

Fitting a new headlight washer pump on a Land Rover Discovery 3

TIME NEEDED: 1.5 HOURS

TOOLS NEEDED:

- Philips head screwdriver and/or Philips head ratchet
- 8mm socket and ratchet
- Plastic rivet remover or trim removal tool
- Flat head screwdriver
- TX20 screwdriver
- Bucket and funnel
- Worklight
- Grease
- Cleaning materials - cloth, brush, etc

PARTS NEEDED:

- New headlight washer pump.
- Useful to have a few new plastic push rivets and some yellow nipple fittings in case of breakage or damage.

Park your disco on a clean level surface and turn the steering wheel all the way to the left. This will give you enough clearance to access the washer reservoir. There is no need to jack and support the vehicle nor do you need to remove the wheel but if you would like more room to work please feel free to do so.

CHECK THAT IT IS THE PUMP THAT NEEDS REPLACING!

- A. Check the fuse - F37 (30A)
- B. Check the relay - R12
- C. Is there sufficient fluid in the reservoir to activate the headlight wash?



Removal

1. Remove the plastic radiator cover.
2. Remove the left headlight.
3. Unscrew and remove the front left mud flap. There are two Philips head screws inside the wheel arch and one under the mud flap. The two inside the wheel arch have 8mm hex heads, so better to use a socket.



4. Undo the Philips head screw inside the headlight compartment.



5. Undo the Philips head screw underneath the front left of the bumper.



6. Remove the 5 plastic rivets just under the rim of the wheel arch.



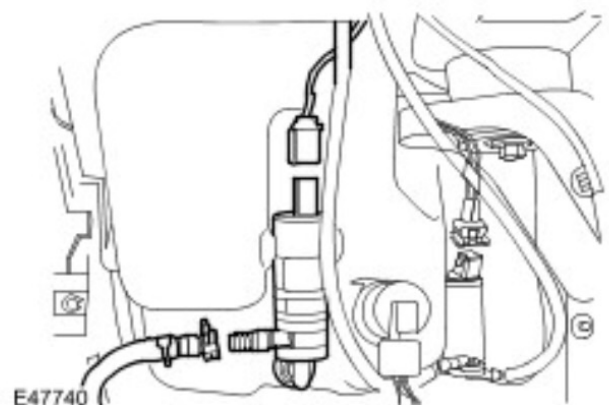
7. Starting at the rear of the front left wheel arch trim, pull outwards. This trim is held on by the yellow push nipples. Follow the trim around until you get to the front corner of the trim. This has a large plastic paddle that slots into the front bumper. You will need to angle the trim to remove this last fitting.



8. Now remove the front 2 plastic rivets in the wheel arch liner. One in the front of the wheel arch, one directly above the tyre.
9. Using the flat head screwdriver pry out the bottom front of the wheel arch liner from the bumper and pull it back as far as you can ensuring you have removed sufficient plastic push rivets.



10. You should now be able to see the washer reservoir and both pumps. The pump on the left is the headlight washer pump, in the middle is the low level sensor and the pump on the right is for the front and rear screens.



11. Get your bucket and funnel ready. Push down on the plastic hose lock on the pump, remove the hose from the pump and then allow the reservoir to empty.



12. Once it is empty remove the electrical push fitting from the top of the pump. The push lock for this electrical fitting is on the opposite side from where you can see so you need to feel for it. If you have problems remove the pump first then remove the electrical push fitting.



13. Carefully pull the pump and the seal out of the reservoir. The pump is held into the reservoir on either side of the white body. Have your bucket underneath as more fluid will come out at this point. If you were trying to save your washer fluid from the first drain to use again, use a different bucket at this point as this drain will be dirty.



AT THIS POINT IT IS WORTH CHECKING THE HEADLIGHT WASHER FITTINGS

1. Remove both front fog lights;
 - A. Pull off the trim.
 - B. Undo the three TX20 screws on each fog light.
 - C. Check the hose fittings are secure for the headlight washers.
 - D. Replace both fog lights and trims.

Now is a good time to clean everywhere you can access, especially inside the wheel arch liner and the mud flap area.

Replacement

1. Push in the new seal.
2. Carefully push in the new pump.
3. Connect the wiring.
4. Connect the hose and push up on the hose lock.

Testing

- I. Refill the water reservoir - check for leaks.
- II. Pop the headlight back in place and reconnect the wiring (It will be coming off again in a moment though).
- III. Start the disco.

- IV. Turn on the headlights and then use the washer button. The first wash cycle should include the headlights and then it only washes the headlights every 5th wash cycle - but not within 10 minutes of the first wash. If the reservoir fluid level becomes too low then the headlight wash function is suspended to preserve washer fluid.
- V. If your test is successful turn off the disco, remove the headlight again and carry on with replacement.

Replacement Cont.

5. Push the wheel arch liner back into position, using the flat head screwdriver to ensure it is tucked in properly at the front.
6. Replace the 2 plastic push rivets.
7. Replace the wheel arch trim starting at the front bottom with the plastic paddle. Push quite hard on each yellow nipple until you hear it click in place.
8. Replace all 5 plastic push rivets on the wheel arch trim.
9. Grease and replace Philips head screw under front left of bumper.
10. Grease and replace Philips head screw Inside headlight compartment.
11. Put mudflap back in position and grease and replace the three Philips head screws (2 inside wheel arch and 1 underneath).
12. You are now going to replace your headlight but if you found it difficult to remove now is a good time to clean and grease the slide locks.
13. Replace plastic radiator cover.

Job Done!