

FUEL INJECTIONPUMP

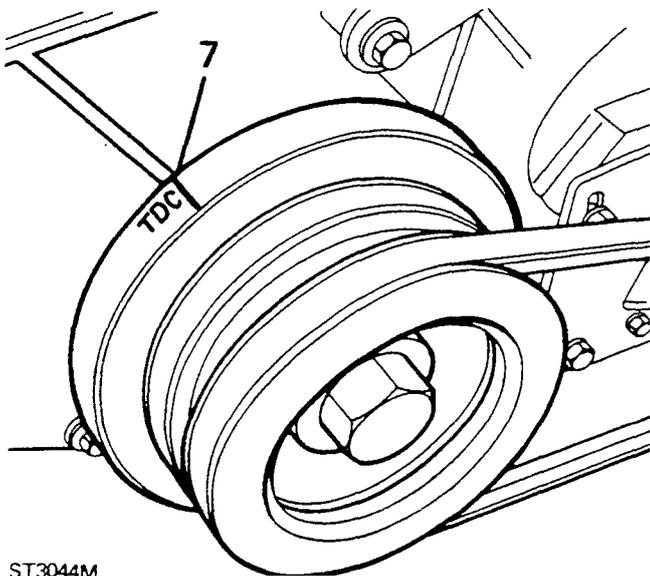
Service Repair No. 19.30.07

Remove and refit

Special tools:-

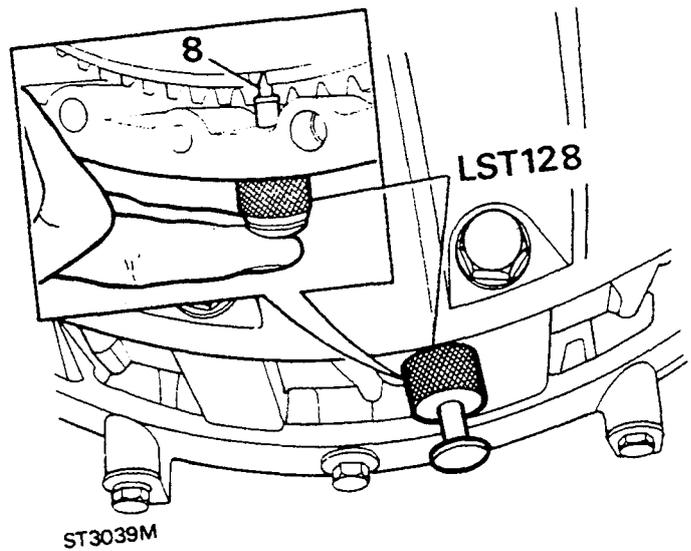
Flywheel timing pin	LST 128
Pump gear retaining tool	LST 129/1
Pump timing pin	LST 129/2

1. Remove the bonnet and disconnect the battery.
2. Drain the cooling system.
3. Remove the fan and viscous coupling assembly see operation 26.25.19
4. Remove the fan cowl see operation 26.25.11.
5. Disconnect the lower cooling hose from the waterpump.
6. Remove the oil filler cap so that the position of number one cylinder valve rockers can be seen to assist in obtaining T.D.C.
7. Turn the crankshaft to align the T.D.C mark on the crankshaft damper with the the web on the front cover plate. At the same time check that the valves of number one cylinder are closed.

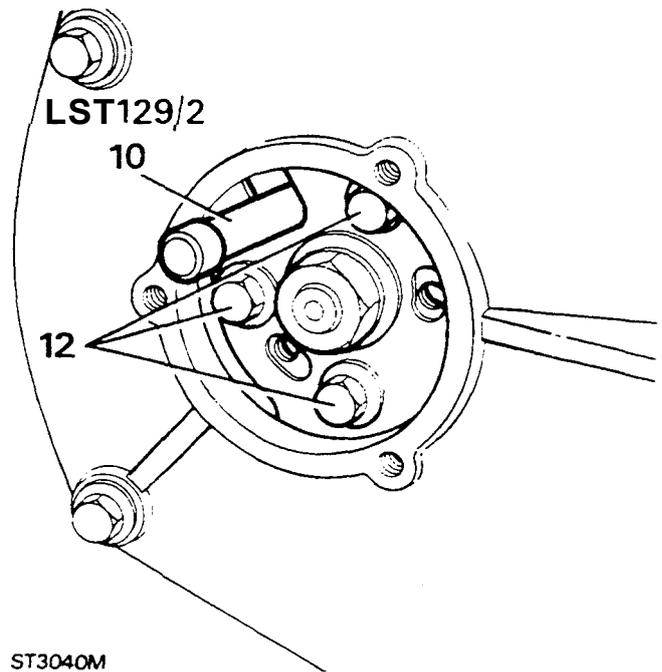


ST3044M

8. Remove the blanking plug from the bottom of the flywheel housing and fit the timing pin LST 128. Check that the pin can be inserted into the appropriate slot in the flywheel. Note that there are two slots in the flywheel the narrowest one being that which determines T.D.C. for this engine.



9. Remove the injector pump hub blanking plate.
10. Insert the injector pump timing pin LST 129/2 Through the "U" shaped slot in the pump hub into the pump body. Ensure that the pin fits easily and is fully inserted.

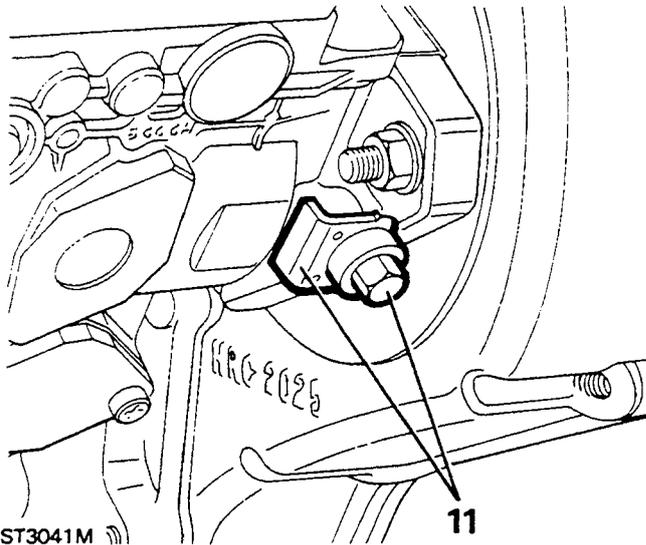


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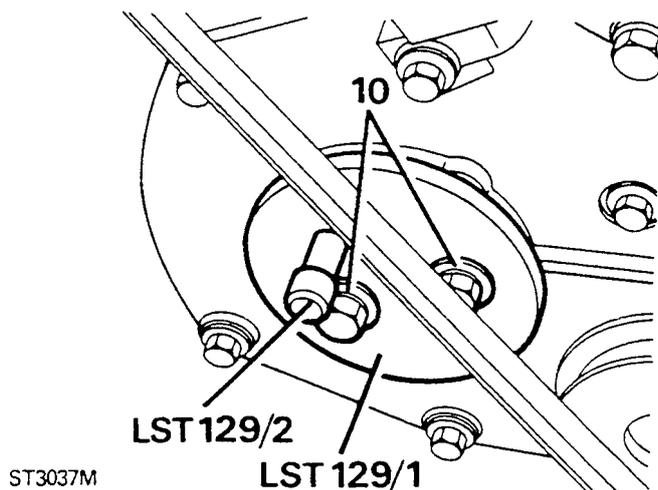
Continued

- Slacken the pump locking screw and remove the keeper plate. Tighten the screw to lock the pump.

CAUTION: Once the timing pin LST 129/2 is inserted and the pump shaft locked, no attempt must be made to rotate the crankshaft.



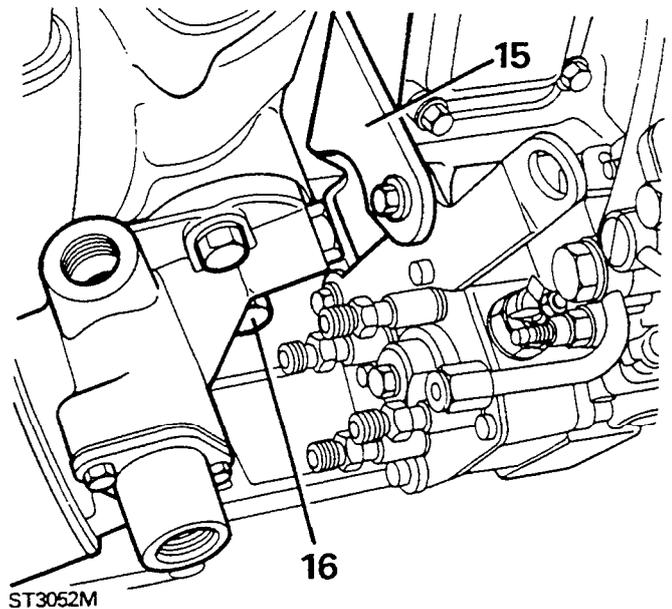
- Remove the pump drive gear three retaining bolts and remove the lock plate and timing pin.
- Fit the pump gear retaining tool LST 129/1 and align and tighten the two bolts. Insert the timing pin LST 129/2, again, through the hole provided in the retaining tool.



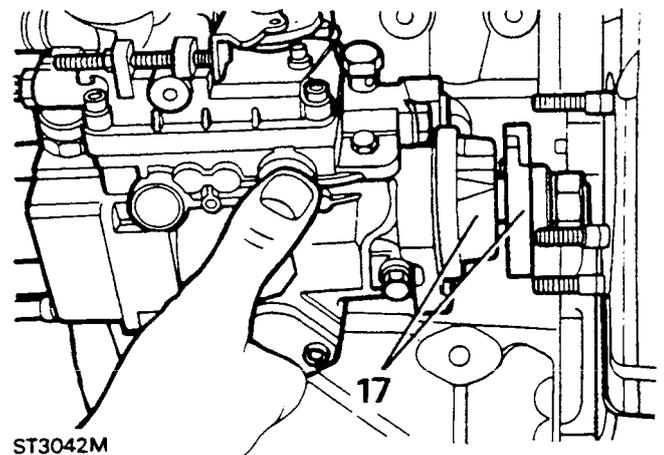
- Remove the injector pipes and disconnect the following items from the injector pump.

Throttle cable.
stop control solenoid lucar.
Spill return pipe.
Turbo charger boost hose.
Main fuel supply pipe.

- Remove the injector pump rear support bracket.
- Remove the oil filter adaptor rear attachment bolt to allow clearance for the pump to be withdrawn.

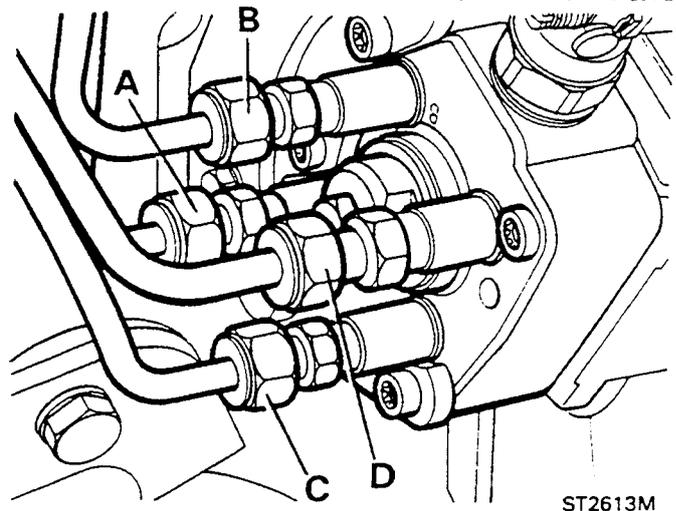
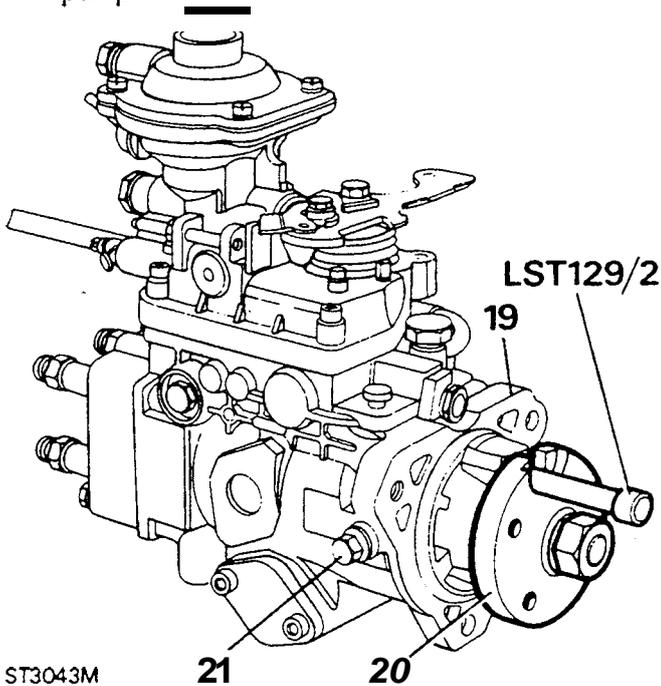


- Remove the pump three retaining nuts and withdraw the pump and gasket, with LST 129/2.
- Fit blanks to the inlet and outlet ports to prevent entry of dirt. Slacken the locking screw, fit the keeper plate and tighten the screw.



Reffiting

19. Clean the pump flange and front cover mating face and place a new gasket in position over the studs.
20. Fit the timing pin LST 129/2 to the pump, if necessary, rotate the pump to enable the pin easily and fully.
21. Slacken the pump locking screw, remove the keeper plate and tighten the screw to lock the pump.



22. Fit the pump to the front cover and drive gear and secure with the three nuts tightening evenly to the correct torque.
23. Fit the rear support bracket to the cylinder block and secure the pump to the bracket. Tighten all bolts to the correct torque.
24. Fit the oil filter adaptor rear attachment bolt.
25. Connect the items listed in instruction 14.
26. Fit the injector supply pipes securing each end to their respective locations, loosely then tighten evenly but do not over tighten. Commencing at the front of the engine connect the pipes as follows:-

- A to number one injector.
- B to number two injector.
- C to number three injector.
- D to number four injector.

27. Remove the pump timing pin and the pump gear retaining tool LST 129/1.
28. Insert the pump timing pin again and fit the gear lock plate and secure with the three bolts and tighten to the correct torque.
29. Remove the timing pin. Unlock the pump, fit the keeper plate and tighten the bolt.
30. To check that the pump timing is correct, turn the crankshaft two complete revolutions and check that the timing pin LST 129/2 can be inserted easily and fully into the pump. At the same time check that the flywheel timing pin can also be inserted in the flywheel slot.
31. If, with the flywheel timing pin located, the timing pin cannot be inserted cleanly into the pump, carry out the following instructions:-

1. Turn the crankshaft the small amount necessary to enable the timing pin to be inserted into the pump.
 2. Remove the keeper plate and lock the pump.
 3. Slacken the three pump gear retaining bolts.
 4. Turn the crankshaft to T.D.C.
 5. Check that the timing pin is an easy fit in the pump and that the flywheel timing pin locates.
 6. Tighten the pump gear retaining bolts to the correct torque.
 7. Unlock the pump, fit the keeper plate and tighten the bolt. Remove the timing pin from the pump and the timing pin tool from the flywheel.
32. Fit the pump aperture cover with a new gasket and secure with the screws.