

NOTE: There is plenty of scope to write off your engine doing this job, however, if you are careful and have some experience working on the engine, you should be fine. The Ford mechanic will scare the willies out of you if you tell him what you are about to do. There are two risks in this process:

1. When you take the fuel pump off, the sprocket moves independently of the rest of the sprockets or falls off of the chain entirely. This will mean you will need to get the timing done again, or worse, if you don't, you will destroy the engine. If the sprocket locking tool doesn't come off, it prevents the sprocket from going anywhere.
2. Contaminating the fuel line. Make sure you blow all fuel lines out with the air line and make sure they get no dirt or contamination anywhere near them. You contaminate the fuel line you will shred your injectors and do the new fuel pump no good.

- Open bonnet.
- Open battery box and unplug battery positive terminal.
- Remove plastic engine cover.
- Remove front grill (held on by two plastic finger screws, it then slides off forwards).
- Remove headlights (held on by two plates that are pulled up to release the headlights).  
Remove plug from the back of the headlight.
- Undo the four bolts on either side of the frame the headlights have just come out of, this will allow this frame to flex a little bit forward enabling easier access.



- Undo the two bolts holding the radiator fan on. BEWARE, once the nut is off, the bolt that appears captive can slide out! Take these off and put them somewhere safe. Flex out the frame to allow the radiator fan to be slide up. No need to unplug it, just place it on top of the engine.

- Remove the manifold and EGR. The bolts through the manifold are captive so will not fall out, be careful with the nuts on the EGR though. **IMPORTANT: NOTHING MUST FALL DOWN INTO THE ENGINE, OR IT'S A HEAD OFF JOB. WE STUFFED SOME RAG DOWN THE HOLES THAT WERE LEFT TO STOP ANYTHING FROM BEING ABLE TO FALL DOWN INTO THE ENGINE.**

Below: Before removal



Below: After removal



- Take off the power steering reservoir and header tank. You will need to empty both out when you detach their hoses, so be sure to have some hydraulic fluid to fill the power steering reservoir up with again when you are done.

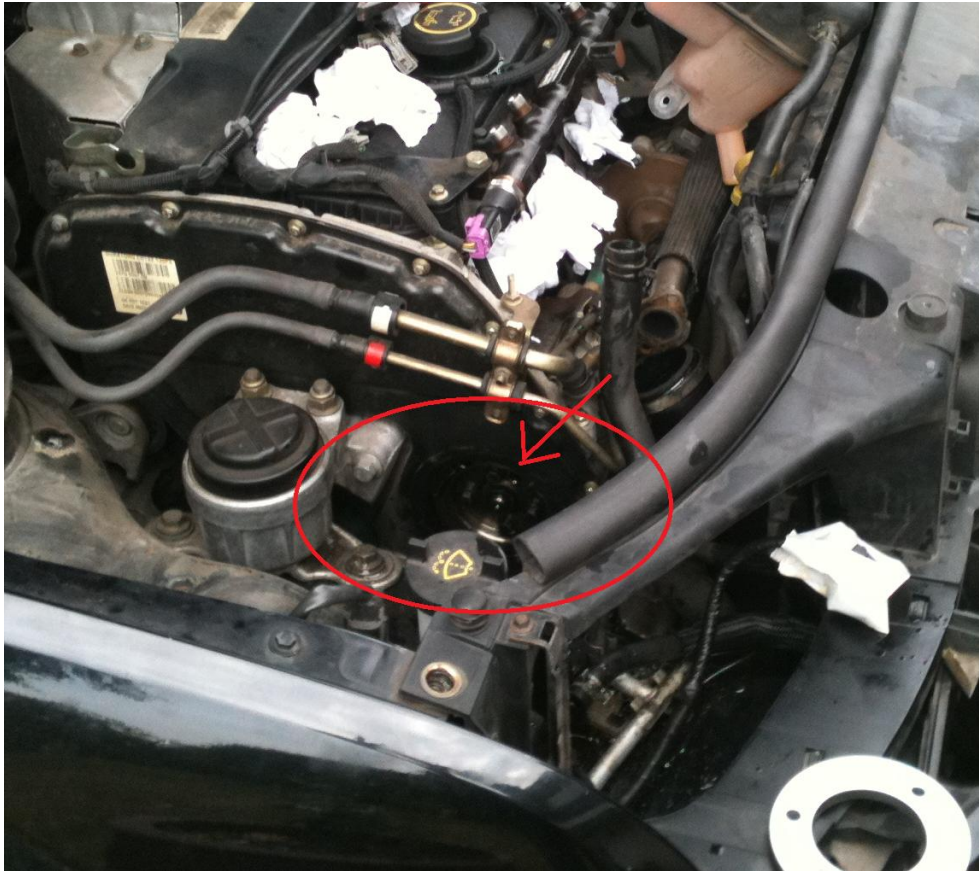
Before removal:



After removal, moved over to the right side of the engine out of the way after emptying:



- Next, remove the side inspection hatch using the tool (or just use a screw driver and hammer to tap the cover around anticlockwise until it unscrews off)



- Place the tool for locking the sprocket (303-1151) in the access hole and rotate it clockwise to lock the sprocket in place.



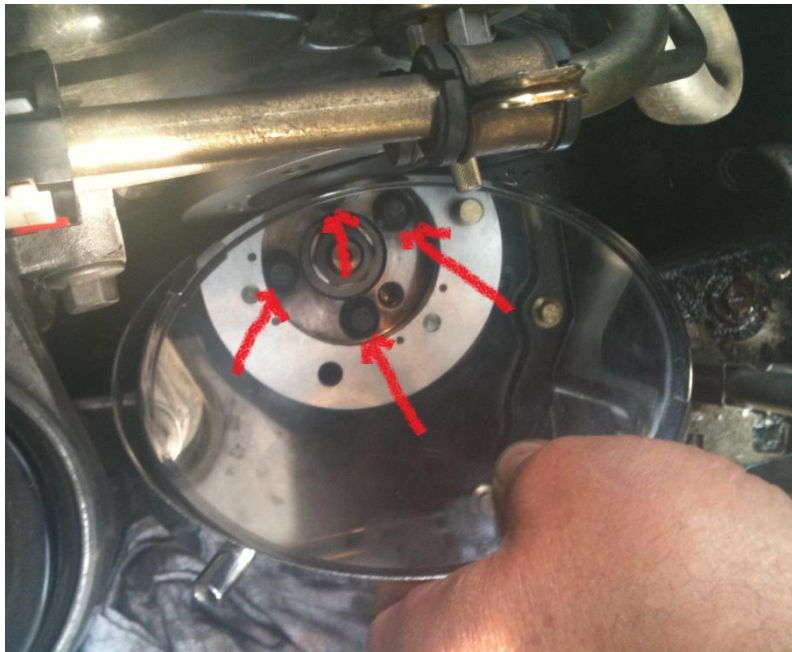
- Rotate the engine with the crankshaft pulley until the small hole in the sprocket is at about 1 o'clock, or slowly roll the car back and forth in third gear. This can be fiddly but you need to do it to line up the three holes in the sprocket with the tool for holding the sprocket in place. We used a torch and mirror to look through the holes in the tool to ensure it was lining up correctly. Once you have all three holes lined up, you will need to make sure the bolts are lined up too. NOTE: THERE IS SOME MOVEMENT IN THE TOOL IN THE HOLE IT MOUNTS IN, WE HAD TO BASH IT WITH A SCREWDRIVER AND A HAMMER TO MOVE IT AROUND IN THE HOLE TO GET IT TO LINE UP PRECISELY WITH THE SPROCKET HOLES. You should end up with the below:



- You will need the other special tool (310-083a) now to loosen the three pump mounting bolts through the locking tool holes. Even though the tool is lined up, the bolts through the sprocket may still not be quite lined up. It is imperative in the stage previous to this one, that when the tools holes are lined up, you also line up the bolts through the holes through the sprocket. The torch and mirror make this nice and strait forward.



- Loosen the four sprocket mounting bolts and remove from sprocket.



**BEWARE! ENSURE THE CAR IS OUT OF GEAR AND THE SPROKET AND GEARS DO NOT MOVE. IF ANY OF THE COGS MOVE INDEPENDANTLY OF EACH OTHER YOU CAN WRITE OFF THE ENGINE COMPLETELY!**



- Remove all fuel pipes from pump including the high pressure pipe to the fuel rail.
- Remove the two electrical connectors from the sensor and the IMV.
- Loosen and remove the two pump mounting bolts from the bracket holding the back of the pump to the engine block.
- And you are done. This guide is done as best as my memory could serve.
- Refitting is the reverse of the above. Do take care with the fuel lines and even the threads of the fuel line unions, as any contamination will damage your injectors and fuel pump!



After replacing my fuel pump and injectors, from 48MPG and my coil light consistently flashing, I now get 60MPG and it drives like a dream. Worth losing the knuckles for...