

# Installing New Face Overlays in 52mm (2 1/16") Gauges

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## **READ ALL INSTRUCTIONS COMPLETELY BEFORE STARTING. THIS MEANS YOU!**

There are several options for dismantling these Volvo or VDO small gauges. I will be illustrating the best options I know along with my recommendations. I welcome your input and experiences. If you have any suggestions for improving these methods or instructions, please let me know.

### **OPTION 1: PRYING THE METAL BEZEL RING**

Some of you may have tried prying back the metal bezel ring around the edge of the gauge. This method will work, but it takes time and patience (work slowly) or the result is a bent and unsightly metal ring... or, in some cases, a broken glass lens. This method works best for gauges with **METAL BODIES**. There is a higher risk doing this with plastic body gauges. Some older plastic gauges become brittle over time and can crack when pushed on. If this becomes a problem for your gauges, then another technique may be best.

The trick to getting this technique right is to use a **small jeweler's screwdriver**. The one pictured below might even be too big to get the bezel started, but whatever you use, it needs to be sharp enough to wedge behind the crimped metal bezel ring and push it away from the gauge body. If you don't have a screwdriver small enough to get a start, then a sharp pick or awl will do. Once you have it started it's pretty easy to gradually widen it and slowly pry the ring outward a little at a time while rotating the gauge. Don't bend it too much at a time or the ring will get warped.

As you can see in the below photo, the gauge on the right is untouched, while the gauge on the left has the bezel ring bent out enough to remove it. Take your time on this and you will have a nice result.



When reassembling this type of gauge, the bezel ring can simply be re-crimped using a tool with a flat end to slowly push back down on the pried ring. One customer has suggested a door lock pull (pictured at right). Keep in mind It will not be necessary to re-crimp the edge ALL the way around, in case you want to keep the option of easily disassembling the gauge again in the future. If this sounds good to you, then just push the lip down in about four places and make it tight enough so the gauge stays together and doesn't rattle.

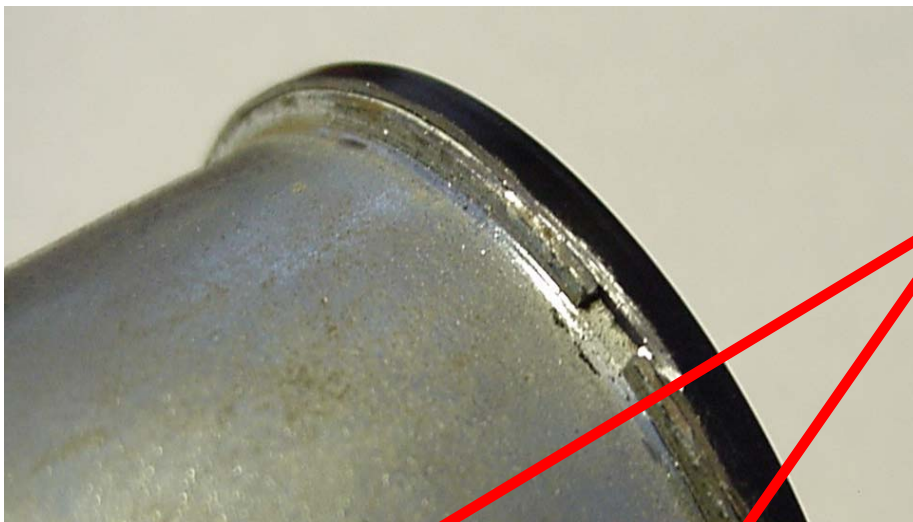


## OPTION 2: TRIMMING THE BEZEL RING

For this method, you will need a small rotary (Dremel type) tool with a friction cutting wheel. It involves carefully cutting/trimming PART of the BACK of the thin metal bezel ring until it can be gently pried off without ruining it. This may be a better technique for plastic body gauges, where the first option may damage it.

This method (and Option 1) is also best for gauges mounted in the 240 upper 3-gauge cluster, where there is a U-bracket putting pressure to the back half of each gauge. The **cutting-in-half method** (Option 3) will not work as well when gauges need to be mounted with a U-bracket, because the pressure can separate the two halves of the gauge (pull it apart). The choice will be yours.

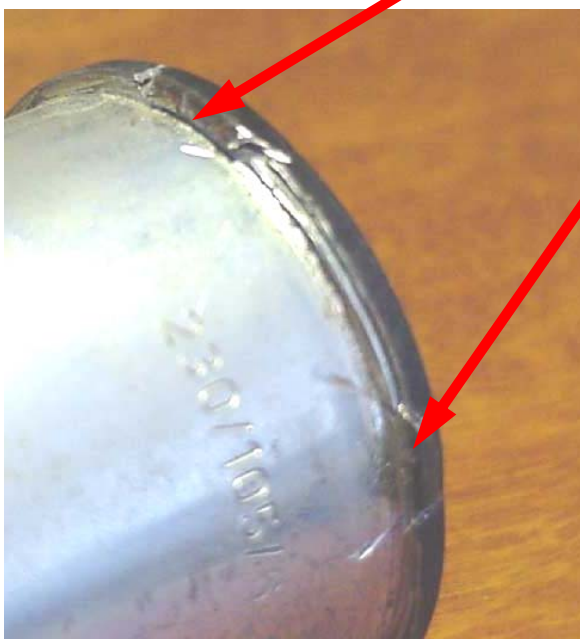
Using a rotary tool with a friction cutting wheel, carefully trim around the outer edge of the rear of the metal bezel ring. **The object is to remove the lip from the bezel ring that is crimped over the edge of the lip on the gauge body.** It takes about 10 minutes per gauge at a careful pace. Once removed, the bezel can be gently pried off over the front. **I strongly recommend you leave 3 or 4 small tabs** that can be bent over the lip for reassembly (see below pic). If not, it can also be reattached with a few dabs of glue, but it won't be as strong.



In the photo at left, you can see how a portion of the bezel ring has been trimmed away, exposing the lip on the gauge body.

In the below left photo you can see where some small tabs have been left. These tabs bend over the lip and will be used to hold the ring on after it's reassembled.

The below photo shows the bezel ring removed from the gauge body.



### OPTION 3: CUTTING-IN-HALF METHOD

This method is recommended ONLY for gauges that do not use the U-bracket to hold the gauge in place, such as the two positions to the immediate right of the main instrument cluster in a 240. This method is the easiest one for plastic body gauges. It's a bit tougher with metal body gauges.



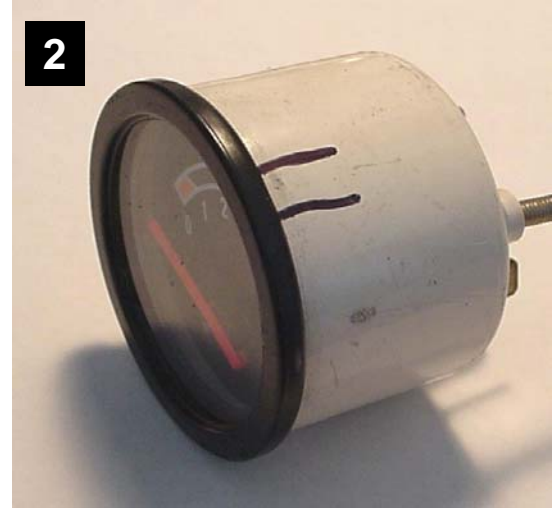
1

If your gauge has this plastic guide piece on the bottom, remove it. Simply pull it off with pliers.



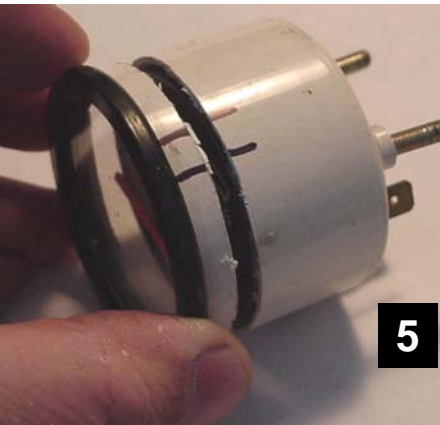
3

Measure about 1/4 inch away from the metal ring and place some tape around the gauge for a cutting guide. A simple marker line works OK too.



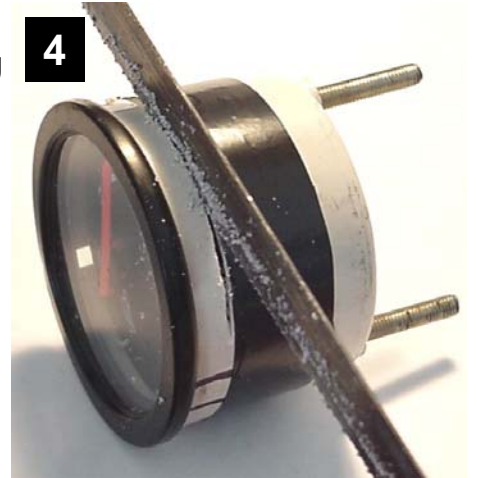
2

Using a felt tip marker, make a mark or two on the plastic housing behind the metal ring. This will help you when reassembling the two halves of the body.



5

After cutting is complete, separate the two halves.



4

With a hack saw, slowly cut through the gauge housing, rotating the housing a little as you go. Be careful... don't allow the blade to go too deep; just allow it to break through the surface of the housing. Take your time.

If you're cutting a metal housing, you will need to exert more pressure and it will obviously take much more time.



**NOTE:** If you are cutting an OEM VOLVO 240 Turbo Boost Gauge, you will need to cut a little closer to the ring. Make your cut on this gauge about 3/16" from the ring.

**The OEM Boost Gauge is unique.** The original metal face plate is held in position by three metal tabs tucked into the inside of the ring. You must pry these tabs down and away from the ring. Or better yet, use another technique, such as Option 1, for disas-



**6** Notice that a mark has been placed with a felt pen on the edge of the housing? This mark should be to record the position of the needle at rest before removing it. It will be used later for lining up the needle when you reassemble it.

A little compressed air comes in handy when cleaning all those plastic shavings out of your gauge housing.



## REMOVING THE NEEDLE



**Do not try to pull it off with your fingers or you will break it.** A simple, but strong kitchen fork does this job very well. **Be sure to pry straight up.**

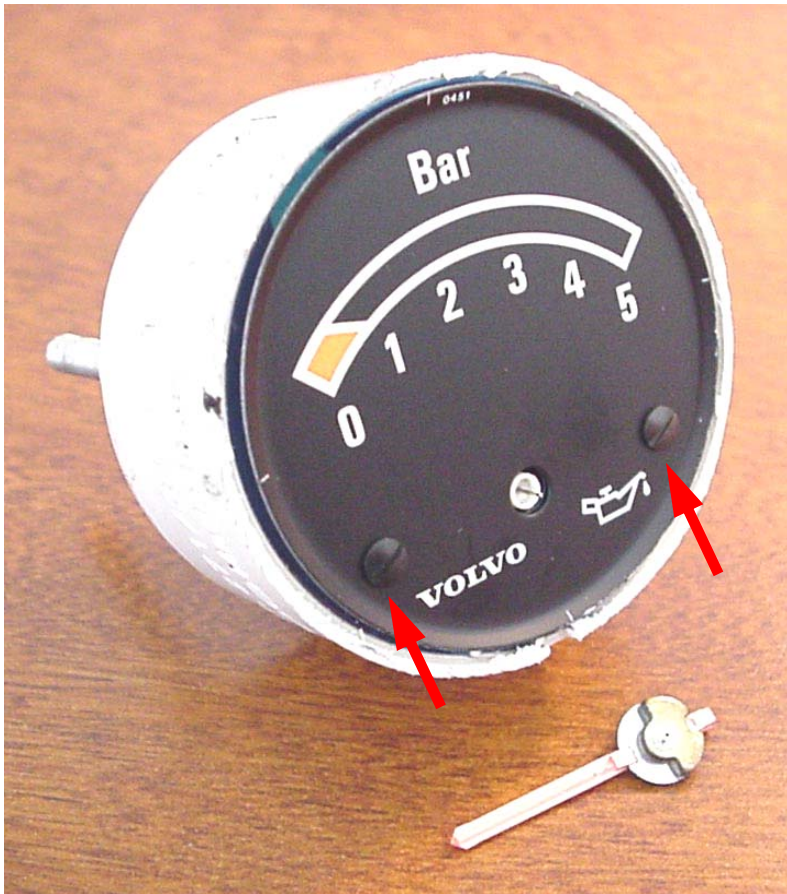
The needle will probably fly across the room... so don't lose it.

**NOTE:** If you are using Option 1 or 2 to disassemble the gauge, the face may be too deep in the housing to reach behind the needle with a fork. You may need to remove the fasteners from the back of the gauge body to allow the inner mechanism to be pushed up or removed from the housing.



Here's a tool that a customer made when he found his fork was not strong enough to pull the needle.

Again, it's important that you pull straight up so the fine shaft the needle is pressed onto does not bend or break.



To remove these little screws, use a proper fitting small screwdriver to remove them.

The proper fitting part is important. Be careful not to gouge the screws. They are made from a soft brass and damage easily.

Once the screws are removed, the face plate lifts off.



When you receive your new face overlays, the center holes will have already been cut out for you.

If the metal face is cupped on the edges, such as the one shown, then you will need to press the new face into the shape of the cup. Try this before peeling off the back liner to attach the new face.

These overlays have a pressure sensitive adhesive on the back. You will be peeling the back liner off and carefully apply the overlays. **BEFORE YOU START**, you may want to consider using an “ADHESION PROMOTER” on the faceplate surfaces.



An adhesion promoter is a strong primer that is applied to the faceplate surface before putting down a label. For this installation, it is recommended for any car that will be in high outside heat for long periods. In these circumstances the car interior would be affected by high temperatures. Vinyl labels have been known to shrink slightly and when that occurs, the outside edges can begin to lift or peel up as high heat softens the glue. It might take years. Using an adhesion promoter makes the adhesion many times stronger and able to withstand heat many times better. This chemical can be purchased in **small inexpensive packets (like photo at left) with sponge tip applicators**, or in pen type applicators, or in bottles for more frequent use. It is generally used when vinyl wrapping a vehicle.



<<< Application should be done with a swab along the edges, like shown here. It dries clear and provides a better surface for the labels. Allow it to dry, then apply the labels.

**CAUTION:** Using an adhesion promoter means you need to be accurate when lining up a label. Pulling the label back up for re-positioning will be harder, but can be done in most circumstances. Be careful. It will stick really, really well.



You might have found a blue plastic lens behind the metal face. It makes the gauge light up with a blue tint. You may leave it in or remove it. Removing it will offer more light on the face at night and the light will look more white.



## REASSEMBLY

### Back to our unique OEM VOLVO 240 Turbo Boost Gauge.

You will notice in the photo I have cut the three metal tabs down to about one half the length they were. This is so it is much easier to reinstall the face.

Also, since there are no screws to hold the face in position, you should use a little glue on the three tabs to hold them to the sides of the plastic housing. A little clear silicone, or any thick glue, will work well.



For other gauges, replace the face on the gauge and gently tighten the screws. These screws do not need to be really tight, so just make them snug.

Replace the needle in the same position it was and give it a push on with your finger. Only a little pressure is needed. If you're installing a boost gauge needle, set it at zero. After you push on the needle, if it is slightly off the mark, it will be easy to nudge a little to the left or right with your finger if needed.

Now reassemble the gauge. If you used method #1 or #2, place the bezel ring back on and crimp the outside edge using a flat tool.

If you cut the body in half (method #3), you can now place the two housing halves of the gauge body together. You have the option of gluing the two halves (use epoxy if you do this) or using electrical tape as pictured. The electrical



tape method works very well and allows you to quickly disassemble the gauge again if you need to.

**HOWEVER, Using tape does not work well if the gauge must be mounted in the dash using a U-bracket behind it, such as in the upper 3 gauge panel in a 240. The force of the bracket will pull the two body halves apart.**

I welcome all comments and suggestions from your gauge face installation experiences. Please feel free to contact me and, if possible, send photos of how you did it.

Thank you, Dave