

Hilton Boost Overlay Installation and calibration Instructions for the Supercharged Lightning



Hilton
BOOST
OVERLAY

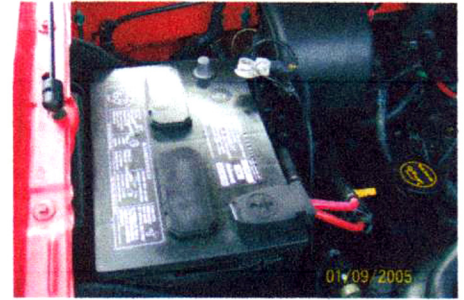


Photo 1

1. Disconnect negative terminal on the battery. (See photo 1)
2. Remove the plastic trim around the steering wheel. It will just pop off with a little pressure. It is best to start at the bottom and work your way up. (See photo 2)



Photo 2

3. Remove headlight switch. You will need to insert a skinny flat object in the bottom of the assembly to pop it loose. It will start to come out and just pull it the rest of the way. (See photo 3)



Photo 3

4. There is a black piece of trim that surrounds the instrument cluster and the headlight switch. This needs to be removed. There are seven bolts that need to be removed. (See photo 4)

5. Instrument cluster bolts should be in view once the trim piece is removed. Remove the four bolts that hold the cluster in place. (See photo 5)

6. On the bottom of the instrument cluster is where your transmission selector indicator is clipped in. There are two clips on each side of it. Just pull the clips inward and it will pop off. (See photo 6)



Photo 4

7. Behind the instrument cluster there are three items that need to be removed. The first two are wiring harnesses and the last is a vacuum tube for the boost gauge.

8. Once you have completed steps 1-7 you may completely remove the instrument cluster. Your dash will look like this now (See photo 7).

9. Go inside and grab an ice cold beverage and prepare to install and calibrate your Hilton Boost Overlay.



Photo 5

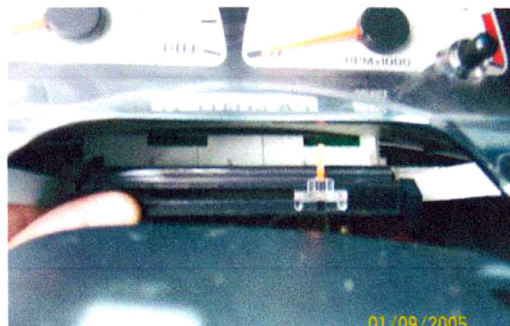


Photo 6

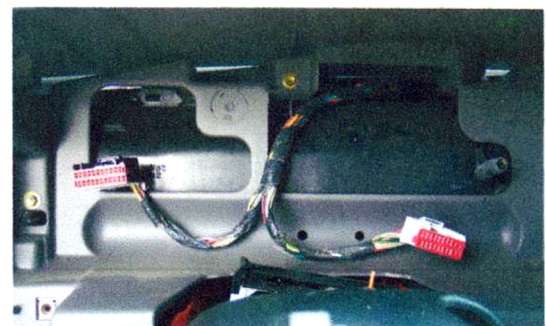


Photo 7

10. Lay the gauge cluster in front of you on your bench or sit it on a table. It's time to remove and "re-clock" the needle. I used a common table fork to pop the needle off the shaft. To protect the gauge face from a possible scratch I covered the back side of the fork with a layer of masking tape. Its just a press fit but the first time it comes off it can be a little stubborn. (See photo 8)

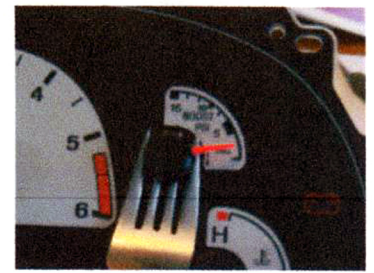


Photo 8

11. After the needle is removed, turn it over and remove the little tab that restricts the needles movement. This can be done a couple of ways but I just took a pair of snips and cut it off close to the base. (See photo 9)

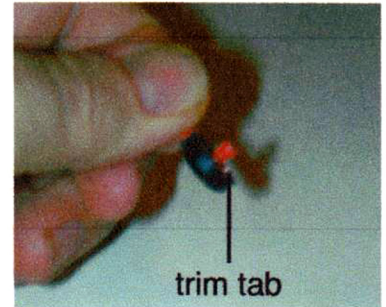


Photo 9

12. Next, let's install the overlay. Take the transfer sheet that the overlay is on and peel it off. NOTE: **Hold it gently by the edges and be careful not to get finger prints on the adhesive side.** I used an xacto knife to peel up the lower right corner and lifted it off the transfer sheet. I left the overlay partially stuck to the tip of the xacto so I could better control the placement of the overlay on the gauge face. There are a few points of reference you need to be looking at as you gently place the overlay on the gauge surface. **One** is the grey squares that the new numbers are printed on should cover up the old numbers on the gauge face. **Two** is the top edge of the big hash mark above the 16 should line up with the top edge of the curved line on the stock gauge. **Three** is the hash mark above the 10 should rest against and stick out away from the same curved line on the stock gauge face. After you are satisfied the overlay is in position press it down firmly. (See photo 10)



Photo 10

13. Now we're ready to calibrate. If you don't already have one in your tool box you'll need to borrow or buy an accurate aftermarket boost gauge for this. It helps to have one that is the same approximate diameter as the stock gauge. Attach a hose to the stock gauge and to a "T" fitting. T fittings can be purchased at most automotive stores. Then attach a hose from the T to the aftermarket gauge. Then attach a hose from the last fitting on the T to a controlled source of air pressure. See photos 11 and 12.

When you're done it should look like the pictures. I chose a hand held vacuum/pressure tester for this which I believe gives you the most control, but something else with a controlled air supply would work. As a starting point place the needle back on the little metal shaft so that it reads aprox. 1/16th inch above the last hash mark. (See photo 10)

This initial placement will vary somewhat but should get you in the ballpark. Place it on the shaft just firmly enough so it won't come off but gently enough so you can remove it easily. One way to tell if the needle is on correctly is this. After you have put it on the shaft take your finger tip and gently move the needle counter-clockwise past the 12 o'clock position. You should feel a slight resistance as the needle swings farther to the left. Remove your finger and let it go it should swing back to where it started or reasonably close to it. Photo 11 and 12 show how everything should look when properly attached and ready to calibrate.



Photo 11 front view

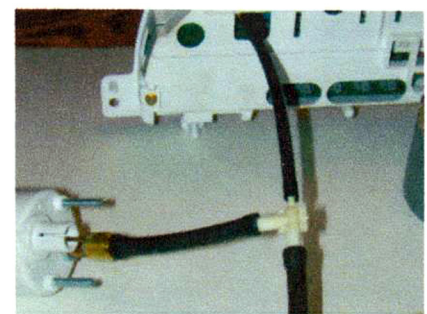


Photo 12 rear view

14. Make sure you have no air leaks in your connections. An air leak will cause an inaccurate reading. When you get everything hooked up its time to begin to introduce air onto the line. You'll notice both gauges react. As the air pressure increases keep an eye on both gauges. As the air pressure increases keep an eye on both gauges. As the aftermarket gauge reaches 10 the stock gauge should be touching the 10 hash mark. Unless you were lucky enough to have placed the needle on earlier in the exact correct position you will need to remove the needle and make the necessary adjustments to have both gauges reading the same. Notice the orientation of the stock needle to the needle in the aftermarket gauge as the air pressure is applied (if it is a little low or a little high). Then release the air pressure and let both gauges zero out. Then gently remove the needle with your trim tool and clock it the same distance higher or lower that it was off. It may take a few attempts to zero in on the exact placement of the needle. I used a piece of masking tape on the gauge face by the zero and scribed a pen mark on the tape to note where the needle bottomed out and used this as a reference point. When it is set properly it will register the exact same on both gauges. When you have both gauges reading the same to your satisfaction press the needle firmly but gently on the post so it won't pop off and you're done.

15. Reassembly is pretty much a reversal of steps 1-7. Enjoy!

NOTE: As you can see from the photos of the installed Lightning overlay the stock numbers have been changed. The 0 and 10 have become 5 and 16. To accomplish this small squares have been printed on the overlay that closely match the color of the gauge face background. You may detect a slight difference in the color of the small squares and the stock gauge face. This slight difference is made less noticeable when the cluster is installed and viewed at the normal driver's position. Because the 5 and 16 are printed on top of these grey squares they become black during night time operation when the dash lights are on. This is normal and Lightning owners have reported that they have quickly become accustomed to this slight design compromise which does not effect the function or accuracy of the overlay.

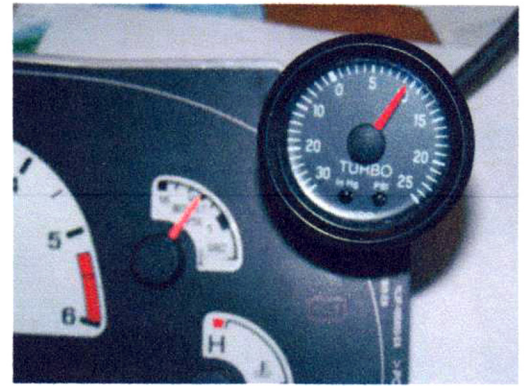


Photo 13 gauges at 10#s



Photo 14 gauges at 16#s

**If you have a question
you may call me at
(517) 627-5145.**

**Please call between
6 p.m. and 10 p.m. E.S.T. Thank
you, Ray Hilton**

**7-Filter
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