



Workhorse 2003-2005 Instrument Clusters



Actia LCD Screen Replacement Instructions

Brazel's RV Performance Products
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Push in and down on the 10 clear tabs starting in the middle as shown to release the lens.

Pic 1



Mode Button

Be careful not to lose the "Mode" and "Trip" pins when you remove the lens!

Pic 2

Trip Button



Retainers

Remove the trim; there are 2 retainers at the 3 o'clock and 9 o'clock position. Press in toward the center of the speedometer ring and pull up.



Lightly rotate to the park position of each gauge and make note of where they are pointing. You will need this info for when you put it back together. We recommend taking a picture of each gauge before pulling the needle off.

Pic 4



Twist and pull up the needle by the cap in the direction that the gauge parks. Twist RPM and Speedo "counter-clockwise".

Pic 5



Twist and pull up the needle by the cap in the direction that gauge parks. Twist Fuel and Temp "clockwise".

Pic 6



Push in and down to release the white face tabs. There are 4 of them.

Pic 7



Push in the cluster connector to remove the face and circuit board.

Pic 8



Push the 7 white tabs outward from the circuit board to release the circuit board from the face.



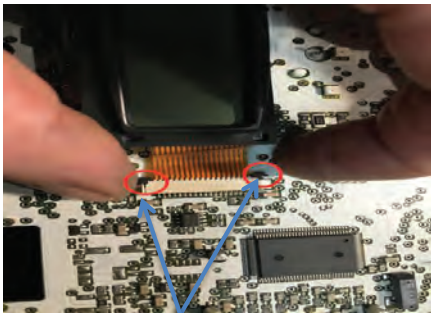
Lift and separate the circuit board from the face.

Pic 10



Squeeze and push down on the black tabs to release the screen bezel.

Pic 11



Turn the board over and with your fingernail push the black lock on either side in and away from the socket, you can do one side a time. Slide it back, but don't remove it.

Pic 12



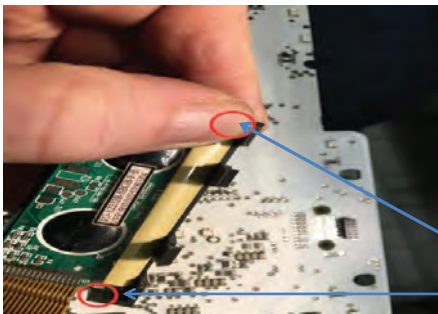
Another view of the previous step.

Pic 13



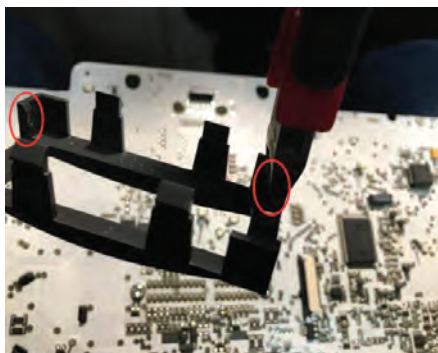
Note the distance that the black ribbon retainer is out.

Pic 14



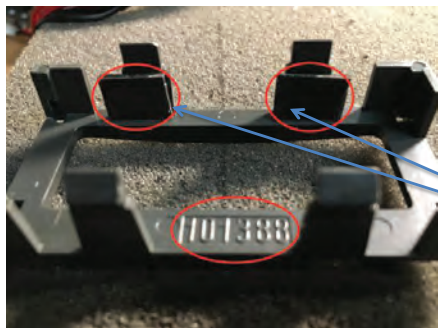
Take the bezel and release the 2 tabs that secure the screen by pushing them away from the screen. You will also need to push on the face of the screen to push it out of the bezel.

Pic 15



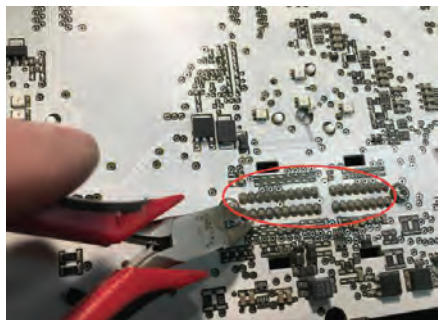
Using side cutters clip out the two retaining tabs.

Pic 16



Install the provided two-sided tape foam opposite the circled numbers. When you put the new screen in, face down, the ribbon will exit the left side as situated in this picture.

Pic 17



!IMPORTANT!

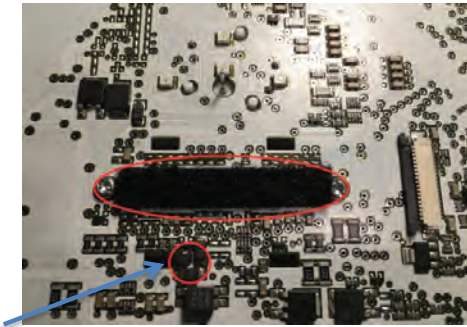
Trim the terminal ends as shown. Take great care to make sure you trim the terminals as close to flush as possible. If these terminals pierce the ribbon it will ruin the cluster circuit board.

Pic 18



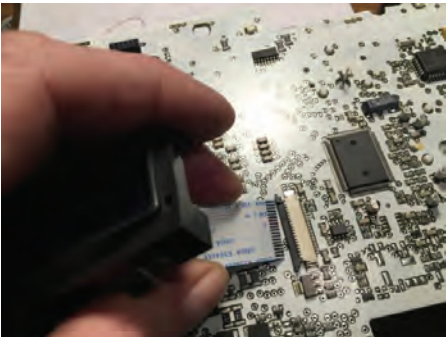
Thoroughly dust off any metal particles.

Pic 19



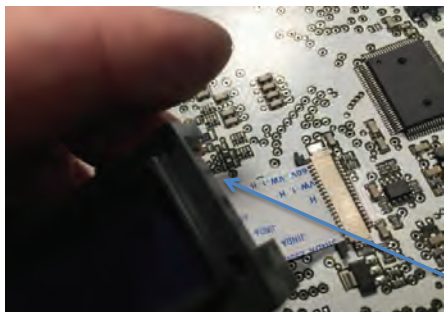
Install insulation tape provided over the terminal ends you just trimmed. Be really careful to not damage the components contained in the small circle, it's really close to the bezel leg that will you be installing!

Pic 20



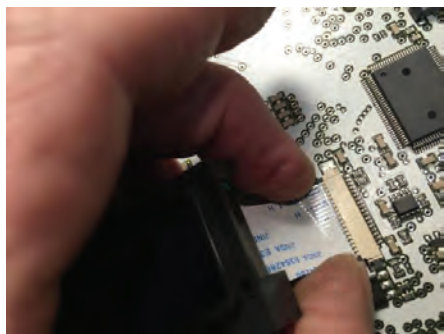
Line up the ribbon with the socket.

Pic 21



Pic 22

Slide the ribbon in until it seats; note the ribbon exits the bezel on the wider offset side opening.



Pic 23

Push the black lock tabs in until it is seated against the socket.



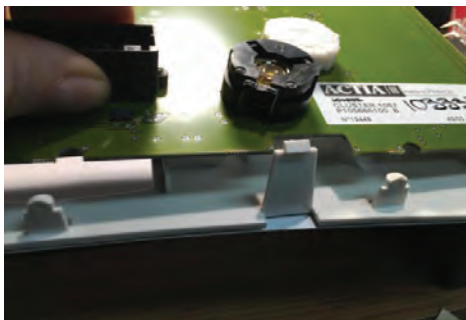
Pic 24

Another reminder to be careful not to damage the circled area!



Lay the face “face-down”.

Pic 25



Position the circuit board, screen down, over the face and snap into place.

Pic 26



Lay out the housing as shown.

Pic 27



Position the face and circuit board into the housing and press down until the four white tabs lock into place.

Pic 28



Push in on the face until it snaps into place.

Pic 29



Install the needles by pushing on to the pins and twisting toward their respective park positions. You will want to point them exactly where they were when you took them off on step #4. Keep the cap of the needle about a fingernail width from the face so it won't drag on it.

Pic 30



View of the “fuel” gauge.

Pic 31



Don’t forget to remove the protective film!

Pic 32



Press the trim back into place. If you have the brown mode and trip pins, you will need to make sure they are in place before you put the trim on.

Pic 33



If you want to test your cluster in the vehicle before you put the lens on, save this step for last. When putting the lens back on, start at the narrow ends first. Snap those into place and then go to the mid-point on the wide ends and snap those in and work your way around until it is fully seated.

Pic 34

Regardless of whether you want to test the needle positions or not, we recommend that you plug in your cluster to the vehicle before you mount it into the dash to make sure that the new screen is operating. If there are any issues you will have to recheck your connections.



Do not install the cluster at this time; just plug it into the harness. For testing the needle position turn the key on and push the “mode” button in for 10 seconds and then release.

Pic 35



Using the “Trip” or “Mode” buttons you can scroll up or down through the menu. Scroll to and highlight “Cluster Diagnostics”. After about 2 seconds of leaving it highlighted it will enter the next menu.

Pic 36



Using the “Trip” or “Mode” buttons you can scroll up or down through the menu. Scroll to and highlight “Gauge Test”. After about 2 seconds of leaving it highlighted it will enter into the “Gauge Test”.

Pic 37



The “Gauge Test” will begin with a sweep of each gauge individually. If adjustment is needed on the needle, you will have to unplug the cluster and adjust the needle as needed. Always move the needle for RPM and MPH counter-clockwise and Fuel and Temp clockwise.

Pic 38



View of “Engine Speed” at 50%.

Pic 39



After you are satisfied with your results, return to step # 34. You can now re-install the cluster in your vehicle.

Pic 40



Should you want the contrast lighter or darker, you can do this at any time by entering the diagnostic menu pushing the “Mode” button for ten seconds and scrolling to “Contrast”.

Pic 41

Note:

The “Gauge Test” is intended to test the gauges ability to sweep to the position that the cluster electronics is commanding it to do. It will not correct for sensor input information that is faulty.

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