Service Manual

3CX, 4CX, 214, 215, 217 & VARIANTS

Backhoe Loader

From M/c No.
460001 To 499999
920001 On
900001 On (N.Am only)

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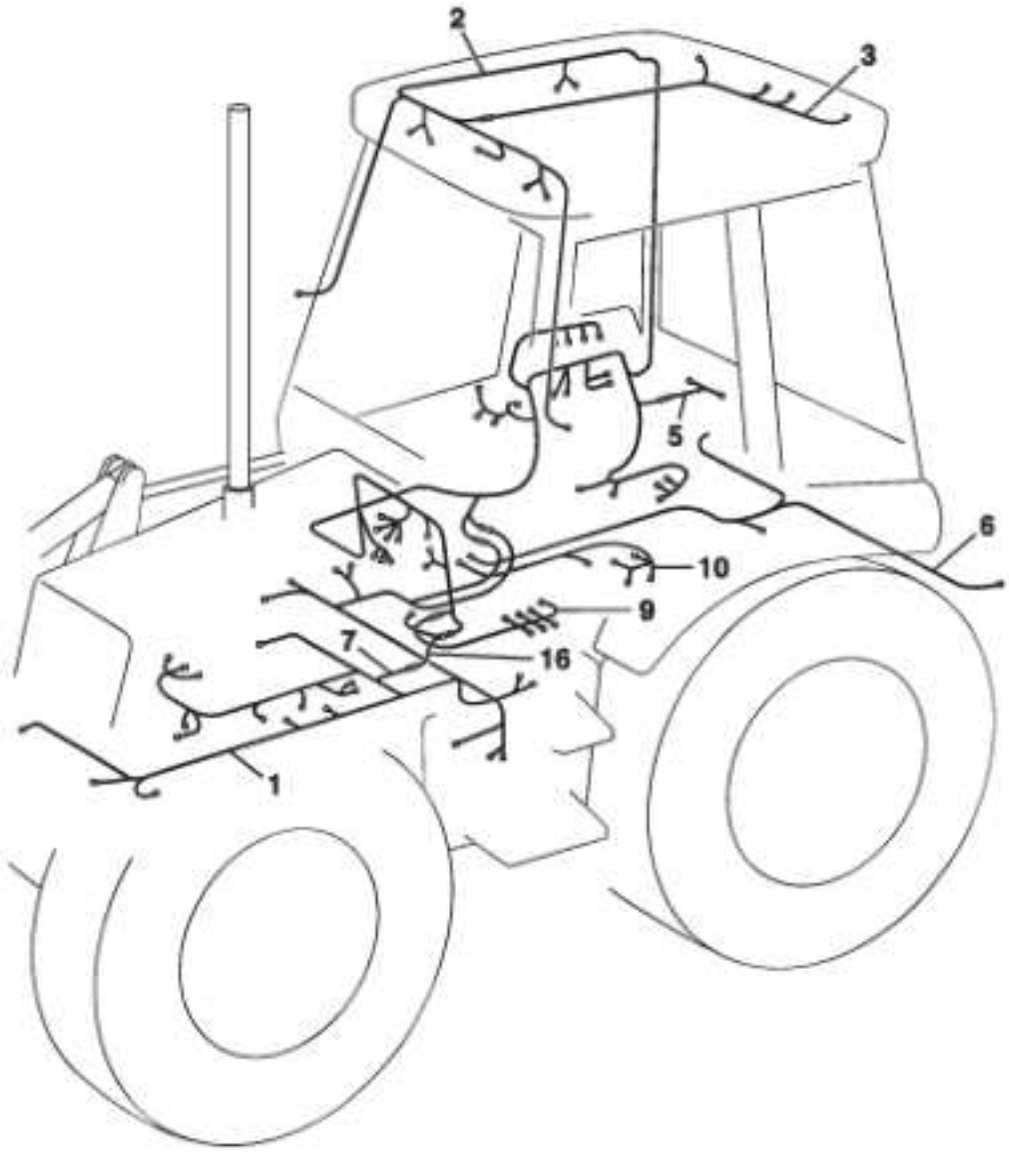
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NORTH AMERICAN MACHINES - 214e & 214Se

ITEM	CAPACITY US Gal	CAPACITY Liters	FLUID/LUBRICANT	INTERNATIONAL SPECIFICATION
Fuel Tank	34.3	130	Diesel Oil	ASTM D975-66T Nos. 1D, 2D
Engine (Oil) ①				
2 Wheel Steer Machines - Build AR	2.6	9.7	**JCB 15W/40** -10°C to + 50°C (14°F to 122°F) **JCB 10W** -20°C to + 10°C (-4°F to 50°F)	CF 4/SG, SAE 15W/40 CF 4/SG, SAE 10W
Engine (Coolant)	6.07	23	**Anti-freeze/Water**	ASTM D3306-74
Syncro Shuttle (2WD) ②	3.8	14.4	**JCB Special Transmission Fluid**	ESP-M2C 33G
Syncro Shuttle (4WD) ②	4.0	15.4		
Front Axle				
Housing (2WS)	3.4	13	**JCB GL-5 80W/90**	API-GL-5
Hubs (x2)	0.5	2.0		
Rear Axle	6.1	23	**JCB Special Gear Oil Plus**	API-GL-4
Brake System				
- Standard	0.32	1.2	**Light Hydraulic Fluid**	ISO VG15
- Servo	0.37	1.4	⚠ **CAUTION: DO NOT USE ORDINARY BRAKE FLUID**	
Hydraulic System ③	34.3	130	**JCB Hydraulic Fluid**	ISO VG46
Grease Points	---		**JCB Moly EP # 2 Grease**	Lithium based, No. 2
Extending Dipper	---		**Waxoyl** ⑤	
Electrical connections	---		As a corrosion and moisture inhibitor all exposed connections should be coated liberally with petroleum jelly.	

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Cab and Chassis - All Later Machines



Item	Description
1	Chassis Harness
2	Cab Panel Harness
3	Cab Roof Harness
4	Powershift Transmission Harness (not shown)
5	Rear Cab (Sideshift) Harness
6	Rear Lights (Sideshift) Harness
7	Auxiliary Harness
8	Head Lights Harness (not shown)
9	Powershift Relay Harness
10	Steer Mode Harness
11	Air Conditioning Harness (not shown)
12	Power Tool Extension Harness
13	Servo Auxiliary Chassis Harness
14	3CX Link Connector (not shown)
16	Strap Earth

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....continued

PROBLEM: Leaks between sections.
POSSIBLE CAUSE: 1) Missing or cut seals.
CORRECTIVE ACTION: 1) Disassemble valve stack and check for missing or cut o-rings.

PROBLEM: Sticking spool.
POSSIBLE CAUSE: 1) Linkage binding. 2) Damaged spool. 3) Uneven torque of tie-rod. 4) Incorrect number of shims on tie-rods.
CORRECTIVE ACTION: 1) Check linkage. 2) Remove and inspect spool. 3) Loosen tie-rod bolts, check and re-torque. 4) Disassemble and check that each tie-rod has one shim.

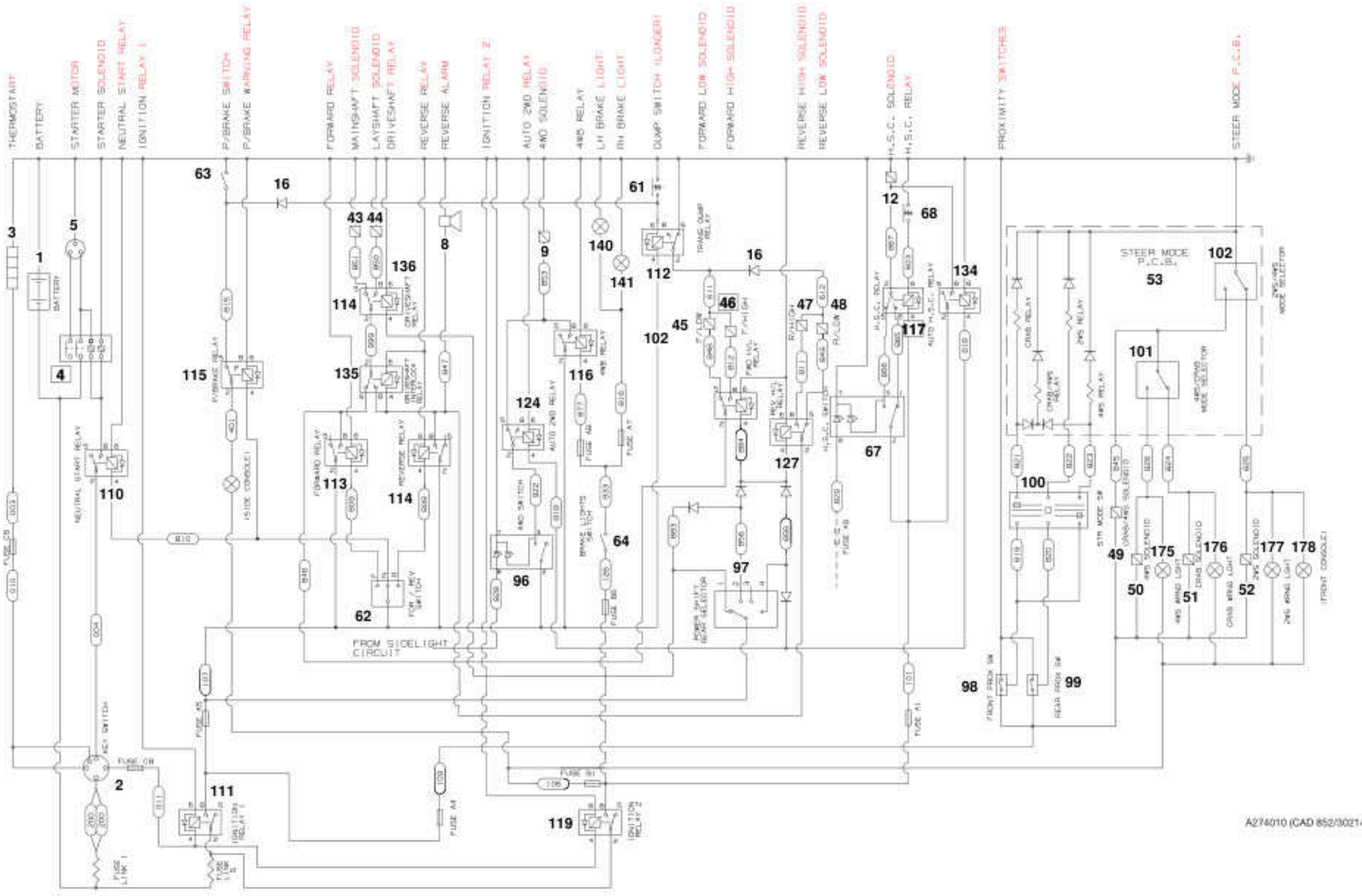
PROBLEM: Mechanical detent will not hold.
POSSIBLE CAUSE: 1) Broken detent shaft.
CORRECTIVE ACTION: 1) Remove detent & inspect.

PROBLEM: Electrical detent will not hold.
POSSIBLE CAUSE: 1) Current broken.
CORRECTIVE ACTION: 1) Check current going into detent.

PROBLEM: Poor performance, slow operating speed and/or low maximum stall speed.
POSSIBLE CAUSE: 1) Blocked flow regulator spool.
CORRECTIVE ACTION: 1) Flow check, remove and clean flow regulator valve, see page E/10-36.

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Powershift (PS700) Transmission & Steer Circuit - AWS Machines Only



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