NEW HOLLAND

TELEHANDLERS

M357

REPAIR MANUAL

87684647 NA

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Workshop Manual
M357
TELEHANDLERS

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TELEHANDLER TELESCOPIC LIFTER

LUBRICANTS AND COOLANTS

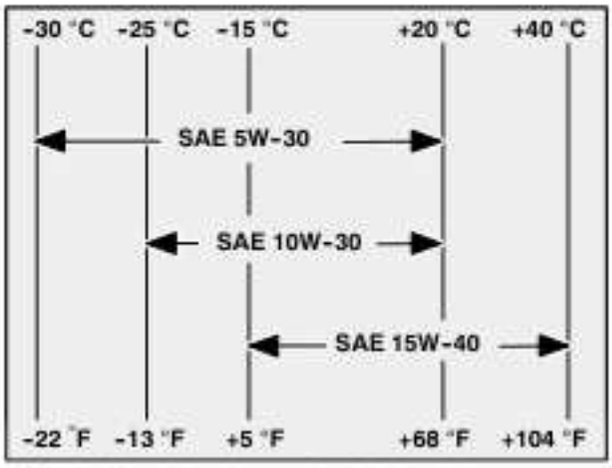
Engine oil correct viscosity grade depends on ambient temperature. Refer to the table on the right for selecting engine oil for your machine.

NOTE: *In areas with long periods of extreme temperature, local lubrication procedures are admissible, such as using SAE 5W30 where there are extremely low temperatures or SAE 50 where there are extremely high temperatures.*

Sulphur contents in fuel.

Engine oil replacement interval is shown in Section 3. Local fuel can however have a high sulphur content: in this case engine oil replacement interval must be changed as follows:

Sulphur contents in %	***Oil replacement interval***
Below 0.5	*Normal*
05.5 to 1.0	*Half the normal*
Over 1.0	*One fourth the normal.*



NOTE: *It is advised to use fuel with sulphur contents below 1.3%.*

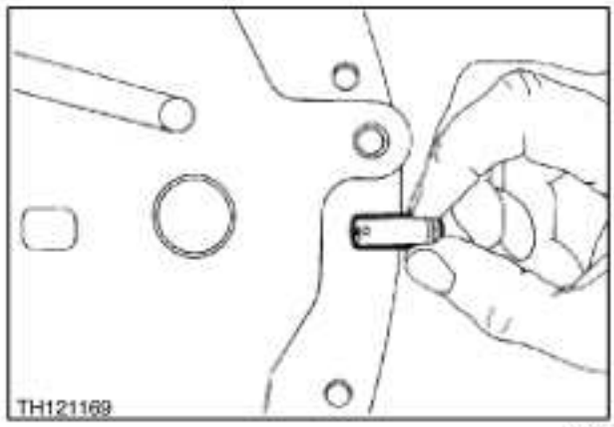
SUGGESTED FLUIDS AND THEIR APPLICATION	International Specification	Quantity	Ambient Temperature (°C)
Oil – ENGINE Ambra Master Gold HSP 15W40	API CH-4 ACEA E-5	2 gal (7.6 litres) (including engine oil filter)	From -10 to +50 From -10 to +50
Oil – POWERSHIFT TRANSMISSION Ambra Hydropower 10W		3.4 + 1 gal (12.9 + 4 litres) (lines and radiator)	
Oil – FRONT AND REAR AXLE Ambra AXF 80W-90		1.8 gal (7 litres)	From -20 to +50
Oil – DROP BOX Ambra Hypoide LS 90 80W90	API GL5	0.2 gal (0.75 litres)	
Oil – FRONT/REAR AXLE HUB Ambra Hypoide LS 90 80W90	API GL5	0.19 gal (0.65 litres)	
Oil – FRONT LOADER HYDRAULIC SYSTEM AMBRA MULTIG	ISO VG 46	31.7 gal (120 litres)	From -20 to +50
ENGINE RADIATOR Water Ambra Agriflu	H_2O	4.50 gal (17 litres) 4.50 gal (17 litres)	From -20 to +50
Oil –BRAKE CONTROL CIRCUIT Ambra Brake LHM	M6C 59-A	0.25 gal (1 litre)	
CRANE ARM SHOES – Grease Ambra GR 9	NLGI 2	As required	From -40 to +50
GENERAL – GREASE 251H EP	NLGI 2	As required	From -40 to +50
CONDITIONER COMPRESSOR Refrigerant R134a			
FUEL Diesel Fuel		37.7 gal (143 litres)	

NOTE: *Fluid and lubricant quantities are meant as overall. Drained fluid or lubricant quantities might not correspond to those stated because part of the oil or fluid could be trapped by some machine components.*

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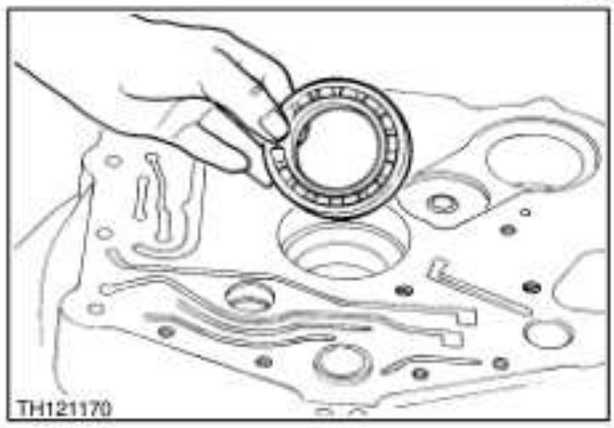
Disassembly of the converter housing

From the top of the housing remove the hexagonal head plug. Then using a small screwdriver, lever out the check valve ball assembly and remove it from the top of the housing.



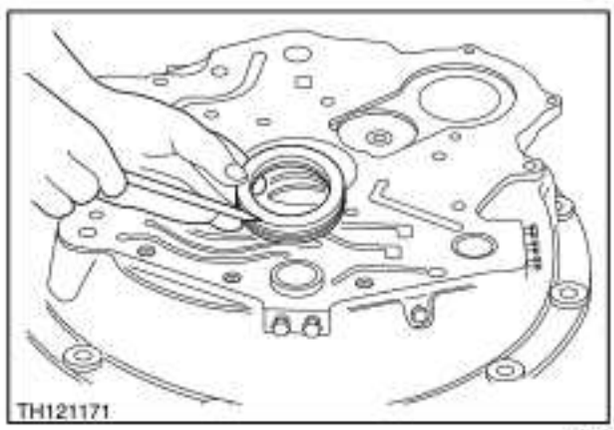
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Remove the torque converter bearing.



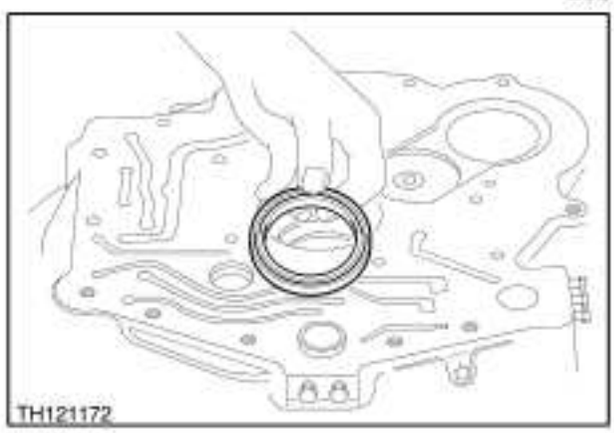
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Remove the oil distributor.



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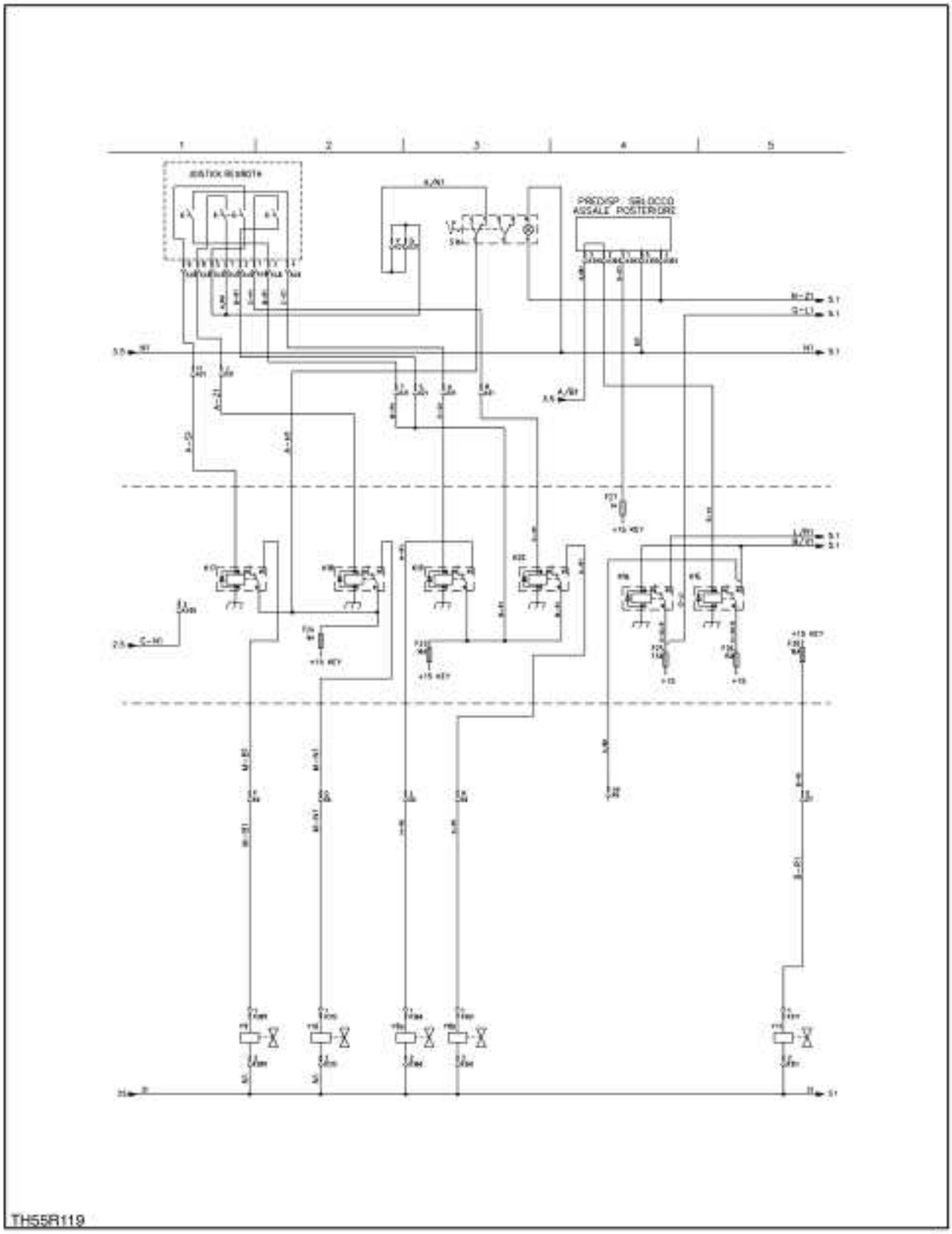
Remove the converter oil seal.



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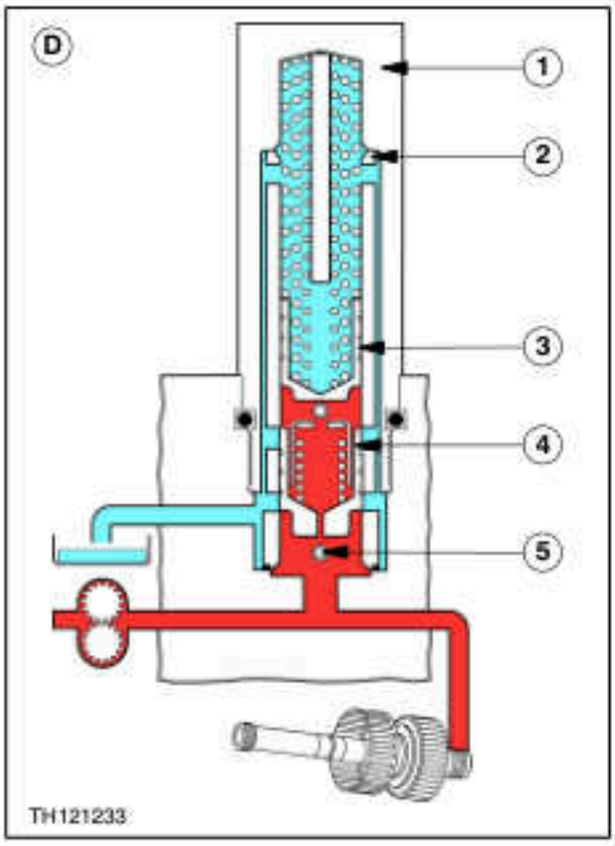
DIAGRAM 4 - BOOM CONTROL
VERSION ON-OFF



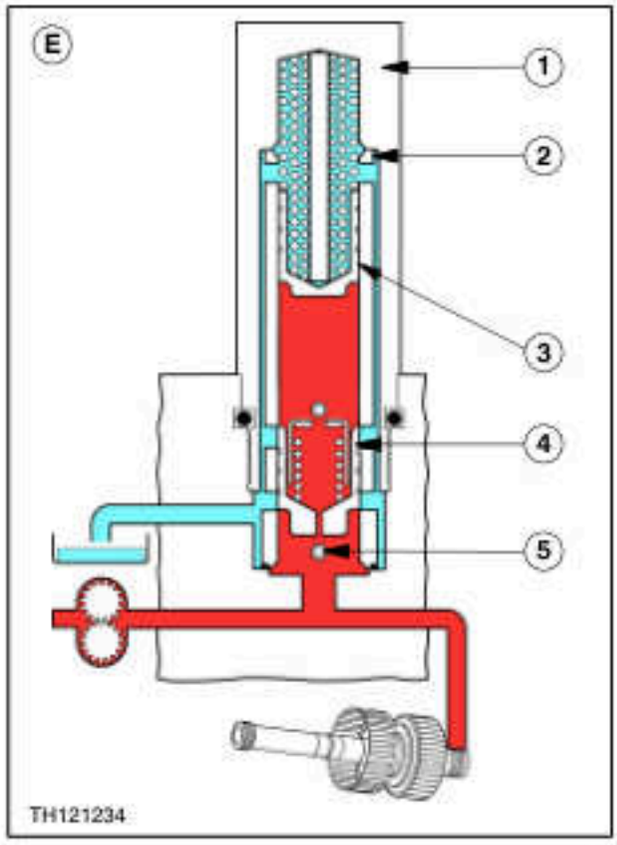
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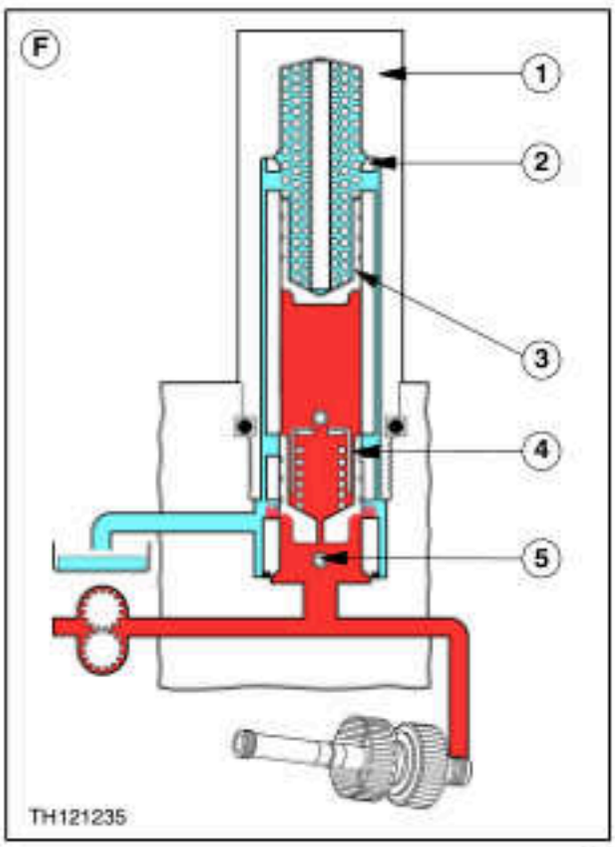
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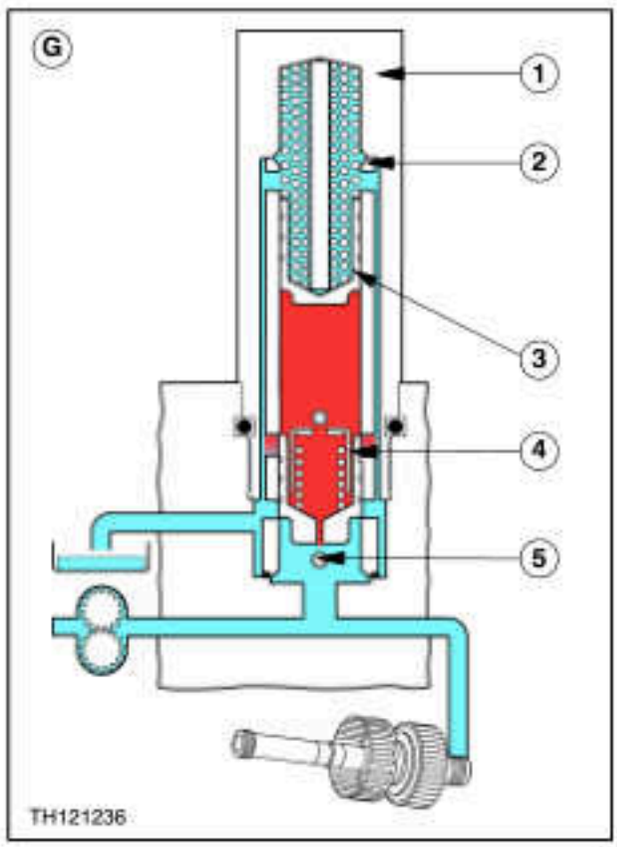
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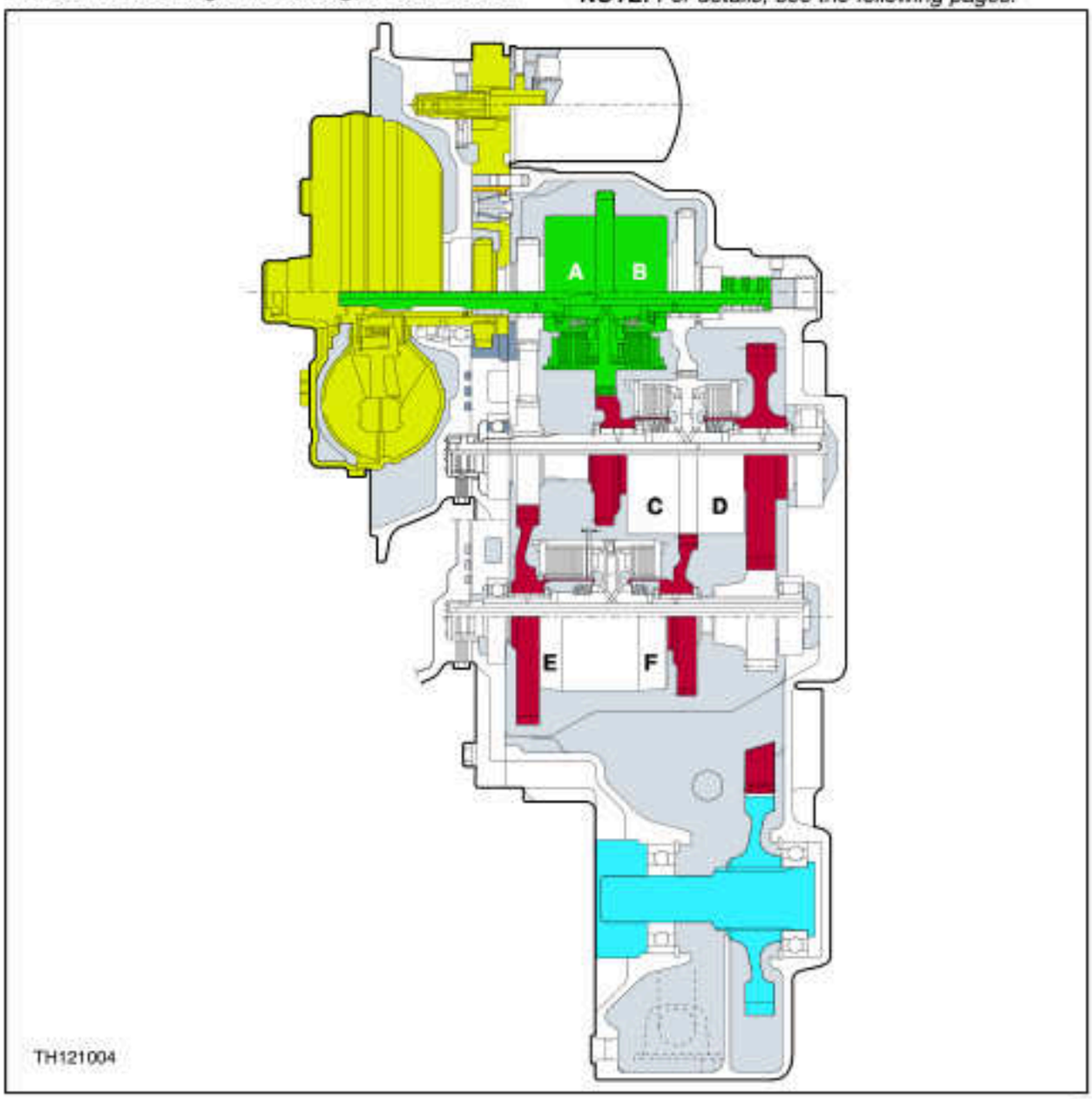
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GEARBOX OPERATION

Through the converter, the thermal engine transmits motion to the gearbox input shaft, on which the advance/reverse motion clutches are assembled.
Depending on the gearbox control lever selection, solenoid valves are energized/de-energized to enable oil under pressure to engage the clutch packages corresponding to the selected direction and speed.

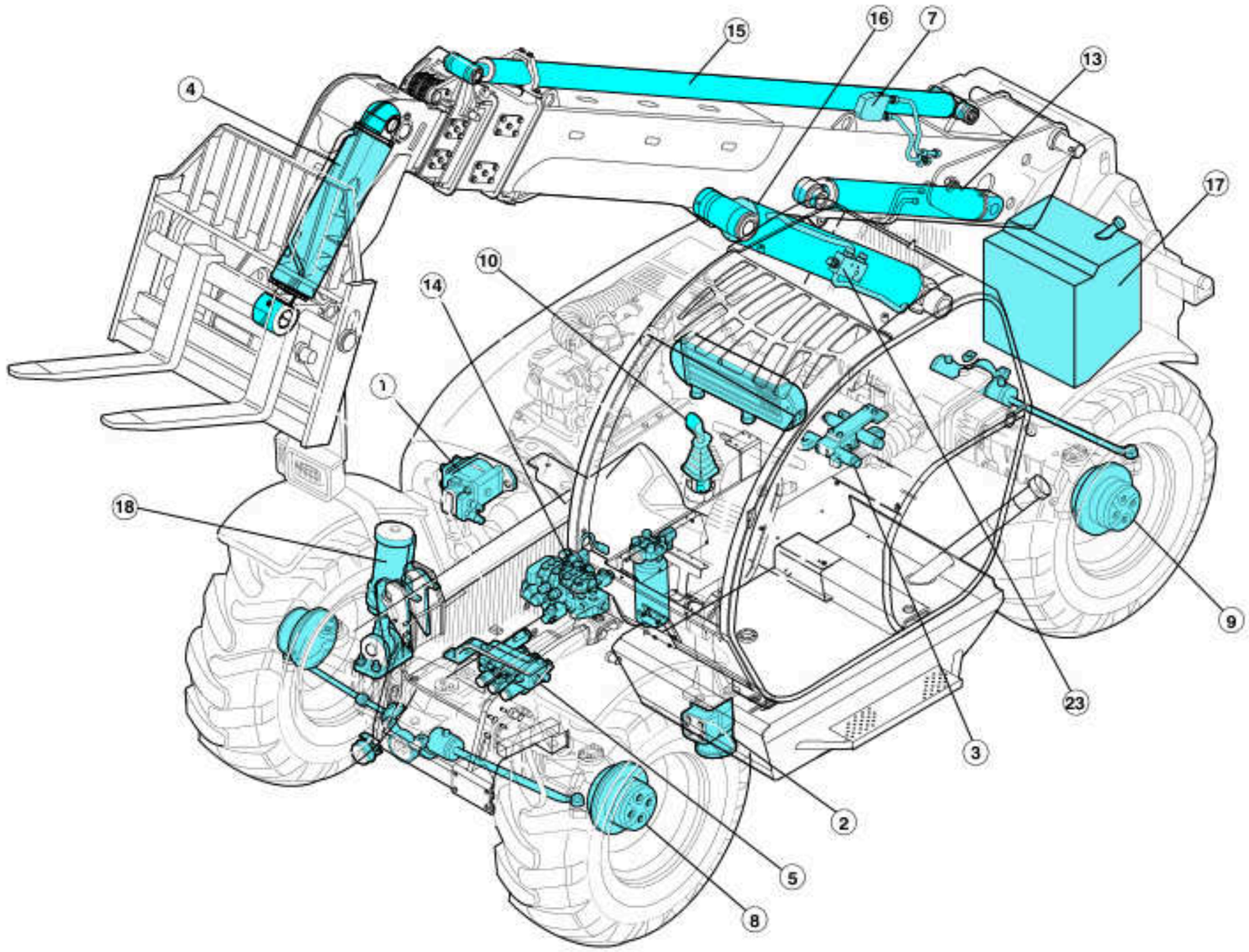
NOTE: *For details, see the following pages.*



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1. Control pump converter and pressure adjusting valve
2. Input shaft and direction clutches (forward/reverse)
3. Speed gears
4. Output shaft
5. Speed clutches

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1. Hydraulic gear pump
2. Power steering
3. Steering mode selection valve
4. Tilt cylinder
5. Frame leveling distributor + pressure reduction valve
7. Telescopic cylinder locking valve
8. Front axle
9. Rear axle
10. Telehandler tool control joystick
13. Compensation cylinder
14. Tool distributor
15. Telescopic cylinder
16. Lifting cylinder
17. Hydraulic oil reservoir
18. Cylinder frame leveling
22. Tilt cylinder lock valve
23. Lifting cylinder lock valve

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