SERVICE MANUAL

LW230.B
WHEEL LOADER



603670610ONA

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SECTION 1

ENGINE

TABLE OF CONTENTS

PARAGRAPH	SUBJECT	PAGE
1.1	IDENTIFICATION DATA	1-1
1.2	GENERAL SPECIFICATATIONS OF ENGINE SERIES "C"	1-3
1.3	ENGINE SUPPORTS	1-6
1.4	COOLING SYSTEM (FAN DRIVE SYSTEM)	1-7
1.4.1	Cooling system hydraulic motors	1-8
1.4.2	Fan hydraulic system pump	1-9
1.4.3	Fan hydraulic control block	1-10

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SECTION 2

TRANSMISSION

TABLE OF CONTENTS

PARAGRAPH	SUBJECT	PAGE
2.1	GENERAL DESCRIPTION	2-1
2.2	TORQUE CONVERTER - TRANSMISSION	2-2
2.3	TORQUE CONVERTER	2-7
2.4	TRANSMISSION - TORQUE CONVERTER PUMP	2-9
2.5	TRANSMISSION	2-10
2.5.1	Power train diagram	2-14
2.5.2	Transmission control valve	2-16
2.6	AUTOMATIC TRANSMISSION CONTROL SYSTEM	2-31
2.6.1	Electronic unit ATC for automatic transmission control	2-32
2.7	TRANSMISSION SELECTOR	2-36
2.7.1	"SHIFT-DOWN" Device	2-38
2.7.2	"KICK-DOWN" Function (with manual and automatic gearshift)	2-38
2.7.3	"FORWARD/REVERSE" Function switch (Variant)	2-38
2.8	OIL CIRCUIT	2-41
2.9	DISASSEMBLY TRANSMISSION	2-43
2.10	REASSEMBLY TRANSMISSION	2-70
2.11	TROUBLESHOOTING GUIDE	2-97
2.11.1	Troubleshooting guide	2-97
2.11.2	Transmission	2-98
2.11.3	Parking brake	2-99
2.12	STANDARD VALUES FOR MAINTENANCE	2-100
2.12.1	Torque converter	2-100
2.12.2	Control valve	2-101
2.12.3	Transmission	2-102
2.12.4	Accumulator	2-103
2.12.5	Parking brake	2-103
2.13	TIGHTENING TORQUES OF MAIN FIXTURE	2-104
2.14	PROP SHAFT	2-105

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SECTION 3

BRAKES SYSTEM

TABLE OF CONTENTS

PARAGRAPH	SUBJECT	PAGE
3.1	GENERAL DESCRIPTION	3-1
3.2	OPERATION	3-3
3.2.1	Operating conditions	3-3
3.3	DISC BRAKE	3-6
3.4	BRAKE PEDAL VALVE	3-7
3.5	BRAKES/POWER SYSTEM PUMP	3-9
3.6	PARKING BRAKE CONTROL VALVE	3-10
3.7	PARKING BRAKE	3-11
3.7.1	Manual release procedure	3-11
3.7.2	Disc parking brake operation	3-12
3.7.3	Brake disengagement	3-12
3.8	OTHER COMPONENTS	3-13
3.8.1	Service brakes accumulator	3-13
3.8.2	Check valve	3-13
3.9	BRAKE PEDAL VALVE HYDRAULIC CONNECTIONS	3-14
3.10	DIAGNOSTICS AND TESTING	3-15
3.10.1	Brake control pressure testing	3-17
3.10.2	Minimum and maximum accumulator recharge pressure adjustment	3-18
3.10.3	Parking brake engagement test	3-19
3.10.4	Accumulator pre-charge test	3-20
3.10.5	Instructions for the restorantion of the service brake accumulators precharge	3-21
3.10.6	Bleeding the brake system	3-22
3.10.7	Brake disc wear check	3-23

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2.11 TROUBLESHOOTING GUIDE

2.11.1 TROUBLESHOOTING GUIDE

Problem	Cause	Inspection	Corrective Action
Overheat or lower horsepower	Low oil level	Check oil level wiht oil level gauge	Add oil to the specified level
	Improper oil used	Check oil type	Change for the specified oil
	Malfunction of cooler line	Check cooling water for dir	Clean
	Defective oil seal ring	Measure oil pressure at inlet port of torque converter	Disassemble and replace parts
		Check breather for oil flash	Disassemble and replace parts
	Malfunction of safety valve	Measure oil pressure at inlet port of torque converter	Disassemble and replace parts
	Broken bearing	Observe foreign material in transmission drain	Disassemble and replace parts
		Check line filter and oil	Disassemble and replace parts
	Low discharge from charging pump	Check transmission strainer for clogging	Clean
		Measure oil pressure at inlet port of torque converter	Replace pump
		Measure oil pressure of transmission clutch	Replace pump
	Excessive use	Check operating conditions and operation	Use properly
	Transmission failure	Refer to "2.11.2 TRANSMISSION"	
Oil leak (from flywheel)	Defective oil baffle oil seal	Check for oil leak to flywheel	Replace parts
	Defective O-ring of oil baffle	Check for oil leak to flywheel	Replace parts
Unusual noises	Broken bearing	Observe foreign material in transmission drain	Disassemble and replace
		Check line filter and oil	Disassemble and replace parts
	Broken gear or improper backlash	Check with sound checker	Disassemble and replace parts
	Broken pump or drive unit	Check with sound checker	Replace pump
	Air in oil	Check oil for air mixed	Retighten piping or replace parts
	Improper oil used	Check oil type	Change for the specified oil

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Brake system schematic

T_1. Front brakes delivery port. (P Max. 45 bar)

T_2. Rear brakes delivery port. (P Max 45 bar)

1. Rear axle brakes
2. Front axle brakes
3. Quick release pressure pick-up
4. Quick release pressure pick-up
5. Transmission cut-off pressure switch (setting = 15 bar)
6. Stop lights pressure switch (setting = 1.8 bar)
7. Brake pedal valve (operating pressure = 45 bar)
8. Accumulator control pressure switch (60 ± 5 bar)
9. Brake accumulator (capacity = 1.4 litres - precharge = 45 bar)
10. Brake accumulator (capacity = 1.4 litres - precharge = 45 bar)
11. Powering pump (for brake system)
12. Delivery oil filter
13. Check valve
14. Pressure relief valve (setting 30 bar)
15. Three way diverter, parking brake engagement/ disengagement control
16. Parking brake pressure switch (setting of pressure switch: OFF = 15 bar; ON = 10 bar)
17. Parking brake caliper cylinder
18. Brake disc
19. Heat exchanger
20. Accumulator (capacity 0.7 litres - pre-charge 19 bar)

(1 bar = 14.50 psi)

WARNING - DANGER

Always disconnect and connect all fittings with the engine stopped and braking system disabled. Accumulators keep some branches of the circuit under pressure even if the engine is stopped. Pressure oil escaping from loose fittings may cause personal injury and damages to things. Wear safety glasses with side shields.

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7.10.6 STEERING MAIN CIRCUIT LOW PRESSURE SWITCH

WIRES

835 To steering low pressure timer "K1" through connex. x14

000 To front frame ground

TECHNICAL DATA

Thread: M14 x 1.5
Setting: (Push-OFF)

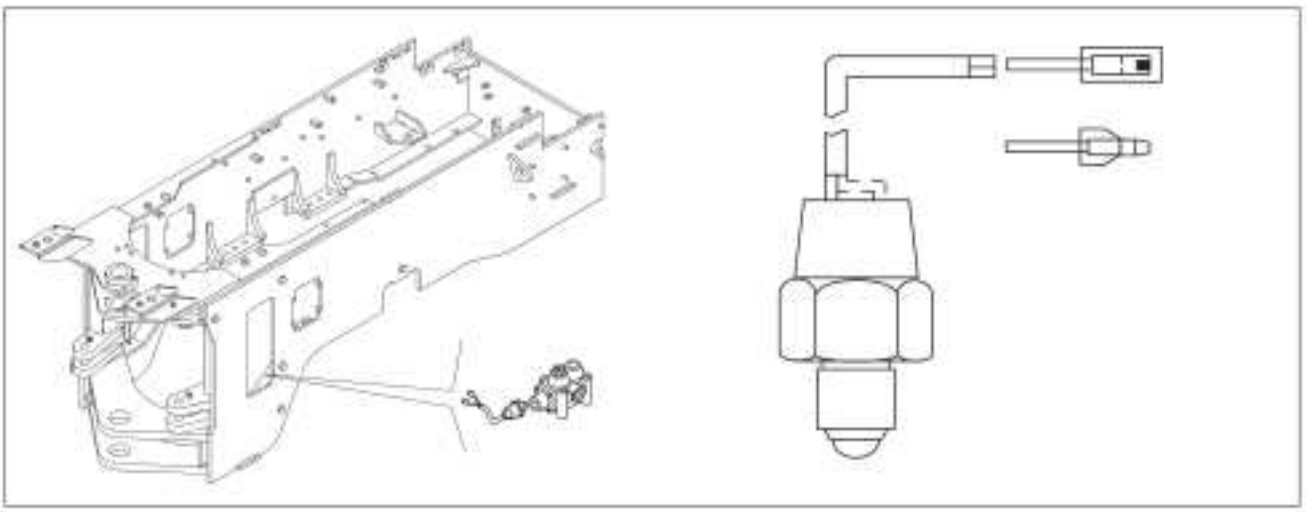


Fig. 7-55

7.10.7 EMERGENCY STEERING CIRUIT LOW PRESSURE SWITCH

WIRES

844 To indicator on instrument panel through connex. x14

000 To front frame ground

TECHNICAL DATA

Thread: M10 x 1 conica
Setting: 1 ± 0.2 bar

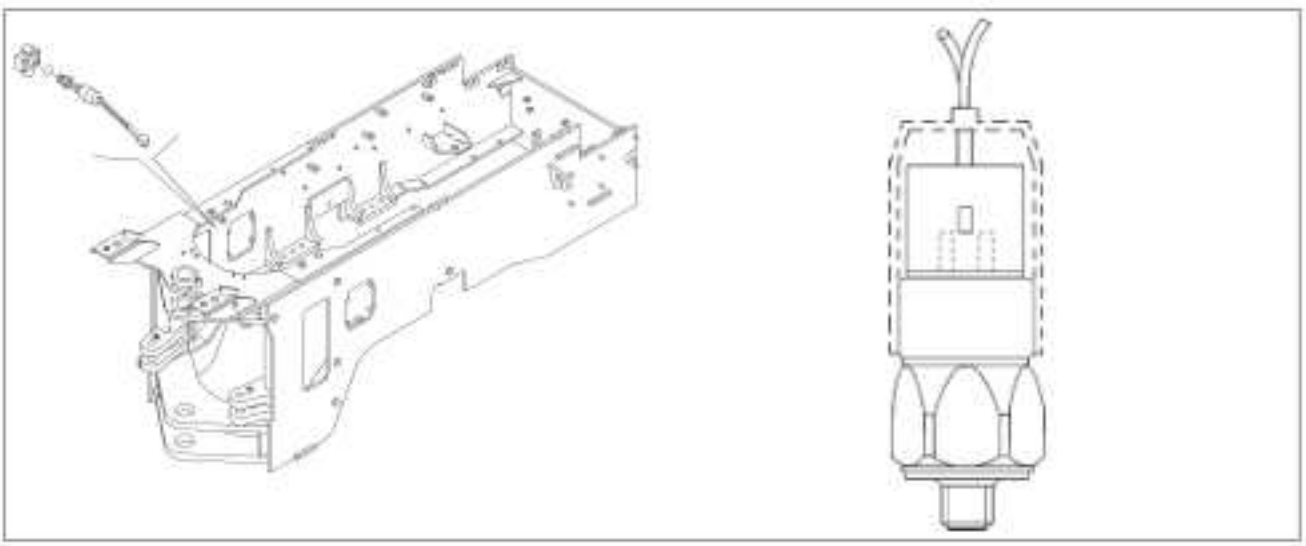


Fig. 7-56

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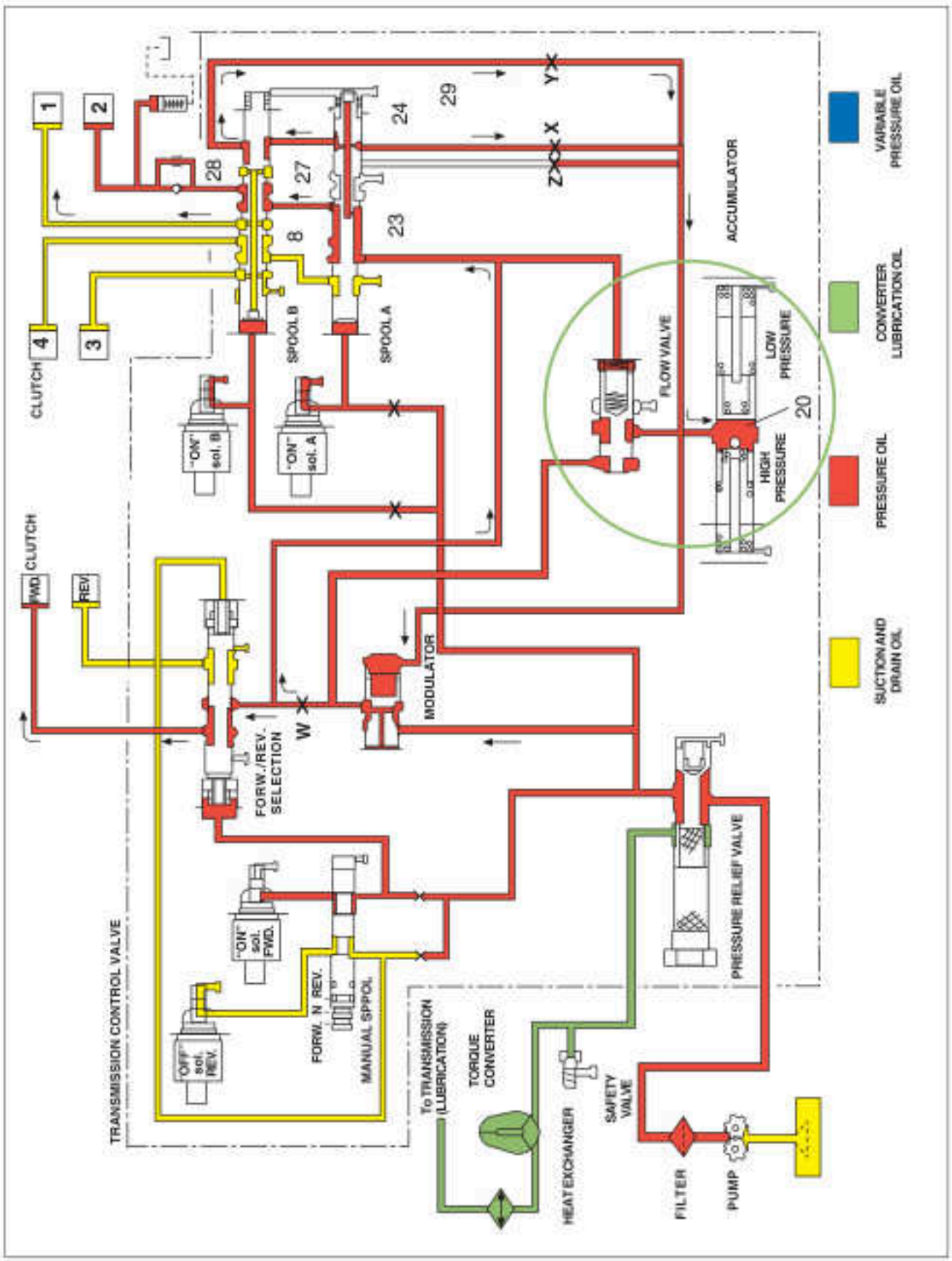
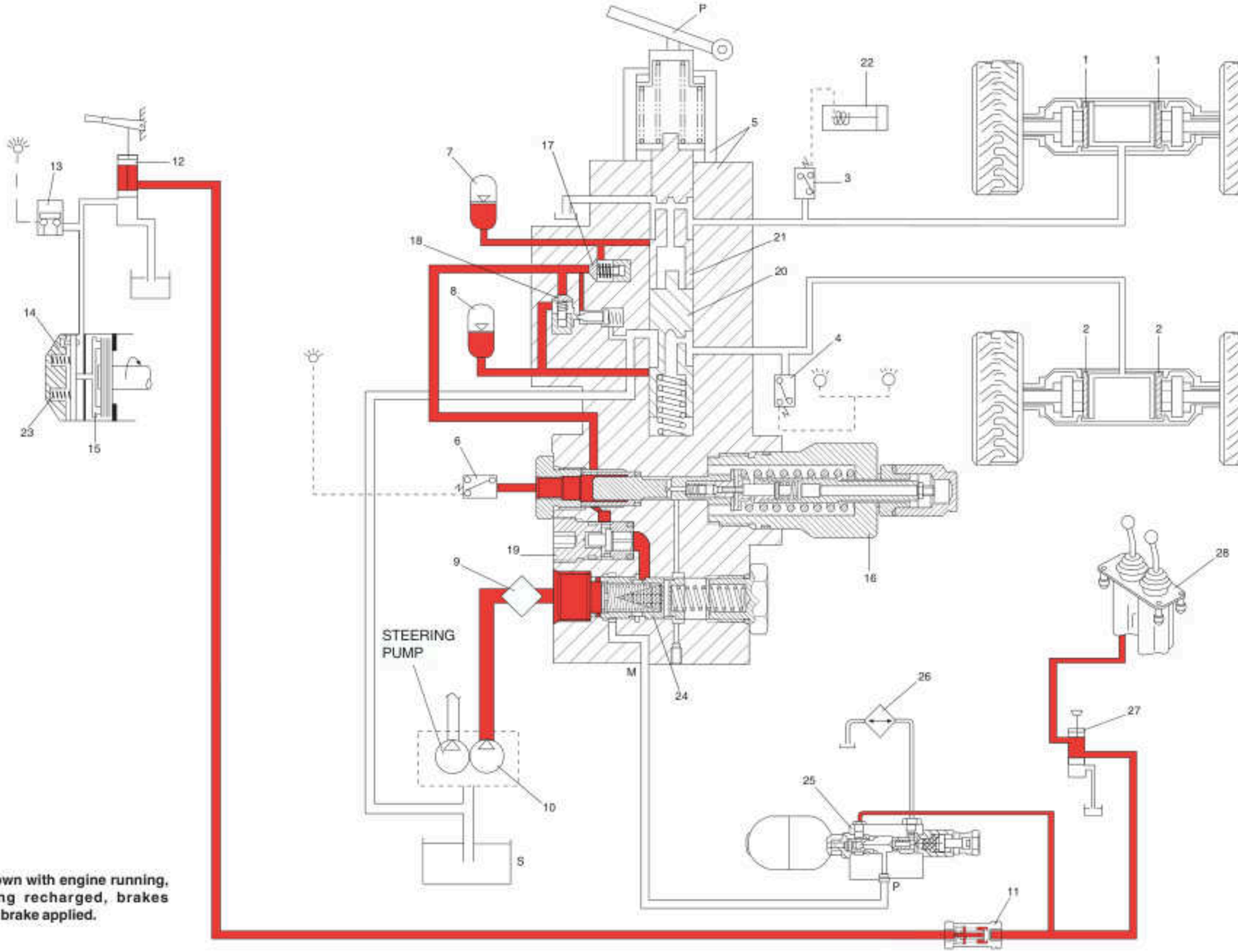


Fig. 2-24 Engagement of clutches (2nd speed Forward)

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Hydraulic circuit shown with engine running, accumulators being recharged, brakes disengaged, parking brake applied.

Fig. 3-2 Hydraulic braking circuit schematic

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