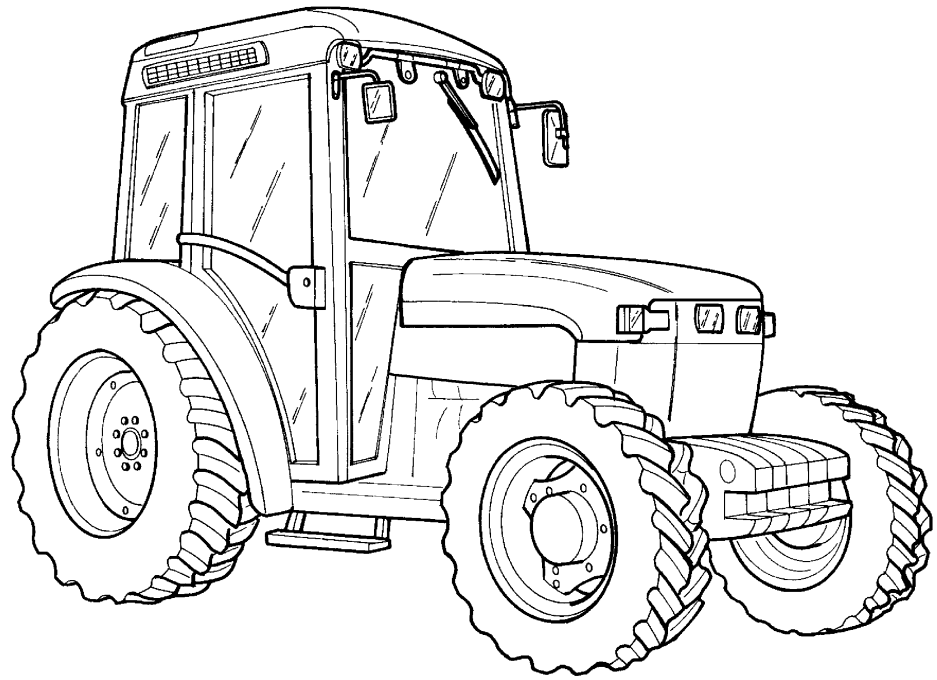




NEW HOLLAND



TN75FA – TN85FA – TN95FA TRACTORS SERVICE MANUAL

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T E C H N I C A L S U P P O R T

Op. 10 001 10

ENGINE Removal-Installation**DANGER**

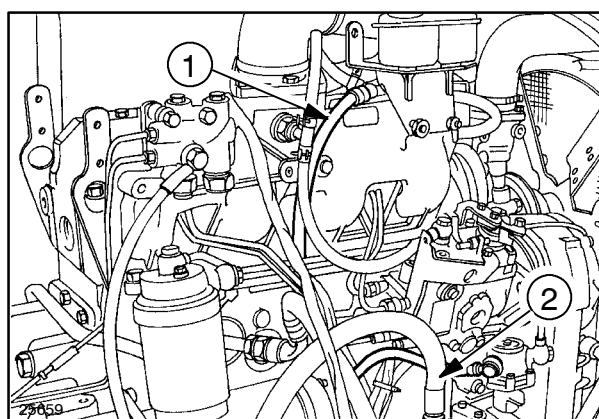
Lift and handle all heavy parts using suitable lifting equipment.

Make sure that assemblies or parts are supported by means of suitable slings and hooks. Check that no one is in the vicinity of the load to be lifted.

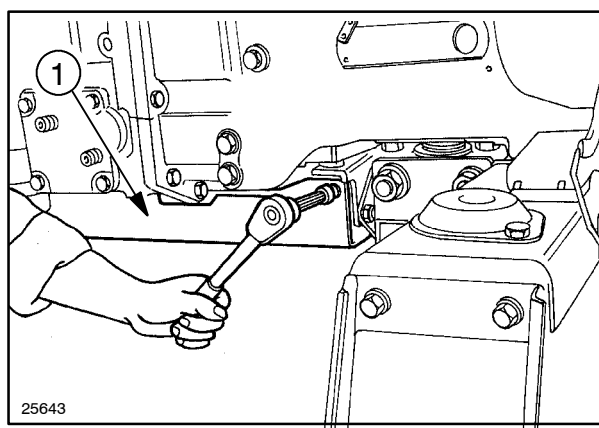
**CAUTION**

Always use appropriate tools to align fixing holes. NEVER USE FINGERS OR HANDS.

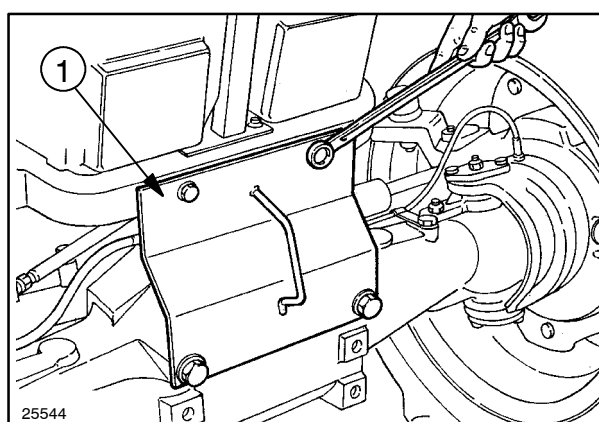
1. Remove the cab following the instructions in Section 90 Chapter 1.
2. Drain the oil from the rear transmission-gearbox housing.
3. Unscrew the clamps and disconnect the fuel return hose (1) to the tank (2) and the fuel supply pump inlet hose.
4. Remove the retaining bolts and detach the rear guard (1).
5. Position bracket **380001613** (1) and secure it to the engine and axle.



7

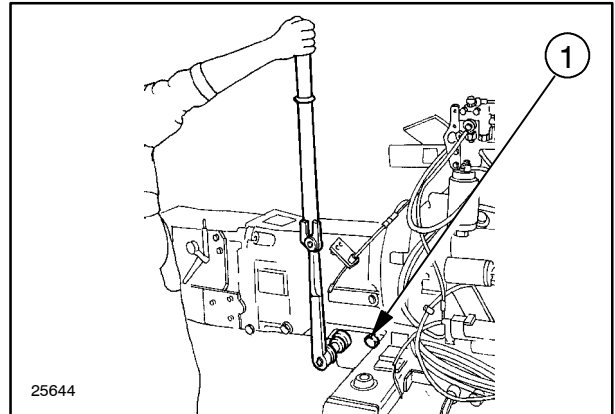


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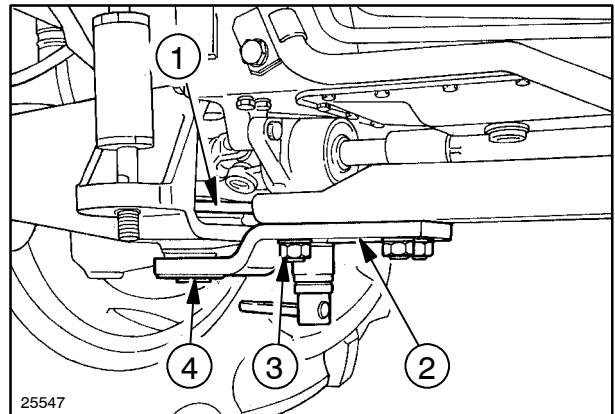


9

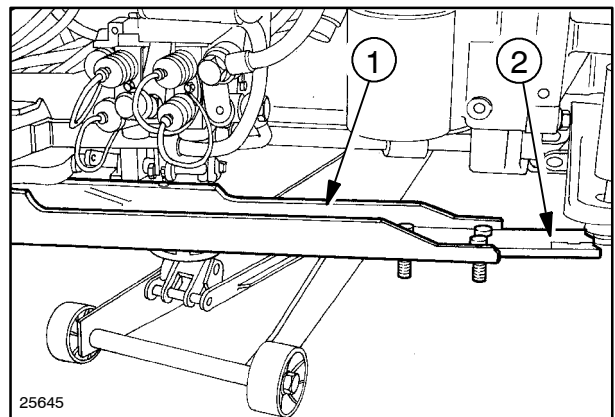
6. Unscrew the two rear nuts (1) retaining the front guard.



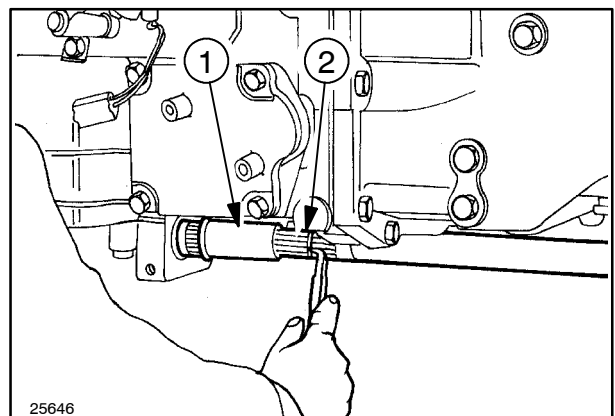
7. Position a hydraulic jack under the front guard. Unscrew the bolts (3) securing the brackets (1 and 2) and the screw retaining the bottom pivot pin (4). Extract this pin and remove the above-mentioned bracket (2).



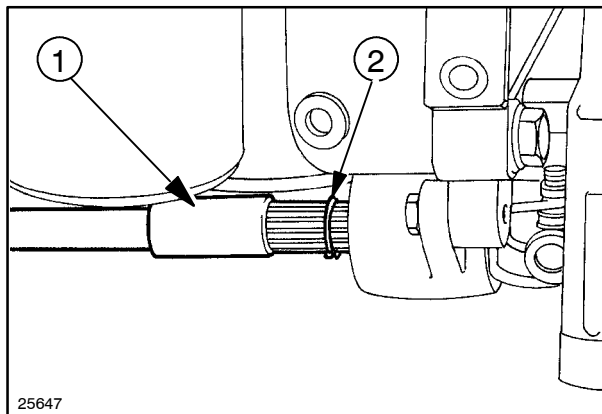
8. Extract the two rear screws and lower the hydraulic jack. Retrieve the guard (1) and bracket (2).



9. Remove the circlip (2) and move the rear sleeve forwards (1).

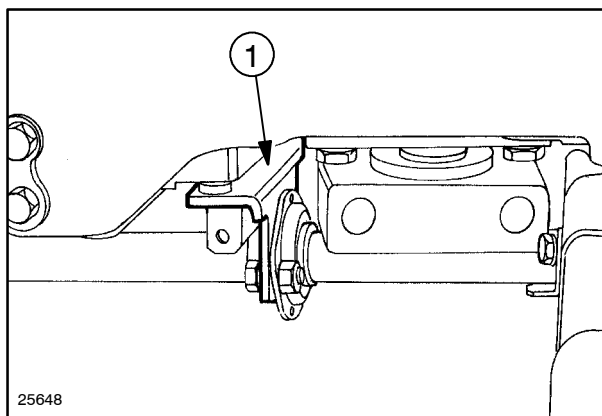


10. Remove the circlip (2) and move the front sleeve forwards (1).



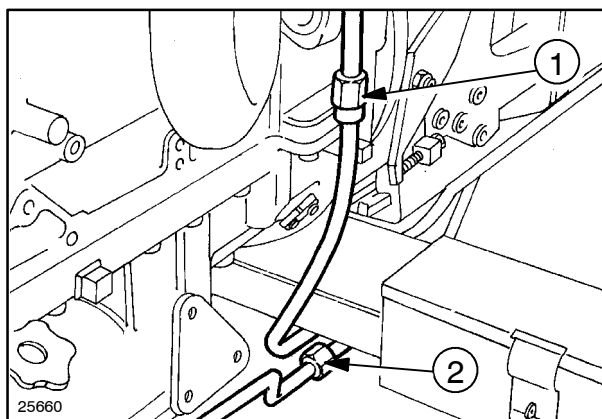
14

11. Unscrew the bolts retaining the bearing support (1) to the clutch housing and retrieve the drive shaft together with the support.



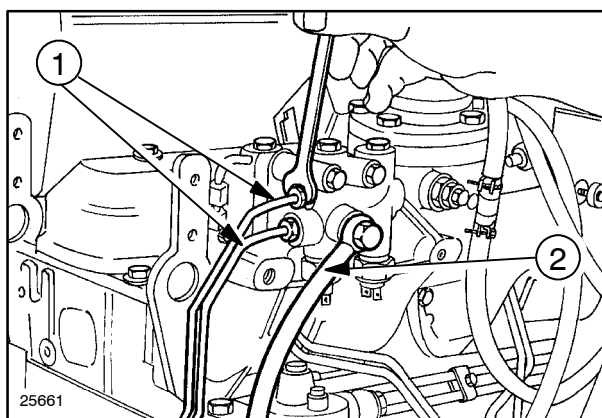
15

12. Disconnect the service control valve supply pipe (1) and the front differential locking control pipe (2).



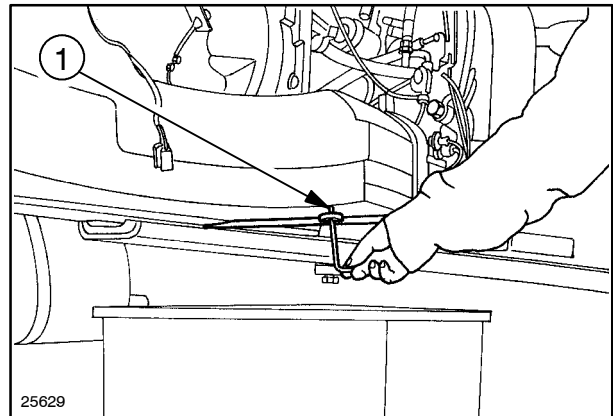
16

13. Disconnect the service brake control pipe (1) and trailer brake valve control pipe (2).



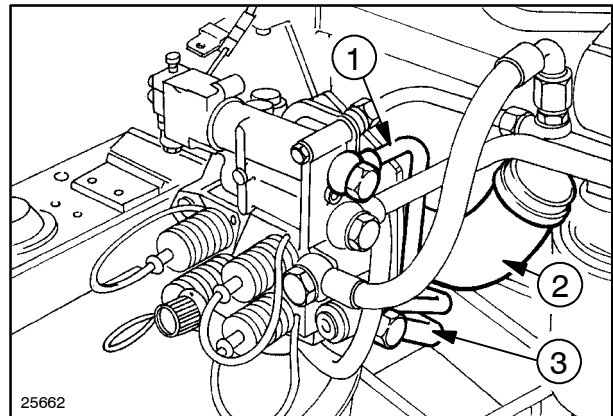
17

14. Remove the drain plug (1) and retrieve the diesel in a suitable container.



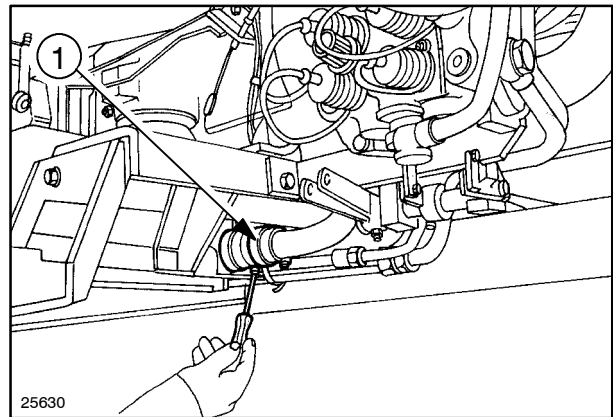
18

15. Disconnect the trailer brake control pipe (1) and the pipe (2) connecting the auxiliary control valves to the lift control valve.
16. Unscrew the clamp and disconnect the hydraulic pump inlet pipe (1).



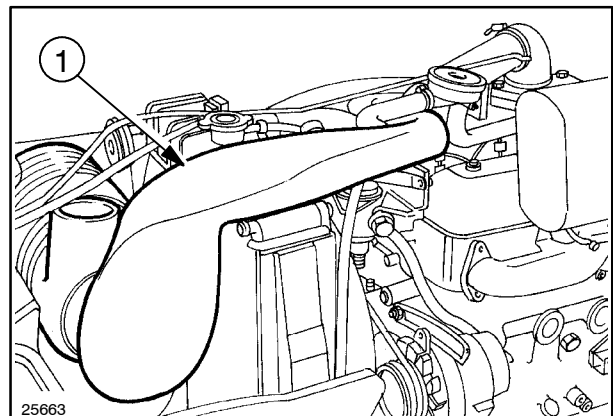
19

17. Loosen the clamp and detach the sleeve (1) from the relevant pipe, which you should then detach from the front tank and remove.



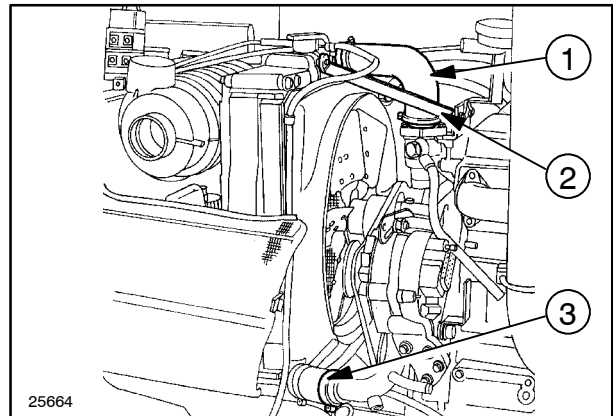
20

18. Unscrew the relevant clamps, detach the thermostarter connections and remove the sleeve (1) coupling the air filter to the intake manifold.



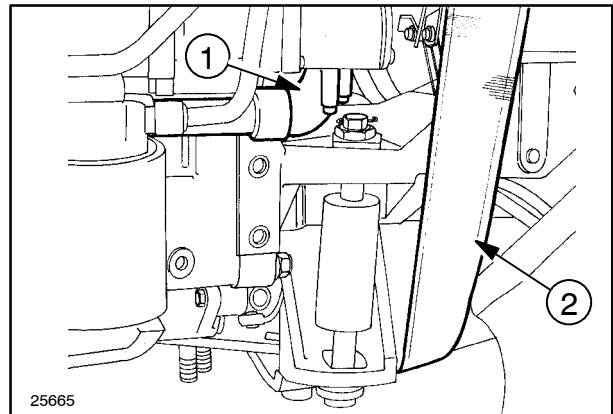
21

19. Detach the sleeves (1 and 3) from the radiator and unscrew the bracket (2) securing the radiator to the engine.
20. Place a fixed stand under the engine, taking care not to dent the oil sump plating.



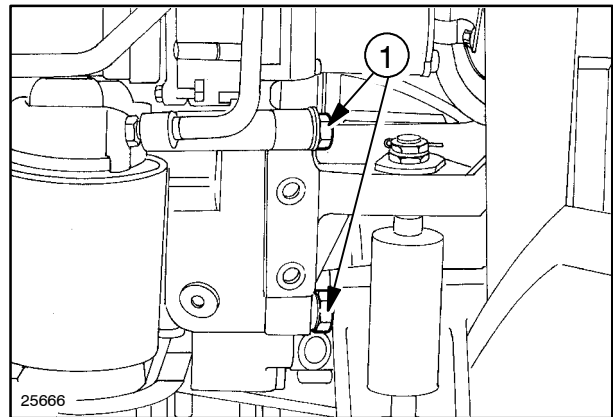
22

21. Connect a nylon rope (2) to the axle support and to the hoist. Tension the rope and detach the union (1) from the front hydraulic pump.



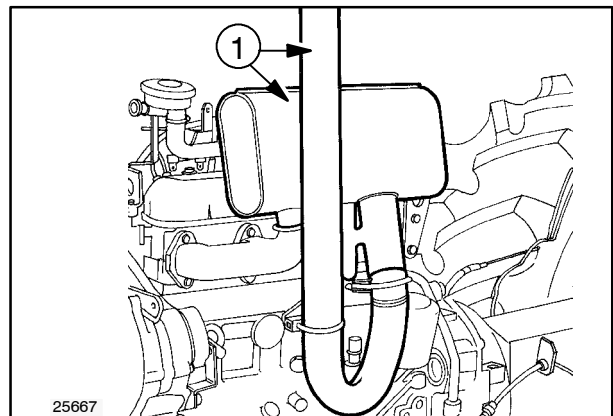
23

22. Remove the retaining bolts (1) from both of them and detach the axle support.



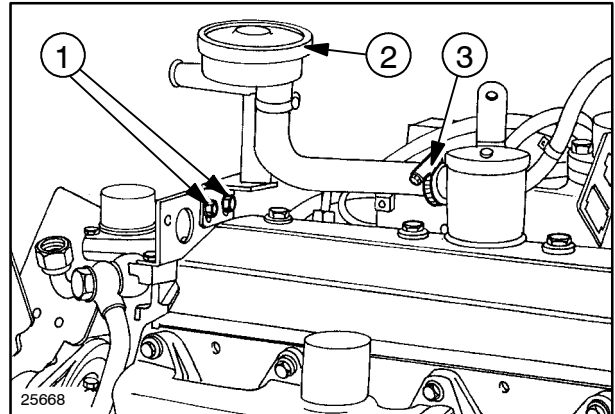
24

23. Remove the bolts, retaining clamps and exhaust silencer assembly (1).



25

24. Loosen the clamp (3), unscrew the retaining bolts (1) and remove the vapour recirculation device (2).



25. Place a fixed stand under the clutch housing. Connect a chain to the engine and hoist. Tension the chain. Unscrew the bolts (1) securing the engine to the clutch housing and remove the engine.

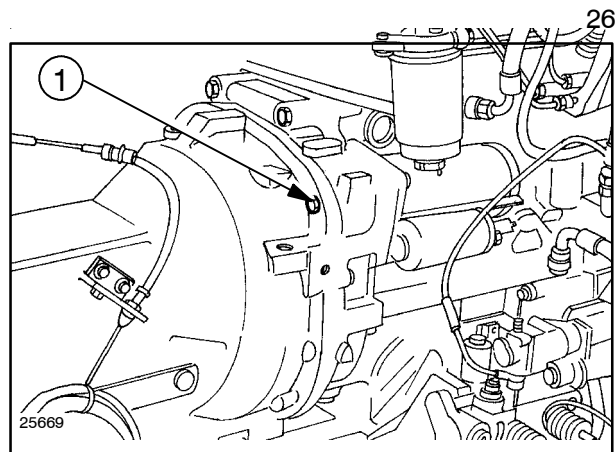
26. Refit the engine taking the following into consideration



CAUTION



Always use appropriate tools to align fixing holes. NEVER USE FINGERS OR HANDS.



- Apply the torque settings listed on page 20.
- Before refitting the engine to the clutch box carefully clean the mating surfaces and apply sealing compound (0.0787 in. (2 mm) diameter), according to the diagram shown Section 21, Chapter 1, page 34.
- Fit the engine on the clutch casing.
- Fit the vapour recirculation device.
- Fit the exhaust silencer assembly.
- Refit the axle support to the engine and fit the union on the front hydraulic pump.
- Connect and secure the sleeves to the radiator. Lock the bracket securing the radiator to the engine.
- Fit the sleeve connecting the air filter to the intake manifold.
- Fit the fuel tank connection piping.

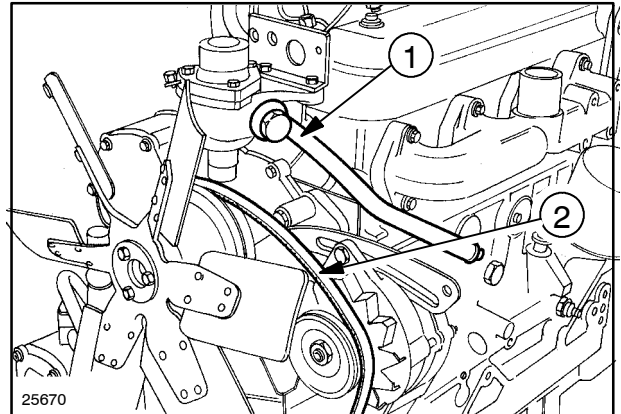
- Connect the hydraulic pump inlet piping and the pipes governing the trailer brake and connecting the auxiliary control valves to the lift.
- Fit the fuel tank plug.
- Connect the service brake and trailer brake valve control pipes.
- Connect the differential lock and service control valve supply pipes.
- Refit the drive shaft and relevant guards.
- Remove bracket **380001613** securing the engine and front axle.
- Refit the fuel inlet and return pipes.
- Screw the drain plugs onto the transmission housing and onto the diesel tank and replenish them (for the prescribed product and quantity, see page 6 sect. 00).
- Refit the cab following the instructions in Section 90, Chapter 1.

Op. 10 001 54**ENGINE Disassembly - Assembly****CAUTION**

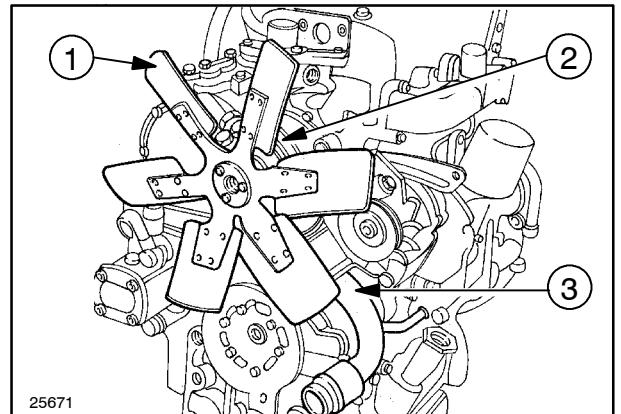
Handle all parts carefully.
Do not put your hands or fingers between parts.
Wear the prescribed safety clothing, including goggles, gloves and safety footwear.

Proceed as follows.

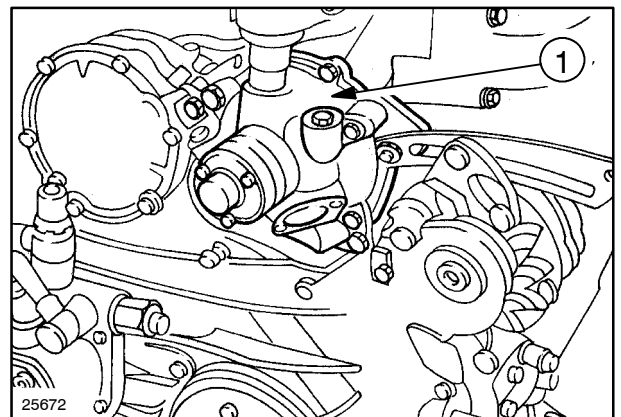
1. Disconnect the pipe (1) from the seat of the thermostatic valve, loosen the bolts securing the alternator and remove the fan drive belt (2).
2. Remove the retaining bolts and retrieve the fan (1), spacer and driving pulley (2). Detach the return pipe (3) from the coolant pump.
3. Take out the retaining bolts and remove the coolant pump (1).
4. Take out the retaining bolts and detach the coolant pump support (1).



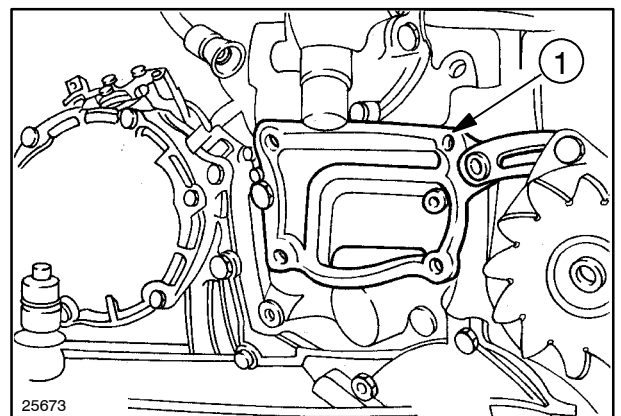
28



29

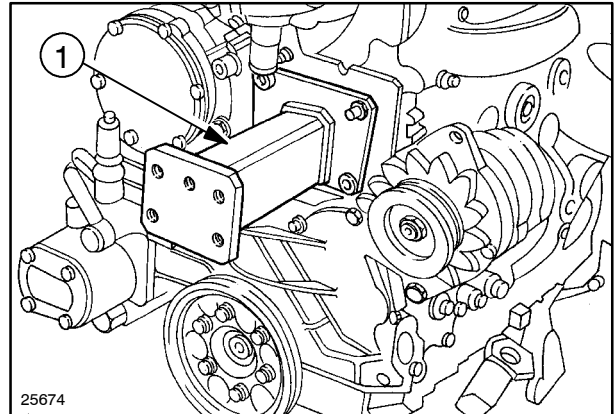


30



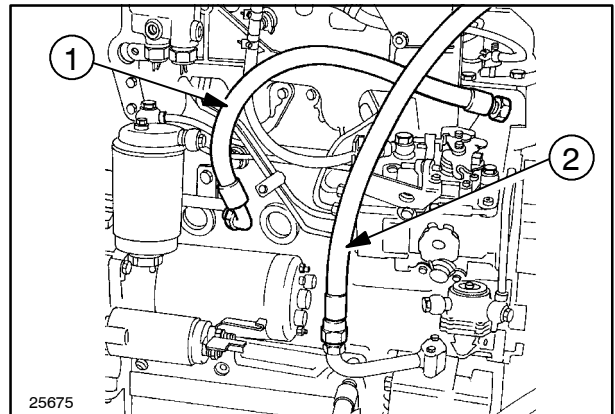
31

5. Secure the bracket (1), series **380000313**, to the engine and lock this on the rotary stand **380000301**.



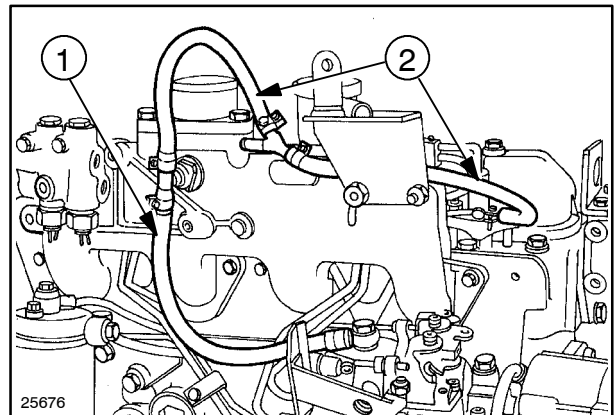
32

6. Disconnect the pipes (1 and 2) from the crank-case and from the hydraulic pump governing the services.



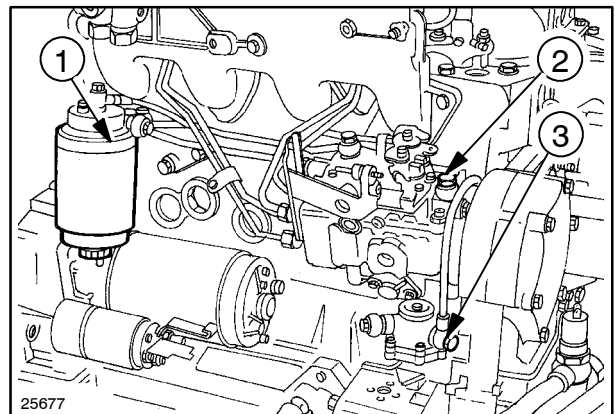
33

7. Disconnect the thermostarter supply pipe (1) and the return pipe (2) from the thermostarter and from the injectors.



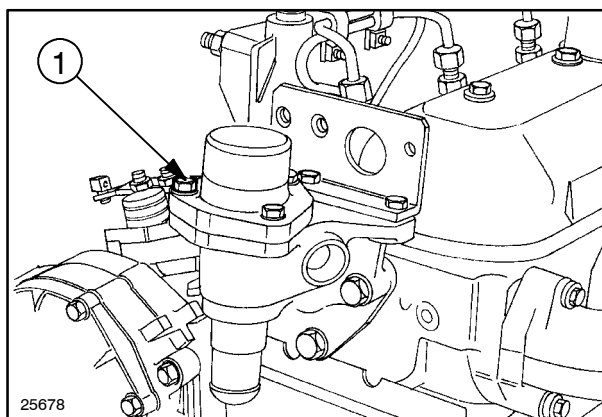
34

8. Unscrew the unions (2 and 3) from the injection pump and from the fuel pump. Take out the retaining bolts and remove the fuel filter (1) together with the support and pipes.



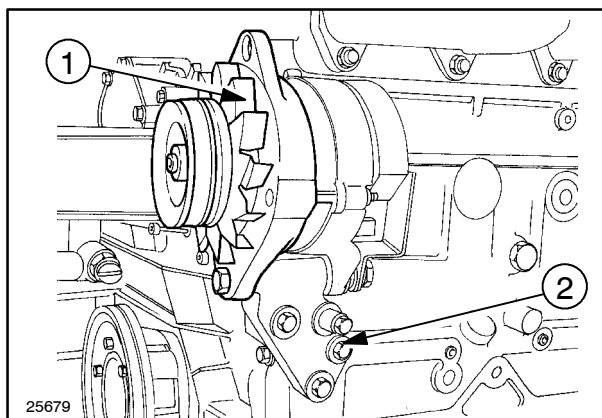
35

9. Unscrew the retaining bolts and remove the thermostatic valve assembly (1).



36

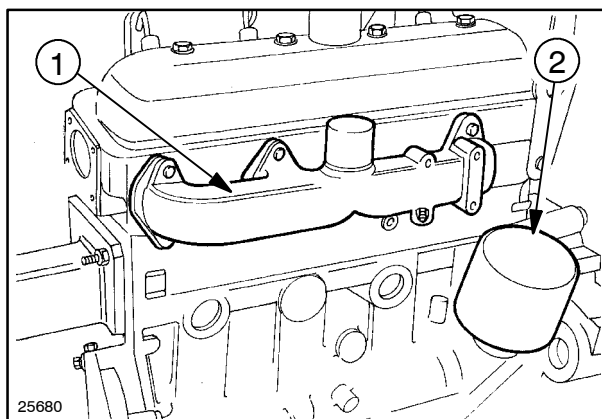
10. Unscrew the retaining bolts and remove the alternator (1) together with the support (2).



37

11. Unscrew the retaining bolts and remove the exhaust manifold (1).

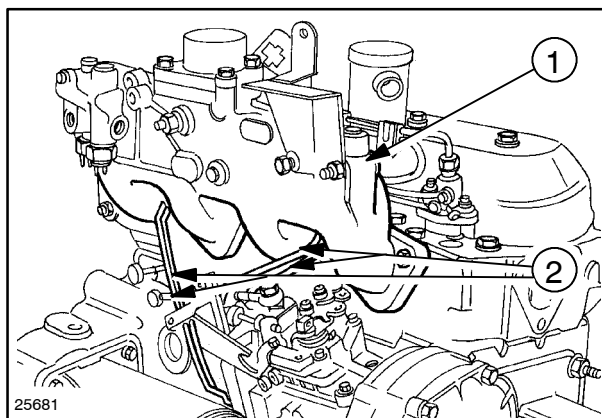
12. Unscrew the engine oil filter (2).



38

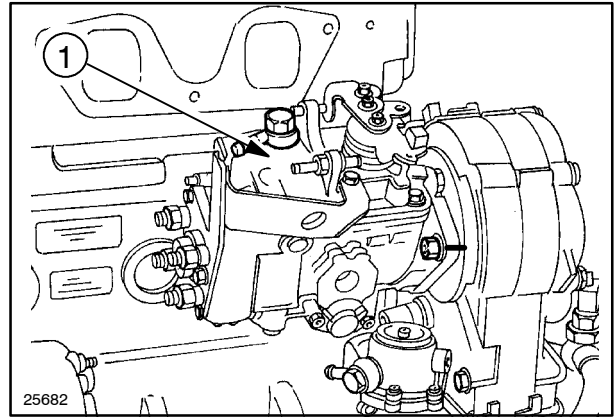
13. Disconnect the pipes (2) from the injection pump and from the injectors.

14. Unscrew the retaining bolts and remove the inlet manifold (1).



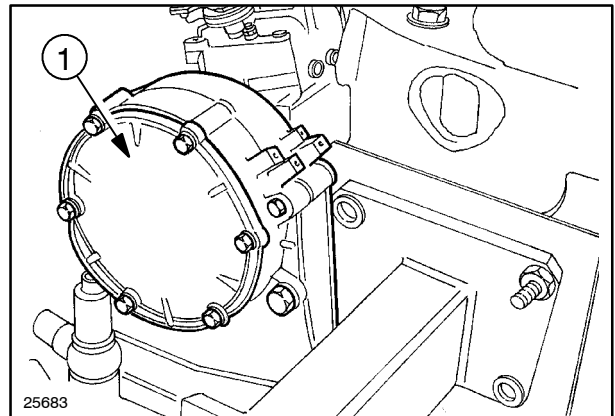
39

15. Unscrew the pump retaining bolts (1).



40

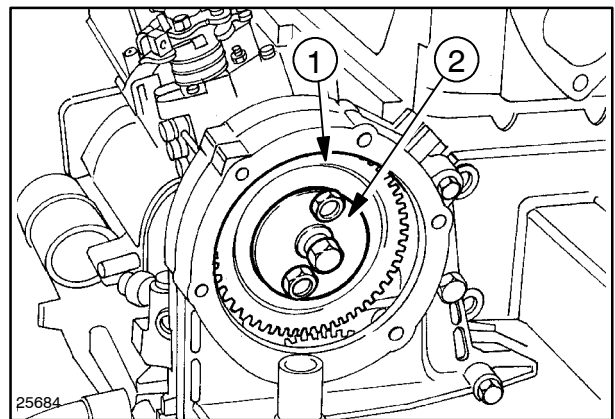
16. Remove the cover (1) to access the injection pump gear compartment.



41

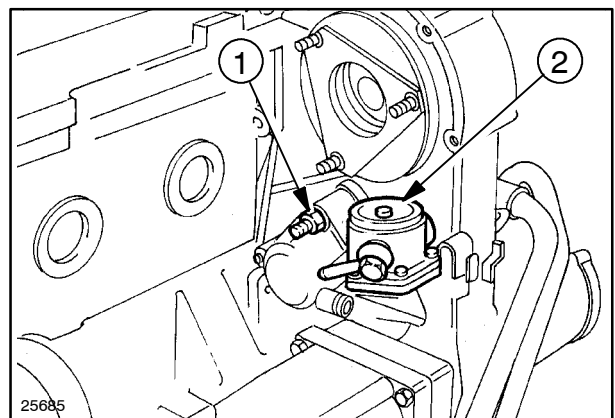
17. Unscrew the nut securing the injection pump to the gear (1).

18. Extract the injection pump driving gear using the tool **380000322** (2) and retrieve the injection pump with the Woodruff key.



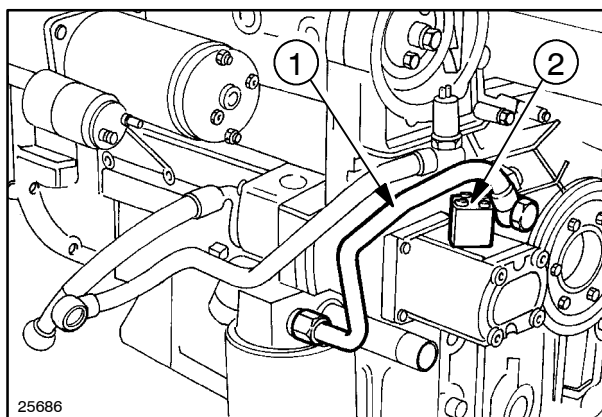
42

19. Unscrew the retaining nuts (1) and retrieve the fuel pump (2) together with the support.



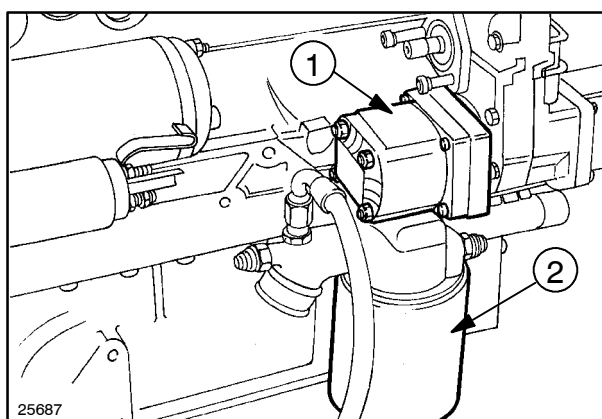
43

20. Disconnect the piping (1) from the filter, unscrew the bolts securing the pressure relief valve assembly (2) and remove it.



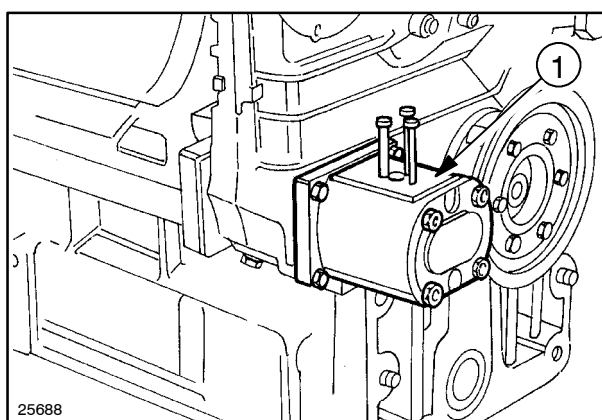
44

21. Take out the retaining bolts and detach the hydraulic pump (1) along with the oil filter (2).



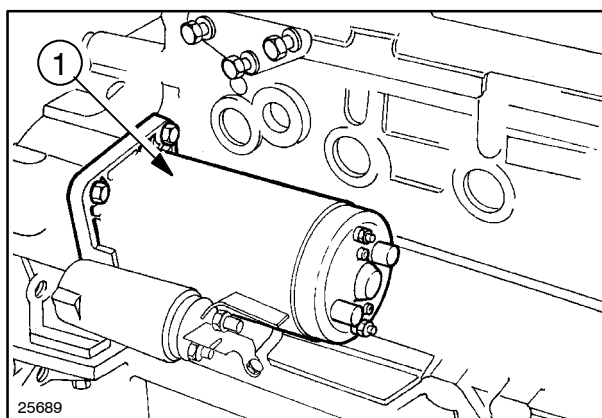
45

22. Take out the retaining bolts and remove the lift hydraulic pump (1).



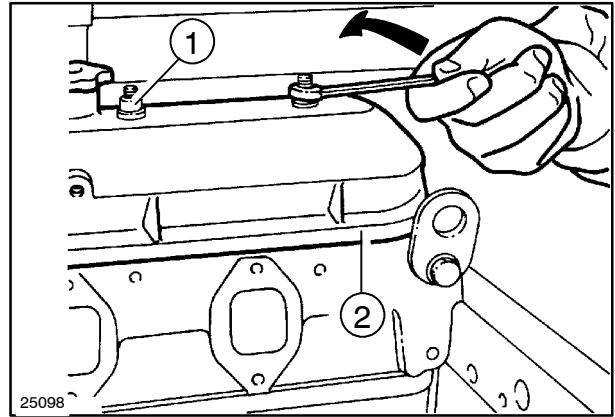
46

23. Take out the retaining bolts and remove the starter motor (1).



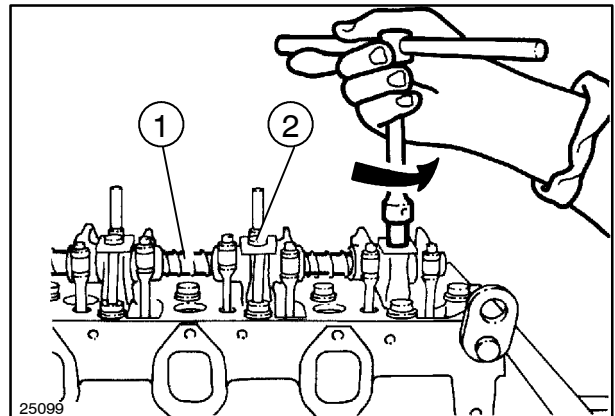
47

24. Remove the injector mounting nuts, the underlying spherical washers, then the supports and the injectors themselves.
25. Remove the retaining bolts (1), washers and seal, then remove the rocker housing cover (2) and seal.



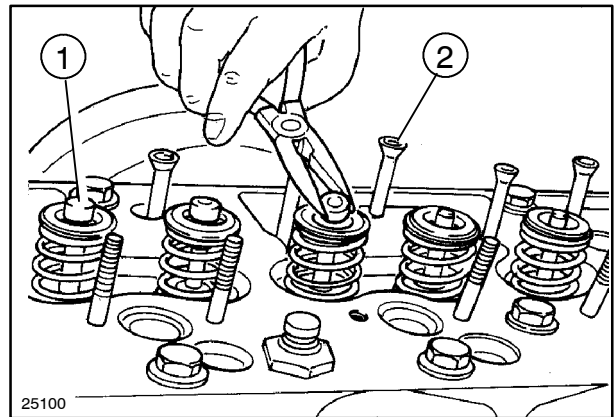
48

26. Remove the rocker shaft retaining bolts (2), then remove the entire rocker shaft assembly (1).



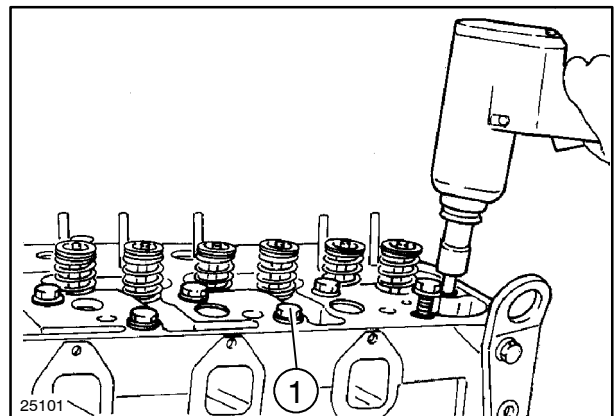
49

27. Remove the valve collets (1) and extract the pushrods (2).



50

28. Unscrew the cylinder head bolts (1) and remove the head using a hoist and lifting hook **380000216**.
29. Remove the cylinder head gasket.



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