NEW HOLLAND

TELEHANDLERS

M427
M428
M459

REPAIR MANUAL

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Workshop Manual
M427/M428/M459
TELEHANDLERS

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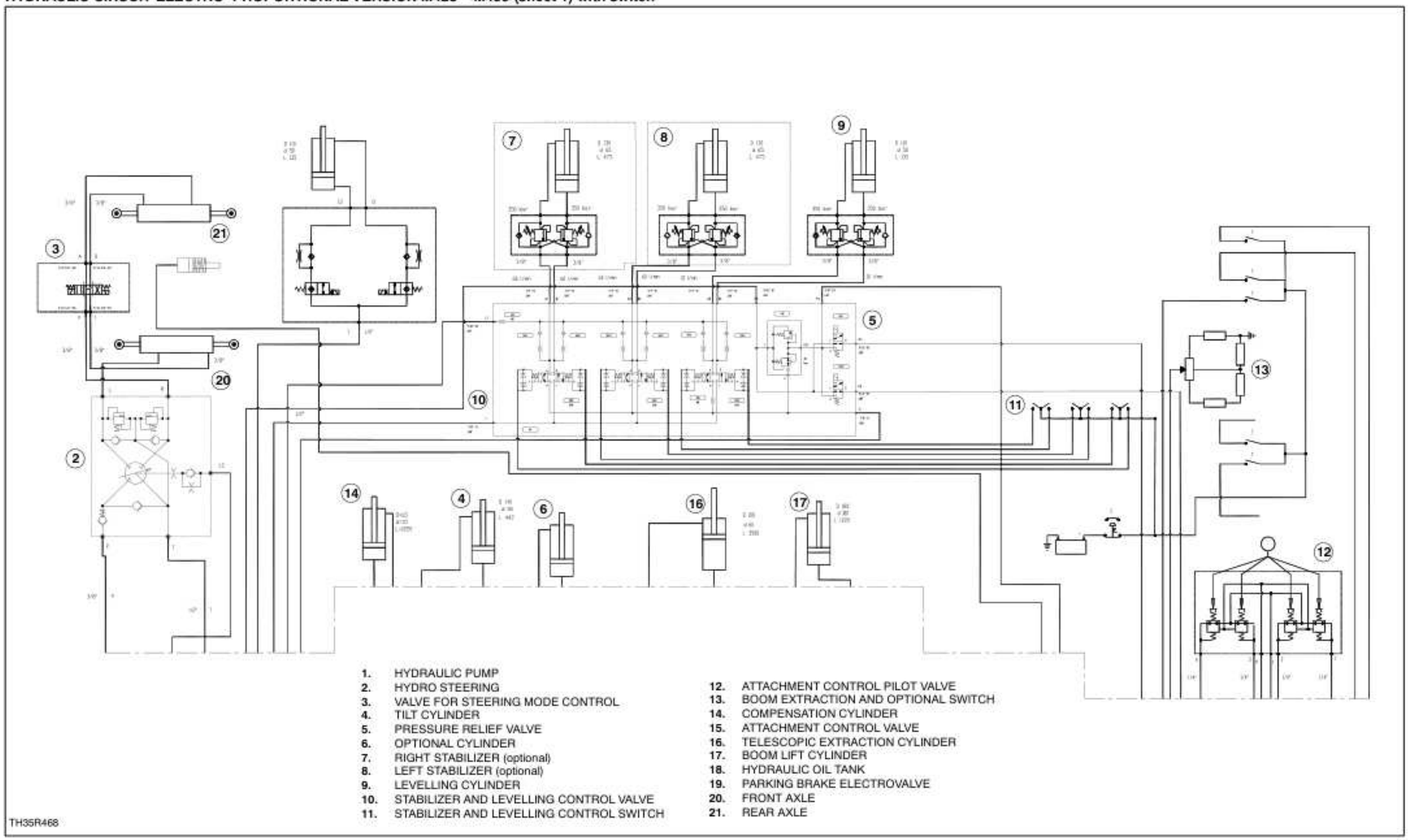
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HYDRAULIC CIRCUIT ELECTRO-PROPORTIONAL VERSION M428 - M459 (sheet 1) with switch

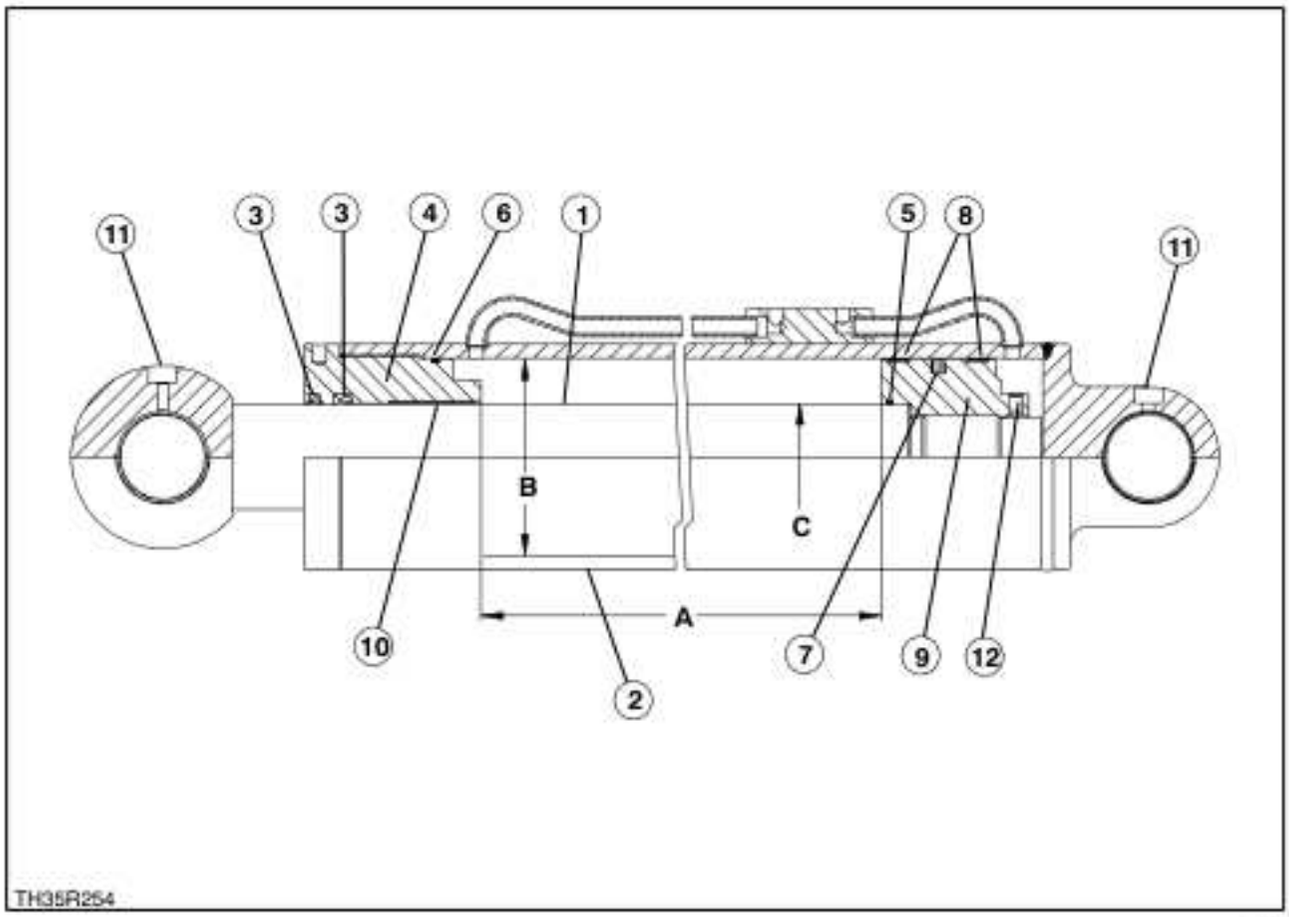


1. HYDRAULIC PUMP
2. HYDRO STEERING
3. VALVE FOR STEERING MODE CONTROL
4. TILT CYLINDER
5. PRESSURE RELIEF VALVE
6. OPTIONAL CYLINDER
7. RIGHT STABILIZER (optional)
8. LEFT STABILIZER (optional)
9. LEVELLING CYLINDER
10. STABILIZER AND LEVELLING CONTROL VALVE
11. STABILIZER AND LEVELLING CONTROL SWITCH
12. ATTACHMENT CONTROL PILOT VALVE
13. BOOM EXTRACTION AND OPTIONAL SWITCH
14. COMPENSATION CYLINDER
15. ATTACHMENT CONTROL VALVE
16. TELESCOPIC EXTRACTION CYLINDER
17. BOOM LIFT CYLINDER
18. HYDRAULIC OIL TANK
19. PARKING BRAKE ELECTROVALVE
20. FRONT AXLE
21. REAR AXLE

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SMALL STABILISER CYLINDER



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Max operating pressure: 3771 psi (260 bar)

	M428	M459
A in (mm)	18.7 (475)	18.7 (475)
B in (mm)	Ø5.11 (Ø130)	Ø5.11 (Ø130)
C in (mm)	Ø2.55 (Ø65)	Ø2.55 (Ø65)

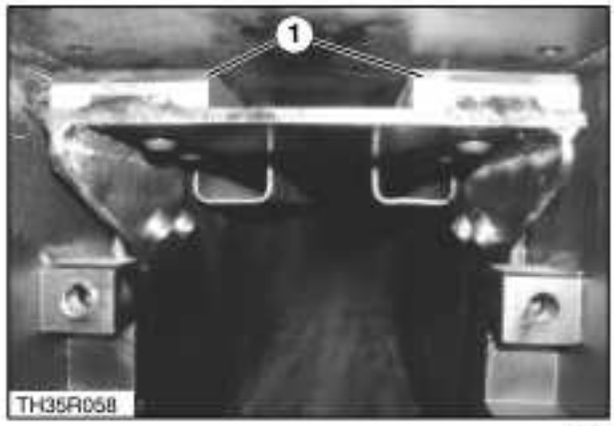
Tightening torque

1. 391 lb-ft (530 Nm)
2. 1135 lb-ft (1538.6 Nm)
3. 23 lb-ft (31.5 Nm)

1. Complete rod
2. Complete cylinder liner
3. Rod seal
4. Front bottom
5. O-ring
6. O-ring
7. Anti-extrusion ring
8. Plunger ring
9. Plunger
10. Guide ring
11. Grease nipple
12. Dowel

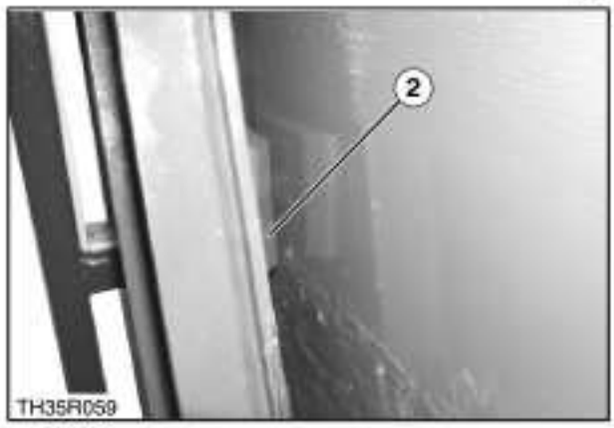
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- Remove two rear-upper wear pads (1) from boom 1 by removing the six securing screws.



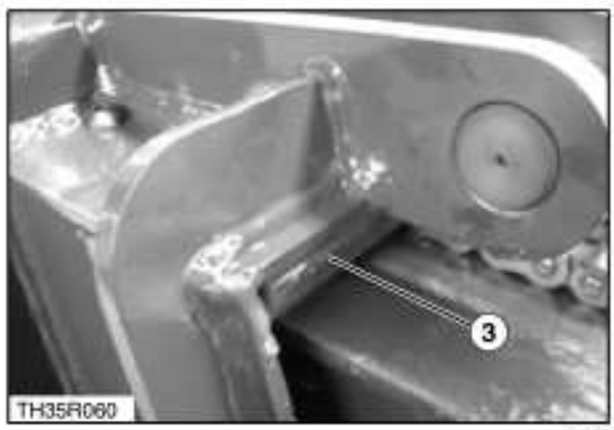
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- Remove two side-front wear pads (2) from boom 2 by removing the four securing screws.



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- Remove two front-wear pads (3) from boom 2 by removing the six securing screws.

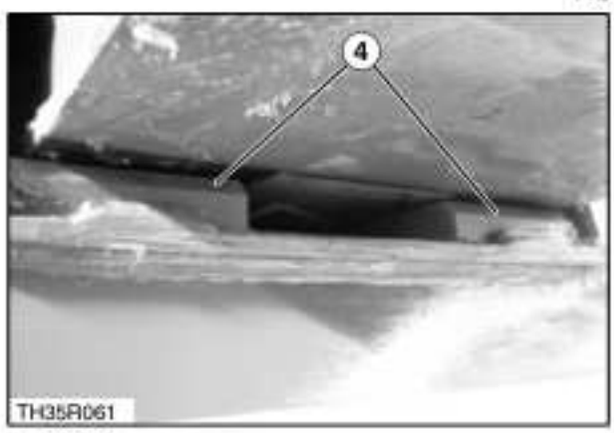


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⚠ ATTENTION ⚠

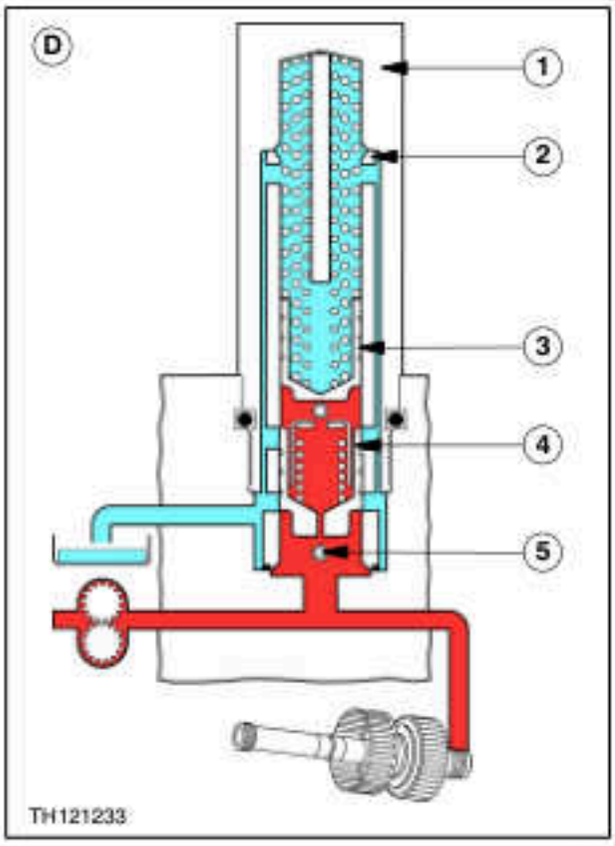
Handle all parts with great care.
Do not place hands or fingers between pieces. Wear authorised protective clothing/devices such as glasses, gloves and safety shoes.

- Use a cable to lift slightly boom 1 to facilitate the removal operations of the two front wear pads pads (4) of boom 2 by removing the six securing screws.

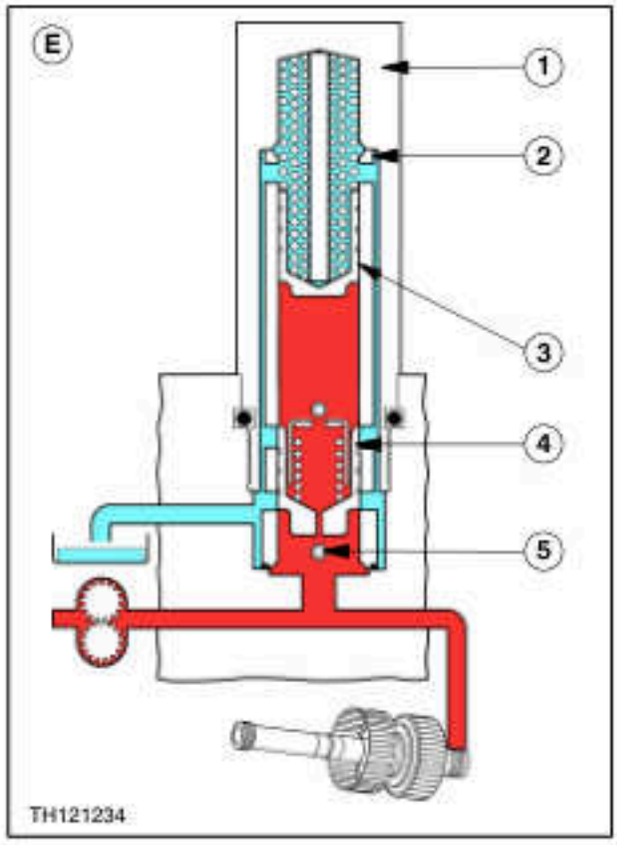


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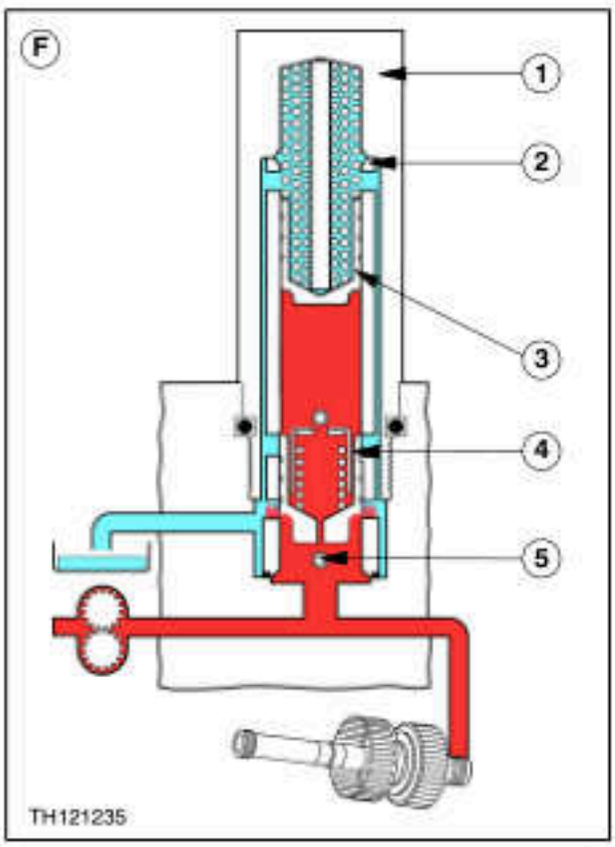
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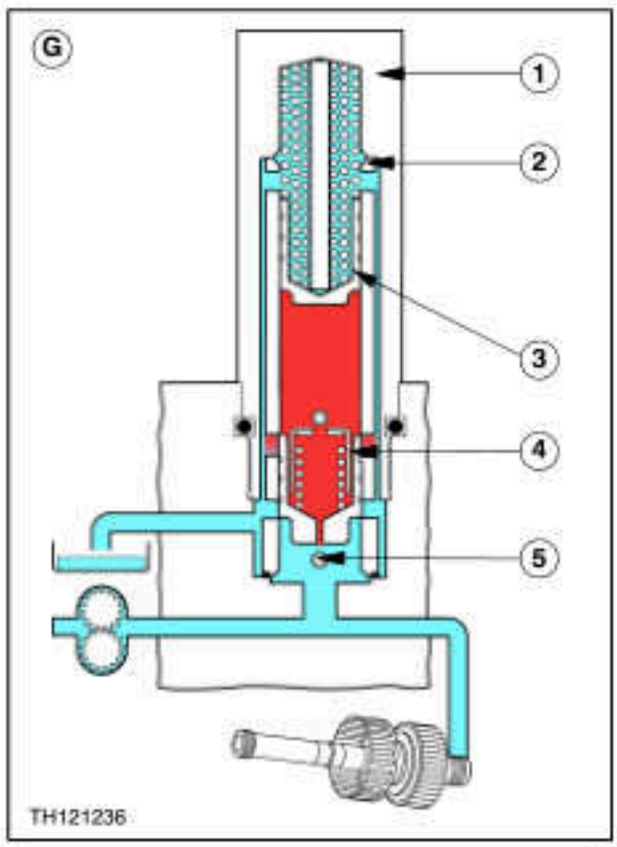
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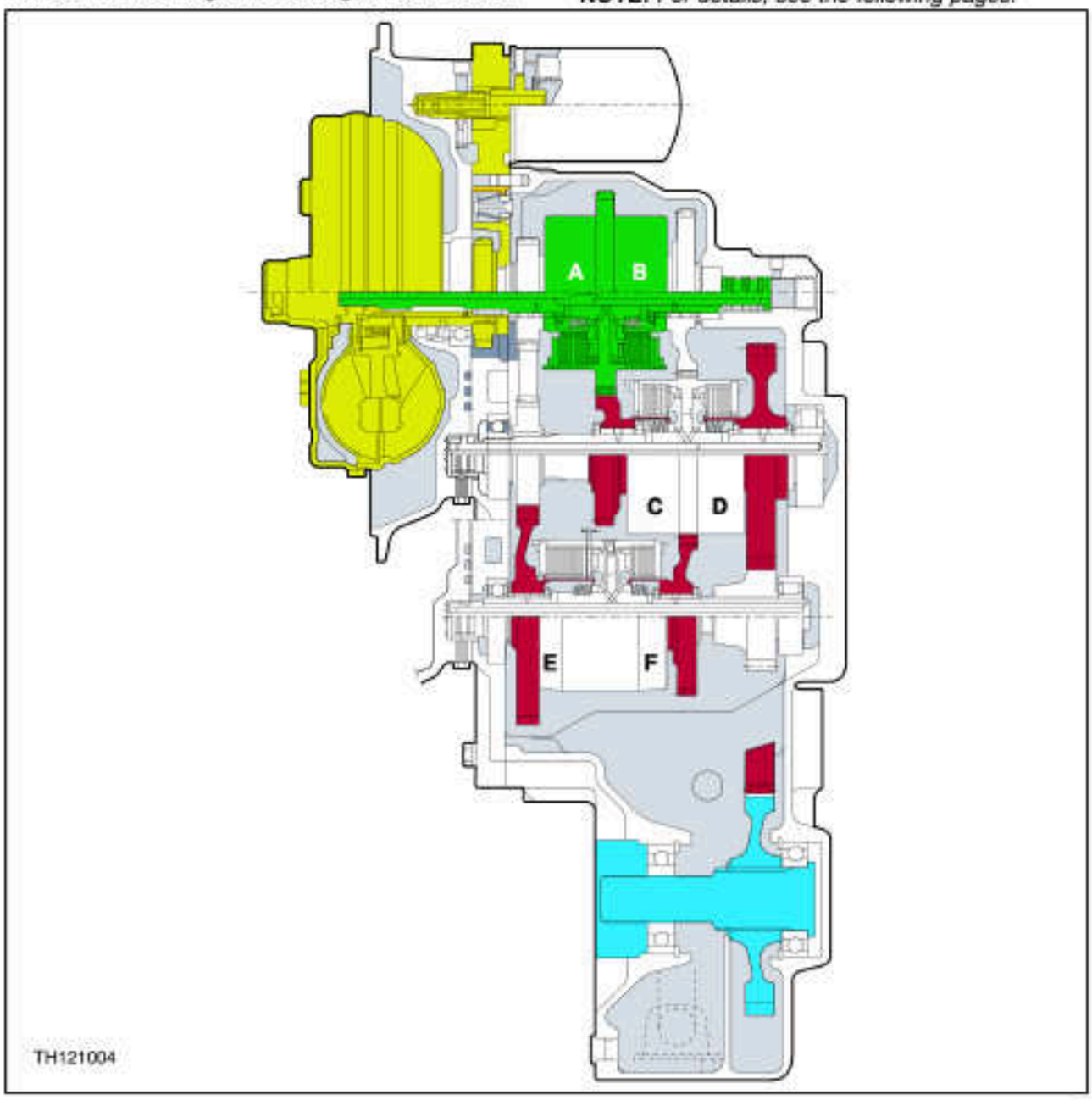
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GEARBOX OPERATION

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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FUSE	CAPACITY	FUNCTION	PIN
F1	7,5A	ENGINE STOP	X400_F1
F2	3A	+ BRAKE OIL LEVEL SENSOR INSTRUMENT	X400_F2
F3	10A	TRANSMISSION INHIBIT FROM PARKING BRAKE	X400_F3
F4	7,5A	OPTIONAL TDDL	X400_F4
F5			X400_F5
F6	10A	ROTARY LAMP	X400_F6
F7	10A	3Ø INTERMITTENCE	X400_F7
F8			X400_F8
F9	15A	LOW BEAM	X400_F9
F10	15A	HIGH BEAM	X400_F10
F11	5A	FRONT LEFT + TAIL RIGHT PARK LAMP - TAIL LAMPS	X400_F11
F12	5A	FRONT RIGHT + TAIL LEFT PARK LAMP	X400_F12
F13			X400_F13
F14			X400_F14
F15			X400_F15
F16			X400_F16
F17	15A	BOOM WORK LIGHT	X401_F1
F18	15A	FRONT WORK LIGHT	X401_F2
F19	15A	REAR WORK LIGHT	X401_F3
F20	10A	SERVOCONTR. POSIT. S.V.	X401_F4
F21	7,5A	Light switch (OPT)	X401_F5
F22	10A	E.V. PROPUTIONAL	X401_F6
F23			X401_F7
F24	10A	OPTIONAL IN/OUT	X401_F8
F25	7,5A	STABILIZ. UP/DOWN	X401_F9
F26	10A	BOOM DOWN SENSOR	X401_F10
F27	3A	REAR AXLE RELEASE	X401_F11
F28	15A	HORN	X401_F12
F29	5A	REVERSE BUZZER	X401_F13
F30	7,5A	15 INTERMITTENCE	X401_F14
F31	7,5A	REAR AXLE SENSOR	X401_F15
F32	5A	BOOM SENSOR THERMOSTARTER KIT	X401_F16

RELAY	FUNCTION	PIN
K1	1st GEAR	X402_1
K2	2nd GEAR	X402_2
K3	REVERSE	X402_3
K4	4th GEAR	X402_4
K5	FORWARD DRIVE	X402_5
K6	DRIVE LOCKOUT	X402_6
K7	REVERSE BUZZER	X402_7
K8	TRAVEL INHIBIT FROM STABILIZERS	X403_1
K9	2 WHEEL DRIVE IND.	X403_2
K10	CRAB INDICATOR	X403_3
K11	SPOT TURN INDICATOR	X403_4
K12	GLOW PLUG LAMP	X403_5
K13	HORN	X403_6
K14	PARKING BRAKE	X403_7
K15	BOOM DOWN SENSOR	X404_1
K16	STAB. RAISE	X404_2
K17	OPTIONAL IN.	X404_3
K18	OPTIONAL OUT	X404_4
K19		X404_5
K20		X404_6
K21	PARKING BRAKE LAMP	X404_7
K22	HIGH BEAM	X407
K23	LOW BEAM	X408

LEGENDA COLORE CAVO – COLOUR ABBREVIATION	
A	ARANCIO ORANGE
B	BIANCO WHITE
C	CELESTE BLUE
G	GRIGIO GREY
H	GIALLO YELLOW
L	BLU SCURO DARK BLUE
M	MARRONE BROWN
N	NERO BLACK
R	ROSSO RED
S	ROSA PINK
V	VERDE GREEN
Z	VIOLA VIOLET
■■■	CAVO SCHERMATO / UNSCHERMATO SHIELDED / UNSHIELDED CABLE
■■■	CAVO SCHERMATO / UNSCHERMATO ATTORCIGLIATO SHIELDED / UNSHIELDED TWISTED CABLE
■■■	CAVO MULTIPOLARE SCHERMATO SHIELDED MULTIPOLAR CABLE

INSTRUMENT PANEL ELECTRO-PROPORTIONAL

WIRE IDENTIFICATION		
A . . . LIGHT BLUE	L . . . DARK BLUE	V . . . GREEN
B . . . WHITE	M . . . BROWN	Z . . . VIOLET
C . . . ORANGE	N . . . BLACK	
G . . . YELLOW	R . . . RED	
H . . . GRAY	S . . . PINK	

A/B . LIGHT BLUE/WHITE EXTENDING SPIRALLY

A-B . LIGHT BLUE-WHITE EXTENDING LATERALLY

ELECTRICAL SCHEMATIC - INSTRUMENT PANEL ELECTRO-PROPORTIONAL
M427, M428, M459 TELEHANDLER

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