

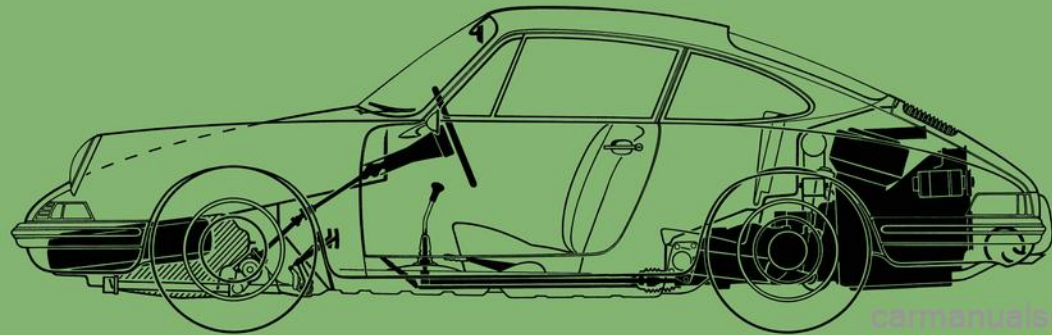
PORSCHE

901

PORSCHE



carmanualsonline.info





With the introduction of the Type 901, the Porsche Company has added another car to round off the upper end of their current program of fast and economical automobiles. The new model was designed in the best of Porsche tradition, combining the virtues of the well proven Type 356 models with ideas and experience gathered by the technical staff of designers and development engineers over a period of many years. Being equal to the Carrera 2000 GS in weight and temperament, and even excelling it in top speed, the Type 901 will again demonstrate that in a Porsche driving is at its best. This car will provide unequalled driving comfort, handling, and safety — qualities which the demanding Porsche owner has enjoyed ever since the introduction of the first Porsche.

The engine is an air cooled, opposed six cylinder unit with one camshaft for each bank of cylinders (ohc). Applied in this design are concepts conceived and proven in the course of development of Grand Prix engines and high performance sports car engines. The crankshaft is mounted in eight main bearings. Component parts are, to



a large degree, of light alloy. This engine was designed with due consideration towards its adaptability for competition use in appropriate stages of development. The two camshafts are chain-driven, a feature applied in Porsches for the first time. A new transmission has been designed for this car. Although similar to the previous units in mechanical operation, the new transmission has five forward speeds to cope with the extended speed range.

The front wheel suspension consists of the shock absorbers and low positioned transverse control arms, with springing effected by longitudinal torsion bars. Suspension of the rear wheels is by longitudinal control arms with transverse torsion bars. Power is transmitted to the rear wheels by twin-joint half-axes.

The rack-and-pinion steering is positioned in the forward center of the vehicle. Owing to this arrangement, which necessitated the utilization of relay shafts in place of a solid steering rod, the aspect of interior safety has been greatly enhanced. The car is equipped with disc brakes on all four wheels.



In view of considerations given to body dimensions, it became necessary to consolidate the new components into a compact unit. The inside space has been enlarged while keeping the outside dimensions down — here exceeding the overall length of the Type 356 by only 120 mm, yet reducing the overall width by 70 mm. At the same time larger window areas have been provided, to satisfy the demands of today.

Despite of the reduced overall width, it was possible to widen the forward passenger space. Retained basically unchanged is the seating arrangement which provides utmost comfort on long distance trips. Leg room behind the forward seats has been extended by approximately 6 cm. Both front fenders have been made detachable to simplify repairs.

A special effort was made to provide an adequate solution to interior ventilation. The spacious luggage compartment under the front hood of the car provides adequate space for the accommodation of suitcases and other luggage.

901

Technical Data

Engine

Number of cylinders	6
Bore	80 mm (3.15 in.)
Stroke	66 mm (2.60 in.)
Piston displacement, actual	1991 cc (121.5 cu. in.)
Compression ratio	9.1
Horsepower rating	130 HP (DIN) at 6200 rpm
Maximum torque	16.5 mkg at 4800 rpm 119.3 lbs./ft. at 4800 rpm
Horsepower per liter	65 HP (DIN)

Engine Design Data

Engine type	Horizontally opposed six, carburetor type, four stroke cycle
Cooling system	Air cooled
Crankcase	Light alloy
Cylinders	Cast iron
Cylinder heads	Light alloy
Number of valves per cylinder	1 intake, 1 exhaust
Valve arrangement	overhead in "V", hemispherical combustion chamber
Camshafts	OHC, in cylinder heads
Valve timing	Over rocker arms
Camshaft drive	By chain
Crankshaft	Forged steel, 8 main bearings
Connecting rod bearings	Plain journal bearings
Blower drive	By V-belt
Lubrication system	Dry sump (separate oil tank); full pressure; with scavenger pump; full-flow oil cooler and oil filter
Fuel supply	Electric fuel pump
Electrical system	12 volt, 45 Ah battery
Radio interference suppression	Accomplished in accordance with VDE 0879, Part I

Generator Ignition type

360 watt, with current and voltage regulator
Battery coil

Power Train

Location of engine in vehicle
Clutch
Transmission
Number of speeds
Synchronized gears
Location of gearshift lever

At rear, behind rear axle
Single plate, dry, diaphragm type
Porsche, servo-thrust synchronization
5 forward, 1 reverse
1 through 5
On floor in center of vehicle (besides driver's seat)

Final drive

Spiral bevel gears in final drive; conventional differential; limited-slip bevel gear differential; limited-slip
7.31, 1 = 4.428
See table below

Chassis and Suspension

Frame (Underbody)

Welded, pressed-steel sections unitized with body

Front wheel suspension

Independent wheel suspension with transverse control arms, and guide struts

Front wheel springing

By torsion bars and rubber cushions

Rear wheel suspension

Independent wheel suspension with longitudinal control arms

Rear wheel springing

By torsion bars and rubber cushions

Shock absorbers

Hydraulic, double-action telescopic shock absorbers front and rear

Service brakes

Four wheel, hydraulic disc brakes

Hand brake

Mechanical, acting on rear wheels

Effective brake disc dia. front

227 mm (8.94 in.)

rear

243 mm (9.57 in.)

Brake lining area, per wheel

front

52.5 cm² (8.14 sq. in.)

rear

40 cm² (6.20 sq. in.)

Total brake sweep area

185 cm² (28.68 sq. in.)

Hand brake drum diameter

180 mm (7.1 in.)

Total sweep area

194 cm² (30.1 sq. in.)

Tires

185 x 15, braced tread

Rim type

4 1/2 x 15

Steering

Rack-and-pinion, steering damper; safety steering post (by relay)

Steering ratio

1:17

Fuel tank capacity

approx. 68 liters (18.0 US gallons or 15.0 Imperial gallons)

Performance

Maximum speed

approx. 210 km/h (130 mph)

Weight/power ratio (ready to operate)

7.7 kg/HP (DIN)

Fuel consumption

11-14 liters per 100 km (17-21 miles/US gal, or 20-26 miles/Imperial gallon)

Acceleration 0-100 km/h (0-62.1 mph)

9.1 sec.

0-160 km/h (0-99.4 mph)

21.9 sec.

Elapsed time for 1 km

29.9 sec. (standing start)

for 400 m (1/4 mile)

16.4 sec.

Dimensions

Wheelbase

2204 mm (86.77 in.)

Track, front

1332 mm (52.44 in.)

Track, rear

1312 mm (51.65 in.)

Overall length

4135 mm (162.8 in.)

Overall width

1600 mm (62.99 in.)

Overall height

1273 mm (50.12 in.)

Ground clearance

118 mm (4.65 in.)

Turning circle

10 m (32.8 ft.)

Gear Ratios

5-speed transmission

1st gear (11-34) 1 = 3.09

2nd gear (18-34) 1 = 1.89

3rd gear (22-29) 1 = 1.32

4th gear (26-26) 1 = 1.0

5th gear (26-26) 1 = 0.75

Additional gear ratios are available.

carmanualsonline.info