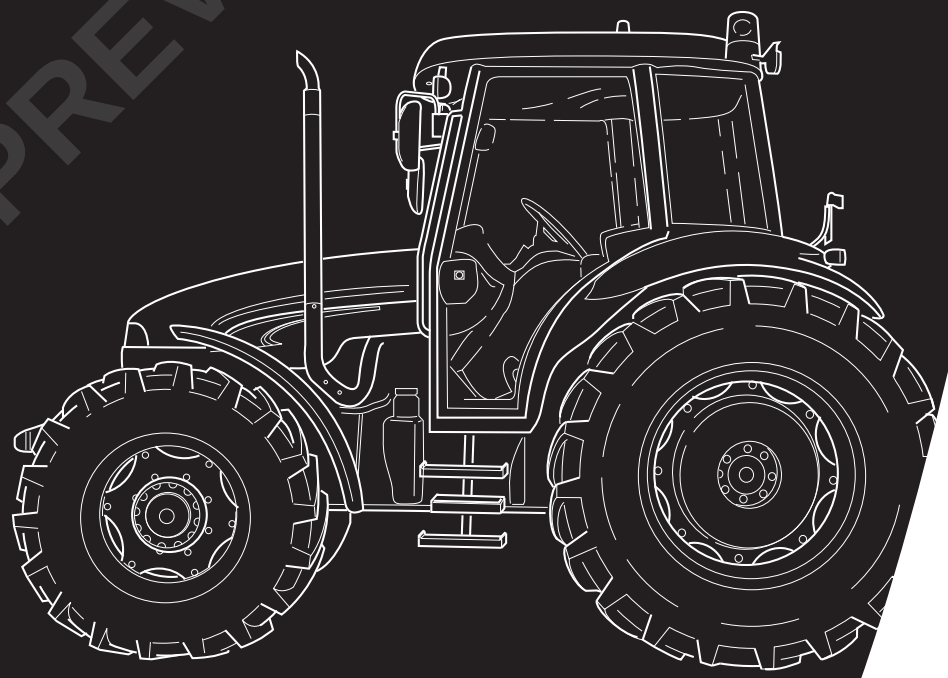
REPAIR MANUAL

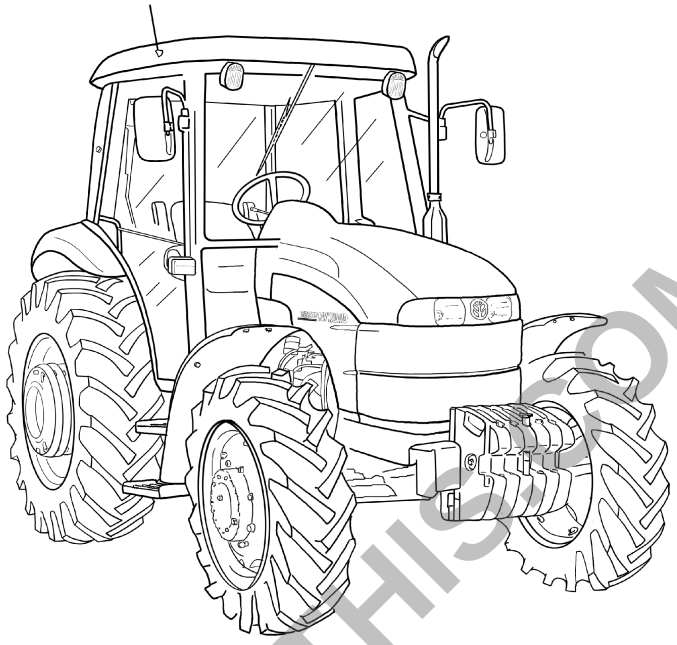
NEW HOLLAND
TD60D
TD70D
TD80D
TD90D
TD95D

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TD60D – TD70D – TD80D – TD90D – TD95D MODEL TRACTORS SERVICE MANUAL

SECTIONS

GENERAL *00*
ENGINE *10*
CLUTCH *18*
GEARBOX *21*
TRANSMISSION OF MOTION *23*
FRONT MECHANICAL TRANSMISSION *25*
REAR MECHANICAL TRANSMISSION *27*
POWER TAKE-OFF *31*
BRAKES *33*
HYDRAULIC SYSTEMS *35*
STEERING *41*
AXLE AND WHEELS *44*
AIR CONDITIONING SYSTEM *50*
ELECTRICAL SYSTEM *55*
CAB *90*

S E R V I C E

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GENERAL SPECIFICATIONS	3 cylinders	4 cylinders
Engine type:		
− mod. TD60D normally aspirated − type 8035.05D.939 (BOSCH pump)	see data pages 6−7	−
− mod. TD70D turbocharged − type 8035.25C.939 (BOSCH pump)	see data pages 8−9	−
− mod. TD80D normally aspirated − type 8045.05R.939 (BOSCH pump)	−	see data pages 10−11
− mod. TD90D turbocharged − type 8045.25.939 (BOSCH pump)	−	see data pages 12−13
− mod. TD95D turbocharged − type 8045.25L.939 (BOSCH pump)	−	see data pages 14−15
Cycle	Diesel, 4−stroke	
Fuel injection	Direct	
Number of cylinders in line	3	4
Cylinder liners		dry force−fitted in cylinder block
Piston diameter		
− mod. TD60D	104 mm (4.0945 in.)	−
− mod. TD70D	104 mm (4.0945 in.)	−
− mod. TD80D	−	104 mm (4.0945 in.)
− mod. TD90D	−	104 mm (4.0945 in.)
− mod. TD95D	−	104 mm (4.0945 in.)
Piston stroke	115 mm (4.5276 in.)	
Total displacement:		
− mod. TD60D−TD70D	2931 cm^3 (178.8496 $in.^3$)	−
− mod. TD80D−TD90D−TD95D	−	3908 cm^3 (238.4662 $in.^3$)
Compression ratio	17 to 1 normally aspirated 16.5 to 1 turbocharged	
Maximum power 2000/25 EC at 2500 rpm:		
− mod. TD60D	43.4 kW (59 hp)	−
− mod. TD70D	50.7 kW (69 hp)	−
− mod. TD80D	−	58.8 kW (80 hp)
− mod. TD90D	−	65.5 kW (89 hp)
− mod. TD95D	−	69.1 kW (94 hp)
Maximum power ECE R 24 at 2500 rpm:		
− mod. TD60D	41.2 kW (56 hp)	−
− mod. TD70D	47.8 kW (65 hp)	−
− mod. TD80D	−	55.9 kW (76 hp)
− mod. TD90D	−	63.3 kW (86 hp)
− mod. TD95D	−	66.9 kW (91 hp)
Fast idling speed	2500 rpm.	
Maximum torque (daNm) at 1500 rpm: TD60D model	20.7 (152.6753 ft lb)	−
Maximum torque (daNm) at 1500 rpm: TD70D model	25.0 (184.3905 ft lb)	−
Maximum torque (daNm) at 1500 rpm: TD80D model	−	27.9 (205.9778 ft lb
Maximum torque (daNm) at 1500 rpm: TD90D model	−	32.0 (236.0194 ft lb)
Maximum torque (daNm) at 1500 rpm: TD95D model	−	33.7 (248.5584 ft lb)
Number of main bearings	4	5
Sump	Structural, cast iron	

(Continued)

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ENGINE
Removal − Installation (Operation 10 001 10)

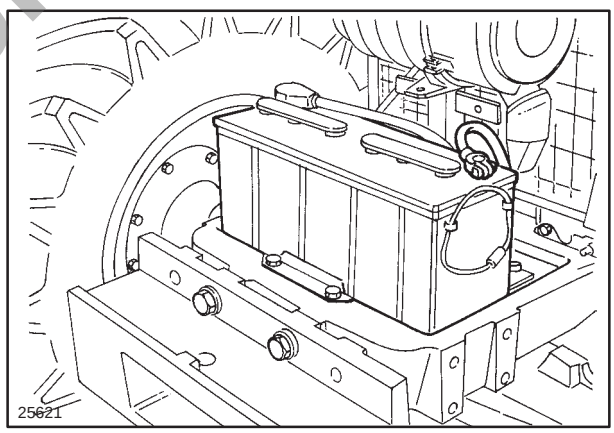
DANGER

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.

WARNING

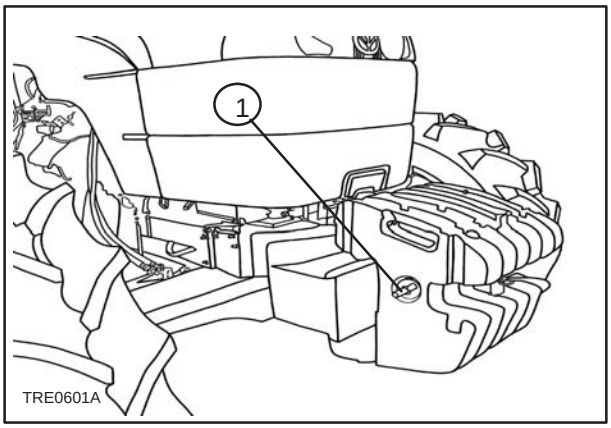
Always use suitable tools to align holes in parts.
NEVER USE FINGERS OR HANDS.

1. Disconnect the battery negative cable.
2. Drain oil from the transmission/gearbox and power steering unit.
3. Drain the cooling system.



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4. Unscrew the nut (1) from the weight retaining pin.



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ENGINE TROUBLESHOOTING

Faults	Possible Cause	Correction
Engine does not start.	**1.** Batteries partially discharged.	Check and recharge battery. Replace if necessary.
	2. Battery terminal connections corroded or loose.	Clean, inspect and tighten terminal nuts. Replace terminals and nuts if excessively corroded.
	3. Incorrect injection pump timing.	Adjust injection pump timing.
	4. Impurities or water in fuel lines.	Disconnect fuel lines from injection pump and clean thoroughly. If necessary clean and dry the fuel tank.
	5. No fuel in tank.	Fill tank.
	6. Fuel supply pump malfunction.	Check and replace pump if necessary.
	7. Air in fuel system.	Check fuel lines, unions, supply pump, filters and injection pump for air, then bleed system.
	8. Starter motor faulty.	Repair or replace starter motor.
	9. Faulty thermostart.	Check and replace thermostart, if necessary.
Engine stalls.	**1.** Idle speed too low.	Adjust idle speed.
	2. Irregular delivery from injection pump.	Check injection pump delivery on test bench.
	3. Impurities or water in fuel lines.	Disconnect fuel lines from injection pump and clean thoroughly. If necessary clean and dry the fuel tank.
	4. Fuel filters clogged.	Renew filter cartridges.
	5. Incorrect valve clearances.	Adjust valve clearance.
	6. Burnt or cracked valves	Replace the valves.
	7. Air in fuel system.	Check fuel lines, unions, supply pump, filters and injection pump for air, then bleed system.
	8. Injection pump drive mechanism damaged.	Replace damaged parts.

(continued)

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ANGLE TIGHTENING TORQUE DATA

PART	Thread	Preliminary torque		Angle
		Nm	ft lb	
Cylinder head bolts (2) fig. 3 or 5	M 12 x 1.25	70	51.6293	90° + 90°
Main bearing cap bolts (4) fig. 3 or 5	M 14 x 1.5	80	59.0050	90°
Big−end cap bolts (5) fig. 3 or 5	M 11 x 1.5	40	29.5025	60°
Flywheel mounting bolts (3) fig. 3 or 5	M 12 x 1.25	40	29.5025	60°

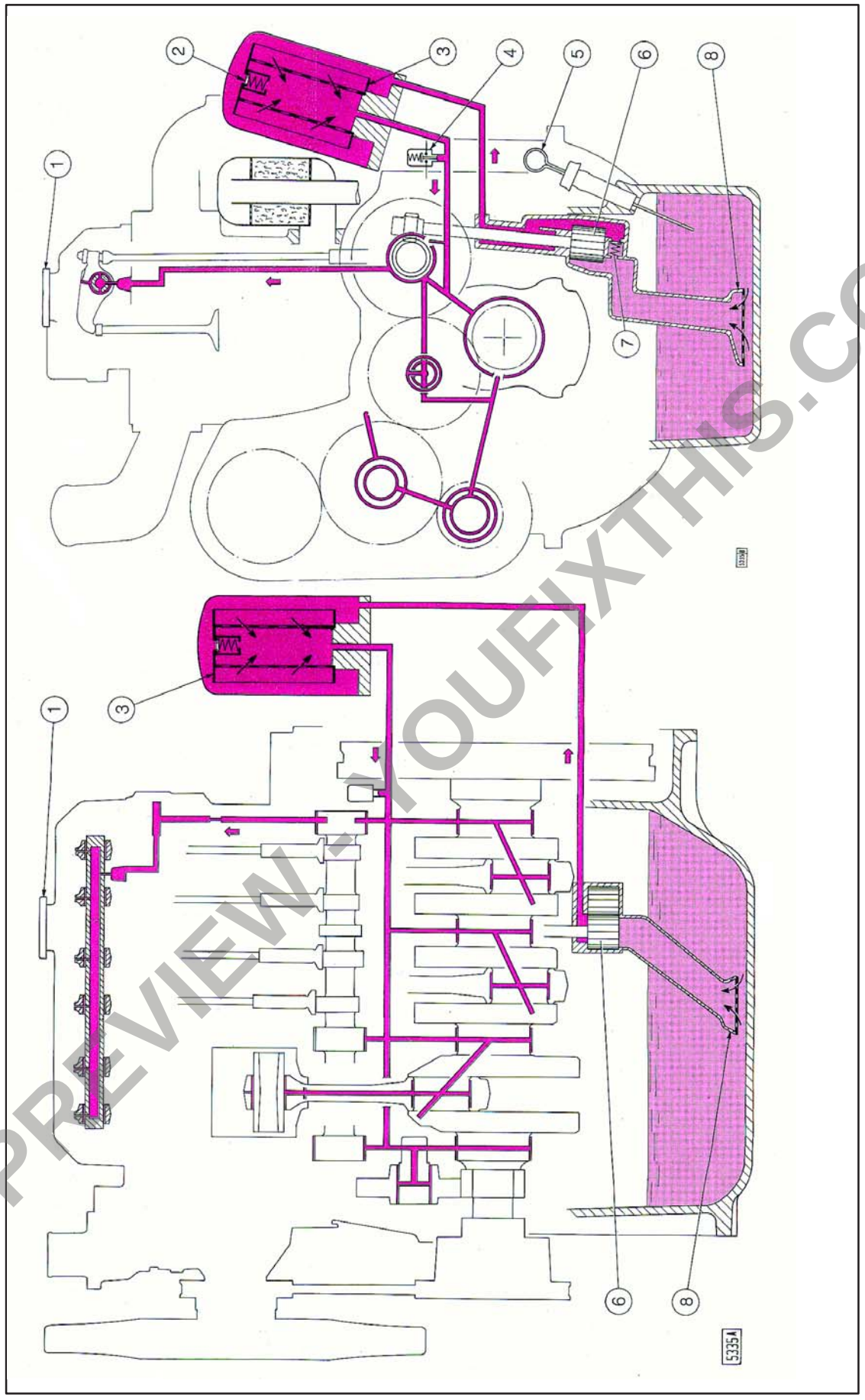
TIGHTENING TORQUE DATA

PART	Thread	Tightening torque	
		Nm	ft lb
Rocker shaft pedestal bolts (1) fig. 3 or 5	M 8	25	18.4390
Crankshaft hub retaining nut (7) fig. 3 or 5	M 30 x 1.5	294	216.8432
Fan and alternator pulley bolts (6) fig. 3 or 5	M 10 x 1.25	55	40.5659
Additional counterweight retaining bolts (1) fig. 6 for TD80D, TD90D and TD95D models	M 12 x 1.25	110	81.1318
Inlet manifold retaining bolts (1) fig. 68	M 8	25	18.4390
Alternator and belt tension adjustment nut (1) fig. 54	M 10 x 1.25	55	40.5659
Coolant pump retaining bolts (1) fig. 59	M 10 x 1.25	55	40.5659
Nuts for injector mounting studs (1) fig. 138	M 8	25 **(*)**	18.4390 **(*)**
Rocker cover nuts (1) fig. 80	M 8	15	11.0634
Rocker shaft pedestal bolts (2) fig. 81	M 8	25	18.4390
Oil pump and pump cover retaining bolts (1) fig. 89	M 8	25	18.4390
Timing gear case and cover bolts (1) fig. 93	M 8	25	18.4390
Intermediate flanged journal bolts (1) fig. 96	M 10 x 1.25	55	40.5659
Camshaft thrust plate retaining bolts (4) fig. 97	M 8	35	25.8146
Rear crankcase cover bolts (2) fig. 117	M 8	25	18.4390
Tappet adjuster screw locknuts (1) fig. 137	M 8	22	16.2263
Exhaust manifold retaining bolts (1) fig. 64	M 8	25	18.4390
Injection pump mounting nuts (1) fig. 70	M 8	25	18.4390
Sump pan retaining bolts (4) fig. 86, to − inner rear timing cover and gear case − cylinder block and flywheel case • TD60D, TD70D, TD80D and TD90D models • TD95D models	 M 10 X 1.25 M 10 X 1.25 M 10 X 1.25	 39 to 49 49 to 59 49 to 69	 28.7692 to 36.1405 36.1405 to 43.5161 36.1405 to 50.8918

(*) Tighten the nuts in two stages: see the operation in figure 138.

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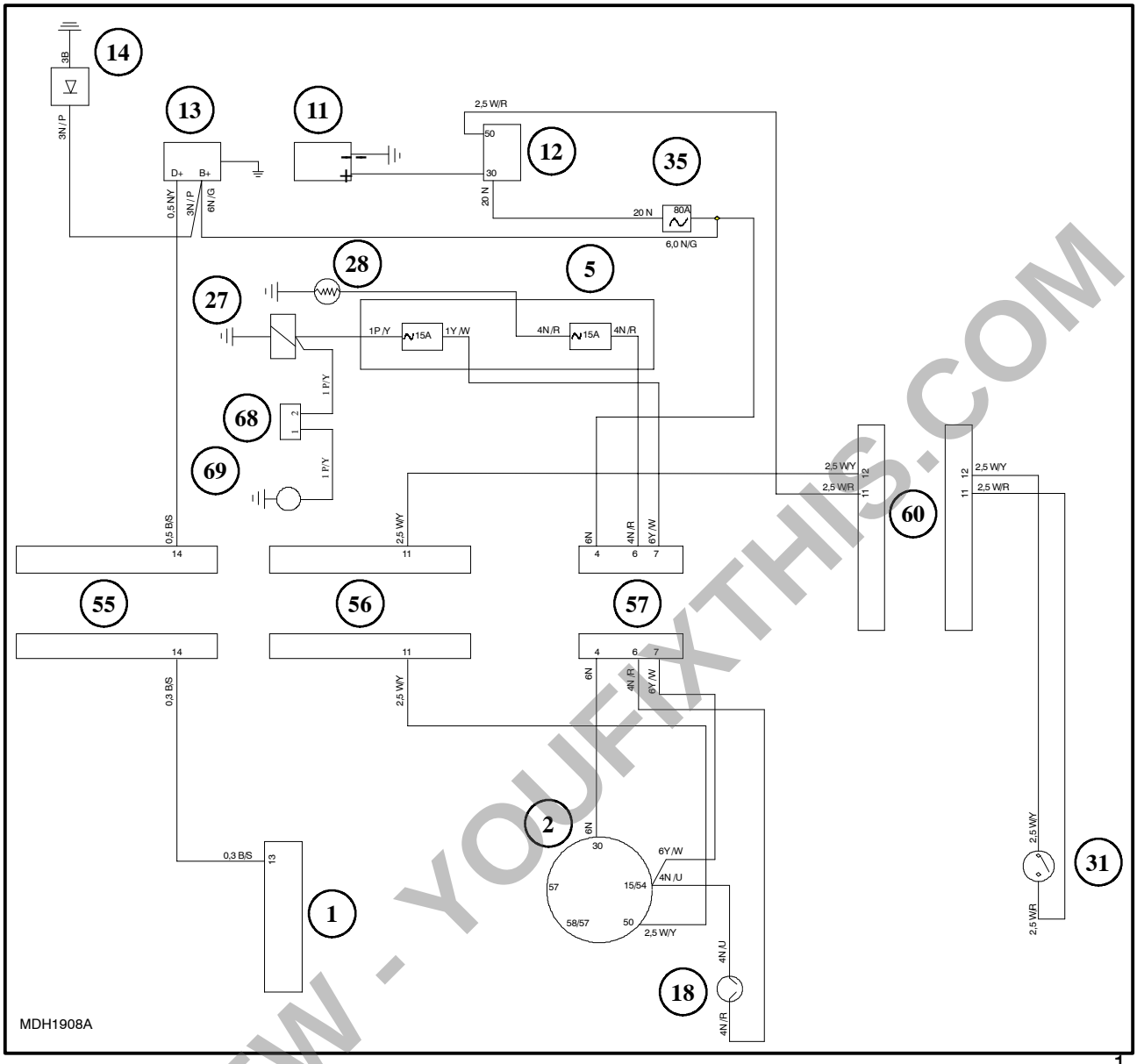
7

Lubrication system of normally aspirated 3−cylinder engines

1. Oil filler cap 2. Filter safety valve (opens when oil pressure at filter inlet exceeds the outlet pressure by 1.5−1.7 bar/cm^2 (140.355− 159.068 psi/in^2)
3. Filter. 4. Switch for low engine oil pressure warning (on dashboard). 5. Dipstick.
6. Pump. 7. Oil pressure limiting valve. 8. Screen filter on pick−up pipe

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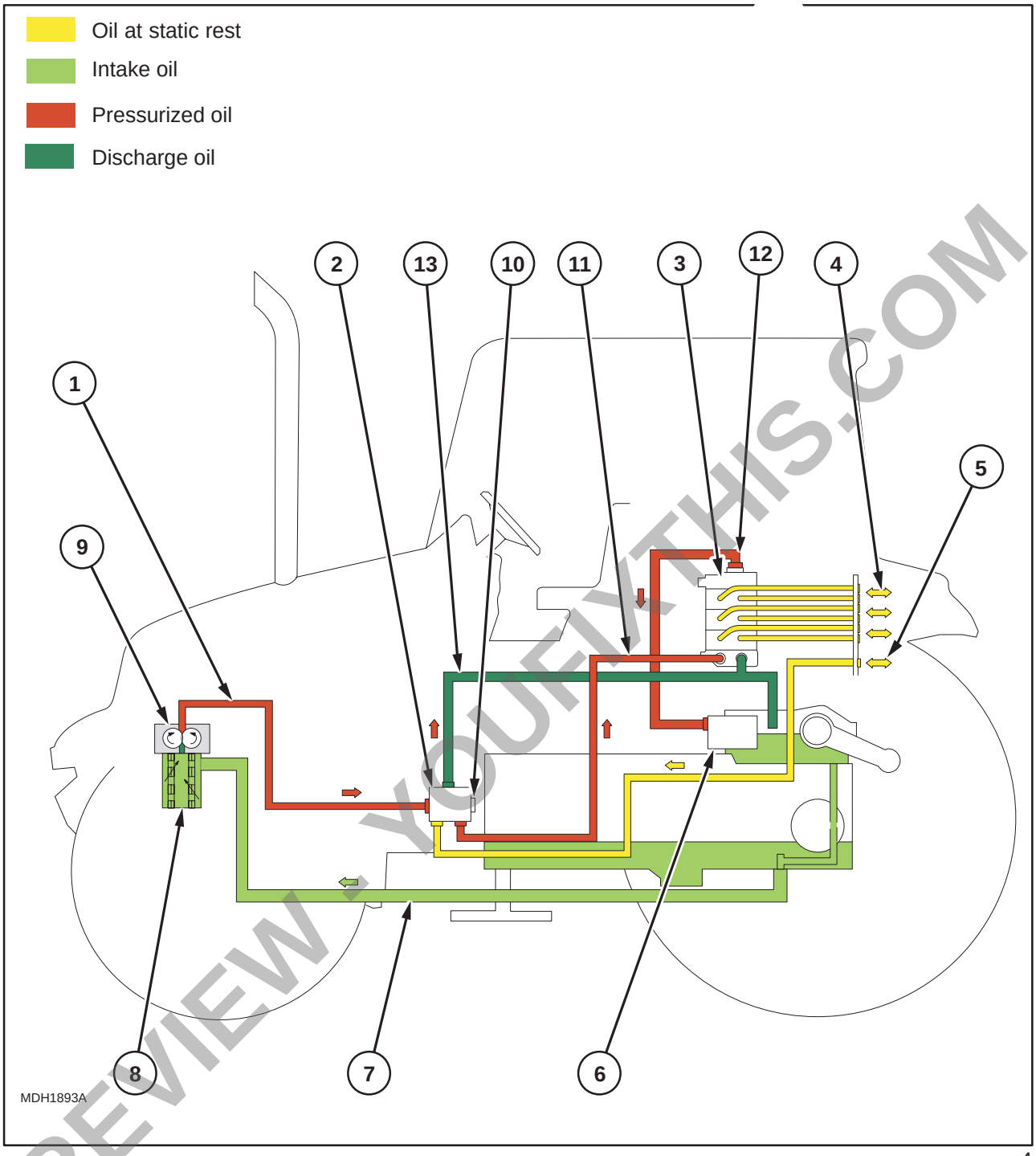


1

STARTING CIRCUIT

2. Starter switch
5. Fusebox
11. Battery
12. Starter motor
13. Alternator
14. Circuit breaker
18. Thermostarter pushbutton
27. Engine shut-down solenoid valve
28. Thermostarter
31. Safety start unit
35. Main fuse
55. White (15 pin) connection
56. Black (15 pin) connection
57. (8 pin) connection
60. (15 pin) connection
68. Thermometric switch
69. Advance cut-out solenoid valve

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HYDRAULIC LIFT CIRCUIT

1. Trailer brake valve delivery line.
2. Trailer brake valve.
3. Auxiliary control valves.
4. Auxiliary control valve lines.
5. Trailer brake control valve line.
6. Lift control valve.
7. Suction line.
8. Oil filter.
9. Hydraulic pump.
10. Trailer brake valve mechanical actuator.
11. Delivery line to additional control valves.
12. Delivery line to lift control valve.
13. Discharge line.

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INTRODUCTION

◊ *This manual is divided into sections identified by two-figure numbers. Each section has independent page numbering.*
For ease of reference, these sections have the same numbers and names as the Repairs Rate Book sections.

◊ *The different sections can easily be found by consulting the table of contents on the following pages.*

◊ *The document number of the manual and the edition/update dates are given at the bottom of each page.*

◊ *Pages updated in the future will be identified by the same document number followed by a two-figure update number (for example: 1st update 603.54.471.01; 2nd update 603.54.471.02; etc.) and the corresponding issue date.*
These pages will be supplemented by a reprint of the updated contents page.

◊ *The information contained in this manual was current on the date printed on each section. As NEW HOLLAND constantly improves its product range, some information may be out of date subsequent to modifications implemented for technical or commercial reasons or to meet legal requirements in different countries.*
In the event of conflicting information, consult the NEW HOLLAND Sales and Service Departments.

IMPORTANT WARNINGS

◊ *All maintenance and repair work described in this manual must be performed exclusively by NEW HOLLAND service technicians in strict accordance with the instructions given and using any specific tools necessary.*

◊ *Anyone who performs the operations described herein without strictly following the instructions is personally responsible for resulting injury or damage to property.*

◊ *The Manufacturer and all organisations belonging to the Manufacturer's distribution network, including but not restricted to national, regional or local distributors, will accept no responsibility for personal injury or damage to property caused by abnormal function of parts and/or components not approved by the Manufacturer, including those used for maintenance and/or repair of the product manufactured or marketed by the Manufacturer.*
In any case, the product manufactured or marketed by the Manufacturer is covered by no guarantee of any kind against personal injury or damage to property caused by abnormal function of parts and/or components not approved by the Manufacturer.

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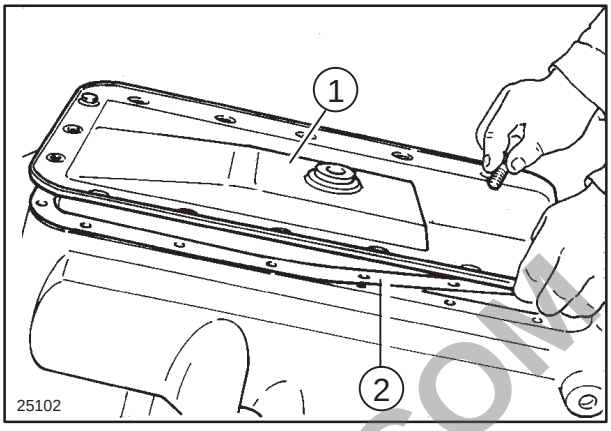
LUBRICATION SYSTEM DATA	mm (in.)	
	TD60D, TD80D	TD70D, TD90D and TD95D
Assembly clearance between oil pump drive shaft and bushing	0.016 to 0.055 (0.0006 to 0.0022)	−
Clearance between shaft and driven gear	0.033 to 0.066 (0.0013 to 0.0026)	−
Tooth backlash between drive and driven gears	0.100 (0.004)	−
Radial clearance between drive and driven gears and housing	0.060 to 0.170 (0.0024 to 0.0067)	−
Thickness of drive and driven gears	40.961 to 41.000 (1.6126 to 1.6142)	−
Height of gear seat in pump	41.025 to 41.087 (1.6152 to 1.6176)	−
Endfloat between gears and gear housing in pump	0.025 to 0.126 (0.0010 to 0.0050)	−
Pressure relief valve spring:		−
− free length	45 (1.7717)	35.9 (1.4134)
− length under load of 45 to 49 N (10.14 to 11.02 lb)	37.5 (1.4764)	−
− length under load of 88 to 94 N (19.84 to 21.16 lb)	30.5 (1.2008)	−
− length under load of 127.8 to 141.2 N (286.60 to 317.46 lb) (2, fig. 182)	−	29 (1.1417)
− length under load of 233.4 − 258 N (524.70 to 579.81 lb) (2, fig. 182)	−	3.2 (0.9134)
For further lubrication system data	See page 3	

COOLING SYSTEM DATA	mm (in.)
Interference fit between pump impeller and shaft	0.017 to 0.059 (0.0007 to 0.00231)
Interference fit between fan hub and shaft	0.024 to 0.058 (0.0009 to 0.0023)
Interference fit between front seal bushing and impeller	0.012 to 0.058 (0.0005 to 0.0023
For further cooling system data	See page 3

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39. Turn the engine upside down on the rotary stand. Remove the sump pan bolts, the sump pan (1) and its gasket (2).

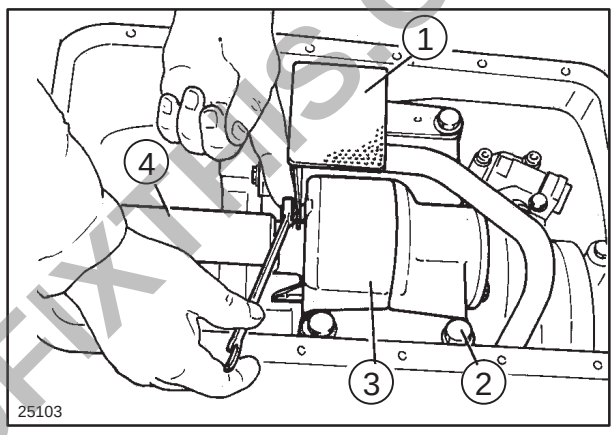


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40. Unscrew the retaining bolts and remove the oil pick−up pipe (1) complete with the strainer and seal.

41. Unscrew the retaining bolts (2) and free the counterweight housing (3) by moving it outward. Remove the sleeve coupling (4) and housing.

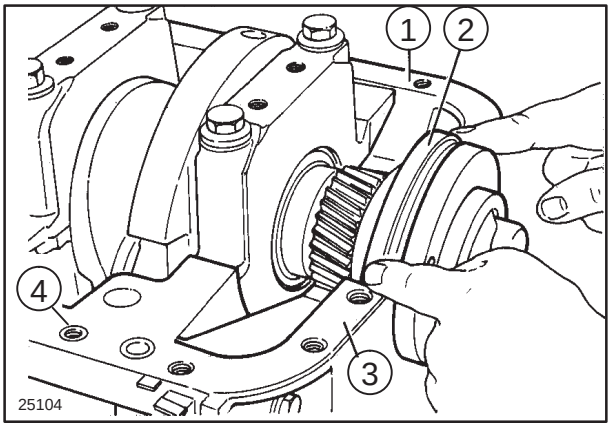
NOTE: Operations **39**, **40** and **41** are to be carried out on 4−cylinder models only. To disassemble and reassemble the rotating counterweight dynamic balance, see pages 67 and 68.



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42. Unscrew the sump pan retaining bolts (4) and remove the sump pan using a hoist, lifting hook **380000216** and lifting chain with eyeholes.

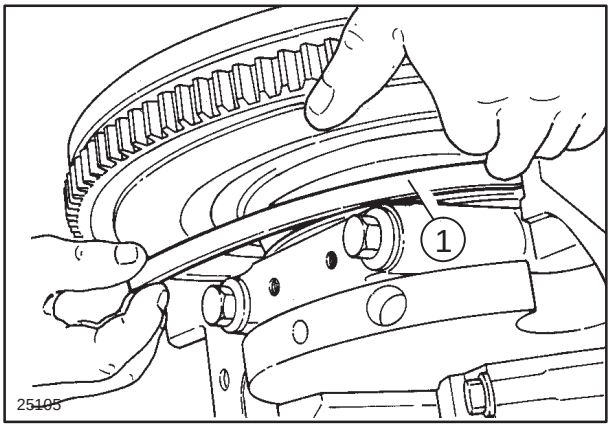
43. Remove the half−gaskets (1) and (3) between the crankcase and sump pan and the gasket (2) between the timing gear carrier and sump pan.



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44. Remove the gasket (1) between the flywheel carrier and the sump pan.

NOTE: When fitting the gaskets (1) and (3) (fig. 86), apply **RHODORSIL CAF1** silicone sealing compound to the mating surfaces.



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CHECKS, MEASUREMENTS AND REPAIRS − LUBRICATION SYSTEM

WARNING

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

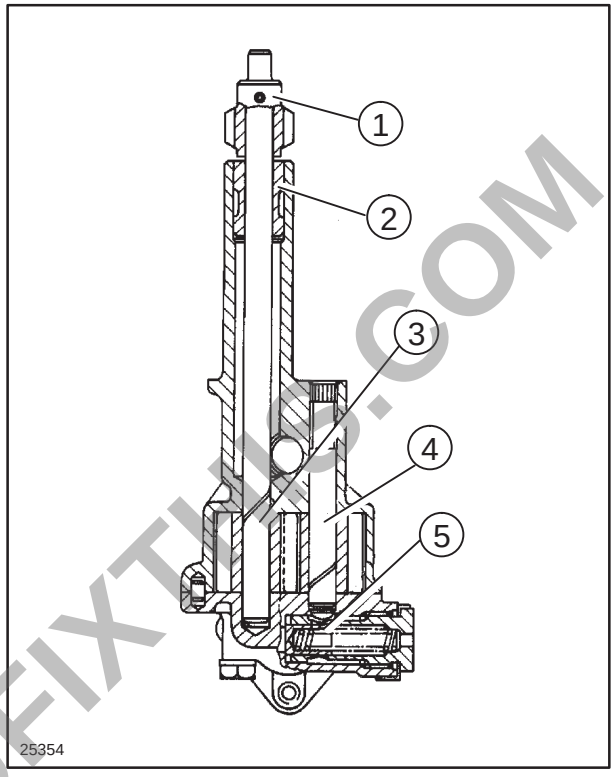
Clean all parts carefully before proceeding with the operations described below.

OIL PUMP − Overhaul

To access the oil pump, remove the sump pan.

When servicing the pump, check component wear against dimensions specified in the table.

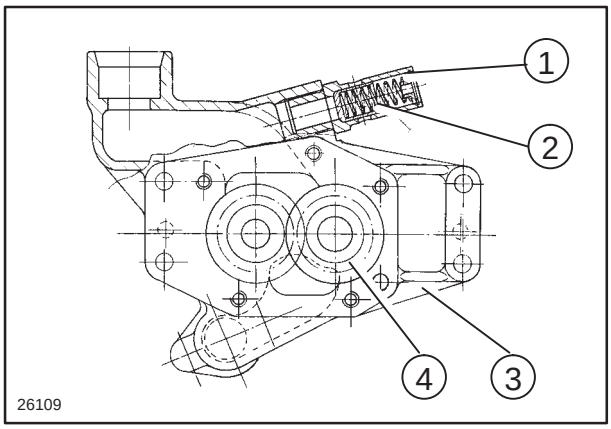
In case of replacement, note that the drive shaft (3) and drive gear are supplied ready assembled, with the gear hot shrink−fitted on the shaft.



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Cross−sectional view of engine lubrication oil pump models TD60D and TD80D Models

1. External drive gear.
2. Bushing.
3. Drive shaft and gear.
4. Driven shaft and gear.
5. Pressure relief valve.



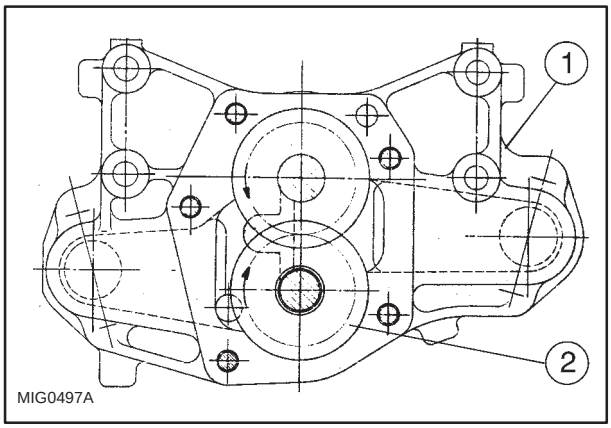
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Cross−sectional view of engine lubrication oil pump models TD90D and TD95D Models

1. Pressure relief valve.
2. Spring.
3. Pump housing.
4. Internal gears.

Cross−sectional view of engine lubrication oil pump models TD70D Model

1. Pump housing.
2. Internal gears.



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CLUTCH
Removal−Refitting (Operation 18 110 10)

To access the clutch it is necessary to separate the engine complete with the front axle from the transmission.

DANGER

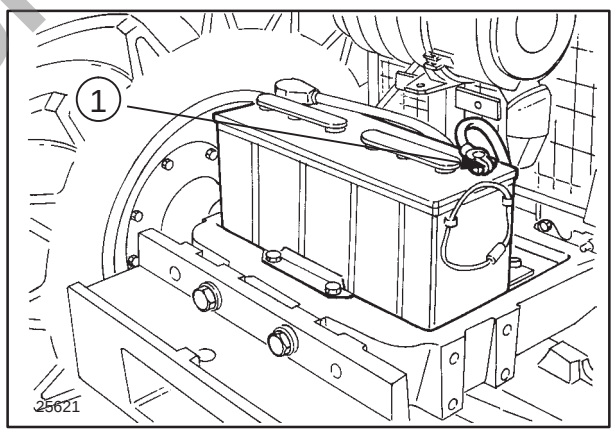
Lift and handle all heavy parts using suitable lifting equipment.
Make sure that assemblies or parts are supported by means of suitable slings and hooks. Check that no one is in the vicinity of the load to be lifted.

ATTENTION

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

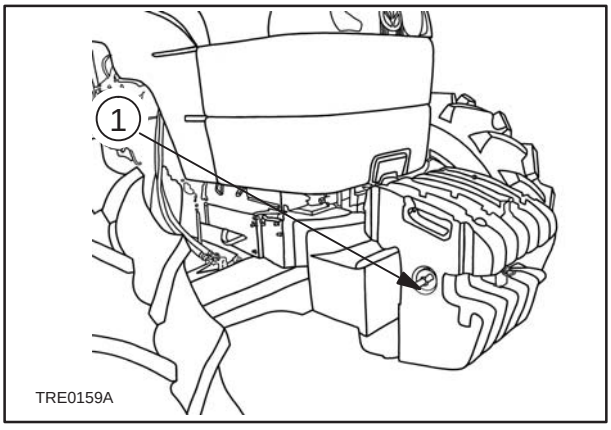
Proceed as follows:

1. Disconnect the battery negative cable.
2. Drain off the oil from the gearbox/transmission casing.



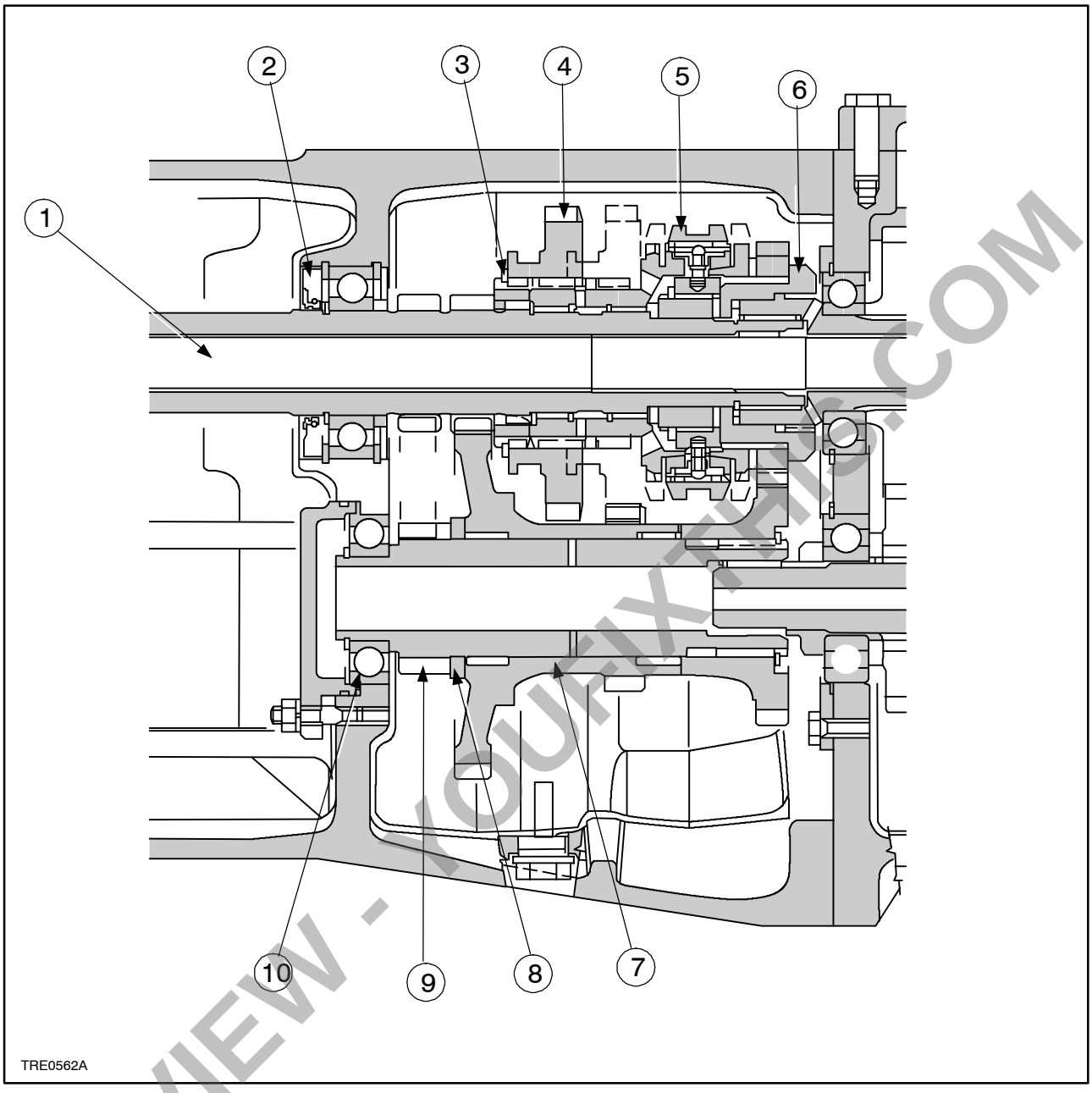
2

3. Drain off the coolant from the engine cooling system.
4. Disconnect two flexible houses from the power steering control cylinder and drain off the oil from the steering system.
5. Remove the front ballast (1).



3

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3

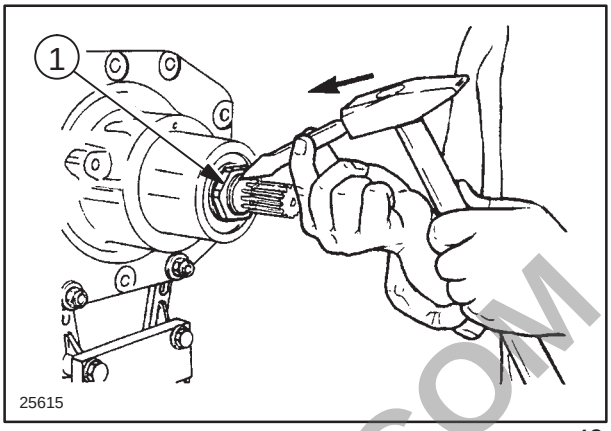
Longitudinal section through reverser-creeper unit

1. Reverser and creeper unit control shaft.
2. Seal.
3. Circlip.
4. Creeper unit control gear.
5. Reverser-creeper unit synchroniser.
6. Gearbox driving shaft control gear.
7. Creeper unit driven gear.
8. Thrust washer.
9. Reverser driven shaft.
10. Seal.

Note - On assembly apply sealing compound to the surfaces **X** following the indications given on page 6 in chapter 1.

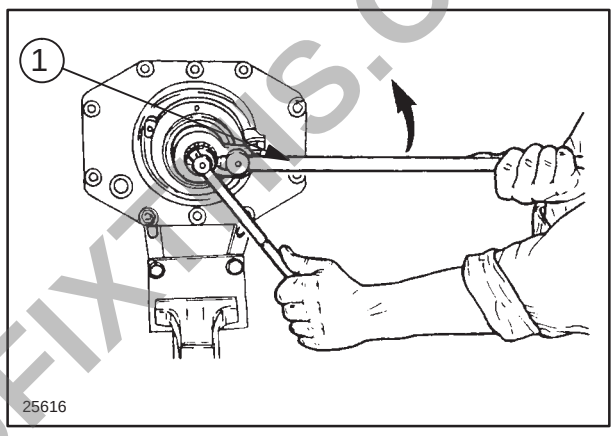
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29. Straighten the locking tab on the splined shaft-lock nut (1).



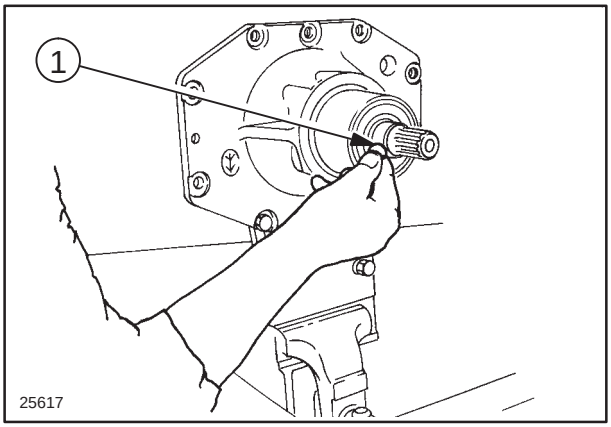
49

30. Unscrew the nut using wren8ch **380000268** (1) while preventing rotation of the bevel drive pinion shaft using wrench **380000257**.



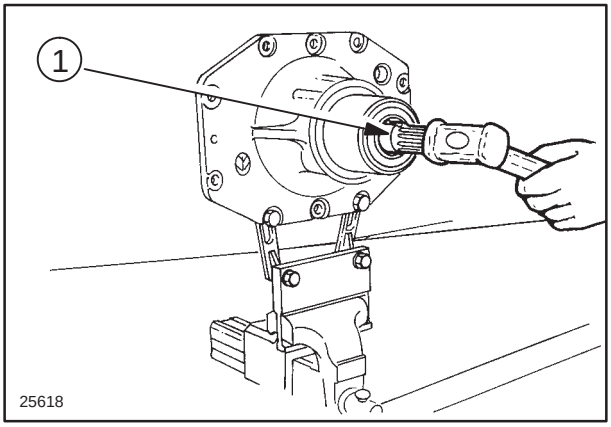
50

31. Recover the splined shaft detent ball (1).



51

32. Withdraw the bevel drive pinion shaft (1) from the rear of the casing and recover the spacer, the adjustment shims and the bearing.

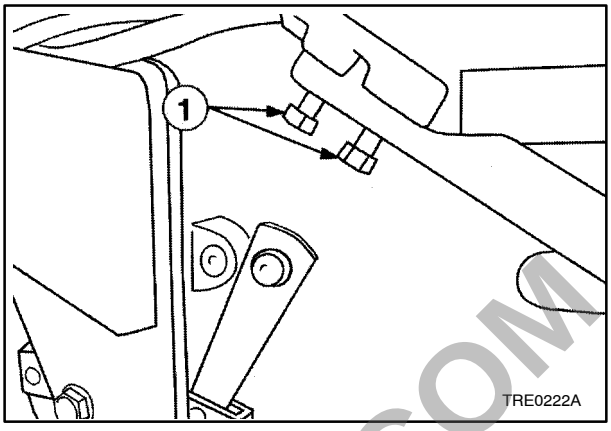


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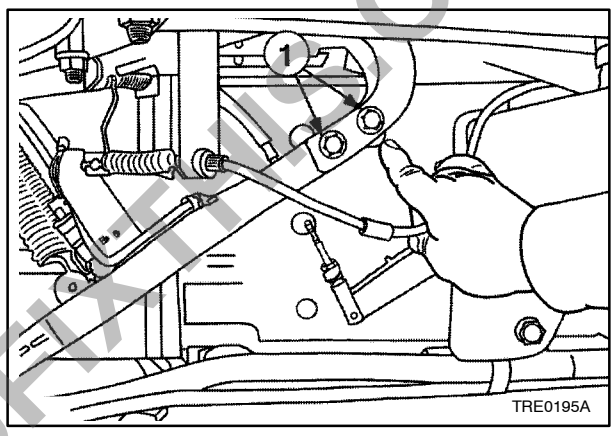
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24. Remove the bolts (1) and remove the clutch pedal assembly from the upper surface of the cab/platform.



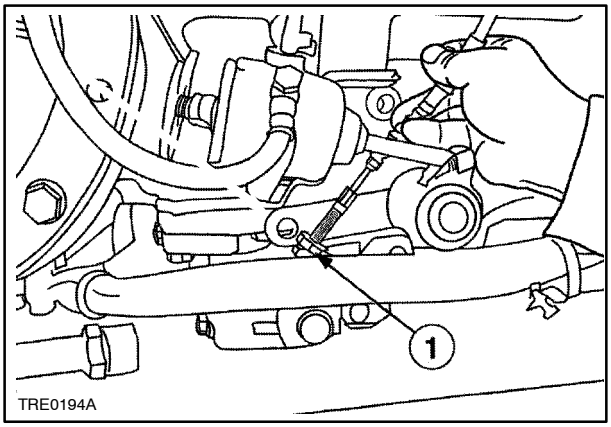
31

25. Remove the securing nuts (1) from the brake pedal retaining bolts. Remove the pedals from the upper surface of the cab/platform.



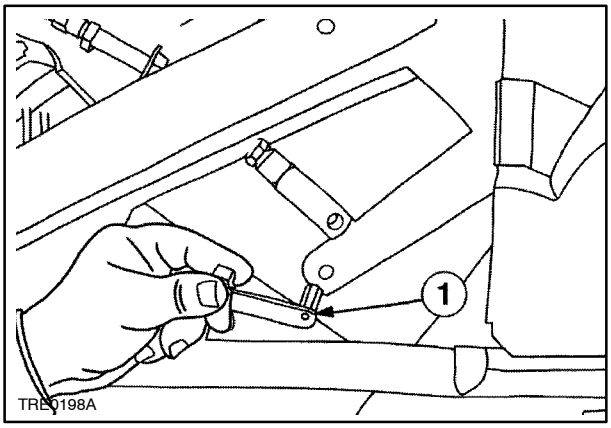
32

26. Remove the nut (1) from the parking brake control cable.



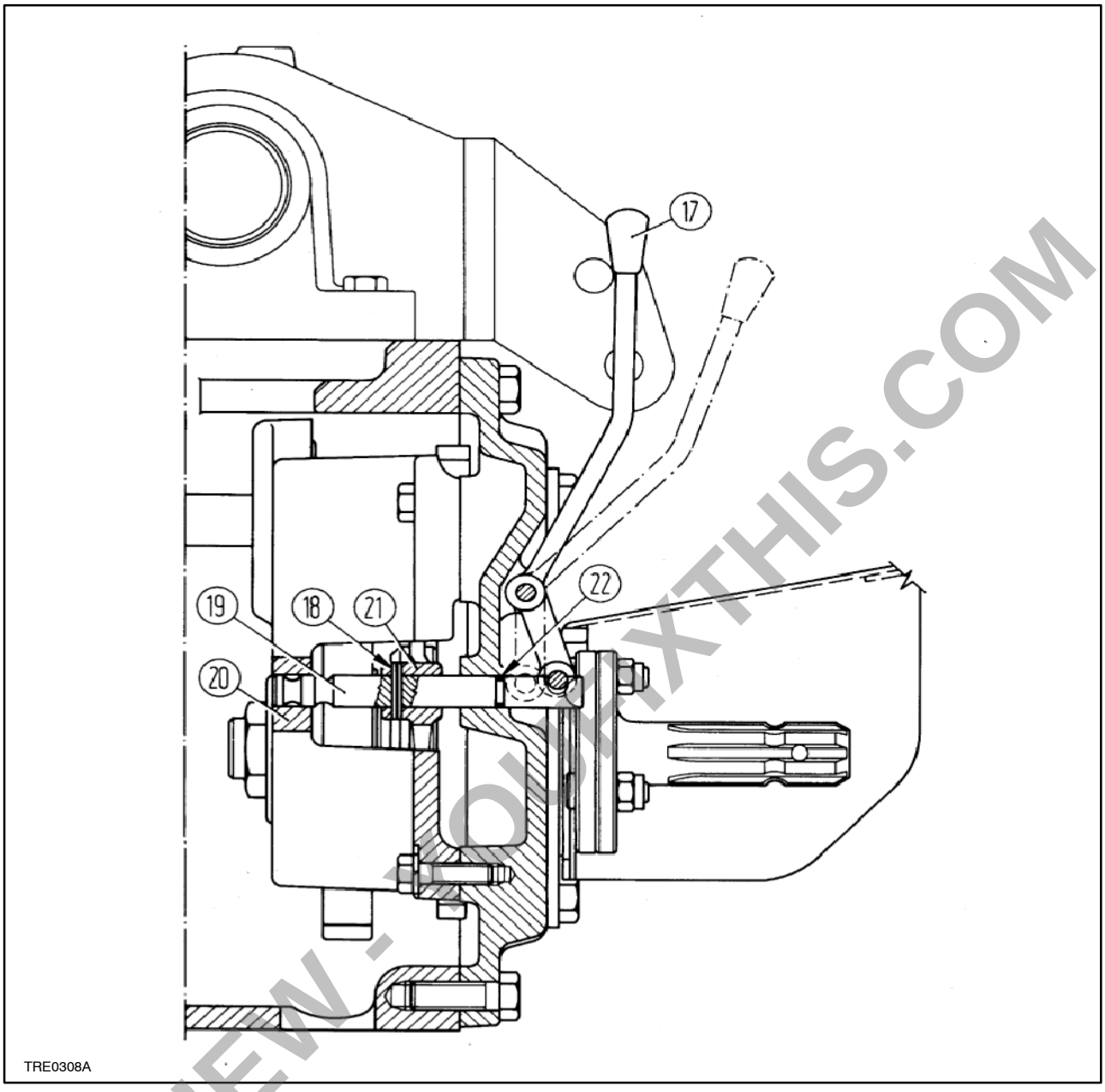
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27. Remove the reatining pin (1) and disengage the PTO clutch cable.



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4

Sectional diagram of single- and 2-speed PTO

17. PTO speed selector lever.
18. Roll pin.
19. Shaft.
20. Rear cover.
21. Fork.
22. O-ring.

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MAIN SPECIFICATION OF IMPLEMENT HITCHING DEVICE

Type		three−point linkage
Category: − All Models		2
Draft control		by means of lower arms with flex bar
Maximum liftable load with centre of gravity 610 mm from the lower arm link ends: with arms horizontal (with top link connected to hole on upper support):		
− TD60D, TD70D Models	kg (lb)	2260 (4982.45)
− TD80D, TD90D and TD95D Models	kg (lb)	2700 (5952.48)
Maximum liftable load: with arms horizontal (with top link connected to upper support pin):		
− TD60D, TD70D Models	kg (lb)	3000 (6613.87)
− TD80D, TD90D and TD95D Models	kg (lb)	3565 (7859.48)
Flex bar diameter: − TD60D, TD70D, TD80D, TD90D Models	mm (in.)	24.867 − 24.900 (0.9790 − 0.9803)
Axial clearance of flex bar	mm (in.)	1.2 − 4.1 (0.0472 − 0.1614)

MAIN SPECIFICATION OF HYDRAULIC PUMP (All models)

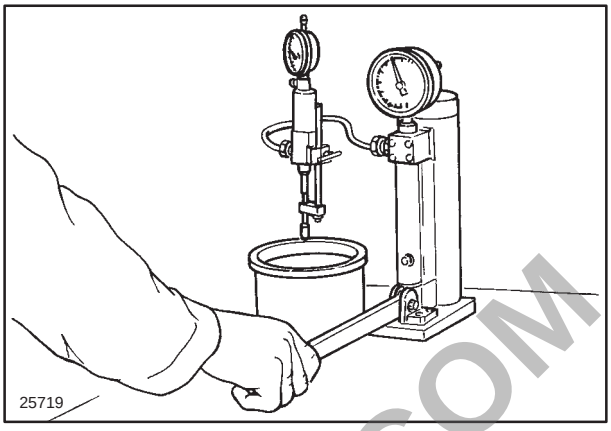
Filter		
Type		paper cartridge
Location		fixed to the pump housing on suction side
Pump		
Type		gear type with oil suction from transmission casing
Location		Flanged on the rear left−hand side of the engine
Construction		BOSCH
Model		A31
Operation		by means of the engine gears
Direction of rotation (as seen from drive side)		left
Engine speed to pump speed ratio		1 : 1.080
Maximum speed of pump rotation (with engine at maximum power equivalent to 2500 rpm)	rpm	2700
Nominal flow rate	dm^3/turn ($inch^3$/turn)	0.01435 (0.8757)
Corresponding rated output for new pump	dm^3/min ($inch^3$/min)	38.7 (2361.6849)

(continued overleaf)

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15. Operate the hand pump until the oil in the system is at an initial pressure of 245 bar − 3553.41 psi. Using the pressure gauge, check that it takes more than six seconds for the pressure to fall from 196 bar − 2842.73 psi to 98 bar − 1421.36 psi. If it takes less than this, replace the control valve block pin. Bear in mind that this part is supplied together with its seat.



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Cylinder safety valve setting

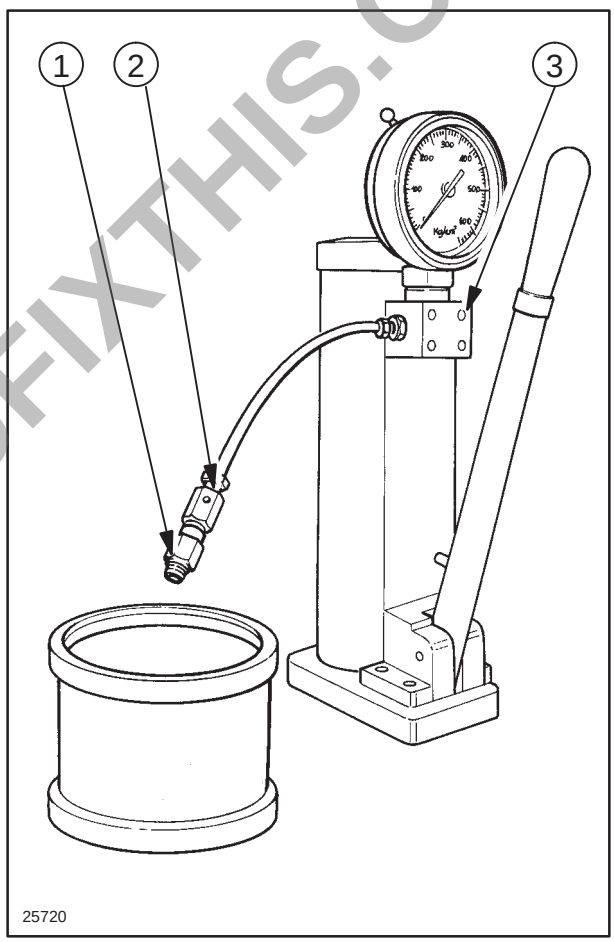
16. Fit the cylinder safety valve (1) on the valve union **380000218** (2) and connect it to the hand pump **380000215** (3).

17. Operate the hand pump (3) and check that the cylinder safety valve opens at a pressure of 210 − 215 bar (3045.78 − 3118.30 psi). If the valve setting does not correspond to the specified value, it is best to replace the valve straight away. If necessary, however, it can be adjusted by turning the threaded cap using spanner **380000230**. Tighten to increase the valve setting value, or slacken to decrease the value.

18. Fit the hydraulic control valve block as follows:

WARNING

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



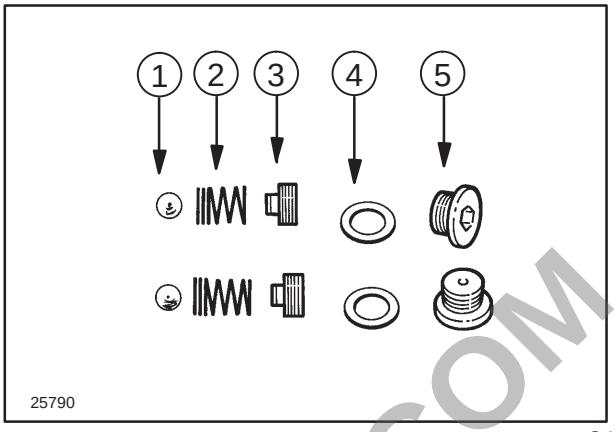
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− Refer to the illustrations on page 8 for the orientation of the various components:
− Apply the torque settings listed on page 5.
− Fit the complete control valve block pin.
− Fit the check valve.
− Fit the cylinder safety valve.
− Fit the control valve.
− Fit the cover on the control valve block.

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Cylinder safety valves components (order of disassembly−assembly).



31

1. Cylinder safety valve ball.

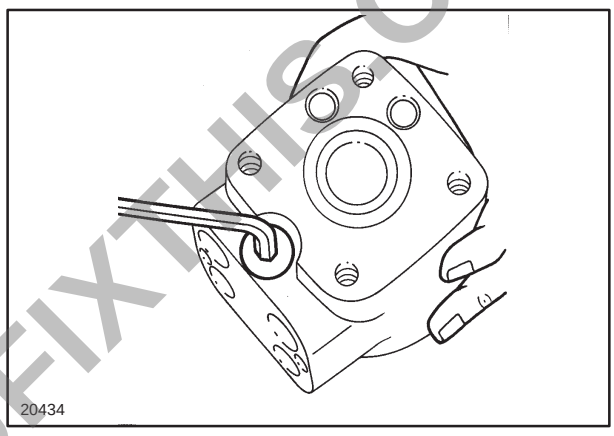
2. Pressure spring.

3. Setting adjuster screw.

4. Seal.

5. Plug.

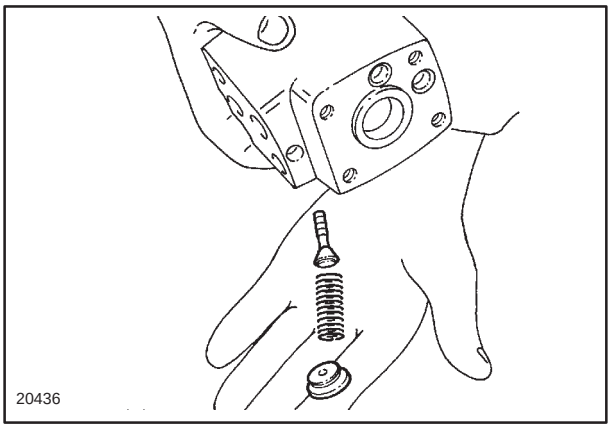
19. Using a 6 mm Allen wrench, remove the threaded plug on the pressure relief valve and extract the seal.



32

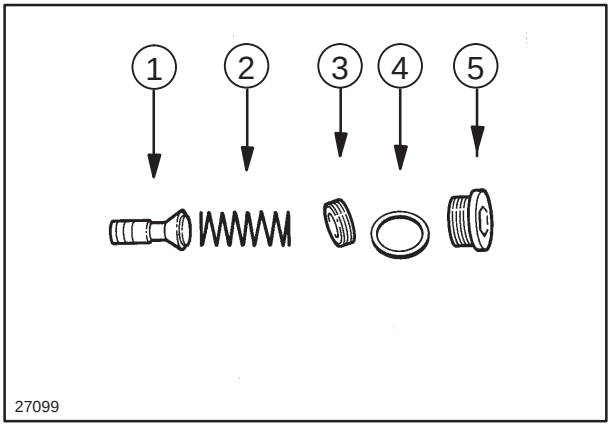
20. Remove the pressure relief valve adjuster screw.

21. Turn the control valve body over and complete disassembly by extracting the spring and the pressure relief valve piston.



33

Pressure relief valve components (order of assembly).



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1. Pressure relief valve.

2. Pressure spring.

3. Setting adjuster screw.

4. Seal.

5. Plug.

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There are five main components of the air conditioning system:

1. **compressor;**
2. **condenser;**
3. **receiver-drier;**
4. **expansion valve;**
5. **evaporator.**

To understand the operating cycle of the system, follow the flow of the refrigerant starting from the compressor (1).

The compressor draws in refrigerant in vapour form at a pressure of 0.5 ÷ 3 bar (7.25 ÷ 43.51 psi) and it compresses it to a pressure of 16 ÷ 24 bar (232.06 ÷ 348.09 psi).

The refrigerant, heated by compression to hot vapour with a temperature of 60÷120 °C (140÷248 °F), enters the condenser coil (2) located forward of the engine radiator.

The air flow passing over the condenser fins and tubes produced by the forward movement of the tractor cools the refrigerant.

This action cools the refrigerant to the point of condensation between 40÷60 °C (104÷140 °F) (depending on the ambient temperature) which thus changes its state from a vapour to a liquid.

The refrigerant, in liquid state at high pressure, is purified by passing through the receiver-drier (3) from where it flows to the expansion valve (4), which restricts the flow of refrigerant and thus reduces its pressure.

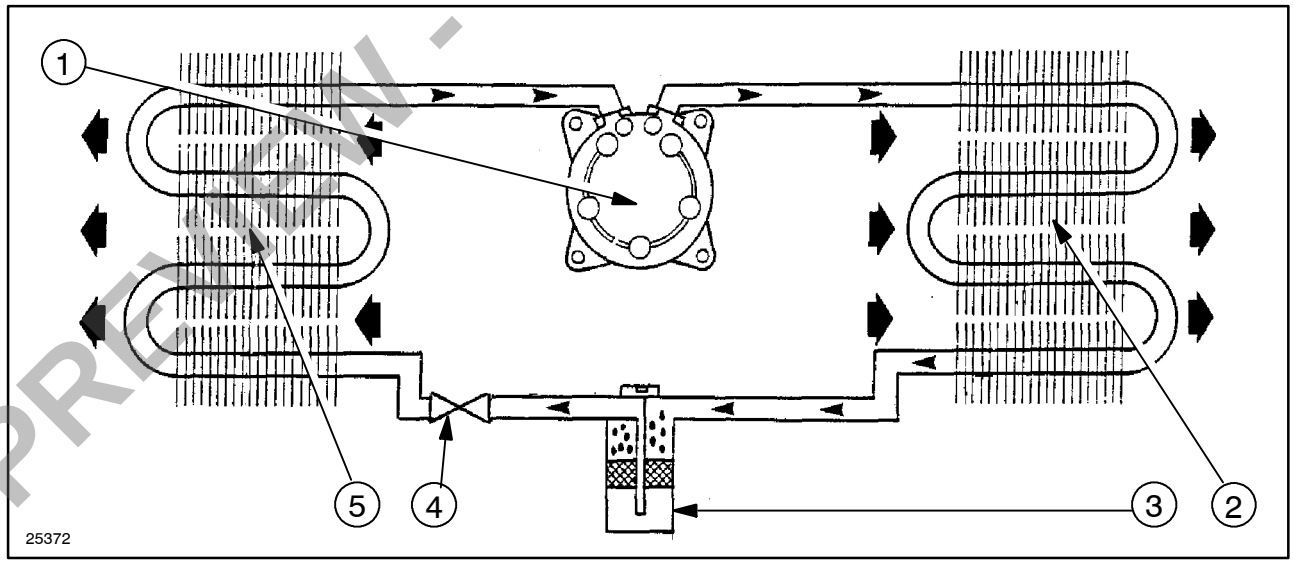
As it passes through the expansion valve (4), part of the refrigerant is transformed into vapour and the low temperature mixture of vapour and liquid thus formed enters the evaporator (5).

Here the electric fan causes a continuous circulation of the cab air over the fins of the evaporator (5), helping the refrigerant to absorb heat from the air and thus change completely from a liquid to vapour.

The evaporation process removes heat from the air passing over the evaporator (5) and thus reduces the temperature inside the cab.

The flow of air over the cold surface of the evaporator (5) also condenses some of the moisture in the air and therefore reduces the humidity in the cab.

On leaving the evaporator (5) at 0÷15 °C (32÷59 °F), the low pressure mixture is aspirated by the compressor (1) to repeat the cycle.



2

Simplified system diagram

1. Compressor.
2. Condenser.
3. Receiver-drier.
4. Expansion valve with thermostatic sensor.
5. Evaporator.

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SECTION 55 − ELECTRICAL SYSTEM

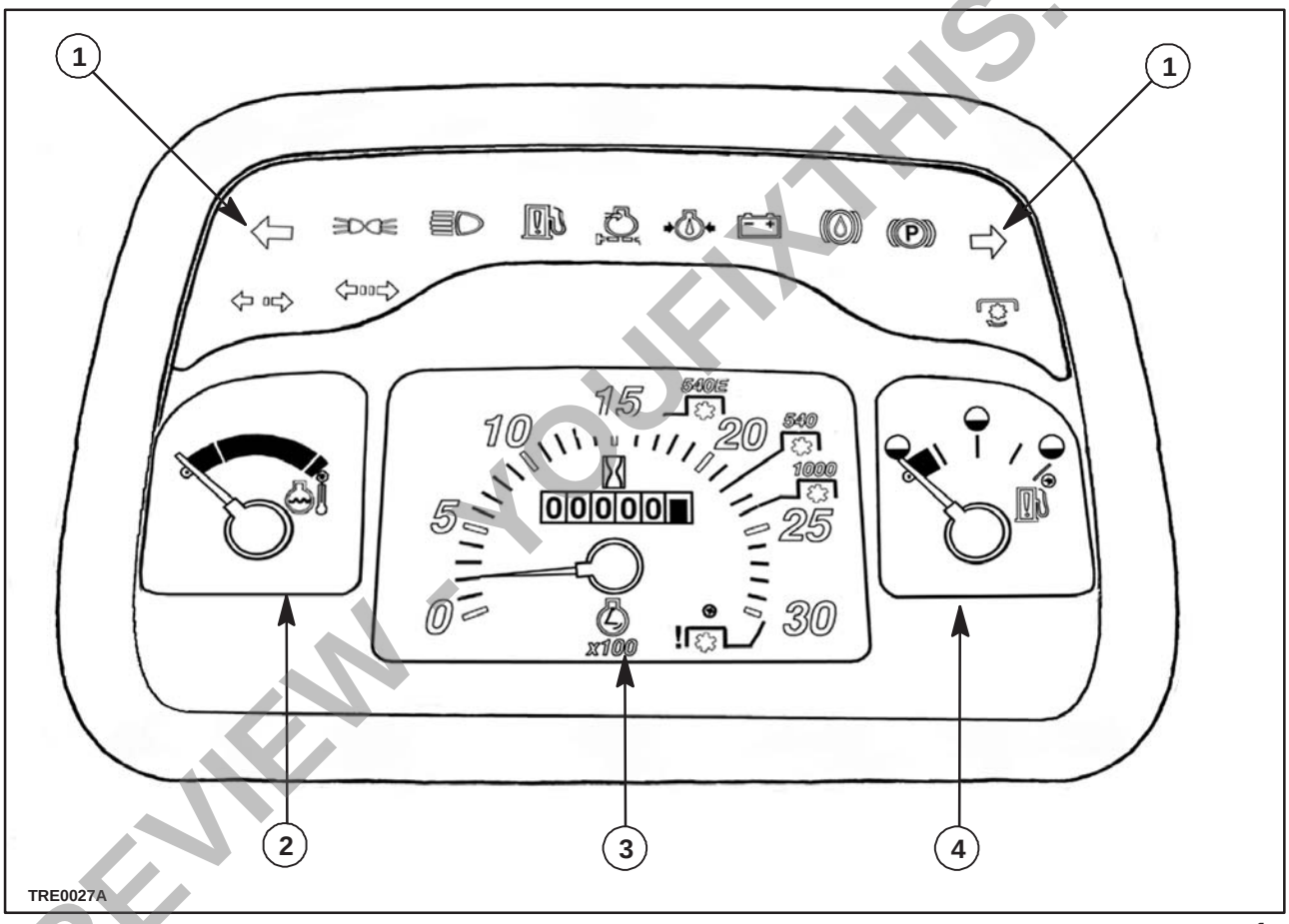
Chapter 1 − INSTRUMENTS

CONTENTS

Description	Page
Analogue instruments Introduction	1
Transmitter and switch	4

ANALOGUE INSTRUMENTS

INTRODUCTION



1

The analogue instrument panel consists of four display sections:

1) Warning and indicator lights;

2) Fuel level gauge;

3) Proofmeter;

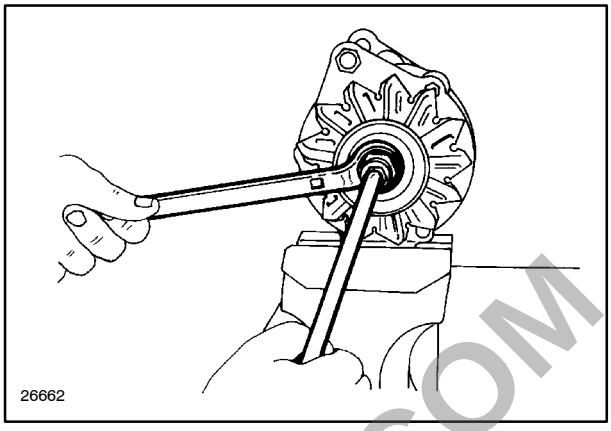
4) Engine coolant temperature gauge.

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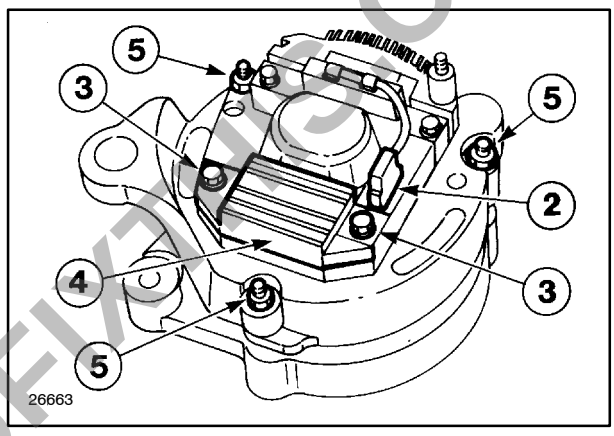
DISASSEMBLY (Op. 55 301 12)

Place a suitable Allen wrench in the hexagonal hole in the alternator shaft to prevent the alternator shaft from turning. With another wrench, unscrew the fan and rotor pulley fastening nut. Draw out the above mentioned parts, spacing collars and alternator washers (Fig. 24).



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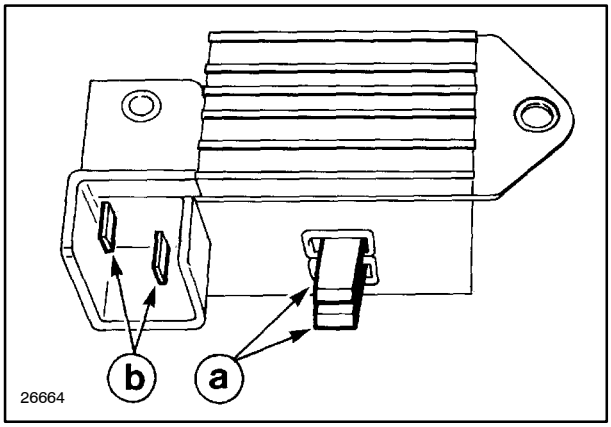
Disconnect the excitation diode terminal wire connector (2) from the pin connected to the positive brush. Unscrew and remove the screws (3) securing the electronic voltage regulator (4), complete with brushes, to the rear alternator support. Unscrew nuts (5) and remove the screws fastening the alternator main external parts (Fig. 25).



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ELECTRONIC VOLTAGE REGULATOR (Fig. 26)

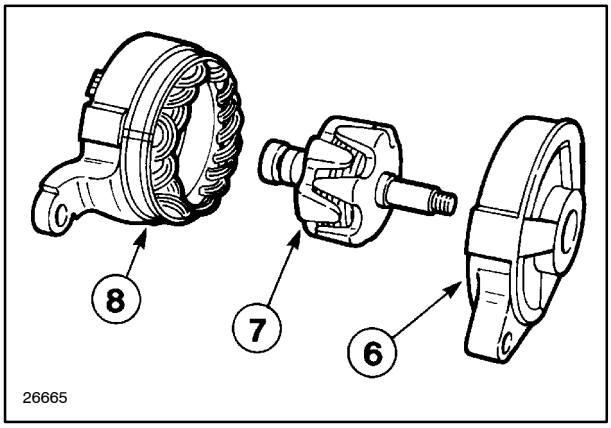
a. Brushes
b. Pins



26

Separate the parts (as illustrated) bearing in mind that it is necessary to apply a considerable degree of pressure on the rotor shaft to free the front support plate (6) and the rotor (7) (Fig. 27).

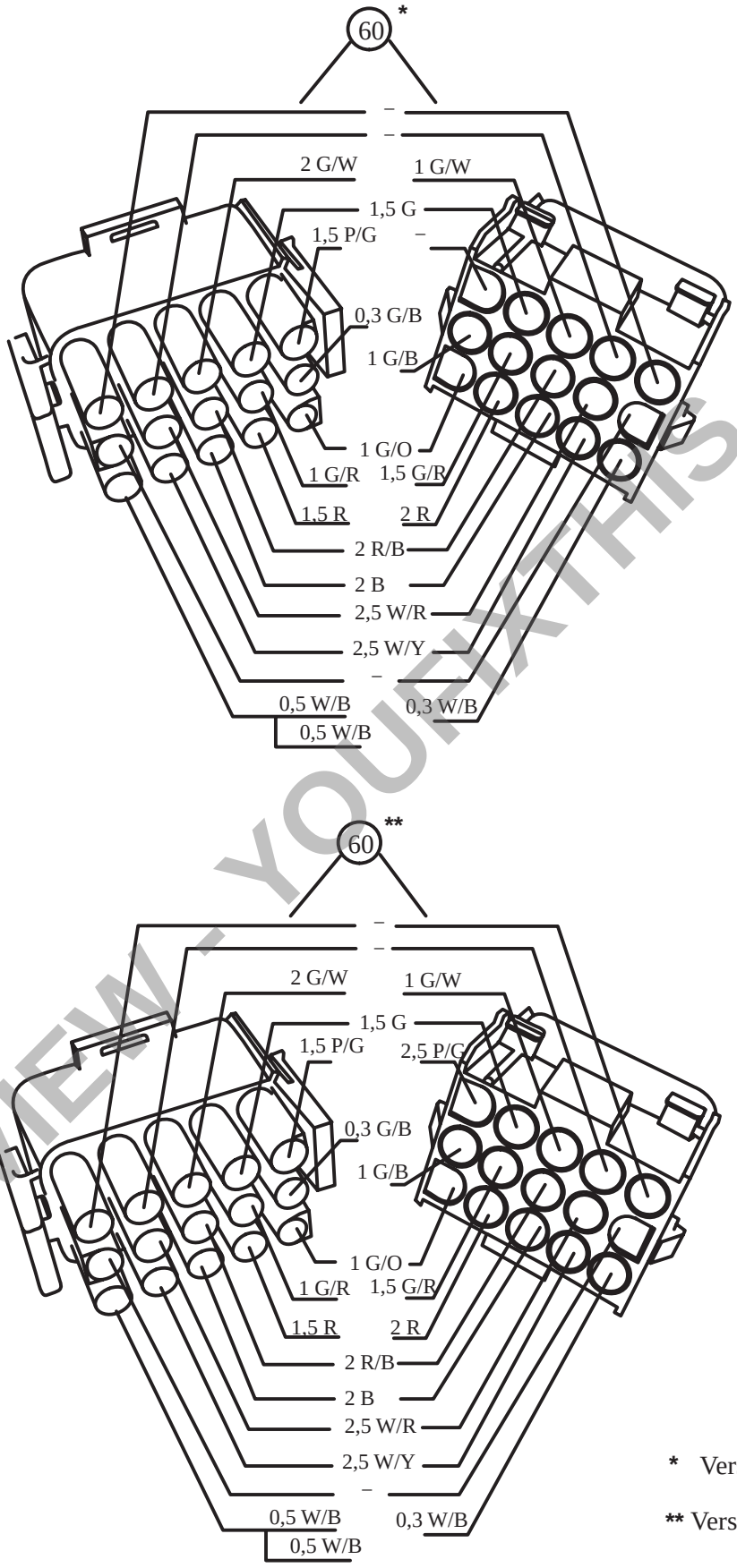
If you do not have a press, use a brass drift, to avoid damaging the thread.



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* Version with cab

** Version without cab

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