## Park Brake System Operation

## **Park Brake System Operation**



## TX1205516-UN: Park Brake System Operation (two-speed shown left, single speed shown right) <u>LEGEND:</u>

- 2 Left Hydrostatic Motor Park Brake
- 3 Left Hydrostatic Motor
- 4 Left Hydrostatic Two-Speed Motor
- 14 Right Hydrostatic Motor Park Brake
- 15 Right Hydrostatic Motor
- 16 Right Hydrostatic Two-Speed Motor
- 18 Park Brake Valve
- 27 Left Hydrostatic Pump
- 33 Charge Pressure Relief Valve
- 35 Right Hydrostatic Pump
- 155 Park Brake Apply Line (2 used)
- 156 Park Brake Release Line (2 used)
- Y5 Park Brake Solenoid

Park brake system is electrically controlled, spring applied, and hydraulically released. Machine has left and right hydrostatic motor park brake (2 and 14) assemblies that are integrated into hydrostatic motors (3, 4, 15, and 16) and drive axles. Park brake solenoid (Y5) shares park brake valve (18) with charge pressure relief valve (33), located behind left hydrostatic motor.

When park brake switch is engaged, park brake solenoid is not energized and prevents charge pressure oil from flowing through park brake release line (156) to brake disc and spacer plate side of brake piston. When park brake is engaged on single speed machines, charge pressure oil fills spring side of brake piston through park brake apply line (155), assisting engagement of park brake when engine is running.

Park brake is applied by an internal spring that pushes brake piston against brake discs and spacer plates. Brake discs are splined to brake housing. Spacer plates are splined to park brake drive shaft. When brake discs and spacer plates are forced together, park brake drive shaft is prevented from rotating.

When park brake switch is disengaged, park brake solenoid is energized and allows charge pressure oil to flow to

brake disc and spacer plate side of brake piston. When park brake is disengaged on single speed machines, charge pressure oil on spring side of piston is routed to return manifold. Charge pressure oil overcomes internal spring force, forcing brake piston away from brake discs and spacer plates. This disengages park brake and allows park brake drive shaft to rotate.

For more information:

- See Hydrostatic Motor Operation—Single Speed . (Group 9026-05.)
- See Hydrostatic Motor Operation—Two-Speed . (Group 9026-05.)
- See Hydrostatic System Schematic . (Group 9026-15.)
- See Hydrostatic Pump Operation . (Group 9026-05.)

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