DIAGNOSTIC FLOW CHART FOR
E-68 & E-88 ELECTRO LIFT® UNITS

These charts are intended to be used as an aid in diagnosing problems on the E-68 & E-88 unit. They are not a substitute for factory training and experience. Be certain to read the General Information and Testing Tips sections before attempting any troubleshooting.

IMPORTANT: Maintenance and repairs must be performed with the moldboard on the ground.

General Information

Before any troubleshooting is started, make certain the following conditions are met.

1. The moldboard is pointing straight ahead. This can often be done by coupling the left cylinder into the right cylinder and pushing the moldboard by hand.
2. The power angling cylinders must be installed correctly on to the plow assembly. The left cylinder (Driver’s side) has a hose attached with a female half of a coupler at the end; the right cylinder (Passenger side) has a hose attached with a male half of a coupler at the end.
3. The solenoid wires must be on their proper coil. The "A" coil (black and tan wires) on power angling block labeled “BLK”. The "B" coil (red and tan wires) on power angling block labeled “RED”. The "C" coil (green and tan wires) on power angling block labeled “GRN”. The "D" coil (yellow and tan wires) on power angling block labeled “YEL”. The "E" coil (purple and tan wires) on power angling block labeled “PUR”.

TESTING TIPS

Many tests do not require removing the Electro Lift® unit from the vehicle. However, more thorough testing can be performed using the Meyer Test Stand which allows direct pressure and amperage readings.

1. Using a screwdriver or other small tool to check for magnetism of the solenoids coils "A", "B", "C", "D" and "E". Place the tool on the nut securing the coil and have an assistant operate the switch. You should feel strong magnetic attraction.
2. Use a test light or volt meter to determine whether there is power at the harness.
3. When determining AMP draw of the motor, always obtain the highest value possible, i.e., at maximum raise or maximum angle with motor running.
4. Proper rotation for the motor is indicated by an arrow located on top side of the (Part # 15889) pump.
5. The pump shaft of a good pump can be turned smoothly using two fingers. If it can’t be turn easily, the pump is too tight and must be replaced.
6. Pump pressure can be measured at an angle hose (note pressure at full angle) or in the pressure filter port (an adaptor is necessary for the filter port). Note: The E-68 & E-88 Unit has a non adjustable pressure relief valve.
7. Flush the complete system including unit, hoses and power angling rams with Meyer Hydra-Flush™ Fluid M-2.

E-68 CONTROLLER OPERATION

• The snow plow should only be in operation when the vehicle ignition switch and the control switch are in the "ON" position. Care should be taken to insure that the control switch is kept dry and free from moisture during normal operation.
• When the control switch is turned “On,” all buttons will illuminate. Individual touch pads operate the functions of the snow plow: (Up), (Angle Left), (Angle Right), and (Down).
• Lowering of the snow plow an inch at a time is possible by tapping the down arrow in short intervals. Holding down the down arrow will activate a float light located in the upper right corner of the control switch. This light indicates the snow plow is now in the Lower/Float position. In this position the snow plow will be able to follow the contour of the road and the snow plow can also be angled to the left or right. Touching the up arrow automatically cancels the Lower/Float position.
• While angling left or right or raising the snow plow if the button is pressed for more than four seconds the operation will be cancelled. This feature eliminates unnecessary amp draw from the vehicle charging system.
• The auto lower button when pressed will illuminate the light above it and allows the plow to lower automatically when the vehicle is shifted into reverse and raise automatically when shifted out of reverse. To turn off the auto lower mode simply press the auto lower button again.
• The Shake button when pressed will shake the plow left and right for three seconds. This function is used to shake off any snow which may be stuck to the plow. This function is only available within the last ten seconds of an angle, raise or lower operation. If you want to cancel shake once it is once it is presses simply press the shake button again.
• The mount button when pressed will flash all buttons and will allow the mount/dismount switch on the hydraulic unit to mount or dismount the plow at the same time none of the other function will operate. (angle left, angle right, raise or lower will not work). When the mount button is pressed again the mount/dismount switch will not work. All plow functions (left, right, raise and lower) will now be available. Once the mount button is pressed it will only allow the plow to be removed or attached to the vehicle within ten minutes. When the ten minutes expires the mount/dismount switch will not work. If the mount/dismount switch is pressed for more than fifteen seconds the operation will be cancelled. This feature eliminates unnecessary amp draw from the vehicle charging system.
• This switch is self diagnosing. The monitor light is located in the upper left corner next to the float light of the control switch. When the monitor light turns on and begins to flash the control switch is sensing a problem with a specific coil/connection on the hydraulic unit. The diagnostic key is on the back side of your control switch.
E-68 & E-88 ONLY
SNOW PLOW WILL NOT RAISE

1. **Does the Motor Operate?**
   - NO: Is there power going to the motor?
   - YES: Remove motor. Does motor run when 12 volts is applied?

2. **Is the fluid level 1-1/2" below filler hole?**
   - NO: ADD M-1 Fluid
   - YES: Does the "B" Coil (Red Wire) have magnetism?

3. **Are the "B" Valve O-Rings in good condition?**
   - NO: See Switch Troubleshooting
   - YES: Replace the "B" Valve and retest.

4. **Clean or Replace the "B" Valve and retest.**
   - NO: Are the "B" Valve O-Rings in good condition?
   - YES: Check for clogged strainer - is oil getting to the pump?

5. **Clean or Replace - "A" Valve.**
   - NO: Is there pressure (or flow) at the filter port?
   - YES: Clean strainer and flush the system completely.

6. **Is pump relief pressure adjusted to 2000 ± 50 P.S.I?**
   - NO: Replace the Pump.

7. **Does the snowplow raise?**
   - NO: Replace Sump Base.
   - YES: Does the "B" Coil (Red Wire) have magnetism?

8. **Are the "B" Valve O-Rings in good condition?**
   - NO: See Switch Troubleshooting
   - YES: Replace the "B" Valve and retest.

9. **Is there power to the "B" Coil? (Red Wire) at Harness?**
   - NO: Replace "B" Coil.
   - YES: Replace pump.
**E-68 & E-88 ONLY**

**SNOW PLOW LEAKS DOWN**

1. **Does the snow plow drop straight down?**
   - **NO**
   - As the snow plow angles does it drop?
     - **YES**
     - Replace "B" Check Valve
     - Does it now hold?
       - **NO**
       - Replace "B" Valve
       - Does it now hold?
         - **NO**
         - Replace Sump Base
       - **YES**
     - **NO**
   - **YES**
   - Replace "B" Check Valve
   - Does it now hold?
2. **Are "A" Valve O-rings in good condition?**
   - **NO**
   - Replace O-Rings
   - Replace "A" Valve
   - **YES**
   - Replace "B" Check Valve
   - Does it now hold?
3. **Does it now hold?**
   - **NO**
   - Dissassemble unit
   - Inspect O-Rings, Cylinder, Piston Assembly
   - Does it hold now?
   - **NO**
   - Replace Sump Base
   - **YES**

**SNOW PLOW WILL NOT LOWER**

1. **Does "A" Coil (Black Wire) have magnetism?**
   - **NO**
   - Is there power to the "A" Coil (Black Wire) at harness?
     - **NO**
     - See Switch Troubleshooting
     - **YES**
   - **YES**
   - Replace "A" Coil
2. **Check Lower Adjustment Screw**
   - **NO**
   - Replace "A" Valve
   - Does it now lower?
     - **NO**
     - Check for a clogged filter or a blocked passageway.
     - **NO**
     - Check for Bent or Siezed Ram Assembly.
   - **YES**

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For troubleshooting and additional information, refer to the troubleshooting guide.
E-68 & E-88 ONLY
SNOW PLOW WILL NOT ANGLE LEFT

Can the snow plow raise?  
NO  
See the Raise Flow Chart Section

YES  
Does the motor run when angle switch is pushed?  
NO  
See Switch Troubleshooting

YES  
Does the "D" coil magnetize?  
NO  
Is there power to the motor solenoid? (Small Terminal)  
NO  
Replace "D" Coil

YES  
Is there power to the yellow "D" Coil wire?  
NO  
See Switch Troubleshooting

NO  
Clean or replace the "D" Valve and Reiset.  
Does it angle left?  
NO  
Is the ampere draw less than 100 amperes while trying to angle snow plow?  
NO  
Relieve the interference between the Pivot Bar and A-Frame.

YES  
Can the snow plow be angled by hand when the P.A. Rams are disconnected from Pivot Bar?  
NO  
Replace both the Coupler sets and/or clean or replace the "D" Valve.

YES  
Will the snow plow angle right & left if not allowed to travel to extreme angled position?  
Inspect P.O. Check O-rings

NO  
Is the Pilot piston in good condition? (worn/sloppy or Missing)  
NO  
Replace Pilot Piston

YES  
Are the Pilot Check Valves in good condition?  
Inspect O-rings.

NO  
Replace the Pilot Check Valves

YES  
Clean or replace the Crossover Relief.  
Does the snow plow now angle?  
NO  
Replace the P.A. Block

NO  
Temporarily put 1/4" spacers between the Pivot Bar and A-Frame to limit the degree of angle.  
Weld Spacers in place

YES  
Replace the Pilot Check Valves

YES  
Clean or replace both coupler sets.
Can the snow plow Raise?  

**YES**

 Does the motor run when angle switch is pushed?  

**YES**

 Does the "C" coil magnetize?  

**YES**

 Clean or replace the "C" Valve and Retest. Does it angle left?  

**NO**

 Inspect or replace both coupler sets.

**YES**

 Is the Pilot piston in good condition? (worn/sloppy or Missing)  

**YES**

 Are the Pilot Check Valves in good condition? Inspect O-rings.  

**YES**

 Clean or replace the Crossover Relief. Does the snow plow now angle?  

**YES**

 Weld Spacers in place

**NO**

 Replace both the Coupler sets and/or clean or replace the "C" Valve.

**NO**

 Replace the P.A. Block

**NO**

 Temporarily put 1/4" spacers between the Pivot Bar and A-Frame to limit the degree of angle. Will the snow plow now angle?

**YES**

 Will the snow plow angle right & left if not allowed to travel to extreme angled position? Inspect P.O. Check O-rings

**YES**

 Replace the Pilot Check Valves

**NO**

 Replace the Pilot Check Valves

**NO**

 Replace the "C" Coil

**NO**

 See Switch Troubleshooting

**NO**

 See Switch Troubleshooting

**NO**

 See the Raise Flow Chart Section

**NO**

 Is there power to the motor solenoid? (Small Terminal)

**NO**

 See Switch Troubleshooting

**NO**

 Is the ampere draw less than 100 amperes while trying to angle snow plow?

**NO**

 Can the snow plow be angled by hand when the P.A. Rams are disconnected from Pivot Bar?

**NO**

 Relieve the interference between the Pivot Bar and A-Frame.

**NO**

 Is the Pilot piston in good condition? (worn/sloppy or Missing)

**NO**

 Replace Piston

**NO**

 Replace Piston

**NO**

 See Switch Troubleshooting

**YES**

 Is there power to the Green "C" Coil wire?

**NO**

 See Switch Troubleshooting

**NO**

 Is the ampere draw less than 100 amperes while trying to angle snow plow?

**NO**

 Can the snow plow be angled by hand when the P.A. Rams are disconnected from Pivot Bar?

**YES**

 Replace the Pilot Check Valves

**YES**

 Clean or replace the "C" Valve and Retest

**YES**

 Clean or replace the "C" Valve and Retest

**YES**

 Yes
E-68 & E-88 ONLY

SNOW PLOW WILL NOT HOLD ANGLE

- Are the Rams mushy? Can you push the moldboard 6" to 8" by hand? [YES]
- Bleed air from the system and snug up gland nuts. Check couplers and fittings for leaks.
- Check Pilot Check Valve Assembly O-rings. Does snowplow now hold? [NO]
- Change Pilot Check Valve Assembly. Does snowplow now hold? [NO]
- Inspect Crossover Relief. Does snow plow now hold angle? [NO]
- Replace the P.A. Block

SNOW PLOW WILL NOT MOUNT

- Does the motor run when mount switch is pushed? [YES]
- Clean or replace the "E" Valve and Retest. Does it mount? [NO]
- Inspect or replace both coupler sets.
- Is the ampere draw less than 100 amperes while trying to mount snow plow? [NO]
- Is the Pilot piston in good condition? O-rings? [NO]
- Replace the Pilot Check Valves

SNOW PLOW WILL NOT DIS-MOUNT

- Does the motor run when dis-mount switch is pushed? [YES]
- Does the "E" coil magnetize? [YES]
- Check for voltage Purple wire "E" Coil. [NO]
- See Switch Troubleshooting
- Replace "E" Coil
- Is the ampere draw less than 100 amperes while trying to mount snow plow? [NO]
- Is the Pilot piston in good condition? O-rings? [NO]
- Replace Pilot
- Clean or replace the "E" Valve and Retest. Does it mount? [NO]
- Inspect or replace both coupler sets.
- Are the Pilot Check Valves in good condition? [NO]
- Replace the Pilot Check Valves
1. Basic E88 System Description

The system is made up of three main components consisting of the Remote Control Module (RCM), Plow Control Module (PCM) and Headlamp Control Module (HCM).

The RCM is located in the truck cab in the form of a handheld joystick controller. The RCM is the device the snow plow operator uses to perform plow functions. The RCM uses a LCD display to reference snow plow status.

The PCM is located on the hydraulic unit which is mounted to the lift frame on front of the vehicle. The PCM is wired to the motor solenoid, valve block solenoids and plow lights. When a movement command is sent from the RCM it is translated by the PCM into electrical outputs to activate the appropriate solenoids to get the proper snow plow movement to occur.

The HCM is located in the engine compartment and is wired into the vehicle’s headlights via the adapter harness. Park and turn signal wires are hard wired to the vehicle park and turn circuit. When the plow is mounted on the truck and is powered on the HCM detects the presence of a PCM. If the truck’s headlights are turned on the HCM will disable the truck headlights and send a command to the PCM to turn on the plow lights. The HCM will also send turn and park commands to the PCM when they are detected by the wiring.

All the commands or communications between the three modules is performed through the power (+) and ground (-) wiring for each module. Due to commands being transmitted over the power lines it is very important that all connections be attached directly to the vehicle battery tight and secure to maintain good communication.

2.0 General Installation Tips

These things can cause intermittent operation:

1. Loose connections between the modules and their associated power sources.
2. Operating the RCM while plugged into the vehicle’s cigarette lighter or accessory port.
3. Low battery voltage, for good communication maintain at least 11 VDC.

A low voltage situation will cause the system to operate intermittently. It may be necessary to power cycle the modules. You can perform this by doing the following:

**Step 1** RCM – Power off by depressing the green power button for 3 seconds then unplug the power cable from the Meyer accessory jack. Then plug cable back in and power on RCM.

**Step 2** PCM – Unplug the plow cable from connector on plow frame, wait 10 seconds then plug back in.

**Step 3** HCM – Locate fuse holder on red power wire (near vehicle battery) and open fuse holder by twisting, remove fuse, wait 10 seconds then put fuse back into fuse holder.

3.0 Xpress Plow General Operation Instructions

These instructions assume a system install has been completed.

**Power Up Sequence:**

1. PCM This device should be already powered on at the plow plug.
2. HCM This device should be already powered on, direct connect to battery.
3. RCM Press power button for 1 second.
**Power Down Sequence:**
1. **RCM** Press power button for three seconds.
2. **HCM** This device will remain connected to battery.
3. **PCM** This device can remain connected to main plow plug.

**Plow**
If plow is Dismounted – Plug in power cable at Plow, Press Mount Switch until mounting is clamped completely. Go to A.
If plow is already mounted – Plug in power cable at Plow. Go to A.
If plow is already mounted and plugged in. Go to A.

**NOTE:** Mounting/dismounting is active for a 20 second period after power cable is plugged in. The headlights will flash at end of this 20 second period to indicate Mount/Dismount is ended. If Remote is powered ON while in mounting/dismounting, lights will flash immediately and system will go out of mounting/dismounting mode.

**A. RCM**
Plug the coiled power cord into the Meyer accessory port, then into the RCM.
**To Power On** the unit - Press and hold the green I/O button for 1 second.
(To **Power Off** the unit – Press and hold the green I/O button for 3 seconds.)

A screen will appear with the MEYER logo for approximately 3 seconds, after which an operational screen will appear. The operational screen will show:

The E-78 or E-88 icon on the left of the display indicates that the PCM is functional and communicating to the RCM. The icon on the right of the display indicates that the HCM is functional and communicating to the RCM. If the RCM should lose communication with the PCM or HCM for a certain length of time, this icon will disappear from the display.

The ALM function is only available when the PCM and HCM are recognized and found in the system by the RCM. When ALM is not available, the button labels for them will not be displayed. The WW button label represents the WigWag plow light function. If there isn’t a plow in the system, WigWag is not available and the WW button label will not be displayed.

If the RCM does not display the PCM or HCM icon, check that the device’s power connector is securely plugged in. When the device is powered on, the RCM will automatically detect it and put the appropriate icon and button labels on the display. The RCM searches for devices when it is powered on. Power cycling the RCM can be used to try to find the devices. There is a “FIND DEVICES” item in the Menu that will allow the RCM to search for devices.

The LED backlight turns on when the RCM is powered on. It will shut off after 30 seconds. It can be turned on again by pressing any button.

**NOTE:** If RCM is powered on during the Mounting/Dismounting sequence, the plow lights will flash and the plow will no longer mount/dismount.

“**UP**” Raise the moldboard by pressing the joystick control in the direction of the display.

“**DOWN**” Lower the moldboard by pressing the joystick control in the opposite direction of the display.

“**FLOAT**” if Down is held for .75 seconds, the unit will be placed in Float. While in Float, this icon will appear in the middle of the display:

“**LEFT**” Angle moldboard left by pressing joystick control to the left.

“**RIGHT**” Angle moldboard Right by pressing joystick control to the right.

**SOFTKEY FEATURES:**

**ALM** Press soft key above ALM to activate “Automatic Lower Mode”, this mode will cause the moldboard to Lower (place in float) when the vehicle is placed in Reverse. Then it will raise the moldboard for 2 seconds when taken out of Reverse. (This action is only available if backup light wire is connected to the HCM)
ELECTRONIC TROUBLESHOOTING E-88

**SHK**  This option only available for 10 seconds after a “joy stick movement”(up, down, left, right). Press soft key below SHK to activate the “Shake” operation. This will cause the moldboard to shake back and forth for approximately 3 seconds to dislodge any snow on moldboard.

**WW**  Press soft key below WW to activate “WigWag” lighting. Parking lights on plow lights will toggle on/off from side to side

**Menu**  Press soft key below Menu to access other menu selectable actions:

(All Blade movement functions are disabled while in Menu screens)

**DIAGNOSTICS:** (Press Sel) This will display any faults that have been detected, Press Next to scroll through selections. Press Exit to leave.

**FIND DEVICES:** (Press Sel) This searches for external modules/devices such as HCM, PCM and will display those that are found. Press Exit to leave.

**REMOTE SETTINGS:** (Press Sel)

**BUTTON CLICK:** This feature Enables/Disables the button “beep”. Press Exit to leave.

**DISPLAY CONTRAST:** This feature increases or decreases the LCD contrast. Press Exit to leave.

**VIEW SW VERSIONS:** (Press Sel) This selects a device to display its software version number. On PCM and HCM “Internal Software Revision” refers to the software for the device that resides in the RCM. “External Software Revision” refers to the software that resides in the external device. Press Exit to leave.

**PROGRAM DEVICES:** (Press Sel) This feature allows field upgrades to the external device software. Select the device to program. If the software version of the external device is the same as the version of software for it stored in the RCM, programming will not be done. Follow instructions on screen. Press Exit to leave.

**HEADLIGHTS:**

Use the truck’s OEM light switch to control OFF/LO/Hi beams.

At initial Power On – Plow lights will be set to Daytime Running Lights (DRL).

Move OEM switch to headlights ON – Plow lights will shine LO or HI depending on position of OEM switch.

Move OEM switch to headlights OFF – Plow lights go to DRL (GM vehicles may illuminate its DRL also)

**TURN SIGNAL:**

Plow lights will follow OEM switch – (vehicle signals will also illuminate but may not be synchronized with the plow lights)

**PARK LIGHTS:**

Plow lights will follow OEM switch – (vehicle park lights will also illuminate)

To Turn Off Plow lights: Power off the RCM.

**NOTE:** All lights, including interior and dash lights will dim while hydraulic unit is operating.

At RCM power off the plow lights will all be shut off and the lighting control will transfer back to the vehicle. If OEM headlight switch is ON at RCM power off, vehicle lights will shine. If OEM headlight switch is ON and PCM power is removed while RCM is still On, light control will transfer to vehicle.

**MOUNT:** There is a 20 second period after plugging in the Plow in which to operate the Mount switch. This Switch is located on the hydraulic unit cover. During this 20 second period, the moldboard functions are disabled. The moldboard functions are disabled for 15 seconds after the Mount switch is released. The pump motor will shut down if the Mount switch is held on for more than 30 seconds. If 20 seconds runs out unplug and replug to reset timer.

**DISMOUNT:** There is a 1 minute period after the RCM has been normally powered off in which to dismount the plow. The switch is located on the plow control cover. During this 1 minute period the blade functions are disabled. If the PCM remains powered on, after the 1 minute period the lights will flash twice quickly to indicate the dismount period has ended.

**HEADING:**

Use the truck’s OEM light switch to control OFF/LO/Hi beams.

At initial Power On – Plow lights will be set to Daytime Running Lights (DRL).

Move OEM switch to headlights ON – Plow lights will shine LO or HI depending on position of OEM switch.

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**DISMOUNT:** There is a 1 minute period after the RCM has been normally powered off in which to dismount the plow. The switch is located on the plow control cover. During this 1 minute period the blade functions are disabled. If the PCM remains powered on, after the 1 minute period the lights will flash twice quickly to indicate the dismount period has ended.
TIMEOUTS: The RCM will power off after 2 hours of inactivity. This conserves battery life if the unit is accidentally left on when driver leaves. This should provide ample time to transport between jobs or just to stop for lunch, etc. Simply pressing any button can reset this timer.

The Plow lights will remain powered on if there is a loss of communications. The moldboard functions will be disabled during this time. This can occur for a couple of different reasons:

1. If the Meyer accessory port plug is accidentally pulled out before the RCM is powered off normally.

2. If there is a real loss of communication between the PCM, HCM and RCM.

Overcurrent: The hydraulic unit will be shut down if an overcurrent situation occurs for more than 2 seconds. An alarm will sound and “Overcurrent” will appear on the display. This might happen when the blade is taken to full stops in any direction and held. “Stacking snow” is one reason this may occur. To reset, simply release the button and press again. If the fault occurs again the hydraulic unit will be shut down again.

Alarms/Faults: All faults will sound an alarm. To extinguish the alarm, press any button. To remove fault from the screen, press the Exit button to return to normal screen. The fault will remain in the diagnostic menu until it is cleared. All moldboard functions will remain active during the alarms, unless perhaps it is a bad solenoid. Example: A bad “B” solenoid, then the moldboard cannot be moved Up, but Left, Right, and Down are still available.

RCM will not power On

Plow Lights do not follow OEM switch positions (RCM and PCM are connected correctly and are working)

RCM Display shows Dark Lines, Updates slowly

Press green button > 1 second?

Yes

No

Power getting to RCM?

Yes

No

Press green button for 1 second

RCM will emit the triple beep at power on even if the button click is turned off through the menu

Check all electrical connections Power cycle RCM

Replace RCM

Is HCM connected securely and correctly?

Yes

Clean and tighten connections

No

Does HCM icon appear on RCM display?

Yes

Replace HCM

No

Power cycle HCM

Are voltage levels correct? (refer to manual)

Yes

Replace HCM

No

If after power cycle, still no icon. Replace HCM

Power to RCM was disconnected abnormally. Power cycle the RCM, verify secure connections to RCM and cigar accessory jack.

BLade, Lights working normally?

Yes

An LCD display will not update/refresh itself very quickly in cold weather. All blade functions should be normal. The information on the screen may be slow to keep up with the action through. Allow the RCM to warm up.

No

LCD display is cold. This should cause no functional problems

Yes

Check all electrical connections Power cycle RCM

Replace RCM
Vehicle lights do not work, no plow connected

- Is HCM Properly Connected?
  - Yes
  - Does HCM icon appear on display?
    - Yes
    - IS OEM light switch in ON position?
      - Yes
      - Are voltages correct?
        - Yes
        - Is bulb good?
          - Yes
          - Replace HCM
          - Replace HCM
        - No
        - Charge battery, clean and tighten connections
        - Replace Battery
      - No
      - Switch ON the lights
    - No
    - Power Cycle the HCM
    - Still No Icon - Replace HCM
  - No
    - Power Cycle the HCM
    - Still No Icon - Replace HCM

RCM Display appears Stuck on Meyer Logo

- Button Beeps when pressed?
  - Yes
    - Power Cycle RCM by pressing green button for > 3 seconds
  - No
    - Display clears, RCM goes OFF?
      - Yes
        - Power ON RCM by pressing green button > 1 second
      - No
        - Power Cycle RCM by pressing green button > 1 second
          - RCM goes to normal Operating screen?
            - Yes
              - RCM Normal Operating Screen
            - No
              - Power Cycle the HCM
              - Replace RCM
          - No
            - RCM Normal Operating Screen?
              - Yes
                - Replace RCM
              - No
                - Replace RCM
**Moldboard will not move RCM, HCM are connected correctly**

- **Does E88 icon show on display?**
  - No: Check all electrical connections, Power cycle PCM
  - Yes: Did user press correct button on RCM?
    - No: UP - Joystick toward display
      - Dem - Joystick opposite display
      - Left - Joystick left
      - Right - Joystick right
    - Yes: Is Plow Mounted to truck?
      - No: Mount plow to truck
      - Yes: Is there power to the motor?
        - No: Check all electrical connections, Power cycle the PCM
        - Yes: Does Pump solenoid energize?
          - No: Check all electrical connections, Power cycle PCM
            - Yes: Still does not energize, Replace Pump solenoid
          - Yes: Does Pump motor cycle?
            - No: Check all electrical connections, Power cycle PCM
              - Yes: Angle solenoids functional?
                - No: Check all electrical connections, Replace solenoids, Power cycle PCM
                - Yes: Replace PCM
            - Yes: Harneses connected correctly?
              - No: Check all electrical connections, Power cycle PCM
              - Yes: Replace PCM

**ELECTRONIC TROUBLESHOOTING**

E-88