Workshop manual for removing and installing rear spoiler and pump unit Porsche 997 Turbo

3-different possibility to remove the upper spoiler part!
- 1 + 2 with drive module intact or half function + (2)emergency release . PAG. 2
- 3 if drive module is faulty. For this procedure Instructions you need a circlips pliers( nose external type snap ring pliers) and a buffed key off nr. 12 with max. 4 mm thickness to remove the hydraulic lines from the rams. PAG.7

CAUTION:
Protect your cold engine with plastic or tissue!
Put tape around the hook wrench to avoid scratch on the paint from the car.

Different tools that you need for removing the spoiler:

- Special hook wrench and the buffed key off nr. 12, both included with my workshop manual.
- second key off nr 12.
- A few quick-release straps
- Torx bits TX10, TX 30, TX 40, holder with extension of +- 10 cm.
- Socket wrench of 10, and the ratchet wrench with extension .
- Circlips pliers( nose external type snap ring pliers)
- small screwdriver of 3 mm thickness or nail.
Removing rear spoiler

**Note:** The spoiler can only be removed easy from the rear lid when the extension elements are extended. (spoiler up) otherwise follow the manual on page 7

1. Extending the spoiler max. with the switch in the car.

2. Pull spoiler upwards with hand if not enough place between rear lid and spoiler -...

3. Push two support pads approx. 60 mm high on the right and left between the rear lid and the spoiler or towels. Note: use suitable packaging material (e.g. styropore pad, cardboard) as a support pad.

4. Insert the top off the hook wrench and turned clockwise to align the bore in the extern tube together wit intern bore(5).
6. Insert hook wrench into the bores and turned clockwise 3 turns around.

7. Remove the two support pads or towels.

Note: there rest about + - 3 cm between lid and spoiler to continue turned with the hook wrench in clockwise direction.

CAUTION: If not enough place between rear lid and spoiler to continue remove rear lid you insert the support pads and take the cylinders with wear gloves during emergency release when you continue turned with the hook wrench for remove the rear lid.

The spoiler must be held tightly by an assistant. During emergency release, the extension element retracts suddenly!

Before release, cover off the painted areas of the lid near the extension elements with adhesive tape in

→ I prefer in this case to follow the instruction on page 6 for easy removal rear lid !!!!!

8. Continue turned with the hook wrench in clockwise direction to remove the rear lid.
Removing hydraulic cylinders and pump unit:

1. Remove air guide: Push the inner plastic part out with the small screwdriver of 3 mm thickness or nail and find this inner part back for further mounting

2. disconnect plug connection on fan

3. remove wiring from holder.

4. unscrew fastening screws fan and remove fan.

5. unscrew fastening screws from hydraulic cylinder with micro switch to rear lid and remove.

6. Remove plastic cover from micros switch holder and unscrew fastening screws TORX BIT TX10 on the hydraulic cylinder.
7. Remove micro switch holder and then remove de left hydraulic cylinder from rear lid

8. Unscrew the 4 fastening screws from pump unit and remove pump. Disconnect plug connection on pump and protect with adhesive tape the connectors.

9. Installing fan with fan housing. Attach with plastic strip the micro switch holder to fan housing.

10. Install the air guide with inner plastic part.

No you can drive with the car until your mechanism is repair. For a good repair service we need all the mechanism for a checkup and filling the oil without air bubbles. Disconnects oil lines from the rams with the buffed key off nr. 12 and remove remaining oil from the mechanism. Be careful with the lines when you package the mechanism to send us for the repair service. Mention the content as hydraulic mechanism that need to repair. Listed my email and phone number on the documents for shipment.
Remove instructions for the spoiler in case of malfunctions in the pump unit and when the mechanism has to be repair.

1. Bring the spoiler down manually using the rocker switch with the ignition on, if spoiler stay up don’t panic you can continuous to follow the instruction:

2. Remove plastic caps from the hydraulic rams.

Disconnects oil lines from the rams with the buffed key off nr. 12 and trapping oil on.(if spoiler total out do it in several steps on left and right ram to prevent damage to hydraulic rams and spoiler fastening)
4. Remove circlip with circlips pliers left and right side (nose external type snap ring pliers) don’t open to much the circlips.

5. Remove spring ring.

6. Remove air guide: Push the inner plastic part out with the small screwdriver of 3 mm thickness or nail and find this inner part back for further mounting.

   6.1 Unscrew a few turns the screws that fastening the 2 rams on the rear lid don’t remove them. Close the rear lid.

7. Pull spoiler upwards with hand, the inner parts of the hydraulic cylinder’s coming with the spoiler out.
8. Place the spoiler upside down on cardboard or bath towel.

9. Insert the top off the hook wrench and turned anti-clockwise to align the bore in the extern tube together with intern bore(10).

10.Insert hook wrench into the bores and turned anti-clockwise until the cylinder is unscrews.
15. Assembling the inner parts from the hydraulic rams with the extern part. Don’t lose any parts.

12. Unscrew fastening screws from hydraulic cylinder with micro switch to rear lid and remove. Remove plastic cover from micro switch holder.

13. Unscrew fastening screws TORX BIT TX10 on the hydraulic cylinder.

14. Remove micro switch holder and then remove de left hydraulic cylinder from rear lid.

15.
Removing pump unit:

1. disconnect plug connection on fan
2. remove wiring from holder
3. unscrew fastening screws fan and remove fan.
4. Unscrew the 4 fastening screws from pump unit and remove pump. Disconnect plug connection on pump and protect with adhesive tape the connectors.

**CAUTION!!!**: don’t remove this circlips on the top off the hydraulic cylinders, there is a big spring inside with many pressure!!
5. Installing fan with fan housing. Attach with plastic strip the micro switch holder to fan housing.

6. Install the air guide with inner plastic part.

No you can drive with the car until your mechanism is repair.

For a good repair service we need all the mechanism for a checkup and filling the oil without air bubbles. Disconnects oil lines from the rams with the buffed key off nr. 12 and remove remaining oil from the mechanism.

Be careful with the lines when you package the mechanism to send us for the repair service.

Mention the content as hydraulic mechanism that need to repair. Listed my email and phone number on the documents for shipment.
Installing rear spoiler:

After the repair service the rams are extended for a easy installing.

1. Check the bores on both extension elements.
2. Installing the pump and the rams on the rear lid but don’t full tighten the ram screws on the rear lid !!!
3. Put spoiler,
4. Insert hook wrench, then turn anti-clockwise, lock spoiler on both sides. Cover off bore of closure peg –1– by gently turning the outer tube. Otherwise dirt and water coming in the rams and you lose your warranty.
5. No you can tighten the 3 screws on the rams for the good alignment.

We fix almost every fail on the Porsche 996-997 turbo spoiler mechanism. We are not responsible for damage on the car or fiscal accidents when you follow our manual for dismantling the rear spoiler.

Do not doubt to contact me for support online.

Workshop manual for removing and installing rear spoiler and pump unit Porsche 996 – 997 Turbo is available in different language.

Send me a e-mail and I will send the manual free in pdf.

**Caution:** when you receive the mechanism don’t unscrew hydraulic lines from the mechanism. Oil will leaking and your mechanism will be out of balance.

During the installing you can twist the connectors with hand on the bottom of the rams to bring hydraulic lines in good position.
Specialized in repair the spoiler hydraulic mechanism from a Porsche 996-997 turbo with min. 5 years warranty.

We have redesigned the inner parts together with one of the biggest industrial service of the world and world leader in Sealing technology.
We guaranty you better than original parts with longer lifetime.

We change broken parts with better manufactured as genuine.
Every mechanism is controlled on pressure before return for good function.

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