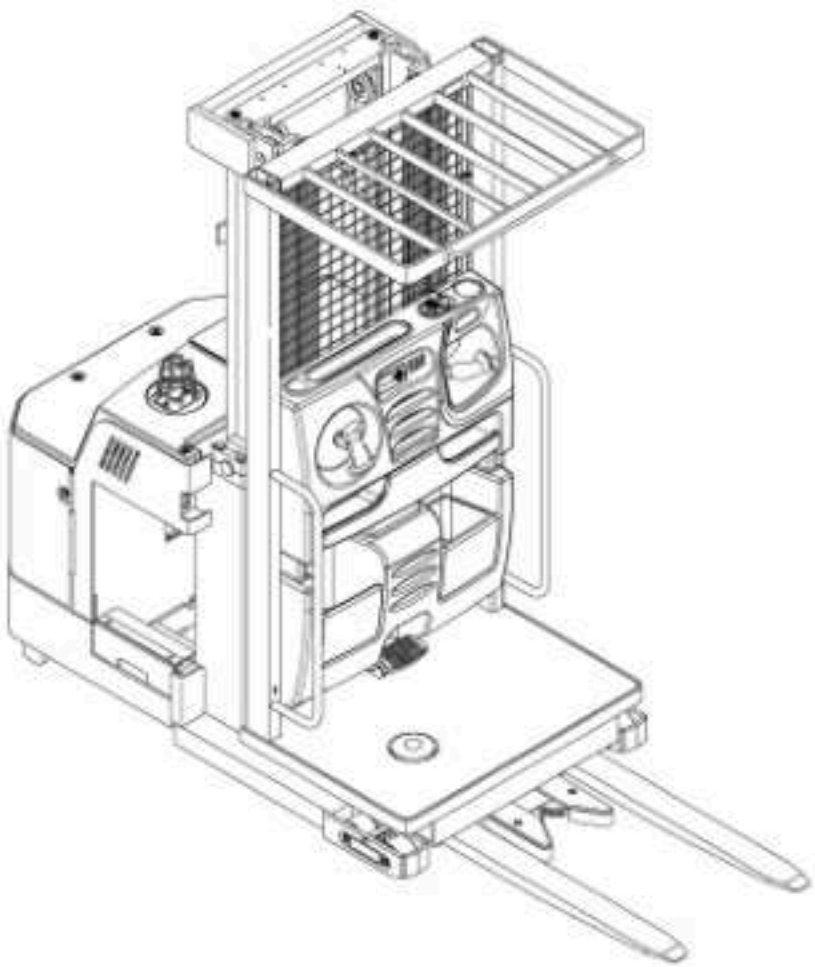
SERVICE MANUAL

E174 (R30XMS3)



Rev. 08/14

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This section is for the following models:

R30XMF3 [A169];
R30XMA3 [A185];
C1.0, C1.3 (V30XMU) [A463, A467];
C1.5B (V35XMU) [A464, A468];
C1.8X (V40XMU) [A465, A469];
C1.3 (V30ZMU) [B463];
C1.5 (V35ZMU) [B464]
R30ES [B174];
R30XMS [C174];
R30XMS2 [D174];
N30XMH2 [C210];
V30ZMD [D210];
R30F/FA/FF [E118];
R30XMS3 [E174];
R30XM/XMA/XMF [F118];
R30XM2/XMA2/XMF2 [G118];
R30XM3 [H118]

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STATUS CODE	DISPLAY MESSAGE	RECOVERY METHOD	CIRCUIT
12545	12545 Node 2	Re-key only	Traction

DESCRIPTION	BEHAVIOR
Pin 3 of the traction controller connector is not connected to battery positive or there is a difference between the voltage at pin 3 and the voltage at pin 10, the controller key switch input voltage. (24V truck only)	Traction in limp mode. Disable lift, disable lower, steer enabled.

Probable Causes and Test Procedures

1. Perform basic checks.
2. If alarm 12548 exists, troubleshoot this alarm first.
3. Harness checks - disconnect the battery connector, turn the key switch to the ON position, and disconnect CPS100:
   - **a.** Check CPS100 pin 3 and pin 10 for spread socket and to ensure that the socket is properly seated.
   - **b.** Check fuse FU3 for good condition and proper connection.
   - **c.** Check wire 002 terminals (at contactor panel) to ensure they are properly crimped, torqued and have proper contact surface.
   - **d.** Check continuity between:
     - CPS100 pin 3 and fuse FU3
     - Fuse FU3 and negative post of line contactor.
     - CPS100 pin 10 and fuse FU1 terminal TS10 (use schematic to follow circuit wire 004 and wire 10)
4. Main contactor checks:
   - **a.** Plunger freely moved.
   - **b.** Tips shall be clean and making proper contacts.
   - **c.** Coil has proper connection.
   - **d.** Coil resistance approximately 44 ohms for 24V truck and 103 ohms for 36V truck
   - **e.** Coil voltage should be 24V for 24V truck and 36V for 36V truck.
   - **f.** Continuity between traction controller pin 12 and negative side of coil.
   - **g.** Continuity between traction controller pin 10 and positive side of the coil.
5. Power cables NEG 1, POS 1, POS and NEG (battery connector) checks:
   - **a.** Properly crimped, seated and torqued.
   - **b.** Lugs contact surfaces are clean.
6. Traction controller studs checks:
   - **a.** B+, B- contact surface are clean.
7. Circuit connections checks - turn key to the OFF position:
   - **a.** Check for correct wires connected to the following components per schematic:
     - CPS100 pin 3
     - FU3

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CAUTION

The replacement battery must fit the battery compartment.

Before connecting the battery, make sure the key switch is in the OFF position and the brake is on.

1. Make sure the battery is the correct size and weight for the lift truck. The correct battery is specified in Table 4. Make sure the battery has clearance for installation and the battery connector can be connected after installation. Make sure the battery compartment has the correct spacers for the battery you are installing. The spacers must not let the battery move more than 13.0 mm (0.5 in.) in any direction. The spacers must keep the battery as far from the mast as possible. Have authorized personnel replace or adjust the battery spacers for that battery. See your Hyster lift truck dealer for the correct spacers. **DO NOT** damage the battery cables during installation.
2. Install the battery puller on the lift truck frame at the center of the battery compartment on the side opposite the battery stand. See Figure 20. Release the ratchet lock, pass the hook through the battery compartment, and attach the hook to the battery lifting hole. **DO NOT** permit the hook to make contact with the cell connectors. Stand on the base of the battery puller and operate the crank to pull the battery off the stand into the battery compartment. Make sure the foot switch is released and the key switch is in the **OFF** position before connecting the battery.

Table 4. Battery Specifications

Model	Volts	Compartment Size Length × Width	Battery Size* Minimum/Maximum		Weight	
			Length	Width	Minimum	Maximum
R30XM3/ XMA3/XMF3	24/36	990.00 × 371.00 mm (38.90 × 14.60 in.)	880.00 to 987.00 mm (34.60 to 38.90 in.)	N/A to 368.00 mm (N/A to 14.50 in.)	(R30XM3) 726 kg (1600 lb) (R30XMA3/ XMF3) 680 kg (1500 lb)	(R30XM3) 862 kg (1900 lb) (R30XMA3/ XMF3) 907 kg (2000 lb)
R30XMS3	24	911.00 × 343.00 mm (35.8.00 × 13.50 in.)	791.00 to 902.00 mm (31.10 to 35.50 in.)	N/A to 330.00 mm (N/A to 13.00 in.)	408 kg (900 lb)	544 kg (1200 lb)

Compartment **width** is measured across the width of the lift truck. The battery's **length** is the installed length as measured from side to side across lift truck. Battery **width** is the installed width as measured from front to back of the lift truck.

*Maximum height for R30XM3/XMA3/XMF3 batteries is 787.0 mm (30.80 in.). Maximum height for R30XMS3 batteries is 590.00 mm (23.25 in.).

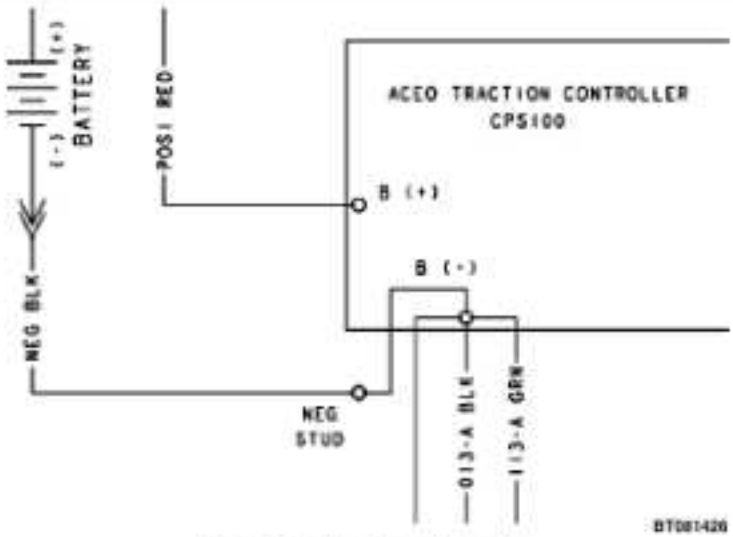
N/A = Minimum battery width is not available.

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DTC 30069 (Cont)
Traction - Capacitor - Charge

END POSSIBLE CAUSES

DTC 30069 TRACTION - CAPACITOR - CHARGE DIAGRAMS



Troubleshooting Scenes

END FAULT

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Traction Motor

CODES

DTC 30060 - Traction - Motor - Circuit
DTC 30061 - Traction - Motor - Open

POSSIBLE CAUSE

A. TRACTION MOTOR CABLE FAULT
B. TRACTION MOTOR FAULT
C. FAULTY TRACTION CONTROLLER

NOTE

Please refer to the end of this procedure for supporting diagrams.

COMPONENT OPERATIONAL CHECK

NOTE: Always check battery condition and state of charge before performing electrical troubleshooting. A faulty or low charged battery will cause electrical features to not operate as designed and give incorrect readings while performing electrical tests.

PROCEDURE OR ACTION:

1. Conduct a visual inspection of all connectors/wiring associated with the fault code.
   Are any faults detected/observed?
   YES: Repair/replace connector or wiring associated with faults found. Refer to the appropriate **Electrical System** SRM.
   NO: Proceed to Step 2.
2. Re-key the vehicle.
   Is the code still present?
   YES: Proceed to Cause A.
   NO: Problem may be intermittent.

CAUSE A - TRACTION MOTOR CABLE FAULT

PROCEDURE OR ACTION:

NOTE: Disconnect battery.

1. Disconnect the traction motor cables from the traction controller and traction motor. Measure continuity of individual cables to isolate fault.
   Is continuity present?
   YES: Proceed to Cause B.
   NO: Repair or replace faulty phase cable.

CAUSE B - TRACTION MOTOR FAULT

PROCEDURE OR ACTION:

NOTE: Disconnect battery.

1. Measure resistance between the traction motor terminals U and V.
   Is resistance between .322 and .383 ohms?
   YES: Proceed to Step 1.

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