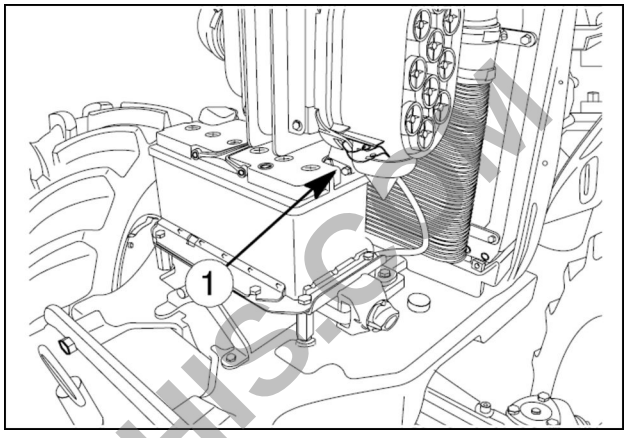
Engine - Remove

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

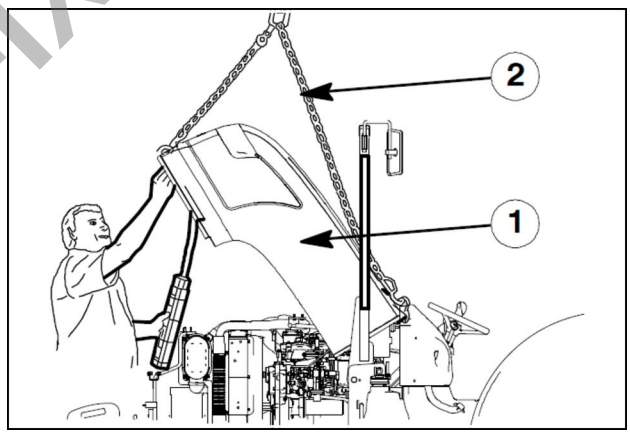
Proceed as follows:

1. Disconnect the battery negative lead **(1)**



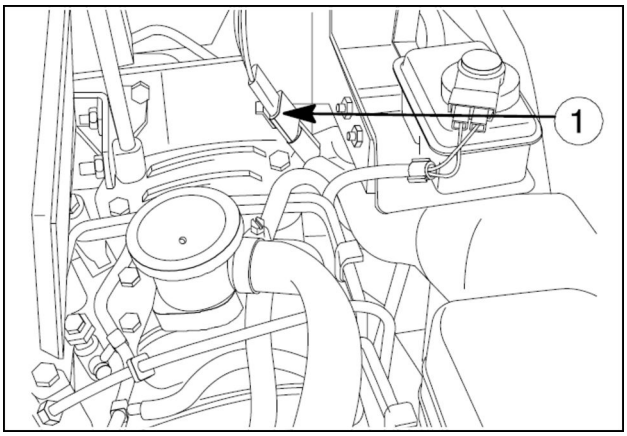
ANIL16TRO2582AA 1

2. Drain the oil from the transmission–gearbox housing.
3. Drain the cooling system.
4. Remove the exhaust pipe. Attach lifting chains **(2)** to the bonnet **(1)** and attach the chain to the hoist.



ANIL16TRO2583AA 2

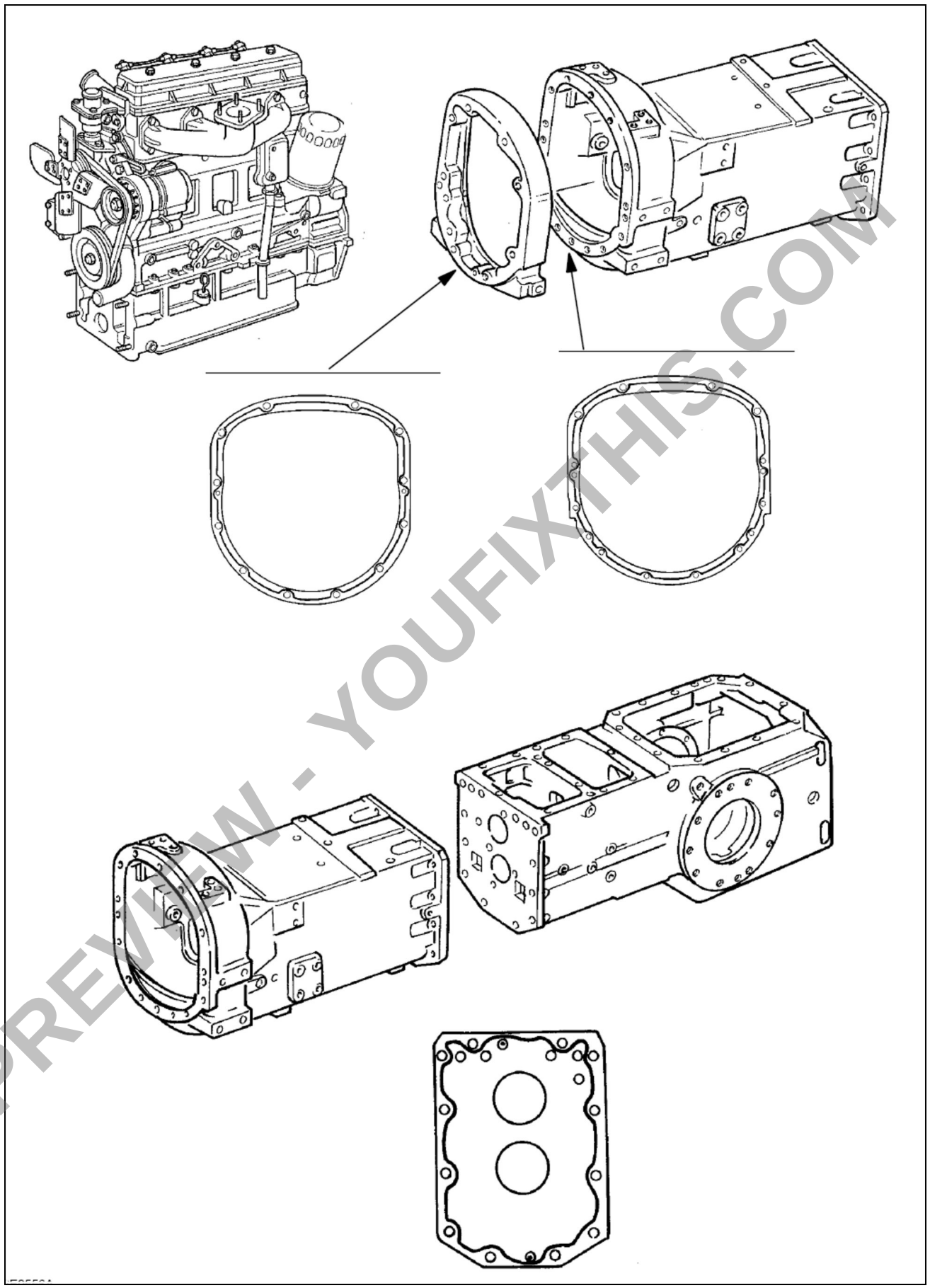
5. Disconnect the electrical connection **(1)** of bonnet.



ANIL16TRO2584AA 3

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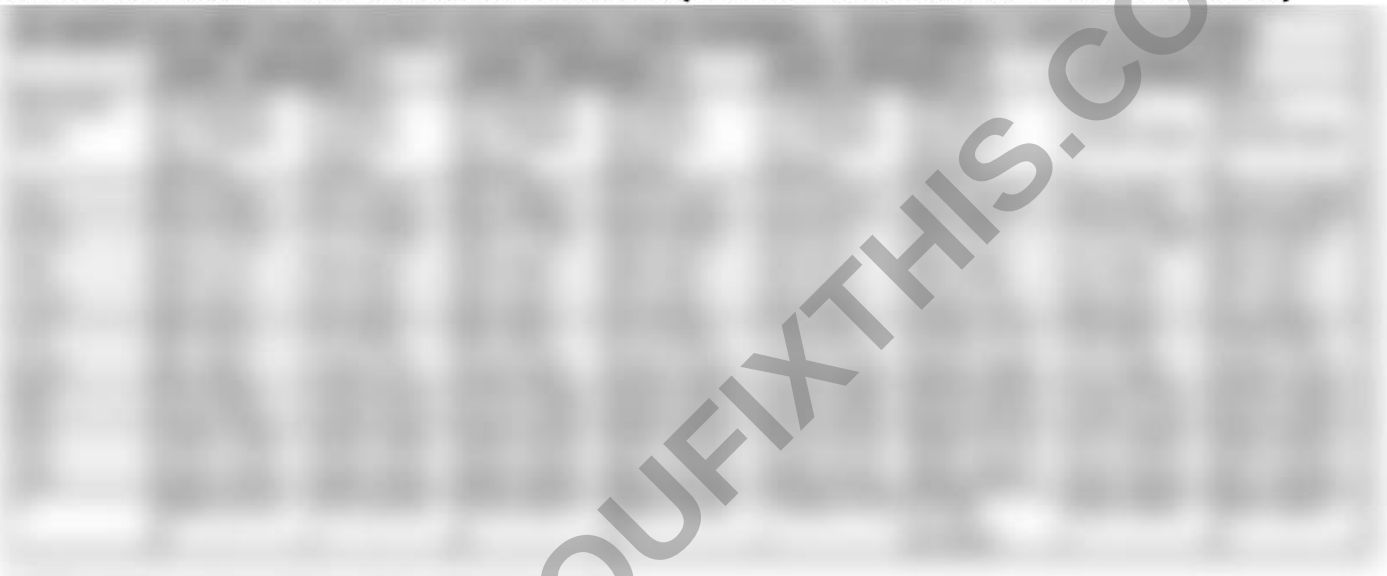
Torque Specification Tables

Standard Bolt Hardware & Hydraulic Connector Torques, Specifications and Information

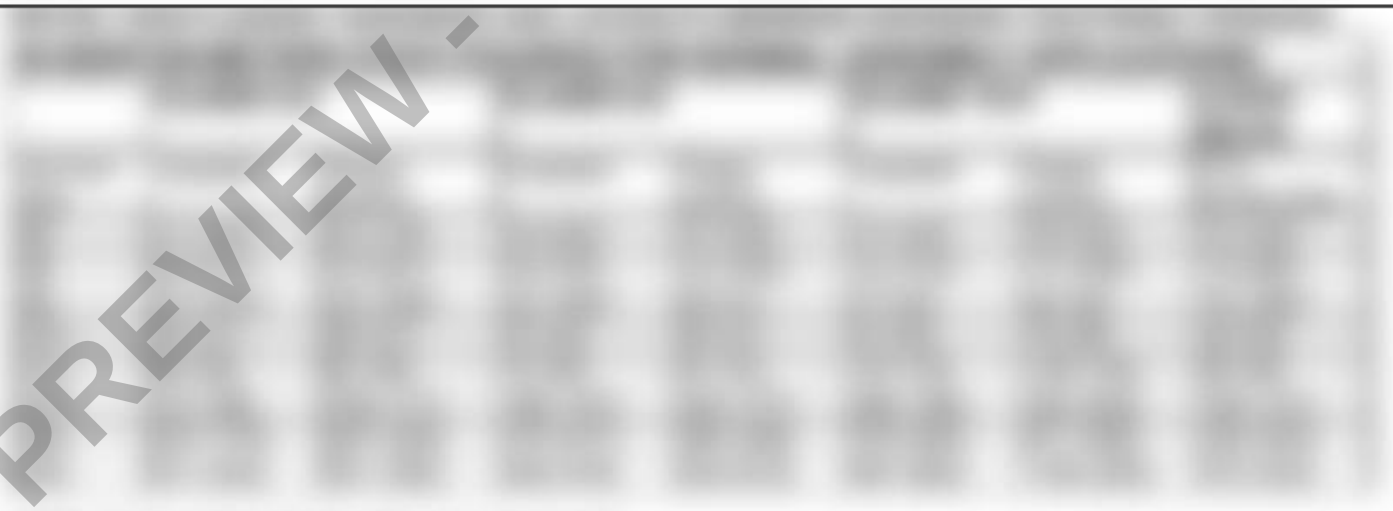
This specification establishes general torque values to be used in bolted joints for metric and inch hardware. This specification is assumed to apply unless another specification (standard or specified requirement) is indicated in the repair manual.

NOTE: These Standards do not include electrical or hydraulic components, they are referred to in their specific charts or tables.

INCH 'NON-FLANGED' HARDWARE AND LOCKNUTS {MINIMUM HARDWARE TIGHTENING TORQUES}



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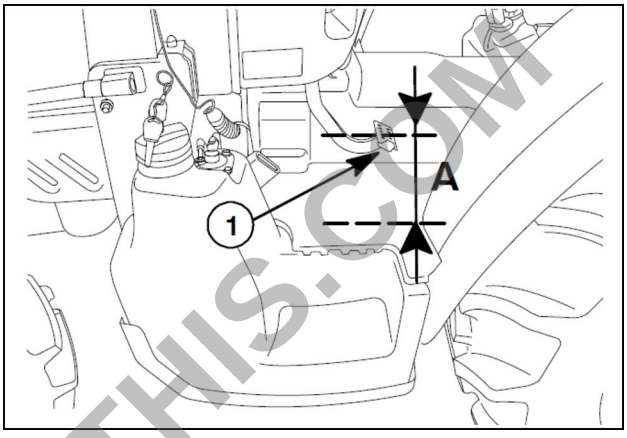
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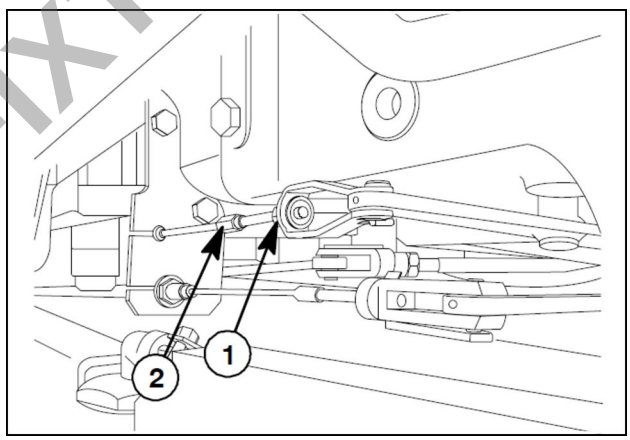
Clutch - Adjust

If the clutch pedal position is uncomfortable (too high) or it will not reach its upper rest position (to prevent the clutch slipping) check that distance A, on clutch pedal **(1)**, figure **1**, is **140.0 mm** (**5.5 in**) if not, adjust the pedal as follows:

1. Release lock nuts **(1)**, figure **2**, and turn hexagon sleeve **(2)** anti–clockwise;
2. Check that distance **(A)** corresponds with the value given above;
3. Tighten lock nuts **(1)**, figure **2**.
4. Re–check that the pedal travel is as specified.



ANIL16TRO2621AA 1



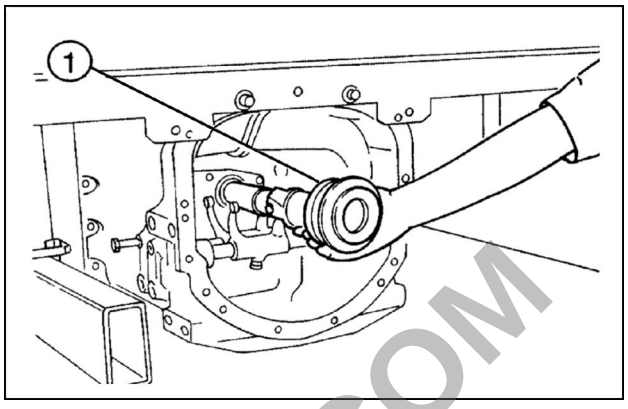
ANIL16TRO2622AA 2

ATTENTION: *The distance must be measured from the pedal centre as shown in figure* ***1*** *.*

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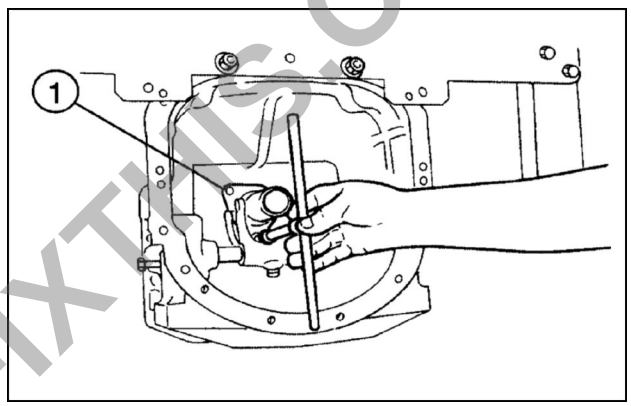
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8. Disengage the fastening springs and remove the sleeves from the clutch collars **(1)**.



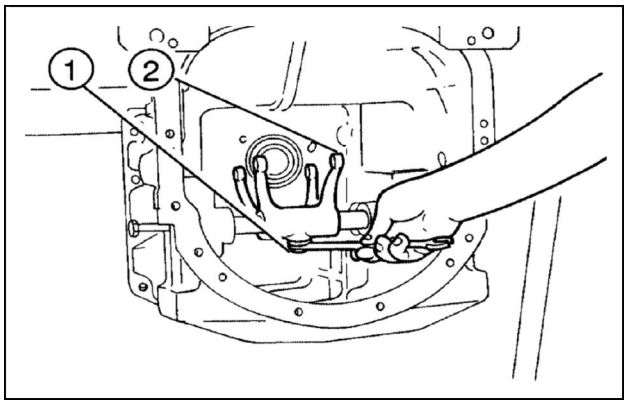
LAIL11TL0431A0A 8

9. Loosen the fixing bolts and remove the sleeve cover-support **(1)**.



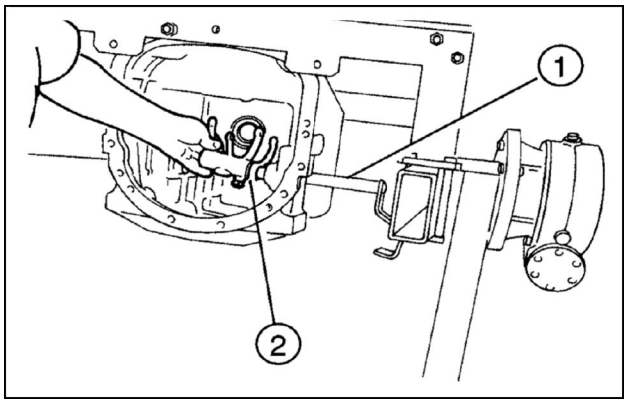
LAIL11TL0432A0A 9

10. Loosen the two bolts **(1)** securing the control forks of the clutch collar sleeves **(2)**.



LAIL11TL0433A0A 10

11. Remove the external shafts **(1)** of the clutch control **(1)** and remove the forks **(2)**.



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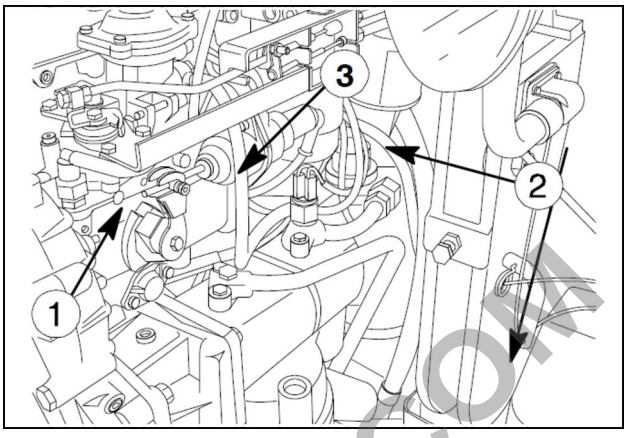
Capacities

Part to be filled	Quantity	Recommended product	International specification
Cooling system: – without cab:	**12.0 L** (**3.2 US gal**)	**NEW HOLLAND AMBRA ACTIFULL™ OT EXTENDED LIFE COOLANT**	–
Fuel tank, all models	**80.0 L** (**21.1 US gal**)	Decanted and filtered fuel oil	–
Crankcase sump: — without filter: — with filter:	**6.6 L** (**1.7 US gal**) **7.3 L** (**1.9 US gal**)	**NEW HOLLAND AMBRA SUPER GOLD 15W-40** NH 330G or **NEW HOLLAND AMBRA SUPER GOLD 10W-30** NH 324G	API CF–4/SG CCMC D4 MIL–L–2104E
Brake control circuit	**0.4 l** (**0.11 US gal**)	**NEW HOLLAND AMBRA BRAKE LHM** NH 610A	ISO 7308
Front axle case: — axle housing — final drives (each):	**7.0 L** (**1.8 US gal**) **1.25 L** (**0.33 US gal**)	**NEW HOLLAND AMBRA MULTI G™ HYDRAULIC TRANSMISSION OIL**	API GL4ISO 32/46SAE 10W–30
Rear transmission (bevel gear pair – lateral final drives and brakes), gearbox and hydraulic lift,	**45.0 L** (**11.9 US gal**)		
Front wheel hubs	–	**NEW HOLLAND AMBRA GR-9 MULTI-PURPOSE GREASE**	NLGI 2
Grease fittings	—		

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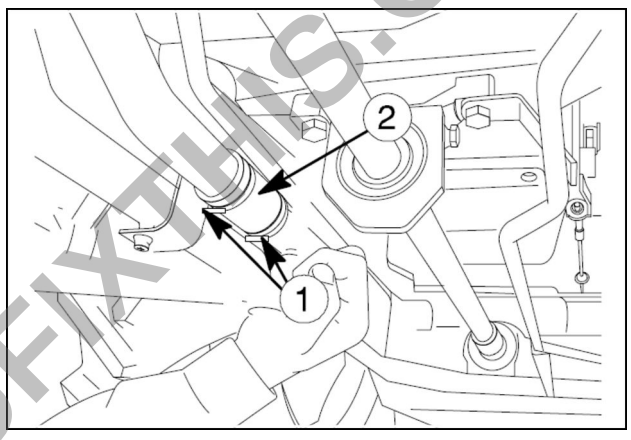
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17. Detach the diesel recovery pipe **(3)** and delivery pipe **(2)** to the diesel pump **(1)** .



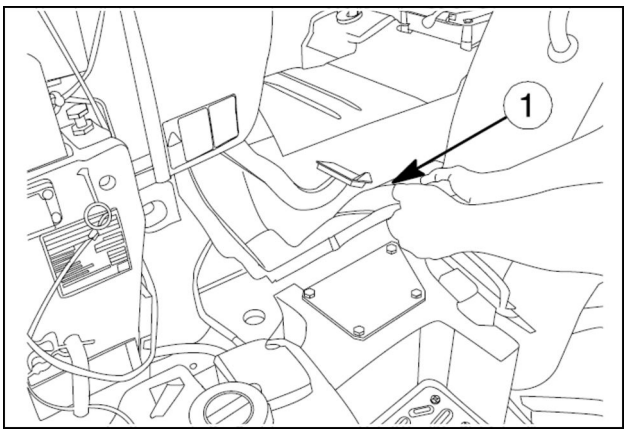
ANIL16TRO2596AA 15

18. Remove two metal clamps **(1)** and the rigid pipe **(2)** of drawing oil from the transmission housing via lift pump.



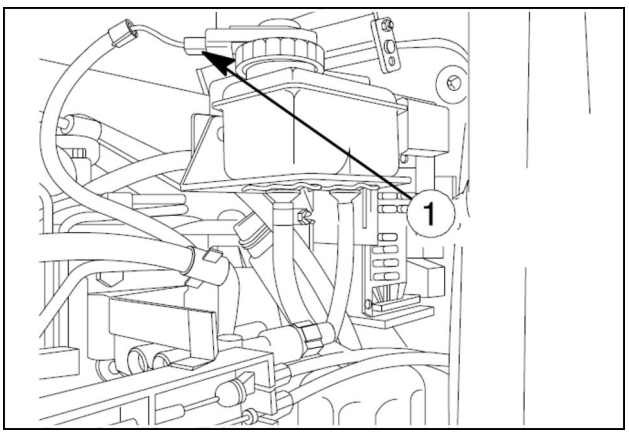
ANIL16TRO2597AA 16

19. Remove the electrical floor mat **(1)** .



ANIL16TRO2598AA 17

20. Remove the electrical connection from the brake fluid reservoir and take the brake fluid reservoir **(1)** from the bracket.



ANIL16TRO2599AA 18

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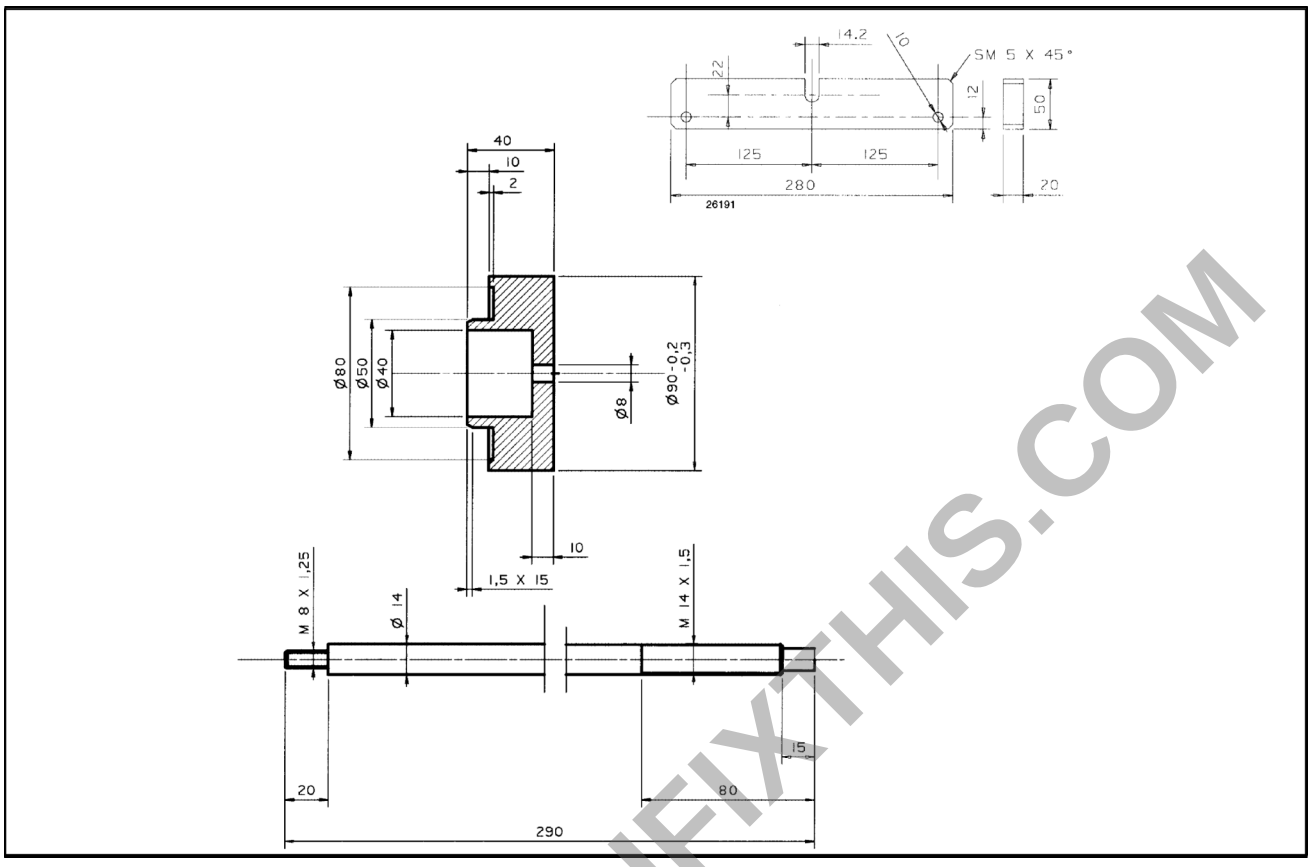
Mechanical transmission - Special tools

Special tools

NOTICE: *The operations described in this section should only be performed using the essential tools that appear below with the symbol "X". However, for greater safety and to obtain the best results as well as saving time and effort, it is recommended that these essential tools be used together with the specific tools listed below and certain tools that should be made according to the construction designs supplied in this manual.*

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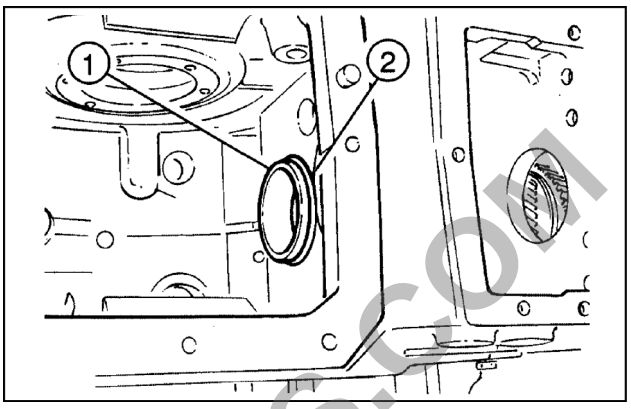
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Differential - Adjust

Adjusting the conical pair

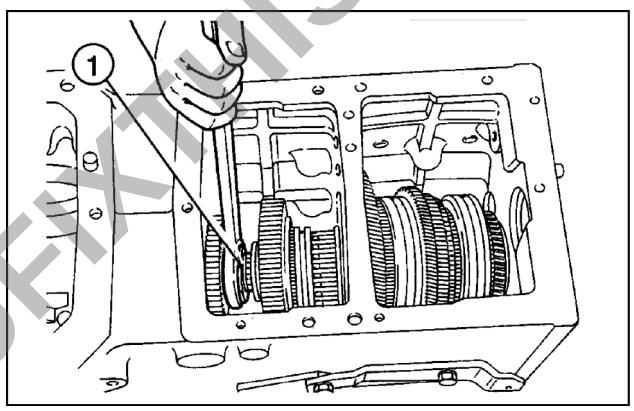
Adjusting the pre-load of the pinion shaft conical bearings.

1. In the transmission housing, install the outer race (cup) of bearing **(1)** with the shim of depth **(2)** calculated previously.



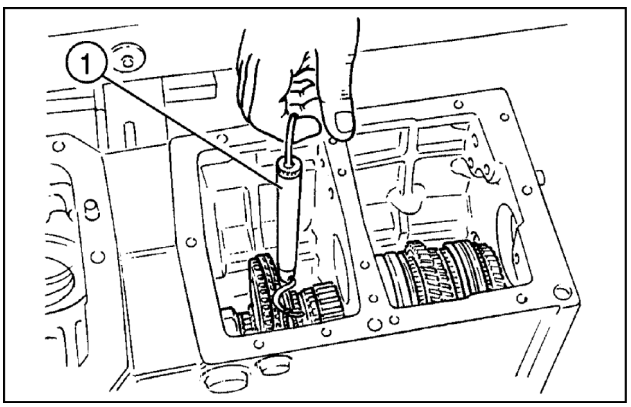
LAIL11TL0520A0A 1

2. Install the complete pinion with the parts.
3. Tighten the adjustment nut **(1)**, turning the pinion shaft to allow the bearing to seat, until reaching a tightening torque of **1.50 – 2 N·m** (**1.1 – 1.5 lb ft**), measured with a dynamometer and a string rolled around the pinion low speed gear, making sure that the gear box shaft does not move.



LAIL11TL0499A0A 2

4. The specified torque corresponds to a force measured with dynamometric scales **(1)** of **17.6 – 23.5 N** (**4.0 – 5.3 lb**).



LAIL11TL0521A0A 3

NOTE: *The pinion shaft conical bearings must be lubricated with* ***NEW HOLLAND AMBRA SUPER GOLD 10W-30*** *oil. The values informed are in movement, therefore, the initial force (starting) is not to be considered.*

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X	380000502	Pinion Ring Nut Wrench
X	293520	Pinion Ring Nut Wrench.
X	**380000257**	Front bevel drive pinion lock key.
X	**380000252**	Wrench for front differential case bearing adjustment nut.
X	**380000253**	Wrench for front differential case bearing adjustment nut.
X	**380000265**	Front axle pivot pin removal tool.
X	**380000234**	Front axle pivot bearing outer ring removal tool.
X	**380000235**	Tool for measurement of rolling drag torque of front axle bearings.
X	293837	Wheel hub ring nut wrench.

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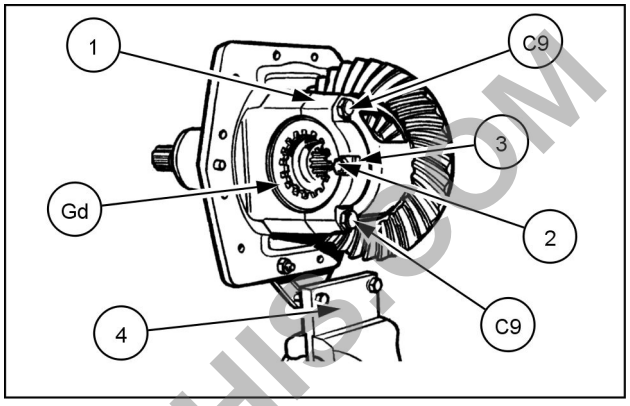
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Limited slip differential - Remove

TD65F	ANZ --- APAC --- LA --- MEA
TD75F	ANZ --- APAC --- LA --- MEA
TD85F	ANZ --- APAC --- LA --- MEA

Self-locking differential

1. Use the support 380000255 **(4)** to secure the assembly of the differential in a vise.
2. Remove the screws **(2)** and the safety plates of the right and left ring nuts **(3)**.

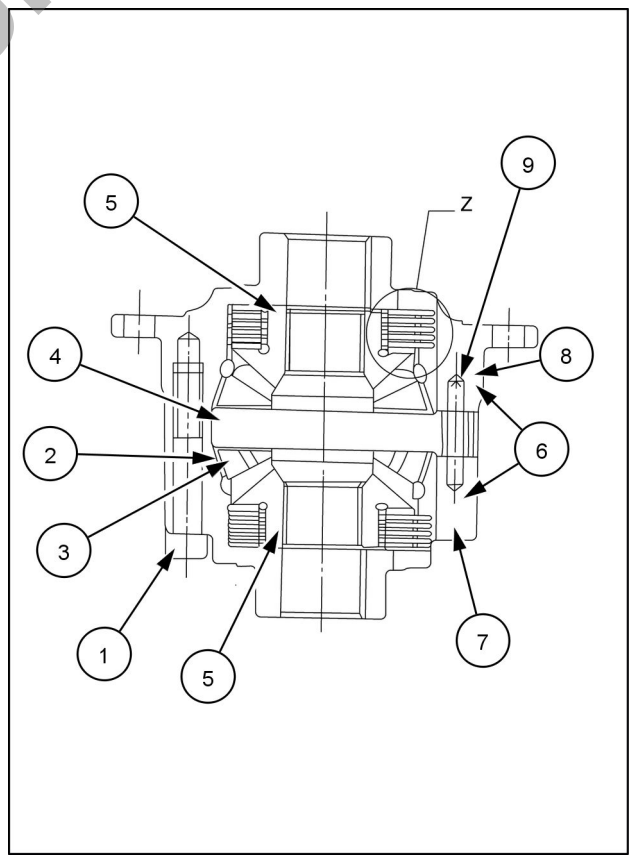


LAIL11FT0689A0A 1

NOTICE: *Mark the left and right caps (3) to facilitate assembly.*

3. Remove the left and right adjusting nuts **(Gd)** from the ring gear.
4. Undo the screws **(C9)** and take off the caps **(1)**. Remove the ring gear from the differential support.

1. Remove the fixing screws **(1)** from the differential casing.
2. Open the differential casing **(6)**.
3. Remove the casing **(7)**, and the differential pin complete **(4)** with the planetary gears **(3)**.



LAIL11FT0957A0A 2

4. The thrust washers **(2)** and the pins **(9)** .
4. Remove the side gear **(5)**, and the friction disc **(11)**.

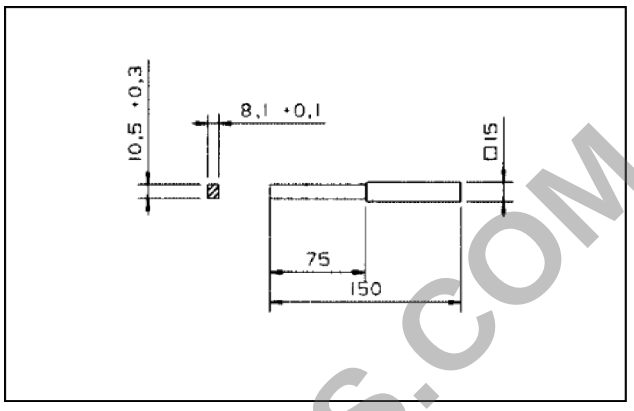
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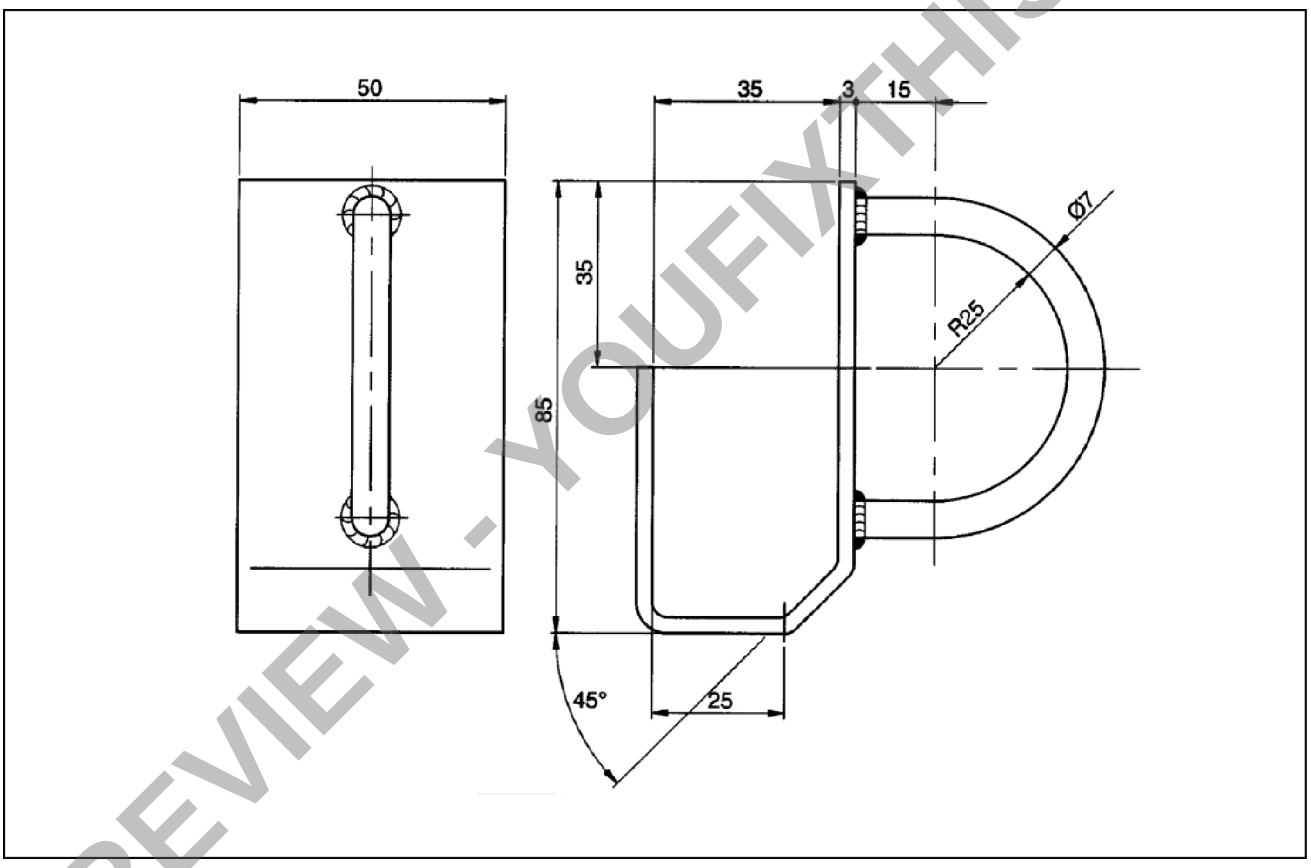
Tool to be manufactured to adjust the conical pinion shaft position (Number **50004** inscribed on the tool - Values in mm)
Build using Aq 45.

Tool to be manufactured to move the differential lock sleeve. (Number 50041 inscribed on the tool - Values in mm)

Build using C40.



LAIL11TL0663A0A 4



LAIL11TL0985F0A 5

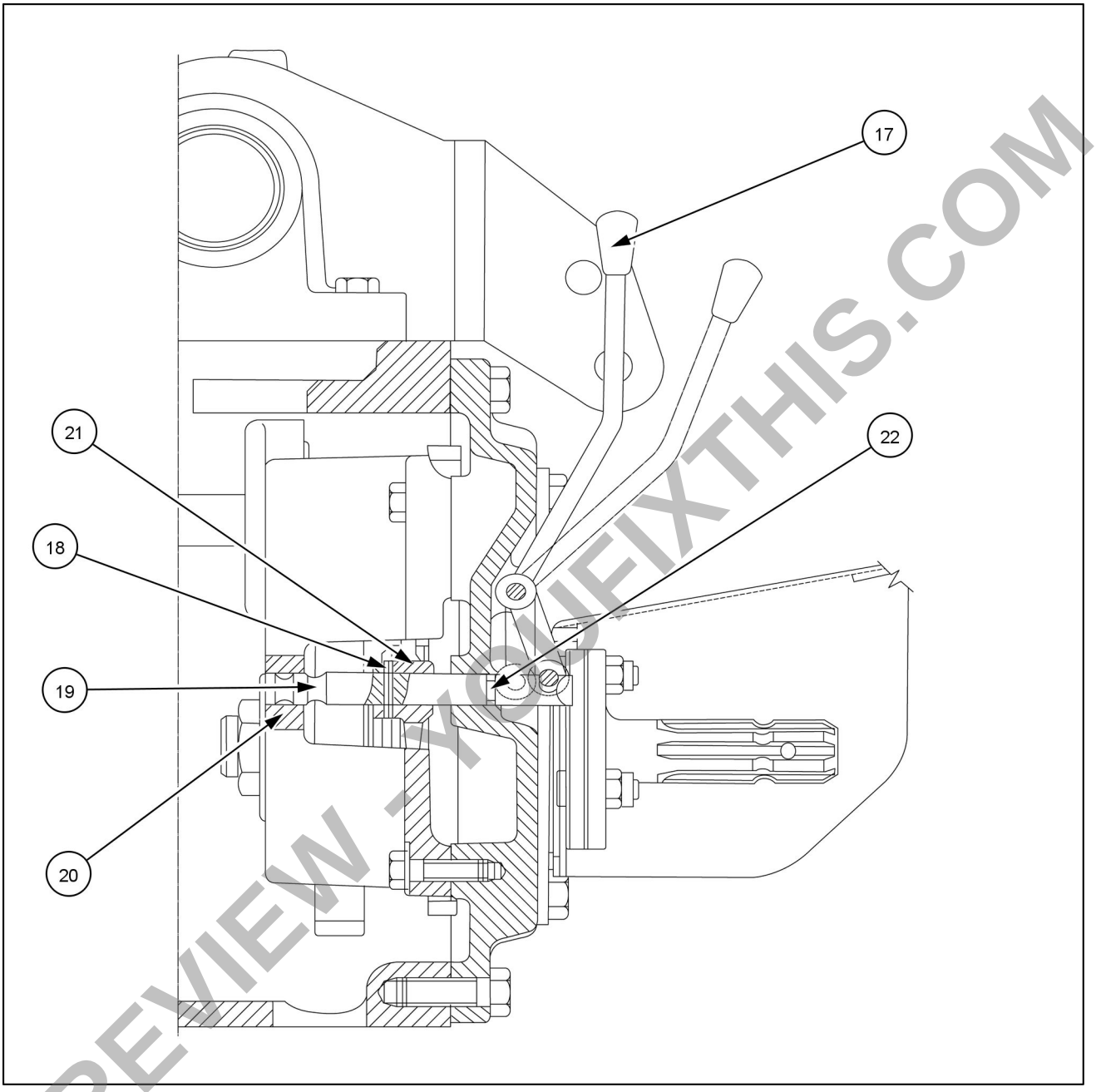
Support for the rear hood (number 50131 inscribed - Sizes in mm)
Build using UNI Fe 42C - Amount = 2

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Rear mechanical control - Sectional view

Cutaway diagram of single and two-speed PTO



LAIL11FT0943G0A 1

17. PTO speed selection lever
18. Roll pin
19. Axle
20. Rear cover
21. Fork (yoke)
22. O-ring

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Brake master cylinder - Dynamic description

Service brake

Refer to the illustrations on page 4. The service brakes are mechanic with oil bath discs. When the L.H. brake pedal (fig. a) is depressed, links move as indicated by the arrows, this causing actuator discs turn, ball (3) in taper seats force the discs apart as shown in detail (c).

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Hydraulic systems - 35

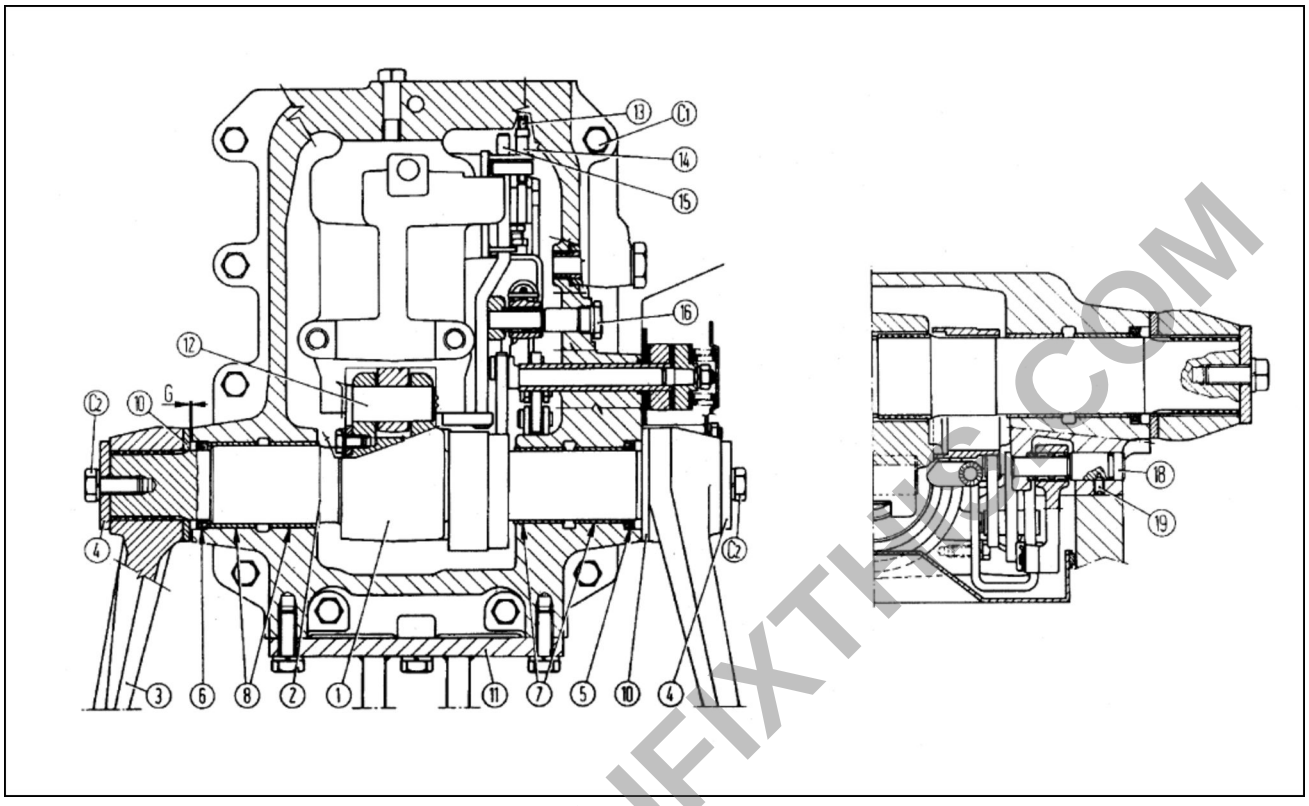
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Remote control valve - Hydraulic schema 14
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Remote control valve - Leakage test 16
Remote control valve - Sectional view 3

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Rear three-point hitch - Sectional view



BRAG12TRALL0185 1

Sectional drawing of lift

C1. Lift capscrews
C2. Thrust plate capscrews
G. **0.2 – 1.4 mm**. Shaft end float
1. Inner arm
2. Cross shaft
3. Link arm
4. Arm thrust plates
5. R.H.Seal
6. L.H.Seal
7. R.H.Bushing.
8. L.H.Bushing
10. Thrust washers
11. Top link support
12. Piston rod pin
13. Travel limit adjusting screw
14. Travel limit adjusting screw locknut
15. Travel limit control rod
16. Control valve link pin
18. Draft control inner lever pivot
19. Set screw

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Power steering pump - General specification

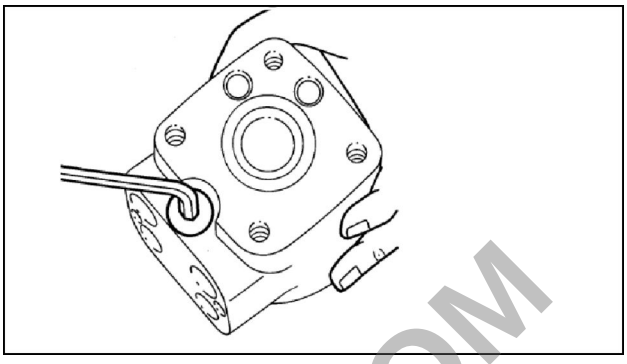
Main specifications for the C25 hydraulic pump

Pump	
Typè	Gear oil suction type
Location	Transmission case behind the distribution gear cover
Model	C 25
Construct	FIAT
Operating system	For distribution gears
Direction of rotation (seen from the operator's set)	clockwise
Ratio between the engine speed and the pump	1 : 0.931
Maximum rotation speed (with engine at maximum power)	**2328 RPM**
Corresponding nominal response (l/min (in.^{3} /min))	26.4 (1611.03)
Bench response to **1450 RPM** and a pressure of 153 bar (156 kg/cm^2):	
For a new or reconditioned pump (l/min (in.^{3} /min))	15.3 (933.66)
For a worn pump (l/min (in.^{3} /min))	10.7 (652.95)
Temperature of the test oil	**55 – 65 °C** (**131 – 149 °F**)
Viscosity of the test oil	SAE 20
Diameter of the driving and driven gear shafts	**17.400 – 17.418 mm** (**0.6850 – 0.6857 in**)
Support seat internal diameter	**17.450 – 17.475 mm** (**0.6870 – 0.6880 in**)
Gap between the gear shafts and their seats	**0.032 – 0.075 mm** (**0.0013 – 0.0030 in**)
- Maximum wear play permitted	**0.1 mm** (**0.00039 in**)
Radial play of gears in the pump body in mm (in	**0.020 – 0.064 mm** (**0.0008 – 0.0025 in**)
Maximum wear to the pump body on the suction side in gear position	**0.1 mm** (**0.0039 in**)

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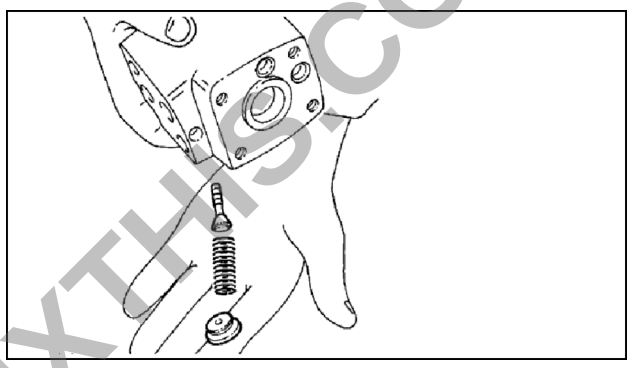
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20. Using a **6 mm** Allenwrench, remove the threaded plug on the pressure relief valve and extract the seal.



BRAG12TRALL0246 17

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



BRAG12TRALL0247 18

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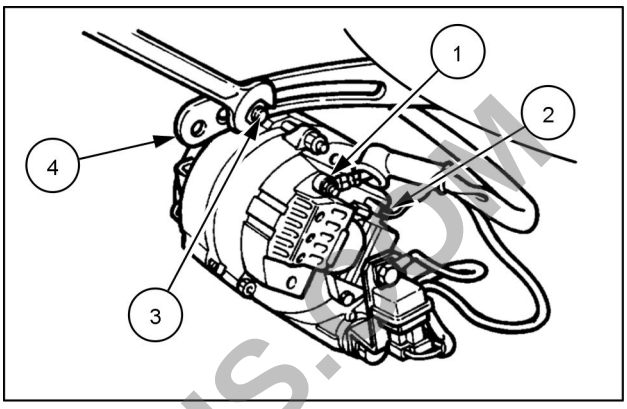
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Alternator - Remove

NOTICE: *Before disconnecting the alternator cables, check that the ignition key is in the OFF position.*

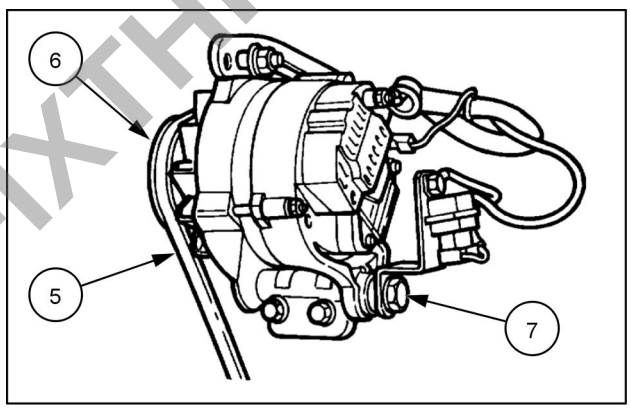
Proceed as follows:

1. Disconnect the negative battery cable.
2. Disconnect the B+ **(1)** and D+ **(2)** cables from the alternator.



LAIL11FT0156A0A 1

1. Loosen and remove the nut and bolt **(3)** that secure the alternator to the tensioning belt **(4)**.
2. Move the alternator to reduce belt tension **(5)** and remove the belt from the alternator pulley **(6)**.
3. Loosen and remove the nut and bolt **(7)**. Remove the alternator.



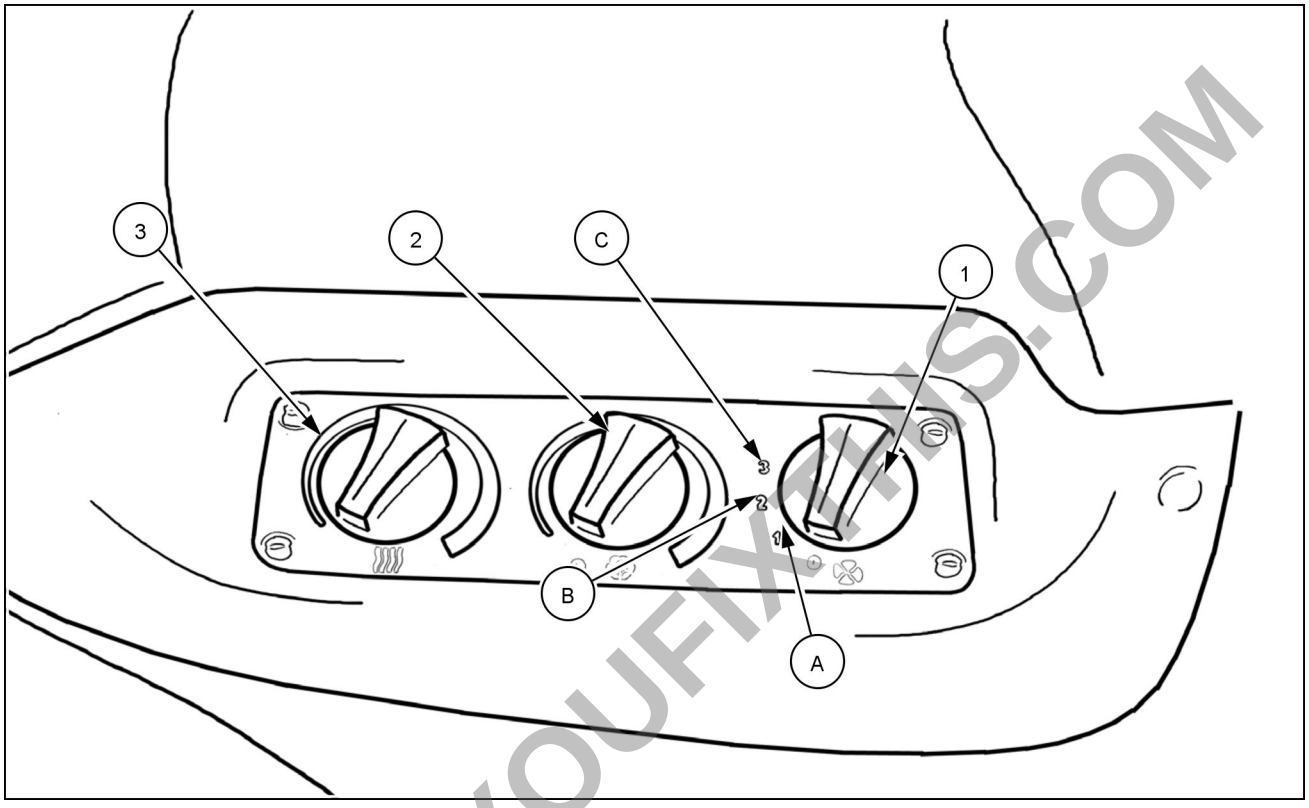
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Cab Heating, Ventilation, and Air-Conditioning (HVAC) controls - Dynamic description

Cab air conditioning controls



BRAG12TRALL0280 1

Air conditioning and temperature control knobs

Functions when the ignition switch is in the starting position **(B)**. With the electric fan knob in positions **(A)** - **(B)** or **(C)**, turn the knob **(2)** to switch on the air conditioning.

Heater control knob

For maximum temperature, turn the knob **(3)** clockwise (fully to the right). To shut off the water supply to the heater and switch off the heater, turn the knob **(3)** fully anticlockwise.

3-speed electric fan control knob

This switch operates with the starter key . is in the starting position **(B)**.
(A) . Low speed.
(B) . Medium speed.
(C) . High speed.

NOTE: *To pressurise the cab, see the Ventilation chapter in* ***Ventilation - Dynamic description (50.104)*** .

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GENERAL DIAGRAM –CENTRE(WITHOUT CAB)

1A– Instrument panel
- 1– Empty
- 2– Grid heater
- 3– Earth
- 4– Fuel gauge
- 5– Battery supply
- 6– NEF dedection
- 7– Water in fuel
- 8– Ignition key supply
- 9– Right turn light
- 10– Parking brake
- 11– Brake hydraulic level
- 12– Air filter
- 13– 4WD
- 14– Empty
- 15– Empty
- 16– Empty

1B– Instrument panel
- 1– Oil pressure
- 2– Empty
- 3– Empty
- 4– Engine RPM
- 5– Engine water temp. gauge
- 6– Left turn light
- 7– Battery charge indicator
- 8– Diff. lock
- 9– High beam
- 10– Side lights
- 11– 1.Trailer
- 12– 2.Trailer

2– Starter switch

3– Turn signal switch
- 1– Side lights
- 2– Right turn lights
- 3– Left turn lights
- 4– High beam
- 5– Power (side lights and head lamp)
- 6– Power
- 7– Low beam
- 8– Power (horn high beam)
- 9– Horn

4– Hazard warning lights indicator sending unit

5– Fuse Box

6– Low beam relay

7– High beam relay

8– Horn relay

11– Battery

12– Starter

13– Alternator

14– Flasher

15– Engine oil pressure switch

16– Air cleaner restriction indicator sending unit

17– Water temperature gauge sending unit

18– Switches beacon lamp

19– Horn

20– Right front parking and turn signal lights

21– Rear left parking,turn signal and stop lights

22– Working lamp

23– Fuel level sensor

24– Beacon lamp

25– Trailer plug

26– Number plate lamp

27– Engine shut off solenoid

28– Thermostarter

29– Hand brake switch

30– Brake stop light switch

31– Starter inhibitor unit

32– Headlamps

34– Rear right parking,turn signal and stop lights

35– Main fuse

36– Front brake oil unit

37– Fuel sedimenter

38– Termostarter fuse

39– Termostarter relay

40– Buzzer

41– Engine oil pressure switch

56– Front left turning light and side light

61– Switches–4WD

62– DT–DL Electronic control unit

63– Switches–Diff. Lock

64– Sensor–Diff.Lock

65– Diff.Lock selenoid

66– 4WD selenoid

67– Sensor–4WD

68– PTO switch

A–Main chasis harnes connector

B–Main and head lamp connector

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