Series 2.25 engine water pump replacement.

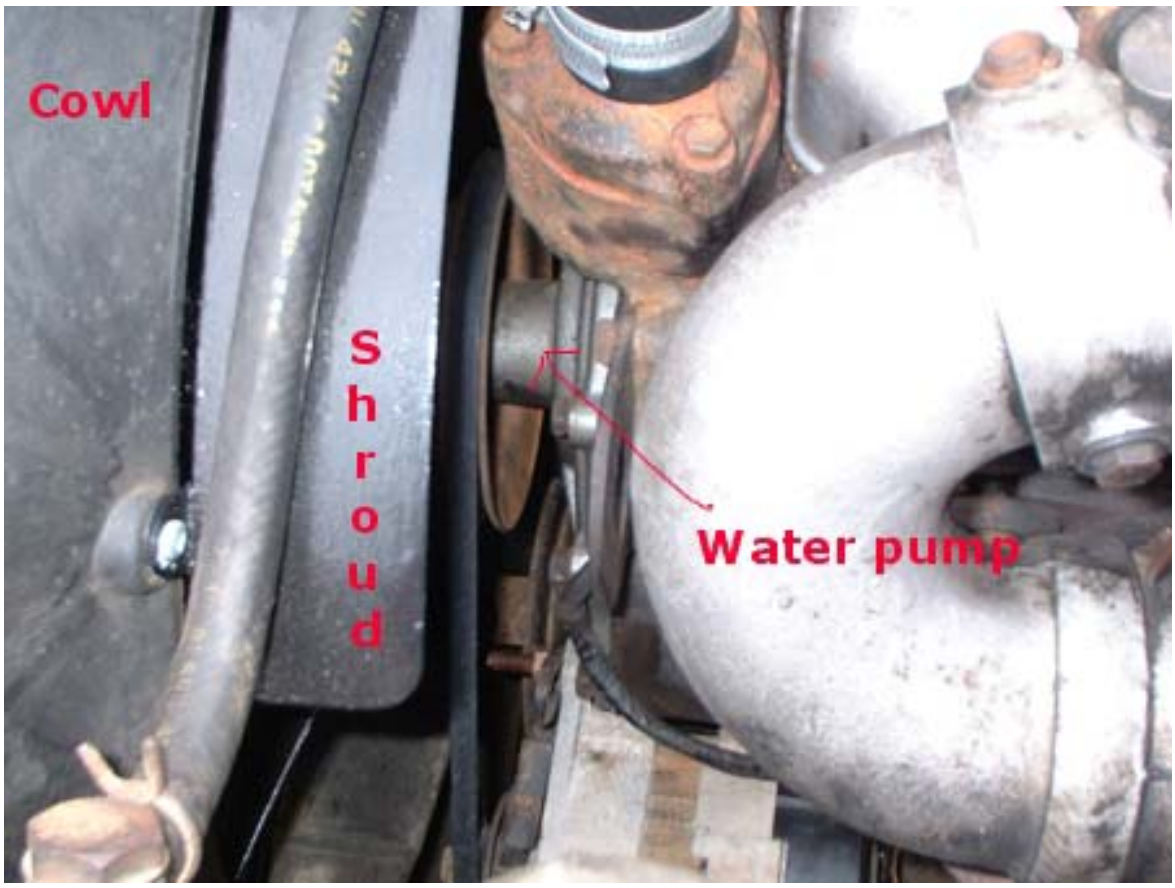
The most common cause for failure of the water pump fitted to the ubiquitous 2.25l Land Rover engine is over tightening the alternator/fan belt.

You may not notice much of a leak at first; quite often the leak starts out small, dripping from the bottom of the pump as the engine cools. It will get worse though.

You may also hear a rumble from the bearings in the water pump, and the fan will develop a wobble. Time to change the pump!!

This first photograph shows the radiator and shroud fitted to a 2.25 diesel

And now, a slightly closer view, which shows how awkward it can be to get at, and even see!



Not all models have the shroud and cowl fitted, and quite often, after removing them, they get left off.

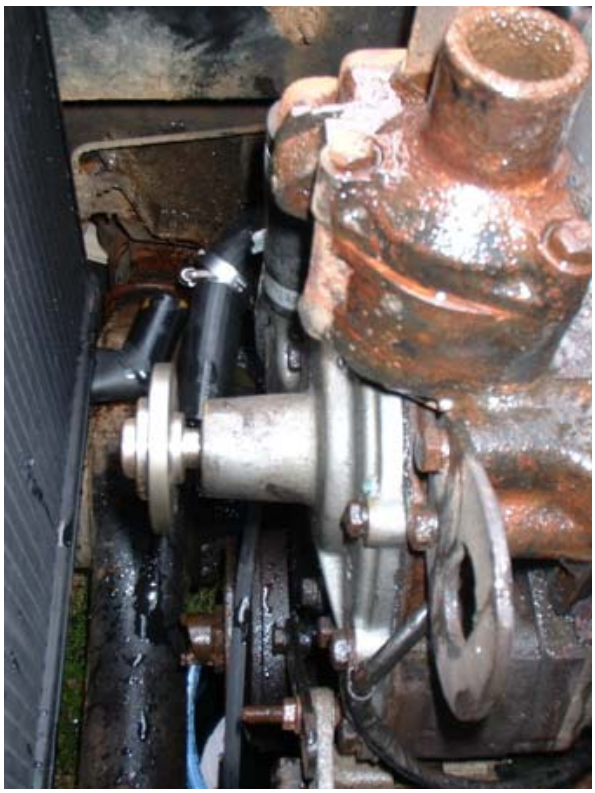
Firstly, disconnect the battery, and then loosen the fittings on the bottom of the alternator, prior to removing the fan/alternator belt. Then you must drain the coolant from the system. The original radiator may have a drain tap fitted to it which may simplify draining. You may wish to remove the bottom hose instead of risking breaking this tap if it is seized. The new replacement radiators don't seem to have a tap fitted, so in this instance as you can see in the photos I had to remove the bottom hose anyway. (Be aware, it's messy!) There is also a drain plug on the alternator side of the engine, which will facilitate drainage of the engine completely.

Having drained the system, remove the top hose (it simplifies access) and remove the metal part of the shroud.

Now that access is a bit easier (and having already loosened the two bolts under the alternator), loosen the top (adjustment) fitting and remove the fan/alternator belt. Then undo the screws holding the plastic cowl to the radiator and push it over the pump and fan assembly as in the next photo.

It isn’t necessary to remove the radiator to access the pump, now the cowl is pushed back you can get at the four bolts (3/4”) holding the fan and pulley assembly to the water pump body. Now you can remove the cowl from the engine bay. And you can also see why they get left off!

As you can see in the next photograph, the pump is now accessible and you can commence removing it.

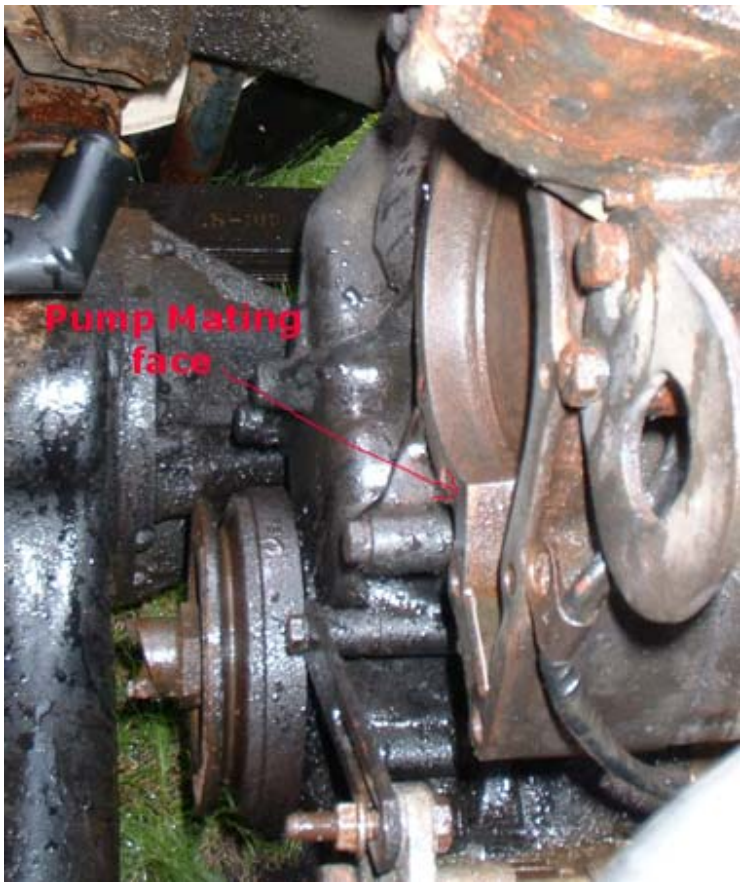


Undo the jubilee clips holding the bypass hose to the pump body and thermostat housing, and then start to remove the bolts holding the pump in position. Military water pumps have 7 bolts, and civilian ones have 9.

There are different sizes and lengths of bolts holding the pump to the engine, and the simplest way to remember where they go when you remove them is to place them in the corresponding holes in the new pump. Then you can put them in the old pump body once you are ready to fit the new one. I had an old pump lying around (as you do…)

and had the new one in the box ready to fit.

Once the pump is removed from the engine, clean the mating faces,



and apply a thin smear of gasket sealant (Hylomar, or Hermetite or similar) and then the gasket. Apply a film of sealant to the pump mating faces, and then fit into position. (You may find it easier to fit the bypass hose to the thermostat housing and slip the pump into it at this point. It's not easy to fit a new hose in there with the pump fitted.) Tighten the bolts.

Now it's a case of refitting all the parts you removed!! Don't forget to put the cowl back over the pump before fitting the fan and pulley assembly!

Fit a new fan belt…you might as well while you are at it, and then adjust the tension of the belt to give between 6 and 9mm movement midway between the fan and crankshaft pulleys. Now replace the metal shroud, and replace the hoses. I always replace with new hoses, but at the very least, use new jubilee clips.

Refill the coolant system with your preferred mix of antifreeze (ethylene glycol based) and water to equal 17.5 pints (10 litres) for a SII or IIa, or 13.75 (7.8 Litres) pints for a SIII.

Now run the engine, and check for leaks. Job done!