



## Do-It-Yourself



### **2000-2005 Porsche 996 Turbo Minor Maintenance 15,000 Mile Interval**

This tutorial is provided as a courtesy by ECS Tuning.

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Why Not?

You take pride in your car's appearance, why not take equal pride and satisfaction from knowing that you have maintained your Porsche to the same high standards—with your own two hands.

ECS Tuning offers fluid and filter packages for both minor and major maintenance services. Contents include everything recommended for each service interval, sourced from respected suppliers.

This pdf outlines the steps in a **minor maintenance** for a Porsche 996 Turbo. Most steps are relatively low tech and, with minor exceptions, can be performed using standard hand tools found in most well-equipped prosumer garages.

If you are skilled DIYer, you will be pleasantly surprised at how easy it is to maintain your Porsche.

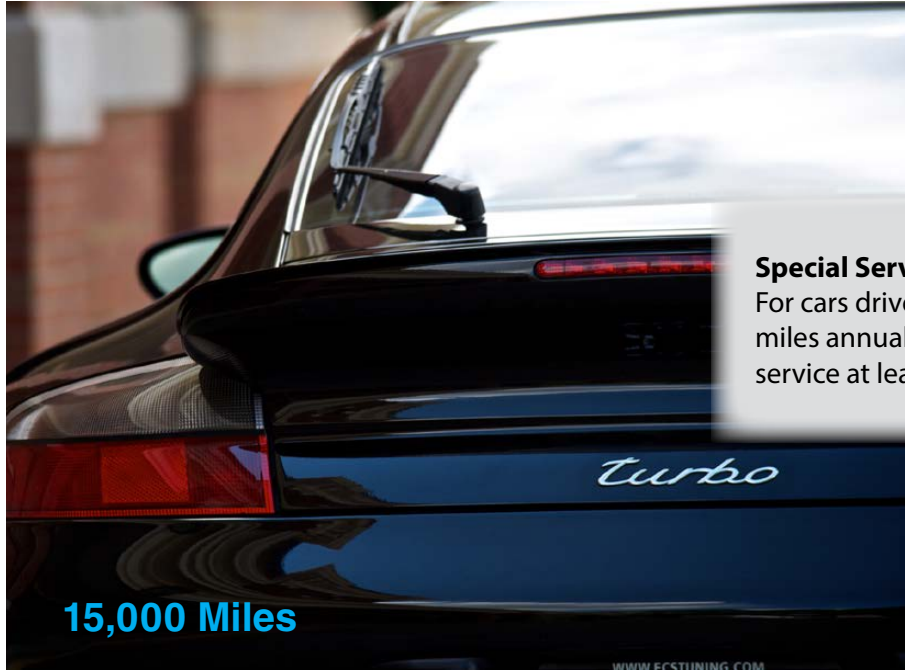


### Porsche 996 Turbo (2000-2005) Minor Maintenance Kit from ECS Tuning ES2550858

The ECS Tuning minor maintenance kit includes quality products from name brand suppliers, including:

- engine air filter element
- cabin air filter element
- oil filter element
- oil filter sealing ring
- drain plug washer
- tank reservoir drain plug seal
- turbo tank sealing washers
- 9-quarts Mobil 1 - 0W40 engine oil

## Porsche 996 Turbo (2000-2005) Minor Maintenance



### Special Service Intervals:

For cars driven fewer than 9000 miles annually, perform a minor service at least once a year.

**15,000 Miles**

Perform a **minor maintenance** at 15,000 mile intervals.

### Fluids and Filters:

- Perform an oil change service.
- Replace the cabin filter element.
- Check and replace the air filter element as needed (varies by driving conditions and mileage).

**For your convenience, we have included service check lists on the next two pages. We suggest you print out copies and record all maintenance services.**

The Porsche Service Procedure includes tests conducted with a proprietary scan test interface not readily available to pro-sumers or repair aftermarket repair professionals.

That does not mean that you are locked out of all diagnostic data. A generic, OBD II compatible scan tool can access a large amount of engine performance and emissions data through the OBD II data link connector located at the lower left edge of the driver side dashboard.

## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Service and Inspection

**Maintenance Date** \_\_\_\_\_

**Mileage** \_\_\_\_\_

All component inspections should include checks for damage, abrasion, looseness, leaks, alignment, tightness, and overall condition.

| Procedure                                 | √ | Problems noted? | Corrective Action |
|-------------------------------------------|---|-----------------|-------------------|
| Change engine oil and filter              |   |                 |                   |
| Change engine air filter                  |   |                 |                   |
| Change cabin (particle) filter            |   |                 |                   |
| Inspect polyrib belt                      |   |                 |                   |
| Inspect undercarriage                     |   |                 |                   |
| Inspect powertrain for leaks              |   |                 |                   |
| Inspect engine compartment                |   |                 |                   |
| Inspect coolant hoses                     |   |                 |                   |
| Inspect coolant level                     |   |                 |                   |
| Check antifreeze concentration            |   |                 |                   |
| Inspect radiators                         |   |                 |                   |
| Fuel system: Check for leaks              |   |                 |                   |
| Power steering: Check fluid               |   |                 |                   |
| Brakes: Check rotor and pad wear          |   |                 |                   |
| Brakes: Inspect all lines and hardware    |   |                 |                   |
| Clutch: Check play and pedal position     |   |                 |                   |
| Throttle: Test operation                  |   |                 |                   |
| Steering: Inspect bellows for leaks/tears |   |                 |                   |
| Tie rods: Check play and dust covers      |   |                 |                   |
| Axle joints: Check play; dust bellows     |   |                 |                   |
| Drive shafts: Check play; boots           |   |                 |                   |
| Exhaust system; leaks, looseness, hangers |   |                 |                   |
| Tires: Condition; inflation pressure      |   |                 |                   |
| Locks & latches; check tightness/function |   |                 |                   |
| Seat belts; tightness & function          |   |                 |                   |
| Lighting; Check operation                 |   |                 |                   |
| Wipers & Washers: Wipers blades & fluid   |   |                 |                   |
| Electrical including warning lights       |   |                 |                   |

## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Test Drive

Maintenance Date \_\_\_\_\_

Mileage \_\_\_\_\_

| Test                                       | √ | Problems noted? | Corrective Action |
|--------------------------------------------|---|-----------------|-------------------|
| Remote control                             |   |                 |                   |
| Seat controls and operation                |   |                 |                   |
| Foot and parking brake                     |   |                 |                   |
| Engine performance                         |   |                 |                   |
| Clutch travel and operation                |   |                 |                   |
| Steering                                   |   |                 |                   |
| Park Assist                                |   |                 |                   |
| Speed control                              |   |                 |                   |
| PSM switch operation                       |   |                 |                   |
| Heating system and controls                |   |                 |                   |
| AC system and controls                     |   |                 |                   |
| All instruments and warning lights         |   |                 |                   |
|                                            |   |                 |                   |
| <b>After test drive</b>                    |   |                 |                   |
| Check all fluid levels                     |   |                 |                   |
| Check for fluid leaks                      |   |                 |                   |
| Make final adjustments to all fluid levels |   |                 |                   |

## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Safety

- Work safely.
- Wear protective clothing and wrap around eye protection designed and approved for shop use.
- Never work alone.

### Cooling System Cautions:

Never open the cooling system when it is hot.

Before adding coolant, test specific gravity. For temperate climates, a 50/50 mix of pure antifreeze and demineralized or distilled water is ideal, and provides freeze protection to -34 degrees F.

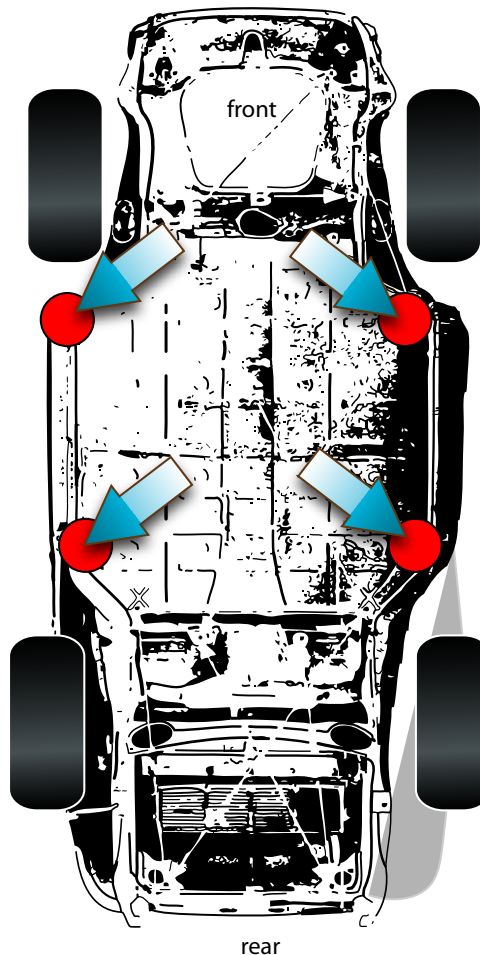
Antifreeze concentrations above 60 percent reduce heat transfer efficiency and can cause assorted cooling system problems.

### Lifting the Vehicle

never work  
beneath  
any vehicle while  
alone

main chassis  
mount  
lift points

always support  
the vehicle  
with approved  
jack stands

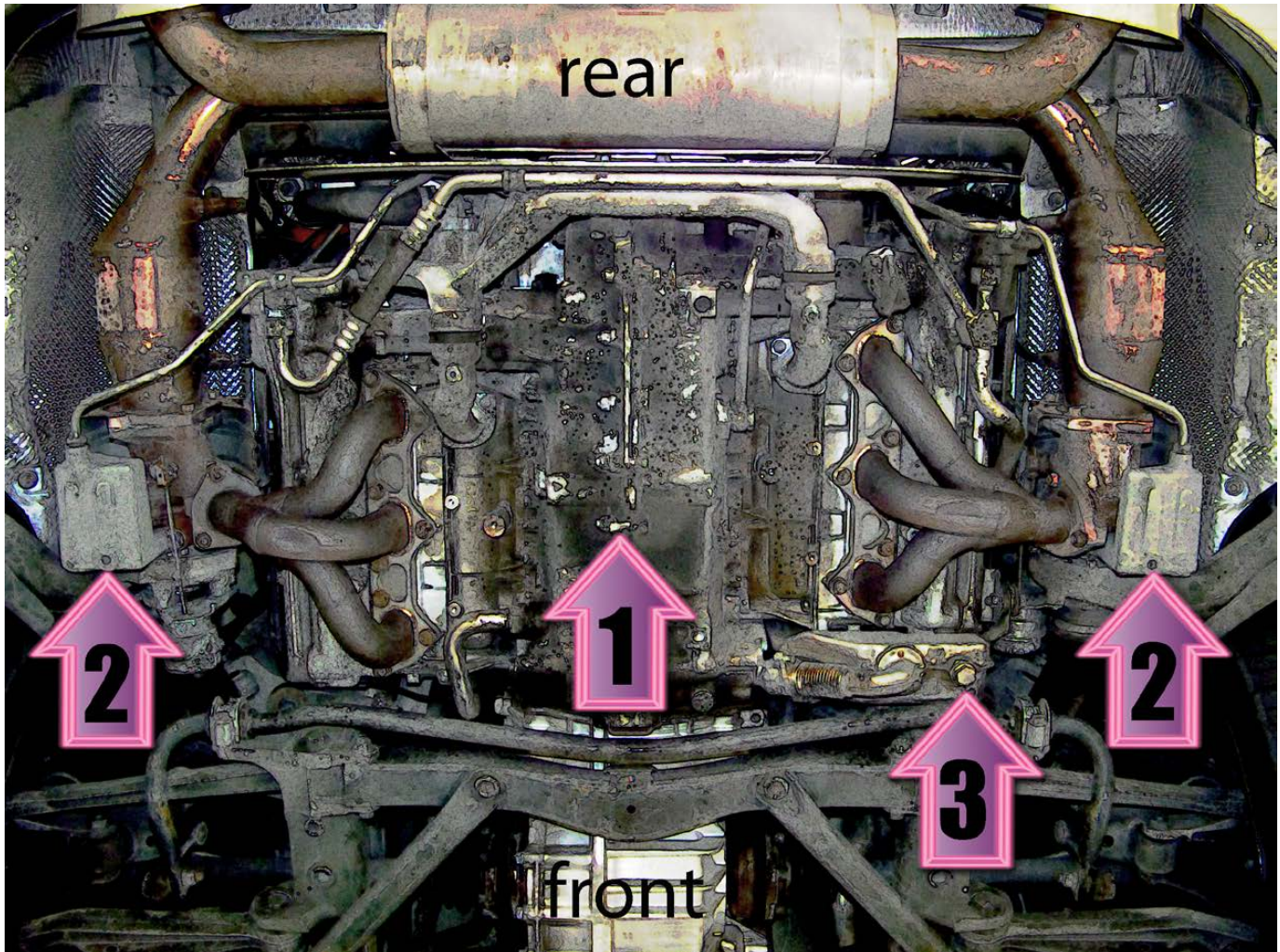


Improperly lifting the vehicle can result in personal injury and vehicle damage.

Position your jack head, jack stands, or vehicle lift pads **ONLY** at the factory approved lift points.



## Porsche 996 Turbo (2000-2005) Minor Maintenance



### Oil Change Service - Step 1

The engine has four engine oil drain plugs. This undercar view shows the locations of:

- 1) The main engine drain
- 2) Two turbocharger oil collector drains
- 3) The oil container drain plug



## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Oil Change Service - Step 2

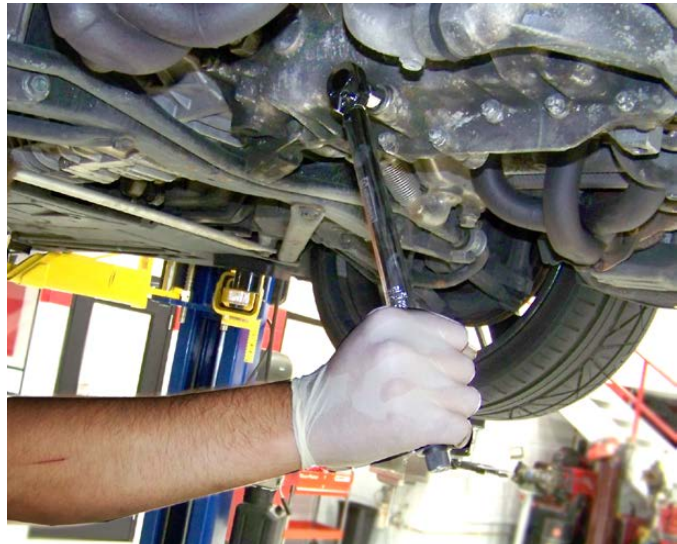
Using a 15mm wrench, loosen and remove the **main engine drain plug** (see map page 6 for location).



### Oil Change Service - Step 3

Discard the old drain plug washer and install the new drain plug washer from the service kit on the drain plug.

After the oil has drained completely, reinstall the drain plug and torque it to 70Nm (52 ft-lb).



### Oil Change Service - Step 4

Using an 8mm hex, loosen and remove the two drain plugs located in the turbo oil collectors (see map page 6 for location).





## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Oil Change Service - Step 5

If the drain plug sealing washer does not come off with the drain plug, take a pick or other sharp tool and dig out the old washer. Look carefully at the hole; the washer may be jammed in so tightly that it looks like part of the housing.

Repeat this process at both turbo oil collectors (see map page 6 for location).



### Oil Change Service - Step 6

Install a fresh washer on each of the two turbo container drain plugs. After all the oil has drained, reinstall the drain plugs and torque them to 30 Nm (22 ft-lb).



### Oil Change Service - Step 7

Remove the drain plug from the oil container (see map on page 6 for location).

Hold the 27mm hex on the container with a backing wrench as you loosen the drain plug with a 19 mm wrench.

Replace the copper sealing ring on the drain plug. After the oil has drained, reinstall the plug and torque it to 60Nm (44 ft-lb).



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### Oil Change Service - Step 8

Move to the engine compartment.

Remove the oil filter housing cover using a suitable oil filter wrench (ES1355436).

Lift the cover and filter out and away from the filter housing in the engine.



### Oil Change Service - Step 9

Use a fluid tool to suction the remaining dirty oil from the filter cavity.



### Oil Change Service - Step 10

Clean the oil filter cap assembly and install a new green sealing ring.

Slide the filter onto the filter cap stalk. The filter is symmetrical; there is no top or bottom orientation.

Make sure the small o-ring at the base of the stalk is in place and that it is not damaged or torn. Lube it lightly with a few drops of fresh engine oil.





## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Oil Change Service - Step 11

Insert the filter cap/cartridge assembly into the engine filter housing. Screw it down by hand until you are sure the threads are properly aligned.



### Oil Change Service - Step 12

Using the correct oil filter tool (ES1355436), tighten the filter cap and torque it to 25 Nm (19 ft-lb).



### Oil Change Service - Step 13

Slowly add 7.8 liters (8.25 quarts) of engine oil at the fill neck. Do not add the oil too quickly.

We've hung the funnel (ES1899403) from a simple wire hanger for convenience. You may want to improvise a similar setup so you don't have to hold the funnel as all 8 quarts are added.



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### Oil Change Service - Step 14

Start the engine and let it warm. Check for leaks.

There is no dipstick. Oil level is measured by a sensor, and displayed on the driver information panel in the dash, below the speedometer.

To properly check the engine oil level, the car must be on a level surface with the engine warm and idling.

Use the stalk on the left side of the steering column to navigate to the “oil” display, and select it.

Then select “Start Measurement” from the display.



### Oil Change Service - Step 15

If the engine oil is too cold for an accurate measurement, you'll be asked to run the engine until it gets warm.



### Oil Change Service - Step 16

When the engine is warm enough, the measurement “in progress” display will count down as it detects the oil level.





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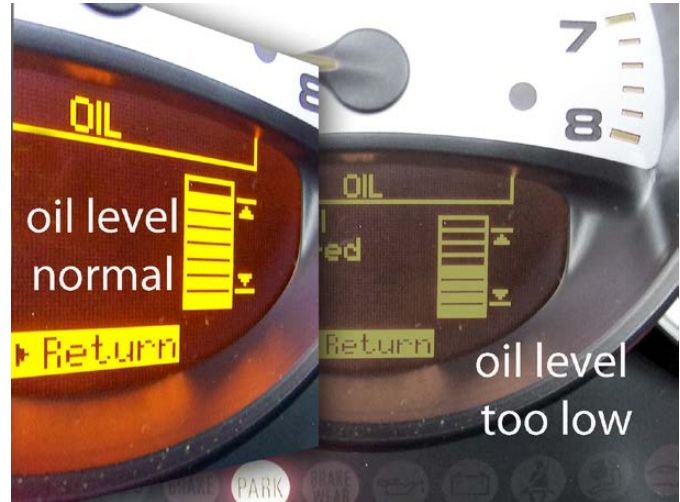
### Oil Change Service - Step 17

When the oil level is correct, all bars between the MIN and MAX levels will be solid yellow (left image).

For comparison, the image on the right shows a low oil level.

The MIN and MAX levels represent a measurement range of 1.5 liters.

If the oil level is too low, add oil slowly until all bars are yellow.



### changing the engine air filter



### Air Filter Service - Step 1

The air filter should be replaced at 15,000 mile intervals, although more frequent filter changes are warranted when the vehicle is driven in conditions that may clog the filter more quickly.

Replacing the air filter is straightforward, requiring nothing more than simple hand tools.

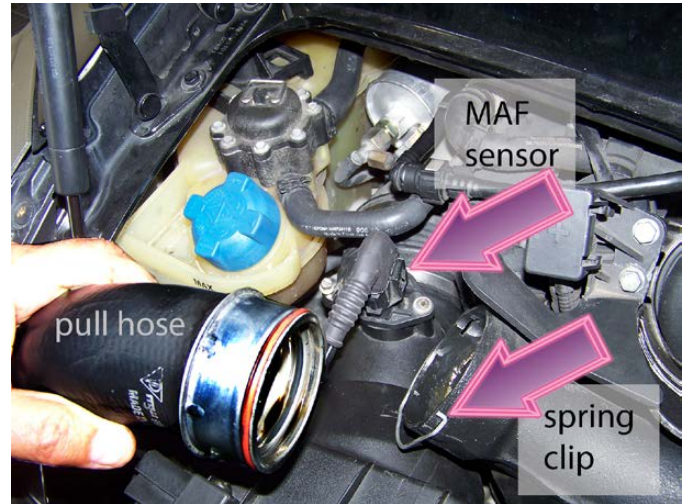
Start by removing the filter housing bolt located next to the rear hatch lid latch mechanism.



## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Air Filter Service - Step 2

- Release the large spring clip at the turbo hose located on the left side of the engine.
- Disconnect the hose and pull it to the left to provide access to the air filter housing hose clamp and Mass Air Flow sensor (MAF) electrical connector.



### Air Filter Service - Step 3

Loosen the hose clamp connecting the air inlet hose to the filter housing (below the coolant bottle, arrow).

Disconnect the Mass Air Flow sensor (MAF) electrical connector and release the MAF wiring harness from the support clip located on the left side of the air filter housing.



### Air Filter Service - Step 4

Rotate the right side of the air filter housing upward, and pull it from the air inlet hose.

Remove the filter housing from the car.

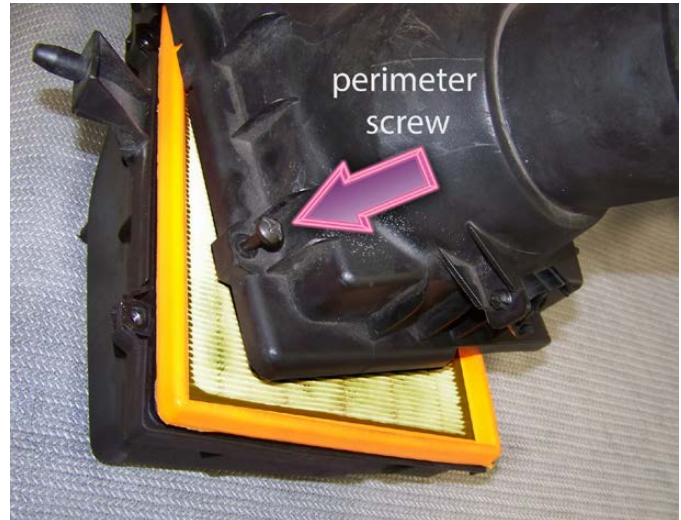




## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Air Filter Service - Step 5

- Remove the nine perimeter screws holding the air filter housing halves together, and open the housing.
- Remove the old filter.
- Clean the housing and insert the new filter element.
- Reassemble the housing halves and hand tighten the perimeter screws.



### Air Filter Service - Step 6

Before reinstalling the air filter housing, perform a thorough accessory belt inspection while the belts are exposed.

Check the belts for signs of damage, side abrasion, glazing, excessive cracking, pilling, and looseness.



### Air Filter Service - Step 7

Reverse the previous steps to reinstall the air filter housing.

Reconnect the air hose to the filter housing; plug in the MAF electrical connector and secure its wiring in the air filter bracket.

You should hear an audible click when the MAF connector (arrow) locking tab snaps in place.





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### Air Filter Service - Step 8

Align the two locator pins at the base of the air filter housing with the body holes beneath them.

With the filter housing seated correctly, replace the filter retaining bolt and tightening it to (10 Nm/7.5 ft-lb).

With the filter housing in place, tighten the filter housing hose clamp loosened in Step 3.



### changing the cabin air filter

### Cabin Filter Service - Step 1

The cabin filter cleans outside air before it enters the heating and air conditioning system. A severely clogged cabin filter reduces HVAC performance by limiting system air flow.

The cabin filter is located in the right cowl area, just ahead of the windshield.

- To replace it, start by raising the trunk lid.
- Remove the plastic battery cover.



## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Cabin Filter Service - Step 2

Using a Philips screwdriver, remove the access panel retainer screw.



### Cabin Filter Service - Step 3

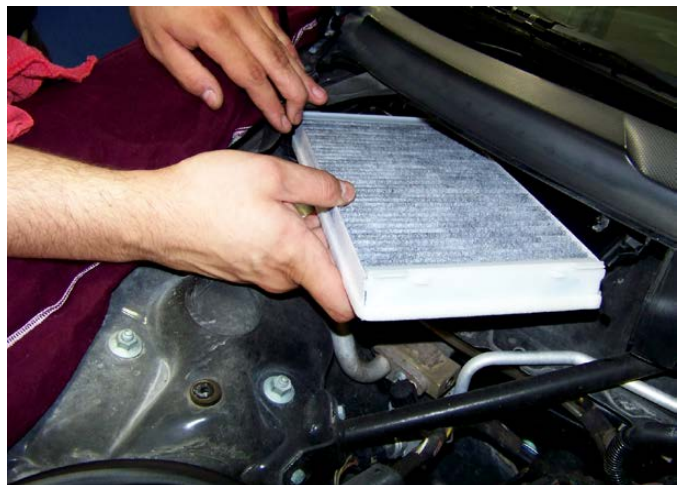
Lift up on the old filter and remove it. Try not to let loose debris or dust fall into the air inlet as you remove the old filter.



### Cabin Filter Service - Step 4

Slide the new filter element in place. Make sure it fits securely inside the filter retainer on all sides.

Replace the filter and battery covers to complete the cabin filter replacement.



## Porsche 996 Turbo (2000-2005) Minor Maintenance

### Vital Statistics:

**Engine Oil Capacity:** with oil filter change 8 liters  
without oil filter change: 7.8 liters  
ECS Tuning Part Number: ES2499526

**Cooling System Capacity:** 7.53 U.S gallons (28.5 liters)  
ECS Tuning Part Number: ES2166164

**Power Steering Fluid:** Pentosin Hydraulic fluid CHF 11 S®  
ECS Tuning Part Number: ES1801

**Brake Fluid:** Porsche Brake Fluid  
ECS Tuning Part Number: ES1353219

