

**PORSCHE**

**914 1,8-2,0**

**EMISSION  
CONTROL  
SYSTEM**

**MAINTENANCE REQUIREMENTS AND WARRANTY**

**1975 MODEL**

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## In the Interest of Clean Air

Pollution of our environment has become a problem that is of increasing concern to all of us. We urge you to join us in our efforts for cleaner air in controlling the pollutants emitted from the automobile.

Porsche has long recognized its responsibilities not only toward its customers but also toward the public in general. We have developed an emission control system that—as the word implies—controls or reduces those parts of the emission that can be harmful to our environment. Your Porsche is equipped with such a system.

In this brochure, we explain how the Porsche emission control system works, and what you can do to keep it in working order.

The Porsche Audi Division of Volkswagen of America, Inc. warrants the emission control system in your vehicle under the terms and conditions set forth on pages 11 to 12 of this brochure. To keep the warranty in force, you, as the owner of the vehicle, have certain responsibilities. It is important that you maintain

your Porsche according to the manufacturer's specifications and that you keep a record of all maintenance work performed. Authorized Porsche Audi dealers will help you meet your obligations under the terms of our warranty. They have Porsche trained mechanics and special tools to provide fast, efficient service.

## How Emission Control Works

When an automobile engine is running, it uses energy generated through the combustion of a mixture of air and fuel. Depending on whether a car is driven fast or slow or whether the engine is cold or hot, some of the fuel (hydrocarbons) may not be burned completely but be discharged into the engine crankcase or exhaust system. Additional hydrocarbons may enter the atmosphere through evaporation of fuel from the fuel tank. These hydrocarbons released into the air contribute to undesirable pollution.

In addition, carbon monoxide (CO) and oxides of nitrogen (NO<sub>x</sub>) contribute to harmful engine emissions. They, too, are formed during the combustion and discharged into the exhaust system.

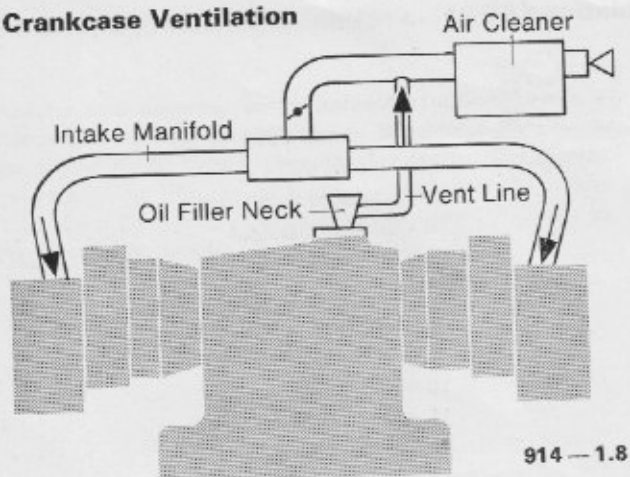
To reduce these pollutants all Porsche vehicles are equipped with a special emission control system. The major components are:

### Controlled Combustion System

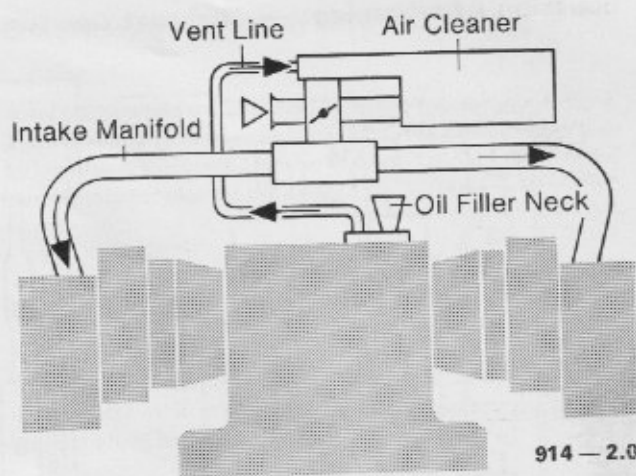
The amount of pollutants emitted from an engine greatly depend on the combustion of the air/fuel mixture. Complete burning of the air/fuel mixture is, therefore, very important. An improved combustion process in your Porsche makes it possible to keep harmful emissions from the engine at the required low level.

Your Porsche engine is equipped with a precisely calibrated fuel injection system that assures a finely balanced air/fuel mixture under all operating conditions. Depending on engine demand the ignition distributor is monitored via a vacuum line to assure ignition at exactly the right moment for complete combustion.

## Crankcase Ventilation

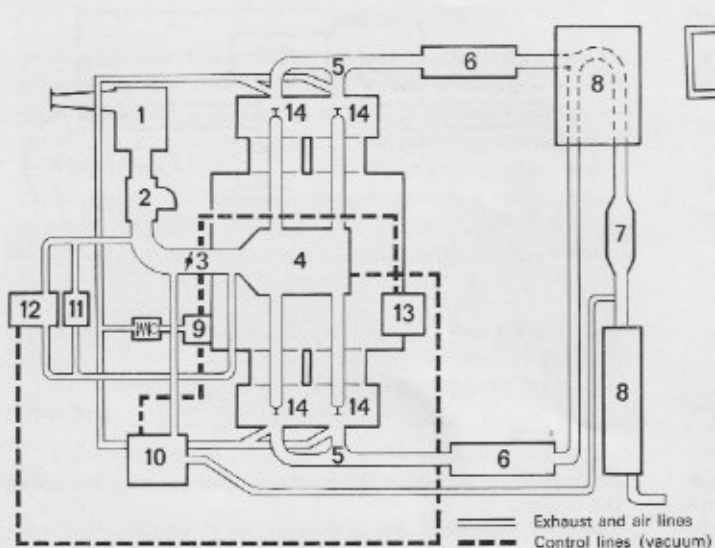


Through Crankcase Ventilation harmful emissions from the engine crankcase are not permitted to reach the outside atmosphere. These emissions are recirculated from the crankcase through a rubber hose to the air intake system. From here



the emissions mix with the intake air and are later burned in the engine. The Controlled Combustion System and Crankcase Ventilation are shown in the illustration.

# Emission Afterburning — Exhaust Gas Recirculation (EGR)



### **Exhaust Gas Recirculation (914—1.8/2.0)**

Porsche cars delivered in California are equipped with a system that provides for recirculation of some of the exhaust gas to the engine before it reaches the muffler. The exhaust gas recirculated into the combustion chamber of the engine helps lower the formation of oxides of nitrogen ( $\text{NO}_x$ ) during the combustion process.

### **Emission Afterburning (914—2.0)**

A special air pump delivers fresh air to the engine exhaust ports. The additional air is used to "afterburn" the harmful emissions as they leave the combustion chambers. Through this method cleaner exhaust reaches the outside air.

### **Catalytic Converter (914—1.8/2.0)**

If your Porsche was delivered in California, a catalytic converter is part of the exhaust system to reduce carbon monoxide (CO) and unburned hydro carbons (HC).

## Fuel Evaporation Control

The sealed Porsche fuel evaporation system prevents gasoline vapors from escaping to the atmosphere through the following controls:

### Fuel Tank Venting

An expansion chamber for the fuel tank and vent lines are part of the fuel tank vent system. These components prevent fuel from escaping to the outside at extremely high outside temperatures and when the car is driven or parked at an incline or in any other non-level position.

### Activated Charcoal Filter

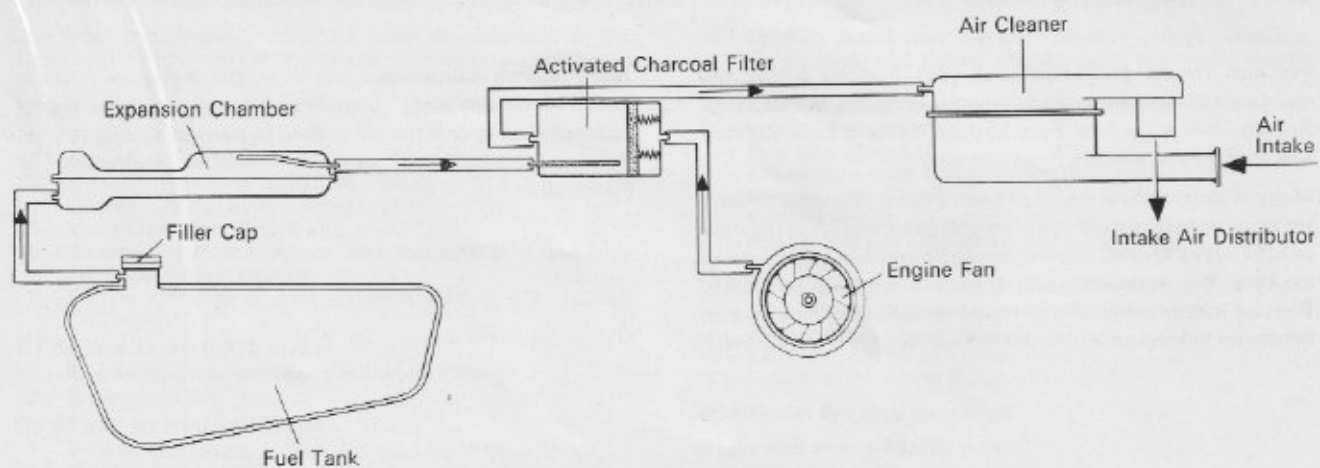
Vapors from the fuel tank are trapped in a container filled with activated charcoal. The filter is connected to the fuel tank vent system. This is how it works:

Fuel vapors pass through the filter and deposit hydrocarbons on the surface of the charcoal filter element. When the engine is running, fresh air diverted from the cooling fan of the engine cleans the filter and routes these hydrocarbons back to the engine where they are burned during normal combustion.



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How fuel evaporation control works is shown in the illustration. The arrows indicate the flow direction of air or fuel vapors, respectively.

## How to Maintain the Emission Control System

For best overall performance of your Porsche follow the maintenance recommendations in your Porsche Maintenance Record. Your authorized Porsche Audi dealer is best qualified and equipped to perform these services.

Many of the maintenance steps have a direct influence on your emission control system. We have grouped these steps together to help you remember at what mileage they must be performed to keep the emission control system working efficiently. Regular maintenance of the emission control system is also necessary to keep your emission control system warranty valid.

More frequent maintenance may be needed if you use your car under severe operating conditions, such as continued short-distance driving or if the car is used in dusty areas. Have your Porsche inspected and serviced whenever you suspect a malfunction.

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## Required Maintenance for the Emission Control System

The following maintenance steps must be performed at the specified mileage intervals to keep the emission control system warranty in effect.

### A) At 1,000 miles

- 1 - Engine oil: Change
- 2 - Engine oil filter: Replace
- 3 - V-belts (including V-belt for airpump 914-2.0) check tension and condition: Adjust
- 4 - Valve clearance: Check and adjust
- 5 - Evaporative control system incl. fuel cap, tank and connections: Check visually
- 6 - Engine idle and exhaust emission (HC + CO): Check and adjust

### B) At and every 5,000 miles

- 1 - Engine oil (at least every 6 months): Change
- 2 - Engine oil filter: Replace

### C) At and every 15,000 miles

- 1 - V-belts (including V-belt for airpump 914-2.0) check tension and condition: Adjust or replace if necessary
- 2 - Valve clearance: Check and adjust
- 3 - Compression: Check
- 4 - Spark plugs: Replace

If you take your car to your authorized Porsche Audi dealer, he will perform the maintenance services recommended and certify its completion. Retain all receipts of service obtained at other than authorized Porsche Audi dealers to verify that these services were performed at the mileage intervals specified.

## Correct any deficiencies found.

- 5 - Ignition distributor: Contact breaker points: Replace. Dwell angle and timing: Adjust (with electronic equipment)
- 6 - Ignition wiring, distributor cap and rotor: Check visually, replace if necessary
- 7 - Fuel filter: Replace
- 8 - Evaporative control system incl. fuel cap, tank and connections: Check visually
- 9 - Exhaust system: Check for damage
- 10 - Engine idle and exhaust emission (HC + CO): Check and adjust
- 11 - Air cleaner filter element (at least after two years): Replace
- 12 - Air pump, control valves, air injection hoses and connections: Check (914-2.0)
- 13 - Filter element for air pump: Replace (914-2.0)
- 14 - Anti-backfire valve: Check (914-2.0)

## Additional Service Required

### D) At and every 30,000 miles

- 1 - EGR-System: Check visually
- 2 - Crankcase ventilation hoses: Check visually
- 3 - Vacuum passages in throttle valve housing: Clean
- 4 - Catalytic converter: Replace

## Explanation of Required Emission Control Maintenance Services

### A) At 1,000 miles

During the first 1,000 miles, all working parts adjust to each other to a certain degree. Therefore components that are essential for the proper functioning of the emission control system, such as valve adjustment, engine idling and exhaust emission are checked and adjusted if necessary. Fuel cap, tank and connections are visually checked. Also, the engine oil is changed and the oil filter replaced at this time. The V-belt tension, which is important for proper function of the electrical system and air pump operation (type 914-2.0), should be checked, and adjusted if necessary.

### B) At and every 5,000 miles

To provide good lubrication and to keep the engine internally clean, the oil should be changed and the filter replaced.

### C) At and every 15,000 miles

Complete burning of the fuel/air mixture in the combustion chambers is very important to keep harmful emissions at their lowest level. It also keeps your Porsche running most economically.

To keep it that way, the adjustment of the ignition system and valves, should be checked and, if necessary, corrected. In addition, the engine idle and exhaust emission should be checked.

Spark plugs must fire properly to ensure good engine performance and emission control. The firing of the spark plugs to ignite the fuel/air mixture in the combustion chambers at the precise moment depends on the ignition breaker points. Both spark plugs and breaker points lose their efficiency through normal wear and should, therefore, be replaced at this time. The compression of each cylinder should be tested. In addition, the fuel filter in the fuel injection system should be replaced.

Thermal and high-voltage stresses cause a heavy burden on the ignition wires, the distributor cap and rotor. These items should be checked and replaced if necessary.

To assure free and uninhibited flow of air to the engine, the air filter cartridge should be replaced at this time. If you operate your Porsche mainly on dusty roads, it may be necessary to replace the filter element more often.

The activated charcoal filter, and the ventilation hoses and connections should be visually checked.

Additional for type 914 — 2.0: The air pump/control valves, air hoses and connections should be visually checked.

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**D) At and every 30,000 miles** (additional services)

The crankcase ventilation hoses and connections should be visually checked.

Additional for vehicles delivered in California: The EGR-system should be checked for proper function, and the vacuum

passages in the throttle valve housing cleaned. The catalytic converter should be replaced.

**Any deficiencies found should be corrected.**

**Important:** Only use replacement parts, fuels and oils that meet Porsche specifications.

### **Warranty for New Porsche Vehicles Emission Control System**

This warranty is issued by the Porsche Audi Division of Volkswagen of America, Inc. ("Porsche Audi"), the authorized United States importer of Porsche vehicles:

1. Porsche Audi warrants that every 1975 model Porsche vehicle imported by Porsche Audi and sold as a new vehicle to a retail customer (a) was designed, built and equipped so as to conform at the time of sale with applicable regulations of the United States Environmental Protection Agency, and (b) is free from defects in material and workmanship at the time of sale which cause such vehicle to fail to conform with such regulations for 5 years after the date of delivery of the vehicle

to the original retail customer or until the vehicle has been driven 50,000 miles, whichever comes first. This warranty is limited, however, to the following: If the vehicle becomes defective under normal use and service and is brought during this period to the workshop of any authorized Porsche Audi dealer in the continental United States or Hawaii or to any authorized Porsche dealer in Canada, the dealer will make such repairs as may be required under such regulations.

2. In order to keep this warranty in effect, the owner must have the vehicle maintained and serviced as prescribed in the Maintenance Schedule for the Porsche Emission Control System.

**3. This warranty does not cover: (i) maintenance services such as fuel system cleaning; (ii) the replacement of service items such as spark plugs, ignition points, wiring, hoses, belts and filters; (iii) damage or defects due to misuse, alteration, negligence, accident or failure to have the vehicle maintained in accordance with the Maintenance Schedule for the Porsche Emission Control System; (iv) damage or defects due to the repair of the vehicle by someone other than an authorized Porsche Audi dealer or the installation of parts other than genuine Porsche parts; (v) damage or defects due to the use of the vehicle in competitive events, including rallies and races; (vi) any vehicle on which the odometer mileage has been altered and the vehicle's actual mileage cannot be readily determined; and (vii) loss of time, inconvenience, loss of use of the vehicle or other consequential damage.**

**4. If the vehicle is brought to an authorized Porsche workshop outside the continental United States or Hawaii, this warranty will not be applicable and defective parts will be repaired or replaced free of charge with new or factory reconditioned parts only within the terms and limitations of the warranty for new Porsche vehicles in effect in the country where such authorized Porsche workshop is located.**

**5. This warranty and the warranty for new Porsche vehicles set forth in the Porsche Owner's Manual are in lieu of all other express warranties of Porsche Audi, the manufacturer, the distributor and the selling dealer. Neither Porsche Audi nor the manufacturer assumes, or authorizes any person to assume, on its behalf, any other obligation or liability.**

## Let us explain the warranty . . .

The Emission Control System Warranty of 5 years or 50,000 miles, whichever comes first, is in addition to your New Vehicle Warranty as outlined in the Porsche Owner's Manual. Both the Emission Control System Warranty and the New Vehicle Warranty begin on the date of original retail delivery and extend to all subsequent owners within the specified warranty periods.

To keep the Emission Control System Warranty in effect, you, as the owner of the vehicle, have the responsibility to provide regular maintenance service for the vehicle in accordance with the manufacturer's emission control maintenance schedule, as outlined on page 9, and to keep a record of all maintenance services performed on your vehicle.

Your best assurance is having these services performed by authorized Porsche Audi dealers. They have Porsche-trained mechanics and special tools to provide fast and efficient Porsche quality service. Provided that maintenance or oil change services were performed in accordance with Porsche

specifications, dated bills from other than authorized Porsche Audi dealers will be accepted as proof that these services were performed when required.

The efficiency of the Emission Control System greatly depends on the overall condition of the car. Not all repairs, adjustments or replacements result from defects in material or workmanship. There are other circumstances beyond the control of the manufacturer that might make a workshop visit necessary. These depend mainly on where you drive and how you drive. They include climatic and atmospheric conditions as well as individual driving habits and vehicle usage.

The following are examples of items that are not covered by this warranty:

### **Maintenance**

A number of components require regular cleaning, adjusting or replacing at recommended intervals to assure efficient engine operation and effective emission control. They include spark plugs, ignition points, air and fuel filters, drive belts, etc. Cleaning of the fuel system may become necessary if contaminated by water, foreign matter, dirt or residue.

Adjustments of ignition timing, valves or fuel injection, which are not performed in accordance with the manufacturer's specifications, may not only increase harmful emissions from your Porsche, but may also cause loss in performance or may make extensive repairs necessary.

### **Wear and Tear**

Contaminated oil, lack of lubrication or a restriction of the engine cooling system may result in damage to pistons, bearings or other moving parts. Always use high-quality oils of the

grade recommended by the manufacturer. It is important to observe the minimum fuel octane rating required for your engine. Your car may require more frequent maintenance when operated in dusty areas or under extreme climatic conditions than a car operated under normal conditions.

### **Corrosion and Deterioration**

The use of corrosive chemicals for cleaning certain engine parts will cause damage that may require replacement of the entire part. The operation of your Porsche in areas of atmospheric contamination or extreme climatic conditions may contribute to deterioration of certain components that would not normally occur.

### **Installation of Accessories or Alterations**

Installation of parts and accessories or alterations not meeting manufacturer's specifications may render your Emission Control System ineffective and may void this warranty.



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