

## Column Mount Display Panel (EV-100/200ZX Motor Controllers) Replacement

### REMOVE

The display panel is in the instrument panel. The display panel cannot be repaired and must be replaced if it has a malfunction. The display panels must be replaced as a unit.

**NOTE:** Most parts of the column mounted display panel can be replaced. However, the LED indicators cannot be replaced separately. The LEDs are part of the circuit board assembly. The major replaceable parts of this display panel are: 1) key switch; 2) housing, top cover, and O-ring seal; 3) housing and light filter for LED warning lights; 4) hourmeter and gasket; 5) battery indicator; 6) buzzer and circuit board; and 7) jumper harness and the wires to the key switch.

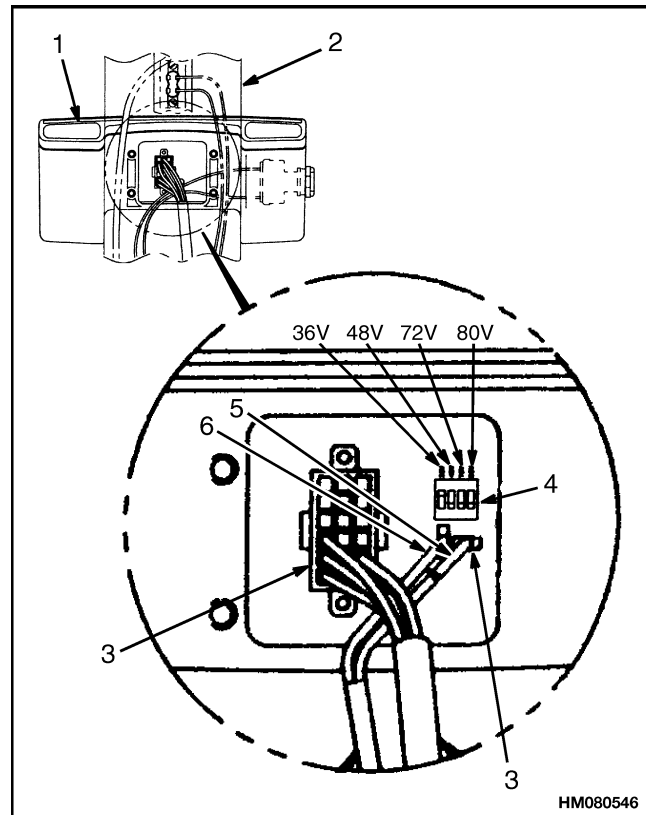
**NOTE:** The only replaceable parts of the Performance display panel are the O-ring seal, key switch, wires to the key switch, and the housing that fastens to the steering column. All other parts of the panel must be replaced as a single unit. See Display Panel Assembly, Replace of this section.

### DISPLAY PANEL ASSEMBLY, REPLACE

Follow this procedure to replace the Basic or Performance display panel as an assembly:

1. Disconnect the battery and remove the key.
2. Remove the front steering column cover with the display panel assembly attached. Carefully disconnect the 18-pin connector, the key switch wires and, on the Basic panel, the two-pin connector from inside the column cover.
3. Remove the four screws that fasten the display panel to the column cover.
4. Install the replacement display panel assembly to the cover of the steering column and tighten the screws. Install the connectors and the key switch wires. On the Basic panel, set the DIP switches near the connector for the panel to the voltage of the lift truck. See Figure 19. Move the

DIP switch for the correct voltage to the up position and all others to the down position. Install the column cover on the steering column.



**NOTE:** ON = UP AS SHOWN.

36V SW#1 ON, OTHERS OFF.

48V SW#2 ON, OTHERS OFF.

**NOTE:** SET DIP SWITCHES TO TRUCK VOLTAGE. IF TRUCK VOLTAGE IS NOT KNOWN, SET 36/48V (U.S.) TRUCKS TO 48V.

- |                         |                 |
|-------------------------|-----------------|
| 1. DISPLAY PANEL        | 4. DIP SWITCHES |
| 2. STEERING COLUMN      | 5. BROWN        |
| 3. ELECTRICAL CONNECTOR | 6. RED/BROWN    |

**Figure 19. Dip Switches**

## INDICATOR LEDS

**NOTE:** The indicator LEDs of the Basic display panel are part of the circuit board and must be replaced as an assembly. See Basic Display Panel, Replace Parts of this section. The LED indicators of the Performance display panel cannot be replaced. If these LED indicators are bad, replace the display panel. See Display Panel Assembly, Replace of this section.

## BATTERY INDICATORS

There are two types of battery indicators for these trucks. One type is a meter movement with colored bands showing the battery charge (Basic display panel). The other type is a Light Emitting Diode (LED) display with LEDs of different colors showing battery charge (Performance display panel).

**NOTE:** The battery indicator is replaced as one of the components of the display panel. See procedure under Basic Display Panel, Replace Parts of this section. The battery indicator of the Performance display panel cannot be replaced as a separate component. The indicator must be replaced as part of the Performance display panel. See Display Panel Assembly, Replace of this section.

See the section **Battery Indicators** 2260 SRM 138 to adjust these battery indicators.

## DIGITAL DISPLAY (PERFORMANCE DISPLAY PANEL ONLY)

**NOTE:** The digital display of the Performance display panel cannot be replaced as a separate component. The display must be replaced as part of the Performance display panel. See Display Panel Assembly, Replace of this section.

## STATUS CODE OR PERFORMANCE LEVEL SWITCHES AND INDICATOR LEDS (PERFORMANCE DISPLAY PANEL ONLY)

**NOTE:** These switches of the Performance display panel cannot be replaced as separate components. The switches must be replaced as part of the Performance display panel. See Display Panel Assembly, Replace of this section.

## BASIC DISPLAY PANEL, REPLACE PARTS

**NOTE:** The parts of the Basic Display Panel can be replaced with the display panel on the steering column. If the assembly housing will be replaced, remove the complete assembly from the steering column as described in Display Panel Assembly, Replace.

**NOTE:** The following is a complete disassembly procedure. Do **ONLY** those steps necessary to replace the part you want replaced.

Remove and replace the components of the Basic display panel as follows:

1. Disconnect the battery and remove the key.
2. Remove the eight screws that fasten the top cover to the panel housing. The screws are at the bottom of the housing. See Figure 20. The hourmeter is fastened to the top cover with the electrical connector on the circuit board inside the housing. Carefully lift the top cover up off the housing and the indicator LEDs without damaging the O-ring gasket. The gasket for the LED indicators can stick to the LED housing as the top cover is removed. Do not lose or damage the gasket. Disconnect the three wire connector for the hourmeter.
3. If the housing or filter for the indicators will be replaced, remove the screws that fasten the LED housing to the cover. If the hourmeter or hourmeter gasket will be replaced, remove the screws that fasten it to the top cover. Install the replacement parts to the top cover. Make sure that the hourmeter is installed so that it can be read after the cover is installed.
4. Remove the nut that fastens the key switch. Remove the key switch from the housing. Make a note of which wires are on which terminals and disconnect the wires. Install the wires on the same terminals of the replacement switch.
5. Align the notch in the shaft housing of the key switch with the tab in the housing of the display panel. Install the replacement switch. Tighten the nut and connect the wires.