

39 Tyres

Check that the tyres have a normal wear pattern. Compare the wear with the foldout.

Front tyres

- Check the front tyres for **pitting**, which indicates: **balancing problems, extremely loose wheel bearings, king pin bushings or lack of a pressure point in the steering gear centre.**
- Check front tyres for feather-edging, which indicates toe-in problems.
- Check front tyres with a view to abnormal wear on outer thread half, which indicates camber problems.

Rear tyres

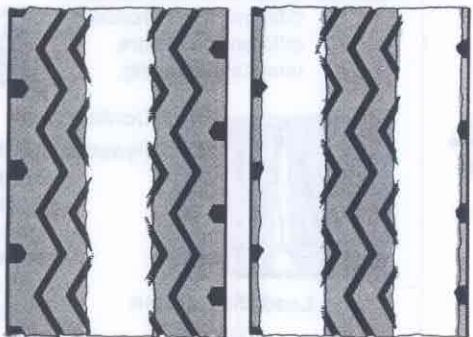
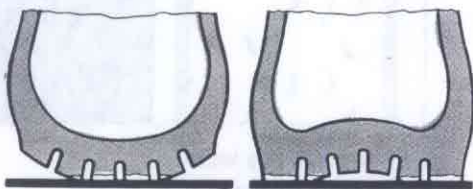
- Check rear tyre wear with a view to abnormal cupping, which may be due to incorrect twin wheel mounting.
- Check for obvious tendencies to wear marks between tyres with twin wheel mounting. If wear marks are found, note this.
- Check tendencies towards toe-in wear, which indicates an out-of-line axle.

Spare tyre

- Check condition of spare tyre.

Various types

Incorrect air pressure

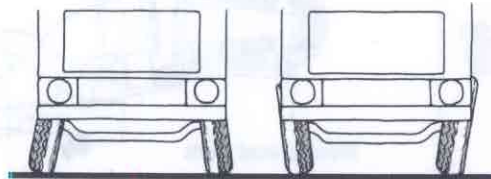
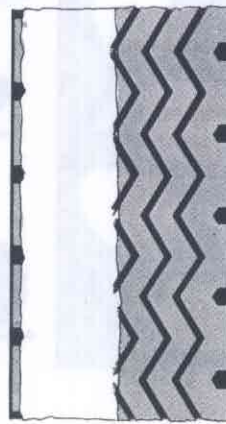


Overinflation
Abnormal wear in middle

Underinflation
Abnormal shoulder wear

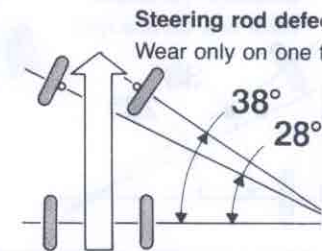
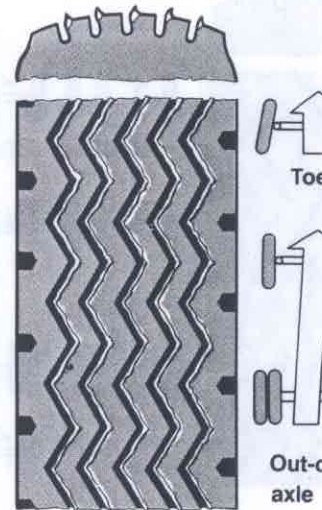


Camber fault

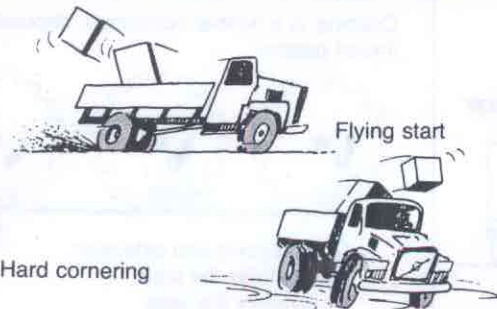
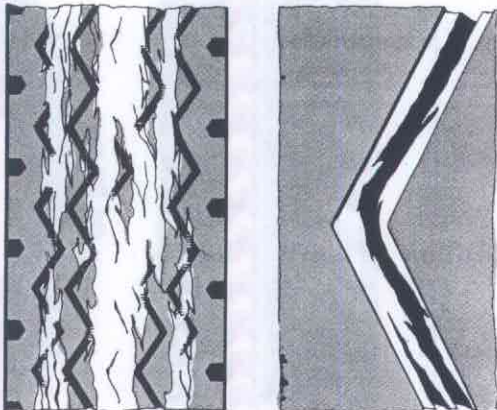


Wrong

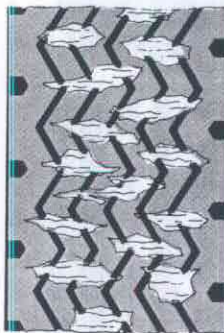
Toe-in faults



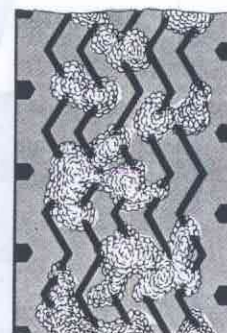
Skid damage



Cuts in tyre thread



Cuts



Flaking cuts

Rubber flaking

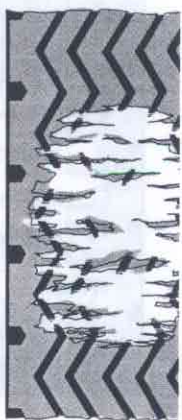


Reason:
Poor roads . . .



. . . air pressure too high,
incorrect type of tyres.

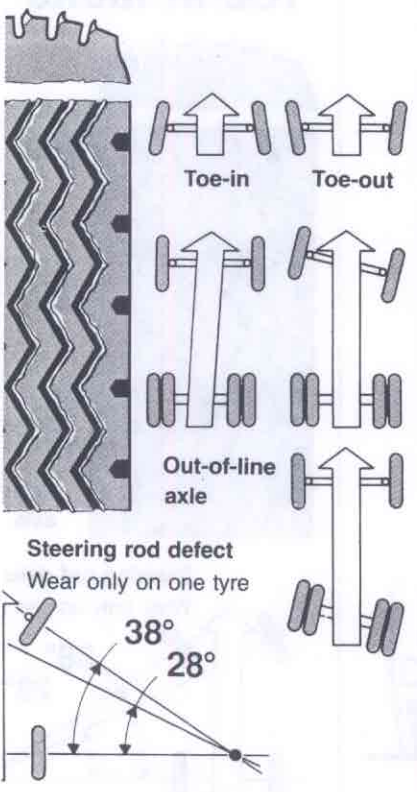
Spot wear



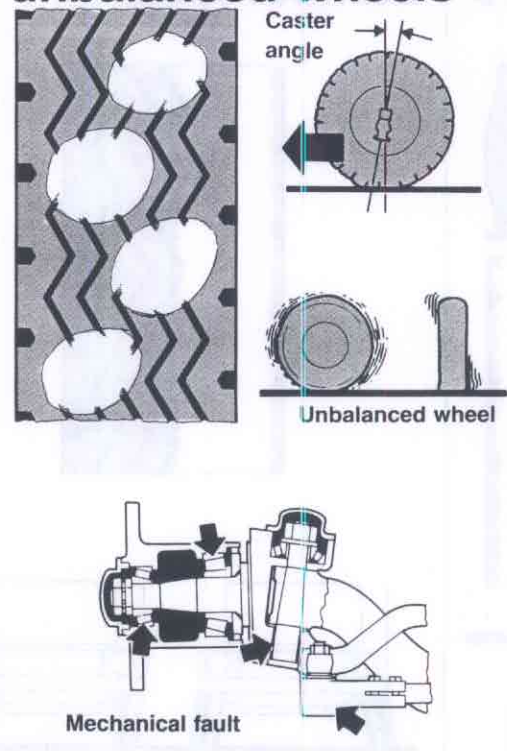
Reason: Over energetic braking
out-of-round brake drums.

Types of tyre wear

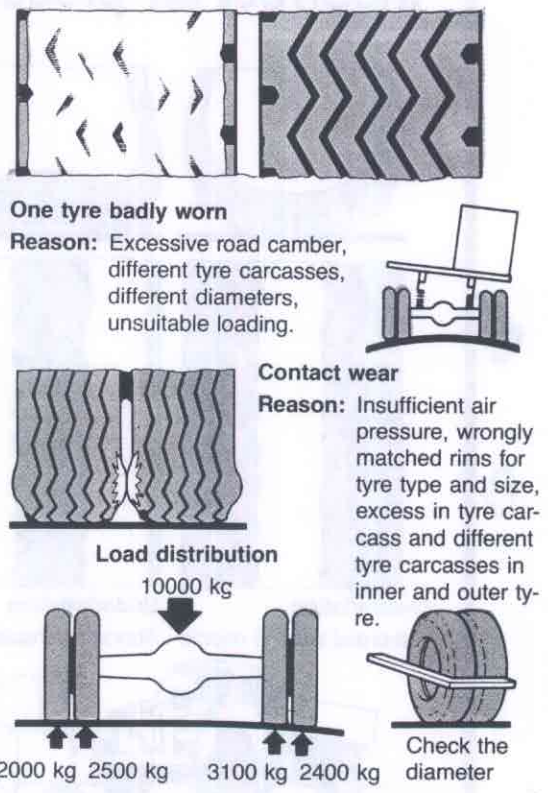
Steering faults



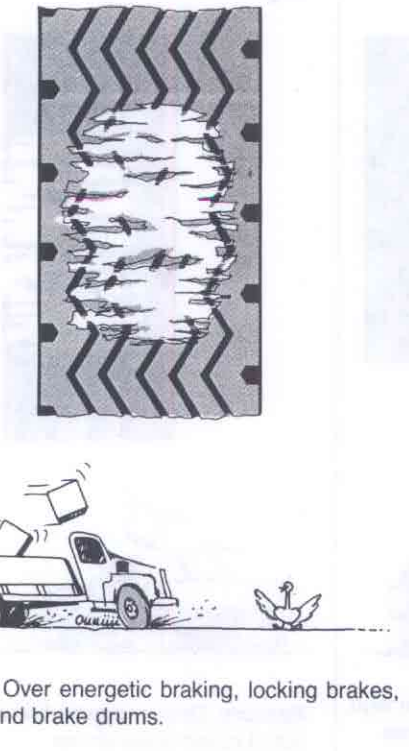
Caster fault or unbalanced wheels



Twin mounting



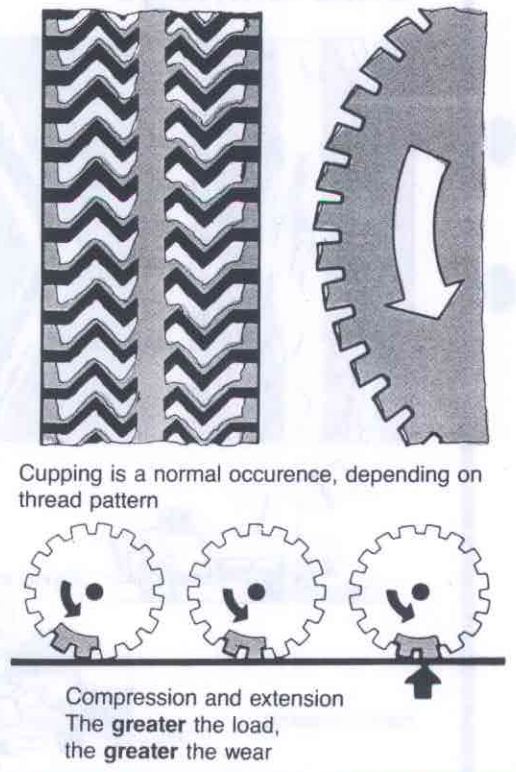
Brake wear



Feathered edges



Cupping



Engine compartment

40 Fuel filter, change

1. Place a suitable container for the fuel under the engine.
2. Clean the area round the fuel filter bracket.
3. Slacken the fuel filters with tool **6670** and unscrew them.
4. Apply oil to the rubber gasket for the filter. Screw on the filter by hand until the gasket makes contact with the sealing surface. Then tighten a further $\frac{1}{2}$ – $\frac{3}{4}$ turn.
5. Open the bleed screw on the fuel filter holder. Fill the fuel filter using the feed pump hand primer until all air bubbles have been expelled from the fuel.

41 Air filter for compressor, change

1. Unscrew the hose clamp for the air filter and remove the filter.
2. Fit the new air filter and tighten it down with the hose clamp.

42 Brushes, alternator

1. Turn the battery master switch to Off.
2. Unscrew the brush holder from the alternator.
3. The brush length is measured between the contact surfaces of the brushes and the brush holder. If the projection is less than 5 mm they must be replaced. Check for wear on the slip rings.
4. Re-fit the brush holder in the alternator and tighten it down.
5. Turn on the battery master switch.

43 Alternator suspension, electrical connections

Check:

- mounting attachment
- that cable connections are correct.

44 Drive belts

1. Check all drive belts for:
 - sharp edges
 - cracks on the inside

- correct location on pulley (not too far in)
- slipping (shiny surface)
- correct tension, **max. 10 mm** deflection midway
- condition and function of spring for automatic belt tensioner

2. Check belt tensioner bearing for play by taking weight off tensioner with pull handle (only certain variants).
3. If belt tension needs to be adjusted: Slacken the screws on the belt tensioner, tension the belts and tighten the screws. The belts should be able to be pressed in 10 mm.

45 Engine mounting

Visually check that:

- the rubber pads are undamaged
- the brackets are undamaged and tightened down.

46 Radiator mounting

- Check that the radiator and charge air cooler attachments, side plates and rubber pads are firmly attached and undamaged.
- Visually check the bolting.

47 Radiator fan, fan shroud

Visually check:

- that the fan shroud is complete and without cracks
- the fan shroud bolting joints
- the fan blades with regard to cracks.

48 Radiator fan

- Move the fan blades forwards and backwards to ascertain any possible bearing play.
- Using a wrench, check the tightness of the bolting joints.
- **Thermostat-controlled fan**
Check that the fan rotates easily and is **not** locked. Certain trucks do not have a locking device.

49 Level sensor, coolant (cleaning)

The level sensor is placed on the expansion tank.

Cleaning the level sensor:

1. Release any overpressure in the cooling system by opening the filler cap.
2. Remove the electrical connector from the level sensor.
3. Unscrew the level sensor and clean off any deposits.
4. Re-fit the level sensor. Fit the electrical connector.

50 Cooling system Pressure test, leakage

- Position and level the pressure gauge 6662 a few decimetres above the highest point of the cooling system.
NOTE! This is to avoid coolant running into the pressure gauge.
- Connect gauge 6662 with nipple and hose 6049 to the drain nipple of the radiator.
- **Slowly** increase the pressure to 40 kPa. This will force air through the cooling system and build up pressure in the empty section of the expansion tank. When the pressure has stabilized, carry out a leakage check on the radiator, connections, hoses and coolant pump. Tighten any loose hose clamps.
- **Slowly** increase the pressure to the value for the pressure valve, which is stated on the expansion tank cap. Check that the pressure valve on the expansion tank cap works by increasing the pressure a little over the value for the pressure valve.
At this pressure, the through-flow of air should be continuous. Stop the check after 10 seconds.
- On concluding the leakage check:
Remove hose 6049 with nipple from the radiator **while maintaining the pressure.**
Note! This is to prevent coolant running into the pressure gauge.

51 Radiator, hoses pipes

- Check that the radiator is undamaged and is firmly in position.
- Check the condition of the hoses and pipes with regard to:
 - scuffing
 - ageing (brittleness)
 - cracks
 - separation (blisters)

52 Oil leakage, engine

Visually check that:

- no oil or coolant leaks from the engine
- nipples, flanges and hose connections do not leak
- hoses or pipes are not scuffed or cracked.

53 Check of air pipes between air intake and turbo

Check that:

- hoses and pipes between the air intake and turbo are not cracked, have loose clamps or are scuffed
- the filter housing is firmly in place and is not cracked. The rubber valves are intact and do not leak
- all clamps are tightened.

54 Turbo-compressor, exhaust pressure governor

1. Remove the inlet hose from the compressor housing.

Check that:

- the compressor wheel is not damaged and rotates easily
 - both axial and radial play feels normal (there should be some play)
 - the compressor and turbine wheels do not scrape when the shaft is pressed respectively pulled axially/radially at the same time as they are turned
 - the compressor section is clean, no evidence of oil leakage.
2. Check that the exhaust pressure governor hose and pipe connections are not cracked or scuffed.

55 Engine controls

1. Check that the control rods and levers run freely and do not lock in any position.
2. Check for possible wear on the control bushings.
3. Check the constant engine speed control (power take-off operation FL6).

Turn the starting key to Drive and the potentiometer to zero. Press in the switch for the power take-off.

- Check the clearance between the flange for the constant engine speed control (3) and the pump lever.
Clearance = $1 + \frac{1}{0}$ mm.

If necessary adjust to the correct clearance between the flange and the pump lever with (2).

- After adjusting the clearance at the lever, check and necessary adjust the return spring (4) length.
Length = 201 ± 1 mm.

Disengage the power take-off with the switch.

56 Pump coupling, injection pump

- Check using a spanner that the screws are tight.
- Check that the discs are not damaged.

57 Fuel lines

Visually check:

- nipples and hose connections
- that the lines do not leak and are not scuffed.

58 Exhaust leakage

Check for carbon deposits:

- round the exhaust ports on the cylinder block
- at the manifold joints and flanges
- at the exhaust brake
- at the front elbow on the exhaust pipe.

59 Charge air cooler

Check that the hoses and pipes between the engine and the charge air cooler are intact and are not scuffed.

60 Power steering, servo pump Oil and air leakage

1. The engine must be running (approx. 1000 r/min).
 - Inspect the power steering system discharge side for oil leakage.
2. Stop the engine to check for air leakage on the suction side.
 - Check if there are air bubbles in the fluid in the power steering system.

61 Power steering, steering shaft universal joint

Check that:

- hoses and pipes are intact and are not scuffed
- the steering shaft universal joint is firmly attached and there is no looseness.

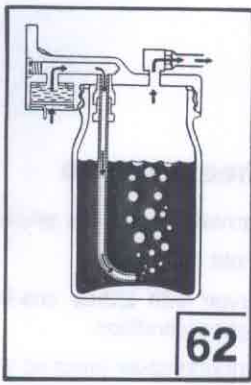
62 Anti-freeze device

The check is carried out with the engine running.

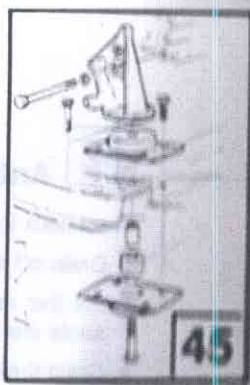
- Drain off the old anti-freeze.
- Fill the reservoir with 2/3rds anti-freeze. Make sure the seals are in good condition.
- Drain the compressed-air tanks so that the compressed air begins to charge.
- Check the function of the device by observing the air bubbles which should pass through the fluid when the compressor is charging at approx. 1200 r/min (engine speed).

Injector type

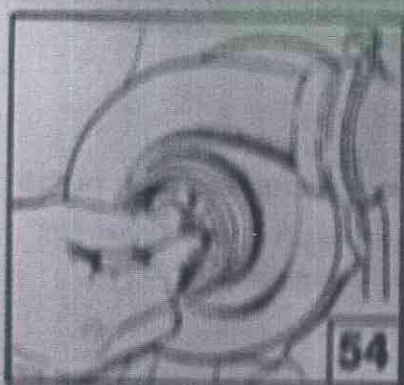
Correct function means that the fluid level has gone down in the reservoir.



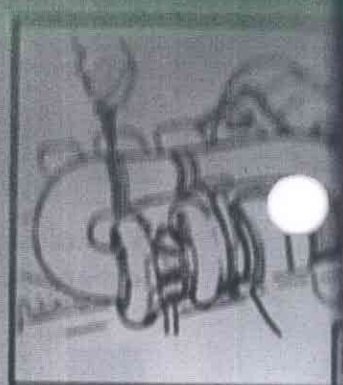
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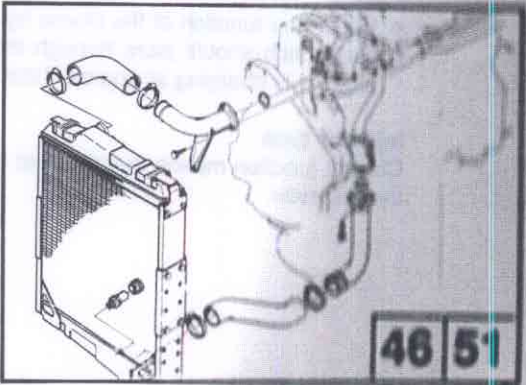
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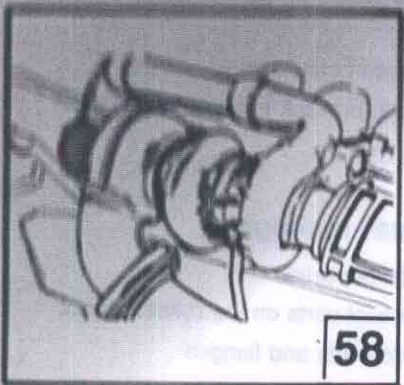
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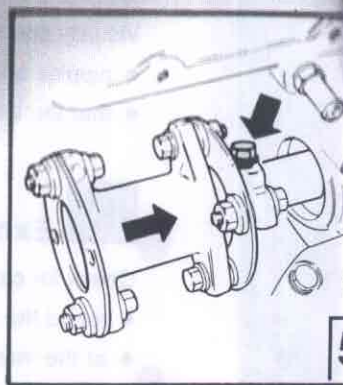
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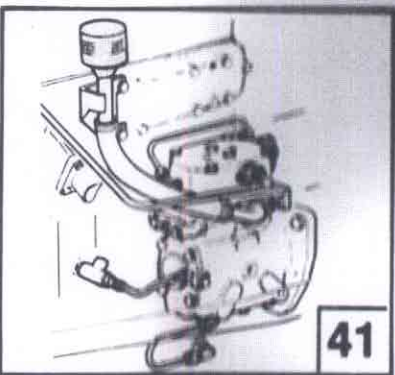
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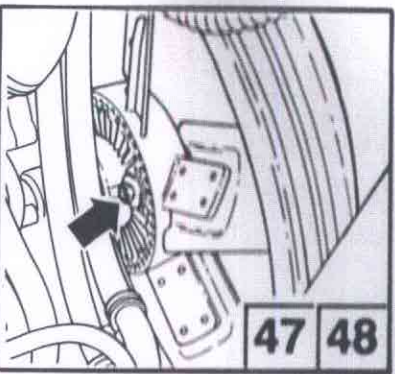
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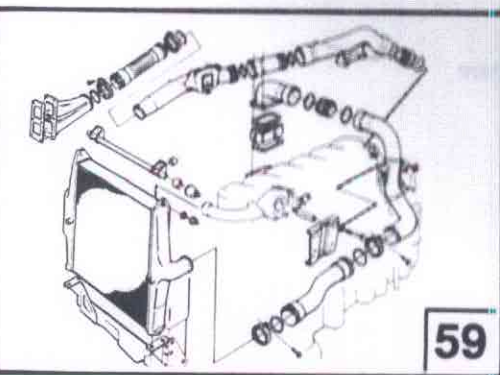
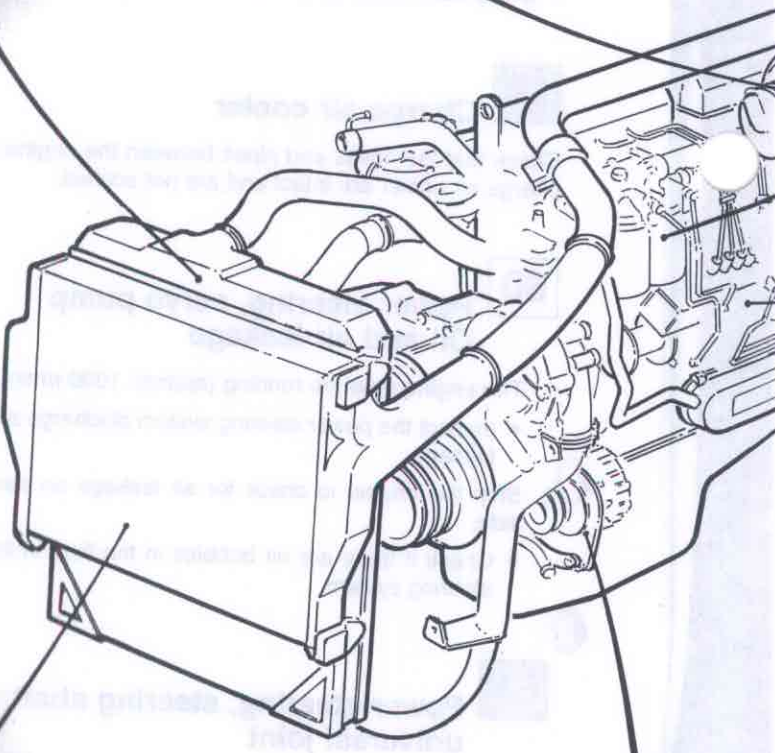
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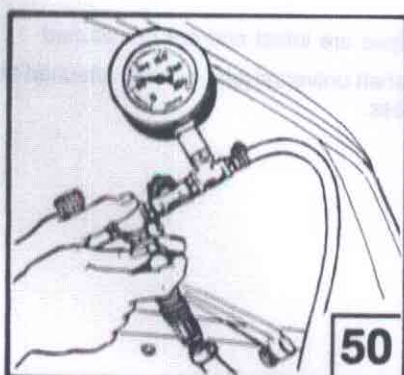
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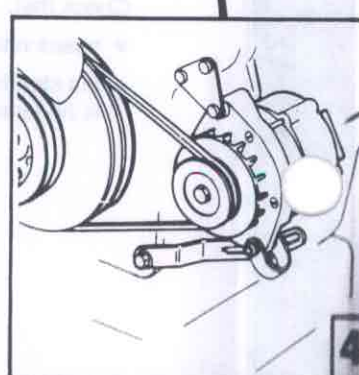
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