

## Systems Operation

### CB54, CB54 XW and CB64 Vibratory Compactors Propel System

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## Hydraulic Schematic (Propel System)

SMCS - 3108; 4050; 4351; 5058; 5070

### System in Neutral

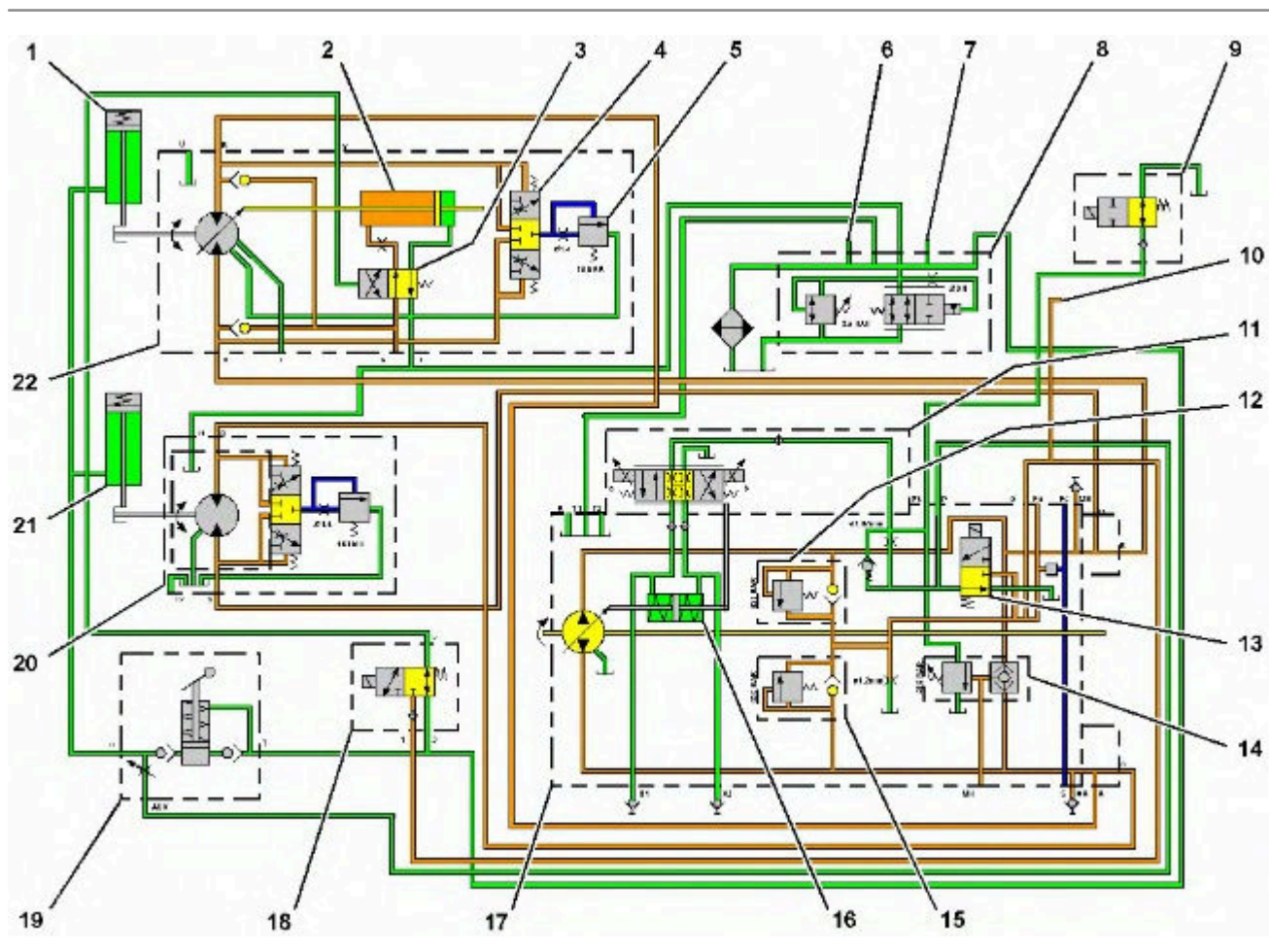


Illustration 1

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Hydraulic Schematic - Neutral

(1) Rear parking brake

(2) Servo piston

- (3) Shift spool
- (4) Flushing spool
- (5) Flushing relief valve
- (6) Line from vibratory motors
- (7) Line from vibratory pump
- (8) Thermal bypass valve
- (9) Interlock valve
- (10) Line from charge filter (steering system)
- (11) Directional control valve
- (12) Forward combination valve
- (13) Brake valve
- (14) POR valve
- (15) Reverse combination valve
- (16) Servo piston
- (17) Propel pump
- (18) Shift valve
- (19) Manual brake release pump
- (20) Front propel motor
- (21) Front parking brake
- (22) Rear propel motor

This schematic shows the propel system hydraulic schematic with the propel lever in the NEUTRAL position, and the parking brake switch in the ON position.

The propel circuit consists of a closed loop hydrostatic drive circuit with one pump and two motors. The direction control spool in the pump is controlled by two solenoids, one solenoid for forward and one solenoid for reverse. The ECM controls the solenoids. When the ECM determines that the propel should be disabled, neither the solenoid is energized, the direction control spool is in the center position, and the swashplate in the pump is at zero angle. Under these conditions, the pump does not produce flow.

The steering hydraulic system provides charge oil to the propel system when the engine is running. Filtered charge oil flows to the propel pump and the shift valve. Inside the pump, charge oil flows to the brake valve.

When the parking brake switch is in the ON position, the parking brake solenoid is de-energized. Under these conditions, charge oil is blocked at the solenoid, and the brake piston cavities are open to the tank. This allows the springs which are acting against the brake pistons to press the disks and plates together to engage the parking brakes.

Inside the propel pump, charge oil is available at the makeup valves in the combination valves. If the pressure in either the forward or reverse loops falls below charge pressure, the makeup valve opens and charge oil flows into the loop.