

Esprit SE, S4, S4s & GT3

If you've got an SE through to a GT3, then you've got a chargecooler (read more about it [here](#) before you start), which means you'll have a chargecooler pump, which pushes the water around the system, which in turn, cools the charge from the turbo allowing the engine to produce more power. The impeller, which is basically a propeller, that propels the water around, is made of a brittle plastic that lasts about 18,000 miles. In the picture above you can see what happens to it. The black circular piece on the left is the impellor and the broken black bits in the middle are what's left of the fins.



Contact us regarding this kit. Once this kit has been fitted your chargecooler system should be working, allowing your Esprit to perform as it should. See [here](#) to find out ways of how to check if your chargecooler is working. You don't want to be driving around with an underperforming Esprit, all for the sake of a little impellor.

WARNING: This job requires patience. Allow minimum of 4-6 hours

You will need the following parts:

Overhaul kit for chargecooler pump
petroleum jelly
engine oil
thread locking compound

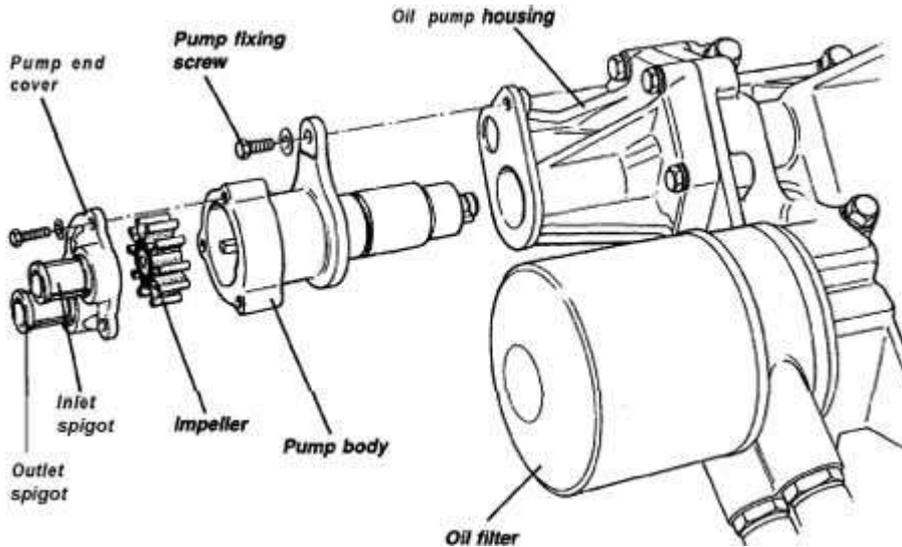
You will need the following tools:

Sockets & Spanners
Screwdrivers
Long Nose Pliers

Servicing the Chargecooler Pump

The rubber impeller of the chargecooler pump may be inspected and/or replaced as follows:

1. Drain the chargecooler system of coolant.
2. Remove the single screw securing the chargecooler pump to the oil pump housing, and withdraw the pump with the hoses attached.



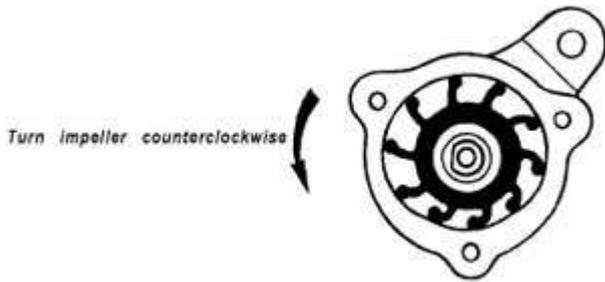
3 . Release the three screws and remove the pump end cover.

4 . If necessary, use long nose pliers to withdraw the impellor from the spindle taking care not to damage the housing inner surface or end face.



5 . Clean the mating faces of the pump body and end cover, removing ail traces of the old gasket, and ensure that the inside of the housing is thoroughly cleaned. Smear some petroleum jelly around the inside of the pump housing and on the shaft.

6 . Carefully fit the new impeller B91 OE6992F (either way round) onto the 'D' of the shaft and introduce into the housing whilst turning in a counterclockwise direction, so that the vanes of the impeller are trailing when the pump shaft rotates counterclockwise as viewed onto the impeller. See diagram.



CAUTION: Once the impeller has been installed, take care not to reverse the direction of shaft rotation, or damage to the impeller vanes may occur.

7 . Apply a thread locking compound to the three end cover fixing screws, smear some petroleum jelly around the end mating face of the pump body, and using a new gasket A91 OE701 OF, fit the end cover, tightening the screws to 2.4 - 2.7 Nm. **DO NOT OVERTIGHTEN.**

8 . Smear the chargecooler pump spigot 'O' ring with engine oil. Ensure that the oil pump end thrust spring is fitted into the end of the auxiliary shaft before inserting the pump into the housing and engaging the offset dog drive mechanism. if necessary, align the drive dog by turning the pump shaft only in the direction of the arrow on the end cover. Retain with the single fixing screw.

9 . Refill the system with the recommended coolant mix.

CAUTION: Never run the engine when the chargecooler system is drained. The pump impeller will be damaged if run dry.

Having now completed this job, there's a couple of tips that might be helpful to other people doing this job. The article above mentions using long nose pliers to remove the impeller, well mine was well and truly stuck. By trying to extract it with the pliers all I did was scratch the inside face. So I popped down to Lakeside Engineering, and Max simply put the part in the vice and knocked the shaft through! He also mentioned that a large amount of red rubber grease should be inserted between the water and oil seal, to help prevent the two liquids mixing during operation, by introducing another barrier.