = 1989 L = 1990 M = 1991	00001-50000 00001-10000

Vehicle Ident. Number Codes



Transmission Number Codes 944 S/S2

Model	Number	Transmission type	Vehicle type
1987, 1988	ACP 19 02 7/8 ACR xx xx x	083D 5-speed 083D 5-speed with limited slip differential	944 S worldwide 944 S worldwide
1989, 1990, 1991	AOS 19 02 9-1 AOT xx xx x ASV xx xx x ASW xx xx x	083F 083F with limited slip differential 083F with oil cooler 083F with oil cooler and limited slip differential	944 S2 RoW 944 S2 RoW 944 S2 Switzerland 944 S2 Switzerland

Transmission Number Codes 944 Turbo

Model	Number	Transmission type	Vehicle type
1985	5P 19 02 5 5R xx xx x	016R 5-speed 016R 5-speed with limited slip differential	Europe/RoW Europe/RoW
	UY xx xx x 9U xx xx x	016S 5-speed 016S 5-speed with limited slip differential	USA/Canada/Japan USA/Canada/Japan
1986, 1987	5P 19 02 6/7 5R xx xx x	016R 5-speed 016R 5-speed with limited slip differential	worldwide worldwide
1988, 1989	UY 19 02 8/9 9U xx xx x	016S 5-speed 016S 5-speed with limited slip differential	worldwide worldwide
	5P xx xx x 5R xx xx x	016R 5-speed with M 414 oil pump 016R 5-speed with M 414 oil pump and limited slip differential	worldwide worldwide
	5R 16 11 7 AOR	016R 5-speed with M 414 oil cooler system, M 220 limited slip differential	worldwide
		Code for transmission 944 Turbo "S"	
1990, 1991	AOR 19 02 0/1	016R with oil cooler and limited slip differential	worldwide

Engine Data 944 S/944 S2

Engine type		M44.40	M44.41
Model year		1987, 1988	1989 - 1991
No. of cylinders		4	4
Bore	mm/in.	100/3.94	104/4.09
Stroke	mm/in.	78.9/3.11	88/3.46
Displacement (actual)	cm ³ /in. ³	2479/151	2990/182.5
Compression ratio		10.9:1	10.9:1
max. engine power, 80/1269/EEC	kW/PS	140/190	155/211
(Net Power, SAE J 1349)	kW/HP	140/188	155/208
at engine speed	rpm	6000	5800
max. torque, 80/1269/EEC	Nm/kpm	230/23.5	280/28.5
(Net Torque, SAE J 1349)	Nm/lb ft	230/170	280/207
at engine speed	rpm	4300	4100
max. specific power, DIN 70020	kW/l(PS/l)	56.5/76.6	51.8/70.6
(SAE J 1349)	kW/l(HP/l)	56.5/75.8	51.8/69.6
Fuel octane rating	RON	95 Pu/Pl	95 Pu/Pl
Engine speed limitation			
by fuel cut-off	rpm	6800 ± 40	6480 ± 20
Idle speed	rpm	840 ± 40	840 ± 40
Engine weight (dry)	kg	175	175

Engine Data 944 Turbo

Engine type		M44.50/51	M44.52
Model year		1985 - 1988	1988 - 1991
No. of cylinders		4	4
Bore	mm/in.	100/3.94	100/3.94
Stroke	mm/in.	78.9/3.11	78.9/3.11
Displacement (actual)	cm ³ /in. ³	2479/151	2479/151
Compression ratio		8.0:1	8.0:1
max. engine power, 80/1269/EEC	kW/PS	162/220	184/250
(Net Power, SAE J 1349)	kW/HP	162/217	184/247
at engine speed	rpm	5800	6000
max. torque, 80/1269/EEC	Nm/kpm	330/33.6	350/35.6
(Net Torque, SAE J 1349)	Nm/lb ft	330/243	350/258
at engine speed	rpm	3500	4000
max. specific power, DIN 70020	kW/l(PS/l)	65.3/88.7	74.2/100.8
(SAE J 1349)	kW/l(HP/l)	65.3/87.5	74.2/99.6
Fuel octane rating	RON	95 Pu/Pl	95 Pu/Pl
Engine speed limitation			
via fuel cut-off	rpm	6500 ± 20	6500 ± 20
Idle speed	rpm	840 ± 40	840 ± 40
Engine weight (dry)	kg	182	193

Technical Data 944 S/S2 Engine Type M 44/40, 41

Engine design

Design	4-cylinder, 4-stroke spark-ignition engine, in line, 2 balance shafts	
Crankcase	2-piece light-alloy crankcase	
Crankshaft	Forged, 5 plain bearings	
Connecting rods	Forged, opt. sinter-forged	
Pistons	Cast light-alloy	
Balance shaft drive	Toothed belt	
Camshaft	Cast, without bearing shells, running in cylinder head	
Camshaft drive	Toothed belt, chain, internally	
Cylinder head	Light alloy	
Valve arrangement	2 intake, 2 exhaust, suspended in V	
Valve timing	2 overhead camshafts, hydraulic bucket tappets	
Valve play	Self-adjusting (hydraulic)	
Timing	M44/40	M44/41
(1 mm stroke, zero play) Intake opens	4 degr. after TDC	3 degr. after TDC
Intake closes	40 degr. after BDC	47 degr. after BDC
Exhaust opens	36 degr. before BDC	39 degr. before BDC
Exhaust closes	4 degr. before TDC	7 degr. after TDC

Engine cooling

Closed coolant system

Engine lubrication

Forced oil circulation with crescent pump
In full flow
Approx. 4 bar overpressure, at operating temperature
Indicator lamp and pressure gauge
Up to 1.5

Oil filter
Oil pressure at 5000 rpm

Oil pressure indicators
Oil consumption l/1000 km

Exhaust system

2 twin-pipe manifolds, Y-pipe up to front muffler/3-way catalytic converter, rear muffler

Technical Data 944 S/S2 Engine Type M44/40, 41

Heater

Warm water heater with heat exchanger and fan

Fuel system

Fuel delivery DME
Fuel grade RON 1 electric fuel delivery pump
Fuel consumption figures Refer to "Engine Data"
Refer to Operating Instructions

Electrical system

Interference suppression ECE-R 10 and 72/245/EEC
Battery voltage V 12
Battery capacitance Ah 50(63)
Alternator/output A/W (115/1610)
Ignition Contactless, via DME
Ignition sequence 1-3-4-2
Ignition timing Via DME
Spark plugs 944 S: Bosch WR 7 DC
944 S2: Bosch WR 5 DC
(USA: WR 5 DC, WR 7 DC)

Electrode gap mm 0.7 + 0.1

Power transmission

Front-mounted engine, transmission at rear end, bolted together by a connecting tube to form a rigid drive unit - transaxle. Front engine, clutch, torsionally elastic drive shaft to transmission mounted in connecting tube, rear transmission interlocked with axle drive, twin drive shafts to rear wheels

Clutch

Single-disk dry clutch with disk spring, extended version, located at engine end
Pressure plate: MFZ 225
Drive plate: GUD 225

Technical Data 944 Turbo Engine Type M 44/50, 51, 52

Engine design

Design	4-cylinder, 4-stroke, spark-ignition engine, in line, 2 balance shafts
Crankcase	2-part light-alloy crankcase
Crankshaft	Forged, 5 plain bearings
Connecting rods	Sinter-forged
Pistons	Light alloy, forged
Balance shaft drive	Toothed belt
Camshaft	Cast, without bearing shells, running in camshaft housing
Camshaft drive	Toothed belt
Cylinder head	Light alloy
Valve arrangement	1 intake, 1 exhaust, suspended, in line
Valve timing	Overhead camshaft, hydraulic bucket tappets
Valve play	Self-adjusting (hydraulic)
Timing	M44/50, 51, 52
(1 mm stroke, zero play) Intake opens	1 degr. after TDC
Intake closes	49 degr. after BDC
Exhaust opens	43 degr. before BDC
Exhaust closes	3 degr. before TDC

Engine cooling

Closed coolant system

Engine lubrication

Oil filter	In full flow
Oil pressure at 5000 rpm	Approx. 4 bar overpressure, at operating temperature
Oil pressure indicators	Indicator lamp and pressure gauge
Oil consumption l/1000 km	Up to 1.5

Exhaust system

2 twin-pipe manifolds, cross-pipe, front muffler/3-way catalytic converter, rear muffler

Technical Data 944 Turbo Engine Type M44/50, 51, 52

Heater

Warm water heater with heat exchanger and fan

Fuel system

Fuel delivery	DME
Fuel octane rating RON	1 electric fuel delivery pump
Fuel consumption figures	Refer to "Engine Data"
	Refer to Operating Instructions

Electrical system

Interference suppression	ECE-R 10 and 72/245/EEC and VDE 0879
Battery voltage	V 12
Battery capacitance	Ah 50(63)
Alternator/output	A/W (115/1610)
Ignition	Contactless, via DME
Ignition sequence	1-3-4-2
Ignition timing	Via DME
Spark plugs	Bosch WR 7 DC
Electrode gap	mm 0.7 + 0.1

Power transmission

Front-mounted engine, transmission at rear end, bolted together by a connecting tube to form a rigid drive unit - transaxle. Front engine, clutch, torsionally elastic drive shaft to transmission mounted in connecting tube, rear transmission interlocked with axle drive, twin drive shafts to rear wheels

Clutch

Single-disk dry clutch with disk spring, extended version, located at engine end
Pressure plate: GMFZ 240
Drive plate: (W)TD 240

Torque Specifications - Engine General

Location	Thread	Tightening torque Nm (ftlb)	
Crankcase top and bottom sections (studs)	M 12 x 1.5	30 (22)	1st stage
		60° turning angle	2nd stage
	M 10	20 (15)	1st stage
		50 (37)	2nd stage
	M 8	20 (15)	
	M 6	10 (7)	
Rotational element on balance shaft	M 6	10 (7) secured with Loctite 270	
Cover for balance shaft housing to top section of crankcase	see balance shaft cover tightening instructions		
Attachment of bearing casing left and right to top section of crankcase	M 8	20 (15)	
Connecting rod bolt Verbusrip nut	M 10 x 1.25	75 + 5 (55 + 4)	
Coolant drain screw in top section of crankcase	M 8	20 (15)	
Oil pan to crankcase	M 6	hand-tight	1st stage
		4 (3)	2nd stage
		10 (7)	3rd stage
Oil pan insert to oil pan	M 5	6 (4) secured with Loctite 270	
Oil drain screw	M 20 x 1.5	50 (37)	
Engine support left and right to crankcase	M 10	48 (35)	

Location	Thread	Tightening torque Nm (ftlb)	
Flywheel to crankshaft	M 10 x 1.25	40 (29)	1st stage
		90 (66)	2nd stage
Sensor bracket to crankcase	M 8	20 (15)	
Gear wheel to crankshaft	M 16 x 1.5	210 (155)	
Sensor to bracket	M 6	8 (6)	
Belt pulley to gear wheel	M 6	8 (6)	
Intake pipe to cylinder head	M 8	20 (15)	
Hollow screw for vacuum pressure connection	M 8 x 1	10 (7)	
Attachment of connector for coolant pipe	M 8	20 (15)	
Connection of fitting for heater flow line to cylinder head	M 8	20 (15)	
Camshaft gear wheel to camshaft	M 10	65-7 (48-52)	
Screw with internal serrations			
Bracket to camshaft bearing	M 6	8 (6)	
Connection piece to driver	M 5	5 (4)	
Cover and hoisting bracket to camshaft housing	M 6	8 (6)	
Distributor finger to connection piece	M 4	4 (3)	

Location	Thread	Tightening torque Nm (ftlb)
Gear wheel to balance shaft	M 10	45 (33)
Tensioning roller to bearing housing	M 10	45 (33)
Roller to bearing bearing housing right	M 10	45 (33) secured with Loctite 270
Water pump to crankcase	M 6	8 (6) secured with Loctite 270
Roller to water pump housing	M 10	45 (33)
Oil pump to crankcase	M 6 M 10	8 (6) 45 (33)
Tensioning roller to oil pump housing	M 10	45 (33)
Belt cover	M 6	8 (6)
Spark plugs	M 14 x 1.25	25-30 (18-22)
Alternator bracket to crankcase	M 10	45 (33)
Screw nut to catalytic converter	M 14 x 1.5	30 (22)
Temperature sensor	M 12 x 1.5	15 (11)
Oil pressure sensor	M 18 x 1.5	35 (26)
Diaphragm damper and pressure regulator to fuel manifold	M 16 x 1.5	30 (22)
Cap nut to fuel manifold	M 12 x 1.5	12 (9)

Location	Thread	Tightening torque Nm (ftlb)
Housing insert in in oil pump housing	M 6	8 (6) Mating face sealed with Loctite 574
Radiator housing/thermostat housing to crankcase	M 8	20 (15)
Screw plug to oil/water radiator housing	M 18 x 1.5	35 (26)
Coolant vent screw	M 8 x 1	12 + 3 (9 + 2)
Oil filter relief valve	M 20 x 1.5	45 (33) 20 (15)
Oil separator to crankcase	M 8	20 (15)
All other bolts and nuts:	M 6 M 8 M 10	8 + 2 (6 + 1) 20 + 2 (15 + 1) 40 + 5 (29 + 4)

Torque Specifications - Engine 944 S/944 S2

Location	Thread	Tightening torque Nm (ftlb)
Knocking sensor	M 8	9 (7), from Mod. '88 20
Cylinder head to top section of crankcase	Refer to tightening instructions for cylinder head	
Camshaft bearing to cylinder head	M 8	20 (15)
Hexagon socket screw for chain tensioner	M 6	10 (7)
Hollow screw/chain tensioner	M 8 x 1	10 (7)
Cylinder head cover	M 6	10 (7)
Securing of Hall sensor	M 6	10 (7)

Torque Specifications - Engine 944 Turbo

Location	Thread	Tightening torque Nm (ftlb)
Cylinder head to upper section of crankcase	Refer to tightening instructions for cylinder head	
Camshaft housing to cylinder head	M 8	20 (15)
Aluminum screw plugs to camshaft housing	M 18 x 1.5	40 (29)
Camshaft bearings to camshaft housing	M 6	8 (6)
Knocking sensor	M 8	9 (7), from Mod. '88 20
Hollow screw/oil line to balance shaft cover	M 14	25 + 3 (18 + 2)
Hollow screw/oil return line to oil pan	M 26 x 1.5	75 + 5 (55 + 4)
Hollow screw/coolant line to turbocharger	M 16 x 1.5	35 + 5 (26 + 4)
Connection piece to turbocharger	M 16 x 1.5	35 + 5 (26 + 4)
Securing union nut/coolant line to turbocharger	M 22 x 1.5	35 + 5 (26 + 4)

Tolerances and Wear Limits - Engine M 44/40, 41

		When installed (new)	Wear limit
Cooling system			
Coolant thermostat	Open. temperature	81-85° C	
Cap for cooling system			
Pressure relief valve	opens at overpress.	1.3-1.5 bar	
Vacuum valve	opens at underpressure	0.1 bar	
Oil circuit			
Oil consumption	l/1000 km		approx. 1.5
Oil pressure			
at 80° C oil temperature:			
at 5000 rpm	Overpressure	approx. 4 bar	
Oil capacity		6 l, from Mod. '88	6.5 l
Content difference		approx. 1.5 l	
oil dipstick			
Valve timing			
Bore for camshaft	Inner diameter	$28 + 0.021$	
Camshaft	diameter	$28 - 0.04$ $- 0.055$	
Camshaft	Axial play	0.08-0.18	
Bore for bucket tappet	Inner diameter	$35 + 0.015$ $+ 0.005$	
Bucket tappet	Diameter	$35 - 0.025$ $- 0.041$	
Camshaft	Runout	0.02	

Tolerances and Wear Limits - Engine M 44/40, 41

		When installed (new)	Wear limit
Cylinder head with valves			
Mounting face	Distortion		max. 0.03
Valve seat width	Intake	1.5	
	Exhaust	1.8	
Seating angle		45°	
Outer correction angle		30°	
Inner correction angle		60°	
Valve guides	Inner diameter	7 + 0.015	
Valve stem:			
Intake	Diameter	6.97-0.012	
Exhaust	Diameter	6.94-0.012	
Valve guide/valve stem	Play		0.8
Intake			0.8
Exhaust			0.8
Compression		8 bar and above	6.5 bar
Pistons with connecting rods			
Cylinder/piston	Play	0.008 - 0.032	approx. 0.080
Piston rings M 44/40	Vert. play groove 1	0.040 - 0.075	
	groove 2	0.020 - 0.055	
	groove 3	0.020 - 0.055	
Piston rings M 44/41	Vert. play groove 1	0.040 - 0.075	
	groove 2	0.030 - 0.065	
	groove 3	0.020 - 0.055	
Piston rings M 44/40	Gap width groove 1	0.20 - 0.40	
	groove 2	0.20 - 0.45	
	groove 3	0.30 - 0.60	
Piston rings M 44/41	Gap width groove 1	0.20 - 0.50	
	groove 2	0.20 - 0.55	
	groove 3	0.30 - 0.90	

Tolerances and Wear Limits - Engine M 44/40, 41

		When installed (new)	Wear limit
Con rod bush	Diameter	24 + 0.018 + 0.028	
Piston pin	Diameter	24-0.004	
Con rod bush/piston pin	Radial play	0.018-0.032	
Crankshaft and cylinder block			
Crankshaft (measure at bearings 2, 3 or 4, bearings 1 and 5 on prisms)	Runout	0.04	max. 0.06
Con rod bearing journal	Diameter	51.971-51.990	
Con rod bearing/crankshaft	Radial play	0.027-0.069	
	Axial play	0.080-0.240	
Crankshaft bearing journal	Diameter	69.971-69.990	
Crankshaft bearing/ crankshaft	Radial play	0.028-0.070	0.16
	Axial play	0.060-0.192	0.40
Cylinder bore	out-of-round	0.010	0.020
Bore for balance shaft bearing shells at crankcase or balance shaft cover	Diameter	34.000-34.019	
Bore for bush in bearing housing	Diameter	34.000-34.019	
Balance shaft	Diameter	30.975-30.991	

Tolerances and Wear Limits - Engine M 44/51, 52

		When installed (new)	Wear limit
Cooling system			
Coolant thermostat	Open. temperature	81-85° C	
Cap for cooling system			
Pressure relief valve	opens at overpress.	1.3-1.5 bar	
Vacuum valve	opens at underpressure	0.1 bar	
Oil circuit			
Oil consumption	l/1000 km		approx. 1.5
Oil pressure at 80° C oil temperature: at 5000 rpm	Overpressure	approx. 4 bar	
Oil content		6.5 l (from Mod. '88 7 l)	
Content difference on oil dipstick		approx. 1.5 l	
Valve timing			
Bore for camshaft	Inner diameter	60.5 + 0.03 - 0	
Camshaft	Diameter	60.5 - 0.04 - 0.055	
Camshaft	Axial play	0.10-0.18	
Bore for bucket tappet	Inner diameter	38 + 0.027 + 0.007	
Bucket tappet	Diameter	38 - 0.018 - 0.034	
Camshaft	Runout	0.02	

Tolerances and Wear Limits - Engine M 44/51, 52

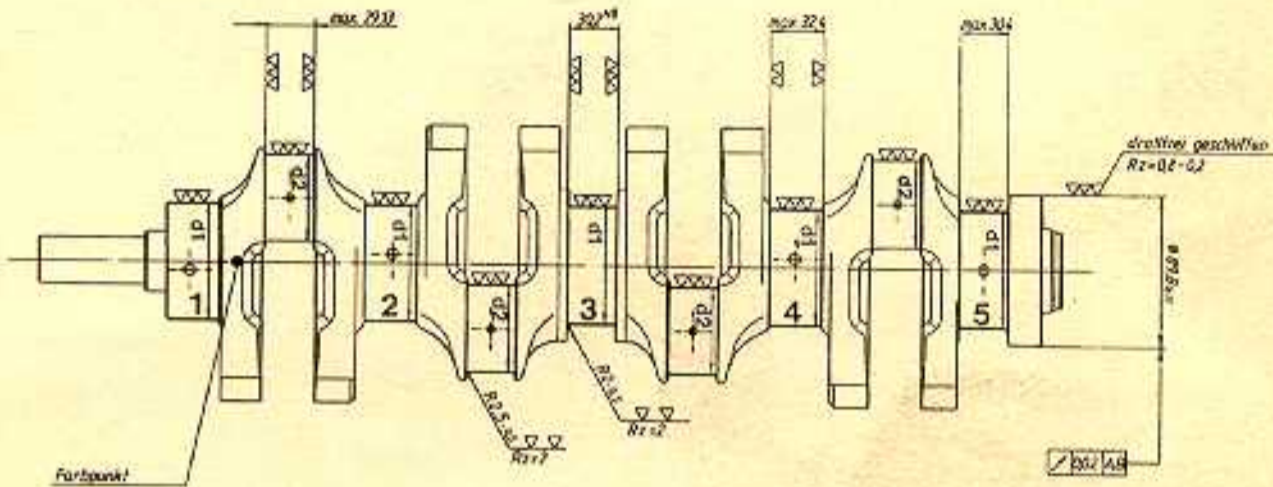
		When installed (new)	Wear limit
Cylinder head with valves			
Mounting face	Distortion		max. 0.08
Valve seat width:			
Intake	Width	1.7	
Exhaust	Width	2.5	
Intake	Seating angle	45°	
Exhaust	Seating angle	45°	
Outer correction angle		30°	
Inner correction angle		60°	
Valve guides:			
Intake and exhaust	Inner diameter	9 + 0.015	
Valve stem:			
Intake	Diameter	8.97-0.012	
Exhaust	Diameter	8.95-0.012	
Valve guide/valve stem	Play		
Intake			0.8
Exhaust			0.8
Compression		10 bar over- pressure and above	6.5 bar
Pistons with connecting rods			
Cylinder/piston	Play	0.008 - 0.032	approx. 0.080
Piston rings	Vert. play groove 1	0.04 - 0.072	
	groove 2	0.03 - 0.062	
	groove 3	0.02 - 0.055	
Piston rings	Gap width groove 1	0.20 - 0.40	0.80
	groove 2	0.20 - 0.40	0.80
	groove 3	0.30 - 0.60	1.20

Tolerances and Wear Limits - Engine M 44/51, 52

		When installed (new)	Wear limit
Con rod bush	Diameter	24 + 0.018 + 0.028	
Piston pin	Diameter	24-0.004	
Con rod bush/piston pin	Radial play	0.018-0.032	
Crankshaft and cylinder block			
Crankshaft	Runout	0.04-0.06	max. 0.08
Con rod bearing journal	Diameter	51.971-51.990	
Con rod bearing/crankshaft	Radial play	0.034-0.092	
	Axial play	0.100-0.400	
Crankshaft bearing journal	Diameter	69.971-69.990	
Crankshaft bearing/ crankshaft	Radial play	0.020-0.098	
Crankshaft bearing/ crankshaft	Axial play	0.110-0.312	0.40
Cylinder bore	out-of-round	0.010	0.020
Bore for balance shaft bearing shells at crankcase or balance shaft cover	Diameter	35.000-35.019	
Bore for bush in bearing housing	Diameter	34.000-34.019	
Balance shaft	Diameter	30.975-30.991	

Crankshaft Normal and Reconditioning Dimensions

Size	Crankcase bore \varnothing	Crankshaft bearing journal $d1 \varnothing$	Crankshaft con-rod bearing journal $d2 \varnothing$	Thrust bearing 3 width
Standard	Standard	69.971...69.990	51.971...51.990	30.000...30.052
-0.25	75.000...75.019	69.721...69.740	51.721...51.740	Reconditioned size
-0.50	Oversize 75.250...75.269	69.471...69.490	51.471...51.490	30.200...30.239

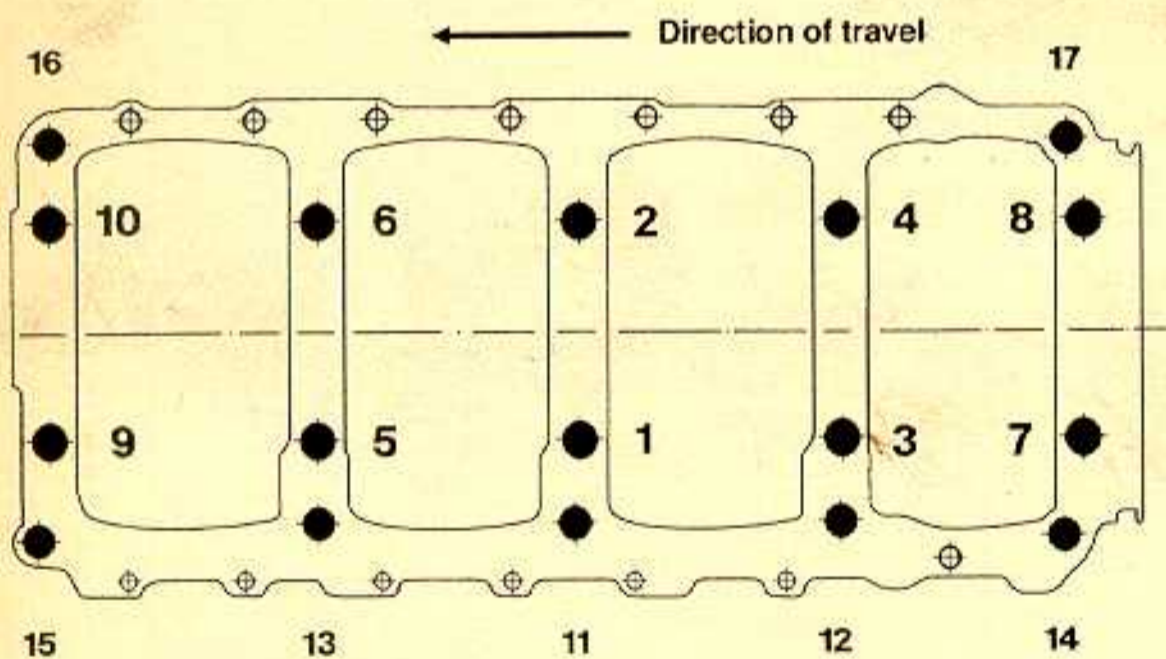


Grind bearing surface for radial oil seal to dimension 89.8 only when the grooves are too deep. Otherwise, repolish as required, $Rz = 0.8...2$. After grinding, give oil bores a radius of $R 0.5$. Break sharp edges with a radius of $R 0.2...0.5$. Permitted vertical runout in relation to mounting = max. 0.04.

Reconditioned size color codes

1st reconditioned size	dot of blue paint
2nd reconditioned size	dot of green paint

Tightening Sequence - Crankcase Upper and Lower Parts



Tightening sequence

Nos. 1...10 in 2 stages:
Thread M 12 x 1.5

1st stage
2nd stage

Tightening torque (ftlb)

30 Nm (22)
60° torquing angle

Nos. 11...17 in 2 stages:
Thread M10

1st stage
2nd stage

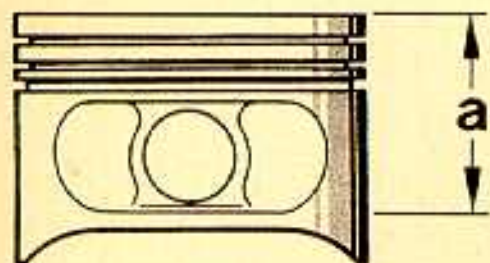
20 Nm (15)
50 Nm (37)

Checking Pistons and Cylinder Bores

Checking pistons

Measure at distance of "a" away from piston crown, offset 90° to piston pin axis.

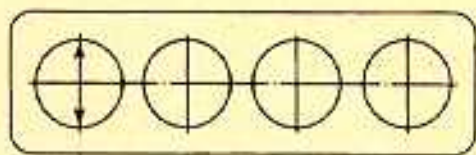
a: M44/51, 52	62 mm
M44/40	61 mm
M44/41	52 mm



Checking cylinder bores

Measure at distance of "a" away from upper edge of cylinder bore transverse to cylinder block.

Note: to perform measurement fit lower section of crankcase and tighten to prescribed torque.



Engine type M 44/40, 51, 52 (2.5 l)

Repair stage	Piston \varnothing (mm)	Cylinder bore (mm)	Tolerance group identification
Stand. dimens.	99.98	100.00	0
	99.99 ± 0.007	100.01 ± 0.005	1
	100.00	100.02	2
1st oversize	100.48	100.50	1 0
	100.49 ± 0.007	100.51 ± 0.005	1 1
	100.50	100.52	1 2

Engine type M 44.41 (3.0 l)

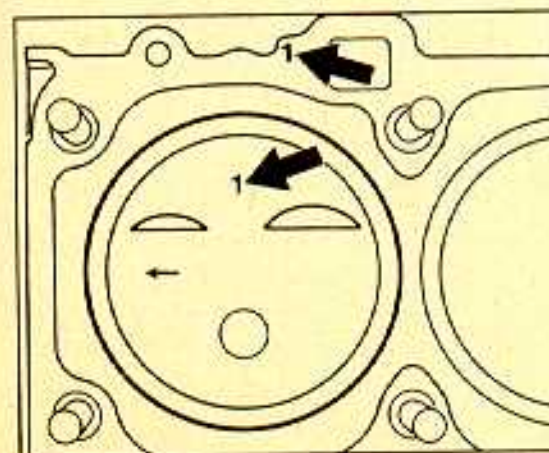
Repair stage	Piston \varnothing (mm)	Cylinder bore (mm)	Tolerance group identification
Stand. dimens.	103.98	104.00	0
	103.99 ± 0.007	104.01 ± 0.005	1
	104.00	104.02	2
1st oversize	104.48	104.50	1 0
	104.49 ± 0.007	104.51 ± 0.005	1 1
	104.50	104.52	1 2

Identification of Pistons and Cylinders

Identification for cylinders on cylinder block, identification for pistons on piston crown.

The position is marked by an arrow pointing to the belt pulley or by larger intake valve pockets.

Only pistons and cylinders of the same tolerance group may be paired together. Different tolerance groups may be used in the same engine.



Ignition sequence

1-3-4-2

Survey of Pistons (Dimensions, Weights and Compression)

Models '87, '88
 Engine M 44.40
 Compression 10.9:1
 Nominal \varnothing 100 mm
 Weight 720 ± 4 g

Models '89 - '91
 Engine M44.41
 Compression 10.9:1
 Nominal \varnothing 104mm
 Weight 710 ± 4 g

Models '85 - '88
 Engine M 44.50, 51
 Compression 8.0:1
 Nominal \varnothing 100mm
 Weight 730 ± 4 g

Models '88 - '91
 Engine M44.52
 Compression 8.0:1
 Nominal \varnothing 100 mm
 Weight 730 ± 4 g

Piston weight tolerances

Pistons and piston pins are paired in accordance with weight selection. Pistons are weighed with their pertinent parts (piston pins, piston rings, snap rings).

Piston pins must always remain assigned to the corresponding piston and must not be interchanged even within one engine set. Observe allocation during disassembly and assembly of engine, and mark if necessary.

If piston pins have been interchanged by mistake, reallocation must be carried out by checking the total weights.

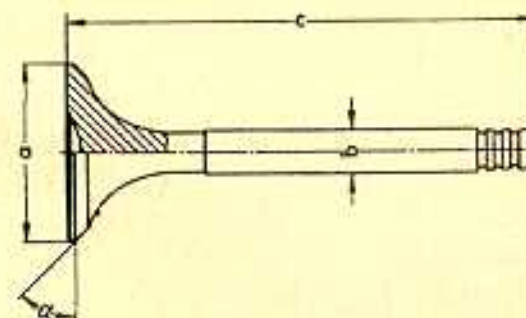
Valve Dimensions

Engine type M 44/51, 52

Size	Intake	Exhaust
a	45.00 mm	40.00 mm
b	8.97 mm	8.95 mm
c	111.50 mm	112.40 mm
α	45°	45°

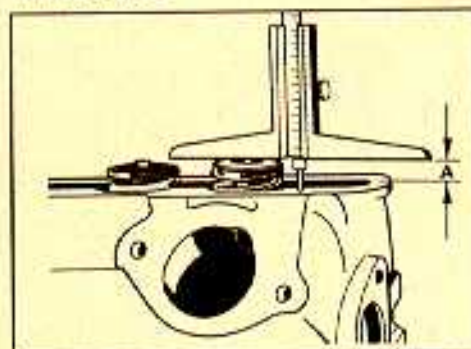
Engine type M 44/40, 41

a	37.00 mm	33.00 mm
b	6.97 mm	6.94 mm
c	114.7 mm	113.7 mm
α	45°	45°



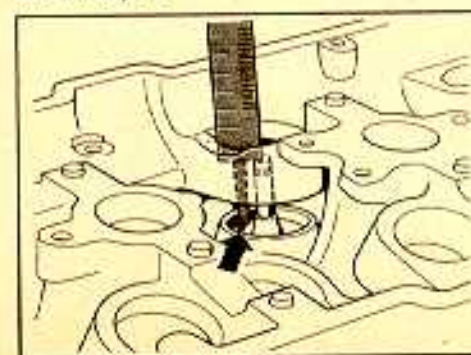
Reworking valve seats

M44/51, 52



Valve seats can be reworked until the wear limit size, dimension "A" = 14.5 mm, is reached (dimension new 13.65 ± 0.45). Perform check with new valve. Dimension "A" must not be exceeded, otherwise the hydraulic valve tappet will no longer operate satisfactorily.

M44/40, 41



The valve seats can be reworked until the wear limit sizes below are reached:
 Intake valve 44.4 mm
 Exhaust valve 43.4 mm.

Checking Valve Guides

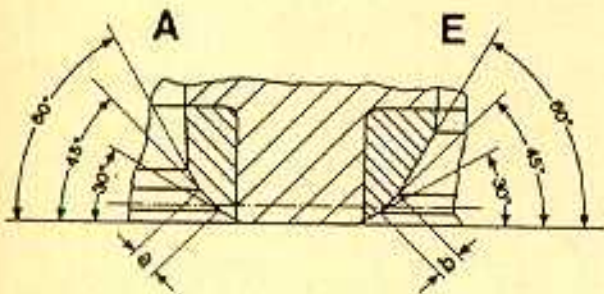
Wear limit (play) for intake and exhaust valve guides = 0.80 mm

Checking Installation Length of Valve Springs

Check installation size with Special Tool 9138/1 and correct as necessary by fitting or removing shims. Shims are available in the thicknesses 0.5 und 1.0 mm.

M44/51, 52	
Intake valve	41.0 + 0.5 mm
Exhaust valve	40.0 + 0.5 mm
M44/40, 41	
Intake valve	38.0 + 0.5 mm
Exhaust valve	37.0 + 0.5 mm

Angles and Dimensions of Valve Seat Inserts

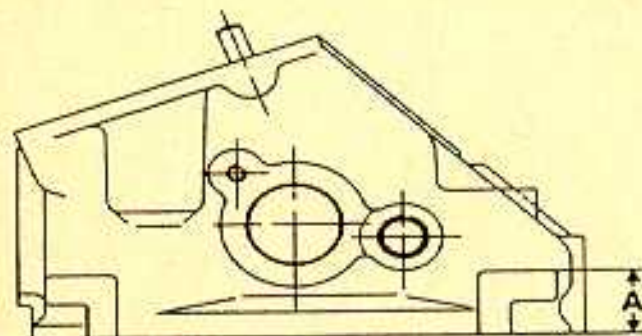


M44/51, 52	a = 2 mm	b = 1.7 mm
M44/40, 41	a = 1.8 mm	b = 1.5 mm

Machining the Cylinder Head Mating Face

Permissible unevenness of mating face: 0.05mm
 Permissible unevenness after machining: 0.03 mm
 Peak-to-valley height: 0.015 mm

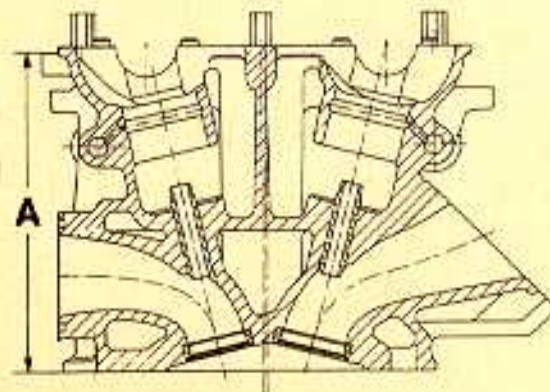
M44/51, 52



Size new A = 24 ± 0.1 mm
 Size worn A = 23.6 mm

If the gasket surface on the combustion chamber side is machined, always also check the surface on the camshaft side for distortion, machining this too if necessary.
 Permissible unevenness: 0.1 mm
 after machining: 0.03 mm

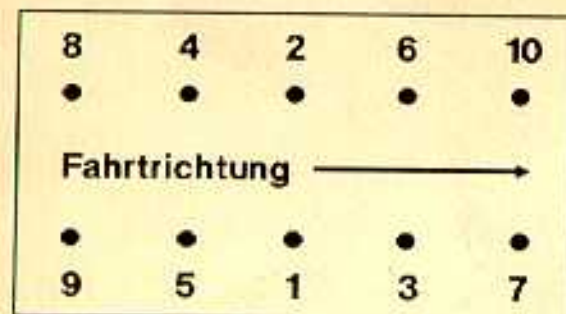
M44/40, 41



Size new A = 147 ± 0.1 mm
 Size worn A = 146.6 mm

If machining produces a result below the new-size tolerance, the 1.4 mm thick replacement cylinder head gasket must be fitted.

Tightening Sequence for Cylinder Head



The thread of the stud bolts must be lightly oiled.

Engine type M 44/40

- 1st stage 20 Nm (15 ftlb)
- 2nd stage 90° torquing angle
- 3rd stage 90° torquing angle

Engine type M 44/51 with 12 mm thick nut and M 44/52

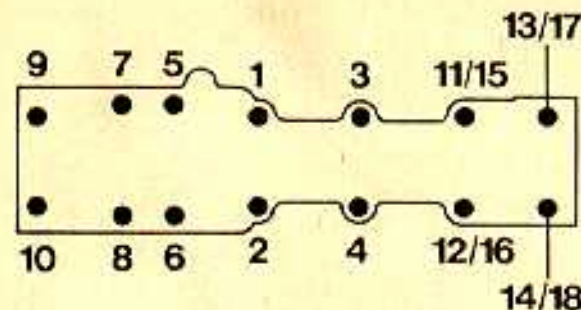
- 1st stage 20 Nm (15 ftlb)
- 2nd stage 90° torquing angle
- 3rd stage 90° torquing angle

Engine type M 44/41

- 1st stage 20 Nm (15 ftlb)
- 2nd stage 60° torquing angle
- 3rd stage 90° torquing angle

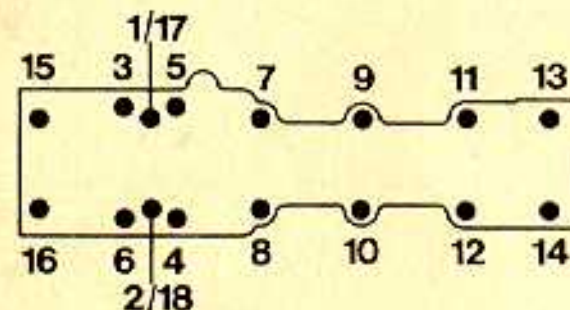
Tightening Sequence - Tightening Torques for Balance Shaft Cover

From Model '85



1. Manually tighten bolts and nuts
2. Fit bearing housing
3. Stud bolts M 6 10 Nm (7 ftlbs)
4. Hexagon bolts M 8 1st stage 15 Nm (11 ftlbs)
2nd stage 20 Nm (15 ftlbs)

From Model '87



1. Manually tighten bolts and nuts
2. Fit bearing housing
3. Hexagon bolts no. 1 and 2 M 8 15 Nm (11 ftlbs)
4. Hexagon bolts no. 3...16 M 6 10 Nm (7 ftlbs)
M 8 20 Nm (15 ftlbs)
5. Hexagon bolts no. 17 and 18 M 8 33 Nm (24 ftlbs)

Camshaft survey

Engine type	M 44/40	M 44/41	M 44/51, 52
Camshaft	E944.105.277.04 A944.105.275.04	E944.105.277.07 A944.105.275.09	944.105.155.05
Identification on camshaft	277.04 275.04	277.07 275.09	155.05
Valve timing 1 mm stroke, zero play			
Intake opens	4° CA after TDC	3° CA after TDC	1° CA after TDC
Intake closes	40° CA after BDC	47° CA after BDC	49° CA after BDC
Exhaust opens	36° CA before BDC	39° CA before BDC	43° CA before BDC
Exhaust closes	4° CA before TDC	7° CA before TDC	3° CA before TDC

Belt Adjustment Values - Engine

Belt type	Scale values on Special Tool 9201	
	New belt up to appr. 3000 km	Used belt over 3000 km

Camshaft toothed belt
for engine with tensioning roller:
(in direction of rotation to TDC
cylinder 1 and 10° crank
angle back)

Adjustment angle	4.0 ± 0.3	2.7 ± 0.3
Check value	2.4 to 4.3	2.7 ± 0.3

Camshaft toothed belt for engine with mechanical belt tensioner:
(in direction of rotation to TDC cylinder 1)

- Undo fixing screws on belt tensioner
- Check mobility of tensioning roller lever
- Tighten fixing screws (20 Nm (15 ftlb))

Balance shaft toothed belt

Adjustment and check value:

for roller with oblong hole	2.7 ± 0.3	2.7 ± 0.3
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Alternator drive belt

Adjustment and check value:

6-rib "poly-rib belt" without air conditioning	9.5	9.5
6-rib "poly-rib belt" with air conditioning	9.5 + 1 revolution at the tensioning strut	9.5

V-Belt Servo Pump

This V-belt cannot be checked with Special Tool 9201.

The tension must be determined by thumb pressure on the middle of the belt:

Belt should give by approx. 5 mm

V-belt dimensions

V-belt for servo pump

9.5 x 950

Poly-rib belt for alternator

K6 720 Lw

Poly-rib belt for alternator
and air conditioning compressor

K6 1000 Lw

Coolant mixing table (average values)

Frost protection to	Antifreeze	Water	Antifreeze	Water
-30° C	45 %	55 %	3.5 l	4.3 l
-35° C	50 %	50 %	3.9 l	3.9 l
-40° C	55 %	45 %	4.3 l	3.5 l

Cleaning the Complete Engine Oil System Following Engine Failure (Bearing Failure)

Note:

This cleaning sequence is only intended to indicate where chips may be found.

The actual scope of work involved must be determined individually for each engine failure.

The following parts should be replaced:

- Hydraulic bucket tappets
- Pressure relief valve (crankcase)
- Pressure reducing valve (cylinder head)
- Oil-water heat exchanger
- Oil filter
- Chain tensioner

The following parts should be dismantled, checked and thoroughly cleaned:

- Oil pump
- Oil-water heat exchanger housing
- Oil check valve in cylinder head

The following parts must be cleaned thoroughly and/or rinsed several times:

Note:

All oil bores can be flushed thoroughly with conventional benzine.

-Oil pan

-Oil inlet pipe

-Oil drain pipe

-Oil lines

-Oil cooler

-Oil filler neck

-Crankcase

-Crankcase

-Cylinder head

-Camshaft housing

-Turbocharger

Change oil filter and engine oil after approx. 500 km.

Note:

Following an engine failure the complete intake system must be checked for foreign bodies and oil and cleaned before assembly.

Testing and Adjusting Values

Engine type	M44/40, 41	M44/51, 52
Electric fuel pump		
Delivery rate	min. 850 cm ³ /30 s	min. 850 cm ³ /30 s
Fuel pressure (engine stopped)		
Fuel pump relay bridged	3.8 ± 0.2 bar	2.3 – 2.7 bar
Check value at idle	approx. 3.3 ± 0.2 bar	approx. 2.0 bar
Leak test		
Min. pressure after 20 Min.	2.0 bar	1.0 bar
Idle setting	Without cat. converter 840 ± 40	Without cat. converter models 840 ± 40
Idle speed rpm	840 ± 40	840 ± 40
CO values %	1 ± 0.5	0.8 ± 0.4 ¹⁾
HC values ppm	≤ 300	≤ 300 ²⁾
		Cat. converter models 840 ± 40 0.6 ± 0.2 ²⁾ ≤ 300 ²⁾

¹⁾ Measured upstream of cat. converter, oxygen sensor connected

²⁾ Measured upstream of cat. converter, oxygen sensor disconnected

Torque Specifications - Clutch

Location	Thread	Tightening torque Nm (ftlb)	
Clutch			
Guide tube to clutch housing	M 7	15 (11)	
Clutch and ring gear mounting	M 8	25 (18)	
Flywheel to crankshaft	M 10	40 (29) 90 (66)	1st stage 2nd stage
Clutch housing to engine	M 12	75 (55)	
Starter motor to clutch housing	M 12	65 (48)	
Protective plate and support plate to clutch housing and crankcase	M 10	42 (31)	
Clutch release shaft with clutch housing	M 6 x 35 M6 (nut)	9.5 (7) 7.5 (6)	
Reference mark and engine speed sensor to holder	M 6	8 (6)	
Slave cylinder to clutch housing	M 8 x 28	21 (15)	
Master cylinder to bulkhead	M 8	21 (15)	
Clutch tube to clutch hose or to master and slave cylinders	M 12	16 (12)	

Clutch

Design Single-plate dry clutch with diaphragm spring, extended design, mounted on engine side. Hydraulic operation.

Pressure plate M44/40, 41: MFZ 225 M44/51, 52: GMFZ 240

Contact pressure M 44/40, 41: 6100...6800 N M 44/51, 52: 8700...9500 N

Clutch disk M 44/40, 41: GUD 225 M 44/51, 52: (W)TD 240

Lateral runout Max. 0.6 mm for \varnothing 220

Clutch play at clutch pedal* Approx. 3 mm

* The clutch play cannot be checked at the clutch pedal due to the automatic hydraulic adjustment. However, perfect functioning of the clutch must be guaranteed by a play of 0.5 mm between the push rod and the master cylinder piston. This play cannot be measured, but must be determined on the clutch pedal by sense of feeling. It will be approx. 3 mm on the pedal tread plate.

Torque Specifications for Central Tube, Transmission Suspension and Shift Actuation

Location	Thread	Tightening torque Nm (ftlb)
Central shaft to transmission drive shaft	M 10 x 46	80 (59)
Central tube flange to clutch housing	M 10 x 35	42 (31)
Central tube case to transmission case	M 12 M 10 x 60	85 (63) 42 (31)
Transmission bearing to body	M 10	46 (34)
Bearing to suspension bracket	M 8	25 (18)
Suspension bracket to transmission	M 8	25 (18)
Transmission bearing to transmission support	M 8	23 (17)
Holder to transmission bearing	M 8	23 (17)
Holder to transmission	M 8	23 (17)
Joint rod to transmission case	M 8	14 (10)
Joint rod to intermediate lever	M 8	21 (15)
Shift rod mounting	M 8	21 (15)
Shift lever plate to central tube	M 8 x 12	21 (15)
Intermediate lever to shifting shaft	M 8	22.5 (17)

Torque Specifications - Manual Transmission

Location	Thread	Tightening torque Nm (ftlb)
Oil filler screw to transmission case	M 24	24 (18)
Oil drain screw to transmission case	M 24	24 (18)
Cover for shifting shaft to transmission case	M 6	8 (6)
Bearing bracket to transmission case	M 8	24 (18)
Ball bearing to drive shaft		
944 S/S2	M 10*	70 (52)
944 Turbo	M 17	150 (111)
Cover to bearing bracket	M 8	24 (18)
5th gear wheel to driving shaft	M 10	70 (52)
Shifting lock to bearing bracket and transmission case	M 18	30 (22)
Shift travel limiter to bearing bracket	M 14	30 (22)
Reversing lever to bearing bracket	M 10	35 (26)
Reverse gear pin to bearing bracket	M 8	24 (18)
Flanged shaft to differential gear	M 8	24 (18)
Side transmission cover to transmission case	M 8	24 (18)
Crown gear to differential case	M 10	90 (66)

*Bolts are microencapsulated. Can be used once only!

Torque Specifications - Manual Transmission

Location	Thread	Tightening torque Nm (ftlb)
Reversing light switch to transmission case	M 18	42 (31)
Speedo bush to transmission case	M 18	42 (31)
Joint shaft to halfshaft flange	M 8	42 (31)

Torque Specifications - Manual Transmission

944 Turbo

Location	Thread	Tightening torque Nm (ftlb)
Spiral cooling pipe to cover and oil pump	M 8	24 (18)
Oil pump cover to side transmission cover	M 6	8 (6)
Spiral cooling pipe mounting to transmission case	M 8	24 (18)
Spiral cooling pipe bracket to mounting	M 6	8 (6)

Technical Data - Type 016 R/016 S, 083 D/083 F

Ratios

1st gear	10:35	$i = 3.500$
2nd gear	17:35	$i = 2.059$
3rd gear	25:35	$i = 1.400$
4th gear	29:30	$i = 1.034$
5th gear	35:29	$i = 0.829$
Reverse	083F:36:28 12:42	$i = 0.778$ $i = 3.500$

Final drive Hypoid drive with 12 mm offset

Final drive ratio	8:27	$i = 3.375$ (944 Turbo)
	8:27	$i = 3.375$ (944 Turbo S)
	9:35	$i = 3.889$ (944 S)
	8:31	$i = 3.875$ (944 S2)

Power transmission Front engine and transmission (at rear) bolted together by means of a connecting tube to form a rigid drive unit. Front engine, clutch, torsionally elastic shaft (25 mm \varnothing) to transmission mounted in 4 bearings in the connecting tube, rear transmission interlocked with axle drive, twin drive shaft to rear wheels

Filling capacity Approx. 2 l hypoid transmission oil, SAE 75W/90, API classification GL 5 or MIL-L 2105 B, or SAE 80, API classification GL 4 or MIL-L 2105.

Torque Specifications - Front Axle

Location	Thread	Tightening torque Nm (ftlb)
Control arm to cross member	M 12 x 1.5	65 (48)
Control arm to body	M 10	46 (34)
Control arm bearing to alum. control arm (caster eccentric)	M 12 x 1.5	85 (63)
Control arm to steering knuckle	M 10	50 (37)
Cross member to body	M 12	85 (63)
Heat sink for hydraulic bearing to cross member	M 6	10 (7)
Track rod to steering knuckle	M 12 x 1.5	Castle nut 30 + 20 (22 + 15) Locking nut 50 (37)
Stabilizer suspension to body	M 8	23 (17)
Clip for stabilizer to suspension	M 8	23 (17)
Stabilizer suspension to control arm	M 10	25 (18)
Plug for vibration damper insert		150 \pm 30 (111 \pm 22)
McPherson strut bearing to shock absorber strut	M 14 x 1.5	77(57)
Fillister head screw to clamping nut	M 7	13 + 3 (10 + 2)
Cover plate to steering knuckle	M 7	10 (7)

Location	Thread	Tightening torque Nm (ftlb)
Brake caliper to steering knuckle	M 12 x 1.5	85 (63)
McPherson strut to steering knuckle	M 12 x 1.5	100 (74)
McPherson strut to body	M 8	25 (18)
Air deflector to McPherson strut	M 6	10 (7)
Brake disk to wheel hub	M 8	23 (17)
	M 6	10 (7)
Light-alloy wheel to brake disk	M 14 x 1.5	130 (96)

Torque Specifications - Steering

Location	Thread	Tightening torque Nm (ftlb)
Universal shaft to steering gear and steering shaft	M 8	30 + 5 (22 + 4)
Steering gear to cross member	M 8	23 (17)
Cover for pinion bearing	M 6	7 (5)
Cover on press. piece bearing	M 6	7 (5)
Check nut for adjustment bolt	M 10 x 1	25 (18)
Track rod to steering knuckle	M 12 x 1.5	Castle nut 30 + 20 (22 + 15)
		Locking nut 50 (37)
Track rod to steering rack (not for power steering)	M 22 x 1.5	50 (37)
Track rod joint to track rod (not for power steering)	M 14 x 1.5	30 (22)
Steering wheel to steering shaft	M 16 x 1.5	45 (33)
Steering column switch to jacket tube	M 8	15 (11)
	M 5	4 (3)
Jacket tube to body	M 8	23 (17)
Support bearing to body	M 6	7 (5)
Power steering*		
Track rod to steering rack	M 14 x 1.5	70 (52)
Track rod joint to track rod	M 14 x 1.5	70 (52)
Pressure and return line to steering gear	M 12 x 1.5	20 (15)
Pressure line to servo pump	M 14 x 1.5	30 (22)
Ring hose nipple for suction hose to servo pump	M 16 x 1.5	45 (33)

*The values not listed are the same as for models without power steering.

Torque Specifications - Rear Axle

Location	Thread	Tightening torque Nm (ftlb)
Bearing flange to transv. tube	M 10	46 (34)
Bearing flange to body	M 12 x 1.5	70 (52)
Thrust bearing to bearing flange	M 10	46 (34)
Thrust bearing to body	M 10	46 (34)
Support bearing to body	M 10	46 (34)
Support bearing to strut	M 8	23 (17)
Axle control arm to rear axle strut (locking nut camber eccentric)	M 12 x 1.5	90 (66)
Axle control arm to rear axle strut (locking nut)	M 12 x 1.5	103 (76)
Axle control arm to transverse tube	M 12 x 1.5	61 (45)
Vibration damper to body	M 12 x 1.5	61 (45)
Vibration damper to aluminium control arm	M 14 x 1.5	123 (91)
Adjusting lever to spring strut	M 16 x 1.5	245 (181)
Stabilizer suspension to rear axle strut and stabilizer	M 10	46 (34)
Stabilizer fastening clip to rear axle transverse tube	M 8	23 (17)
Wheel hub to rear wheel shaft with aluminum control arm	M 22 x 1.5	500 (369)

Torque Specifications - Rear Axle

Location	Thread	Tightening torque Nm (ftlb)
Universal shaft to transmission and rear wheel shaft	M 8	42 (31)
Cover plate to axle control arm	M 6	10 (7)
Brake caliper to axle control arm	M 12 x 1.5	85 (63)
Brake line to brake caliper and brake hose	M 10 x 1	12 (9)
Mounting bracket for brake line to brake carrier or axle control arm	M 6	10 (7)
Cable holder to control arm	M 6	10 (7)
Brake disk to wheel hub	M 6	5 (4)
Light-alloy wheel to wheel hub	M 14 x 1.5	130 (96)

Technical Data

Front axle

Wheel suspension	wheels independently suspended on light-alloy control arms and spring struts (McPherson design)	
Springs	One coil spring per wheel, coaxial with spring strut	
Shock absorbers	Double-acting hydraulic shock absorber struts Standard: VW or F + S Optional extra: Koni	
Stabilizer		
	944 S	Standard Solid stabilizer Ø 20 mm Optional extra Solid stabilizer Ø 21.5 mm or tubular stabilizer Ø 23 mm tubular stabilizer Ø 25.5 mm (Introduction during Mod. '87)
	944 Turbo 162 kW/220 HP	Solid stabilizer Ø 22.5 mm Ø 25.5 mm from Mod. '87 tubular stabilizer Ø 24 mm tubular stabilizer Ø 25.5 mm tubular stabilizer Ø 26.8 mm (with M030 sports suspension)
	944 Turbo 184 kW/250 HP, 944 S2	tubular stabilizer Ø 26.8 mm

Technical Data

Steering

Steering wheel	Standard: Optional extra:	Rack and pinion steering, hydraulically assisted power steering optionally extra 380 mm Ø 360 mm Ø
Steering wheel ratio in the middle		22.39:1 (Power steering Left hand drive 18.85:1 Right hand drive 18.96:1)
Turning circle diameter		10.75 m
Track circle diameter		10.1 m
No. of steering wheel turns lock to lock		3.84 - 4.02 (Power steering Left hand drive 3.24 Right hand drive 3.26)

Rear axle

Rear axle		Independent wheel suspension on semi-trailing arms
Springs		One round torsion bar per wheel, transverse
Torsion bar Ø		Refer to spring strut and height adjustment
Shock absorbers		Double-acting hydraulic shock absorbers Standard: F + S Optional extra: Koni
Stabilizer		
	944 S	Standard — Optional extra 18 mm 20 mm with M 030 sports suspension
	944 Turbo 162 kW/220 HP	18 mm
	944 Turbo 184 kW/250 HP, 944 S2	16 mm

Technical Data

Front axle

Height adjustment*
bottom screw edge
of control arm bearing
at rear **under** wheel
center

944 S M 030/M 637

(height-adjustable spring struts)

944 S2 M 030, 944 Turbo

(height-adjustable spring struts)

146 ± 10 mm

130 ± 10 mm

Rear axle

Spring strut
adjustment
(tilt of
spring strut) **

Height adjustment*
Center of strut bearing
(torsion bar center)
under wheel center

944 S Standard

Torsion bar Ø 23.5 mm

23°
(24°23' USA, Canada)

-3.5 ± 10 mm

M 030/M637 Mod. 87/88

Torsion bar Ø 25.5 mm

18°

-18.5 ± 10 mm

944 S2 Standard

Torsion bar Ø 24 mm

Cabrio 23°
Coupe 22°

-10.5 ± 10 mm

M 030/M 031

Torsion bar Ø 25.5 mm

18°

-18.5 ± 10 mm

Spring strut
adjustment
(tilt of
spring strut) **

Height adjustment*
Center of strut bearing
(torsion bar center)
under wheel center

944 Turbo up to Mod. '88

Standard and M 474
Torsion bar Ø 23.5 mm

25°
(26°30' USA, Canada)

-3.5 ± 10 mm

M 030, Turbo "S"

Torsion bar Ø 25.5 mm

18°

-18.5 ± 10 mm

944 Turbo from Mod. '89

Standard and M 030
Torsion bar Ø 25.5 mm

18°

-18.5 ± 10 mm

* Max. height difference from left to right 10 mm.
The bumper height is decisive for USA and Canada models. The distance from the measuring surface (road/flat surface) to the top edge of the bumper must be 522 ± 20 mm **at the rear axle**. **At the front axle** the distance must be 526 ± 20 mm for the 944 S and 533 ± 20 mm for the 944 S2 and 944 Turbo.

** Max. difference right to left 0.5°. 1° change in spring strut tilt corresponds to approx. 5 mm change in vehicle height.

Wheel Alignment Adjustment Values

The following values apply to curb weight in accordance with DIN 70020 (car with full fuel tank, spare wheel and tool kit).
USA and Canada values in brackets.

Wheel alignment values up to end of Mod. '89

	Adjustment value and tolerance	Max. difference left to right
Front axle		
Toe - unpressed	+ 10' ± 5'	
Toe difference angle at 20° lock	-40' to - 1° 50'	may be affected only by replacement of steering arms
Camber	-20' ± 15'	10'
Caster	2°30' + 30' - 15'	30'
Rear axle		
Toe per wheel	0° ± 5'	10'
Camber	-25' ± 30' (-1° ± 20')	30' 30'

Wheel Alignment Values from Mod. '90

	Adjustment value and tolerance	Max. difference left to right
Front axle		
Toe - unpressed	+ 10' ± 5'	
Toe difference angle at 20° lock	-40' to - 1° 50'	may be affected only by replacement of steering arms
Camber	0° ± 10'	20'
Caster	2°30' + 30' - 15'	30'
Rear axle		
Toe per wheel	+10' ± 10'	10'
Camber	-45' ± 20' (-1° ± 20')	30' 30'

USA and Canada values in brackets.

Coil Spring Tolerance Groups

General

The coil spring designs differ with respect to length and hardness (spring rate).

They are identified by color markings.

Each type of spring is also divided into two or three tolerance groups (tolerance of spring rate $\pm 4\%$).

Survey

Coil spring Part No. 951 343 531 00, spring rate 21.8 N/mm

Use: 944 S with standard shock absorbers (unpressurized)

Group	Length removed	Spring force F at length 251 mm	Color dot
1	approx. 407 mm	3265 - 3355 N	1 white
2	approx. 407 mm	3355 - 3445 N	2 white
3	approx. 407 mm	3445 - 3535 N	3 white

Coil spring Part No. 951 343 531 01, spring rate 21.8 N/mm

Use: 944 S with sports shock absorbers (gas-filled dampers)

Group	Length removed	Spring force F at length 251 mm	Color dot
1	approx. 396 mm	3034 - 3118 N	1 yellow
2	approx. 396 mm	3118 - 3202 N	2 yellow
3	approx. 396 mm	3202 - 3286 N	3 yellow

Coil spring Part No. 944 343 531 02, spring rate 23.8 N/mm

Use: 944 S2 with standard shock absorbers

Group	Length removed	Spring force F at length 244 mm	Color dot
1	approx. 378 mm	—	1 purple
2	approx. 378 mm	—	2 purple
3	approx. 378 mm	—	3 purple

Coil Spring Tolerance Groups

Coil spring Part No. 944 343 531 03, spring rate 23.8 N/mm

Use: 944 S2 with sports shock absorbers up to end of Mod. '89

Group	Length removed	Spring force F at length 244 mm	Color dot
1	approx. 367 mm	—	1 blue-green
2	approx. 367 mm	—	2 blue-green
3	approx. 367 mm	—	3 blue-green

Coil spring Part No. 944 343 531 01, spring rate 28 N/mm

Use: 944 S2 with M 030 sports suspension

Group	Length removed	Spring force F at length 220 mm	Color dot
1	approx. 329 mm	3050 - 3150 N	1 white - 1 yellow
2	approx. 329 mm	3150 - 3250 N	2 white - 1 yellow

Coil spring Part No. 944 343 531 04, spring rate 28 N/mm

Use: 944 S2 with Turbo suspension characteristics (M 031/from Mod. '90)

Group	Length removed	Spring force F at length 241 mm	Color dot
1	approx. 348 mm	2881 - 2961 N	1 beige
2	approx. 348 mm	2961 - 3040 N	2 beige
3	approx. 348 mm	3040 - 3120 N	3 beige

Coil Spring Tolerance Groups

Coil spring Part No. 951 343 531 01, spring rate 21.8 N/mm, constant wire Ø 12 mm

Use: 944 Turbo with standard and sports shock absorbers up to end of Mod. '88

Group	Length removed	Spring force F at length 251 mm	Color dot
1	approx. 396 mm	3034 - 3118 N	1 yellow
2	approx. 396 mm	3118 - 3202 N	2 yellow
3	approx. 396 mm	3202 - 3286 N	3 yellow

Coil spring Part No. 944 343 531 01, spring rate 28 N/mm, inconstant wire Ø 11.7 - 12.2 mm

Use: 944 Turbo with M 030 sports suspension* from Mod. '87 and standard on Mod. '89

Group	Length removed	Spring force F at length 220 mm	Color dot
1	approx. 329 mm	3050 - 3150 N	1 white - 1 yellow
2	approx. 329 mm	3150 - 3250 N	2 white - 1 yellow

Coil spring Part No. 951 343 531 03, spring rate 28 N/mm, constant wire Ø 11.6 mm

Use: 944 Turbo with standard shock absorbers from Mod. '90

Group	Length removed	Spring force F at length 241 mm	Color dot
1	approx. 356 mm	3082 - 3168 N	1 gray
2	approx. 356 mm	3168 - 3253 N	2 gray
3	approx. 356 mm	3253 - 3330 N	3 gray

* Standard equipment on special model 944 Turbo "S" (M 758)

Torque Specifications - Mechanical Brake System

Location	Thread	Tightening torque Nm (ftlb)
Fillister head screw to clamping nut	M 7	13 + 3 (10 + 2)
Brake caliper to steering knuckle	M 12 x 1.5	85 (63)
Brake disk to front wheel hub	M 8 M 6	23 (17) 10 (7)
Cover plate to steering knuckle	M 7	10 (7)
Air deflector to spring strut	M 6	10 (7)
Wheel hub to rear wheel shaft	M 22 x 1.5	500 (369)
Mounting bracket for brake line to brake carrier or axle control arm	M 6	10 (7)
Cable holder to control arm	M 6	10 (7)
Cover plate to brake carrier or control arm	M 6	10 (7)
Brake disk to rear wheel hub	M 6	5 (4)
Brake caliper to control arm	M 12 x 1.5	85 (63)
Handbrake lever to body	M 8	21 (15)
Brake cable to yoke	M 6	8.5 (6)
Handbrake cable to turn-buckle	M 6	8.5 (6)
Brake booster to intermediate piece	M 8	21 (15)
Intermediate piece to bulkhead	M 8	21 (15)
Fork head to brake push rod	M 10	35 (26)

Torque Specifications - Hydraulic Brake System

Location	Thread	Tightening torque Nm (ftlb)
Brake pressure line to brake master cylinder, brake hose, distributor and brake caliper	M 10 x 1	12 (9)
Brake power regulator to brake master cylinder or hydraulic unit	M 10 x 1	14 (10)
Brake hose to brake caliper	M 10 x 1	14 (10)
Bleed screw to floating caliper	M 7	4 (3)
Bleed screw to fixed caliper	M 10	8-12 (6-9)
Brake master cylinder to brake booster	M 8	21 (15)
Brake booster to intermediate piece	M 8	21 (15)
Intermediate piece to bulkhead	M 8	21 (15)
Shield panel for braking equipment to body	Bolt M 6 Nut M 6	10 (7) 5 (4)
Mounting bracket on brake carrier or rear axle control arm	M 6	10 (7)
Stop screw in brake master cylinder	M 6	7 - 10 (5-7)

Technical Data - Brake System

Designation	Remarks, dimensions	Wear limit
Service brake (foot brake)	Hydraulic dual-circuit brake system with brake circuits split up front/rear (black/white) brake booster, internally ventilated brake disks with sliding calipers or fixed calipers front and rear. The push rod brake circuit is allocated to the front wheels.	
Brake booster (Light-weight built)	Ø 9 inches	
Booster factor	3.4*	
Brake master cylinder* (Aluminum design)		
up to end of Mod. '86	23.81/19.05 mm	
from Mod. '87	23.81/20.64 mm	
Brake power regulator in rear brake circuit		
Change-over pressure/ reduction factor		
944 S	33 bar/046	
944 S2/944 Turbo	18 bar/046	
Brake disks Ø		
944 S front	282.5 mm	
rear	289 mm	
944 S2 and front	298 mm	
944 Turbo 162 kW rear	299 mm	
944 Turbo 184 kW front	304 mm	
rear	299 mm	

*on models with ABS (optional extra from Mod. 87) with two central valves.

Technical Data - Brake System

Designation	Remarks, dimensions	Wear limit
Brake lining thickness		
front	13 mm	2 mm
rear	13 mm	2 mm
Brake disk thickness new		
944 S front	20.5 mm	
rear	20 mm	
944 S2 and front	28 mm	
944 Turbo 162 kW rear	24 mm	
944 Turbo 184 kW front	32 mm	
rear	24 mm	
Min. brake disk thickness* after reworking		
944 S front	19.1 mm	18.5 mm
rear	19.2 mm	18.6 mm
944 S2 and front	26.6 mm	26 mm
944 Turbo 162 kW rear	22.6 mm	22 mm
944 Turbo 184 kW front	30.6 mm	30 mm
rear	22.6 mm	22 mm
Thickness tolerance of brake disk max.	0.02 mm	
Max. lateral runout wheel hub	0.05 mm	
brake disk	0.05 mm	
Max. lateral runout of brake disk when installed	0.1 mm	

*the brake disk must only be reworked symmetrically, i.e. from both sides equally.

Technical Data - Brake System

Designation	Remarks, dimensions	Wear limit
Max. peak-to-valley height after reworking	0.006 mm	
Play at brake pedal when brakes bled and engine off	approx. 10 mm	
Parking brake (handbrake)	mechanical, acting on both rear wheels Drum brake	
Handbrake drum \varnothing	180 mm	181 mm
Brake shoe width	25 mm	
Brake lining area per wheel	85 cm ²	
Brake lining thickness	4.5 mm	2 mm

Checking Rims

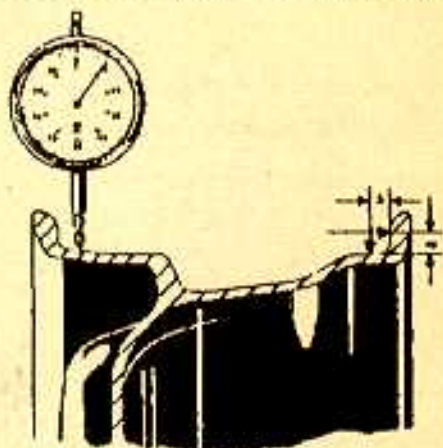
Points for measuring vertical and lateral runout on outer and inner rim shoulders.

Dimension "a" = 8 mm

Max. permissible vertical and lateral runout: 1 mm

Note

Straightening twisted rims is not permissible.



Tires, Wheels, Tire Pressures

Information on permitted tire/wheel combinations and dimensions is contained in the vehicle documents or Technical Information bulletins.

Tire pressures (summer and winter tires) measured with tires cold

944 S	front 2.0 bar (29 psi)	rear 2.5 bar (36 psi)
944 S2/Turbo up to Mod. '89	front 2.5 bar (36 psi)	rear 2.5 bar (36 psi)
944 S2 Mod. '90 Turbo from Mod. '90	front 2.5 bar (36 psi)	rear 3.0 bar (44 psi)
944 S2 Mod. '91	front 2.5 bar (36 psi)	rear 2.5 bar (36 psi)
Spare wheel	2.5 bar (36 psi)	

Technical Data - Air Conditioning

Refrigerant volume 950 g R12

Refrigerant oil in compressor $80 \text{ cm}^3 \pm 20 \text{ cm}^3$ Densoil

Torque Specifications

Location	Designation	Thread	Tightening torque Nm (ftlb)
Compressor	Hexagon screw	M 8	28 (21)
Evaporator	Hexagon screw	M 6	6 (4)
Fluid tank	Union nut	5/8" x 18 UNF	17 (13)
Condenser inlet	Union nut	11/16" x 14 UNF	44 (32)
Condenser outlet	Union nut	5/8" x 18 UNF	17 (13)

Electrical System

The fuse and relay assignment plan is on the inside of the Central Electrical Compartment cover.

Dimensions (at curb weight in accordance with DIN)**944 S**

Wheelbase	2400 mm
Track width front	1477 mm
Track width rear	1451 mm
Length	4200 mm
Length with USA bumpers	4320 mm
Width	1735 mm
Height	1275 mm
Ground clearance*	125 mm
Turning circle	approx. 10.3 m
Overhang angle front*	14.7°
rear*	16.5°

944 Turbo 162 kW/220 HP

Wheelbase	2400 mm
Track width front	1477 mm
Track width rear	1451 mm
Length	4230 mm
Length with USA bumpers	4289 mm
Width	1735 mm
Height	1275 mm
Ground clearance*	125 mm
Turning circle	approx. 10.3 m
Overhang angle front*	13.8°
Overhang angle rear*	15.8°

*at permitted total weight

Dimensions (at curb weight in accordance with DIN)**944 S2****944 Turbo 184 kW/250 HP**

Wheelbase	2400 mm
Track width front w. sports suspension	1457 mm
w/o sports suspension	1472 mm
Track width rear	1436 mm
from Mod. '90	1451 mm
Length	4230 mm
Length with USA bumpers	4289 mm
Width	1735 mm
Height	1275 mm
Ground clearance*	125 mm
Turning circle	approx. 10.75 m
Overhang angle front*	12.5°
rear*	15.0°
from Mod. '90 front*	13.8°
rear*	16.0°

*at permitted total weight

Performance Data (at DIN curb weight and half payload)

		Turbo Mod. '86 up to '88	Turbo from 944 S Mod. '89 and Turbo S	944 S2
Maximum speed	km/h	245	260	228
	mph	(152)	(162)	(142)
Acceleration 0 - 100 km/h	s	6.3	5.9	7.9
Kilometer from standing start	s	26	24.5	27.8
1/4 mile from standing start	s	(14.4)	(13.5)	(15.4)

(USA values in brackets)

Weights

944 Turbo

Mod. '86

Curb weight to DIN
 Perm. total weight
 Perm. axle load front*
 Perm. axle load rear*
 Perm. trailer load unbraked **/***
 Perm. trailer load braked **/****
 Perm. towing weight
 Perm. roof load */****
 Perm. drawbar load***

RoW

1280 kg
 1600 kg
 730 kg
 920 kg
 500 kg
 1200 kg
 2800 kg
 75 kg
 50 kg

USA

1315 kg/2899 lbs.
 1600 kg/3527 lbs.
 730 kg/1609 lbs.
 920 kg/2028 lbs.

75 kg/ 165 lbs.

RoW

1350 kg
 1670 kg
 770 kg
 930 kg
 500 kg
 1200 kg
 2800 kg (from '88 2870)
 75 kg
 50 kg

USA

1360 kg/2998 lbs.
 1645 kg/3626 lbs.
 760 kg/1675 lbs.
 920 kg/2028 lbs.

* The permitted total weight must, however, not be exceeded.

** Up to 16% incline

*** Valid only if original Porsche spare parts are used.

**** Only if original Porsche basic roof rack is used, otherwise only **35 kg** roof load.

Caution: if additional equipment is installed (air conditioning etc.) the payload capacity is reduced accordingly.

Weights

	944 Turbo Mod. '90		944 S Mod. '87, '88	
	RoW	USA	RoW	USA
Curb weight to DIN	1400 kg	1400 kg/3086 lbs.	1280 kg	1300 kg/2866 lbs.
Perm. total weight	1740 kg	1690 kg/3725 lbs.	1600 kg	1600 kg/3527 lbs.
Perm. axle load front*	810 kg	790 kg/1741 lbs.	730 kg	730 kg/1609 lbs.
Perm. axle load rear*	970 kg	920 kg/2028 lbs.	900 kg	900 kg/1984 lbs.
Perm. trailer load unbraked**/****	500 kg		500 kg	
Perm. trailer load braked**/****	1200 kg		1200 kg	
Perm. towing weight	2940 kg		2760 kg	
Perm. roof load*/****	75 kg	75 kg/ 165 lbs.	75 kg	75 kg/ 165 lbs.
Perm. drawbar load***	50 kg		50 kg	

* The permitted total weight must, however, not be exceeded.

Caution: if additional equipment is installed (air conditioning etc.) the payload capacity is reduced accordingly.

** Up to 16% incline.

*** Valid only if original Porsche spare parts are used.

**** Only if original Porsche basic roof rack is used, otherwise only 35 kg roof load.

Weights

944 S2	Mod. '89		Mod. '90	
	RoW	USA	RoW	USA
Curb weight to DIN	1310 kg	1330 kg/2932 lbs.	1340 kg	1360 kg/2998 lbs.
Perm. total weight	1650 kg	1620 kg/3571 lbs.	1680 kg	1650 kg/3637 lbs.
Perm. axle load front*	740 kg	740 kg/1631 lbs.	760 kg	760 kg/1675 lbs.
Perm. axle load rear*	930 kg	900 kg/1984 lbs.	960 kg	910 kg/2006 lbs.
Perm. trailer load unbraked**/****	500 kg		500 kg	
Perm. trailer load braked**/****	1200 kg		1200 kg	
Perm. towing weight	2850 kg		2880 kg	
Perm. roof load*/****	75 kg	75 kg/ 165 lbs.	75 kg	75 kg/ 165 lbs.
Perm. drawbar load***	50 kg		50 kg	

* The permitted total weight must, however, not be exceeded.

Caution: if additional equipment is installed (air conditioning etc.) the payload capacity is reduced accordingly.

** Up to 16% incline.

*** Valid only if original Porsche spare parts are used.

**** Only if original Porsche basic roof rack is used, otherwise only 35 kg roof load.

Weights

	944 S2 Mod. '91	Cabriolet Mod. '90, '91
	RoW	USA
Curb weight to DIN	1340 kg	1360 kg/2998 lbs.
Perm. total weight	1680 kg	1650 kg/3637 lbs.
Perm. axle load front*	760 kg	760 kg/1675 lbs.
Perm. axle load rear*	960 kg	910 kg/2006 lbs.
Perm. trailer load unbraked**/****	500 kg	500 kg
Perm. trailer load braked**/****	1200 kg	1200 kg
Perm. towing weight	2880 kg	2910 kg
Perm. roof load*/****	75 kg	75 kg
Perm. drawbar load****	50 kg	50 kg

* The permitted total weight must, however, not be exceeded.

** Up to 16% incline.

*** Valid only if original Porsche spare parts are used.

**** Only if original Porsche basic roof rack is used, otherwise only **35 kg** roof load.

Caution: if additional equipment is installed (air conditioning etc.) the payload capacity is reduced accordingly.

Filling Capacities

Engine oil specification	API class SE/CC to SF/CD multi-grade oils see works approval: Technical Information bulletins - engine oils	
Engine oil volume	944 Turbo	up to Mod. '87 approx. 6.5 liters
	944 Turbo	from Mod. '88 approx. 7.0 liters
	944 S	Mod. '87 approx. 6.0 liters
	944 S	Mod. '88 approx. 6.5 liters
	944 S2	approx. 6.5 l
Cooling system, heater	Measurement with oil dipstick is decisive criterion. Difference between marks on dipstick: up to Mod. '87 approx. 1 liter from Mod. '88 approx. 1.5 liters approx. 7.8 l coolant, factory filling gives frost protection to - 35° C. Only use antifreeze and corrosion inhibitors which are suitable for light-alloy engines and radiators.	
Power steering	approx. 0.6 liters hydraulic fluid, only ATF Dexron II D	
Fuel tank	approx. 80 liters, inc. 8 liters reserve	
Brake fluid tank	approx. 0.2 liters brake fluid in accordance with SAE J 1703, DOT 3 or DOT 4	
Windshield washer system	approx. 6 liters, without headlights cleaning system approx. 3 liters	
Manual transmission with differential	approx. 2 liters hypoid transmission oil, SAE 75W/90, API Class GL 5 or MIL-L 2105 B, or SAE 80, API Class GL 4 or MIL-L 2105.	