

# Electrical



The electrical system is the most simple of any proven automated collection unit in the industry.

It takes an ignition supply from the chassis, through a switch normally mounted by the body manufacturer, to the electric joystick.

Operation of the joystick energizes an electric/air solenoid to provide the hydraulic oil supply and shifts a spool in the Curotto Can hydraulic valve to send oil to the correct cylinder.

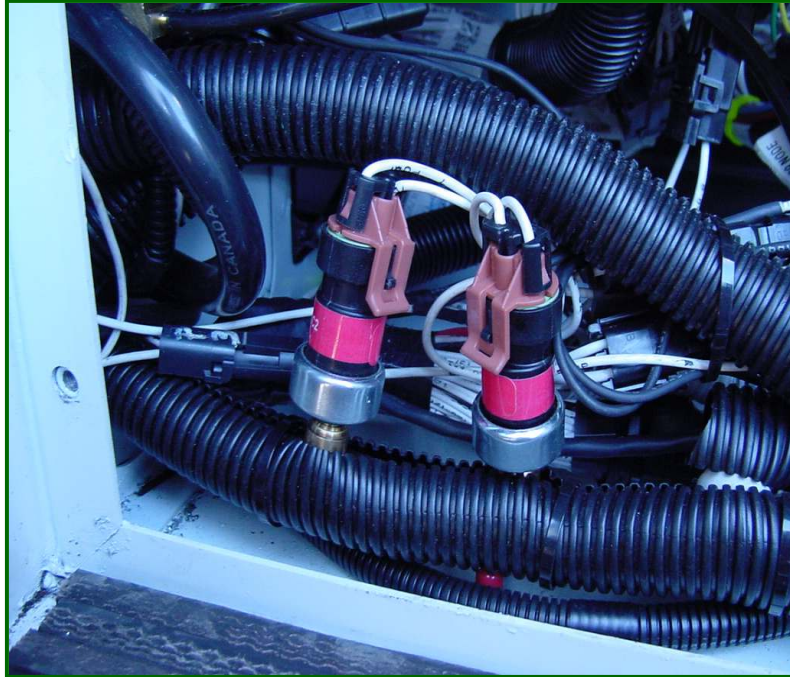
It all runs on 12v with a common ground.

The auto-retract system is incorporated into the electrical system and employs a solid state timer, a diode block and two air switches.

The following slide shows the entire electrical overview.

Take a moment to study the overview and become familiar with the components.

# Electrical – Auto Retract System



The auto-retract system is incorporated into the electrical system and employs a solid state timer, a diode block and two air switches.

The normally open air switches close when air pressure is sensed as the *arms up* and *forks down* main joystick functions are operated.

The power supply is directed to the timer which will run for 1.2 seconds, and in that time, supply power to all 3 retract functions on the Can, allowing them to retract.

The following slide shows the retract components.

# Auto Retract Check



Structural damage will occur if the auto retract system is not working properly.

## Auto Retract Check

Step 1. Start engine and wait until air pressure gauge reaches 90psi.

Step 2. Arm up check. In the working position, extend all cylinders a minimum of 2" – raise truck arms slightly and **all three cylinders should fully retract automatically**

Step 3. Forks extend. Again - extend all cylinders a minimum of 2" then extend forks on truck – **all three cylinders should fully retract automatically**

NOTE: The auto-retract test using the forks lower function should be carried out with the Can resting on the ground. This will provide a hydraulic resistance in the fork cylinders and prove that the Curotto Can cylinders retract.

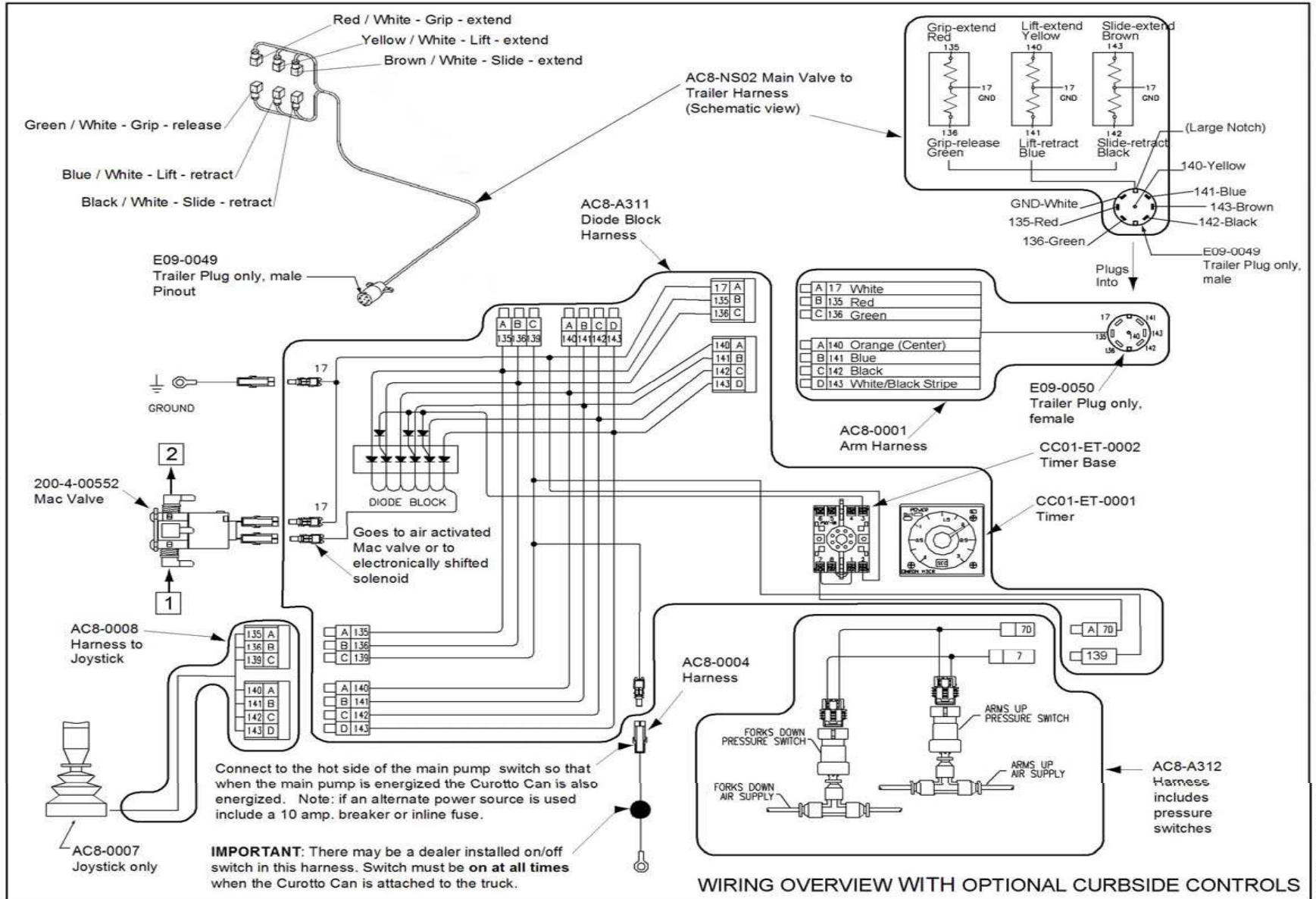
Action: If either of these function do not work as described – **DO NOT OPERATE THE UNIT** – serious and costly damage could occur to the container

# Verify Autoretract Function

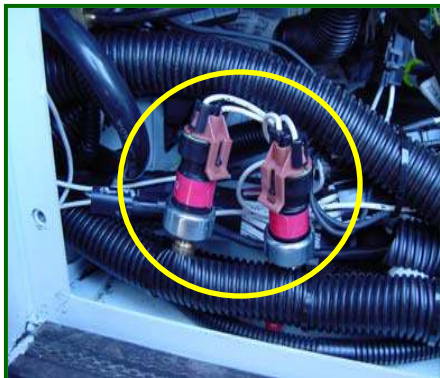
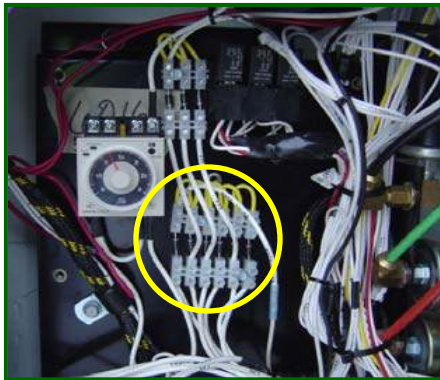
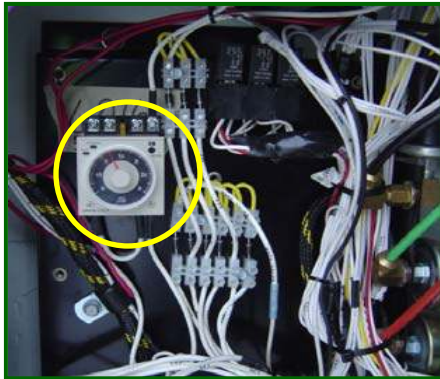


- Does it work? We recommend you personally verify the system. Go to the truck and complete the check shown on the previous slide. If you are not trained, have a properly trained driver carry out the check.
  - Remember, check the autoretract on BOTH 1. arms up and, 2, forks retract.
  - Its important to note which circuits the autoretract works and does not work.
    - 1. Only on arms up and not forks extend
    - 2. Only of forks extend and not on arms up
    - 3. Neither arms up and forks extend work
- Go to the slide that fits the results of the function test.

# Electrical

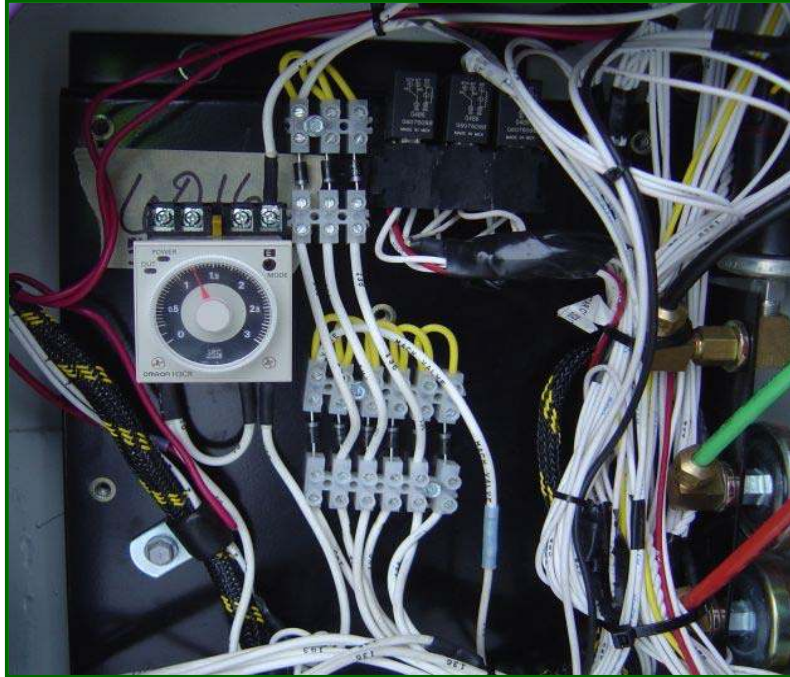


# Troubleshooting Auto Retract System Both not working



- Refer to page 19 of the parts manual
  - Truck off
  - Key on
  - 120psi in system
  - Curotto can front of can touching the ground
- Check power to pressure switches.
  - Unplug pressure switch check 12V on wire 7. If you see no power, check for broken wire in harness – see schematic.
  - Check on the timer base at terminal 7 (wire 7D) power when operating arms up AND forks down – should have power on wire 7D on both functions – if you don't have power on both functions make note of which functions you don't have power and go to the slide 8.
- Timer check
  - Is it plugged in? Make sure the timer is secured in the timer base
  - Check to see it is set at 1.5 seconds in Mode E and SEC
  - Light on timer
  - Should illuminate only when arms up/forks extend is activated
- Locate the timer base. Check for 12V on terminal 3 of timer base. In order to check this properly, activate the arm up/forks extend function and allow the joystick to go to neutral. This will ensure that the timer will reset after the 1.5 second delay. If you have power on terminal 3 when arms up/forks extend is activated and the autoretract does not work – troubleshoot electrical (slide 7)

# Autoretract Trouble shooting

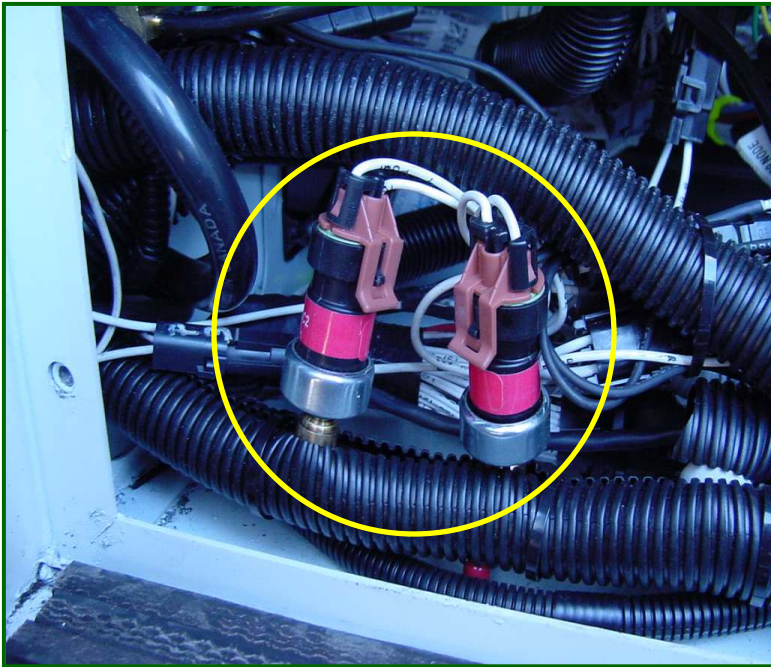


Troubleshooting the system can be as simple as tracing a loose wire or a disconnected plug.

Locate the diode block terminal strip. This is a good place to test to confirm power supply and that the joystick is functioning. It can be used to show that power is being distributed from inside the cab.

Disconnect the trailer plug at the forks and have an assistant cycle the joystick. Use a meter to ensure that there is 12v+ at each terminal. Then go to each electric/hydraulic solenoid in turn on the Curotto Can valve.

## Arm OR Fork Function is NOT Functioning



- Locate pressure switches.
- Swap switches and recheck the autoretract functions BOTH arms up AND forks down. If the problem follows - replace pressure switch
- If not, troubleshoot system as described in previous slide



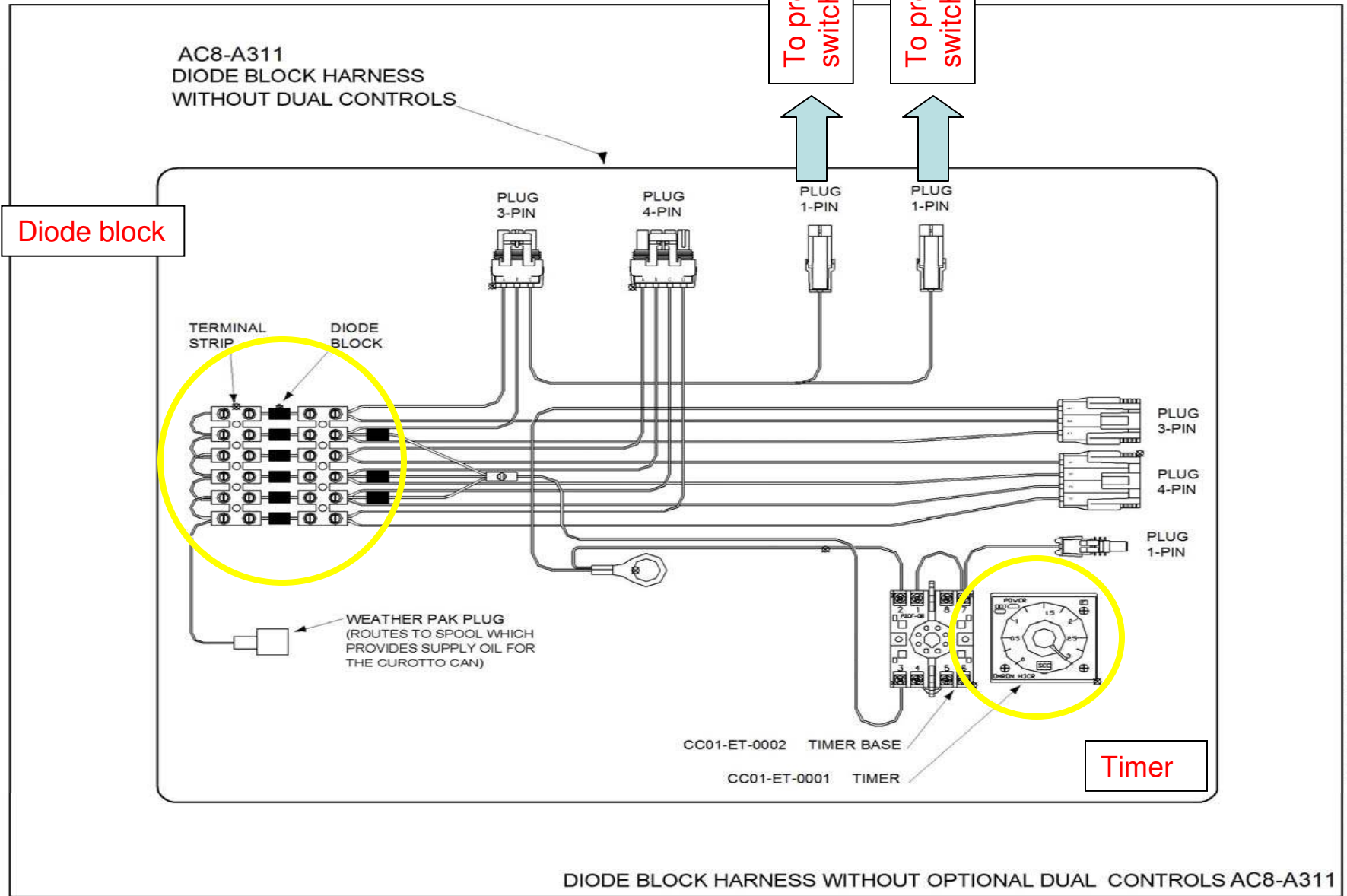
# Electrical – Auto Retract System



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CUROTTO CAN ELECTRICAL: DIODE BLOCK HARNESS WITHOUT OPTIONAL DUAL CONTROLS