

# BRAZEL'S RV PERFORMANCE PRODUCTS

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Workhorse 2003-2005 Instrument Clusters



## Actia LCD Screen Replacement

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# ***Actia LCD Screen Replacement***

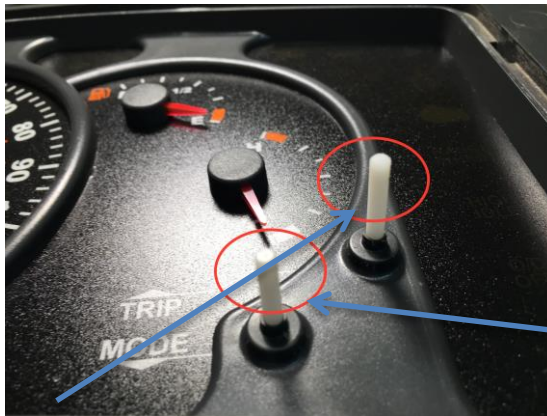
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**Pic 1.** Push in and down on the 10 clear tabs starting in the middle as shown to release the lens.



**Pic 2.** Be careful not to lose the “Mode” and “Trip” pins when you remove the lens!



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



**Pic 4.** Lightly move 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.



**Pic 5.** Twist and pull up needle by the cap in the direction that the gauge parks. Twist RPM and Speedo “counter-clockwise”. (Example 1)



**Pic 6.** (Example 2) of above, twist Fuel and Temp “clockwise”.



**Pic 7.** Push in and down to release the white face tabs. There are 4 of them.

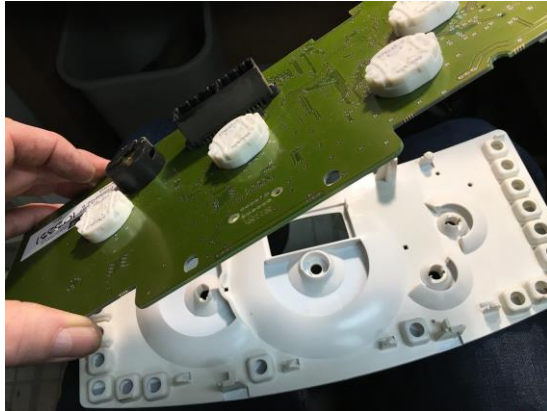


**Pic 8.** Push in the cluster connector to remove the face and circuit board.

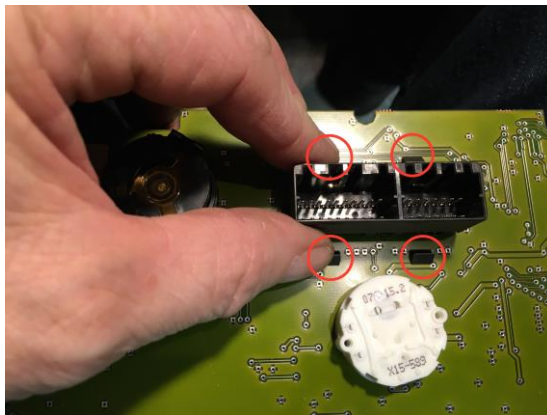




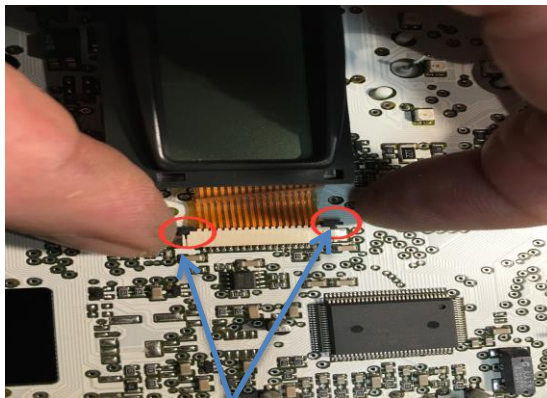
**Pic 9.** Push the 7 white tabs outward from the circuit board to release the circuit board from the face.



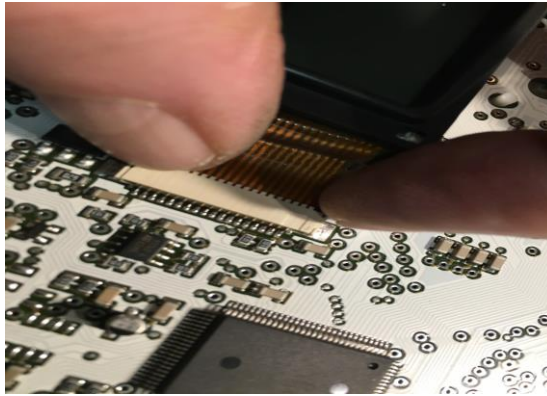
**Pic 10.** Lift and separate the circuit board from the face.



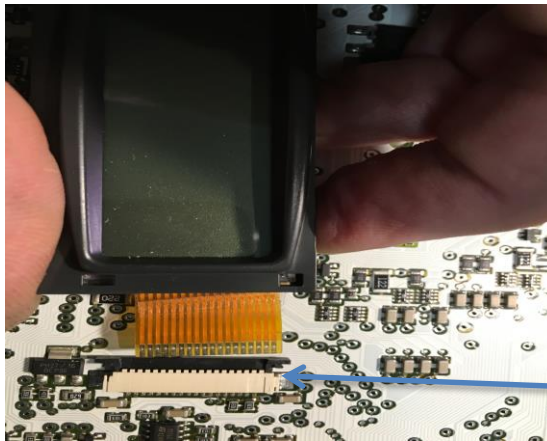
**Pic 11.** Squeeze and push down on the black tabs to release the screen bezel.



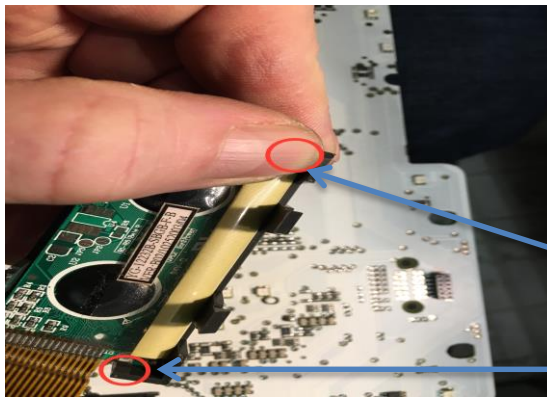
**Pic 12.** Turn the board over and with your fingernail push the black lock on either side in and away from the socket, you can do one side at a time. Slide it back, but don't remove it.



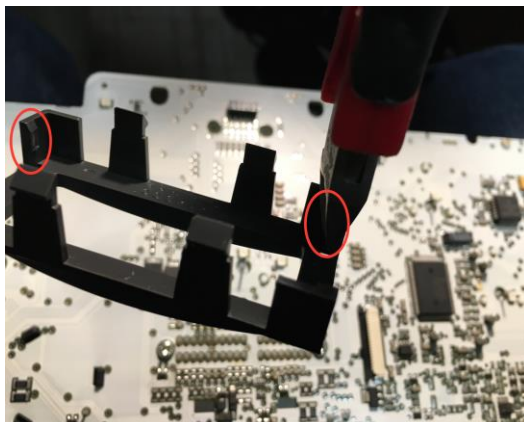
**Pic 13.** Another view of the previous step.



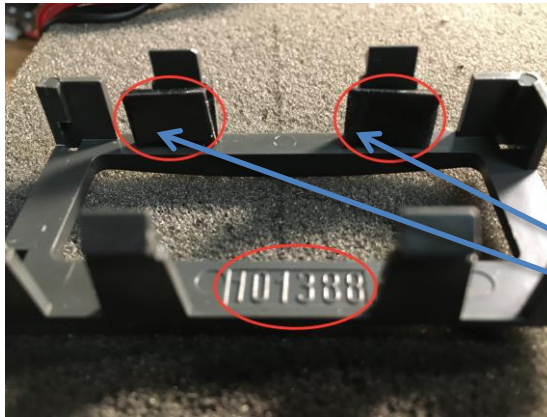
**Pic 14.** Note the distance that the black ribbon retainer is out.



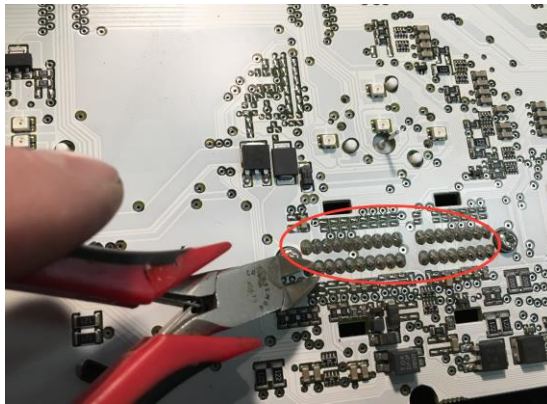
**Pic 15.** Take the bezel and release the 2 tabs that secure the screen by pushing them away from the screen. You will also need to push on the face of the screen to push it out of the bezel.



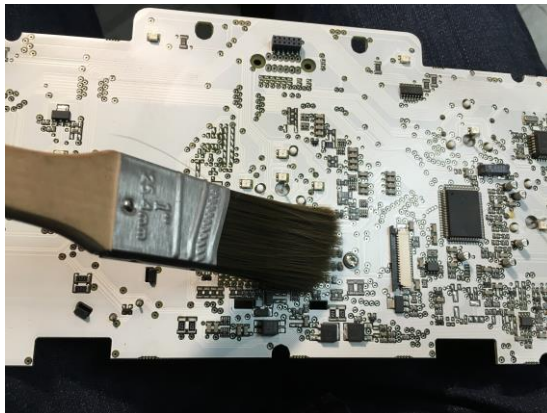
**Pic 16.** Using side cutters clip out the 2 retaining tabs.



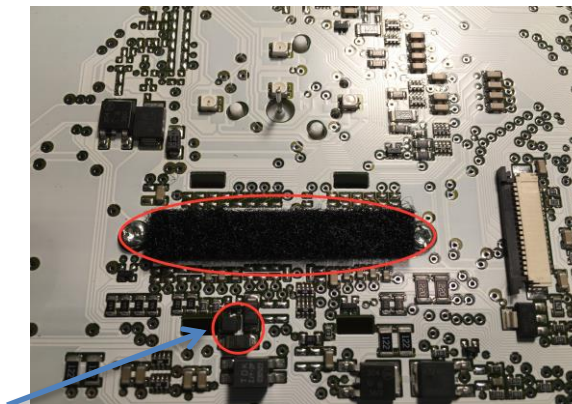
**Pic 17.** Install the provided 2-sided tape foam opposite the circled numbers. When you put the new screen in, face down; the ribbon will exit the left side as situated in this picture.



**Pic 18.** Trim the terminal ends as shown.

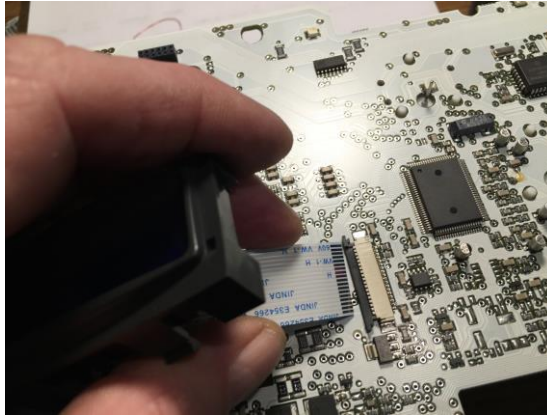


**Pic 19.** Thoroughly dust off any metal particles.

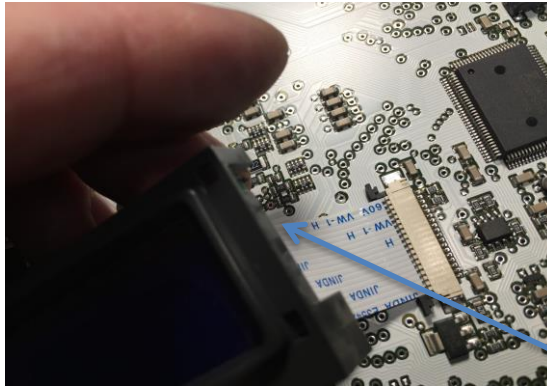


**Pic 20.** Install insulation tape provided over the terminal ends you just trimmed. Be really careful to not damage the components contained in the small circle, it's really close to the bezel leg that you will be installing!





**Pic 21.** Line up the ribbon with the socket.



**Pic 22.** Slide the ribbon in until it seats; note the ribbon exits the bezel on the wider offset side opening.

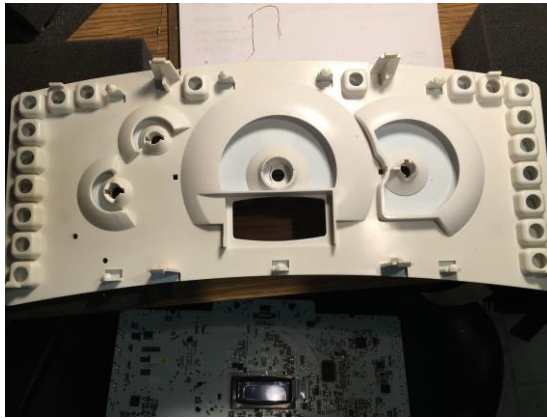


**Pic 23.** Push the black lock tabs in until it is seated against the socket.

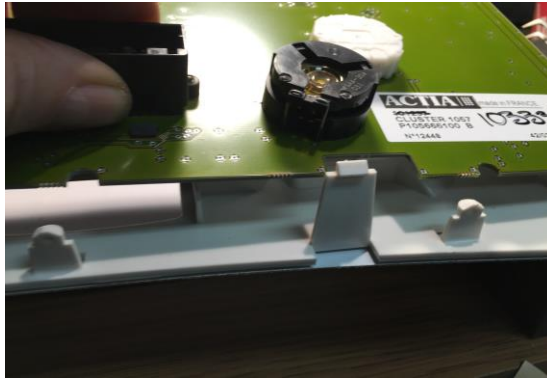


**Pic 24.** Another reminder to be careful not to damage the circled area!





Pic 25. Lay the face “face-down”.



Pic 26. Position the circuit board, screen down, over the face and snap into place.



Pic 27. Lay out the housing as shown.



Pic 28. Position the face and circuit board into the housing and press down until the 4 white tabs lock into place.



**Pic 29.** Push in on the face until it snaps into place.



**Pic 30.** 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 note step #4. Keep the cap of the needle about a fingernail width from the face so it won't drag on it.



**Pic 31.** View of the "Fuel" gauge.



**Pic 32.** Don't forget to remove the protective film!



**Pic 33.** 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 34.** 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.

**Regardless of whether you want to test the needle positions or not, we recommend that you plug in your cluster before you permanently install it to make sure the new screen is operating, if it is not you will have to recheck your connections.**



**Pic 35.** 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.





**Pic 36.** Scroll to “Cluster Diagnostics”... “Trip” scrolls up the menu and “Mode” scrolls down. By setting on a highlighted selection it will enter after about 2 seconds.



**Pic 37.** Enter into “Gauge Test”



**Pic 38.** It will begin a sweep of each gauge, if adjustment is needed you will have to unplug the cluster and move the needle as needed. Always move the needle for RPM and MPH counter clockwise, and Fuel and Temp clockwise.



**Pic 39.** View of “Engine Speed” at 50%





**Pic 40.** After you are satisfied with your results, return to step #34. You can now re-install the cluster to the vehicle!



**Pic 41.** 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”

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.