

Replacing Headlight Assembly Volvo V70XC 2000 – 20?? - Alan Yeo 2008

If you have the misfortune to break the headlight glass on a V70 XC (2000 onwards model) then to change it you have to virtually remove the nose cone of the vehicle. (see picture 1 below) Who ever at Volvo designed this should be shot, as it is fairly obvious when you finally remove it that with just a little more thought it could have been made easily removable without all this effort. (and maybe on later models it is). However my job was to replace the headlight assembly on a 2001 XC, and the hard fact is that you do have to virtually remove the nose cone. So if you haven't done it before, set aside around two hours for the job, I'm fairly certain that once you know what you're doing you could cut that time in half, and maybe the following pictures and instructions will help.

One final point worth making is that if you undertake this task you will discover as I did that that nice chunky tough looking front end of the V70 XC is actually more akin, and has about the same structural strength as a yogurt pot held on with about a dozen plastic pins. Be very careful of that nose cone; do not be tempted to drive through any off-road brush thicker than grass, and I suspect the high speed impact of an average pheasant will probably blow the nose cone off. (that was pheasant not peasant)



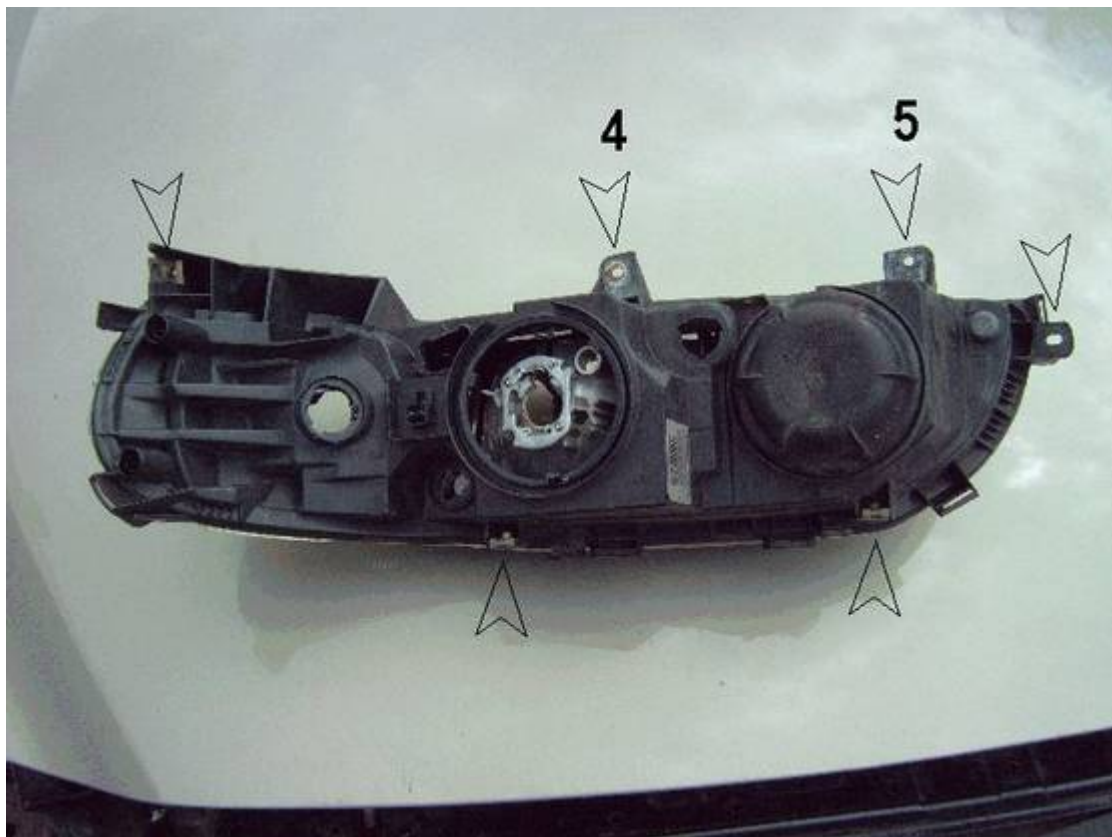
Figure 1. (This is what the front of your XC will look like when you are half way 😊)

What Tools are required?

Not many: 8mm Socket, 10mm Socket, 13mm Socket (make sure the 10mm is a slim line one), a 2" and 4" socket extension bar, small flat screwdriver, T20? (maybe T27) TORX bit, pair of Pliers, and a small can of spray lubricant (as I certainly found a few fixings that required a bit of easing or needed a bit of lubrication on re-assembly to hold the corrosion at bay)

Info

The following is informational only but will give you an idea of where the six (6) bolts that secure the headlight are located (4 & 5 arrowed actually hold the headlight wiper motor on to the headlight, but they have to come off as well)



NB. The following instructions are for a car fitted with standard halogen H7 bulbs. I understand that the XENON headlights are slightly different, so you may have to do an extra bit of peeking around to see if the electrical or securing connections are different. Also if you are working on a later than 2001 model, its just faintly possible that they have improved things, so it would pay to run through the following comparing with what you can see on your vehicle before blasting in. If you find any differences “post them somewhere!” for other people.

OK lets get started!

Step 1

Locate the single TORX head screw on the inside of the front wheel arch (1). The picture shows the head with the Nose Cone removed. Unscrew the TORX head about 5mm $\frac{1}{4}$ "", and then tap it forward. As you can see in the picture this will actually push forward the large plastic wedge (2) that pulls back against the nose cone to secure it. Repeat this on both sides.



TORX head screw

Step 2.

With the bonnet open locate the 6 push dot fixings along the top of the nose cone in front of the radiator. To release then take a small screwdriver and push gently on the centre dot until it depresses about 2mm, $\frac{1}{8}$ ". With the same small screwdriver lift gently under the outside edge of the fixing and it should just lift out. Do it gently as they are just plastic and may be brittle, and you don't want to have to go to a Volvo dealer just to replace these. There are a further 4 of these fixings, two on each side, on the bottom edge of the nose cone if you look from below. (odd's are some will be missing from the bottom as if you so much as touch a curb with the nose cone I think the bottom ones sheer)



Releasing the push dot fixings



Push dot fixings on lower edge (1 missing)

At this point you may as well reset these fixings so that they are ready to refit later. Just push the centre spike back up through the fixing so that the head protrudes about 5mm, ¼” as shown in the picture



Push dot fixing reset ready to re-fit.

Step 3.

Removing the headlight wiper arms. Swing back the little cover at the end of the wiper arm and undo the 8mm nut. After removing the nut, the shaft end looked fairly corroded so I applied a spot of light lubricant to the thread and let it soak for a couple of min's. The arm is on a taper on the shaft and you need to pull it off, I found the only way was to grip (don't crush) with a pair of pliers and pull firmly and jiggle and they came off.

There is a washer tube that is connected to the wiper arm, which disappears through a nose cone filler plate. Pull gentle on the hose until a little plastic joint appears, and then separate the pipe. You can now remove the wiper arm, and with a broad flat screwdriver remove the plastic filler plate. I found just lifting gently on the front edge they popped out. When you remove the filler plate make a note of the routing of the washer tube, when you come to re-assembly you need to make sure that the ends of the tubes are poked back out through the nose cone so that you can reconnect them.



Pulling off wiper arm



Wiper arm and removed filler plate (note pipe joint next to motor shaft)



When re-assembling ensure washer pipe is pushed through nose cone

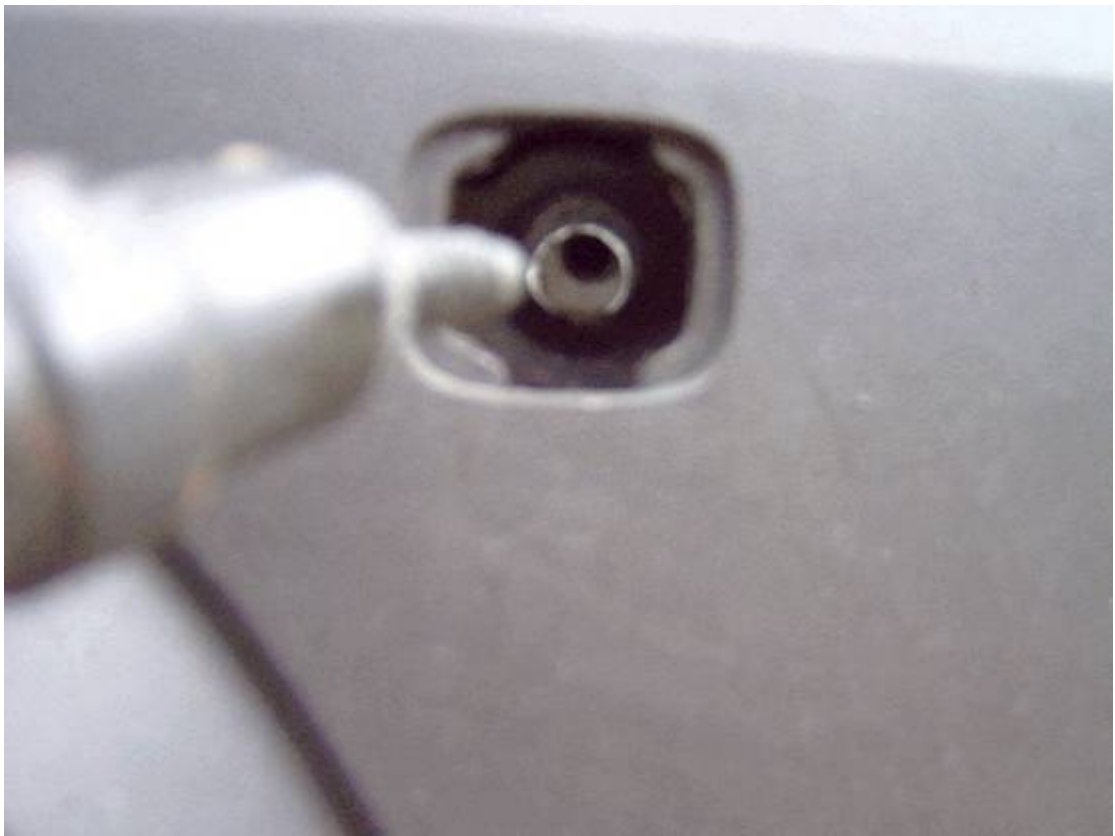
Step 4.

Nose Cone securing bolts. There are only two of these and they are located behind small plastic cover plates in the nose cone, which can be popped out with a small flat screw driver. Behind the cover plate is a 13mm bolt head, use a socket with a short extension to reach the head. Again mine were slightly corroded and I used an impact driver in reverse to loosen them. (They would probably have come loose with the ratchet handle, but once you get use to having a small impact driver around you use it for everything).

Note in the second picture that upon re-assembly the hole in the nose cone and the threaded insert were not quite aligned, and I found I had to use a little bottle jack to gently lift the nose cone to get them aligned, as it was too awkward to try and lift the nose cone and refit the bolt with only two hands.



Securing bolt cover plate



Removing/Re-fitting securing bolt (note miss-alignment)

Step 5

OK you should now be ready to gently pull the nose cone away from the car. Ensure that the two TORX held slide clamps have pushed forward away from the wheel arches and gently pull the two edges out about 25mm, 1". You should then be able to grip the top of the nose cone and pull it away from the body. It's a bit fiddly and sticks and catches but without exerting real force it should come away. You don't need to completely pull it way (and you shouldn't try as the low level spot lights are still connected) just about as far as is shown in the first picture. You will find out in the following steps if it's far enough anyway.

Step 6

Finally we are going to start to unbolt the headlight.



Remove the 2 bolts indicated above.



Just below the outside of the headlight you will see a small square opening just big enough to slide in a slim line 10mm socket on about a 75mm, 3" extension. I would suggest either a magnetic socket or a blob of heavy grease inside the socket as when it is undone it can easily fall down inside the plastic housing below that contains the washer fluid and pumps. (If it does fall down! I found out with a bit of gentle banging on the housing that it will fall to the ground) One point here to remember for re-assembly, the bolt you have just removed has a captive washer; the captive washer is bigger than that square hole (another engineering masterpiece) so you can't put the bolt in a socket on the end of the extension and feed it back through the hole to re-fit it. I just switched it with one of the top fixing bolts that have smaller washers, but that will still do the job.

Next you want to find the bolt round next to the radiator. This is where you will find it if you have pulled the nose cone fare enough away to get at it.



Radiator end bolt

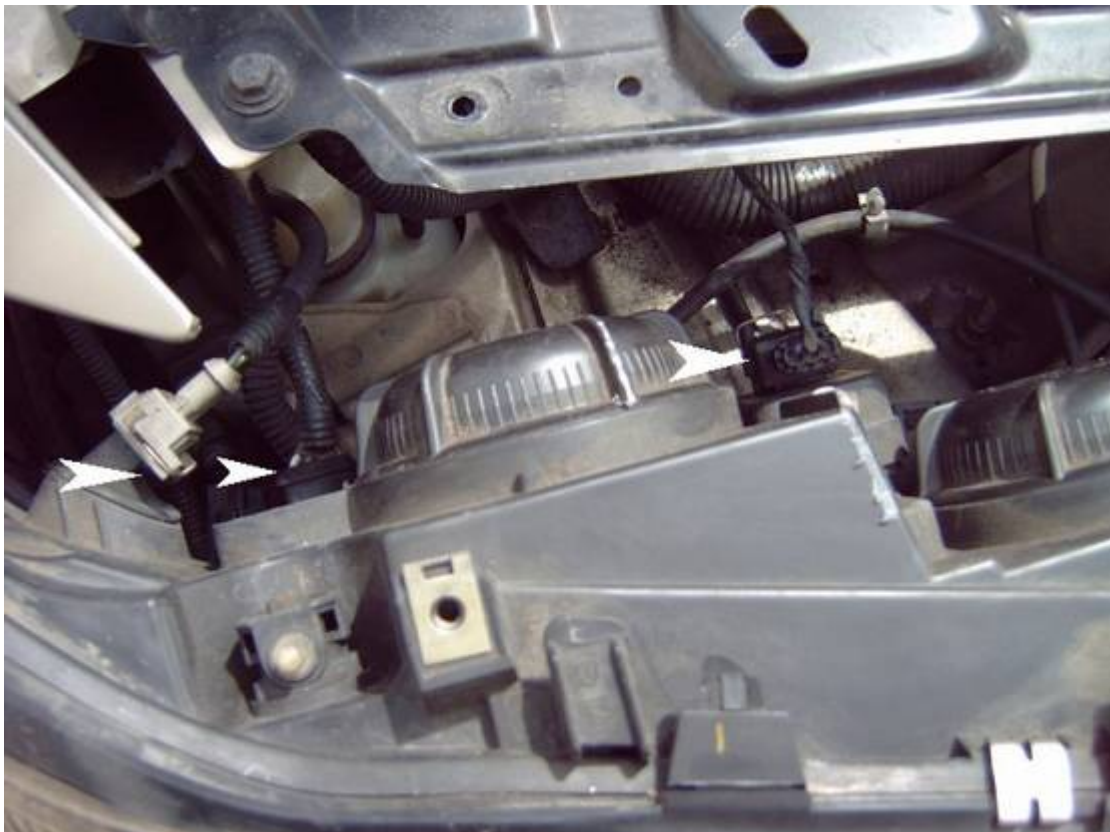


Wiper Motor fixing bolts (after they have been unscrewed)

Now you need to undo the two bolts that hold the wiper motor and the wiper arm bump stops to the headlight. You will need a 10mm socket and around a 75mm 3" extension to reach them. You can then remove the bump stop moulding, leave the wiper motor housing resting where it falls. Again I found that these bolts were slightly corroded on the threads and needed a bit of effort to undo, another thing to lubricate on re-assembly. The bolts actually go through the bump stop moulding, through the headlight brackets into tapped threads on the wiper motor housing. So on re-assembly you have three bits to juggle and not that much captive thread to screw into, so take care not to cross thread or over tighten and strip the thread. On the right hand unit the washer pipe exits through a hole in the wiper motor body, make sure that its still there on re-assembly.

It may be possible to remove the headlight without disconnecting the wiper motor, but I couldn't easily see the electrical connection for it, and also thought trying to feed the washer pipe back through on re-assembly might also be difficult, so didn't bother.

You should now be able to wiggle the headlight unit out 4 or 5 inches to get at the three (3) electrical connections. I found that the headlight swung free from the radiator end more easily, and then could be jiggled free from where it is slid inside the external body panel. It would be possible to disconnect the electrical connections before doing anything else, but I decided it would be easier when I could see what I was doing, and also how the fiddly little wire clips worked. The latter I never did work out, but just found that gripping them with a pair of pliers and wiggling them gently they sprang off and the connectors could be pulled off.



3 electrical connections

Wow Finished! NO - Hold on, certainly on the right hand side there is one more thing you need to do. If you look underneath the unit there is a washer pipe clipped to the bottom of the headlight. It looks as though you either find the end of the washer pipe, pull it off and feed the pipe through the clip, or leverage the clip out complete with pipe. I chose the latter as I had a spare clip on the replacement unit if it broke.



Underside headlight, clip shown on washer pipe, and also where fitted on replacement

OK Now Your Finished and the hole should look something like.....



Now in the words of all good manuals “Reverse the process” to re-fit the new unit.

A couple of hints:

Unless you found out how they were supposed to work, first re-fit the wire clips to the electrical plugs, then they will just snap back on when you present the new unit.

You will need to ease the new light unit into the outer panel end first, and fiddle it over the black plastic piece shown on left in above picture. Also take care not to mark the paintwork on the outer panel.

Refit washer hose to bottom of headlight before you push the headlight in too far.

If doing the right hand headlight, be careful when easing the headlight into the outside panel, there are three or four washer pipes and wiring loom pieces at that end that it is easy to trap unless you take care.

It was easier to get the headlight just about in position and loosely tighten all but the two bolts holding the wiper motor first, before refitting the wiper motor and tightening the bolts finally.

When refitting the nose cone I found it easier to ease it gently into place and just loosely tighten the TORX screws to hold it, then to start the two main securing bolts, then to tighten it all up and then lastly fit the push dot fasteners along the top and bottom edge. Don't forget to check those two headlight washer pipes are poking out through the nose cone before you secure it.

Be careful with any plastic fittings, clips, brackets etc. Most of it is plastic and cheap Ford plastic at that. It was all designed for easy production line assembly not to be disassembled and re-assembled a couple of years later when it has all gone brittle.