

# Volvo 1800 Smiths Gauge Face Overlay Installation

By Dave Barton

These face overlays are printed with a special printer using waterproof and UV resistant ink on high quality, professional-grade adhesive backed vinyl, and then laminated with a high-quality, non-glare (matte) film. Follow these instructions closely and you will have a very nice looking set of gauges in your Volvo.

Some of the ideas you see in my instructions were suggested by customers like yourself. If you have an idea that will help future Volvo owners with a smooth installation, please let me know. Thank you.

## **PLEASE READ THROUGH THESE INSTRUCTIONS BEFORE STARTING.**

**This guide covers the installation of gauge face overlays on your existing metal face plates. IT DOES NOT COVER THE REMOVAL OF GAUGES FROM YOUR CAR OR THE DISASSEMBLY OF THEM.**

Disassembly of these gauges will be similar to disassembly of 240 VDO 52 mm gauges and 240 dash gauge clusters. You should read those instructions for guidance.

**If you feel you cannot perform any of these services by yourself, contact me. I can refer you to a gauge expert who can complete these services for you.**

Here is a photo of all of the Smiths face plates from an 1800. Each gauge has **TWO** face plates that you will be covering, so this job is a bit more involved than most other Volvo gauge face installations. **There will be a total of 14 pieces that will be covered by 14 overlays.**



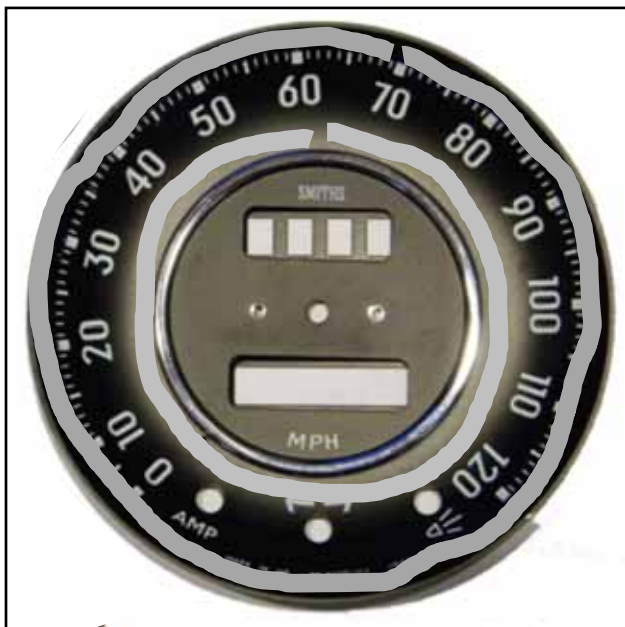
It will be important to make sure your faces are clean and smooth before putting down the overlays. If your original faces are sun-damaged or have rough, corroded surfaces that can be seen or felt with your fingers, those surfaces should be lightly sanded smooth, because any bumps you can feel will be seen on the vinyl overlay after they are installed. **The installation will not change for black faces versus white faces.**

Before sticking any overlay down, test fit each one so you can be familiar with how it should be positioned. When sticking an overlay down for the first time, place it on the face lightly. This will make it easy to pull off and reposition if needed.

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. Sometimes your car will be outside in the hot sun. The car interior can get hot and the adhesive on vinyl labels can soften when that occurs. If the adhesives softens enough to release, the overlay can begin to lift or peel up. It could take years. Using an adhesion promoter like this one makes the adhesion many times stronger and it will be able to withstand heat better. This chemical can be purchased in a **small inexpensive packet like the photo with a sponge tip applicator**, or in **pen type applicators**, or in bottles for more frequent use. It is generally used when a professional is wrapping a vehicle with vinyl for the edges or for difficult areas that need extra adhesion.



<<< Application should be done with a small swab along the edges on ALL face plates, like these examples shown here. It dries clear and provides a better surface for the label adhesive to hold on. Allow it to dry for a minute, then apply the labels.

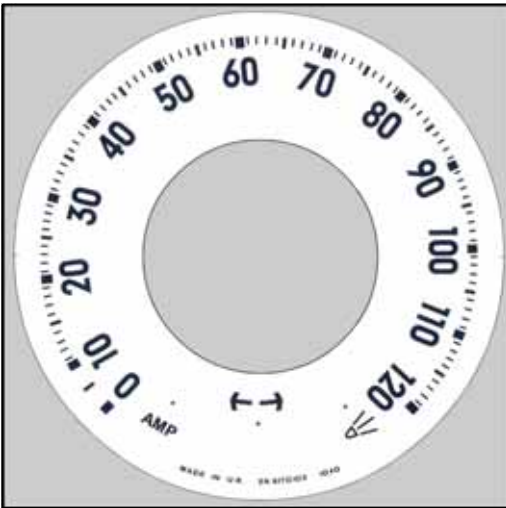


**CAUTION:** Using an adhesion promoter means you need to be accurate when lining up a label. Pulling the label back up for repositioning will be harder, but can be done in most circumstances. **Be careful. It will stick really, really well onto the faceplate.**

## Speedometer and Tachometer Face Installation:

The **speedometer** and **tachometer** faces (and **clock**) will be the hardest parts of this installation, because of the **concave dish curve** of these faces, which makes them appear like a bowl. Applying the vinyl overlays must be done using a special technique along with heat from a heat gun or hair dryer to soften the overlays, allowing them to form into the bowl shape. If you follow these directions closely, your installation should turn out well.

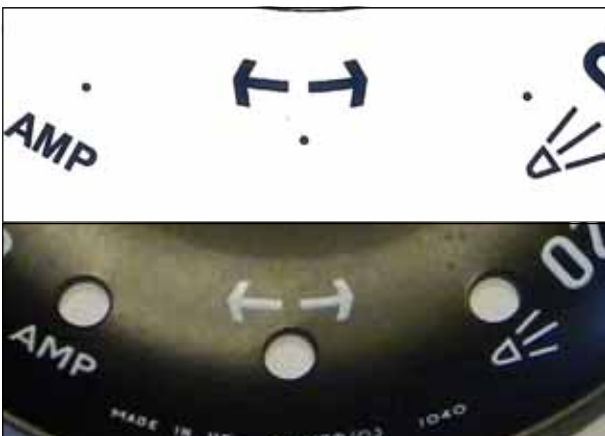
If you feel that you are unable to complete these steps, the face plates may be sent to Dave Barton and the faces will be applied to your face plates for a small fee.



Look at the speedo overlay. You will find two small marks on the outer edge. One at **23 MPH** and another at **101 MPH**. On a 200 km/h speedo, the marks are at **36** and **166 km/h**. Locate these positions on your metal speedo face and use a sharp tool to scribe very small marks in the same two positions at the outer edge of the face plate. The face is brass under the paint. The marks should be made visible so you can see them when positioning the overlay.



After scribing the marks, gently **test-lay** the overlay over the face plate to see how it is positioned. The overlay should be evenly positioned around the edges and the two marks should line up as close as you can.

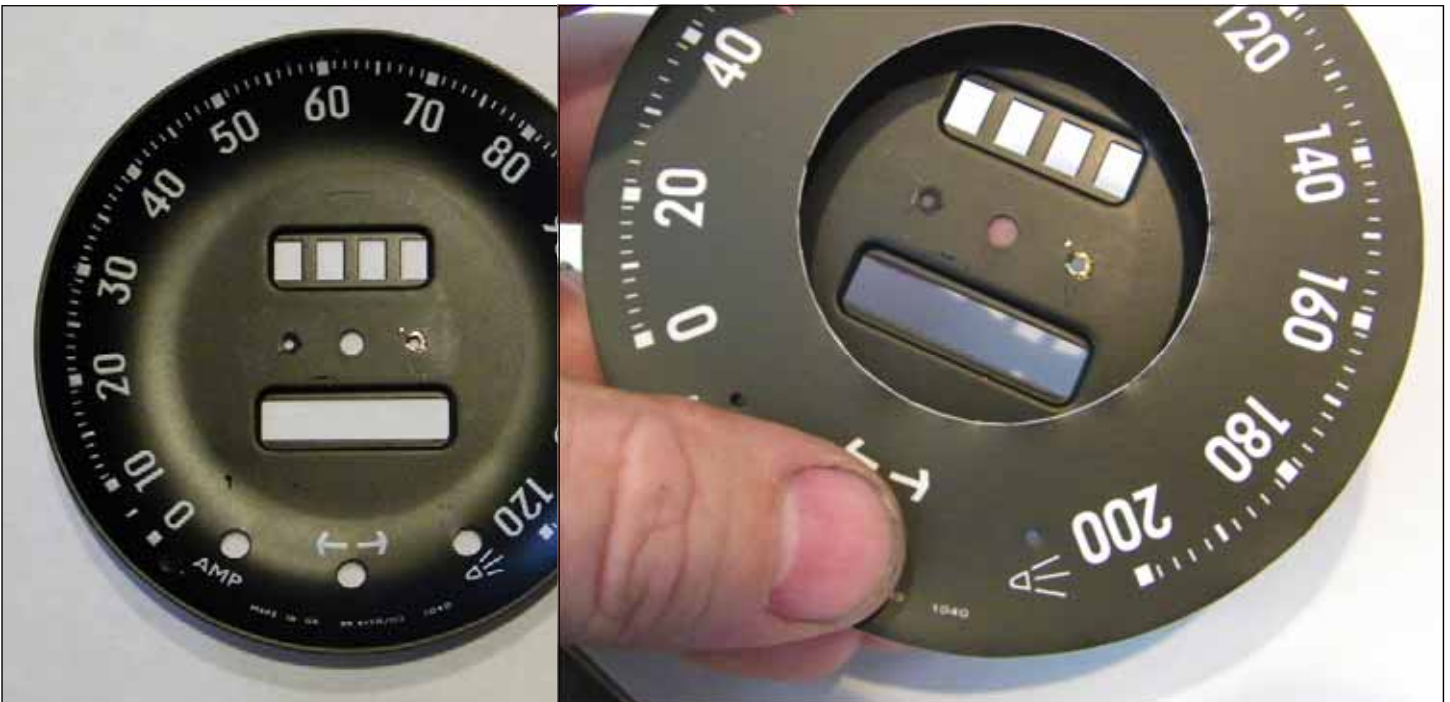
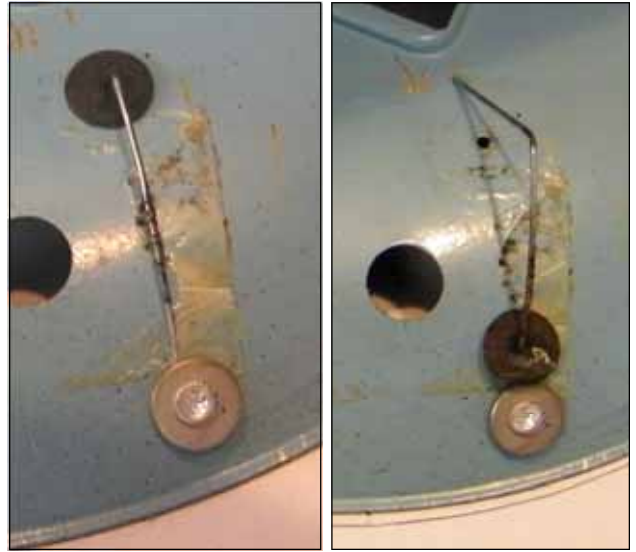


<<< You will notice that the small holes in the overlay for the three warning lamps are not yet fully cut out. This will be finished by you later using a sharp hobby knife.

The small wire you see at the ZERO position is a limit stop for the speedo needle. It needs to be pulled from the hole.

This can be done after removing the tape holding it on the back of the face. Gently lift the wire out from the back and let it rest in place. **Try not to bend it out of shape.**

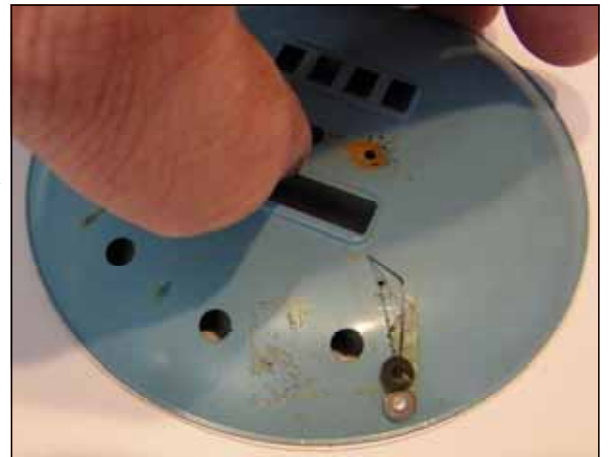
When you're ready, peel off the backing and gently place the overlay on the speedo face, allowing the outer edges to stick to the rim.



**DO NOT try to push the center of the overlay down into the bowl.**

It will help if you first place the overlay on a flat surface, **face down**, adhesive facing upward, and then lower the face plate down onto the overlay. Check again to see that the two marks you scribed are lined up at the edges and the outside edge is nice and even all around the face. If you need to re-position the overlay, gently pull it up and try again.

**Again: DO NOT try to push the center of the overlay down into the bowl.**

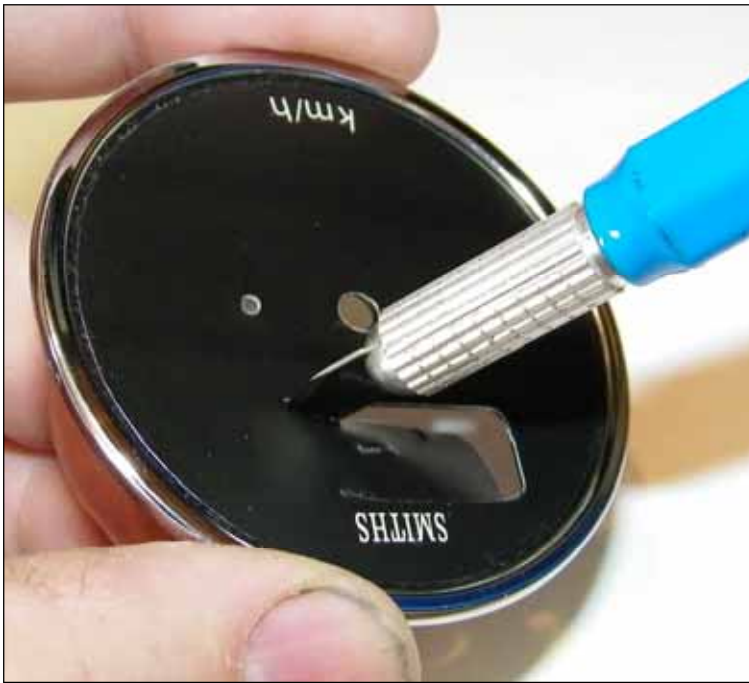


Using a hair drier or heat gun, slowly warm up the overlay, **starting with the outer edges**. Warm it up evenly and **SLOWLY**, but be careful not to over-heat it. It does not need to get too hot to touch with your hands during this step. As it warms up, gently push and smooth the overlay down with your fingers, **starting with the outer edges only** and then work **slowly** around the face, smoothing the vinyl down to avoid creating air bubbles. Watch for air pockets and lift/try again if you see one.

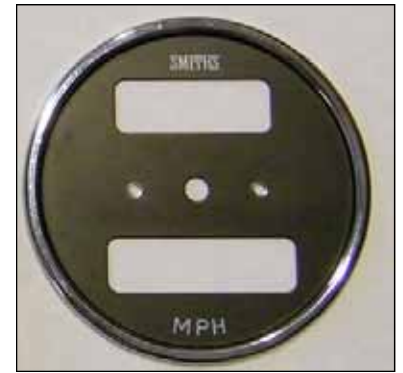
You will gradually work around in a circle, while slowly getting closer to the center. **Take plenty of time**. It can take 10 minutes to smooth this overlay down. Soon the overlay will be entirely formed to the face plate bowl shape. You should find that the three small marks or holes for the three warning light holes at the bottom are positioned **inside the warning lamp holes**.



After you are satisfied that the overlay is in place, now use your hair drier again to heat the entire face. **The overlay can be safely heated to 175 degrees Fahrenheit (80 Deg C)**. This is an important step. Heating the vinyl in this way will help to set the shape of the overlay so that it does not try to resume a flat shape later.



Your next step will be to cover the speedo center disc. The three round center holes will already be cut out for you. Use those holes to line it up. And be careful to make the edges even around the inside of the chrome ring.



<<< Now you may use a **sharp hobby knife** to slowly trim the two windows.

Also at this time you may trim the three small warning light holes on the speedo face. Gently trim from the top of the face (not the bottom), as in the photo shown here, using short strokes, until the holes are trimmed cleanly to the edges.



**The tachometer overlays will be installed using the same technique, except there will be no cutting of any small holes afterward.**

There are no special tricks to covering the small flat faces. Some of them will require small windows to be cut out after the vinyl overlays are in place. Others will simply drop into position and will be done.

Repainting or changing the colors of the needles and other visible parts in the gauge (like this photo below) is an option you can consider. In the end, you will find you have created a very nice looking gauge set.

