



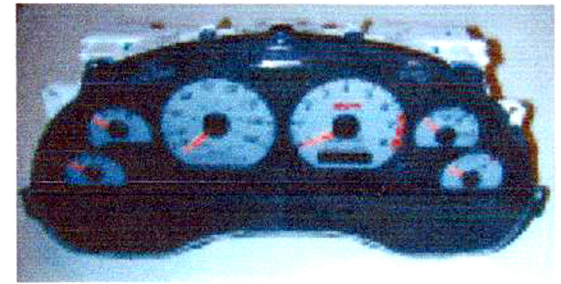
Hilton Boost Overlay installation and calibration instructions for the Supercharged '03 and '04 svt Cobra

Plan on about 1-2 hours or so for this project. There are a few tools you will need. I used a trim tool (pictured), an aftermarket boost gauge and a controllable air source (also pictured on pg. 2). Don't rush it or force anything. Just like any job you do on your car be patient and keep your cool. You will be rewarded with a nice finished product you can be proud of when you're done. I've probably gotten a bit wordy with my instructions but I wanted to make sure everything was covered and explained. Are you ready to get started? Let's do it!

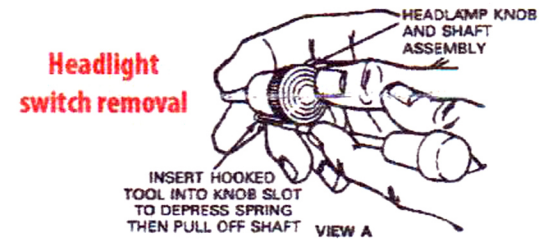
First you'll need to remove your stock gauge cluster. The headlight switch can be removed by following the illustration to the right. This is pretty standard Ford switch removal. I fashioned a hook tool from a piece of wire. The gauge cluster bezel is held in place by 2 torx screws in the upper part and 2 side and 2 lower spring clips. To get the gauge bezel to come off you must slide something between it and the dash panel. The trim tool that I have pictured is very useful in this. This is a common part you can find in most automotive stores and I think anyone who works on cars should have one in their tool box. Then, remove the 4 torx screws, the same size as the first 2, that hold the cluster in place. It was difficult to wrestle the gauge cluster towards me far enough to reach behind and disconnect the 2 electrical connections and the one boost line that attached to the gauge. The electrical connections have some built in length to do this but the boost gauge does not. To make this easier I rotated the cluster on it's back so I could get my hand in there and try to disconnect the line from the boost gauge. You may be able to separate the two. I could not. After thinking about this a while I decided that I wanted some extra length of hose spliced into the line to make reassembly easier anyway, and simply cut my line with a sharp utility knife. After that it practically popped out into my awaiting hands.

Remove the torx screws holding the clear cluster cover. With the cover removed you have direct access to the needle. Again the trim tool pictured was very valuable. Because the way its shaped it allowed me to slide it under the needle and keep even pressure on it while popping it off the shaft. To protect my gauge face from a possible scratch I covered the end of the trim tool with a layer of masking tape. I took it off for the photo here so you could better see how it is shaped. Its just a press fit but the first time it comes off it can be a little stubborn. After the needle is removed, turn it over and you'll see 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. One **IMPORTANT** thing to remember is to cut it off as flush to it's base as possible. It can not come into contact with the slot in the gauge face hole that restricts the needles movement.

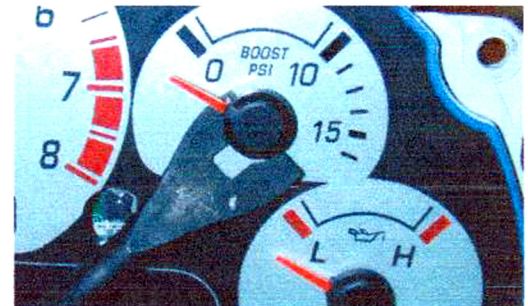
Ok, now we're ready to install the overlay. Lay the gauge cluster in front of you on your bench or sit it on a table. Take the transfer sheet that the overlay is on and peel off the overlay. Hold it gently by the edges and be careful not to get finger prints on the adhesive side. There are 2 points of reference you need to be looking at as you place the overlay on the gauge surface. One is the little metal shaft that the needle slides on. This must be pretty close to being centered in the hole in the overlay when its applied. The other is the hash mark at the 10. The hash mark on the overlay is slightly smaller than the hash mark on the gauge face. Lay the overlay gently on the gauge as you align these 2 reference points and you will have it placed properly. The hash mark on the overlay is shorter than the one on the stock gauge face. You will want the bottom edge of the overlay hash mark to lay directly on the bottom edge of the stock gauge face hash mark. I did this on the first try. You can too if you do it slow and steady. Be careful not to press down and smooth out the overlay till you are certain you have it placed properly. You can probably reposition it if you are careful and don't hit it on the first try. You'll notice that the overlay goes past the silver area of the gauge and onto the black approx. 1/8" and is pretty even all around. Don't worry if it covers a little of the tach face, the cluster cover will hide it.



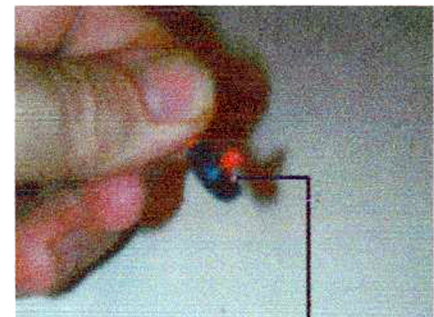
Gauge cluster



Trim tool



Needle removal



Needle tab (trimmed)



Finished overlay installed

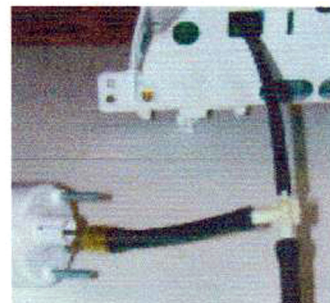
Now we're ready to calibrate. You'll need to borrow an accurate aftermarket boost gauge for this. It helps to have one that is the same approximate diameter as the stock gauge. Attach a hose to the stock gauge and to the T fitting. T fittings can be purchased at most automotive stores. Then attach a 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. 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 approx. 3/16ths inch below the zero hash mark. This initial placement will vary somewhat but should get you in the ball park. 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 clockwise past the 12 o'clock position. You should feel a slight resistance as the needle swings farther to the right. Remove your finger and let it go it should swing back to where it started. 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 aftermarket gauge reaches 10 the stock gauge should just be touching the left or upper side of 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 bottom 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 on the post so it won't pop off and you're done.

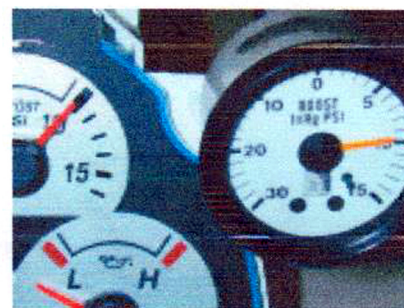
I spliced in a piece of hard plastic tubing, maybe 3 or 4 inches, to give me more length coming off the stock gauge which made reinstalling the cluster a breeze. I put a small amount of silicone sealer on the hose ends just to make sure they stayed on and stayed sealed. But be sure you don't plug up the line and make sure you don't kink the hose when you replace the cluster back in your dash. From this point everything else is a reverse of the disassembly instructions. Enjoy!



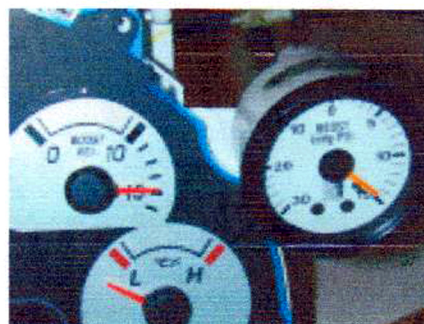
Air source , aftermarket gauge, and stock gauge "T" together



Rear view of "T" connection



Both gauge faces reading 10lbs.



Both gauge faces reading 15lbs.

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

Ray Hilton
BOOST
OVERLAY