SERVICE MANUAL

D210 (V30ZMD)



FORM 1569232 Rev. 03/14

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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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Troubleshooting

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
No movement of lift cylinders.	No oil or not enough oil supply to lift cylinder.	Check oil level and add oil as needed.
	Hydraulic leaks, damaged hydraulic pump, or damaged hydraulic pump drive.	Repair hydraulic leaks. Replace pump or pump drive. Replace check valve. Reset relief valve to correct setting.
	Relief valve setting wrong or check valve damaged.	Adjust relief valve setting. Replace check valve.
Slow action of the lift cylinders.	Not enough oil supply to the lift cylinder.	Check oil level and add oil as needed.
	Bad cylinder seal. Check for internal leaks. Install a gate valve in the hydraulic line. Raise the mast. Close the gate valve. See if the mast or carriage slowly lowers because of an internal leak.	Replace cylinder seals.
	Low relief valve setting.	Adjust relief valve to correct setting.
Rough movement of the mast assembly.	Air in the hydraulic system.	Remove air from hydraulic system.
	Bent piston rod, or cylinder shell is damaged.	Replace cylinders.
	Mast assembly is damaged or not in alignment.	Repair damage or realign mast assembly.

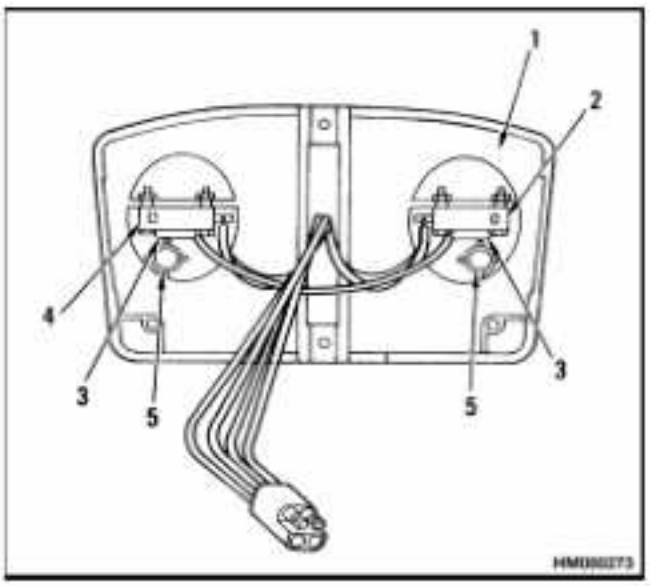
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There is a small directional switch under each pad of the MONOTROL pedal. See Figure 46. Each switch controls one direction. A capacitor is in parallel with each direction switch to decrease arcs at the switch contacts. If both sides of the MONOTROL pedal are pushed at the same time, the direction circuit is de-energized and the lift truck will not move. The contacts of the two direction switches are in a series and parallel arrangement so that both direction contactors cannot be energized at the same time.

STEERING COLUMN

The controller includes logic circuits for an optional direction control on the steering column. See Figure 20. The Forward and Reverse switches complete the circuit for the controller card to energize the Forward or Reverse contactors.

Check that the direction switches operate correctly by operating the lift truck in the forward and reverse directions. If the lift truck operates correctly, the switches are good. See MONOTROL Pedal Direction Switches, Replace and Steering Column Direction Control Switches, Replace for the replacement of direction switches. There is no adjustment for these switches.



1. PEDAL PAD
2. FORWARD DIRECTION SWITCH
3. CAPACITOR
4. REVERSE DIRECTION SWITCH
5. SPRING

Figure 46. MONOTROL Pedal

MONOTROL Pedal or Accelerator Pedal Adjustment

WARNING

Some checks and adjustments in this section must be done with the battery connected and power applied to the controller. Lift truck movement during checks or adjustments can cause personal injury. Raise the drive wheels to prevent lift truck movement. See the Operating Manual or the section Periodic Maintenance 8000 SRM 1060 for lift truck models J2.00-3.20XM (J40-65Z) (A416); V30ZMD (D210/E210); E1.50-2.00XM (E25-35Z, E40ZS) (E114/F114); and E2.00-3.20XM (E45-65Z) (G108), the section Periodic Maintenance 8000 SRM 1226 for lift truck model J2.00-3.20XM (J40-65Z) (B416), or the section Periodic Maintenance 8000 SRM 1201 for lift truck models E3.50-5.50XL, E4.50XLS (E70-120Z, E100ZS) (D098/E098) to raise the drive wheels.

Never have any metal on your fingers, arms, or neck. These metal items can accidentally make an electrical connection and cause an injury.

ALWAYS disconnect the battery before making checks or adjustments that do not need power applied.

If the unit has a MONOTROL pedal, there are direction switches that must be correctly adjusted. There is also a start switch for the MONOTROL pedal or accelerator pedal. There is also an accelerator position sensor for either pedal. Adjust the pedal movement in this procedure before adjusting the switches. See Start Switch Adjustment and Accelerator Position Sensor Adjustment of this section to adjust these parts.

The movement of the MONOTROL pedal or accelerator pedal must be correctly adjusted before the start switch or accelerator position sensor is adjusted. The floor plate must be in position to check or adjust the pedal movement. Push the pedal down. Check that the pedal arm is against the down stop when the pedal is within 0.2 mm (0.08 in.) of the floor plate. If adjustment is necessary, loosen the bolts that fasten the pedal mount plate to the frame. See Figure 19. The bolts must be tight enough to hold the position,

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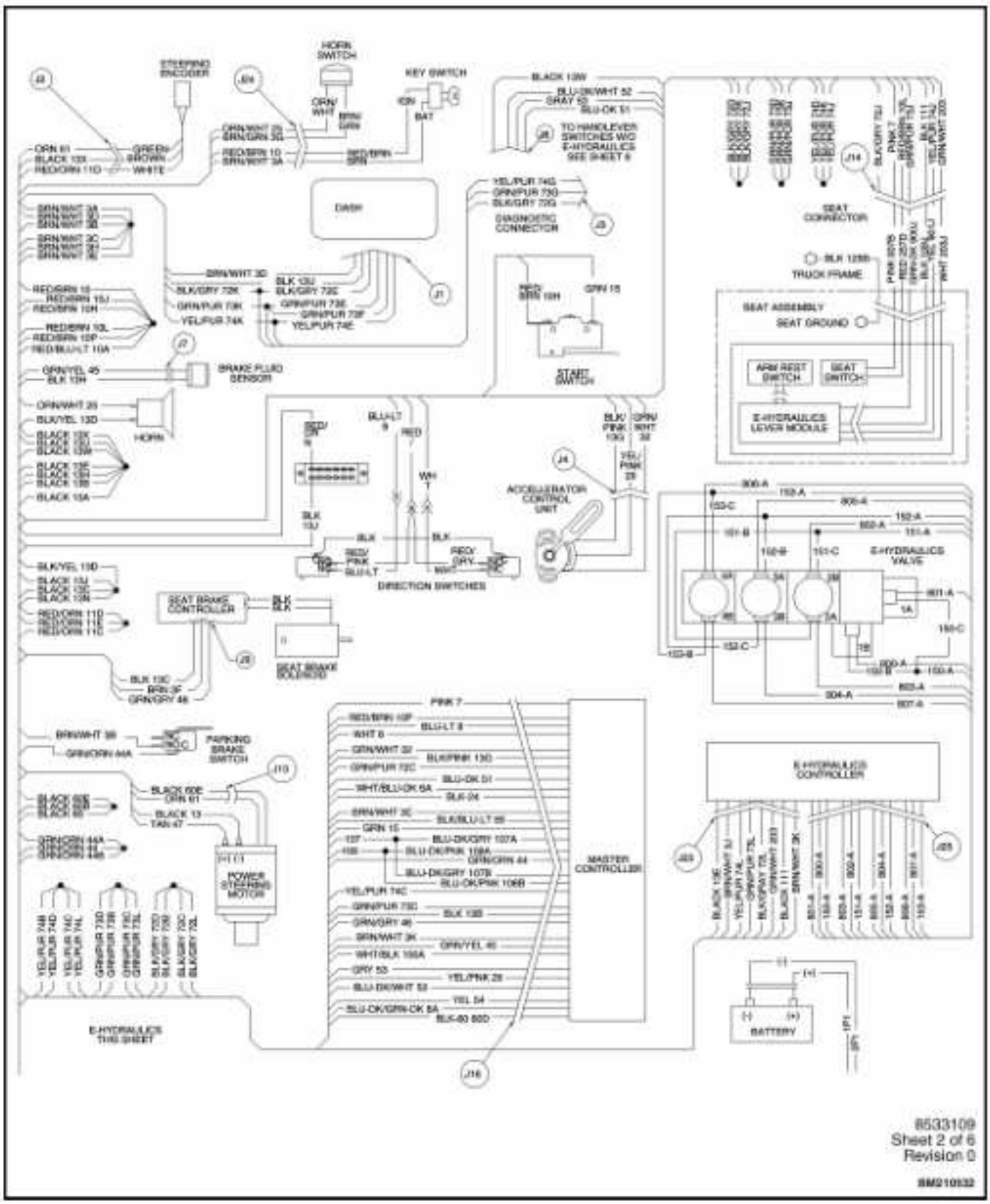


Figure 4. Wiring Diagram for E2.00-3.20XM (E45-65Z) (G108) and V30ZMD (E210), 36v/48v Lift Trucks With Electro-Hydraulic Control Valve (Sheet 2 of 6)

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