Removal of Brown Wire Instructions

Required Tools and materials:

- #2 Square drive screw driver or #2 Phillips screwdriver
- ¼" nut driver for harness connector removal (if necessary)
- Standard Duty, 6 watt, 4.5 volt battery operated cordless soldering iron **or** cordless drill with 1/8" drill bit
- 3/8" brake fitting wrench (Only used if brake line needs to be removed)
- ½" open-end wrench (Only used if brake line needs to be removed)
- Wire cutter
- Crimp tool for crimping connectors
- 5/16" open-end wrench (Only used if brakes need to be re-bled)
- Clear hose for bleeding brakes (If needed)
- Electrical tape
- 10-12 gauge crimp-type cap connectors (2 required)
- 4 ¼" X 2" Label for inside electrical shutoff access door
- Aluminum pan (to be placed under ActiBrake)
- Flat Rate allowance for this service
    - a) 1 (one) hour maximum for service which does not require complete ActiBrake removal and brake bleeding
    - b) 2 (two) hour maximum for service which requires removal of the ActiBrake to complete this service or for complete change out. This includes brake bleeding.

Instructions

1. Be sure trailer is not connected to a tow vehicle.
2. Disconnect trailer from shore power to ensure the converter is not running.
3. Disconnect positive cable from trailer battery.
4. Cut the brown wire using a wire cutter, on the ActiBrake side of the factory-installed crimp cap connector.
5. Insulate the exposed end of the brown wire that is attached to the ActiBrake wiring harness, using a 10-12 gauge crimp cap connector.
6. Disconnect the white wire that was supplying power from the circuit breaker to the brown wire of the ActiBrake. This circuit breaker is located in the battery compartment of the trailer. If possible, completely remove this white wire from the trailer. If it is not feasible to completely remove this white wire from the trailer, it is important to place a label on this wire so there is no question it should not be used in the future. If this wire is not disconnected from the breaker, it will continue to carry voltage from the circuit breaker connection. **NOTE: If this wire is left connected to the circuit breaker, even if the breaker is tripped, this wire will remain "Hot" if the DC converter is running**.
7. Remove the screws from the right side of the two mounting straps that hold the ActiBrake in place and slide the ActiBrake approximately 6 inches toward the front of the trailer. Use caution when sliding the ActiBrake to make sure the brake line behind the ActiBrake does not get kinked or damaged in any way. (If

there is not enough brake line to allow the ActiBrake to be pulled out 6 inches, the brake line will need to be disconnected before proceeding to step 8. **NOTE:** If the brake line is disconnected, the brake system will need to be bled when the brake line is re-connected at the end of this service.

8. When the reservoir filler cap is accessible, remove the cap and check the brake fluid level. If the brake fluid level is low, (down 1 inch or more from the bottom of the filler opening), this may indicate that there is an internal leak in the ActiBrake.
    a) If the fluid level is low as stated above, place a small pan under the actuator prior to continuing to step 9
    b) If the reservoir is full of brake fluid, proceed directly to step 9. **NOTE:** A full reservoir may not be 100% indication no internal leak is present. It may be possible that someone may have filled the reservoir prior to this service.

9. Replace the reservoir filler cap and rotate the ActiBrake counterclockwise onto its side so the bottom of the ActiBrake is facing to your right. Draw a straight line, or place a piece of tape on the right side of the ActiBrake, from the back end of the ¾ inch by 3 ¼ inch rectangular indentation, to the edge of the raised base on the bottom of the ActiBrake. (see photo)

10. Using a Standard Duty, 6 watt, 4.5 volt battery operated cordless soldering iron with a tip ¾" to 1" long, make a hole through both layers of the ActiBrake enclosure. After the soldering tip has penetrated the second layer of the plastic, allow the soldering iron tip to cool for 3 to 5 seconds before removing it from the plastic. This will ensure a clean through-hole. If a cordless soldering iron is not

available, a portable drill with a 1/8” diameter drill bit can be used. If a drill is used, the drill bit should penetrate the plastic at least ¾” but should not be allowed to penetrate the plastic more than 1 ½”.

11. If there is no evidence of brake fluid flowing from the hole pierced in the bottom of the ActiBrake when the unit is rotated so the hole is facing down, place the ActiBrake in the aluminum pan and reposition the ActiBrake, re-install the harness connector if it was removed, and reattach the two mounting straps to secure the unit in place. Proceed to step 12. If there is brake fluid leaking from the pierced hole, contact Active Technology at 515-965-9105 for a replacement ActiBrake actuator. (If a replacement ActiBrake is installed, the reservoir will need to be filled with DOT 3 brake fluid, and the brake system will need to be bled. See bleeding instructions below.)

12. After securing the ActiBrake in place, reattach the cable to the positive terminal on the trailer battery.

13. Test the ActiBrake system by removing the pin from the breakaway switch. After verifying that the ActiBrake runs, replace the pin into the breakaway switch. After the pin is replaced into the breakaway switch, the trailer can be reconnected to a tow vehicle or to shore power. Attach 4 ¼" X 2" Warning label inside the electrical shutoff access door.

14. If the ActiBrake was removed to perform this service, or if the ActiBrake was replaced as part of this service, the brakes must be bled using this procedure. Determine which caliper is furthest away from the ActiBrake. This will require following the plumbing for the brake fluid under the trailer. It is possible that the front passenger wheel is the furthest caliper from the ActiBrake. When the appropriate caliper is determined, proceed with the bleeding process. First, install a length of clear bleeder hose on the first caliper bleed screw (use the top bleed

screw on Kodiak brakes). Place the loose end of the hose into a clear container so the end of the hose will be completely submerged in brake fluid to observe air bubbles being removed during the bleeding process. Pressurize the system by removing the pin from the breakaway switch. When the system is pressurized, use a 5/16" open end wrench to loosen the bleeder screw one full turn, which will open the system to the atmosphere through the passage in the bleeder screw.

Bleeding is complete when bubbles no longer are observed. At that point, **with the ActiBrake still pumping fluid,** close the bleeder screw securely. Repeat the bleeding process for all calipers. **You must periodically check and refill the ActiBrake reservoir as needed during the bleeding process. DO NOT ALLOW THE FLUID LEVEL IN THE ACTIBRAKE TO FALL BELOW HALF FULL. If the fluid level falls below the ActiBrake pump inlet, air will be re-introduced into the system. If this happens it may take up to 8 hours before the brake lines can be successfully re-bled!**