Volvo 1800 Smiths Gauge Face Overlay Installation

By Dave Barton

These face overlays are the product of a lot of research. They 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. The only piece missing in this photo is the center piece on the tachometer.

Each gauge has TWO pieces that you will be covering, so this job is a bit more involved than other Volvo gauge face installations. There will be a total of 14 pieces that will be covered by 14 overlays.

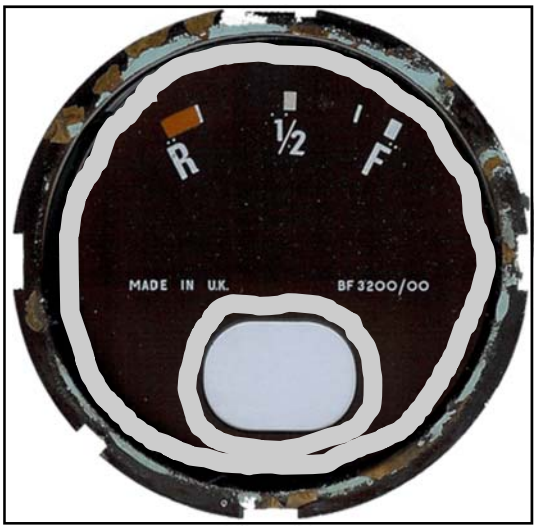
It will be important to make sure your faces are clean and smooth before putting down the overlays. If your original faces are sun-damaged or have rough, corroded surfaces that can be seen or felt with your fingers, those surfaced should be lightly sanded smooth, because any bumps you can feel will be 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 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. The adhesive on vinyl labels can soften when that occurs and the overlay can begin to lift or peel up as the glue releases. 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 for edges and difficult areas.

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

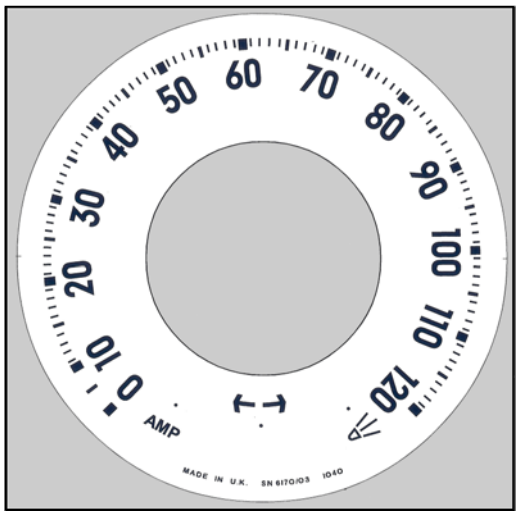


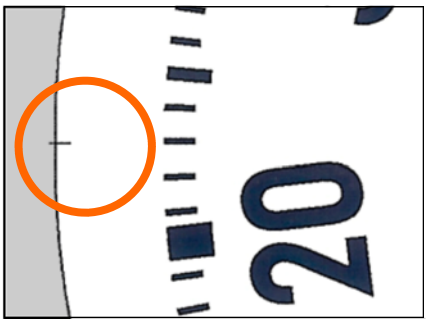
CAUTION: Using an adhesion promoter means you need to be more accurate when lining up a label. Pulling the label back up for repositioning will be harder, but can be done in most circumstances. Be careful. It will stick really, really well.

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.

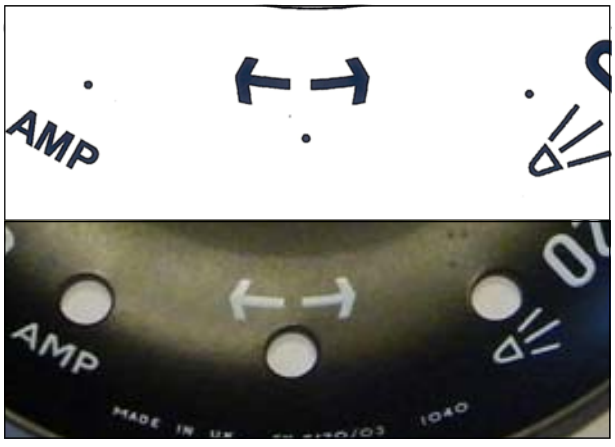
If you feel that you are unable to complete these steps, the face plates may be sent to Dave Barton and the faces will be applied to your face plates for a small fee.





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.

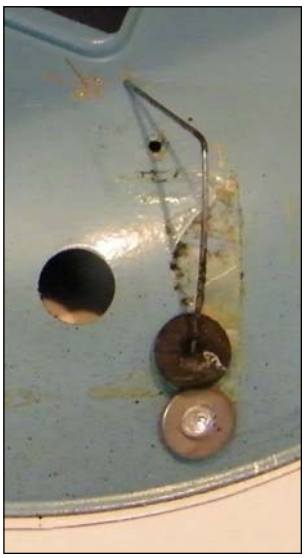
After scribing the marks, gently **test-lay** the overlay over the face plate to see how it is positioned. The overlay should be evenly positioned around the edges and the two marks should line up as close as you can.



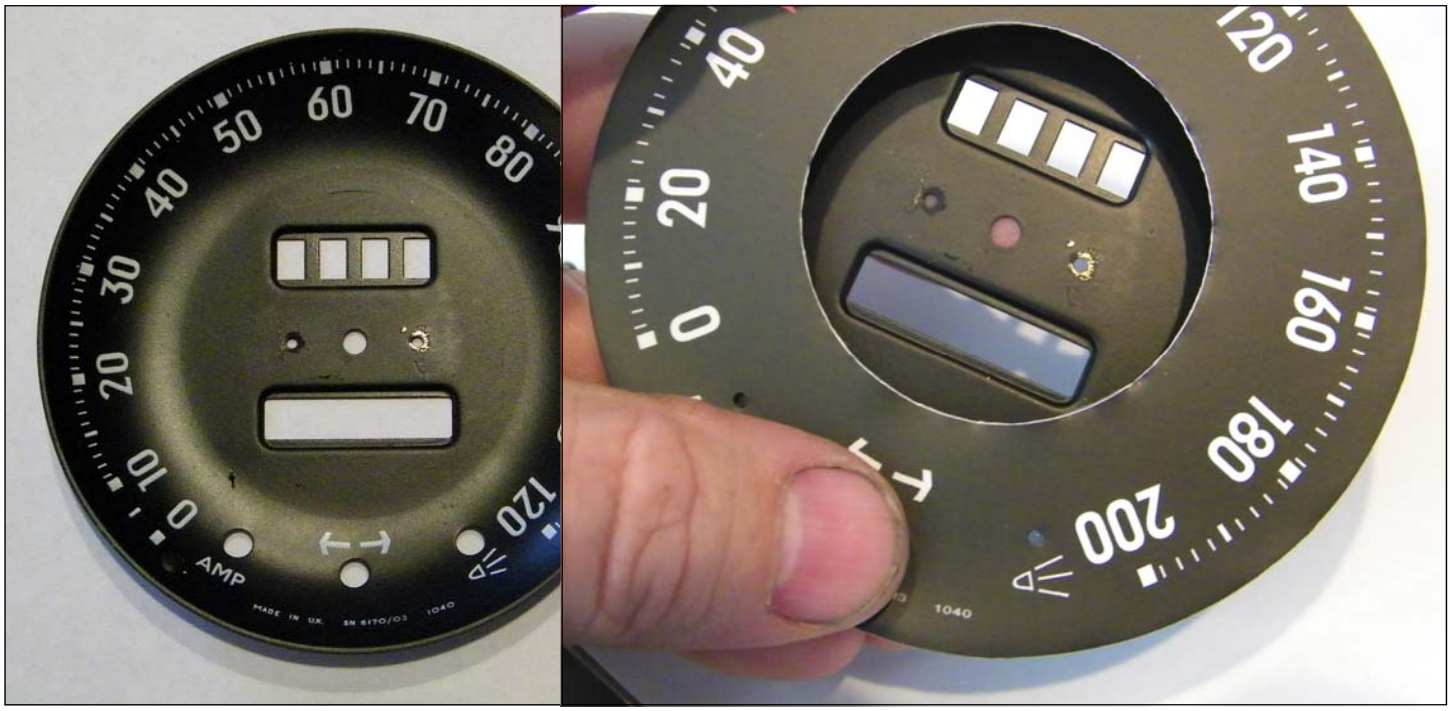
<<< You will notice that the small holes in the overlay for the three warning lamps are not yet fully cut out. This will be finished by you later using a sharp hobby knife.

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.**



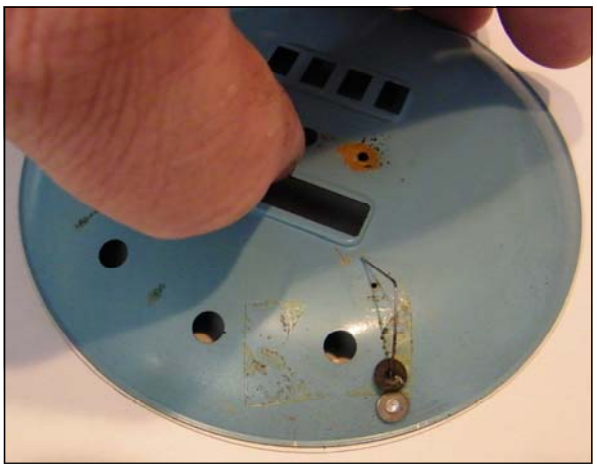
When you're ready, peel off the backing and gently place the overlay on the speedo face, allowing the outer edges to stick to the rim.



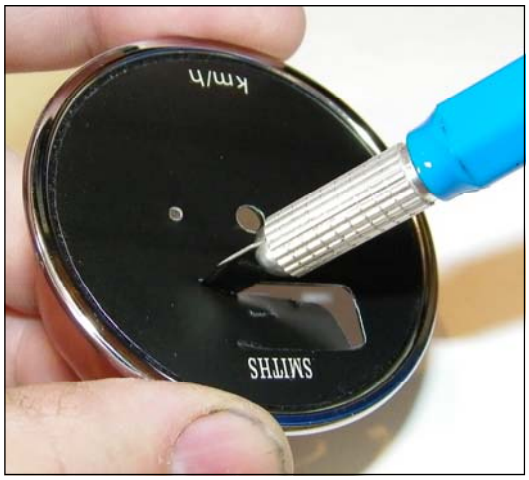
DO NOT try to push the center of the overlay down into the bowl.

It might 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.

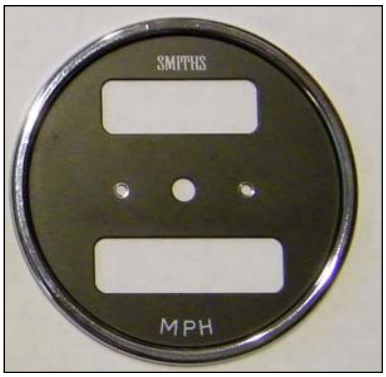
Again: DO NOT try to push the center of the overlay down into the bowl.



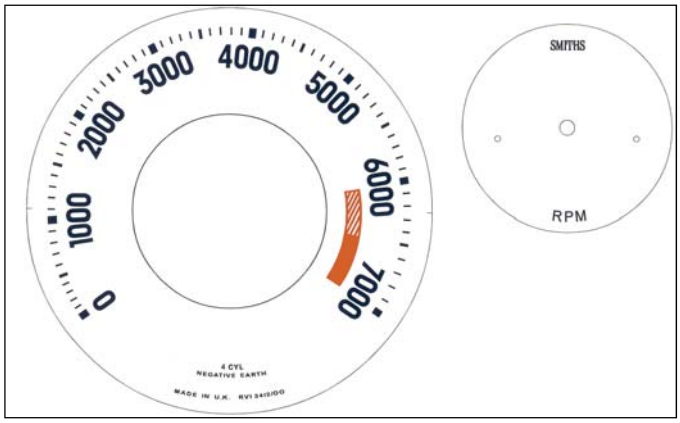
Using a hair drier or heat gun, slowly warm up the overlay, **starting with the outer edges.** Warm it up evenly and SLOWLY, but be careful not to over-heat it. It should not get too hot to touch with your hand. As it warms up, gently push the overlay down, **starting with the outer edges** and working **slowly** around the face to avoid creating bubbles of air. **Take plenty of time** and check that the outer edges remain even. Soon the overlay will be entirely formed to the face plate. You should find that the small marks or holes for the three warning light holes at the bottom are positioned **inside the warning lamp holes.**



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 the chrome ring.

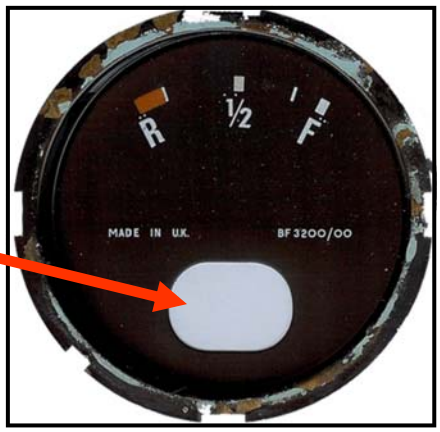


Now you may use a **sharp hobby knife** to slowly trim the two window in the center piece and also trim three small warning light holes on the speedo face. Gently trim from the top of the face (not the bottom), as in the photo shown here, using short strokes, until the holes are trimmed cleanly to the edges.

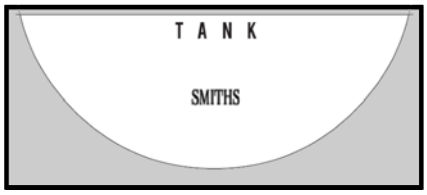


The tachometer overlays will be installed using the same technique, except there will be no cutting of any small holes afterward.

There are no special tricks to covering the small flat faces. Some will require windows to be cut (shown at right) after mounting the overlay.



Others will simply drop into position, like this one.



Repainting or changing the colors of the needles and other visible parts is an option you may want to consider. In the end, you will find you have created a very nice looking gauge set.