0.1.4 - Lifting instructions

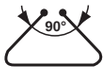
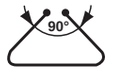
DANGER

Components weighing over 25 kg or of significant size must be supported and removed using suitable lifting equipment with wire rope or polyester slings.

Wire ropes - slings

- Use wire ropes or polyester slings of suitable capacity for the parts to be lifted, referring to the following tables:

Tab.1

WIRE ROPES (standard twisted “S” or “Z” type)				POLYESTER SLINGS (eye-and-eye - simple loop)				
Ø rope mm	Capacity (kg)			Width (mm)	Capacity (kg)			
								
8	650	620	500	25	500	400	860	700
10	1000	1740	1420	50	1000	800	1730	1410
12	1450	2500	2050	62	1250	1000	2160	1760
14	2000	3460	2820	75	1400	1120	2420	1980
16	2600	4500	3670	100	2000	1600	3460	2820
18	3300	5710	4660	150	2500	2000	4330	3530

Lifting capacities are calculated with a safety coefficient.

- The lifting hook should be attached to the central part of the rope or sling; if the hook is attached near the ends of the rope/ sling, this could cause the load to slip during lifting.
- Never lift a heavy load using a single rope; always use two or more symmetrically arranged ropes.

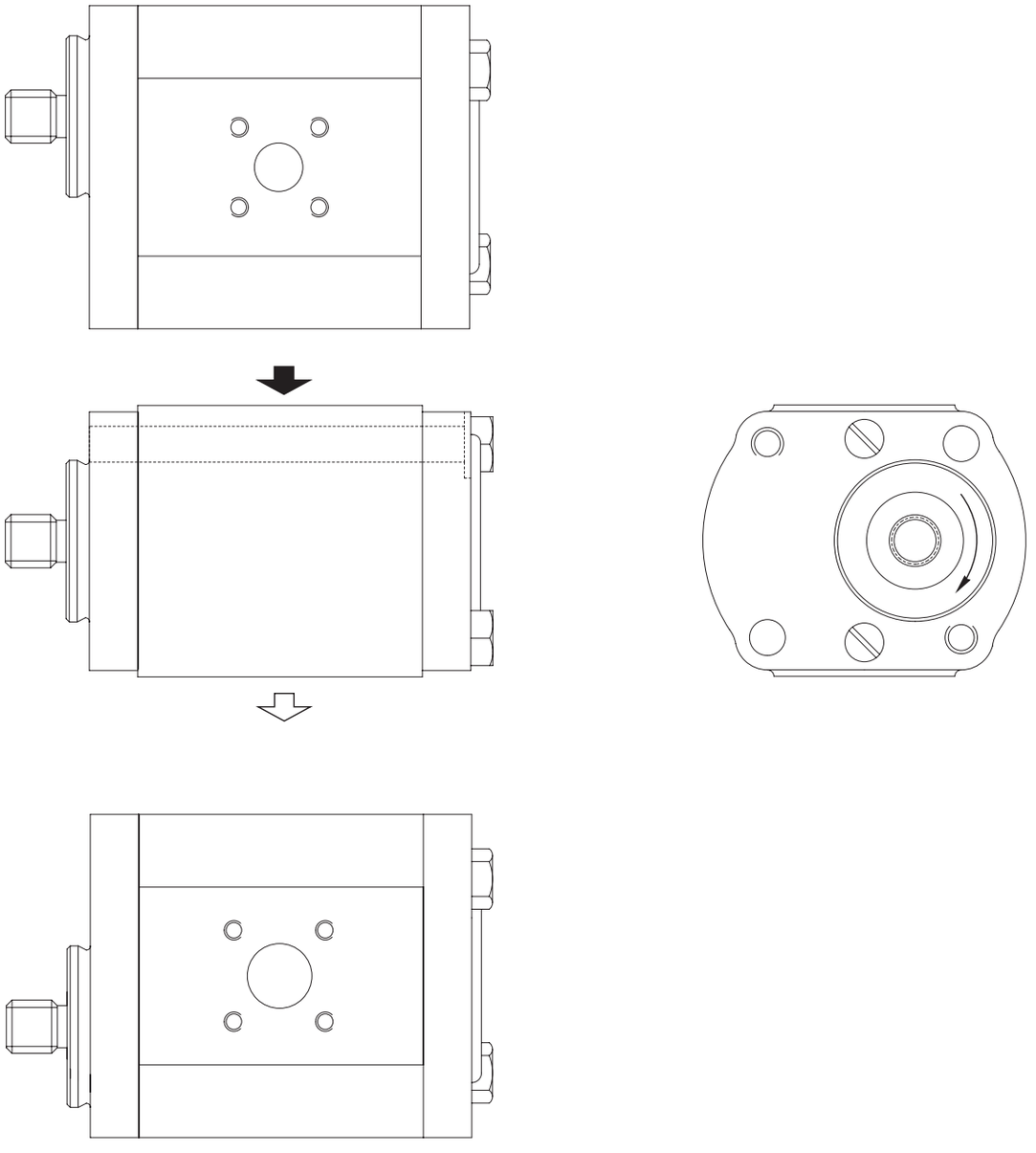
DANGER

Suspension of a load from a single rope could cause the load to start rotating and consequently cause the rope strands to untwist or the load to slip; this could lead to serious injury.

- Never lift a heavy load when the two legs of the ropes form a wide angle. the permitted load (kg) decreases in inverse proportion to the angle of suspension; the table below indicates how the permitted load varies according to the angle of suspension for two Ø 10 mm ropes each with a load capacity of 1000 kg.

SEALANTS SILICONE	Silastic 738 (Dow Corning) Colour: milky white	One-part silicone adhesive/sealant, non dhrinking, ready for use. Cures on exposure to air to form a rubbery solid and obviates the need for conventional seals on flexible joints, filling gaps greater than 1 mm.
	Dirko Transparent Colour: transparent	One-part silicone adhesive/sealant, shrinking, ready for use. Cures rapidly when exposed to humidity in the air to form a rubbery solid; resistant to high temperatures.
SEALANTS POLURETHANE	Betaseal HV3 (Gurit Essex) Colour: black	Polyurethane prepolymer based adhesive/sealant, high viscosity, suitable for permanent, high-strength flexible bonding. Slow curing, used for bonding glass to frames, wire mesh, metal plates, etc. surfaces must be degreased with primer.
RETAINING COMPOUNDS	Loctite 601 Colour: fluorescent green	Anaerobic, fast-curing, high-strength adhesive. Suitable for sealing and retaining cylindrical assemblies with gap clearances of up to 0.10 mm; used for retaining rotors, gears, bearings, pulleys, bushes etc. on shafts.
	Loctite 638 Colour: fluorescent green	Anaerobic structural adhesive, quick-curing, very high strength; suitable for bonding cylindrical parts in non-ferrous alloys.
	Loctite 648 Colour: fluorescent green	Anaerobic structural adhesive, quick-curing, high-strength; suitable for bonding cylindrical parts, permanent retention of threaded parts, sealing of refrigeration systems, retention of bearings, etc. Alternative to Loctite 601 in high-temperature applications.
	Loctite 986/AVX Colour: Fluorescent red	Anaerobic sealant/retaining compound for metal cylindrical parts. Slow-curing, high-strength, heat-resistant and resistant to chemical attack. Parts must be first treated with an activator.
LUBRICANTS	Grease (NLGI 2 EP ASTM D217: 265/295)	Multi-purpose Lithium grease used for lubrication of seals, to prevent oxidization and to facilitate assembly operations.
	Molikote (Dow Corning)	Anti-wear compound, contains Molybdenum bisulphate, used neat or diluted with engine oil for assembly of main engine bearings.
	Vaseline	Neutral pH compound used to protect battery terminals against oxidization and corrosion.
	Engine oil 10W - 30	Used to dilute Molikote anti-wear lubricant during assembly of main engine bearings.

Lift circuit gear pump



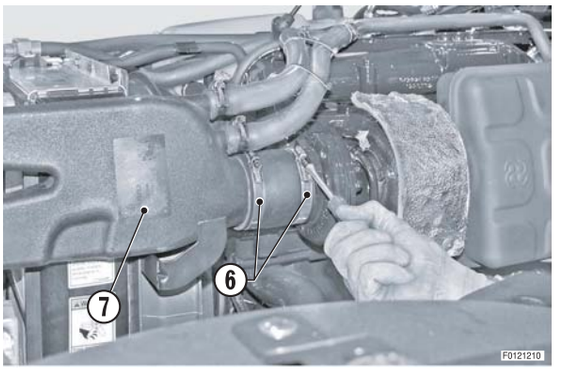
D0021770

Fig.37 - Lift circuit gear pump

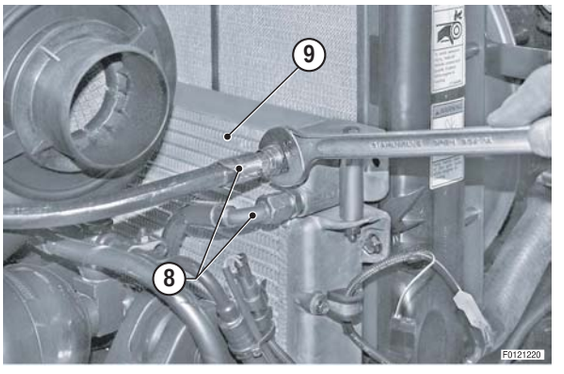
- displacement: 22.5 cc/rev
- Maximum operating pressure: 190 bars

METHOD

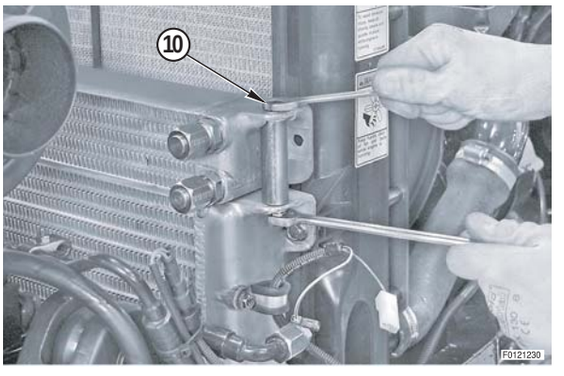
5 Loosen clips (6) and remove air intake hose (7).



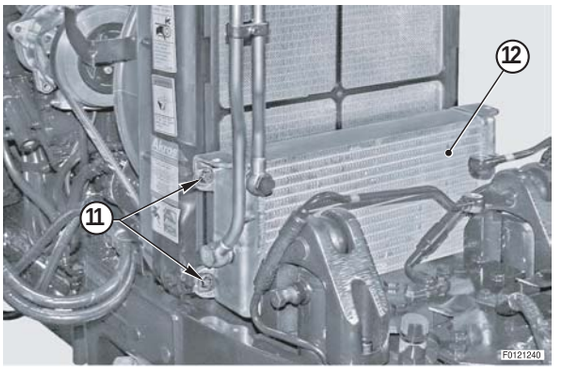
6 Remove pipes (8) from cooler (9).



7 Remove screws (10) (1 per side) and remove the cooler.



8 Remove screws (11) (n°2) on each side and tip hydraulic oil cooler (12) towards the rear.

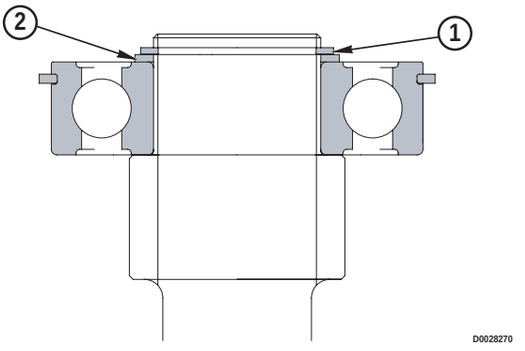


30.3.16 - PTO output shaft disassembly (2 speed versions)

Disassembly

1 Remove circlip (1) and spacer (2).

Using the puller, remove bearing (3).

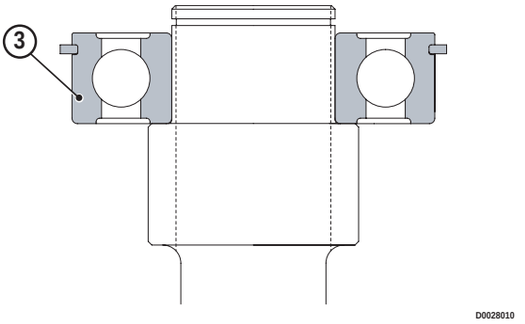


Assembly

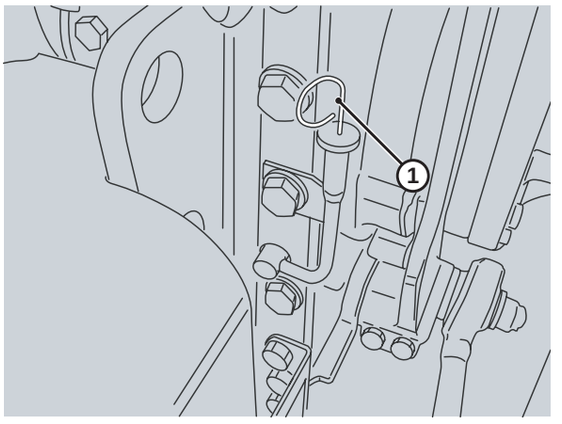
To assemble, follow the disassembly steps in reverse order and use caution in relation to the following procedures:

Procedure 1

- Take care to install bearing (3) the right way round with respect to the shaft.



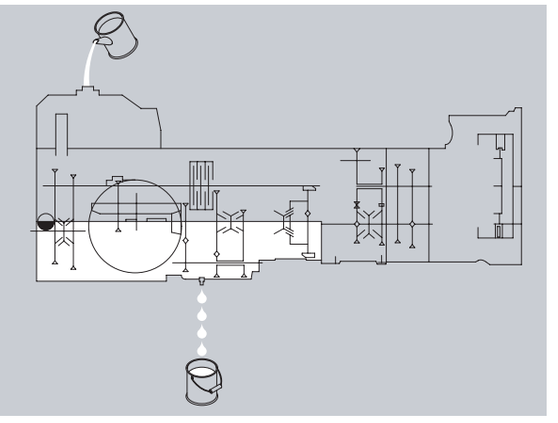
4 Remove the oil plug with dipstick (1).



> **CAUTION**
>
> Never top up with oil of a different type (class or viscosity) to that already in the engine.

5 Change the oil filters located on the left-hand side of the transmission casing.

6 Fit and tighten the drain plug (1) and fill the gearbox with oil through the hole on top of the lift casing after removing the plug (3) to reach the level indicated by the plug with the dipstick (4).



7 After filling, screw in the oil filler plug and run the engine for a few minutes.

8 Check the oil level via the plug with dipstick (4) and top up if necessary.

The tractor is equipped with a gearbox oil cooler, for cleaning it see “Cleaning engine front compartment gearbox oil cooler”.

30.4.8 - Planet carrier assembly (Agrofarm 100)

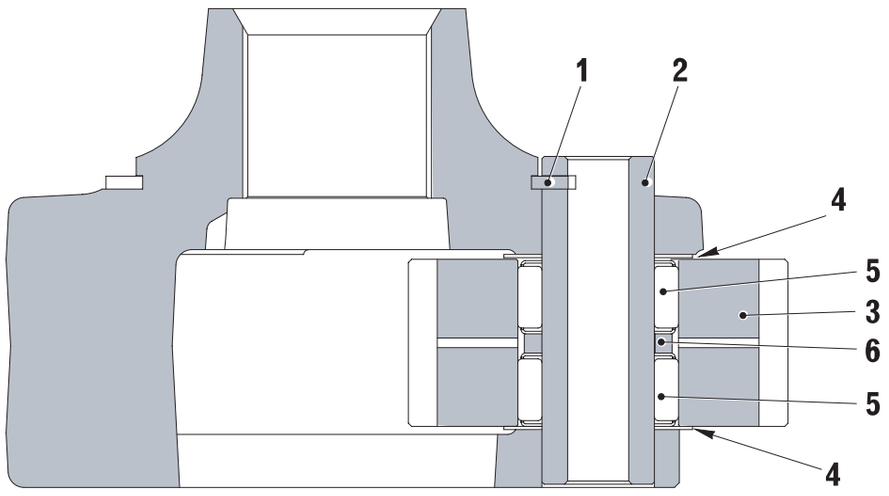
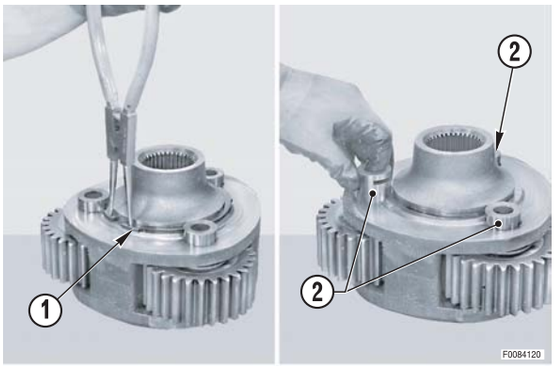


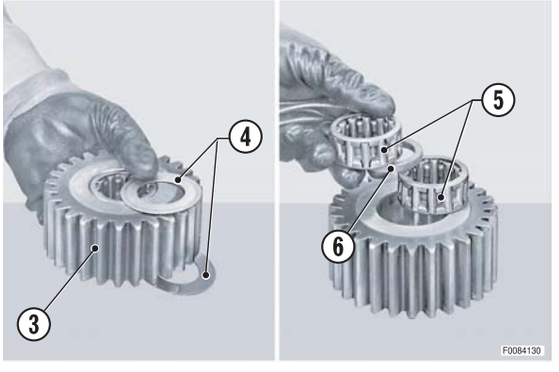
Fig.97 - Planet carrier assembly

Disassembly

1 Remove circlip (1) and remove pins (2).



2 Remove planet gears (3) with shims (4) and remove needle roller bearings (5) and spacer (6).



Assembly

To assemble, follow the disassembly steps in reverse order and use caution in relation to the following procedures.

30.5.8 - Steering knuckle housing and halfshaft

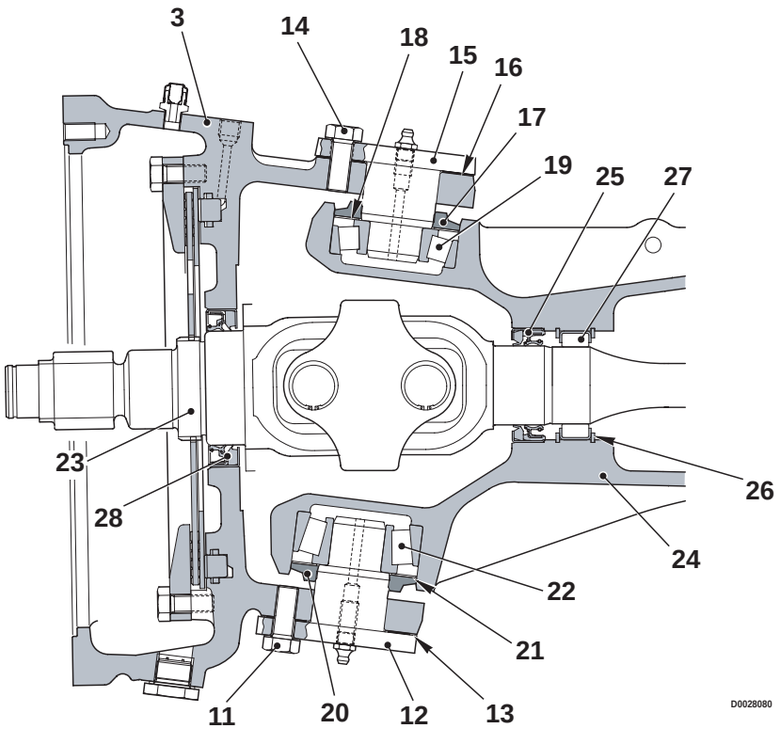
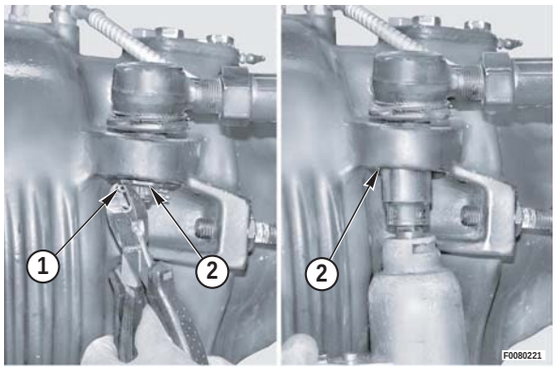


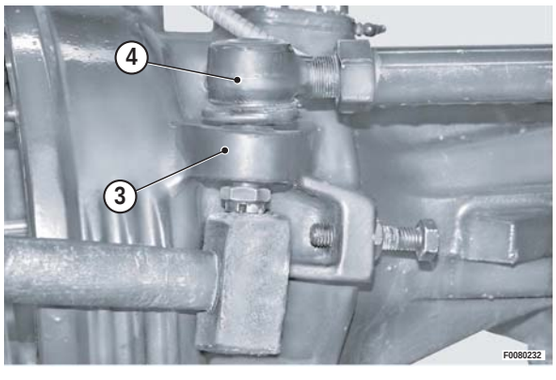
Fig.101 - Steering knuckle housing and halfshaft

REMOVAL

1 Remove split pin (1) and loosen nut (2) without removing it.

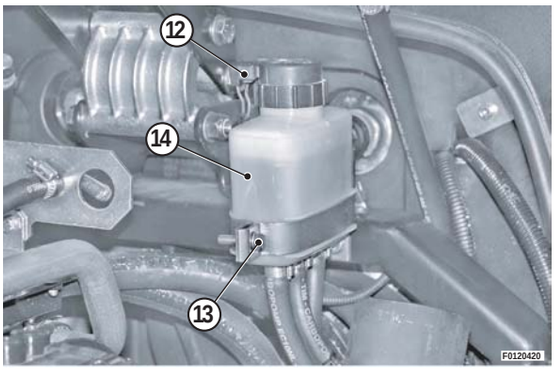


2 Using a soft mallet, disconnect rod (4) from steering knuckle housing (3).

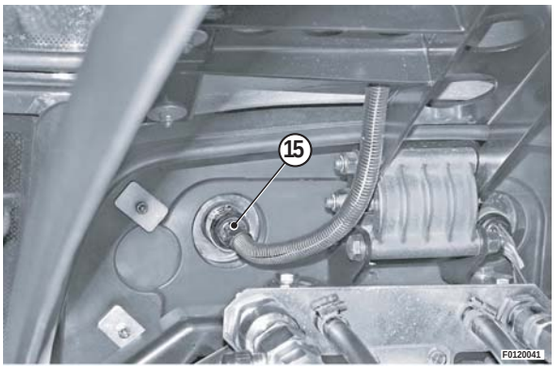


METHOD

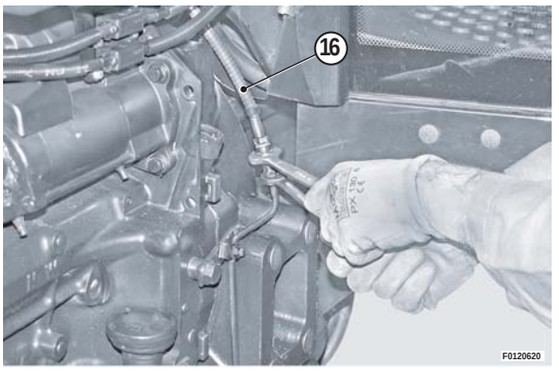
5 Disconnect connectors (12), loosen screw (13) and move brake and clutch fluid compensation tank (14) towards the rear of the tractor.



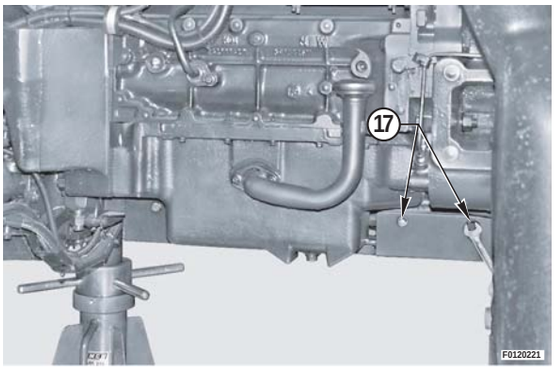
6 Unplug connector (15).



7 Disconnect the clutch control cylinder pipe (16).

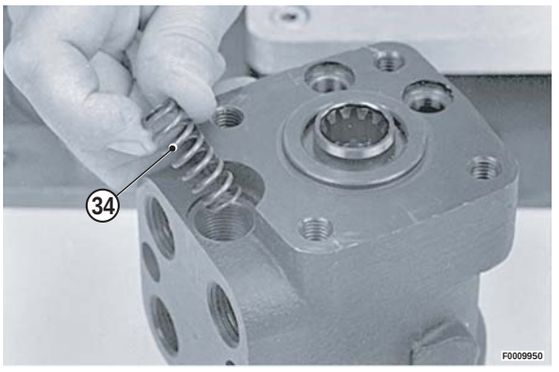


8 Remove screws (17) (3 on the left-hand side and 2 on the right-hand side).



METHOD

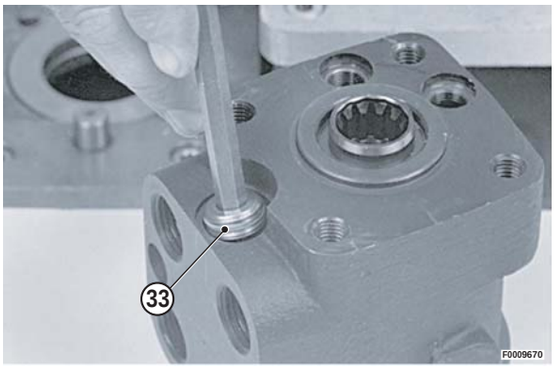
32 Fit spring (34).



33 Fit the pressure adjustment screw (33).

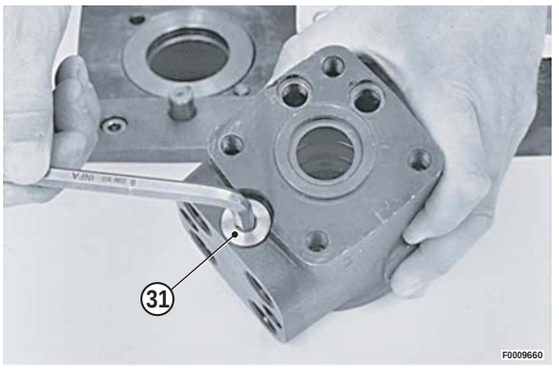
- Calibrate maximum working pressure on a test bench.

  Pressure: 180+10 bar (2610+145 psi)

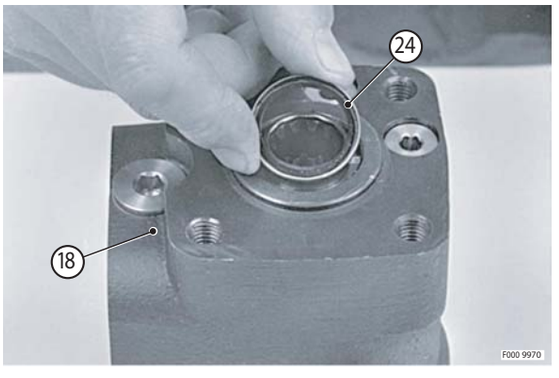


34 Fit plug (31) complete with seal.

- Plug: 50±10 Nm (36.8±7.4 lb.ft.)

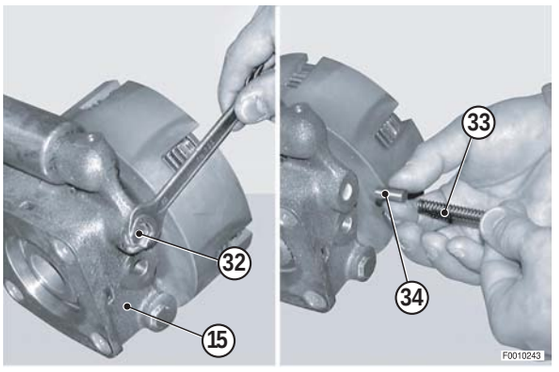


35 Locate dust seal (24) in steering valve housing (18).

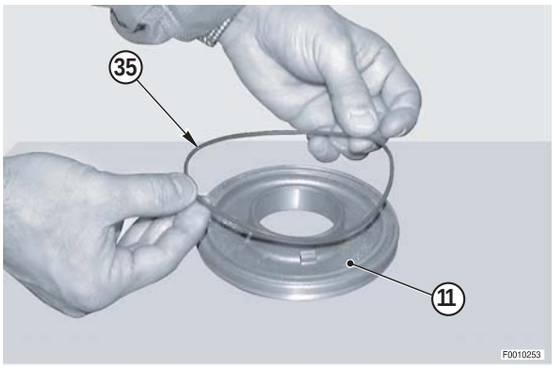


18 Remove plug (32) and remove spring (33) and push rod (34) from clutch housing (15).

- Renew the copper washers on reassembly.



19 Remove O-ring (35) from clutch piston (11).



Assembly

To assemble, follow the disassembly steps in reverse order and use caution in relation to the following procedures:

Procedure 17

- Lubricate piston (29) with oil.

Procedure 16

- Damper assy (24): Loctite 242

Procedure 14

- Lubricate retaining rings (23) with oil.

Procedure 9

- Lubricate O-rings (19) and (20) and piston (18) with oil.

Procedure 8

- Lubricate brake disc (16) with oil

Procedure 7

- Lubricate O-ring (12) and piston (11) with oil.

30.11 - WHEELS

30.11.1 - Front wheels (S0.01.01)

REMOVAL

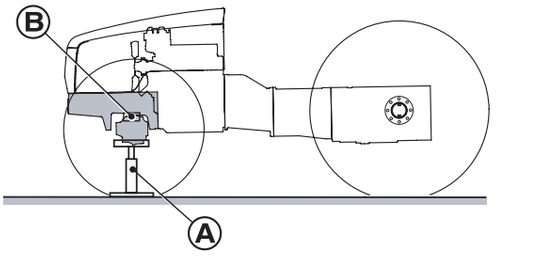
1

DANGER

Remove the key from the starter switch and apply the parking brake.

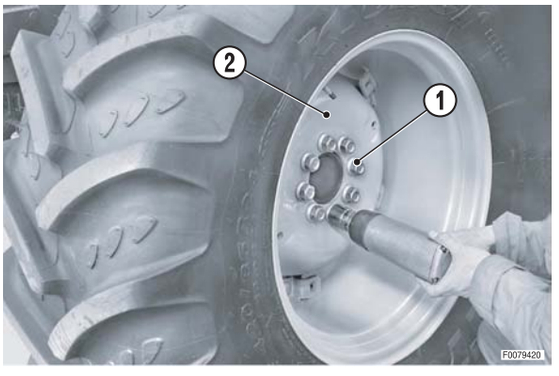
2 Raise the tractor and position two stands “A” under the front axle.

- Drive safety wedges “B” between the axle and the front support.



3 Remove all the screws (1) except one for safety.

Remove the last screw and remove wheel (2).



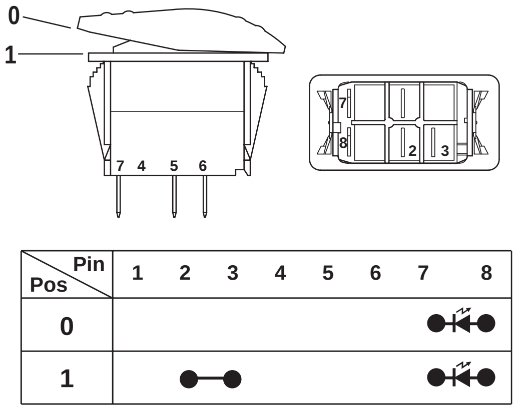
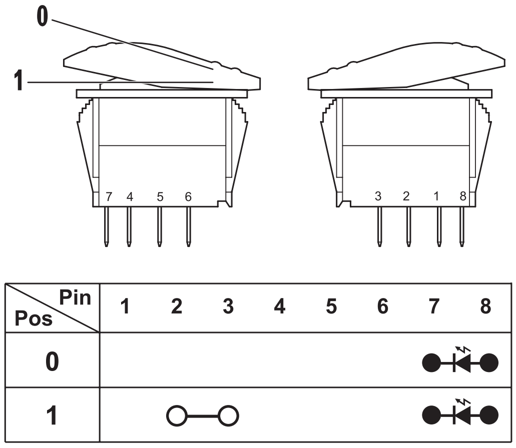
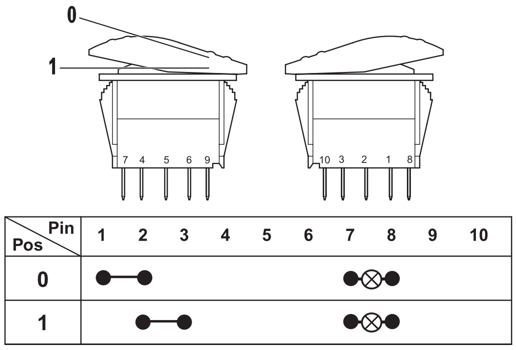
4 Repeat the above operations for the other wheel.

Installation

Refitting is the reverse of removal. Use caution in relation to the following procedures:

Procedure 3

- Screws: 350 Nm (258 lb.ft.)

NO	DESCRIPTION	CODE	CHARACTERISTICS	CON- NECTOR
33	Corner lights switch	2.7659.156.0		X110
34	Wheel speed sensor	0.010.5612.0/10	Pin1 = 12V DC power supply; Pin2 = output signal; Pin3 = earth Between pin 2 and pin 3: 0.02V with sensor far from metals 12.0V with sensor near to metals (if kept near to metal, after 5 seconds it must return to 0V)	X19
35	4WD control solenoid valve	2.3729.697.0/10	See solenoid 0.010.2831.1	X20
36	Rear PTO control solenoid valve	2.3729.250.0/50	See solenoid 0.010.2831.1	X21
37	differential lock control solenoid valve	2.3729.697.0/10	See solenoid 0.010.2831.1	X22
38	H/L travel control solenoid valve	2.3729.697.0/10	See solenoid 0.010.2831.1	X24
39	Front PTO switch	2.7659.277.0		X48
40	Differential lock switch	2.7659.152.0/10		X50

40.3.15 - Air conditioning system - Tractor with high-visibility cab

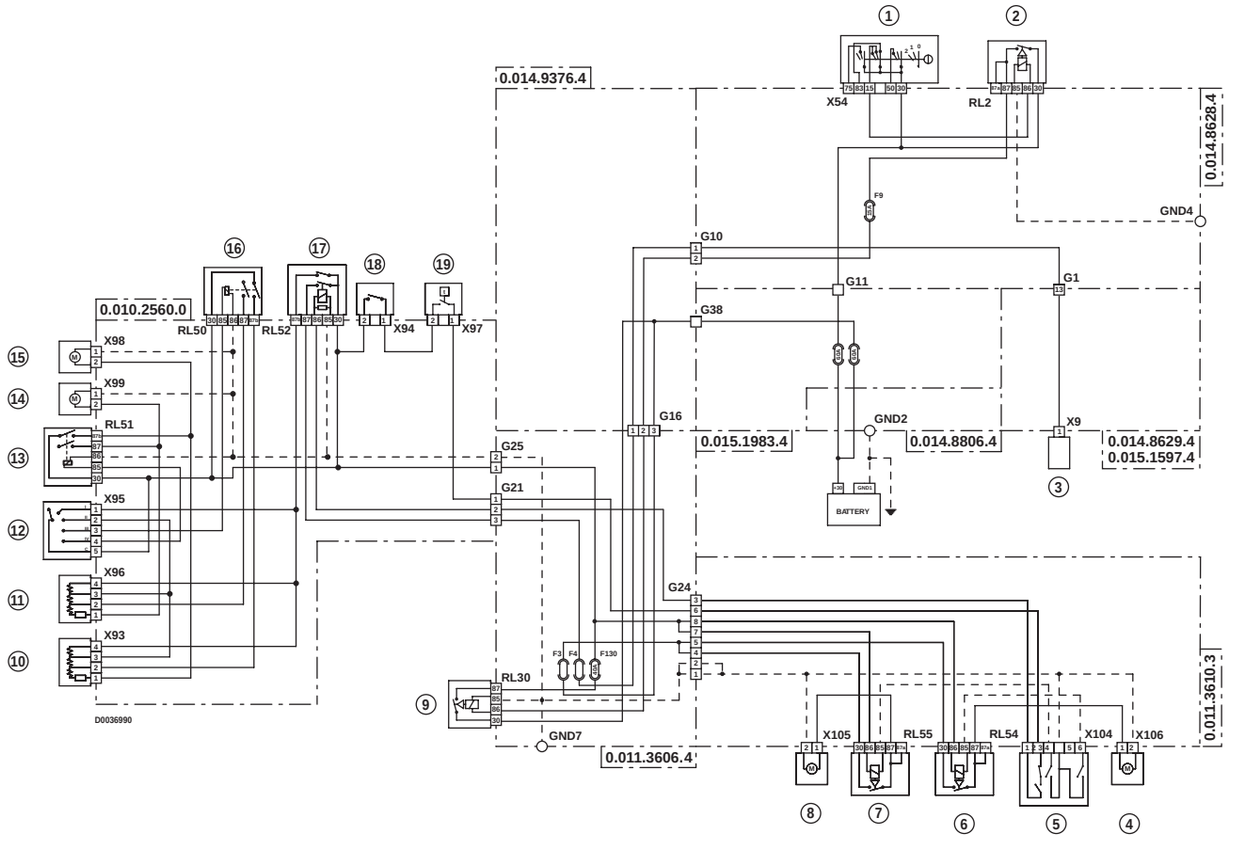


Fig.136 - Air conditioning system

Key

1. Starter switch
2. Key positive supply relay
3. Air conditioning compressor
4. Supplementary air conditioning fan
5. Air conditioning pressure switch
6. Control relay for supplementary air conditioning fan
7. Control relay for air conditioning fan
8. Air conditioning fan
9. Roof line supply relay
10. LH resistor
11. RH resistor
12. Fan speed selector switch
13. Max. fan speed relay
14. RH electric fan
15. LH electric fan
16. 3rd blower speed relay
17. Compressor and starting in 1st blower speed in A/C relay
18. A/C switch
19. Air conditioning temperature thermostat

Wiring and connectors list

- 0.014.8628.4/20 - Instrument panel wiring

40.4.17 - LH drivetrain wiring - 0.014.9193.4/20

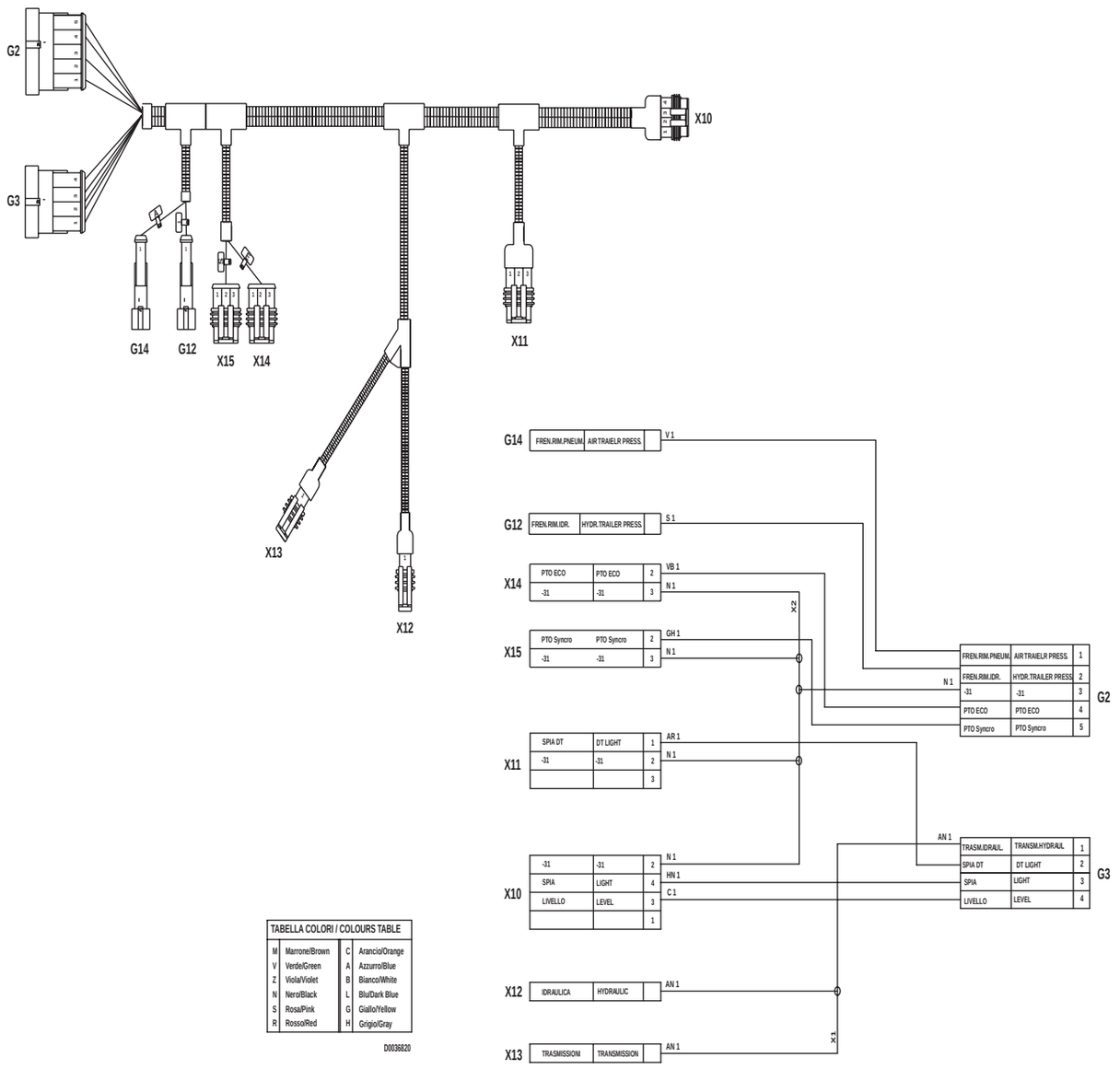


Fig.163 - LH drivetrain wiring

Connectors list

- G2 - To instrument panel wiring
- G3 - To instrument panel wiring
- G12 - To trailer hydraulic braking wiring
- G14 - To trailer air braking wiring
- X10 - Fuel level sensor
- X11 - 4WD engagement control switch
- X12 - Hydraulic oil filter clogging pressure switch
- X13 - Transmission oil filter clogging pressure switch
- X14 - ECO PTO engagement switch
- X15 - GROUNDSPEED PTO engagement switch