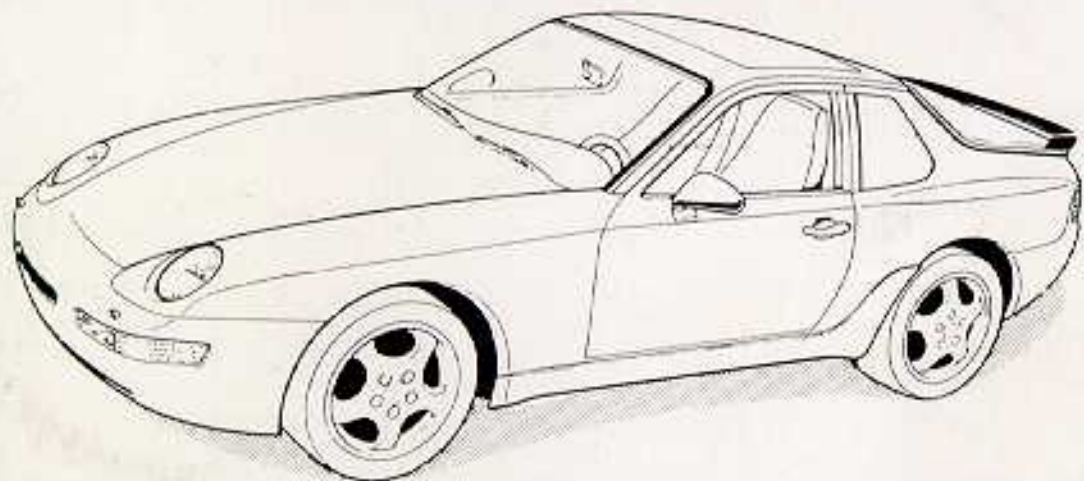


PORSCHE



968

Models 92, 93

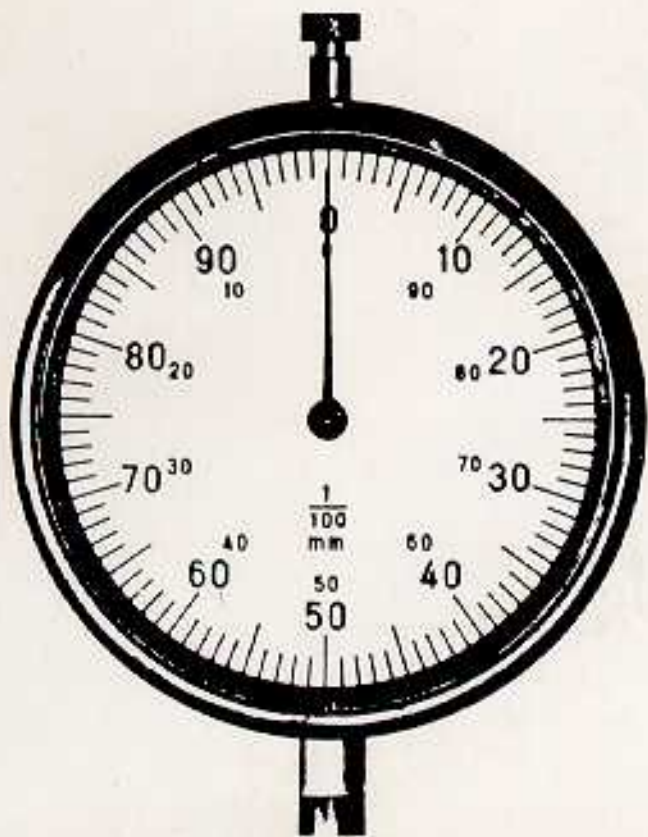
968

968 CS

Model 93

968 CS

**Technical
Speci-
fications**



Contents

	Page
General	
Important conversion factors and new dimensioning units	7
Survey of type designations	8, 9
Engine number codes as of Model 92	10
Engine type codes	11
Chassis number codes (Model 92)	12
Transmission number codes as of Model 92	13
Transmission type codes	13
Engine and clutch	
Engine data 968/968 CS	14
Technical data type 968/968 CS	16, 17
Torque specifications - engine	18 - 21
Tolerances and wear limits - engine	22 - 24
Crankshaft - normal and reconditioning dimensions	25
Tightening sequence - crankcase - upper and lower parts	26
Tightening sequence - tightening torques - compensating shaft cover	27
Checking pistons and cylinder bores	28
Survey of pistons (dimensions, weights and compression)	29
Piston and cylinder marking	30
Connecting rods - Installation position	30
Checking valve seat angles, valve dimensions and valve guides	31
Reworking valve seats and checking installation of valve springs	32

	Page
Transmission	
Machining the cylinder head mating face	33
Installing the cylinder head	34
Camshaft survey	35
Checking camshaft adjustment	35
Belt adjustment values - Engine	36
V-belt dimensions	36
Coolant mixing table	36
Cleaning engine oil circuit	37
Test values - engine	38
Torque specifications - clutch	40
Clutch - general	41
Transmission	
Torque specifications - manual transmission G 44	42
6-speed manual transmission G 44, general data	43
Torque specifications - Tiptronic transmission A 44	44
4-speed Tiptronic transmission A 44, general data	45
Torque Specifications - Central Tube, Transmission Suspension (Tiptronic)	46
Torque Specifications - Central Tube, Transmission Suspension and Transmission (Manual Transmission)	47

Survey of Type Designations

Model year designation	Vehicle type designation T = Tiptronic	Engine type designation	Dis- place- ment (HP) act.	Output-DIN-kW	Stroke/ bore (mm)	Com- pression ratio
			(cm ³)			ε
1992	968 Coupe RoW	M44/43	2990	176(240)	88/104	11.:1
	968 Coupe RoW	T M44/44	2990	176(240)	88/104	11.0:1
	968 Cabrio RoW	M44/43	2990	176(240)	88/104	11.0:1
	968 Cabrio RoW	T M44/44	2990	176(240)	88/104	11.0:1
	968 Coupe USA, Canada	M44/43	2990	176(240)	88/104	11.0:1
	968 Coupe USA, Canada	T M44/44	2990	176(240)	88/104	11.0:1
	968 Cabrio USA, Canada	M44/43	2990	176(240)	88/104	11.0:1
	968 Cabrio USA, Canada	T M44/44	2990	176(240)	88/104	11.0:1
1993	968 Coupe RoW	M44/43	2990	176(240)	88/104	11.0:1
	968 CS Coupe RoW	M44/43	2990	176(240)	88/104	11.0:1
	968 Coupe RoW	T M44/44	2990	176(240)	88/104	11.0:1
	968 Cabrio RoW	M44/43	2990	176(240)	88/104	11.0:1
	968 Cabrio RoW	T M44/44	2990	176(240)	88/104	11.0:1
	968 Coupe USA, Canada	M44/43	2990	176(240)	88/104	11.0:1
	968 Coupe USA, Canada	T M44/44	2990	176(240)	88/104	11.0:1
	968 Cabrio USA, Canada	M44/43	2990	176(240)	88/104	11.0:1
968 Cabrio USA, Canada	T M44/44	2990	176(240)	88/104	11.0:1	

Fuel-induc- tion system	Engine numbers	Trans- mis- sion type	Chassis numbers
S+u = Super plus unleaded			
DME S+u	42N00001-20000	G44/00	WP0 ZZZ 96 ZNS8 00001-05000
DME S+u	42N50001-60000	A44/00	WP0 ZZZ 96 ZNS8 00001-05000
DME S+u	42N00001-20000	G44/00	WP0 ZZZ 96 ZNS8 30001-35000
DME S+u	42N50001-60000	A44/00	WP0 ZZZ 96 ZNS8 30001-35000
DME S+u	42N00001-20000	G44/00	WP0 AA2 96 ©NS8 20001-25000
DME S+u	42N50001-60000	A44/00	WP0 AA2 96 ©NS8 20001-25000
DME S+u	42N00001-20000	G44/00	WP0 CA2 96 ©NS8 40001-45000
DME S+u	42N50001-60000	A44/00	WP0 CA2 96 ©NS8 40001-45000
DME S+u	42P00001-20000	G44/00	WP0 ZZZ 96 ZPS8 00001-05000
DME S+u	42P00001-20000	G44/00	WP0 ZZZ 96 ZPS8 15001-19999
DME S+u	42P50001-60000	A44/00	WP0 ZZZ 96 ZPS8 00001-05000
DME S+u	42P00001-20000	G44/00	WP0 ZZZ 96 ZPS8 30001-35000
DME S+u	42P50001-60000	A44/00	WP0 ZZZ 96 ZPS8 30001-35000
DME S+u	42P00001-20000	G44/00	WP0 AA2 96 ©PS8 20001-25000
DME S+u	42P50001-60000	A44/00	WP0 AA2 96 ©PS8 20001-25000
DME S+u	42P00001-20000	G44/00	WP0 CA2 96 ©PS8 40001-45000
DME S+u	42P50001-60000	A44/00	WP0 CA2 96 ©PS8 40001-45000

Engine number codes as of Model 92

Explanation of digits:

1	2	3	45678
Type of engine	Engine type	Model year	Serial number
4 = 4-cyl. engine	2 = naturally aspirated engine	N = 1992 P = 1993	00001...99999 00001...99999

Range of serial numbers: 00001 bis 20000 = Manual transmission
50001 bis 60000 = Tiptronic transmission

The first serial number figure is 501 in each case

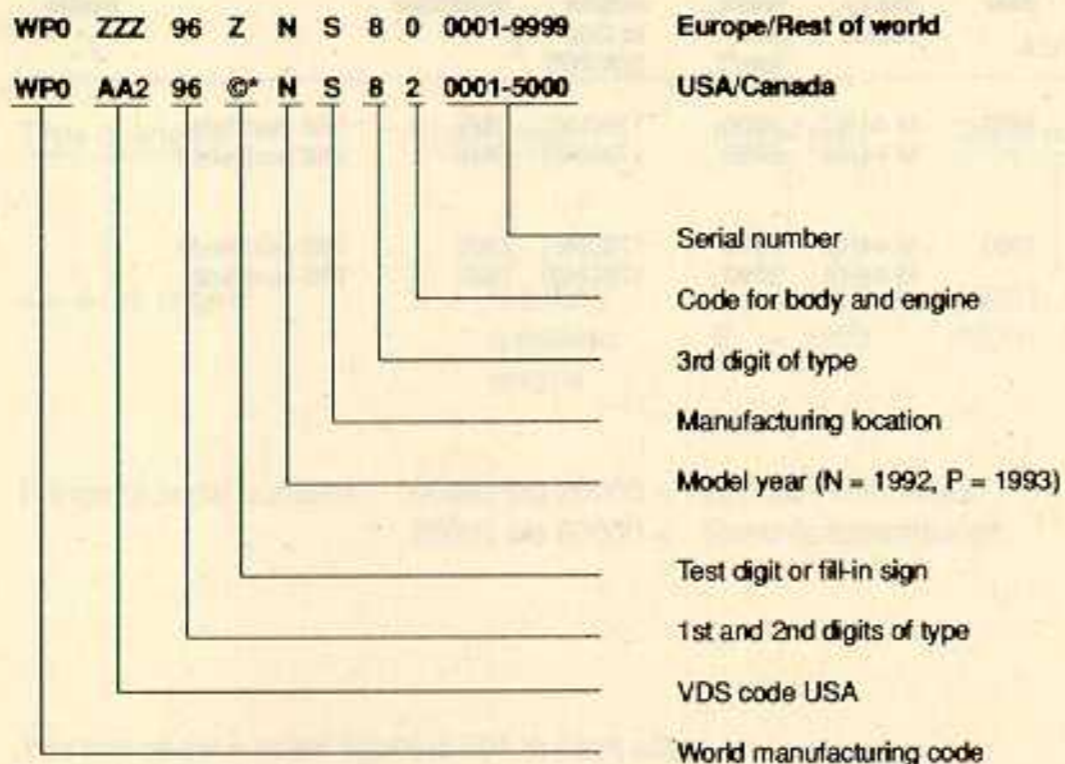
Example: 42N00604

Engine for 968 manual transmission 104th engine in model year 1992

Engine type codes

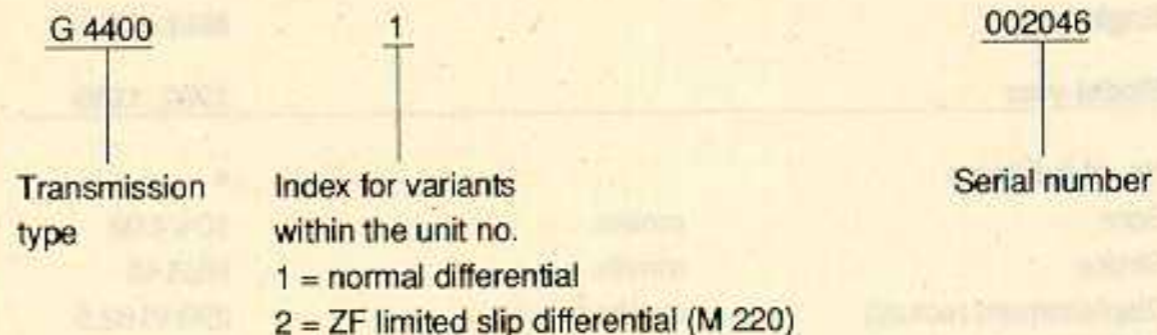
Pro-duction year	Model year	Type designation	Displacement act. (cm ³)	Engine output to DIN (kW/HP)	Fuel induction	installed in	T = Tiptronic
1991/92	1992	M 44/43	2990	176(240)	DME	968 worldwide	
		M 44/44	2990	176(240)	DME	968 worldwide	T
1992/93	1993	M 44/43	2990	176(240)	DME	968 worldwide	
		M 44/44	2990	176(240)	DME	968 worldwide	T

Chassis number codes (Model 92)



* Ⓢ = Test digit can be 0 ... 9 or X.

Transmission number codes as of Model 92



Caution: The transmission nos. 1...2000 of each type are reserved for testing. The first serial number is 2001.

Example: G 4400 2 002046

Transmission G 44/00 manufactured as of model year 1992 as the 46th standard transmission (with ZF limited slip differential M 220).

Transmission type codes

Transmission type	No. of speeds	Installed in vehic. type	Installed as of transm. no.	Remarks
G 44/00	6	968	G 4400 1 000001	Manual transmission
G 44/00	6	968	G 4400 2 000001	Manual transmission + M 220
A 44/00	4	968	A 4400 1 000001	Tiptronic

Engine Data 968/968 CS

Engine type		M44.43/44
Model year		1992, 1993
<hr/>		
No. of cylinders		4
Bore	mm/in.	104/4.09
Stroke	mm/in.	88/3.46
Displacement (actual)	cm ³ /in. ³	2990/182.5
Compression ratio		11.0:1
max. engine power,		
80/1269/EWG	kW/PS	176/240
(Net Power, SAE J 1349)	kW/HP	176/236
at engine speed	rpm	6200
max. torque,		
80/1269/EWG	Nm/kpm	305/31
(Net Torque, SAE J 1349)	Nm/lb ft	305/225
at engine speed	rpm	4100
max. specific power,		
DIN 70020	kW/l(PS/l)	58.9/80.3
(SAE J 1349)	kW/l(HP/l)	58.9/78.7
Fuel octane rating	RON	98 Sb+
Engine speed limitation		
by fuel cut-off	rpm	6700 ± 20
Idle speed M 44.43	rpm	840 ± 40
Idle speed M 44.44	rpm	880 ± 40
Engine weight (dry)	kg	172

Notes

Technical Data 968/968 CS

Engine design

Design	4-cylinder, 4-stroke spark-ignition engine, in line with 2 balance shafts	
Crankcase	2-piece light-alloy crankcase	
Crankshaft	Forged, 5 plain bearings	
Connecting rods	Forged	
Pistons	Forged light-alloy	
Balance shaft drive	Toothed belt	
Camshaft	Cast, without bearing shells, running in cylinder head	
Camshaft drive	Toothed belt and internal chain with electric/hydraulic adjustment	
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	Basic timing	Torque timing
(1 mm stroke, zero play)	Intake opens	7.5 degr. after TDC
	Intake closes	52 degr. after BDC
	Exhaust opens	31 degr. before BDC
	Exhaust closes	1 degr. before TDC

Engine cooling

Closed coolant system

Engine lubrication

Oil filter	Forced-feed circulation lubrication with crescent-type gear pump
Oil pressure	In full flow
Oil pressure indicator	0.6...8 bar, min 3.0 bar at 3000 rpm
Oil consumption	0...5 bar, electric gauge with warning light contact
l/1000 km	Up to 1.5

Exhaust system

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

Technical Data 968/968 CS

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	98 S+u
	Refer to Operating Instructions

Electrical system

Interference suppression	ECE-R 10 and 72/245/EEC
Battery voltage	12 V
Battery capacitance	Ah
Alternator/output	A/W
Ignition	63 Manual transmission (64 Tiptronic, 50 968 CS)
Ignition sequence	115/1610 (90/1260 968 CS)
Ignition timing	Contactless, via DME
Spark plugs	1-3-4-2
	Via DME
	Bosch WR 7 DTC
	3-ground electrode
Electrode gap	0.7 + 0.1 mm

Power transmission

Front-mounted engine, transmission at rear end, bolted together by a connecting tube to form a rigid drive unit - transaxle. Front engine, double-mass flywheel, 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 diaphragm spring, extended version, located at engine end
Pressure plate: GMFZ 240
Drive plate: Ø 240 (rigid)

Engine tightening torques

Location	Thread	Tightening torque Nm(ftlb)	
Crankshaft/ crankcase			
Crankcase bolt joints top and bottom section (studs)	M 12 x 1.5	30 (22)	1st stage
		60	60° torque angle 2nd stage
	M 10	20 (15)	1st stage
		50 (37)	2nd stage
	M 8	20 (15)	
	M 6	10 (7)	
Rotation body on balance shaft	M 6	10 (7), secured with Loctite 270	
Cover for balance shaft housing to upper crank- case section	M 6	10 (7)	
	M 8	20 (15)	
Hexagon head bolt			
Hexagon head bolt (bearing saddle)	M 8 x 58	15 (11)	1st stage
		33 (24)	2nd stage
Left-hand and right-hand bearing housing to upper crankcase section	M 8	20 (15)	
Sprocket on balance shaft	M 10	45 (33)	
Tensioning pulley to bear- ing housing	M 10	45 (33)	
Water pump to crankcase	M 6	10 (7), secured with Loctite 270	
Idler pulley to water pump case	M 10	45 (33)	
Tensioning pulley to oil pump housing	M 10	45 (33)	
Oil pump to crankcase	M 6	10 (7)	
	M 10	45 (33)	

Engine tightening torques

Location	Thread	Tightening torque Nm(ftlb)	
Toothed belt tensioner to crankcase	M 8	20 (15)	
Tensioning pulley to ten- sioning lever	M 10	45 (33)	
Support pin for tensioning lever	M 10	45 (33)	
Connecting-rod bolts (forged con-rods) Verbus-Ripp nut	M 10 x 1.25	25 (18) + 90° torque angle	
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 plug	M 20 x 1.5	50	
LH + RH engine support to crankcase	M 10	48	
Flywheel to crankshaft	M 10 x 1.25	40	1st stage
		90	2nd stage
Sensor brackets to crank- case	M 8	20	
Sensor to bracket	M 6	10	
Sprocket to crankschaft	M 16 x 1.5	210	
Flywheel to sprocket	M 6 x 25 Grade 10.9	13	
Mounting of belt cover	M 6	8	
Bracket for alternator to crankcase	M 10	45	
Water temperature gauge	M 10 x 1	35	

Engine tightening torques

Location	Thread	Tightening torque Nm(ftlb)
Temperature sender (coolant or oil)	M 12 x 1.5	15 (11)
Knock sensor	M 8	20 (15) Genuine bolt with- out washer
Oil pressure sender	M 18 x 1.5	35 (26)
Housing insert in oil pump housing	M 6	10 (7) mating flange sealed with Loctite 574
Radiator fan/thermostat housing to crankcase	M 8	20 (15)
Plug at oil/coolant radiator housing	M 18 x 1.5	35 (26)
Coolant vent plug	M 8 x 1	12 + 3 (9 + 2)
Oil filter pressure relief valve	M 20 x 1.5	45 (33) 20 (15)
Cylinder head		
Cylinder head to crankcase upper section Engine type M 44.43/44	M 12	20 (15) 1st stage 60° torque angle 2nd stage 90° torque angle 3rd stage
Camshaft support to cylin- der head	M 8	20 (15)
Camshaft adjuster - Vario- Cam to cylinder head	M 6	10 (7)
Socket head bolts for chain tensioner /oil pipe	M 6	10 (7)
Banjo bolt /oil pipe	M 8 x 1	10 (7)
Cylinder head cover	M 6	10 (7)
Intake pipe to cylinder head	M 8	20 (15)

Engine tightening torques

Location	Thread	Tightening torque Nm(ftlb)
Inlet flange for heater to cy- linder head	M 8	20 (15)
Flange for coolant pipe	M 8	20 (15)
Toothed belt cover to cylin- der head	M 6	10 (7)
Hall sender/mounting	M 6	10 (7)
Camshaft gearwheel to camshaft multi-tooth bolt	M 10	65 - 70 (48 - 52)
Distributor rotor to cam- shaft gearwheel	M 5	6 (4)
Transport bracket to cylin- der head	M 6	10 (7)
Spark plugs	M 14 x 1,25	25 - 30 (18 - 22); grease thread lightly with Moly- kote paste HTP (white)
Fuel system		
Mounting of pressure regu- lator to fuel collection pipe	M 6 x 12	10 (7)
Cap nut to fuel collection pipe	M 12 x 1,5	12 (9)
Exhaust system		
Plug nut to catalytic conver- ter	M 14 x 1,5	30 (22)
All other nuts and bolts:	M 6	8 + 2 (6 + 1)
	M 8	20 + 2 (15 + 1)
	M 10	40 + 5 (29 + 4)
Coat all nut and bolt unions with Optimoly HT		

Tolerances and Wear Limits - Engine M 44.43/44

		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		6.5 l	
Quantity difference		approx. 1.5 l	
at oil gauge			
Oil thermostat	Open. temperature	95° ± 4° C	
Valve timing			
Camshaft bore	Inner diameter	28 +0.021 - 0	
Camshaft	Diameter	28 -0.04 - 0.055	
Camshaft	Axial end play	0.08...0.18	
Flat-base tappet bore	Inner diameter	35 + 0.015 + 0.005	
Flat-base tappet	Diameter	35 - 0.025 - 0.041	
Camshaft	Runout	0.02	

Tolerances and Wear Limits- Engine M 44.43/44

		When installed (new)	Wear limit
Cylinder head with valves			
Mounting face	Distortion		max. 0.05
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	6.98-0.012	
Exhaust	Diameter (stem end)	6.974 ± 0.006 tapered stem	
Valve guide/valve stem	Play		
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	Vert. play groove 1	0.040...0.075	
	groove 2	0.030...0.065	
	groove 3	0.020...0.055	
Piston rings	Gap width groove 1	0.20...0.50	
	groove 2	0.20...0.55	
	groove 3	0.30...0.90	

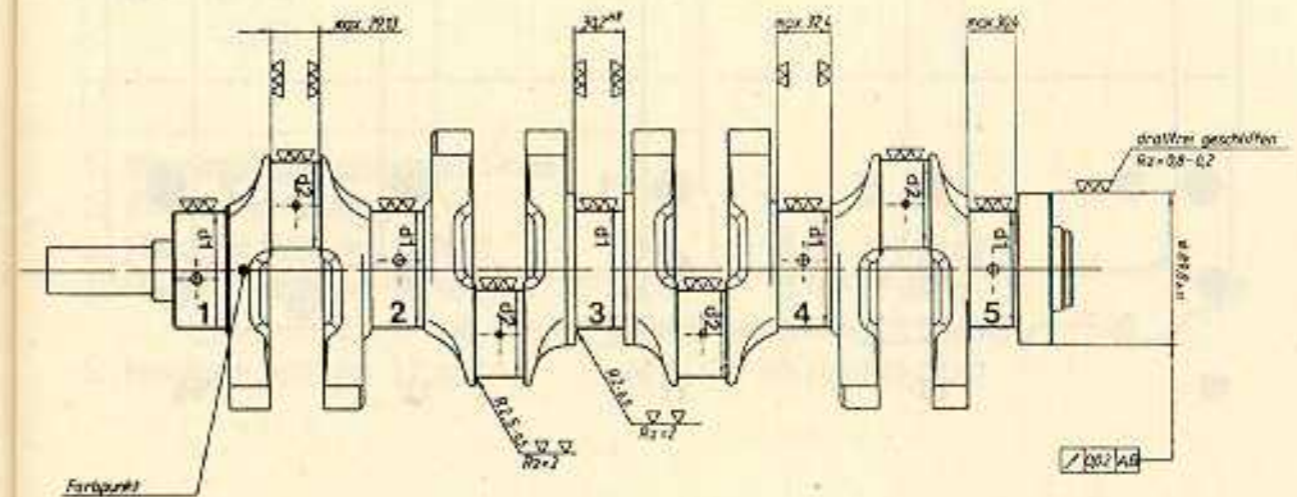
Tolerances and Wear Limits - Engine M 44.43/44

		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 (measure at bearings 2, 3 or 4, bearings 1 and 5 on prisms)	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 shafts	Diameter	30.975...30.991	

All dimensions in mm.

Crankshaft - normal and reconditioning dimensions

Size	Crankcase Bore dia.	Crankshaft bearing journal d1 journal dia.	Crankshaft con rod journal d2 journal dia.	Thrust bearing 3 width
Normal	Normal	69,971...69,990	51,971...51,990	30,00...30,052
- 0,25	75,000...75,019	69,721...69,740	51,721...51,740	Reconditioning size
- 0,50	Oversize 75,250...75,269	69,471...69,490	51,471...51,490	30,200...30,239

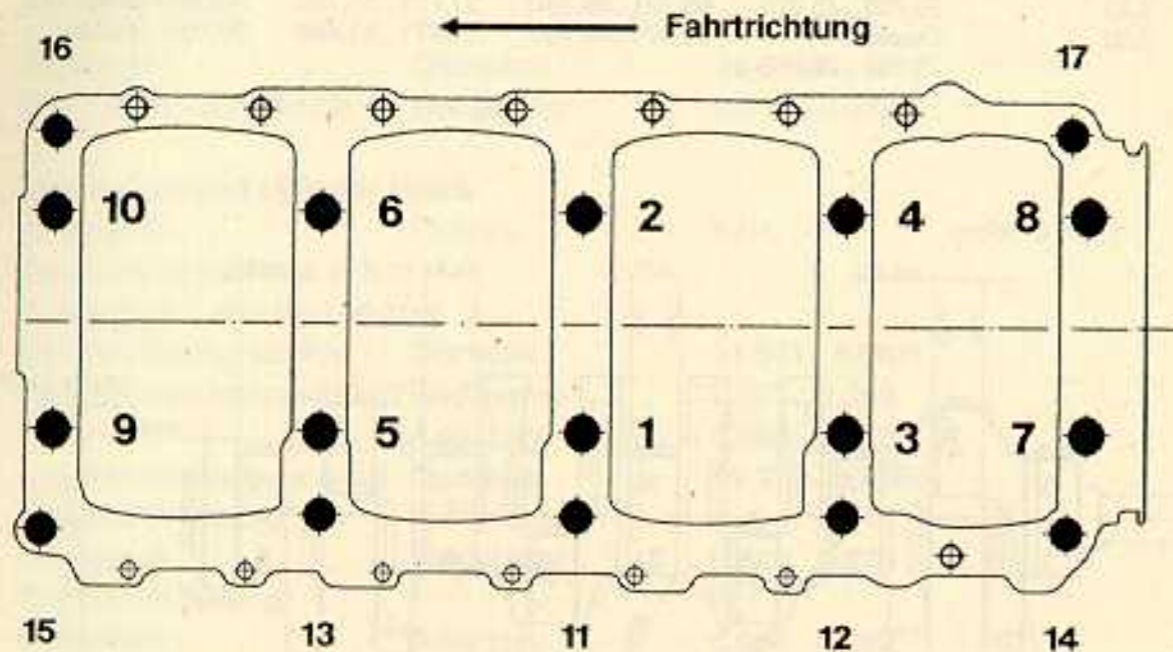


Grind bearing surface for oil seals to dimension 89.8 only if score marks are too deep. In other cases, repolish if required $R_a = 0.8...2$. Oil bores are rounded to $R 0.5$ after grinding. Remove sharpe edges with $R = 0.2...0.5$. Max. permissible radial runout relative to support max. 0.04.

Color coding of reconditioning sizes

1st reconditioning size	blue dot
2nd reconditioning size	green dot

Tightening Sequence - Crankcase Upper and Lower Parts



Tightening sequence

Nos. 1...10 in 2 stages:
Thread M 12 x 1,5

Nos. 11...17 in 2 stages:
Thread M 10

1st stage
2nd stage

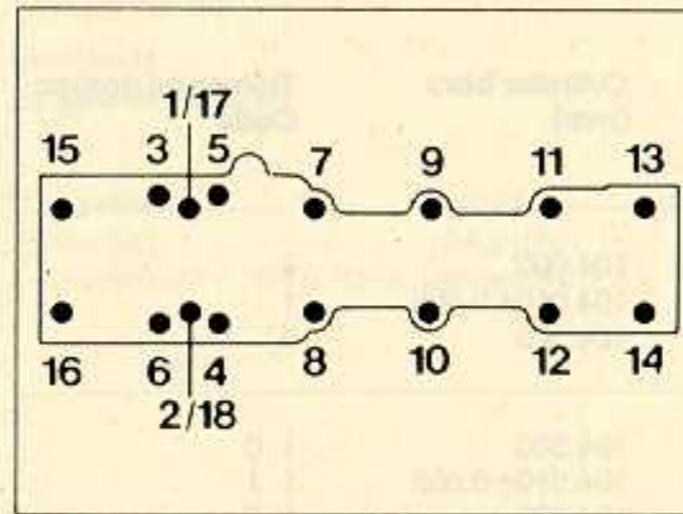
1st stage
2nd stage

Tightening torque (ftlb)

30 Nm (22)
60° torquing angle

20 Nm (15)
50 Nm (37)

Tightening Sequence - Tightening Torques for Balance Shaft Cover



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)

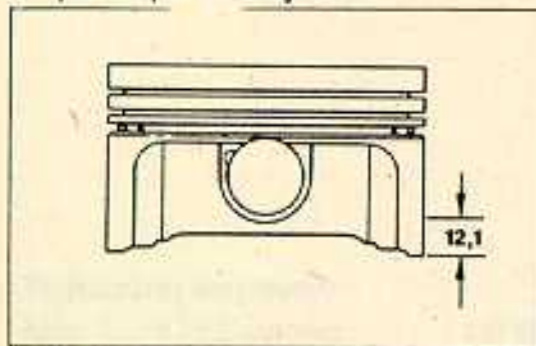
Checking piston and cylinder bore

Engine type M 44.43/44

Repair size	PistonØ (mm) Kolben Schmidt AG	Cylinder bore (mm)	Tolerance groups Code
Standard	103.980	104.000	0
	103.990± 0.007	104.010± 0.005	1
	104.000	104.020	2
Oversize 1	104.480	104.500	1 0
	104.490± 0.007	104.510± 0.005	1 1
	104.500	104.520	1 2

Checking pistons

Measure at a distance of 12.1 mm from the bottom of the piston skirt, offset from the piston pin axis by 90°.

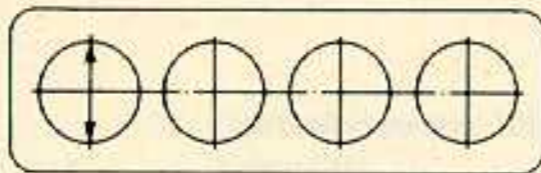


Note

It is recommended that the stocks of the relevant piston tolerance group are checked before machining the cylinders. If necessary, hone to the piston size available. In some cases, certain tolerance groups may be in short supply.

Checking cylinder bore

Measure approx. 61 mm from top edge of cylinder bore, across the cylinder block. For measurement, mount lower crankcase section and tighten with prescribed tightening torque.



Survey of Pistons (Dimensions, Weights and Compression)

Models 92...93

worldwide

Engine M 44.43/44

Compression 11,0 : 1
NominalØ 104,0 mm
Piston weight = 704 g Perm. tolerance = ± 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).

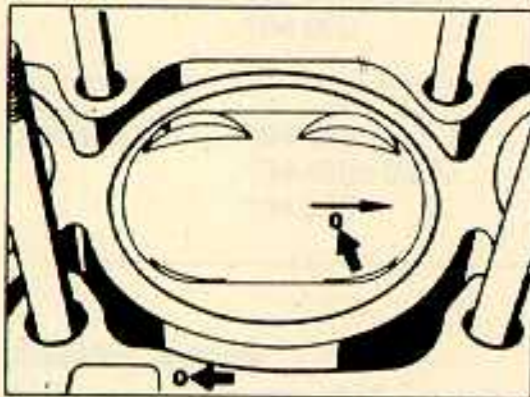
Piston pins must always remain assigned to the corresponding piston and must not be interchanged even within one engine set. Observe allocation during disassembly and assembly of engine, and mark if necessary.

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

Identification of Pistons and Cylinders

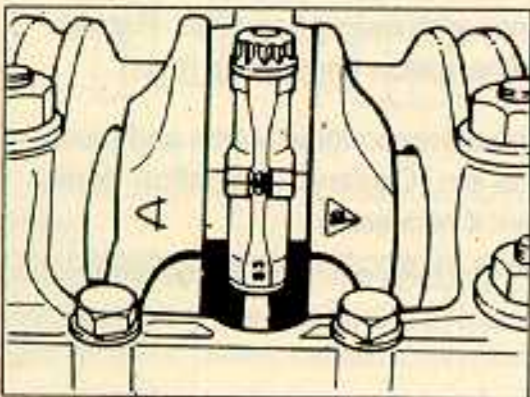
Identification for cylinders on cylinder block, identification for pistons on piston crown.

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

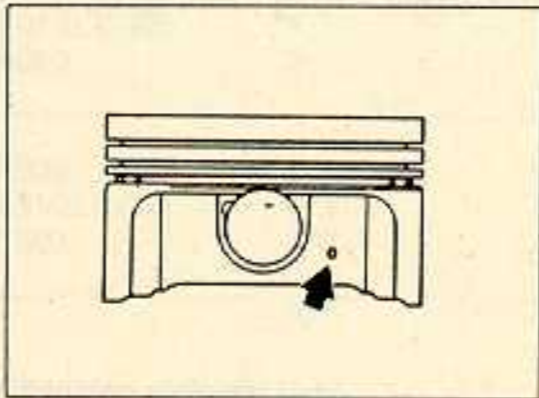


Connecting rods – Installation position

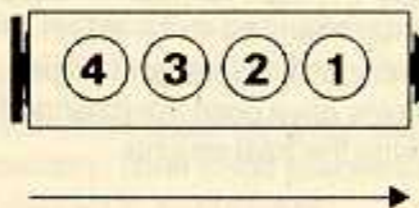
The matching numbers must always face each other so that they remain legible in pairs.



Arrow (rubber stamp) points towards pulley. If arrow is not discernible anymore, refer to the tolerance group mark that also points towards the pulley.



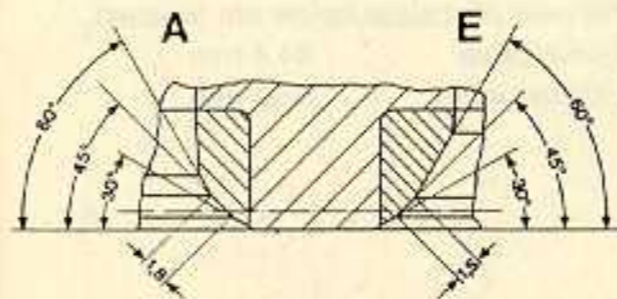
When fitting the connecting rods, the matching numbers of the four connecting rods must be on the same side throughout.



Ignition sequence 1-3-4-2

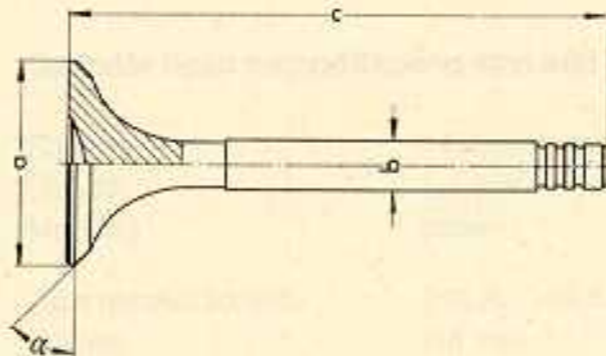
Checking valve seat angles, valve dimensions and valve guides

Valve seat angles



Intake seat width 1.5 mm
Exhaust seat width 1.8 mm

Valve dimension



Dimension	Intake	Exhaust
a	39.00 mm	33.00 mm
b	6.98 mm	6.97 mm
c	114.70 mm	113.60 mm
α	45°	45°

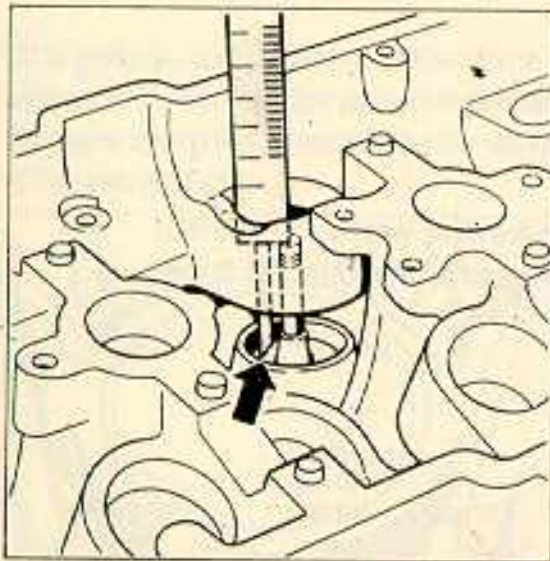
Checking valve guides

The valve guide is measured at a valve stroke of 10 mm (distance between valve head and valve seat).

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

Reworking valve seats and checking installation of valve springs

Reworking valve seats



The valve seats can be reworked until the wear limit sizes below are reached:

Intake valve	44.4 mm
Exhaust valve	43.4 mm.

Measurement is performed with the valve to be subsequently installed, from the end of the valve stem to the valve spring pad in the cylinder head. The valve must be held firmly on the valve seat.

Checking installation length of valve springs with a depth gauge

Note:

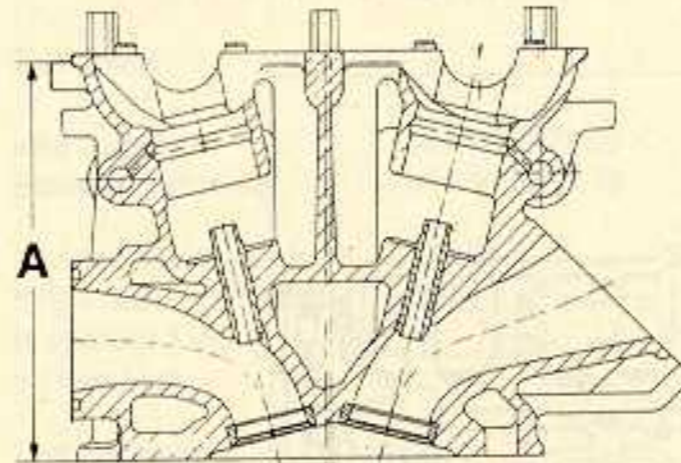
The depth gauge is used to measure vertically down through the gap from the surface of the valve spring plate to the surface of the outer spring pad.

Installation length

Intake	$38.0 + 0.5$ mm
Exhaust	$37.0 + 0.5$ mm

Machining the cylinder head mating face

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



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

Cylinder head reconditioning size and marking

Size new	147 ± 0.1 mm
Gasket	1.1 mm
Marking	none
Size reconditioned	146.8...146.6 mm
Gasket	1.4 mm
Marking	N

Marking „N“

Apply to dead head beneath gasket surface of cylinder head cover on exhaust side, between cylinders 2 and 3.

Height of letter stamp „N“ 6 mm

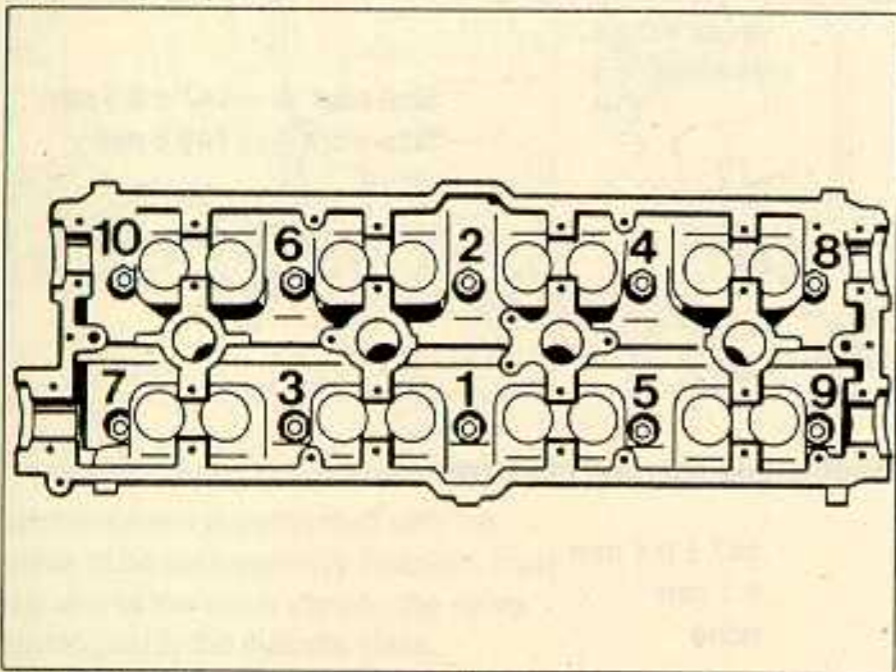
Installing the cylinder head

Cylinder head attached with studs

Note

The cylinder head may be fitted with the engine remaining in the car.

Tightening sequence:



Slackening sequence: reverse order

Tightening specifications for cylinder head

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

Note

Do not use any lubricant when fitting the cylinder head nuts and washers. Only the threads of the studs should receive a thin coat of engine oil.

Camshaft references

worldwide
as of model 92
Engine type 968
M 44.43/44

Camshafts

Inlet camshaft	944.105.277.09
Exhaust camshaft	944.105.275.10

Marking between thrust bearing and cam of cylinder 1 or on rear face	277.09 275.10
---	------------------

Camshaft timing
1mm stroke, zero clearance

Basic timing

Inlet opens	7.5° CR after TDC
Inlet closes	52° CR after BDC
Exhaust opens	31° CR before BDC
Exhaust closes	1° CR after TDC

Checking camshaft adjustment

worldwide
as of model 92
Engine type
M 44.43/44

Inlet valve stroke (at over-
lapping TDC)

Test/adjustment value	0.39 ± 0.03 mm
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Belt Adjustment Values - Engine

Belt type Scale values on Special Tool 9201
Balance shaft toothed belt

Adjustment and check value:
for roller with oblong hole 2.7 ± 0.3

Alternator drive belt

Adjustment and check value:
6-rib "poly-rib belt"
without air conditioning 9.5
6-rib "poly-rib belt"
with air conditioning 9.5
+ 1 revolution at the tensioning strut

V-Belt Servo Pump

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)
- Oil filter

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

- Oil pump
- Oil check valve in cylinder head
- Thermostat housing

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

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.

Test values at the engine

Engine type M 44.43/44

Test operation	Test values		Special remarks
Electric fuel pump Min. feed	rate 850 cc/30s		
Fuel pressure (Engine standstill) DME relay jumpered	3.8 ± 0.2 bar		
Check value at idle Leak test Min. pressure after 20 min	3.3 ± 0.2 bar 2.0 bar		
Idle speed rpm Engine type M 44.43 (Manual transmission)	without cat. conv. 840 ± 40**	with cat. converter 840 ± 40**	**Idle speed can only be checked. Idle adjustment is no longer performed.
Engine type M 44.44 (Tiptronic)	880 ± 40**	880 ± 40**	
CO values %	0.5...1.5	0.4...1.2*	*Measured ahead of catalytic converter, oxygen sensor connector not disconnected CO adjustment is no longer performed
HC values ppm	≤ 300	≤ 300*	

Notes

Torque Specifications - Clutch

Location	Thread	Tightening torque Nm (ftlb)	
Guide tube to clutch housing	M 6	10 (7)	
Pressure plate to flywheel	M 8	23 (17)	
Flywheel to crankshaft	M 10	40 (29)	1st stage
		90 (66)	2nd stage
Clutch housing to engine	M 12	75 (55)	
Starter motor to clutch housing	M 10	40 (29)	
Cover to clutch housing	M 8	23 (17)	
Protective plate and support plate to clutch housing and crankcase	M 10	42 (31)	
Clutch release shaft with clutch housing	M 6	9.5 (7)	
	M 6 (nut)	7.5 (5)	
Reference mark and engine speed sensor to holder	M 6	8 (9)	
Slave cylinder to clutch housing	M 8	21 (15)	
Clamping sleeve/central shaft	M 10	80 (59)	

Clutch

Design	Single-disk dry clutch with diaphragm spring, extended design, mounted on engine side. Hydraulic operation. Double-mass flywheel.
Pressure plate	GMFZ 240
Contact pressure	8800...9600 N
Clutch plate	Ø 240 (rigid)
Slave cylinder	Ø 23.81 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 by sense of feel at the clutch pedal. It will be approx. 3 mm at the pedal plate.

Torque Specifications - Manual Transmission G44

Location	Thread	Tightening torque Nm (ftlb)
Selector shaft cover to transmission case	M 8	25 (18)
Locking screws to transmission case and end shield	M 24 x 1.5	70 (52)
Reversing lamp switch to cover	M 12 x 1.5	20 (15)
End shield to transmission case	M 8	25 (18)
Four-point bearing, drive shaft	M 17 x 1	150 (111)
Cover plate to end shield	M 8	25 (18)
Retaining plate to end shield	M 8 (with collar)	25 (18)
Deflection lever for reverse gear to end shield	M 14 x 1.5	35 (26)
Oil filling and drain plug	M 22 x 1.5	35 (26)
Screw neck for guide plate to transmission case	M 6	10 (7) (and Loctite 271)
Side cover to transmission case	M 8	25 (18)
Joint flange to differential	M 10	44 (32)
Ring gear to differential housing (Verbus-Ripp screw)	M 12 x 1.25	200 (147)

General Data

Manual transmission G 44

Transmission ratios

$$Z_2 : Z_1 = i$$

1st gear

$$35 : 11 = 3.182$$

2nd gear

$$38 : 19 = 2.000$$

3rd gear

$$33 : 23 = 1.435$$

4th gear

$$30 : 27 = 1.111$$

5th gear

$$31 : 34 = 0.912$$

6th gear

$$28 : 36 = 0.778$$

Reverse

$$38 : 11 = 3.455$$

Final drive

Hypoid bevel-gear drive with 12 mm offset

Transmission ratio

$$34 : 9 = 3.778$$

Final drive

Filling capacity

approx. 2.75 liter hypoid oil SAE 75 W 90 or API classification GL5 (or MIL-L 2105 B)

Tightening torques – Tiptronic transmission A 44

Location	Thread	Tightening torque Nm (ftlb)
Multi-function switch to transmission	M 6	10 (7)
Operating lever to selector shaft	M 8 x 1	15 (11)
Lock nut to ball socket	M 5	5 (4)
Inductive pickup to transmission cover	M 18 x 1.5	30 (22)
Plug for ATF quick-fill connection	M 14 x 1.5	30 (22)
Plug for ATF pan	M 10 x 1	15 (11)
ATF pan to transmission	M 6	6 (4)
ATF filter to hydraulic control unit	M 6	8 (6)
Hydraulic control unit to transmission	M 6	8 (6)
Valve housing to hydraulic control unit	M 5	6 (4)
Solenoids to hydraulic control unit	M 5	5 (4)
Hexagon nuts to transmission socket	M 26 x 1	20 (15)
ATF spray line to transmission	M 12 x 1.5	35 (26)
Spur gear drive to transmission housing	M 8	23 (17)
Housing flange to housing (spur gear drive)	M 6	8 (6)

Tightening torques – Tiptronic transmission A 44

Location	Thread	Tightening torque Nm (ftlb)
Oil drain plug (rear axle final drive)	M 16 x 1.5	40 (30)
Oil filler plug (rear axle final drive)	M 18 x 1.5	50 (37)

General Data

Design

Fully automatic 4-speed planetary transmission (Tiptronic)

Transmission ratios

Spur gear drive

1.22

1st gear

2.579

2nd gear

1.407

3rd gear

1.000

4th gear

0.742

Reverse

2.882

Final drive

Hypoid bevel-gear drive with 10 mm offset

Final drive transmission ratio

39 : 12 $i = 3.25$

Stall speed

2700 – 400

Rear-axle final drive capacity

approx. 0.7 l multigrade transmission oil 75 W 90 to API specification GL 5 (MIL-L 2105 B). Optionally SAE 90.

Capacity: Automatic section including convert

Total capacity approx. 7.0 l
Change quantity approx. 3.0 l ATF-Dexron II D

Torque Specifications - Central Tube, Transmission Suspension (Tiptronic)

Location	Thread	Tightening torque Nm (ftlb)
Shock absorber to central shaft (clamping screw)	M 10	80 (59)
Torque converter mount to central shaft (clamping screw)	M 10	80 (59)
Clutch housing to central tube flange	M 10	42 (31)
Shock absorber to flywheel	M 8	21 (15)
Torque converter to drive plate	M 10	76 (56)
Transmission to central tube	M 10	42 (31)
Torque converter mount to central tube housing	M 8	21 (15)
Clutch housing to engine	M 12	75 (55)
Transmission support to body	M 10	46 (34)
Transmission mount to bracket	M 10 (Property class 8.8) M 10 (Property class 10.9)	46 (34) (hexagon-head screw with washer) 65 (48) (collar screw without washer)
Transmission mount to transmission support	M 8	23 (17)
Bracket to transmission case	M 8	23 (17)

Torque Specifications - Central Tube, Transmission Suspension and Transmission (Manual Transmission)

Location	Thread	Tightening torque Nm (ftlb)
Clamping sleeve to transmission input shaft and control shaft	M 10	80 (59) (Assembling sequence see Repair Manual)
Central shaft I to central shaft II	M 10	80 (59)
Clutch housing to central tube flange	M 10	42 (31)
Transmission to central tube	M 10 M 12	42 (31) 85 (63)
Clutch housing to engine	M 12	75 (55)
Transmission support to body	M 10	46 (34)
Transmission mount to bracket	M 10 (Property class 8.8) M 10 (Property class 10.9)	46 (34) (hexagon-head screw with washer) 65 (48) (collar screw without washer)
Transmission mount to transmission support	M 8	23 (17)
Bracket to transmission case	M 8	23 (17)
Joint rod to transmission	M 8	14 (10)
Lock nuts/joint rod		10 (7)
Fastening of shift rod	M 8	21 (15)
Gear lever plate to central tube	M 8	21 (15)
Intermediate gear lever to selector shaft	M 8	23 (17)

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	100 (74)
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	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)
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	120 (88)
McPherson strut to body	M 8	25 (18)
Air deflector to McPherson strut	M 6	10 (7)
Brake disk to wheel hub	M 6	10 (7)
Spoiler an Querlenker	M 6	10 (7)
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)
Track rod to steering knuckle	M 12 x 1.5	50 (37)
Steering wheel to steering shaft	M 16 x 1.5	45 (33)
Steering column switch to jacket tube	M 8 M 5	15 (11) 4 (3)
Jacket tube to body	M 8	23 (17)
Support bearing to body	M 6	7 (5)
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 M 10 x 1	20 (15) left-hand drive 15 (11) right-hand drive
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)

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	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 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)
Wheel to wheel hub	M 14 x 1.5	130 (96)

Technical Data – Front Axle, Steering, Rear Axle

Running Gear	968 RoW	968 USA	Sport running gear M 030
Front Axle			
Spring wire Ø mm/in	11.58	11.58/0.46	=
Spring coil Ø mm/in	94.4	94.4/3.72	=
Stabilizer Ø mm/in	26.8	26.8/1.05	30/1.18
Steering			
Steering wheel Ø mm/in	380 360 968 CS	380/14.96	
Steering wheel ratio	18.85 : 1	=	
Steering wheel turns	3.24	=	
Turning circle Ø m/ft	10.75	10.75/35.27	
Rear Axle			
Torsion bar Ø mm/in	25.5	25.5/1.0	=
Additional spring Ø mm/in	–	–	9.5/0.37
Spring coil Ø mm/in	–	–	120/4.72
Stabilizer Ø mm/in	16	16/0.63	19/0.748 Manual transm. 18/0.71 Tiptronic

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).

Wheel alignment values

	Adjustment value and tolerance	Max. difference left to right
Front Axle		
Toe - unpressed	+ 10' ± 5'	
Toe difference angle at 20° lock	-40° bis - 1° 50'	may be affected only by replacement of steering arms
Camber	0° ± 10'	20'
Caster	3°15' + 0' – 45'	30'
Rear Axle		
Toe per wheel	+10' ± 10'	10'
Camber	-45' ± 20'	30'

Ride height and spring brace settings

Front axle			Height setting*
			Bottom bolt edge of rear trailing arm mount below wheel center
968 CS			147 ± 10 mm
Sport-type running gear M030 (height-adjustable spring struts)			
RoW			147 ± 10 mm
USA			127 ± 10 mm
Rear axle		Spring brace setting (Spring brace inclination)**	Height setting*
			Center of brace mount (torsion bar center) below wheel center
ALL 968 CS		14°	- 37 ± 10 mm
ALL 968 CS M 030		9°	- 37 ± 10 mm
RoW Coupé	Manual transm.	18°	- 17 ± 10 mm
	Tiptronic	18,5°	- 17 ± 10 mm
RoW Cabrio	Manual transm.	18,5°	- 17 ± 10 mm
	Tiptronic	20,5°	- 17 ± 10 mm
USA Coupé	Manual transm.	18,5°	- 17 ± 10 mm
	Tiptronic	18,5°	- 17 ± 10 mm
USA Cabrio	Manual transm.	19,5°	- 17 ± 10 mm
	Tiptronic	20,5°	- 17 ± 10 mm
RdW M 030	Manual transm.	10°	- 37 ± 10 mm
	Tiptronic	11°	- 37 ± 10 mm
USA M 030	Manual transm.	14°	- 17 ± 10 mm
	Tiptronic	15°	- 17 ± 10 mm

* max. ride height difference left to right: 10 mm
On U.S. vehicles, the bumper height is used as a reference. The distance from the measuring surface (road surface or any level surface) to the measuring point must be 543 ± 20 mm at the rear axle. At the front axle, the distance must be 611 ± 20 mm betragen.

** max. difference right to left: 0.5°

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 6	10 (7)
Cover plate to steering knuckle	M 7	10 (7)
Air deflector to spring strut	M 6	10 (7)
Spoiler to front-axle trailing arm	M 6	10 (7)
Wheel hub to rear wheel shaft	M 22 x 1.5	500 (369)
Mounting bracket for brake pipe to rear-axle trailing arm	M 6	10 (7)
Cable holder to rear-axle trailing arm	M 6	10 (7)
Cover plate to rear-axle trailing 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)

Torque Specifications - Mechanical Brake System

Location	Thread	Tightening Torque Nm (ftlb)
Intermediate piece to bulk-head	M 8	21 (15)
Fork head to brake push rod	M 10	35 (26)
Speed sensor to steering knuckle and rear-axle trailing arm	M 6	10 (7)

Torque Specifications - Hydraulic Brake System

Location	Thread	Tightening Torque Nm (ftlb)
Brake pressure line to brake master cylinder, brake hose, hydraulic unit, 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 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 bulk-head	M 8	21 (15)
Mounting bracket on rear axle control arm	M 6	10 (7)

Technical Data - Brake system

Designation	Remarks, dimensions	Wear limit
Operating brakes (foot brake)	Hydraulic dual-circuit brake system with front/rear axle circuit division (black/white), brake booster, vented brake discs with fixed caliper on front and rear axle. The pushrod brake circuit is allocated to the front wheels. 4 pistons per each fixed caliper.	
Brake booster (light weight built)	Ø 9 inch	
Boost coefficient	3.4	
Brake master cylinder (aluminum design) Ø in mm	23.81/20.64 mm	
Brake power regulator in rear axle circuit		
switchover pressure/reduction coefficient	18 bar/046	
Brake discs Ø front	298 mm (304 mm)*	
rear	299 mm	
Effective brake disc dia front	245 mm (250.8)*	
rear	246 mm	

*968 with special running gear M 030. The brake disks are perforated.

Technical Data – Brake system

Designation	Remarks, dimensions	Wear limit
Piston dia. in brake caliper front, mm rear mm	2 x 36 + 2 x 40 (2 x 36 + 2 x 44)* 2 x 28 + 2 x 30	
Brake pad thickness front rear	13 mm 13 mm	2 mm 2 mm
Brake pad area each front wheel	86 cm ² (126 cm ²)*	
Brake pad area each rear wheel	86 cm ²	
Total brake pad area	344 cm ² (424 cm ²)*	
Brake pad thickness, new front rear	28 mm (32 mm)* 24 mm	
Min. brake disc thickness** after refacing front rear	26.6 mm (30.6 mm) 22.6 mm	26 mm (30 mm)* 22 mm
Tolerance of thickness of brake disc max.	0.02 mm	

* 968 with special running gear M 030

** The brake disc may only be machined symmetrically, i.e. in a uniform manner on both sides

Technical Data – Brake system

Designation	Remarks, dimensions	Wear limit
Lateral runout of brake disc max.	0.05 mm	
Lateral runout of fitted brake disc max.	0.1 mm	
Lateral runout of wheel hub max.	0.05 mm	
Surface roughness of brake disc after machining max.	0.006 mm	
Play at brake pedal with brakes bled and engine standing still	approx. 10 mm	
Parking brake (hand brake)	Drum brake, with mechanical action on both rear wheels	
Parking brake drum dia	180 mm	181 mm
Brake shoe width	25 mm	
Brake lining area (each wheel)	85 cm ²	
Brake lining thickness	4.5 mm	2 mm

Tire condition/tire pressure

Tires represent safety elements which can only meet the requirements made of them if inflation pressure is correct and if tread depth is sufficient.

The inflation pressures quoted here are minimum pressures. Lower pressures must on no account be used, since they not only diminish handling quality but may also lead to serious tire damage.

Valve caps protect the valve from dust and dirt, and therefore also from leaks. Always tighten caps properly and replace missing caps.

For safety reasons, a check of the tire pressure should also be accompanied by a check to ensure that tread depth is sufficient, that no foreign bodies are embedded in the tire, and that there are no cuts, tears or bumps on the tire's sidewall (breakage of webbing).

Tire pressure for cold tires (approx. 20° C) (16" and 17" summer and winter tires)

front	2,5 bar overpressure
rear	2,5 bar overpressure
Folding spare tire	
front/rear	2,5 bar overpressure

Checking Rims

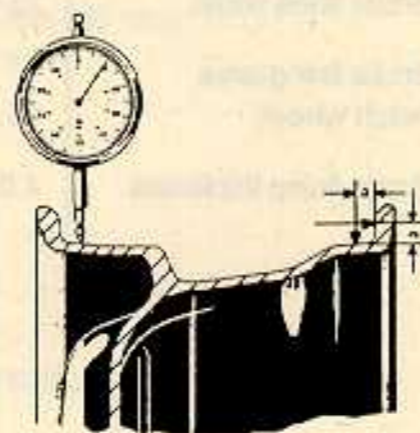
Points for measuring vertical and lateral runout on outer and inner rim shoulders.

Dimension "a" = 8 mm

Max. permissible vertical and lateral runout = 1.0 mm

Note

Straightening twisted rims is not permissible



Technical Data - Air Conditioning

Model 92

Refrigerant volume	950 g R12
Refrigerant oil in compressor	80 cm ³ ± 20 cm ³ Densoil

from Model 93

Refrigerant volume	860 g R134a
Refrigerant oil in compressor	120 cm ³ ± 20 cm ³ PAG oil

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

Type		968	968 CS
Model year		92/93	93
Wheelbase	mm/in	2400/94.49	
Track width front	mm/in	1472/58.2, with 7 J x 16 rim	1457/57.7 with 7.5 J x 17 rim
Track width rear	mm/in	1450/57.1 with 8 J x 16 rim	1445/57.0 with 9 J x 17 rim
Length	mm/in	4320/170.1	
Width	mm/in	1735/68.31	
Height (at curb weight to DIN)	mm/in	1275/50.20	1255/49.4
Ground clearance	mm/in	125/4.92	
Turning circle	m/ft	approx. 10.75/35.27	
Overhang angle at perm. max. weight			
front		14.5°	
rear		15.5°	

Performance data (at DIN curb weight and half payload)

Type		968	968	968 CS
Model year		92/93	92/93	93
		Manual transmission	Tiptronic	Manual transmission
Maximum speed				
km/h		252	247	252
mph		156	153	156
Acceleration	s	6.5	7.9	6.5
0...100 km/h				
Kilometer from standing start	s	26.6	27.7	26.6
1/4 mile from standing start	s	14.7	15.6	14.7

Weights

Type Model year	968 1992 Coupé		968 1992 Coupé Tiptronic	
	RoW	Manual transmission USA	RoW	USA
Curb weight to DIN	kg 1370	kg/lbs 1400/3086	kg 1400	kg/lbs 1430/3152
Perm. total weight	kg 1700	kg/lbs 1690/3726	kg 1730	kg/lbs 1720/3792
Perm. axle load front*	kg 820	kg/lbs 820/1807	kg 820	kg/lbs 820/1807
Perm. axle load rear*	kg 990	kg/lbs 990/2182	kg 990	kg/lbs 990/2182
Perm. trailer load unbraked**	kg 500		kg 500	
Perm. trailer load braked**	kg 1200		kg 1200	
Perm. roof load* with Porsche roof transport system	kg 35	kg/lbs 35/ 77	kg 35	kg/lbs 35/ 77
	kg 75	kg/lbs 75/ 165	kg 75	kg/lbs 75/165
Perm. drawbar load	kg 50		kg 50	
Perm. towing weight	kg 2900		kg 2930	

* The perm. total weight must not however be exceeded.

** Up to 16 % incline

Weights

Type Model year	968 1992 Cabriolet		968 1992 Cabriolet Tiptronic	
	RoW	Manual transmission USA	RoW	USA
Curb weight to DIN	kg 1440	kg/lbs 1470/3240	kg 1470	kg/lbs 1500/3306
Perm. total weight	kg 1760	kg/lbs 1650/3637	kg 1790	kg/lbs 1680/3704
Perm. axle load front*	kg 820	kg/lbs 820/1807	kg 820	kg/lbs 820/1807
Perm. axle load rear*	kg 990	kg/lbs 990/2182	kg 990	kg/lbs 990/2182
Perm. trailer load unbraked**	kg -		kg -	
Perm. trailer load braked**	kg -		kg -	
Perm. roof load* with trailer hitch on luggage com- partment lid Cabriolet	kg -	kg/lbs -	kg -	kg/lbs -
	kg 35	kg/lbs 35/ 77	kg 35	kg/lbs 35/77
Perm. drawbar load	kg -		kg -	
Perm. towing weight	kg -		kg -	

* The perm. total weight must not however be exceeded.

** Up to 16 % incline

Weights

Type Model year	968/968 CS 1993 Coupé		968 1993 Coupé Tiptronic	
	RoW	USA	RoW	USA
Curb weight to DIN	kg 1370 1320/968 CS	kg/lbs 1400/3086	kg 1400	kg/lbs 1430/3152
Perm. total weight	kg 1730 1570/968 CS	kg/lbs 1720/3792	kg 1760	kg/lbs 1750/3858
Perm. axle load front*	kg 830	kg/lbs 830/1829	kg 830	kg/lbs 830/1829
Perm. axle load rear*	kg 990	kg/lbs 990/2182	kg 990	kg/lbs 990/2182
Perm. trailer load unbraked**	kg 500		kg 500	
Perm. trailer load braked**	kg 1200		kg 1200	
Perm. roof load* with Porsche roof transport system	kg 35 kg 75	kg/lbs 35/ 77 kg/lbs 75/ 165	kg 35 kg 75	kg/lbs 35/ 77 kg/lbs 75/165
Perm. drawbar load	kg 50		kg 50	
Perm. towing weight	kg 2930		kg 2960	

* The perm. total weight must not however be exceeded.

** Up to 16 % incline

Weights

Type Model year	968 1993 Cabriolet Manual transmission		968 1993 Cabriolet Tiptronic	
	RoW	USA	RoW	USA
Curb weight to DIN	kg 1440	kg/lbs 1470/3240	kg 1470	kg/lbs 1500/3306
Perm. total weight	kg 1790	kg/lbs 1680/3704	kg 1820	kg/lbs 1710/3770
Perm. axle load front*	kg 830	kg/lbs 830/1829	kg 830	kg/lbs 830/1829
Perm. axle load rear*	kg 990	kg/lbs 990/2182	kg 990	kg/lbs 990/2182
Perm. trailer load unbraked**	kg -		kg -	
Perm. trailer load braked**	kg -		kg -	
Perm. roof load* with trailer hitch on luggage compartment lid Cabriolet	kg - kg 35	kg/lbs - kg/lbs 35/ 77	kg - kg 35	kg/lbs - kg/lbs 35/77
Perm. drawbar load	kg -		kg -	
Perm. towing weight	kg -		kg -	

* The perm. total weight must not however be exceeded.

** Up to 16 % incline

Filling capacities

Engine oil specification	API SG (US specification), or CCMC G4 or G5 (European specification). Multigrade oils see works approval. Technical Information bulletins for engine oils
Engine oil volume	Approx. 6.5 l, (measurement with oil dipstick is decisive criterion). Difference between "Min." and "Max." marks on dipstick = approx. 1.5 l.
Cooling system inc. heating	Approx. 8.0 l coolant, factory filling gives frost protection to -30°C (Scandinavian countries to -40°C). Only use antifreeze and corrosion inhibitors which are suitable for light-alloy engines and radiators.
Power steering	approx. 0.6 l hydraulic fluid ATF (only Dexron II D)
Fuel tank	approx. 74 l, incl. 8 l reserve
Brake fluid tank	approx. 0.2 l brake fluid in accordance with SAE J 1703, DOT4 (as of mod. 93 genuine Porsche brake fluid)
Windshield washer system with headlamp cleaning system	approx. 6.5 l
Manual transmission with differential	Volume approx. 2.75 l hypoid gear oil SAE 75 W 90 API classification GL 5 (or MIL-L 2105 B)
Tiptronic transmission with torque converter	Volume approx. 7.0 l Oil-change volume with torque converter approx. 3.0 l ATF-Dexron II D
Final drive	Volume approx. 0.7 l hypoid gear oil SAE 75 W 90 API classification GL 5 (MIL-L 2105 B), alternatively SAE 90