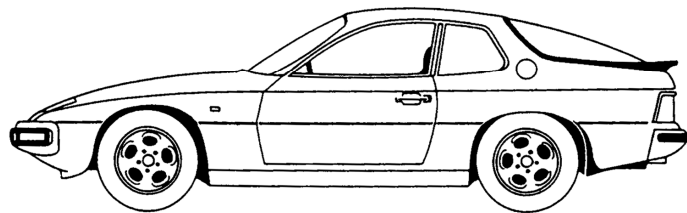


Technical specifications

924 models 78-85
925 turbo models 79-84
924 Carrera GT models 81

PORSCHE



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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 (ftlb)	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	Displacement act. Cm ³	DIN-kW (HP)	Stroke/Bore (mm)	Compression ratio	Fuel-induction system	Engine numbers	Chassis numbers
1978-1979	924 Europe, RoW 924 USA, Japan, Calif.	XK/XJ XG/XE	1984 1984	92/125 85/115	84.4/86.5 84.4/86.5	9.3:1 8.5:1	K-Jetronic K-Jetronic K-Jetronic	XK 000001 onwards XG 000001 onwards XG 000001 onwards	9248100001-99999 924 82 00001-99999 924 83 00001-99999 (Japan)
1980	924 Europe, RoW 924 USA, Canada, Japan	XK/XJ VC	1984 1984	92/125 85/115	84.4/86.5 84.4/86.5	9.3:1 9.0:1	K-Jetronic K-Jetronic	XK 000001 onwards VC 000001 onwards	92 AO 410001-9999 92 AO 43 0001-9999
1981-1982	924 Europe, RoW 924 USA, Canada, Japan	XK/XJ VC	1984 1984	92/125 85/115	84.4/86.5 84.4/86.5	9.3:1 9.0:1	K-Jetronic K-Jetronic	XK 000001 onwards VC 000001 onwards	WPO ZZZ 92 Z BN 40 0001-9999 WPO AAO 92 0 BN 45 0001-9999
1983-1985	924 Europe, RoW	XK/XJ	1984	92/125	84.4/86.5	9.3:1	K-Jetronic	XK 000001 onwards	WPO ZZZ 92 Z DN 40 0001-9999
1979-1980	924 turbo, Europe, RoW 924 turbo, USA, Canada Japan	M31/01 M31/02	1984 1984	125/170 110/150	84.4/86.5 84.4/86.5	5 7.5:1 5 7.5:1	K-Jetronic K-Jetronic	31010001-9999 31020001-9999	93 AO 14 0001-9999 93 AO15 0001-9999
1981-1982	924 turbo, Europe, RoW 924 turbo, USA, Canada Japan	M31/03 M31/04	1984 1984	130/177 115/156	84.4/86.5 84.4/86.5	5 8.5:1 5 8.0:1	K-Jetronic K-Jetronic	31030001-9999 31040001-9999	WPO ZZZ 93 Z BN 100001-9999 WPO AAO 93 0 CN 15 0001-9999
1982-1984	924 turbo, Italy	M31/03	1984	130/177	84.4/86.5	5 8.5:1	K-Jetronic	3103 0001-9999	WPO ZZZ 93 Z DN 10 0001-9999

Engine Number Codes

e.g.	XK	000001
	Code letters engine type	Serial no. continuous irrespective of model year, when code letters identical. With new code letters/engine type, serial no. starts again at 000001.

Code letters range engine type	Techn. data	Fitted in vehicle type	Engine no. Letters
XK	92kW/125HP	924-Europe, Rest of World	000001 onwards
XJ	92kW/125HP	924-Europe, Rest of World right-hand drive	000001 onwards
XG	85kW/115HP	924-USA, Japan	000001 onwards
XE	85kW/115HP	924 California	000001 onwards
VC	85kW/115HP	924-USA, Canada California, Japan	000001 onwards

Engine number codes (8-digit) 924 turbo

3 1 01 0001 -9999	Europe/Rest of World (left and right-hand drive)
31 02 0001-9999	USA/California/Canada/Japan
31 03 0001-9999	Europe/Rest of World (left and right-hand drive)
31 04 0001-9999	USA/California/Canada/Japan
	Serial no.
	Type designation
	3101 = 125kW (170 HP)
	3102 = 110 kW (150 HP)
	3103 = 130 kW (177 HP)
	3104 = 115 kW (156 HP)

Chassis Number Codes, Models 78...79

1. Chassis no. codes (10-digit)

924 8 1 00001	Type Model year	Model version	Serial no.
8 = 1978	1 = Europe,	1 = Europe,	00001 to 99999
9 = 1979	Rest of World	Rest of World	
	2 = USA,	2 = USA,	Serial no. starts
	California	California	at beginning again for
	3 = Japan	3 = Japan	each model year and country
			category

Chassis Number Codes, Model Year 80

The following changes are effective from model year 1980 for the chassis no.:

- The 1st and 2nd digits signify basic type.
- The 3rd digit signifies model year, internationally established as A for 1980.
- The 4th digit indicates the factory. For model year 1980 the code is 0.
- The 5th digit, in conjunction with digits 1 and 2, provides further identification of the vehicle. The 6th digit indicates the engine version.
- The remaining 4 digits form the serial no.

The example below makes the changes clear:

924 _____ Model year 1979 924 91
00001

0001 | _____ Model year 1980 92 A041

924 turbo _____ Model year 1979
9249400001

0001 | _____ Model year 1980 93 A014

Chassis Number Codes, Model 80

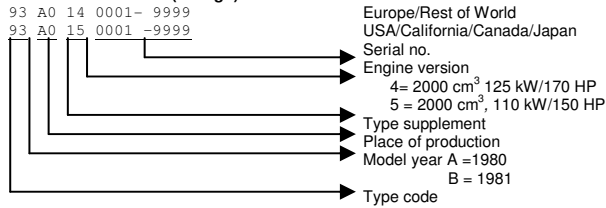
Chassis number codes 924

92 AO 41 0001 - 9999	Europe / Rest of World
92 AO 42 0001 - 9999	And beyond if more than 9999 vehicles
92 AO 43 0001 - 9999	USA/California/Canada/Japan
92 AO 44 0001 - 9999	And beyond if more than 9999 vehicles

	Serial no.
	Engine version
	1 2000 cm ³ 92kW/125HP
	2 2000 cm ³ 92kW/125HP
	3 2000 cm ³ 85kW/115HP
	4 2000 cm ³ 85kW/115HP
	Type supplement (this number designates model 924 in conjunction with first 2 digits)
	Place of production (Factory code initially designated as 0.)
	Model year A =1980
	B = 1981
	Type code (vehicle model)

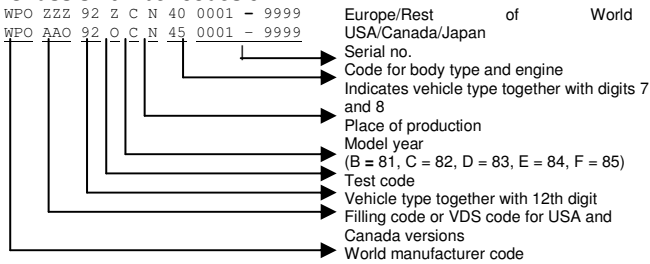
The 924 turbo is designated type 931 internally.

1. Chassis no. codes (10-digit)



Chassis Number Codes as from Model 81

Chassis number codes 924



Chassis number codes 924 turbo

WPO ZZZ 93 Z C N 100001 - 9999 Europe/Rest of World
WPO AAO 930 C N 150001 - 9999 USA/Canada/Japan

Manual and automatic transmissions 924/924 turbo

Model	Ident. letters	Type	Fitted in	model year
088/6	YR	4-speed	Europe, RoW	78/79
088/A	XT	4-speed	USA, Japan	78/79
016Z	VA	5-speed	Europe, RoW	78/79
016Y	VB	5-speed	USA	78/79
016/8	VQ	5-speed	Europe, RoW	80
016/9	VR	5-speed	USA, Japan	80
016/8	MD	5-speed	Europe, RoW	from 81
016/8	4Q	5-speed	Europe, RoW with lock USA	82
016/9	MF	5-speed	USA, Japan	from 81
016/9	5Q	5-speed	with lock Japan	82
016/9	ME	5-speed		from 81

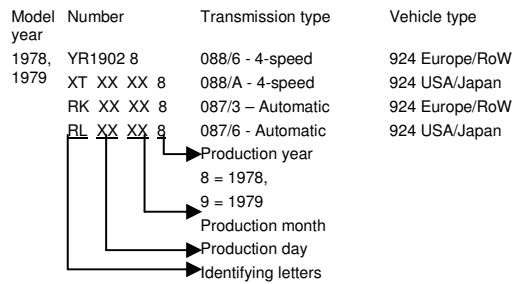
For repair purposes these transmissions differ only slightly from model 80.

087/3	RK	Automatic	Europe, RoW	from 78
087/6	RL	Automatic	USA, Japan, California	from 78

924 turbo

G31/01	MB	5-speed	Europe, RoW USA,	79..84 up to 80
G31/02	MX	5-speed	Japan USA	81/82
016G		5-speed		
016G		5-speed		

Transmission Number Codes 924



	VA 00001-99999	016Z - 5-speed	924 Europe/RoW
	VB 00001-99999	016Y - 5-speed	924 USA/Japan
		Serial number	
1980	VQ XX XX 0	016/8-5-speed	924 Europe/RoW
	VR XX XX 0	016/9-5-speed	924 USA/Japan
	RK XX XX 0	087/3-Automatic	924 Europe/RoW
	RL XX XX 0	087/6- Automatic	924 USA/Japan
1981	MD XX XX 1	016/8-5-speed	924 Europe/RoW
	MFXXXX1	016/9-5-speed	924 USA/Canada
	ME XX XX 1	016/9-5-speed	924 Japan
	RK XX XX 1	087/3 - Automatic	924 Europe/RoW
	RLXXXX1	087/6 - Automatic	924 USA/Japan/Canada
1982	M019 02 2 4Q	016/8 - 5-speed	924 Europe/RoW
	XX XX X	016/8 5-speed w. Differential lock	924 Europe/RoW
	MF XX XX X 5Q	016/9 - 5-speed	924 USA/Canada
	XX XX X	016/9 - 5-speed w. Differential lock	924 USA/Japan
	ME XX XXX	016/9 - 5-speed	924 Japan
	RK XX XX X RL	087/3 - Automatic	924 Europe/RoW
	XX XX X	087/6 - Automatic	924 USA/Japan/ Canada
1983	MD 19 02 3 4Q	016/8 - 5-speed	924 Europe/RoW
	XX XX X	016/8- 5-speed w. Differential lock	924 Europe/RoW
	RK XX XX X	087/3 - Automatic (up to 09.1982)	924 Europe/RoW
	RCC XX XX X	087/3 - Automatic (from 10.1982)	924 Europe/RoW
1984, 1985	MD19024	016/8 - 5-speed	924 Europe/RoW
	4Q XX XX X	016/8- 5-speed w. Differential lock	924 Europe/RoW
	RCC XX XXX	087/3 - Automatic	924 Europe/RoW

Transmission Number Codes 924 turbo

Model year	Number	Transmission type	Vehicle type
1979, 1980	31 01 00001 (12) - 99999	G31/01 - 5-speed	924 turbo Europe/RoW
	3102 00001 (12)- 99999	G 31/02 - 5-speed Differential lock	924 turbo USA/Japan
1981	31 01 00001 (12) -99999	G31/01 - 5-speed	924 turbo Europe/RoW
	016 G 000001 -99999	MB = 016G - 5-speed MX = 016G - 5-speed	924 turbo USA/Can. 924 turbo Japan
1982	31 01 00001 (12) -99999	G31/01 - 5-speed	924 turbo Europe/RoW
	016G 00001 -99999	MB = 016G - 5-speed	924 turbo USA/Can.
	016G 00001 -99999	MX = 016G - 5-speed	924 turbo Japan
	016G 00001 -99999	6Q = 016G - 5-speed with differential lock	924 turbo USA/ Canada/Japan
1983, 1984	31 01 00001 (12) -99999	G31/01 - 5-speed	924 turbo Italy
	31 01 00001 (12) -99999	G31/01 - 5-speed	924 turbo Italy

Engine Data

Engine type		924 XK	924 XG	924 VC	M31/01 turbo	M31/02 Turbo	M31/03 turbo	M31/04 turbo
Model year		78...85	78...79	80...82	79...80	73...80	81..84	81...82
No. of cylinders		4	4	4	4	4	4	4
Bore	mm/in.	86.5/3.41	86.5/3.41	86.5/3.41	86.5/3.41	86.5/3.41	86.5/3.41	86.5/3.41
Stroke	mm/in.	84.4/3.32	84.4/3.32	84.4/3.32	84.4/3.32	84.4/3.32	84.4/3.32	84.4/3.32
Displacement (actual)	Cm ³ /in ³	1984/121.06	1984/121.06	1984/121.06	1984/121.06	1984/121.06	1984/121.06	1984/121.06
Compression ratio		9.3:1	8.5:1	9.0:1	7.5:1	7.5:1	8.5:1	8.0:1
Max. engine power, 80/1269/EWG	kW/HP	92/125	85/115	85/115	125/170	110/150	130/177	115/156
(Net Power, SAE J1349)	kW/HP		82/110		121/162	106/143	126/169	115/154
At engine speed max. Torque, 80/1269/EWG	Rpm	5800	5750	5750	5500	5500	5500	5750
(Net Torque, SAE J1349)	Nm/kpm	165/16.8	156/15.9	156/15.9	245/25	206/21	250/25.5	210/21.4
At engine speed	Nm/ftlb	151/11.3			237/175	199.4/147	242/184.5	203.3/154.8
Max. specific power, DIN 70020	Rpm	3500	3500	3500	3500	3500	3500	3500
(SAE J 1349)	kW/l/(HP/l)	46/63	43/58	43/58	63/86	55.4/75.6	65.5/89.2	58/78.6
Fuel octane rating	RON	98	90	91	98	91	98	91
Max. perm. engine speed	Rpm	6500	6500	6500	6500	6500	6500	6500
Idle speed	Rpm	950±50	950±50	750...800	900 ± 50	900 ± 50	<900	<900
Engine weight (dry)	Kg	136	142	142	165	165	165	165

Technical Data Type 924 Engine Type XK/XJ

Engine design

Design	4-cylinder, 4-stroke spark-ignition engine, in line
Crankcase	1-piece gray cast iron cylinder/crank-case with aluminum oil pan
Crankshaft	forged, 5 plain bearings
Connecting rods	Forged steel
Pistons	Cast light-alloy
Camshaft	Case-hardened steel without bearing shells, running in cylinder head
Camshaft drive	by means of toothed belt, with tightening roller
Cylinder head	Light alloy
Valve arrangement	1 intake, 1 exhaust in line overhead
Valve timing	by overhead camshaft and bucket tappets
Valve play	Intake 0.20 mm, Exhaust 0.45 mm
Timing with engine warm	(1 mm stroke, zero play)
Intake opens	6 degr. Before TDC
Intake closes	42 degr. After BDC
Exhaust opens	47 degr. Before BDC
Exhaust closes	2 degr. After TDC

Engine cooling

closed coolant system
Forced oil circulation system with crescent pump

Engine lubrication

Oil filter
Oil pressure at 5000 rpm approx. 7 bar for oil temperature between 80... 100 °C
Oil pressure indicators Indicator lamp and pressure gauge

Exhaust system

up to 1.5
Manifold, single pipe up to front muffler, front, center and final muffler

Heater

Warm water heater with heat exchanger and blower

Fuel system

K-Jetronic
1 electric fuel delivery pump

Fuel grade RON

98

Fuel consumption

Refer to "Operating Instructions"

Electrical system

ECE-R 10 and 72/245/EWG

Battery voltage V

12

Battery capacitance Ah

45 (opt. Extra 63)

Alternator/output A/W

75/1050

Ignition

Battery ignition system/TSZ ignition system

Ignition sequence

1-3-4-2

Ignition timing

10° CA before TDC at 950 ± 50 rpm without vacuum pipe

Spark plugs

Bosch W5D, Beru 14-5 DU

Electrode gap mm

0.7 ± 0.1

Power transmission

Front-mounted engine, transmission mounted 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 shaft to rear wheels.

Clutch

Single-disk dry clutch with disk spring, in compact design, arranged at engine end

Pressure plate

(MF215K)

Technical Data for the 924 Carrera GT

Main data of the 924 Carrera GT model 81 compared with the basic 924 turbo

Engine type		924 Carrere GT M31/50	924 turbo M31/03
Max. engine power	kW/HP	154/210	130/177
at engine speed	rpm	6000	5500
max. torque	Nm/kpm	280/28.5	250/25.5
max. specific power	kW/l, HP/l	77.6/105.8	65.5/89.2
Engine weight	kg	175	165
Boost pressure	bar	0.75	0.64
Clutch contact force	N	7800...8500	7200...7900
Clutch disk		TD225	GUD 225
Stabilizer, rear	∅	16mm	14mm

Wheels and tires

924 Carrera GT	Wheels	Tires
5-hole wheels	LMGs7Jx15	215/60 VR 15
Rim offset 23.3 mm (924 turbo 53 mm)		

Engine number code 924 Carrera GT

31 50 0001 -9999 Europe/RoW

Transmission number code 924 Carrera GT

31 03 00001 (12) - 99999 G31/03 - 5-speed Europe/RoW
with differential lock

Torque Specifications - Engine 924/924 turbo

Location	Thread	Tightening torque Nm (ftlb)
Bearing housing to crankcase	M12	80 (59)
Bearing housing 5 to crankcase	M10	65(48)
Connection rod bolted joint	M10x1	60(44)
Oil suction line to crankcase	M6	10(7.5)
Oil drain line to crankshaft bearing housing	M6	10(7.5)
Housing to oil pump	M 6	8(6)
Oil pump to crankcase	M6	10(7.5)
Oil pan to crankcase	M8	15(11)
Oil pan to crankcase	M6	8(6)
Oil drain screw	M26 x 1.5	40(29)
Flywheel to crankshaft	M12x1.5	100 (74)
Toothed belt pulley to crankshaft	M16X1.5	250 (184)
V-belt pulley to toothed belt pulley	M8	20(15)
Water pump to crankcase	M8x72 M8x65	22(16)
Water pump to crankcase	M6x35 M6x45	9(7)
Water pump pulley to hub	M8x12	20(15)
Connection piece to oil pan	M26X1.5	110(81)
Oil return line from turbo-charger to oil pan		95(70)
Oil return line from turbocharger to bracket		85 (63)
Screw connector oil filter to oil filter bracket	¾ -16 UNF	To firm fit max. 20 (15)
Bracket for oil filter to crankcase	¾ -16 UNF-2 B	60 (44)
Oil lines to bracket for oil filter	M18X1.5	55 (41)
Oil supply line to bracket for oil filter		85 (63)
Oil line to bracket for turbocharger		40 (29)
Connecting piece to bracket for turbocharger	M14X-1.5	40.. .45 (29...33)
Camshaft bearing housing to cylinder head	M6	10(7.5)
Camshaft bearing housing to cylinder head	M8	16...20(12...15)
Cylinder head cover to cylinder head	M6	8(6)
Oil pressure sensor to cylinder head	M10x1	15(11)
Toothed belt gear	M12X1.5	80 (59)
Tensioning roller thermostat housing	M10	40 (29)
Flange for heater on cylinder head	M6x35	10 (7.5)
Coolant governor	M6	10 (7.5)
Coolant governor to cylinder head	M8x35 M8x25	20(15)
Spark plug	M14 x 1.25	30(22)
Distributor bolts	M8	20...22(15...16)
Telethermometer transmitter	M10x1	8(6)
Suction pipe and hoisting bracket to cylinder head	M8x72 M8	24(18)
Exhaust manifold to cylinder head	M8	25(18)
Toothed belt cover to cylinder head	M6x25	10(7.5)
Toothed belt cover to oil pump	M6x25	10(7.5)
Throttle valve connector piece to suction line	M8x40	22(16)
Engine bracket to engine nock	M10	42(31)
Engine mounting to engine bracket	M12x1.5	61(45)
Engine mounting to frame	M10	42(31)
Clutch housing to engine	M12	75(55)
Clutch housing to engine	M10	45 (33)
Insulating connector piece to cylinder head		22...25(16...18)
Injection valve to insulating connector piece		6.0...7.0 (4.5...5.0)
Fuel lines to mixture control unit	M12x1.5	20(15)
Injection lines to injection valve		10(7.5)
Injection lines cyls. 1-4 to mixture control unit	M8x1	9(7)
Fuel line to warm-up regulator and mixture control unit warm-up regulator	M8x1	9(7)
Fuel line to warm-up regulator		14(10)
Fuel line to cold-start nozzle and mixture control unit	M8x1	9(7)
Fuel line for timing valve to mixture control unit	M8x1	9(7)
Fuel line to timing valve		12.5 (9)
Oxygen sensor to front of exhaust pipe		50...60 (37...44)
Control line to bypass valve	M12x1.5	20(15)
Screw plug to bracket for oil filter	M42X1.5	120 (88)
Oil filter		20(15)
Turbocharger turbine casing	M6 M8	12(9) 25(18)
Turbocharger compressor casing		7(5)
Exhaust manifold flange Turbo charger (from model year 81)	M10	35(26)
	M10	50(37)
Boost pressure safety switch	M10xl	15(11)
Vent casing on bypass valve	M12x1.5	20(15)

Coat all threads of exhaust system with Optimoly HT

Tolerances and Wear Limits when installed (new) wear limit

Cooling system	Open. Temperature	80...93°C or 85...102°C	
Coolant thermostat			
Cap for cooling system			
Pressure relief valve	opens at overpress	0.9...1.15bar	
Vacuum valve	opens at vacuum p res.	0.06...0.1 bar	
Oil circuit			
Oil consumption	l/1000 km		1.51
Oil pressure (only for SAE 20 W/20 oils)			
at 80 °C oil temperature: at 2000 rpm	Overpress.	3...6 bar	2.0 bar
Oil dipstick upper mark	oil content	5.001	
lower mark	oil content	3.801	
Oil pump:			
Casing/gear wheels	Axial play	0.03...0.07	
Gearwheels	Backlash of teeth	0...0.13	
Oil filter:			
Bypass valve opens	Overpress.	2.2...3.2 bar	
Oil pressure switch opens at	Overpress.	0.3...0.6 bar	
Valve timing			
Bore for camshaft	Inner diameter	26.00...26.021	
Camshaft	Diameter	25.94...25.96	
Camshaft	Axial play	0.05...0.16	0.2
(Measured on center bearing, bearings 1 and 5 on prisms)	Runout		Max. 0.02
Bore for bucket tappet	Inner diameter	38.5...38.525	
Bucket tappet	Diameter	38.45...38.47	
Cylinder head with valves			
Mounting face valve seat:	Distortion		max. 0.1
a) Intake	Width	2.0	
b) Exhaust	Width	2.4	
c) Intake	Seating angle	45°	
d) Exhaust	Seating angle	45°	
Valve guides			
Intake and exhaust	Inner diameter	9.000...9.015	
Valve stem:			
Intake	Diameter	8.97	
Exhaust	Diameter	8.95	
Valve guide/valve stem	Play		
Intake		0.4	0.8
Exhaust	Overpress.	0.5 8...11 bar	1.0 6 bar
Compression	in		max. 3 bar
Pressure difference between individual cylinders			
Pistons with connecting rode			
Cylinder/piston	Play	0.03	0.08
Cylinder/piston 924 turbo	Play	0.048...0.072	0.12
Weight difference of an engine's pistons			max. 14g
Piston rings	Vert. play	0.04...0.07	0.1
Piston rings	Gap width	0.3...0.5	1.0
Con rod weight	Standard	815...927g	
Weight difference of an engine's con rods	new	Eg	
	for repairs	8g	
Con rod bush	Diameter	24.012...24.018	
Piston pin	Diameter	23.996...24.000	
Con rod bush/piston pin	Radial play	0.01 ...0.02	
Crankshaft and cylinder block			
Crankshaft (measured on 2nd, 3rd or 4th bearing, bearings 1 and 5 on prisms)	Runout		max. 0.06
Con. rod journal	Diameter	47.95...47.97	
Con rod/crankshaft	Radial play	0.02...0.07	0.1 0.4
	Axial play	0.05...0.08	
Crankshaft bearing journal	Diameter	59.95...59.97 (63.95...63.97")	
Crankshaft bearing/crankshaft	Radial play	0.02...0.08	0.16
Crankshaft bearing 3/crankshaft	Axial play	0.1 ...0.19	0.25
Cylinder bore	out-of-round		0.04
Cylinder block/crankshaft bearing bore	Diameter	68.000...68.019	
924turbo			
Turbocharger	Radial play		max. 0.42
Turbocharger	Axial play		max. 0.16

Repair Stages for Crankshaft (Dimensions in mm)
(from engine no. XK 00 32 14)

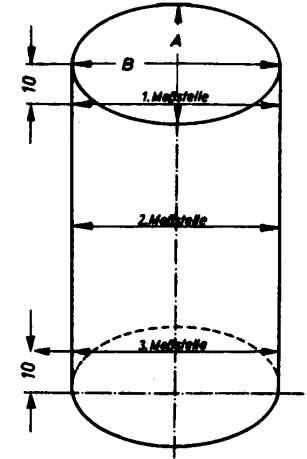
	Crankshaft bearing Journal			Crankshaft con rod Journal		
	Journal	∅	Max. out-of-round	Journal	∅	Max.
Original size	64.00:	-0,03 -0,05	0.03	46.00	-0.03 -0.05	0.03
Repair stage I	63.75:	-0,03 -0,05	0.03	47,75	-0.03 -0.05	0.03
Repair stage II	63.50:	-0,03 -0,05	0.03	47,50	-0.03 -0.05	0.03
Repair stage III	63.25:	-0,03 -0,05	0.03	47,25	-0.03 -0.05	0.03

Permitted vertical runout for crankshaft max. 0.06 mm, measured at main bearings 2, 3 and 4, bearings 1 and 5 on prisms.

Checking Pistons and Cylinder Bores 924

Checking pistons

Measure approx. 16 mm from lower edge, offset 90° to piston pin axis. Deviation from prescribed dimension (see table): max. 0.04 mm



Checking cylinder bores Measure at 3 points, transversely - "A" –and longitudinally - "B". Deviation from prescribed dimension (see table): max. 0.08 mm

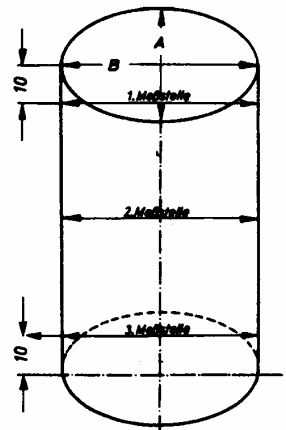
Repair stage	Tolerance group identification	Cylinder bore (mm)	Piston diameter (mm) Mahle pistons/KS pistons
	601	86.5 +0,015 +0,005	86.48 ± 0.007
Stand.dmens.	602	86,5 +0,025 +0,025	86.49 ± 0.007
	603	86.5 +0,035 +0,025	86.50 ± 0.007
	626	86.75 +0,015 +0,005	86.73 ± 0.007
1st oversize	627	86.75 +0,025 +0,015	86.74 ± 0.007
	628	86.75 +0,035 +0,025	86.75 ± 0.007
	651	87.00 +0,015 +0,005	86.98 ± 0.007
2nd oversize	652	87.00 +0,025 +0,015	86.99 ± 0.007
	653	87.00 +0,035 +0,025	87.00 ± 0.007

The tolerance group identification is stamped into the cylinder block on the starter motor side, just under the cylinder head.

Checking Pistons and Cylinder Bores 924 turbo

Checking pistons

Measure approx. 13 mm from lower edge, offset 90° to piston pin axis. Deviation from prescribed dimension (see table): max. 0.04 mm

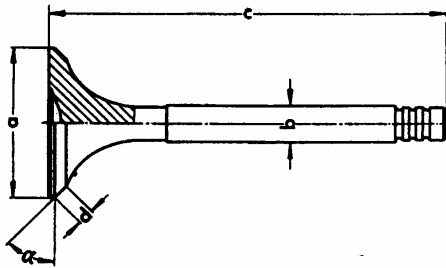


Checking cylinder bores Measure at 3 points, transversely - "A" –and longitudinally - "B". Deviation from prescribed dimension (see table): max. 0.08 mm

Repair stage	Marking on piston head	Piston \varnothing (mm)	Cylinder bore (mm)	Tolerance group identification
Stand. dimension		86.45	86.51	601
		86.46	86.52	602
		86.47	86.53	603
1st Rep. stage	86.75	86.70	86.76	626
		86.71	86.77	627
		86.72	86.78	628
2nd Rep. stage	87.0	86.95	87.01	651
		86.96	87.02	652
		86.97	87.03	653
3rd Rep. stage	87.5	87.45	87.51	701
		87.46	87.52	702
		87.47	87.53	703

Note
Only pistons from a single manufacturer (Mahle or KS) may be used in one and the same engine.

Valve Dimensions



924		924 turbo	
Intake valve	Exhaust valve	Intake valve	Exhaust valve
a) \varnothing 40mm	\varnothing 33mm	\varnothing 40mm	\varnothing 36 mm
b) \varnothing 8.97 mm	\varnothing 8.95 mm	\varnothing 8.97 mm	\varnothing 8.95 mm
c) 137.2mm	136.95 mm	133.2 mm	133.35 mm
d) 2.2...3.0 mm	2.2...3.0 mm	2.2...3.0 mm	2.2...3.0 mm
α 45°	45°	45°	45°

Checking Valve Guides

Insert new valve into guide until valve stem end is flush with end of guide. Ascertain play.

Wear limit for intake valve guide **0.8 mm**
Wear limit for exhaust valve guide **1.0 mm**

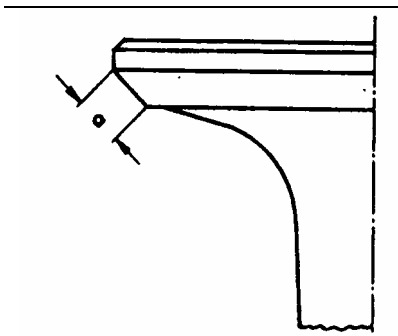
Adjusting Screw Notching

The number of notches indicates the thickness of the valve adjusting screws. Higher number of notches = thicker adjusting screw

New adjusting screw Part no.	Identification	
046.109.453.D	1 notch	The replacement adjusting screw will continue to be available, but without any marking (previously white dot of paint).
046.109.453.E	2 notches	
046.109.453.F	3 notches	
046.109.453.G	4 notches	
046.109.453.C	without notch	

Checking and Adjusting Valve Play Reworking Intake Valves

Valve play is checked and adjusted with the engine at operating temperature (oil temp. approx. 80°C.)
Intake valve: 0.20 mm
Exhaust valve: 0.45 mm
Basic valve play setting (for engine overhaul etc.)



With engine cold
Intake valve: 0.10mm
Exhaust valve: 0.40 mm

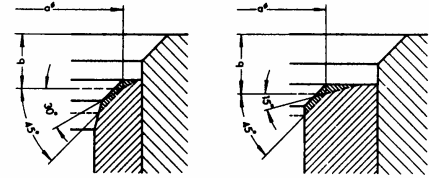
When reworking the valve, dimension a = 3.5 mm must not be exceeded.

Note
Exhaust valves must not be reworked. Only grinding to size is permitted.

Reworking Valve Seats

Valve seats with traces of wear or burning may be reworked until the wear limit "b" is reached. If the wear limit is exceeded, the cylinder head should be replaced, as the prescribed valve play can no longer be set, and valve seat rings cannot be replaced using conventional workshop equipment.

924
Intake valve seat **Exhaust valve seat**
a) \varnothing 38.5 mm a) \varnothing 31.5 mm
b) max. 3.3 mm b) max. 3.9 mm



Caution

If a valve seat has been reworked, the valve adjusting screw of the bucket tappet belonging to that valve must be exchanged for a replacement adjusting screw, 046 109 453 C (without marking).

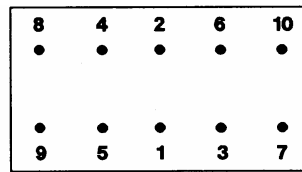
924 turbo

New dimension, measured from cylinder head mating face to valve head:

Intake 5.0mm Wear limit: Intake 5.3mm
Exhaust 4.7mm Exhaust 5.2 mm
Carry out check with new valve. Keep material loss to a minimum.

Tightening Specifications - Cylinder Head Bolts - 924

Tightening sequence for cylinder head



Tightening specifications using the turning angle method-924-induction engine

Tightening is performed in two stages, following the sequence shown in the diagram at each stage. Reverse sequence when undoing the bolts.

Turning angle tightening method

Tightening in two stages (with screws with internal serrations)

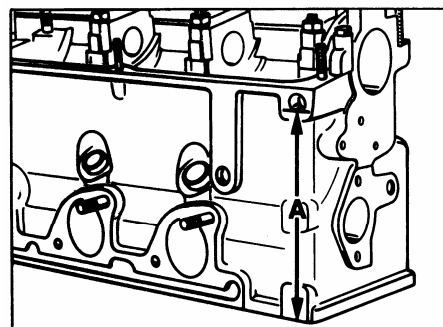
1st stage 65 Nm
2nd stage 180° = 1/2 turn

Tightening specifications for cylinder head bolts - 924 turbo

1. Tighten cylinder head bolts in prescribed sequence, in stages, to 40 Nm, 80 Nm and 110 Nm.
2. Retighten cylinder head bolts after at least 60 minutes (to allow for settling of cylinder head). To do so, loosen bolt no. 1 (see tightening sequence) approx. 1/2 a turn and tighten to 110 Nm. Repeat this procedure with the remaining bolts in the prescribed sequence. Bring engine up to operating temperature (oil temperature approx. 80°C). Allow engine to cool and give cylinder head bolts a final tightening as described under 2.

Machining the Cylinder Head Mating Face

Permissible unevenness of mating face: 0.1 mm
Max. reworking depth 0.4 mm
Peak-to-valley height = 0.015 mm
Size Worn A = 139.55mm



Main Testing and Adjusting Values for Engine

Engine type 924				Engine type 924 turbo			
	XK,XJ	XG,XE	VC		M31/D1/02	M31/03/04	Mod. 81 (Sweden, Australia)
Electric fuel pump Delivery rate	Min. 750 cm ³ /30 s	as XK, XJ	as XK, XJ	Electric fuel pump Delivery rate	min. 1050cm ³ /30s	as 01/02	as 01/02
System pressure test value	4.5...5.2 bar	as XK, XJ	as XK, XJ	System pressure test value	5.8...6.5 bar	as 01/02	as 01/02
Adjust, value	4.7...4.9 bar	as XK, XJ	as XK, XJ	Adjust, value	6.0...6.3 bar	as 01/02	as 01/02
Control pressure cold (approx. 20° C)	1.3...1.7bar	as XK, XJ	1.7...2.1	Control pressure cold (approx. 20° C)	2.0...2.4 bar	2.4...2.8	1.3...1.7
Control pressure warm	3.4...3.8 bar	as XK, XJ	as XK, XJ	Control pressure warm without overpressure	3.45...3.85 bar	as 01/02	3.1 ...3.5
Leakiest				Leak test			
Min. pressure after 10 min.	1.7 bar	as XK, XJ	as XK, XJ	Min. pressure after 10 min.	2.0 bar	as 01/02	as 01/02
Min. pressure after 20 min.	1.5 bar	as XK, XJ	as XK, XJ	Min. pressure after 20 min.	1.7 bar	as 01/02	as 01/02
Opening pressure of inject valves	2.5...3.6 bar	as XK, XJ	as XK, XJ	Opening pressure of inject valves	2.7...3.8 bar	as 01/02	as 01/02
Ignition timing with vacuum hose disconnected	10° CA before TDC for 950 ± 50 rpm			Ignition timing with vacuum hose disconnected	M31/01 25° CA before TDC at 2000 rpm	Digital advance unit (DZV)	
Ignition timing with vacuum hose connected		3° CA after TDC for 950 ± 50 rpm	0° CA = TDC for 950 ± 50 rpm				

Page Transmission and clutch

Torque Specifications Manual Transmission, Central Tube, Clutch and Actuating Elements 924 (4-speed transmission type 088)

Test	Testing and Adjusting values 924	Special notes
Idle speed setting		All consumers switched off
Idle speed rpm	950 ± 50 rpm 750...800 rpm (from mod. 81 USA, California, Canada) 1000 + 50 rpm (from mod. 81, Japan, automatic)	
CO content %	1.0...2.0% USA and Canada Mod. 78 0.5... 1.0 % * (measured upstream of cat.) Mod. 79 0.7... 1.1 % * (measured upstream of cat.) Mod. 80 0.6...1.0 % (measured upstream of cat.) from mod. 81 0.5...1.0 % (measured upstream of cat.) California Up to Mod.79 max. 0.7 %* (measured upstream of cat.) Mod. 79 0.8... 1.2 %* (measured upstream of cat.) Mod. 80 0.6...1.0 % (measured upstream of cat.) From mod.81 0.5...1.0 % (measured upstream of cat.) Japan Mod. 78 0.5...1.0 %* (measured upstream of cat.) Mod. 79 0.7... 1.1 %* (measured upstream of cat.) Mod. 80 0.6...1.0 % (measured upstream of cat.) From mod. 81 0.6... 1.0 % (measured upstream of cat.)	*Air pump and activated charcoal container not connected Plug connector for oxygen sensor not connected Plug connector for oxygen

Location	Thread	Tightening torque Nm (ftlb)
Side transm. Flange	M8	25(18)
Side transm. cover	M8	27 (20)
Cover for shifting shaft	M6	8(6)
End shield	M8	24(18)
Drive shaft	M8	24 (18)
Drive shaft	M8	24(18)
Oil filler screw	M24	25(18)
Oil drain screw	M24	25(18)
Reverse gear pin	M8	25(18)
Reversing lever bearing	M10X1.5	35(26)
Shifting lock	M14X1.5	30(22)
Reversing lever	M18x1.5	30(22)
Crown gear	M10x1	85...100 (63...74)
Flanged shaft to diff. gear	M8	25(18)
Protective tube to transmission case	M7	10...16 (7.5...12)
Joint shaft	M8	42(31)
Shifting lever mounting	M8	21 (15)
Joint rod to intermediate shifting lever	M8	21 (15)
Joint rod to transmission case	M8	14(10)
Reversing light switch	M18x1.5	30(22)
Exhaust line to transmission	M10	45(33)
Exhaust line to Transaxle system	M8	10 (7.5)
Front muffler to exhaust pipe	M8	20(15)
Central tube housing to transmission case	M12	85 (63)
Central housing to transmission case	M10	42(31)
Shift lever plate to central tube	M8	21 (15)
Central shaft to transmission shaft	M8x35	30 (22)
Central tube flange to clutch housing	M10X35	42(31)
Clutch housing to engine flange	M10x1.5 M12x1.5	45 (33) 75(55)
Transmission bearing to body	M10	42(31)
Bearing bracket to transmission	M8	25(18)
Clutch lever	M8	15(11)
Clutch to flywheel	M8	32 (24)
Guide tube to clutch housing	M7	10...16(7.5...12)
Support strut to transmission (USA)	M10	42 (31)
Arrester to central tube (USA)	M8	20(15)

Test	Testing and Adjusting Values 924 turbo (GT)	Special notes
Idle speed setting		from mod. 81 (DZV ignition system) with cold intake airtemp. Sensor ignition marking in insp. aperture
Idle speed rpm	900 ± 50 rpm Mod. 79/80 (Europe, USA, Japan and Canada) < 900 rpm from mod. 81	
CO content %	0.5...1.0 Mod. 79/80 (Europe, USA, Japan and Canada) 0.5...1.5 from mod. 81 1.0. ...2.0 Australia, Sweden	measured upstream of cat., plug connector for oxygen sensor not connected

Measuring Boost Pressure 924 turbo

Model 79/80	from Model 81
Europe USA 0.67...0.73bar 0.43...0.47bar	Europe USA 0.62...0.68 bar 0.43...0.47 bar

924 Carrera GT 0.72...0.78 bar

V-Belt Dimensions

924 V-belt for alternator	mm 9.5 x 888 LA without teeth
V-belt for alternator as from mod. 81	mm 9.5 x 888 LA with teeth
V-belt for air-conditioning compressor	mm 12.5x900 LA without teeth
V-belt for compressor as from mod. 79	mm 13/12.5 x 875 LA With teeth
V-belt for air pump (air injection)	mm 9.5 x 771 LA
924turto V-belt for alternator as from mod. 81	mm 9.5 x 1048 LA without teeth mm 9.5 x 1050 LA with teeth

Coolant Mixing Table

Frost protection to	Antifreeze	Water	Antifreeze	Water
-25°C	40%	60%	2.81	4.21
-30°C	45%	55%	3.21	3.81
-35°C	50%	50%	3.51	3.51

Torque Specifications - Manual Transmission, Central Tube, Clutch and Actuating Elements 924 (5-speed transmissions type 016 Z and 016 Y)

Location	Thread	Tightening torque Nm (ftlb)
Drive shaft	M30 x 1.5	220...240 (161 ...175)
Drive shaft	M22 x 1.5	160...180 (110...133)
Driving shaft	M24 x 1.5	200...220 (147...162)
Flange shaft to diff. gear	M10X1.5	47...50 (35...37)
Shift lock/rear axle and wheel housing	M10X1.5	15...18 (11 ...13)
Mounting of casing and cover	M8x1.25	22...25(16...18)
Crown gear/diff. Gear	M12 x 1.25	150...160 (111 ...118)
Locking pawl/rear axle casing	M6x1	8...10(6...7.5)
Reversing light switch/ wheel housing	M18X1.5	25...32 (18...24)
Oil filler screw/wheel housing	M24 x 1.5 (tapered)	20...25 (15...18)
Oil drain screw/rear axle casing	M25X1.5 (tapered)	20...25(15...18)
Tension plate, rear axle casing, wheel housing	M8x1.25	22...25(16...18)
Joint shaft	M8	42(31)
Exhaust tine to transmission	M10	45(33)
Exhaust line to transaxle system	M8	10(7.5)
Front muffler to exhaust pipe	M8	20(15)
Central shaft to transmission shaft	M8x35	35 (26)
Central tube flange to clutch housing	M10X35	42 (31)
Clutch housing to engine flange	M10x1.5 M12x1.5	45(33) 75(55)
Clutch lever	M8	15(11)
Clutch to flywheel	M8	32 (24)
Guide tube to clutch housing	M7	10...16 (7.5...12)
Transmission bearing to transmission	M10	42(31)
Transmission bearing to rear axle transverse tube	M10	42(31)
Central tube to transmission case	M12x1.5	85 (63)
Shifting rod to inner shifting rod/transmission	M8	18(13)
Bearing bracket to floor unit - center	M6	9(7)
Angled linkage to guide rod	BM10	23(17)

Torque Specifications - Manual Transmission, Central Tube, Clutch and Actuating Elements 924 (5-speed transmissions type 016/8 and 016/9)

Location	Thread	Tightening torque Nm (ftlb)
Oil filler screw to transmission case	M24	25(18)
Oil drain screw to transmission case	M24	25(18)
Protective tube to transmission case	M7	10...16 (7.5...12)
Shifting shaft to transmission case	M6	6...10(4.5...7.5)
End shield to transmission case	M8	24 (18)
Ball bearing to drive shaft	M10	50(37)
Cover to end shield	M8	25(18)
5 th gear wheel to driving shaft	M10	50 (37)
Shifting lock to end shield	M18	30 (22)
Shift travel limiter to end shield	M18	30(22)
Reverse transfer lever to end shield	M14	35(26)
Reverse gear pin to end shield	M8	20(15)
Flanged shaft to diff. gear	M8	25(18)
Side transmission cover to transmission case	M8	25(18)
Crown gear to diff. casing	M10	85...100 (63...74)
Reversing light switch to transmission case	M18	30(22)
Joint shaft	M8	42(31)
Joint rod to transmission case	M8	21 (15)
Joint rod to transmission case	M8	14 (10)
Shift lever plate to central tube	M8	21 (15)
Exhaust line to transaxle system	M8	10(7.5)
Front muffler to exhaust pipe	M8	20(15)
Central tube housing to transmission case	M12	85 (63)
Central tube housing to transmission case	M10	42 (31)
Shifting rod mounting	M8	21 (15)
Central shaft to transmission shaft	M8x35	35(26)
Central tube flange to clutch housing	M10x35	42(31)
Clutch housing to engine	M10x1.5 M12x1.5	45(33) 75(55)
Clutch bearing to body	M10	42(31)
Bearing bracket to transmission	M8	25(18)
Clutch lever	M8	15(11)
Clutch to flywheel	M8	32(23)
Guide tube to clutch housing	M8	10...16 (7.5...12)

Clutch 924

Design	Single-plate dry clutch with disk spring, compact design
Pressure plate	MF215K
Contact pressure	4810...5490 N
Clutch disk	∅215mm
Clutch drive plate with riveted on lining	
Thickness untensioned (new)	10.1-0.4 mm
Wear limit	8.5 mm with asymmetrical wear
Lateral runout	Max. 0.6 mm with ∅ 200 mm
Clutch play at clutch pedal	20-25 mm

Clutch 924 turbo

Design	Single-plate dry clutch with disk spring, hydraulically actuated, extended design
Pressure plate	MFZ225
Contact pressure	7200...7900 N
Clutch disk	∅ 225 mm
Clutch drive plate with riveted on lining	
Thickness untensioned (new)	8.1 ± 0.3 mm
Wear limit	6.3 mm with asymmetrical wear
Lateral runout	Max. 0.6 mm with ∅ 225 mm
Clutch play at clutch pedal	Approx. 3 mm

Technical Data 4-Speed Manual Transmission Type 924 YR (924 XT*)

Ratios	
1st gear	10:36 i=3.60
2nd gear	16:34 i=2.125
3rd gear	25:34 i = 1.360
4th gear	30:29 i = 0.966
R.gear	12:42 i=3.50
Final drive	Hypoid drive, 12 mm offset
Final drive ratio	9:35 i= 3.8888
Climbing ability in %	
1st gear	54 (49.5)
2 nd gear	28 (26)
3rd gear	16 (14.5)
4th gear	9.5 (9)
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 (20 mm Ø) to transmission mounted in 4 bearings, rear transmission interlocked with drive axle, twin articulated drive shafts to rear wheels
Transmission weight (dry)	45 kg (99 lbs)
Filling capacity	Approx. 2.6 liters multi-grade transmission oil, SAE 75 W-90, API classification GL 5 (or MIL-L 2105 B) or 80 W90-GL 4

Technical Data 5-Speed Manual Transmission Types 016 Z and 016 Y *

Ratios	
1st gear	14:39(14:39) i= 2.7857 (2.7857)
2nd gear	18:31 (19:32) i = 1.7222 (1.6842)
3rd gear	23:28(27:30) i= 1.2174 (1.1111)
4th gear	29:27 (31:25) i = 0.9310 (0.8064)
5th gear	34:24 (35:21) i = 0.7059 (0.6000)
R. Gear	46:21-16:14 i= 2.5034
Final drive	Helical bevel gear differential
Final drive ratio	7:33 i= 4.7143 (7:35 i= 5.000)
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 (Ø20 mm) to transmission mounted in 4 bearings, rear transmission interlocked with drive axle, twin articulated drive shafts to rear wheels
Getriebegewicht (trocken)	45 kg (99 lbs)
Filling capacity	Approx. 2.5 liters multi-grade transmission oil, SAE 75 W-90, API Classification GL 5 (or MIL-L2105B)

"Specifications for USA in brackets

Technical Data 5-Speed Manual Transmission Types 016/8 and 016/9 *

Ratios	
1st gear	10:36 i= 3.600
2nd gear	16:34 i=2.125
3rd gear	24:35 (25:34) i = 1.458 (1.360)
4th gear	28:31(30:29) i= 1.107 (0.966)
5th gear	35:30 (37:27) i = 0.857 (0.729)
R. gear	12:42 i= 3.500
Final drive	Hypoid drive, 12 mm offset
Final drive ratio	9:35(9:37) i= 3.889 (4.111)
Climbing ability in %	
1st gear	59 (57)
2nd gear	32(30)
3rd gear	21 (18)
4th gear	14(11.5)
5th gear	9.5(7)
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 (Ø 20 mm) to transmission mounted in 4 bearings, rear transmission interlocked with drive axle, twin articulated drive shafts to rear wheels
Transmission weight (dry)	55 kg (121 lbs)
Filling capacity	Approx. 2.5 liters multi-grade transmission oil, SAE 75 W-90, API Classification GL 5 (or MIL-L 2105 B) or 80 W90-GL4

"Specifications for USA in brackets

Torque Specifications - Automatic Transmission 924

Location	Thread	Tightening torque Nm (ftib)
Oil filler transmission case	M24X1.5	20 (15)
Flange shaft to differential	M8x1.25	25(18)
Locking plate to adjusting ring	M6x1	8(6)
Planetary gear to axle drive	M8x1.25	29(21)
Governor cover to axle housing	M8x1.25	9(7)
Cover for diff. pinion to axle housing	M8x1.25	25(18)
Cover of axle housing to axle housing	M8x1.25	25(18)
Crown gear to differential	M10x1	78...93 (58...69)
Governor shaft to governor housing	M5x0.8	3.5 (3)
Screw plug for measuring connection	M10x1	15(11)
Lever for hand slide valve to transmission case	M6x1	3.5 (3)
Detent segment to lever for hand slide valve	M16X1.5	20.5 (15)
Lever of kickdown valve to shaft of accelerator rod	M8x1.25	17(13)
Detent spring to transmission case	M8x1.25	20.5 (15)
Pump to transmission case	M6x1	7.0(5)
Slide valve case to transmission case	M6x1	3.5(3)
Oil strainer to slide valve case	M5x0.8	3.5(3)
Oil pan to transmission case	M8x1.25	20.5 (15)
Intermediate plate to transmission case	M5x0.8	3.5(3)
Facing plate to slide valve case	M5x0.8	3.5(3)
Supporting plate to duct plate	M5x0.8	-3.5(3)
Intermediate and duct plates to slide valve case	M5x0.8	3.5(3)
Cover plate to pump housing	M4x0.7	1.4(1)
Adjustment brake strap 2nd gear	M12X1.5	19.6(14)
Converter to drive plate	M8	21 (15)

Torque Specifications -Automatic Transmission Actuating Elements 924

Location	Thread	Tightening torque Nm (ftib)
Shift lever guide to shift bracket	M6	9(7)
Locking segment to shift bracket	M6	10 (7.5)
Mount of shift actuation and side seal guide	M6	10(7.5)
Retaining bracket to transmission	M8	21 (15)
Cable to bracket	M8	8±1 (6±1)
Cable to retaining bracket	M8	8±1(6±1)
Cable to transmission lever	M8	5±1(4±1)

Torque Specifications -Accelerator Actuation (Automatic Transmission) 924

Location	Thread	Tightening torque Nm (ftib)
Guide pulley to bracket	M6	9(7)
Guide pulley bracket to intake pipe	M6	9(7)
Control cable to bracket	M8	5(4)
Control cable to transmission	M10	30(22)
Control cable to central tube	M4	1.4(1)
Rubber to lever for accelerator actuation	M6	9(7)
Rubber to lever	M6	9(7)
Support to bracket for guide pulley	M6	9(7)
Support for guide pulley to crankcase	M8	21 (15)
Accelerator pedal to floor plate	M6	5(4)

Torque Specifications-Central Tube (Automatic Models)

924

Location	Thread	Tightening torque Nm (ftlb)
Torque converter mounting to rear bell	M8x25	21 (15)
Mounting of central shaft to flange shaft	M8	35 (26)
Central tube flange to clutch bell	M10x35	42(31)
Central tube housing to transmission case	M12X1.5	85 (63)
Central tube housing to transmission case	M10x-1.5	42(31)
Torque converter to driver plate	M8x12	21(15)
Mounting of central shaft to clamper	M8	35 (26)
Damper to flywheel	M8x18	21 (15)
Cover to clutch housing	6.3x19	5(4)
Stop basket to damper	M8x25	21 (15)

Technical Data - Automatic Transmission 924

Internal designation	RK(RL)
Number of speeds	3 forward, 1 reverse and parking lock
Ratios:	Driving position 1 i = 2.5517 Driving position 2 i = 1.4483 Driving position D i=1.0000 Driving position R i= 2.4615 Hydrodynamic torque converter
Clutch	2.2 (up to mod. 79 = 2.1 from mod. 80 = 2.44)
Torque converter ratio	2600 ± 200 (up to mod. 79 = 2100 ± 200 from mod. 80 = 2450 ± 200)
Stall speed	K (up to mod. 79 = J, from mod. 80 = M)
Torque conv. code letter	Hypoid drive set
Final drive	44mm
Hypoid offset	11/38(11/41)
Axle ratio	approx. 11 multi-grade gear oil, SAE 75 W-90, API classification GL 5 (or MIL-L 2105 B)
Filling capacities Final drive	61 total filling capacity with ATP Dexron, torque converter capacity 2.51, change quantity approx. 2.81, observe marking on top-up reservoir
Automatic section	

Specifications for USA in brackets

Pressure-Testing Hydraulic Control Unit

Up to model 80

From model 81

Selector Lever. Pos.	Accel. pedal pos.	Main press. In bar Overpressure (kg/cm ²)	Test condition	Selector lever pos	Accel. pedal pos.	Main press. In bar Overpressure (kg/cm ²)	Test-condition)
D	Idle (zero accel.)	2.95 ± 0.05	Speed more than 50 km/h*	D	Idle (zero accel.)	2.95 ± 0.05	Speed more than 50 km/h*
D	Full accel.	6.85 ± 0.05 (590+005)		D	Full accel.	6.85 ± 0.05 (5,90 ± 0,05)	
R	Idle (zero accel.)	7.35 ± 0.3	Vehicle stationary	R	Idle (zero accel.)	9.6 ± 0.3 (9.4 ± 0.3)	Vehicle stationary
R	Full accel.	over 18	at stall speed	R	Full accel.	over 18	at stall speed

*Specifications for USA in brackets

Torque Specifications - Manual Transmission 924 turbo (Types G31/01, G31/02, G31/03)

Location	Thread	Tightening torque Nm (ftlb)
Drive shaft	M 30 x 1.5	220 (162)
Driving shaft	M 24 x 1.5	220 (162)
Flange shaft to diff. gear	M10x1.5	46(34)
Shift lock/rear axle and wheel housing	M10x1.5	18(13)
Mounting of casing and cover	M 8x1.25	25(18)
Crown gear/diff. gear	M 12 x 1.25	150(111)
Locking pawl/rear axle casing	M6x1	10 (7.5)
Reversing light switch/ wheel housing	M18x1.5	30(22)
Oil filler screw/wheel housing	M24X1.5 (tapered)	25(18)
Oil drain screw/rear-axle casing	M25x1.5 (tapered)	25(18)
Tension plate, rear axle casing, wheel housing	M 8x1.25	25(18)
Joint shaft to joint flange	M 8x1.25	42(31)

Torque Specifications - Clutch, Central Tube, Transmission Suspension, Shift Actuation 924 turbo (Type G31/01, G31/02, G31/03)

Location	Thread	Tightening torque Nm (ftlb)
Clutch		
Guide tube to clutch housing	M7	12(9)
Clutch and ring gear mounting	M8	25(18)
Flywheel to crankshaft	M12	100 (74)
Clutch housing to engine	M12 M10	75(55) 45 (33)
Clutch release shaft with clutch casing	M6x35 M6	9.5 (7) 7.5(5)
Clutch operating cylinder to clutch housing	M8x28	21 (15)
Central tube		
Central shaft to transmission input shaft	M10x46	80 (59)
Central tube flange to clutch housing	M10x35	42(31)
Central tube flange to transmission case	M12	85 (63)
Transmission suspension		
Transmission bearing to rear axle transverse tube	M10	42(31)
Transmission bearing to transmission	M10	42(31)
Shift actuation		
Bearing support to center of floor unit	M6x10	9(7)
Shifting rod to transmission	M8	18(13)
Angled joint to guide rod	BM 10	23(17)

Torque Specifications - Manual Transmission 924 turbo (Type 016G)

Location	Thread	Tightening torque Nm (ftlb)
Oil filler screw to transmission case	M24	25(18)
Oil drain screw to transmission case	M24	25(18)
Cover for shifting shaft to transmission case	M6	6...10 (4.5...7.5)
End shield to transmission case	M8	24(18)
Bait bearing to transmission input shaft	M10	50 (37)
Cover to end shield	M8	25(18)
5 th gear wheel to driving shaft	M10	50(37)
Shifting lock to end shield and transmission case	M18	30(22)
Shift travel limiter to end shield	M18	30(22)
Reverse-transfer lever to end shield	M14	
Reverse gear pin to end shield	M10	35(26)
Reverse gear pin to end shield	M5	20(15)
Flange shaft to differential	M8	25(18)
Transmission side cover to transmission case	M8	25(18)
Crown gear to differential casing	M10	85...100 (63...74)
Reversing light switch to transmission case	M18	30 (22)
Joint shaft to joint flange	M8	42(31)

Torque Specifications - Clutch, Central Tube, Transmission Suspension and Shift Actuation 924 turbo (Type 016G)

Location	Thread	Tightening torque Nm (ftlb)
Clutch Guide tube to clutch housing	M7	12(9)
Clutch and ring gear mounting	M8	25(18)
Flywheel to crankshaft	M12	100 (74)
Dutch housing to engine	M12 M10	75(55) 45(33)
Clutch release shaft with clutch housing	M6x35 M6	9.5 (7) 7.5 (5)
Clutch operating cylinder to clutch housing	M8x28	21 (15)
Central tube		
Central shaft to transmission input shaft	M10x46	80 (59)
Central tube flange to clutch housing	M10x35	42(31)
Central tube housing to transmission housing	M12x75 M12x80 M10X60	85(63) 85(63) 42(31)
Transmission suspension		
Transmission bearing to body	M10	42(31)
Bearing to support bracket	M8	23(17)
Support bracket to	M8	25(18)
Transmission Shift actuation		
Joint rod to transmission case	M8	14(10)
Joint rod to intermediate shifting lever	M8	21 (15)
Shifting rod mounting	M8	21 (15)
Shift lever plate to central tube	M8x12	21 (15)
Intermediate shifting lever to shifting shaft	M8	22.5 (17)

Technical Data- 5-Speed Manual Transmission G 31/01, G31/02* and G31/03

Ratios	
1st gear	10:36 i= 3.6000
2nd gear	16:34 i= 2.1250
3rd gear	24:35 i=1.4583
4th gear	28:31 i=1.1071
5th gear	37:27 i = 0.7297
R.gear	12:42 i= 3.5000
Final drive	Hypoid drive, 12 mm offset
Final drive ratio	9:35 i = 3.8889
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 (Ø 25 mm) to transmission mounted in 3 bearings, rear transmission interlocked with drive axle, twin articulated drive shafts to rear wheels
Transmission weight (dry)	55 kg (121 lbs)
Filling capacity	Approx. 2.5 liters multi-grade transmission oil, SAE 75 W-90, API classification GL 5 (or MIL-L2105 B)

Technical Data - 5-Speed Manual Transmission 016G

Ratios	
1st gear	12:38 i= 3.1666
2nd gear	18:32 i=1.7777
3rd gear	23:28 i=1.2174
4th gear	29:27 i = 0.9310
5th gear	34:24 (35:21) i = 0.7059 (0.6000)
R.gear	12:16-22:48 i= 2.9091
Final drive	Helical bevel gear differential
Final drive ratio	8:33 i = 4.1250 (7:33 i= 4.7143)
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 (Ø 25 mm) to transmission mounted in 3 bearings, rear transmission interlocked with drive axle, twin articulated drive shafts to rear wheels
Transmission weight (dry)	45 kg (99 lbs)
Filling capacity (specifications for USA in brackets)	Approx. 2.5 liters multi-grade transmission oil, SAE 75 W-90, API classification GL 5 (or MIL-L2105B)

Torque Specifications - Front Axle 924/924 turbo

Location	Thread	Tightening torque Nm (ftib)
Control arm to cross member	M12x1.5	65 ± 10 (48 ± 7.5)
Clip to control arm	M10	46(34)
Control arm to steering knuckle	M10	50+10 (37+ 7.5)
Cross member to body	M10	42(31)
Track rod to steering knuckle	M12x1.5	30+20(22+15)
Clip for stabilizer to	M8	13(10)
Body (up to Oct. 81)	M8	20(15)
Stabilizer suspension to control arm (up to Oct. 81)	M10	20 ± 5 (15 ± 4)
McPherson strut bearing to shock absorber strut	M14x 1.5	77+3(57+2)
Fillister head screw to clamping nut	M7	13+3(10+2)
Cover plate to steering knuckle	M7	10(7.5)
Floating caliper to steering knuckle	M12x1.5	85 (63)
McPherson strut to steering knuckle	M12x1.5	100 (74)
McPherson strut to body	M8	25 ± 4 (18 ± 3)
Spoked wheel to brake disk (LA wheel)	M14X1.5	130 (96)
Disk wheel to brake disk (st. Wheel)	M14X1.5	110(81)
Guide joint to control arm	M7	25(18)
Stabilizer suspension to body	M8	23(17)
Clip for stabilizer to suspension	M8	23(17)
Stabilizer bearing to control arm	M8	23(17)

Torque Specifications - Steering 924/924 turbo

Location	Thread	Tightening torque Nm (ftib)
Track rod to steering knuckle	M12X1.5	30+20(22+15)
Universal shaft to steering gear	M8	30+5(22+4)
Steering gear to cross member	M8	20+4(15+3)
Cover for pinion bearing	M6	7±1(5±1)
Cover for thrust piece bearing	M6	7±1(5±1)
Check nut for adjusting bolt	M10x1	25 ± 5 (18 ± 4)
Track rod to steering rack	M22X1.5	50 ± 7 (37 ± 5)
Track rod joint to track rod	M14X-1.5	30+10(22+7.5)
Steering wheel to steering column	M16X-1.5	45 ± 10 (33 ± 7.5)
Steering column switch to jacket tube	M8	15±4(11 ±3)
Support bearing to body	M6	5 (4)
Universal shaft to steering column	M8	30 ± 5 (22 ± 4)

Torque Specifications - Rear Axle 924/924 turbo

Location	Thread	Tightening torque Nm (ftib)
Bearing flange to transverse tube	M10	46(34)
Bearing flange to body	M12x1.5	70(52)
Thrust bearing to bearing flange	M10	46 (34)
Thrust bearing to body	M10	46(34)
Support bearing to body	M10	46(34)
Support bearing to strut	M8	23(17)
Axle control arm to rear axle strut	M12X1.5	90(66)
Axle control arm to rear axle strut	M12X1.5	103(76)
Axle control arm to transverse tube	M12X1.5	61(45)
Vibration damper to axle control arm and body	M12X1.5	61(45)
Universal shaft to final drive and rear wheel shaft	M8	42(31)
Adjusting lever to spring strut	M16x1.5	245 (180)
Stabilizer suspension to rear axle strut and stabilizer	M10	46(34)
Fastening clip to transverse tube	M8	23(17)
Wheel bearing cover to axle control arm	M10	58(43)
Wheel hub to rear wheel shaft	M24 x 1.5	380 + 70 (280 + 52)
Brake drum to rear wheel shaft	M24X1.5	350 ± 50 (258 ±37)
Cover plate to brake carrier	M6	10(7.5)
Floating caliper to brake carrier	M12X1.5	85 (63)
Brake line to floating caliper/ slave cylinder	M10x1	14(10)
Mounting bracket for brake line to brake carrier	M6	10(7.5)
Brake disk to wheel hub	M6	5,0 (4)
LA wheel to wheel hub	M14X-1.5	130 (96)
Steel wheel to wheel hub	M14X-1.5	130 (96)
LA wheel to brake drum	M14x1.5	130 (96)
Steel wheel (4-hole) to brake drum	M14X1.5	110(81)

Technical Data - Front Axle 924

Wheel suspension	Wheels independently suspended on control arms and spring struts (McPherson design)	
Springing	One coil spring per wheel, coaxial with spring strut	
Shock absorbers	Double-acting hydraulic shock absorber struts	
Stabilizer	Up to end model 77	Standard Ø
	Model 78	Optional extra Ø
	Model 79	— 20 mm
	Model 80	— 22 mm
		— 23 mm
		— 23 mm
	Model 81	(21 mm) (23 mm)*
	some of model 82 up to end Sept. 81	21 mm 23 mm**
	In model 82 from Oct. 81	20mm 21.5mm

Specifications for USA, Canada, Japan in brackets *Not as indiv. optional extra M 404
**Only for export in conjunction with optional extra M 471

Technical Data - Front Axle 924 turbo

	Rest of world (USA, Canada, Japan- opt. extra)	USA, Canada, Japan- basic model(from model 81 see ROW)
Wheel suspension	Wheels independently suspended on control arms and spring struts (McPherson design)	
Springing	One coil spring per wheel, coaxial with spring strut	
Shock absorbers	Double-acting hydraulic shock absorber struts	
	VW (Opt. extra Koni)	VW (Opt. extra Koni)
Stabilizer Ø	23 mm USA, Canada Japan from mod. 81 21 mm (opt. extra for USA, Canada, Japan from mod. 81 23mm in conjunction with Koni shock absorber and 14 mm rear stabilizer) from mod. 82 21.5mm	

Technical Data - Steering 924

Steering wheel	2 spokes Ø383 mm up to end model 81
	3 spokes Ø380 mm from model 82
	Optional extra
	4 spokes Ø362 mm
	3 spokes Ø380 mm
Steering wheel ratio in the middle	19.15:1
Turning circle diameter	10.08 m
Track circle diameter	9.21 m
Steering wheel turns from lock to lock	4.02

Technical Data - Steering 924 turbo

	Rest of world (USA, Canada, Japan - opt. extra)	USA, Canada, Japan - basic model (from model 81 see ROW)
Steering wheel Ø	380mm 360 mm (opt. extra)	380mm 360 mm (opt. extra)
Steering wheel ratio in the middle	22.39:1	19.15:1
Turning circle Ø	10.3	10.08 m
Track circle Ø	9.5m	9.21 m
Steering wheel turns from lock to lock	4.02	4.02

Technical Data - Rear Axle 924

Wheel suspension	Independent wheel suspension on semi-trailing arms	
Springing	One round torsion bar per wheel, transverse	
Torsion bar	Ø22mm	
	Ø23.5 mm in conjunction with stabilizer	
	Ø14 mm	
	Ø23.5 mm from model 81 USA, Canada, Japan from chassis no. 92 AO 430199 (Sept. 79)	
Shock absorbers	Double-acting hydraulic shock absorbers	
Stabilizer up to end model 77	Standard Opt. extra 018 mm	
from model 78	Standard Opt. extra 014 mm*	
Spring strut adjustment (angle of spring strut) up to end model 77	23°	
From model 78		
With Ø22 mm torsion bar	23°40'	
with Ø23.5 mm torsion bar	19°	
(for relevant models see above)		

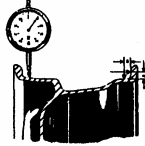
* Model 80 for USA, Canada, Japan not as individual optional extra (M 404)
Model 81 and some of 82 (up to end Sept. 81) only export in conjunction with M471

Technical Data - Rear axle 924 turbo

	Rest of world (USA, Canada, Japan - opt. extra)	USA, Canada, Japan - basic model (from model 81 see ROW)
Wheel suspension	Independent wheel suspension on semi-trailing arms	
Springing	One round torsion bar per wheel, Transverse	
Shock absorbers	Double-acting hydraulic shock absorbers	
	F+S (Opt. extra Koni)	F+S (Opt. extra: Koni)
Torsion bar Ø	23.5 mm	23.5 mm
Spacers	21mm per wheel	-
Stabilizer Ø	14mm	-
	USA, Canada, Japan from model 81 — (Opt. Extra for USA, Canada, Japan from model 81 14 mm in conjunction with Koni shock absorbers and 23 mm front stabilizer)	

Checking Rims

Points for measuring vertical and lateral runout on outer and inner rim shoulders.
Dimension "a" = 8mm
Max. permissible vertical and lateral run-out
With light alloy rims = 1.0 mm
With steel rims = 1.25 mm Note
It is not permitted to straighten twisted rims.



Tires, Wheels, Tire Pressures

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

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

	924	924 turbo
front	2.0bar (29psi)	front 2.0bar (29psi)
rear	2.0bar (29psi)	rear 2.5bar (36psi)
Spare wheel	2.2bar (32psi)	Spare wheel 2.2bar (32psi)
924 up to model 79		Tires
Front and rear	5 1/2 Jx14	165 HR 14
from model 79	6 Jx14	185/70 HR 14
924 turbo from model 79		
front and rear	6 Jx15	185/70 VR 1572

Wheel Alignment Adjustment Values 924/924 turbo

The following values apply to curb weight in accordance with DIN 70020 (car with full fuel tank, spare tire and tool kit)

	Adjustment value and tolerance	Max. difference left to right
Front axle Toe-in (pressed with 150 N/15 kp)	+10'±5'	
Track 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-in per wheel	0°±5'	10'
Camber	-25'±30' (-1°±20')	30'
Spring strut adjustment* (angle of spring strut) Up to end of model 77 From model 78	23°	0.5°
With Ø 22 mm torsion bar	23°40'	0.5°
With Ø 23.5 mm torsion bar Application of Ø 23.5 mm torsion bar: in conjunction with Ø 14 mm stabilizer from model 81, all USA, Canada, Japan models from chassis no. 92A0 43 0199 (Sept. 79)	19°	0.5°
Vertical adjustment** (from model 78) Center of strut bearing (torsion bar center) under wheel center	Adjustment value and tolerance 3.5 ± 10 mm (8 ± 10 mm)	Max. difference left to right 10 mm 10 mm

Specifications for USA, Canada, Japan in brackets

* 1' change in spring strut angle corresponds to approx. 6 mm change in vehicle height with Ø 22 mm torsion bar 5mm change in vehicle height with Ø 23.5 mm torsion bar
** For USA, Canada, Japan this figure may vary slightly. The important factor is the bumper height. The distance from the measuring platform (level road surface) to top edge of bumper must be 522 ± 20 mm.

Brakes

Torque Specifications-Mechanical Brake System 924/924 turbo

Location	Thread	Tightening torque Nm (ftlb)
Fillister head screw to damping nut	M7	13+3(10+2)
Floating caliper to steering knuckle	M12x1.5	85 (63)
Brake disk to wheel hub	M8	23(17)
Cover plate to steering knuckle	M7	10(7.5)
Wheel hub to rear wheel shaft Brake drum to rear wheel shaft	M24x1.5	380 + 70 (280 + 52)
	M24x1.5	350 ± 50 (258 ± 37)
Mounting bracket for brake line to brake carrier	M6	10(7.5)
Cover plate to brake carrier	M6	10(7.5)
Brake disk to wheel hub	M6	5(4)
Floating caliper to brake carrier	M12x1.5	85 (63)
Cover plate to axle control arm	M10	58(43)
Handbrake lever to body	M8	21 (15)
Brake cable to yoke	M6	8.5 (6)
Handbrake cable to tumbuckle	M6	8.5 (6)
Brake cable bracket to brake carrier	M8	21 (15)
Wheel brake cylinder to brake carrier	M8	21 (15)

Torque Specifications-Hydraulic Brake System 924/924 turbo

Location	Thread	Tightening torque Nm (ft lb)
Brake pressure line to tandem master brake cylinder, brake hose, distributor, wheel brake cylinder and floating caliper	M10x1	14(10)
Brake hose to floating caliper	M10x1	14(10)
Bleed screw to floating caliper	M7	4(3)
Bleed screw to wheel brake cylinder	M6	4(3)
Brake light switch to tandem master brake cylinder	M10x1 conical	15+4(11+3)
Screw plug to master brake cylinder	M10x1	14(10)
Tandem master brake cylinder to brake booster	M8	21 (15)
Brake booster to intermediate piece	M8	21 (15)
Brake booster to bulkhead	M8	21 (15)
Mounting bracket to brake carrier	M6	10(7.5)

Technical Data - Brake System 924

Designation	Remarks	Dimensions	Wear limit
Service brake (toot brake)	Hydraulic dual-circuit brake system, split up diagonally, brake booster, front wheels with sliding caliper disk brakes, rear wheels with simplex drum brakes		
Handbrake (parking brake)	acting mechanically on both rear wheels		
Brake disk Ø	257mm		
Effective brake disk Ø	210mm		
Brake disk thickness, new	13mm		
Min. thickness after reworking*)	12mm		11.5mm
Effective total brake lining area	470 cm ²		
Brake lining area per front wheel	65 cm ²		
Brake lining area per rear wheel	170 cm ²		
Piston Ø in brake caliper	48 mm		
Uning thickness front	14 mm 2.0 mm		
Brake drum Ø	230mm		
Min. Ø after reworking **)	231 mm 231.5mm		
Brake shoe width	38.6mm		
Brake lining thickness	3.8...4.0 mm 2.5 mm		
Brake lining thickness, oversize	4.3...4.5 mm 2.5 mm		
Piston Ø rear wheel brake cylinders	19.05 mm		
Master brake cylinder Ø up to mod. 80	20.64 mm		
from mod. 80	23.81 mm		
Brake booster up to mod. 80	7 inches		
from mod. 80	9 inches		
*The brake disk must only be reworked symmetrically, i.e. from both sides equally			
**Use oversize brake linings			

Technical Data - Brake System 924 turbo/Carrera GT

Designation	Carrera GT 924 turbo Rest of World (USA, Canada, Japan-opt. extra) Remarks	924 turbo USA, Canada, Japan-Basic model (from mod. 81 see ROW),	Carrera GT 924 turbo Rest of World (USA, Canada, Japan-opt. extra)	924 turbo USA, Canada Japan-Basic model (from mod. 81 see ROW) Wear limit
Service brake (footbrake)	Hydraulic dual-circuit brake system with brake booster			
	Internally ventilated brake disks with sliding calipers front and rear. On Carrera GT additional ventilation via one airduct each side	Front wheels with sliding caliper disk brakes, rear wheels with Simplex drum brakes.		

	Remarks, Dimensions		Wear limit	
Brake circuit split Brake booster Ø Master brake cylinder Ø Brake disk Ø Front Rear Brake drum Ø Effective Brake disk Ø Front Rear	924 turbo: Diagonal Carrera GT: front/rear (black/white) 9 inches Internal ratio i=3.0 924 turbo: Tandem 23.81 mm Carrera GT: Tandem stepbore 23.81/19.05 mm 282.5 mm 289.0 mm - 224.6 mm 242.0 mm	Diagonal 9 inches Internal ratio i=3.0 Tandem 23.81 mm - 257.0 mm - 230 mm 210 mm -		
Piston Ø in brake caliper Front Rear Piston Ø rear wheel brake cylinders Brake lining area per front wheel Brake lining area per rear wheel Total brake lining area Lining thickness Front Rear Lining thickness, oversize Brake disk thickness, new Front Rear Min. Brake disk thickness after reworking Front Rear Thickness tolerance of brake disk max. Max. Lateral runout of brake disk. Max. Lateral runout when installed Brake drum Ø new Min. Brake drum Ø after reworking Max peak-to-valley height after machining Play at brake pedal when brakes bled and engine not running	54mm 36mm - 92cm ² 63 cm ² 310 cm ² 13mm 13mm - 20.5 mm 20.0 mm 19.1 mm 19.2 mm 0.02 mm 0.05 mm 0.1mm - - 0.006mm min 10mm	48mm - 19.05 mm 65 cm ² 170 cm ² 470 cm ² 14mm 3.8...4.0 mm 4.3...4.5 mm 13mm - 12mm - 0.03 mm 0.05 mm 230mm 231mm 0.006mm min 10mm	2mm 2mm - 18.5mm 18.6mm 0.2mm - 231.5mm -	2 mm 2.5mm 2.5mm 11.5mm -
*The brake disk must only be reworked symmetrically, i.e. from both sides equally. "Use oversize brake linings Parking brake Drum brake acting mechanically on both rear wheels (handbrake)				
Handbrake drum Ø Brake shoe width Brake lining area per wheel Brake lining thickness)	180mm 25 mm 85 cm ² 4.5 mm	230mm 38.6 mm 170 cm ² 3.8...4.0 mm (Oversize 4.3...4.5 mm)	181mm 231.5mm 2 mm 2.5 mm	

Technical Data - Air Conditioning from model 79

Refrigerant volume 850 g
R 12 refrigerant

Refrigerating oil in compressor

230 ± 15 cm³ Denso¹ 6 (up to model 78 175 cm³)
or Suniso No. 5 GS
or Texaco Capella "E"
or Fuchs Reniso Kes
or refrigerating oil of identical specifications

Power consumption

Evaporator fan 160 ± 20 W
Magnetic clutch 40 W

Temperature regulation

Temperature for cut-in/cut-out of magnetic clutch, air temperature measured at evaporator outlet.

	Max. Cooling capacity	Min. cooling capacity
On	4 ± 1.5 °C	18 ± 1.5 °C
Off	3 ± 1.5 °C	15 ± 1.5 °C

Compressor

No. of cylinders 6
Swept volume 134 cm³ per revolution
Weight 8.4 kg

Fusible safety plug on fluid reservoir

The safety plug fuses open at 103 °C to 110 °C, corresponding to an overpressure of 35 to 40 bar.

Low pressure switch on fluid reservoir The contact is open at an overpressure of under 2.2 bar

Thread sizes on the air conditioning components

Component	Thread in inches (U Inlet)	NF Outlet	Connection for checking
Compressor	7/8	3/4	5/8 5/8 7/16
Condenser Fluid reservoir	Evaporator	7/8	

Tightening torques

Thread in inches	Tightening torque
3/4	38 Nm (28 ftib) 3
7/8	8 Nm (28 ftib)
5/8	20 Nm (15 ftib)

Electrical System

Relays

a	Horn relay (radiator fan from model 79)
b	Fuel pump relay
c	Fog lamp relay (optional extra) (air conditioning from model 79)
d	Relay for headlamp cleaning system (optional extra)
e	Headlamp flasher switching relay only B.J.L.
	Warning delay relay (seat belt) only USA
	Switch device for catalytic converter monitor only Japan
f	Relay for rear window heater
g	Combined relay for headlamp flasher and low beam (plug bridge from model 81, term. 56-56b)
h	Relay for supplementary headlamps
i	Relay for radiator fan (horn relay from model 79)
k	Intermittent windshield wiper relay
l	Turn indicator relay

Fuses from model 79

No	Consumer	Amperes
1	Low beam left	8
2	Low beam right	8
3	Main beam left	8
4	Main beam right	8
5	Supplementary headlamps	16
6	Brake lights, motor for concealed headlamps (hazard warning lights from model 81) Interior light	8
7	Hazard warning Lamps/cigarette lighter/clock (interior-trunk-radio illumin. from model 81)	8
8	Turn indicator	8
9	Reversing lights, rear wiper, exterior mirrors	8
10	Fresh air fan	16
11	Windshield wipers	8
12	License plate, trunk and Ashtray lights, rear fog lamp (instrument and switch illumination from model 81)	8
13	Position lamp right	8
14	Position light left, (engine comp. light from model 81)	8
15	Fog lamps	16

A further fuse box is located above the center electrical unit

1	Horn	8
2	Fuel pump (supplement. sliding air valve, warm air control, timing valve from model 81)	16
3	Radiator fan, el. antenna motor	16
4	Rear window heating	25
5	Condenser fan (air conditioning)	16
6	AC compressor, evaporator fan	25
7	not used (rear fog lamp from model 81)	8
8	El. windows	25
9	not used	

Dimensions (at curb weight in accordance with DIN)

924

Wheelbase	2400mm
Trackwidth, front	1418mm
Track width, rear	1372 mm
Length	4213mm
Length with USA bumpers	4320 mm
Width	1685mm
Height	1270mm
Ground clearance*	125 mm
Turning circle	approx. 10m
Overhang angle, front*	19.7°
rear*	15°

924 turbo

Wheelbase	2400mm
Track width, front	1418mm
Trackwidth, rear	1392 mm
Length	4213mm
Length with USA bumpers	4290mm
Width	1685mm
Weight	1270mm
Ground clearance*	120 mm
Turning circle	approx. 10m
Overhang angle, front*	20°
rear*	16.4°

*at permitted gross weight

Performance Data (with DIN curb weight and half payload)

Type Model year		924 XK/XJ (XG/XE) 78		924 XK/XJ 79...85		924 VC 80...82		924 turbo 79...80	924 turbo 81...84
		Manual	Automatic transm	Manual	Automatic transm..	Manual	Automatic Transm.	Manual	Manual.
Maximum speed	Km/h mph	200(192) 124(119)	195(185) 121(115)	204	195	192 120	185 116	225 (212) 140(132)	230 (215) 143 (134)
Acceleration 0...100 km/h	S	9.9(11.5)	11.4(13.0)	9.6	11.4	11.2	13.0	7.8 (9.4)	7.7 (9.3)
Kilometer from standing start	S	31.0 (32-6)	32.2 (33.6)	30.5	32.2	32.3	33.6	28.0 (30.0)	27.9 (29.8)
1/4 mile from standing start	S	17.4 (17.9)	17.7 (18.4)			17.8	18.4	(16.3)	(16.2)

Specifications for USA in brackets

Weights

Type Model year	924 78	924 79...85	924 80...82	924 turbo 79...84	924turbo 81...82
	ROW	ROW	USA	ROW	USA
Curb weight to DIN	1080 kg	1130 kg	1185kg/26121bs.	1260 kg	1260 kg/2779 lbs.
Perm. total weight	1400 kg	1450 kg	1500 kg/3307 lbs.	1550 kg	1550 kg/3418 lbs.
Perm. axle load front*	600 kg	650 kg	660 kg/1455 lbs.	700 kg	700 kg/1544 lbs.
Perm. axle load rear*	840 kg	850 kg	880 kg/1940 lbs.	900 kg	900 kg/1985 lbs.
Perm. trailer load unbraked**/****	500 kg	500 kg		500 kg	
Perm. trailer load braked**/****	800 kg	800 kg		1200 kg	
Perm. lowing weight	2200 kg	2250 kg	2200 kg/4850 lbs.	2700 kg	
Perm. roof load */****	75 kg	75 kg	75 kg/165 lbs.	75 kg	75 kg/165 lbs.
Perm. drawbar load***	30 kg	40 ± 10 kg	40±10 kg/88±22 lbs.	40 ± 10 kg	

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

** Up to 12% incline

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

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

Caution: additional equipment (air conditioning etc. reduces payload by a corresponding amount

Filling Capacities

Engine oil specification	API class SP/CC or SG multi-grade oils, see works approval Technical Information bulletins on engine oils
Engine oil volume	924 approx. 5.0 liters 924 turbo approx. 5.5 liters
Difference between marks on oil dipstick:	924 approx. 1.2 liters 924 turbo approx. 1.6 liters
Cooling system, heating	Approx. 71 coolant, factory filling with anti-freeze to - 25°C Nordic countries to - 35°C
Fuel tank	924 approx. 62 liters, of which 5 liters reserve 924 turbo approx. 84 liters, of which 9 liters reserve
Brake fluid reservoir	Approx. 0.2 liters brake fluid in accordance with SAE J 1703, DOT 3 or DOT 4
Windshield washer system and head lamp cleaning system	Approx. 6 liters
Manual transmission with differential	Approx. 2.5 liters multi-grade transmission oil, SAE 75 W-90, API classification GL 5 orMIL-L2105B
Automatic transmission	Filling capacity approx. 6 liters, oil change volume approx. 2.8 liters ATP Dexron II D
Final drive	Approx. 1 liter multi-grade transmission oil, SAE 75 W-90, API classification GL 5 orMIL-L2105B