JX60, JX70, JX80, JX90, JX95 Tractors

Repair Manual

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CASE IH

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The following pages are the collation of the contents pages from each section and chapter of the JX Tractor Repair manual. Complete Repair part # 87649366.

The sections used through out all Case IH product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the JX Tractors.

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Chapter 1 - General

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SECTION 10 - ENGINE

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Chapter 1 - Engine

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SECTION 10 - ENGINE

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Rotating Counterweight Dynamic Balancer

⚠ CAUTION ⚠

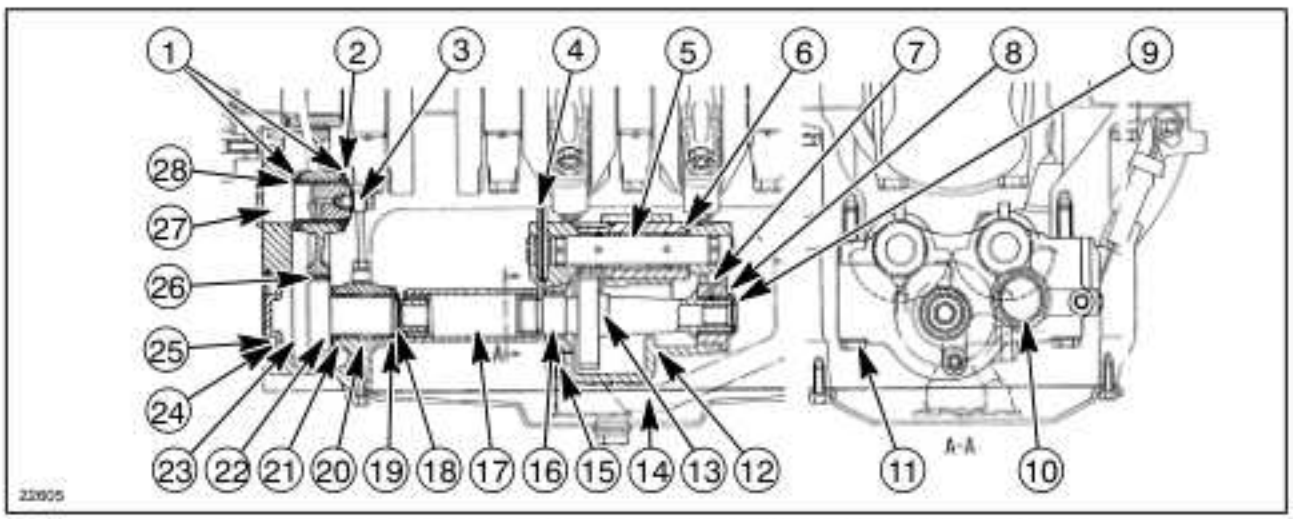
Handle all parts carefully. Do not put your hands or fingers between parts. Wear suitable safety clothing – safety goggles, gloves and shoes

1. Clean All Parts Carefully Before Proceeding With The Operations Described Below.

2. Check Component Wear And Replace Any Defective Parts.

   When Replacing The Bushings On The Counterweights, Preheat The Counterweights In Oil To A Temperature Of 140° To 160°C (284° – 320°F) (Or Dip The Bushings In Nitrogen) Before Shrink-installing In The Bores.

   Ream The New Bushings After Installing Using A Reamer With Expanding Cutters To The Inside Diameter listed in the SPECIFICATIONS table in the beginning of this chapter.



Cross-Sectional View of Rotating Counterweight Dynamic Balancer 166

1. Thrust washers
2. Circlip
3. Bushing lubrication tube
4. Counterweight rotation shaft
5. Shaft retaining spring pin
6. Counterweight drive gear carrier
7. Thrust washer
8. Counterweights
9. Intermediate counterweight drive gear
10. Circlip
11. Bolts securing balancer housing to sump
12. Dynamic balancer housing
13. Counterweight drive gear
14. Wire screen filter
15. Screen filter retaining screw
16. Bushing
17. Sleeve coupling
18. Circlip
19. Thrust washer
20. Carrier for drive box gear
21. Thrust washer
22. Drive box gear for dynamic balancer
23. Cover
24. O-ring seal
25. Circlip
26. Intermediate gear
27. Intermediate gear rotation shaft
28. Bushing

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TROUBLESHOOTING

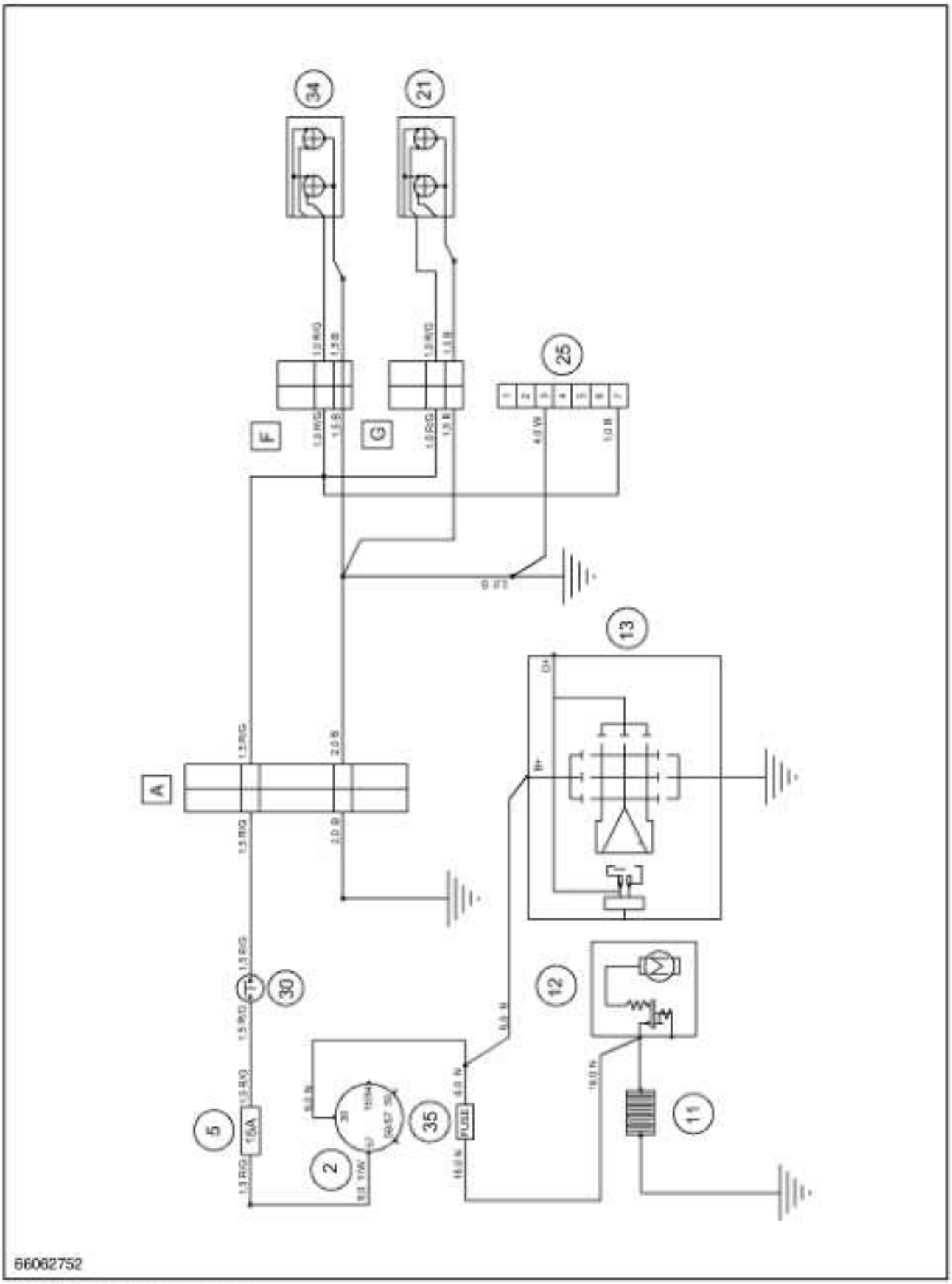
PINION AND DIFFERENTIAL

Problems	Possible causes	Solutions
Transmission noisy while the tractor is moving, even when the gearbox is in neutral (not arising from final drives).	Incorrect adjustment of bevel pinion and / or ring gear bearings.	Remove the rear transmission box and adjust the pinion and ring gear bearings correctly.
Transmission noisy when tractor loaded and unloaded.	Excessive clearance between pinion and ring gear teeth.	Remove the rear transmission box and correctly adjust the pinion and ring gear bearings.
Differential repeats noise within short intervals.	An internal component broken or defective.	Remove the rear transmission box, replace the worn parts and correctly adjust the differential gear clearance.
Transmission noisy and assembly overheats.	Pinion and / or differential bearing clearances insufficient.	Remove the rear transmission box and correctly adjust the pinion and ring gear bearings.
	Insufficient coupling clearance between the teeth of the pinion and the ring gear.	Remove the rear transmission box and correctly adjust the ring gear bearings.

FINAL DRIVES

Problems	Possible causes	Solutions
Final drives make noise when tractor is moving, even with the gearbox in neutral.	An internal component broken or defective.	Remove the final drive box and replace the damaged parts.

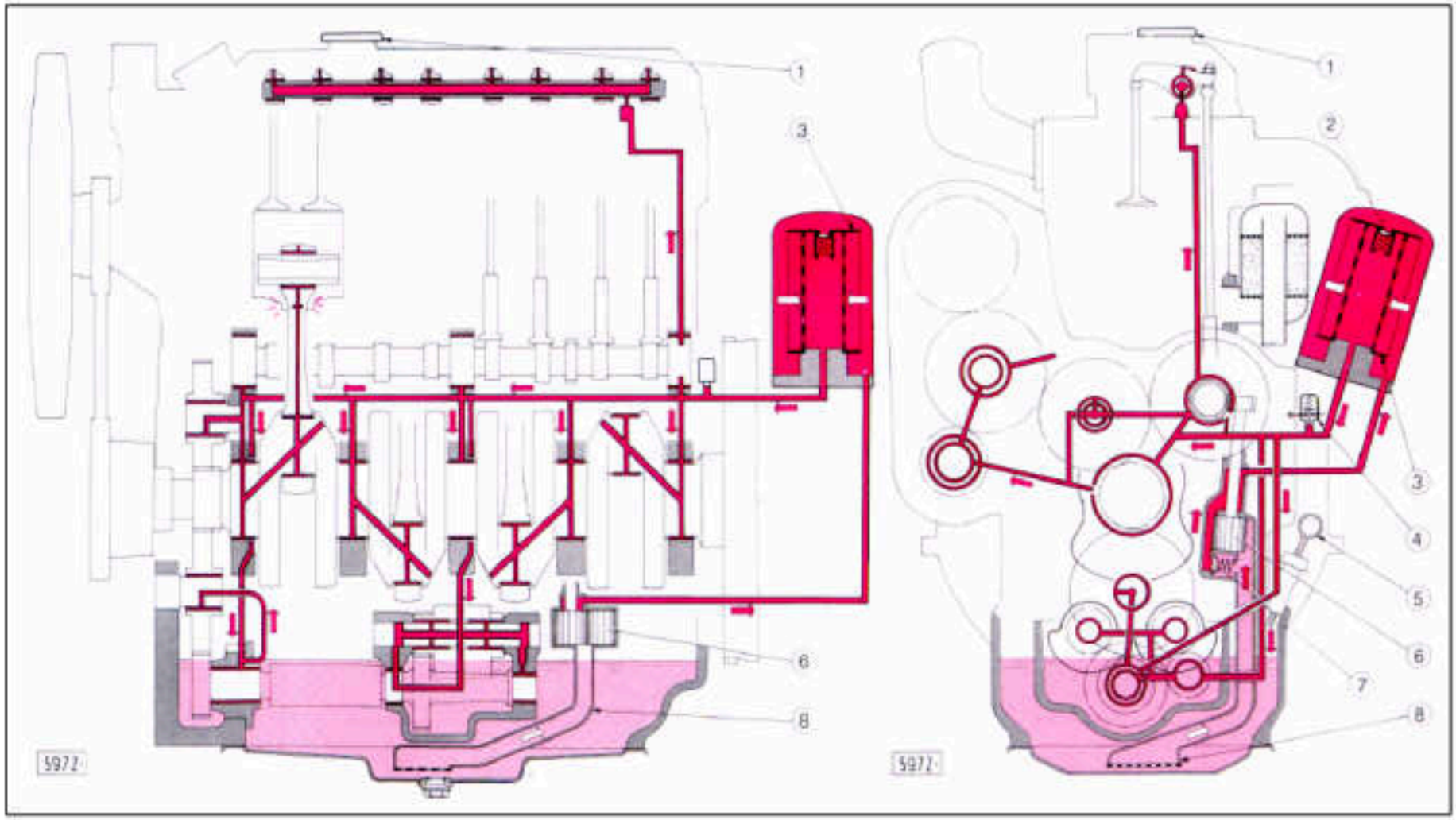
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BRAKE LIGHT CIRCUIT

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Engine Lubrication System on JX70, JX80 and JX95 models

1. Oil filler cap
2. Filter safety valve (opens when oil pressure at filter inlet exceeds the pressure at the outlet by 1.5 - 1.7 bar/cm^2 (21.7 - 24.6 psi)
3. Filter
4. Switch for low engine oil pressure warning (on dashboard)
5. Dipstick
6. Pump
7. Oil pressure limiting valve
8. Screen filter on pick-up pipe.

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OPERATION

Steering Right

When the steering wheel is turned in a clockwise direction, the springs deform, allowing the valve to rotate in relation to the sleeve.

Under these conditions the following occurs:

- The internal passages on parts, which were previously communicating in the neutral phase, become misaligned and the oil outflow is interrupted.
- The alignment with the same number of ducts, that are connected with the compartments on the rotor in the pump suction phase and in the delivery phase of the steering cylinders, allow turning to the right.

Steering Left

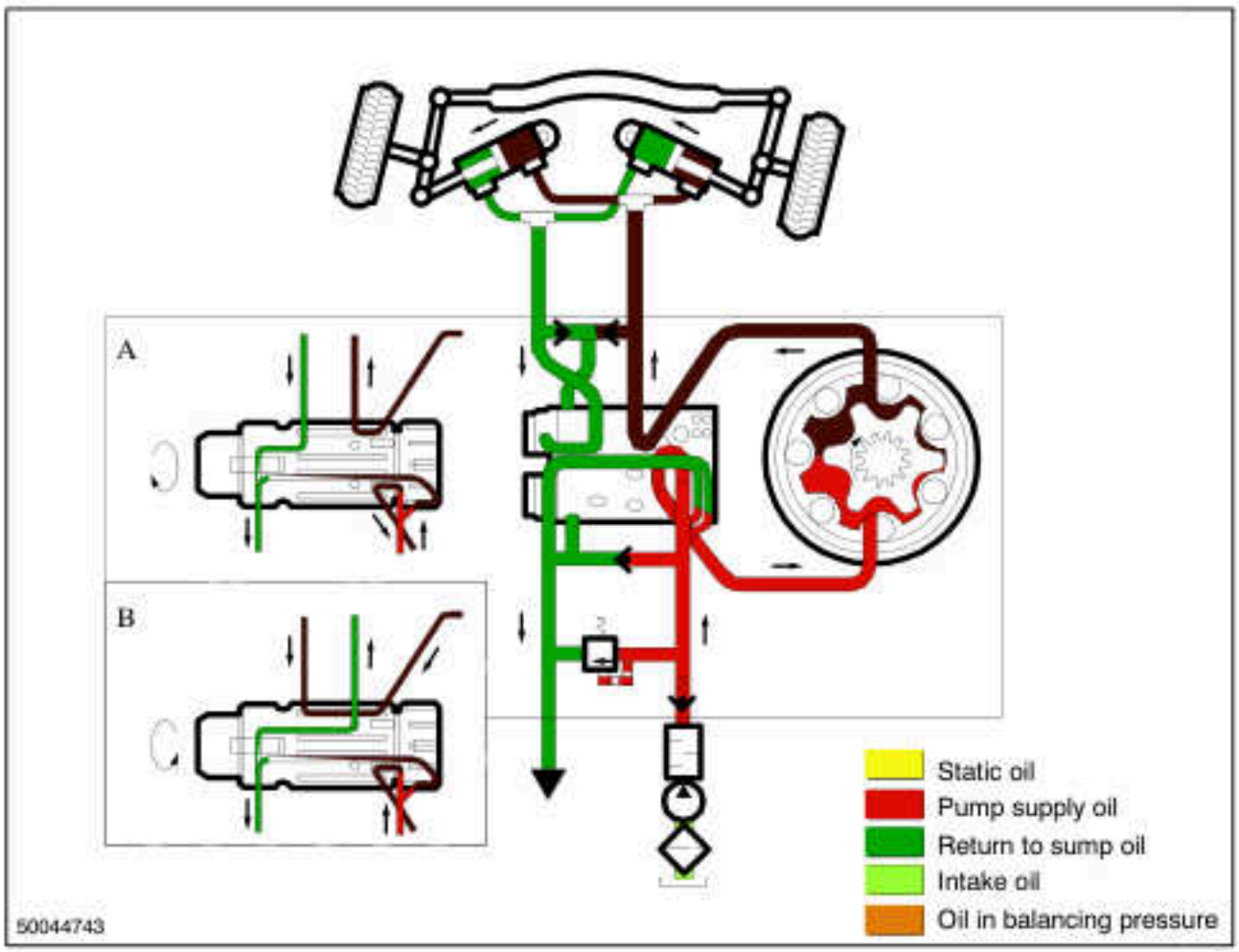
When the steering wheel is turned counterclockwise, the internal grooves on parts and the delivery to the steering cylinder are inverted, allowing turning to the left.

Manual Steering to Right

In the event of power steering pump failure or insufficient oil pressure, turning is possible manually.
When the steering wheel is turned in a clockwise direction, the power steering control valve internal rotor operates as a hand pump, directing the oil to the rod side of the cylinders, allowing manual turning to the right.

Manual Steering to Left

When the steering wheel is turned counterclockwise, the internal power steering control valve rotor operates as a hand pump (as previously described), directing the oil to the cylinder piston side, allowing manual turning to the left.



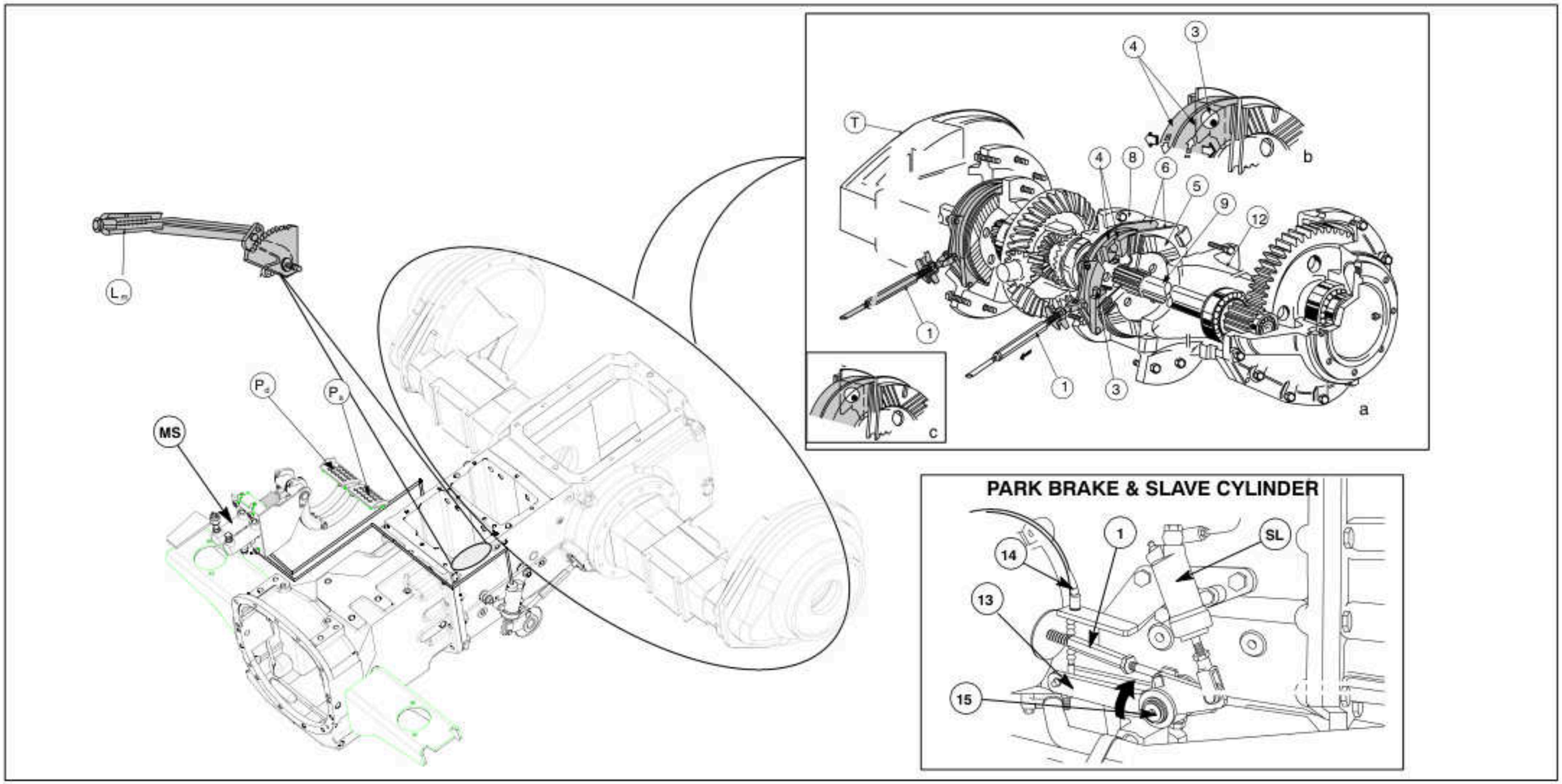
6

Hydrostatic Power Steering Oil Flow (Turning) (Models with FWD Shown - Similar on 2WD)

A. Right-hand turn

B. Left-hand turn

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View of service and park brake controls

a. R.H. brake pedal in rest position and L.H. brake applied.
b. Brakes applied.
c. Brakes in rest position.
Lm. Parking brake hand lever.
M. Brake pedal return springs.
Pd. R.H. brake pedal.
SL. Slave cylinder
MS. Master cylinder
T. Parking brake link.
1. Brake links.
3. Actuator ball.
4. Brake actuator.
5. Brakes discs.
6. Back-up discs.
7. Actuator return spring.
8. Differential support.
9. Axle shaft.
12. Final drive housing.
13. Park brake control lever.
14. Park brake control cable.
15. Brake pivoting shaft.

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