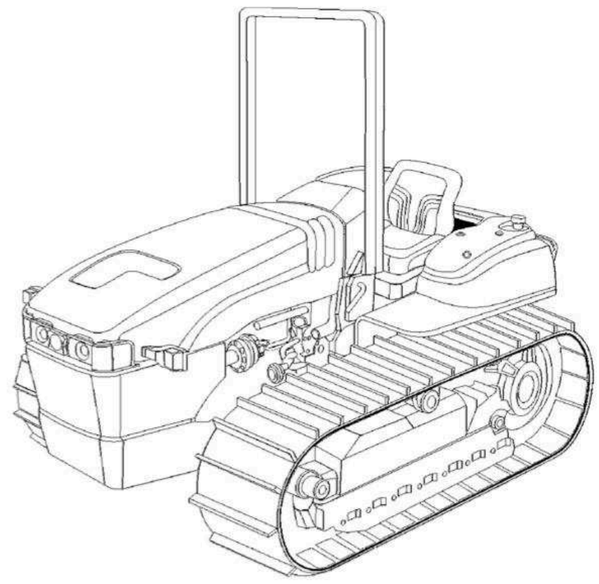


NEW HOLLAND
TK65 TK75
TK76 TK85
TK95 TK70A
TK75A TK80A
TK90A TK100A
TRACTORS

SERVICE MANUAL

NEW HOLLAND AGRICULTURE

SERVICE

6035438100

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CONSUMABLES

COMPONENT TO BE FILLED OR TOPPED UP	QUANTITY dm^3 (gallons)	RECOMMENDED NEW HOLLAND PRODUCTS	NEW HOLLAND SPECIFICATIONS	INTERNATIONAL SPECIFICATIONS
Cooling system: - models TK65, TK75 ..... - models TK76, TK85, TK95	 10.5 (2.31) 13.0 (2.86)	Water & liquid **AMBRA AGRIFLU 50% + 50%**	NH 900 A	-
Fuel tank: - models TK65, TK75 ..... - models TK76, TK85, TK95	 80 (17.6) 129 (28.38)	Decanted and filtered diesel fuel	-	-
Engine sump: without filter: - models TK65, TK75 ..... - models TK76, TK85, TK95 with filter: - models TK65, TK75 ..... - models TK76, TK85, TK95	 6.7 (1.47) 10.5 (2.31) 7.3 (1.61) 11.2 (2.46)	**AMBRA SUPER GOLD 15W - 40** oil or **10W - 30**	NH 330G (SAE 15W-40) NH 24G (SAE 10W-30)	API CF-4/SG CCMC D4 MIL-L-2104E
Steering clutches	1.4 (0.31)	**AMBRA SUPER** oil **10W**	NH 301 C	API CE CCMC D4 MIL-L-2104C SAE 10W
Transmission: (gears, bevel drive, brakes and hydraulic lift) - models TK65, TK75 ..... - models TK76, TK85, TK95 Track tension wheel, carriage rollers, track support rollers	 33.3 (7.32) 39.0 (7.92) -	**AMBRA MULTI F** oil	NH 420 A	API GL4 ISO 46/68 SAE 20W-30
Final drives (each)	2.0 (0.44)	**AMBRA HYPOIDE 90** oil	NH 520 A	API GL5 MIL-L-2105D SAE 80W-90
Grease fittings	-	**AMBRA GR9** grease	NH 710 A	NLGI 2

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SECTION 10 - ENGINE

Chapter 1 - Engine

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GENERAL SPECIFICATIONS	3 cylinders	4 cylinders
Engine, technical type:		
- model TK 65 - type 8035.05.421 (BOSCH pump)	See data on page 6-7	-
- model TK 75 - type 8035.25.421 (BOSCH pump)	See data on page 8-9	-
- model TK 76 - type 8045.06.421/521 (BOSCH pump)	-	See data on page 10-11
- model TK 85 - type 8045.05.421/521 (BOSCH pump)	-	See data on page 12-13
- model TK 95 - type 8045.25L.421 (BOSCH pump)	-	See data on page 14-15
Cycle	diesel, 4-stroke	
Injection	direct	
Number of on-line cylinders	3	4
Cylinder liners	dry force-fitted in cylinder block	
Piston diameter		
- models TK 65, TK 75	104 mm (4.0945 in.)	-
- model TK 76	-	100 mm (3.937 in.)
- models TK 85, TK 95	-	104 mm (4.0945 in.)
Piston stroke	115 mm (4.37 in.)	
Total displacement:		
- model TK 65	2931 cm^3 (0.6447 gal.)	-
- model TK 75	2931 cm^3 (0.6447 gal.)	-
- model TK 76	-	3613 cm^3 (0.7947 gal.)
- model TK 85	-	3908 cm^3 (0.8596 gal.)
- model TK 95	-	3908 cm^3 (0.8596 gal.)
Compression ratio for models TK 65, TK 76 and TK 85	17 to 1 normally aspirated	
Compression ratio for models TK 75 and TK 95	16.5 to 1 turbocharged	
Maximum power:		
- model TK 65	44.5 kW (60 Hp)	-
- model TK 75	54 kW (72 Hp)	-
- model TK 76	-	53 kW (71 Hp)
- model TK 85	-	58.8 kW (80 Hp)
- model TK 95	-	66.5 kW (90 Hp)
Maximum power speed - models TK 65, TK 75	2300 rpm	
Maximum power speed - TK 76, TK 85, TK 95	2500 rpm	
Maximum torque speed - model TK 65	1400 rpm	-
Maximum torque speed - model TK 75	1400 rpm	-
Maximum torque speed - model TK 76	-	1500 rpm
Maximum torque speed - model TK 85	-	1500 rpm
Maximum torque speed - model TK 95	-	1500 rpm
Number of main bearings	4	5
Sump pan	structural, cast iron	

(continued)

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ENGINE TROUBLESHOOTING

(continued)

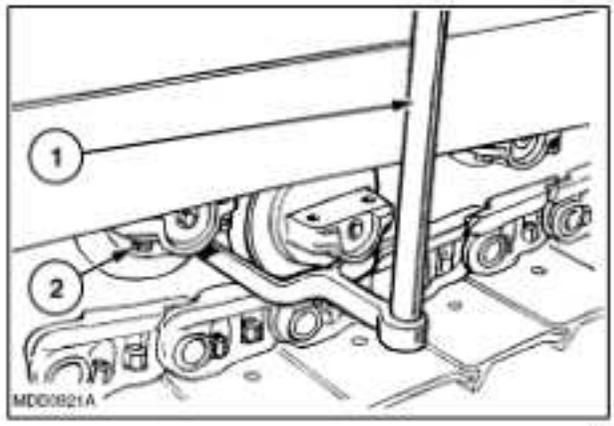
Problems	Possible causes	Remedies
Engine overheating	1. Coolant pump malfunction	Overhaul pump and replace if necessary
	2. Thermostat faulty	Replace thermostat
	3. Radiator inefficient	Remove internal deposits by flushing. Check for leaks and repair
	4. Deposits in cylinder head and crankcase coolant passages	Flush out coolant system
	5. Coolant pump and fan drive belt slack	Check and adjust belt tension
	6. Coolant level low	Top up expansion tank with specified coolant mixture
	7. Incorrect engine timing	Check and adjust engine timing
	8. Injection pump calibration incorrect - delivering too much or too little fuel	Calibrate pump on test bench to values specified in calibration tables
	9. Air filter clogged	Clean filter unit and replace filter element if necessary
Engine lacks power and runs unevenly	1. Injection pump timing incorrect	Adjust injection pump timing
	2. Auto advance regulator in injection pump damaged	Overhaul injection pump and adjust on test bench to values specified in calibration table
	3. Distributor journal worn	Overhaul injection pump and adjust on test bench to values specified in calibration table
	4. Injection pump delivery irregular	Overhaul injection pump and adjust on test bench to values specified in calibration table
	5. All-speed governor damaged	Overhaul injection pump and adjust on test bench to values specified in calibration table
	6. Injectors partially obstructed or damaged	Clean, overhaul and calibrate injectors
	7. Impurities or water in fuel lines	Disconnect fuel lines from injection pump and clean thoroughly. If necessary clean and dry the fuel tank

(continued)

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8. Remove the external and internal lateral guards, the bolts (2) fixing the rollers to the carriages and, if operations 5, 6, and 7 are not carried out, remove the rollers assembly using a hoist **291667** (1).

9. Refit the single rim (Rs) and double rim (Rd) rollers, in relation to the chain tightener wheel (Rt), referring to the diagrams below, remembering that the axes on the rollers must be parallel and perpendicular to the track carriage axis.



51

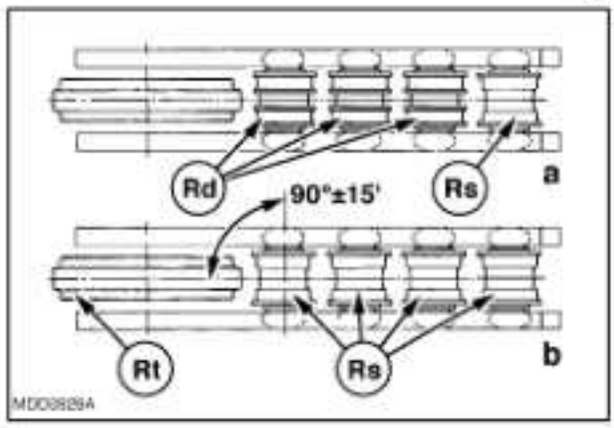
- Apply the torque settings noted on page 8.

CAUTION

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

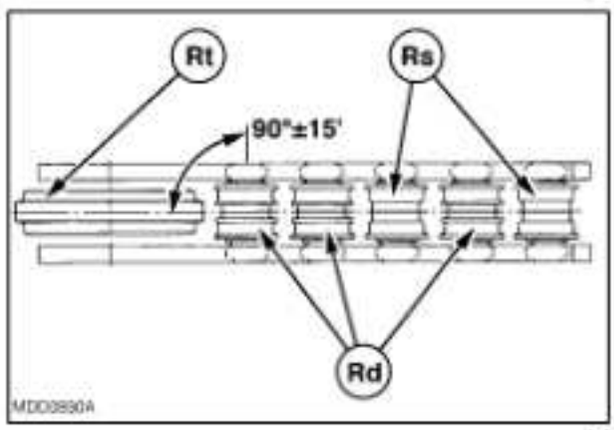
- Rollers assembly diagram for TK65V, TK65F and TK75V for 125 mm (4.921 in.) pitch chains (fig. 52 a).

- Rollers assembly diagram for TK65V, TK65F, TK75V, TK75F, TK75M for 140 mm (5.512 in.) pitch chains (fig. 52 b).



52

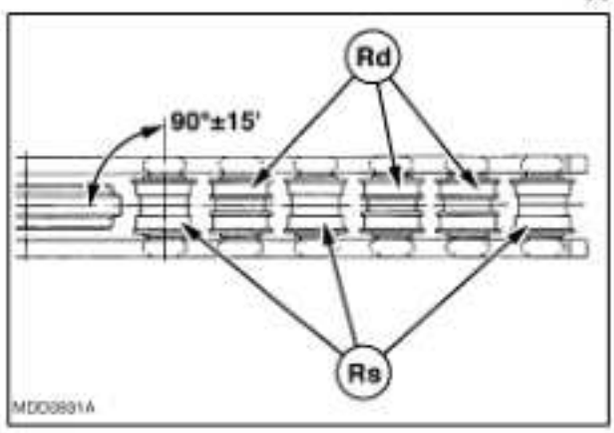
- Rollers assembly diagram for TK76, TK76M, for 140 mm (5.512 in.) pitch chains (fig. 53).



53

- Rollers assembly diagram for TK85, TK85M and TK95M for 140 mm (5.512 in.) pitch chains (fig. 54).

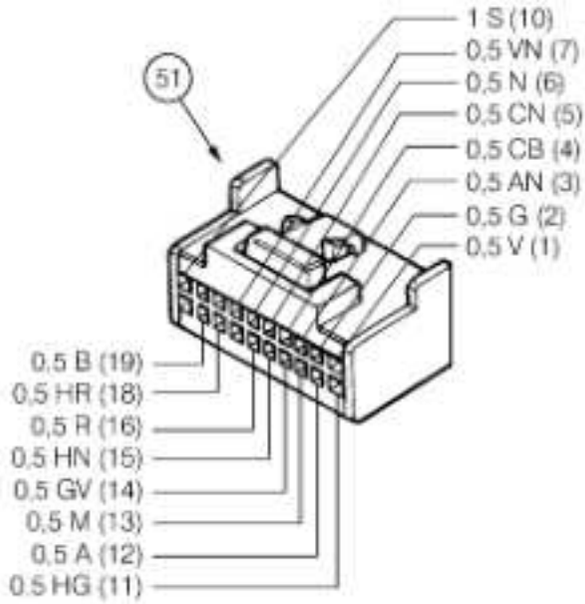
- Assemble the external and internal lateral guards and, if the chains have been removed, they must be refitted as described in operation **48 100 20**.

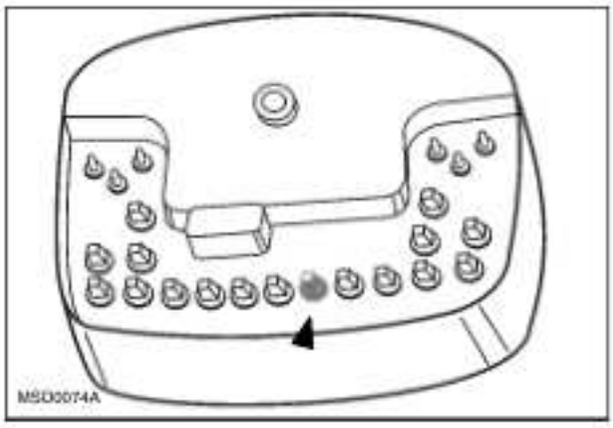


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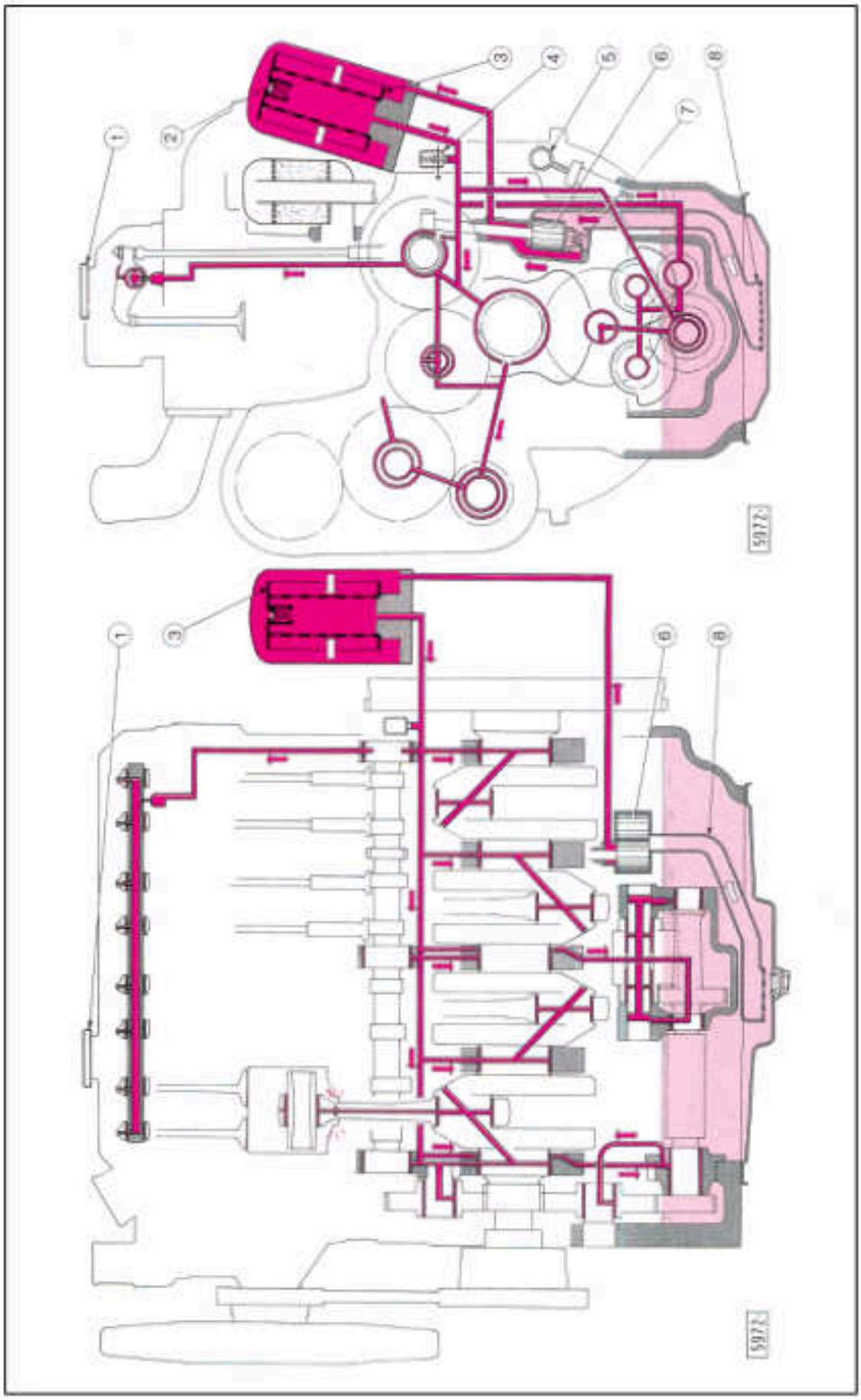
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ENGINE OIL PRESSURE SENSOR (See: ELECTRICAL CIRCUITS – Diagram G)





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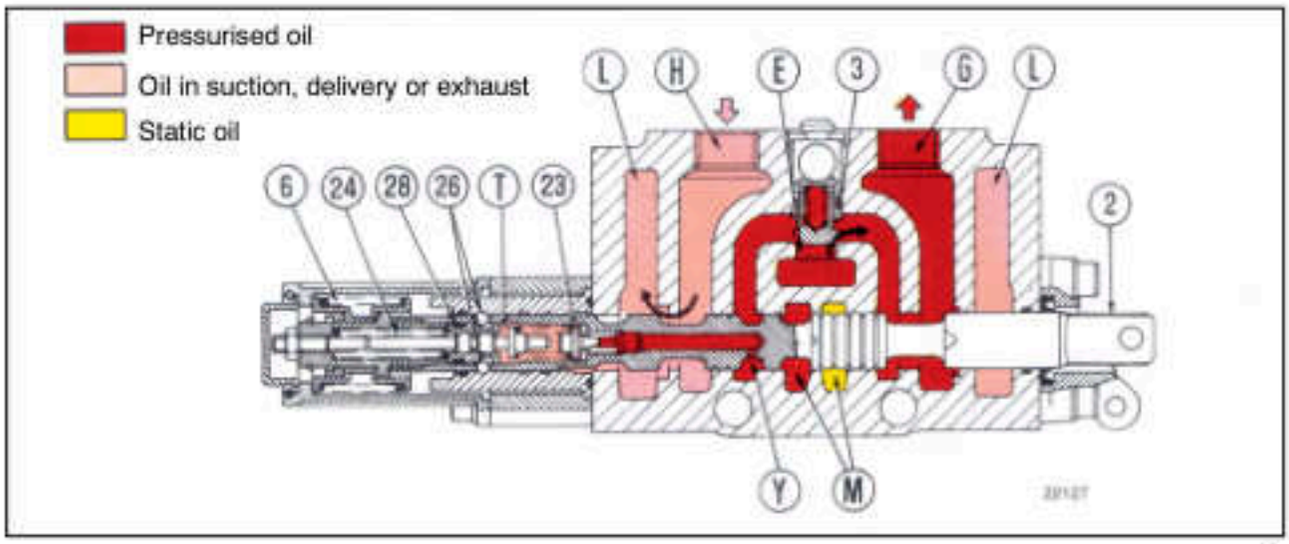
4-cylinder engine lubrication system diagram

1. Oil filler plug - 2. Filter safety valve (activated when the oil infeed pressure on the filter exceeds the outfeed pressure by 1.5-1.7 bar/cm2 - 3. Filter - 4. Switch for indicator lamp (on dashboard) - low engine lubrication oil pressure - 5. Dipstick - 6. Pump - 7. Oil pressure relief valve - 8. Intake mesh filter

8

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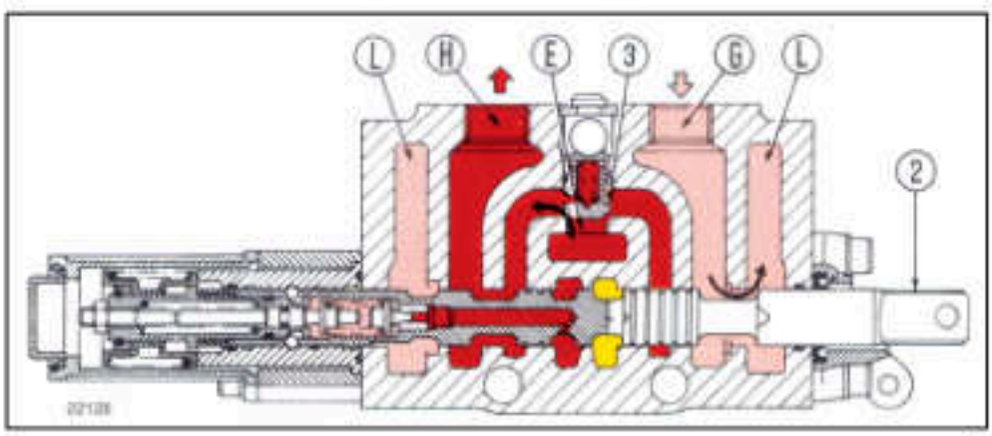
OPERATING STAGES OF AUXILIARY CONTROL VALVE FOR THE OPERATION OF A SINGLE/DOUBLE-ACTING CYLINDER WITH AUTOMATIC DETENT RELEASE AND FLOAT POSITION



9

LIFTING

On pulling back the control lever (located in the cab), the spool (2) shifts and the detent balls (26) engage the left hand groove, where they are held in place by the support (28) and spring (24). The movement of the spool (2) connects: delivery line (E) with the lower chamber of the cylinder, by way of the check valve (3) and the line (G), and also the upper cylinder chamber with the exhaust line (L) by way of line (H), intercepting the supply of oil to the hydraulic lift control valve. On completion of the lifting movement, the oil pressure increases to 170 to 175 bar (2466 to 2538 psi), acting through the port (V), it overcomes the resistance of the spring of the needle valve (23). Inside chamber (T) the oil pressure increases and, acting on the detent ball support (28), it overcomes the resistance of the spring, thus moving the support (28). In this condition the two detent balls (26) drop onto the support (28), releasing the spool (2) which, under the action of the spring (6), returns to the neutral position, and consequently the entire flow from the pump is conveyed to the lift control valve through lines (M).



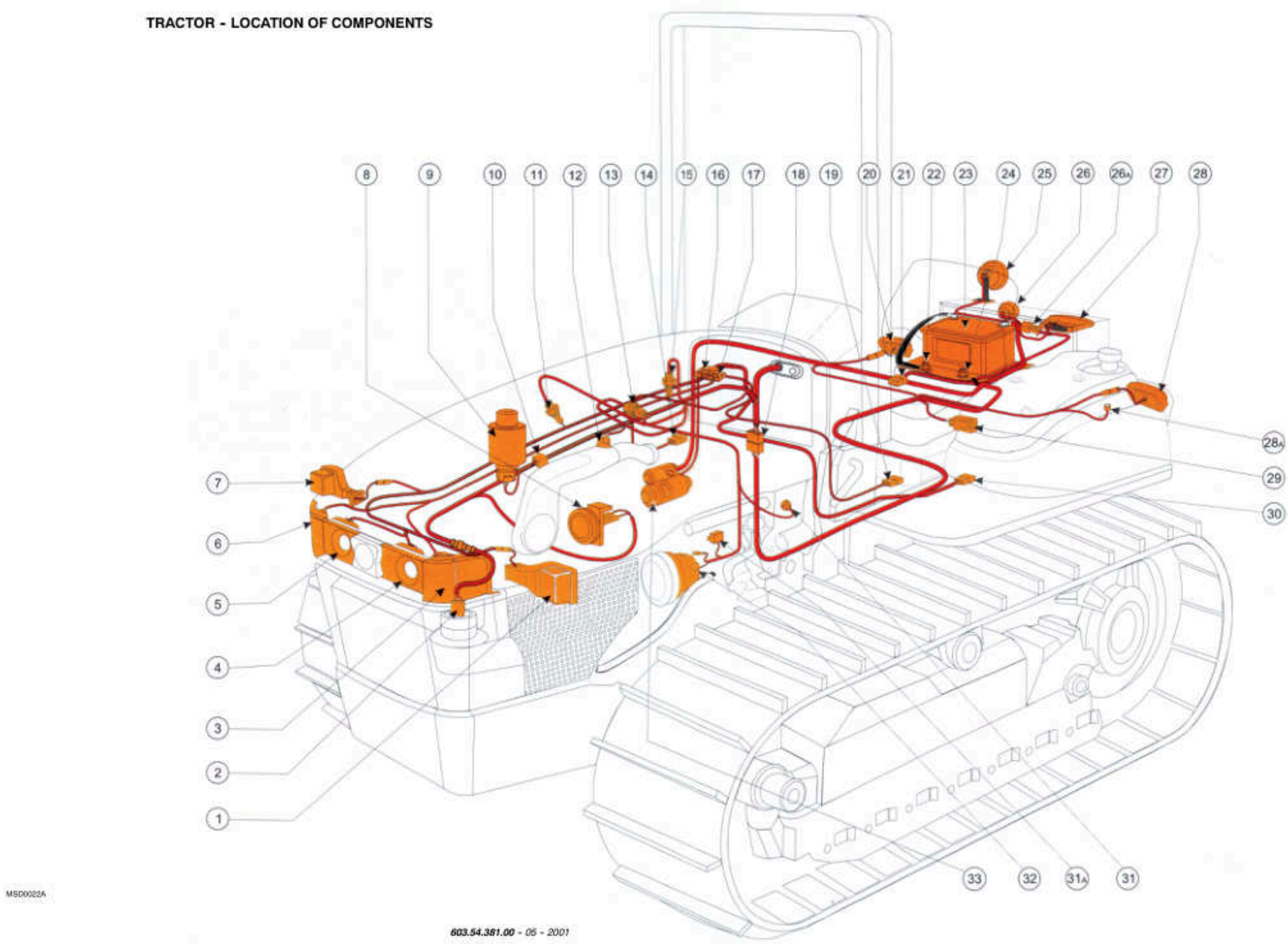
10

LOWERING

To lower the implement, push forward the control lever (in the cab). The control valve spool (2) shifts and the detent balls engage in the central groove where they are held in position by the support (28) and the spring (24). In this condition the oil contained in the lower chamber of the cylinder can flow to the exhaust (L) by way of line (G), while the upper chamber is connected with the delivery (E) by way of line (H) and check valve (3). On completion of the lowering operation, the detent will be automatically released in the manner described previously.

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