

Yamaha V Star 1100

Custom Speedometer Face Plate Installation

Tools Needed:

5 mm Allen Key or T-handle
Ratchet Handle and Extension
12 mm Socket or Wrench
Pliers. Small Plastic Container
4 mm Allen Key or T-handle
8 mm Socket or Wrench
No. 2 Phillips Screwdriver
Small / Medium Size Flat Screwdrivers
Lint Free Cloth. Electrical Tape
Thin, Small Fork (or similar)
Clear or White Silicone Sealant

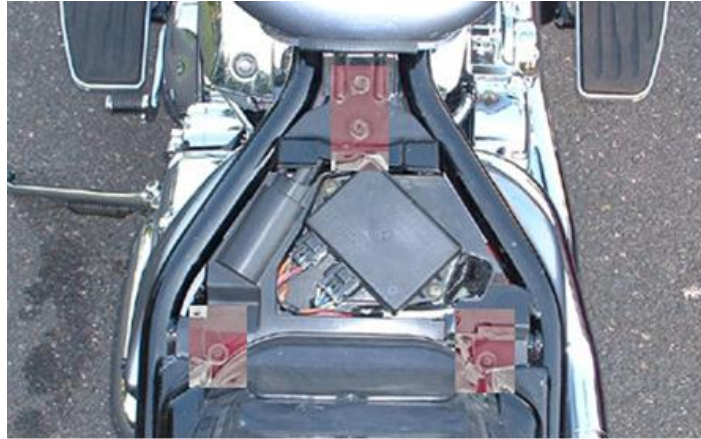
An adequate working area, organization and clean hands are the key to a sanitary installation. Completely review these instructions a few times prior to starting. Proceed at your own risk as noted in the disclaimer below. If you are unsure of your ability, please have an experienced professional complete this work for you.

STEP 1: REMOVE THE FRONT AND REAR SEATS:

Use a 5 mm Allen key or T-handle to remove the bolt just behind the rear seat, and the bolt just behind the front seat. Pulling up and back will free the seat(s).

STEP 2: DISCONNECT THE DASHBOARD PLUG:

This picture shows the 3 black fasteners (oversized plastic pop-rivets) that need to be removed to gain access to the dashboard plug. Using a small Allen key or Phillips screwdriver, press the small circle in the middle of the each rivet down until you feel / hear a click, and then remove these 3 fasteners by hand.



You have to free and lift the black plastic cover up, and move it out of the way, in order to expose the dashboard plug / electrical connector underneath it that will be unplugged. This picture shows the black plastic cover being completely removed (depending on the year of V* 1100, 1 or 2 ignition module plugs on it were disconnected), and the large white plastic dashboard plug exposed:

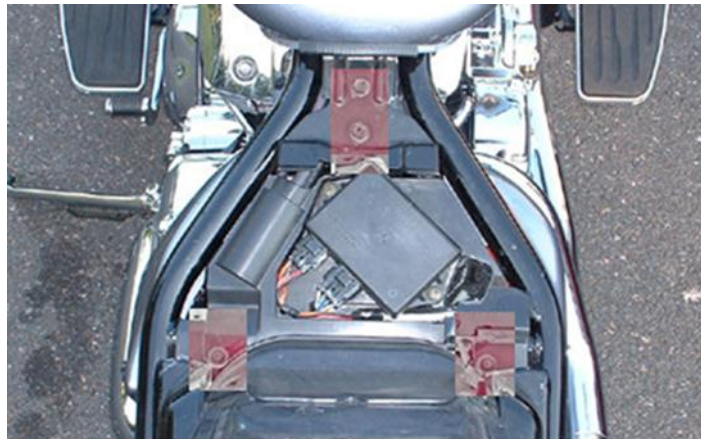


NOTE: Your trip odometer will lose its count, so record this number if you wish to save your current mileage for this particular tank of gas.

NOTE: To re-install the black plastic fasteners, push the center pin up from the bottom, so that it protrudes from the top of the head. Then put the fastener in place, and push the pin down with your finger until it "clicks" flush. When the center pin is flush with the top of the fastener, it is in its lock position.

STEP 3: REMOVE THE GAS TANK:

Removing the gas tank may be easier when the tank is low on fuel as it won't be as heavy. Remove the top 2 highlighted bolts in this picture that hold the gas tank to the frame with a 12 mm socket:



As highlighted in this picture, turn the fuel selector switch to the OFF position and use pliers to relocate the hose clamp. Remove the fuel line / hose from the selector switch, while collecting the gas in a small container.



Remove the gas tank by placing one hand on the rear tank bracket and the other on the front underside of the tank. While pulling up gently, and lifting the rear of the tank higher than the front, remove the tank to the rear of the bike. Handle the gas tank carefully and store it in a safe place.

STEP 4: REMOVE THE SPEEDOMETER FROM THE GAS TANK:

As shown by the red arrows in this picture, remove the 3 screws holding the dashboard cover in place on the gas tank using the 4 mm Allen key or T-handle:



Disconnect the connector between the dashboard and the speedometer as shown by the red arrow in this picture:



Remove the 3 nuts holding the speedometer mounting bracket in place on the tank using an 8mm socket as shown in the next picture:



Remove the 3 Phillips screws holding the mounting bracket in place on the back on the speedometer as shown here:



Carefully bend the wiring harness on the bottom of the tank by hand, just enough to loosen / release the speedo cable.

Remove the entire speedometer unit from the gas tank and place it face down on a piece of lint-free cloth on a clean, sturdy table. The large speedo wire / dashboard plug will remain attached to the speedometer unit after it is removed.

ALTERNATIVE METHOD (not recommended): If you don't want to remove the gas tank, you must slowly / carefully label and remove the 6 small color coded wires / screws from the rear of

the speedo. If any of the wires touch each other you will blow a 5A fuse that keeps the memory for the trip odometer.

STEP 5: REMOVE THE METAL SPEEDOMETER BEZEL / GASKET / GLASS:

The lip of the chrome bezel will be bended to gain access to the inside of the speedometer. See *NOTE on top of next page. This is the before picture:



Using a thin, narrow flat screwdriver, pry / push the metal ring away from the plastic speedo housing, slowly going around-and-around the metal bezel, prying / pushing a little at a time, until the metal ring is straight up, such that the bezel can be removed from the speedometer housing. This step takes time and patience.



*NOTE: It is recommended that a few bands of electrical tape be put around the base of the plastic speedo unit and the side of the chrome metal ring to prevent scratching. As you go around-and-around the bezel, increasing the size of flat screwdriver being used as the bezel ring opens up, may help with its removal. Work carefully as this metal ring is thin and very sharp.

ALTERNATIVE METHOD TO REMOVE BEZEL (not recommended): If you're not patient, you can use a Dremel cutoff wheel to remove portions of the bezel retaining ring, while leaving 8 evenly spaced tabs that will be bent back into place on re-installation around the bezel. Using a Dremel tool comes with a much greater risk of damage, and the finished work will not seal as well as the original.

This is what the bezel looks like once it is removed from the speedometer:



Note the orientation of the original bezel / gasket / glass as they must be re-installed exactly the same again in STEP 15 in order to seal correctly. There are 2 notches in the tapered rubber gasket and corresponding tabs on the speedo unit.

Work carefully, keep dirt out of the speedometer glass housing area once you have it disassembled, and keep it in a clean, dust free area. You could cover it with a clean piece of paper or a lint-free cloth (not mandatory if you have a clean, organized work area). Do not use a towel that may have lint on it. Do not touch the underside of the speedo glass. Do not blow or use an air compressor. Read STEP 14 below now.

STEP 6: REMOVE THE SPEEDOMETER NEEDLE:

Work carefully. Do not over bend the speedo needle. Gently lift the end of the needle away from the face of the speedometer (it may be stiff at first) and over the top of the "0" (zero) stop pin. The needle is still attached to the case at this point at its pivot point. When the needle has been lifted over the stop pin and in its unloaded position, it will be pointing down on the speedometer. NOTE: Make sure that you mark the exact point of the needle's unloaded resting position (after lifting it over the stop pin). This resting position is very important as it must be duplicated to ensure calibration on re-installation in STEP 11 below.

After you have marked the unloaded resting position, completely remove the needle from the case by lifting it off of its pivot pin. The speedo needle may be hard to remove. Carefully using a small thin fork or computer chip puller, with pieces of a credit card underneath for protection, will help lift it off.

STEP 7: REMOVE THE ORIGINAL SPEEDOMETER FACE PLATE:

Remove the 2 screws holding the faceplate on as shown here:



STEP 8: REMOVE THE NEEDLE STOP PIN:

Using something flat such as the back of a tea spoon, carefully push on the underside of the needle stop pin to remove it from the speedo face, and/or carefully use needle nose pliers to remove the stop pin from the top side. Keep your eyes on the stop pin in case it goes flying.

STEP 9: RE-INSTALL THE STOP PIN:

Re-install the stop pin into the new custom speedo face. If the hole is slightly too large, use a toothpick to put a very small drop of clear silicone sealant on the bottom of the stop pin to hold it in place. Make sure that it is straight up-and-down from side-to-side, and wait several hours for it to harden before completing your installation. If it is slightly too small, carefully use the pointed end of a safety pin to make it larger. If your stop pin fits snugly in the new custom speedo face, no silicone sealant is necessary (as original). Some years of V Star 1100's have

different sized stop pins / holes. Work carefully. You may need to use needle nose pliers to push the stop pin back into the face. If used, do not get silicone on the top of your new custom face plate.

STEP 10: INSTALL THE NEW SPEEDOMETER FACE PLATE:

Install your new custom speedo face plate and re-install the 2 screws to hold it on. Make sure that it is straight up-and-down. **IMPORTANT:** Do not over tighten these screws as you will damage your new custom speedo face plate.

STEP 11: RE-INSTALL THE SPEEDOMETER NEEDLE:

Gently press the speedo needle back on the speedometer slightly. Do not firmly install it yet. The needle should be pointing down in its exact unloaded position that you previously marked. If it is not perfect, remove and gently re-install the needle slightly, until it is exactly in line with the resting position that you marked when removing the original speedo needle in STEP 6. Do not firmly install it yet.

Lift the speedo needle back over the stop pin so that it is resting against the stop pin and at 0 (zero) again.

STEP 12: TEST SPEEDOMETER OPERATION:

Do not re-install your gas tank, seats, or re-install the speedo bezel yet. Hook up the speedometer wire / plug to the white dashboard plug on your motorcycle. Turn on the key and check to see if the speedometer is calibrated correctly. If the needle is jumping up-and-down it is not calibrated properly and indicates that you did not re-install your needle in its exact, original unloaded resting position. If it fails this calibration test, you must repeat STEP 11.

STEP 13: COMPLETE INSTALLATION OF SPEEDOMETER NEEDLE:

After you have completed the calibration test and confirmed that the speedo needle in its correct position, you are ready to firmly seat the speedo needle on its pin. Place pieces of a credit card or other similar spacer on both sides and tight to the speedo case needle mounting pin. You may want to put pieces of paper underneath the credit card spaces to protect your new custom speedo face. Then push firmly down on the speedo needle's pivot point. The credit card will act as a spacer and keep the needle off of your new speedo face. **NOTE:** Work carefully. If you don't use a spacer and push the needle down too tight on the speedo face (very easily done if no spacer is used), it will not work properly, and will be scraping on your new speedo face.

STEP 14: FINAL INSPECTION (PRIOR TO RE-SEALING BEZEL RING):

Check for any dust on the new faceplate. Do not clean the underside of the bezel glass before putting it back together. Dust can materialize quickly, so be very careful after you remove the speedometer bezel that you don't cover it with a towel that may have lint on it. Turn it face down on a sturdy table, and do not touch the inside of the glass for any reason. If dust is present, do not blow it off using your mouth or an air compressor as they both will 'spit' water on it, which can ruin the factory anti-fogging agent. If necessary, use "DUST-OFF" in a can.

NOTE: Review all of these instructions to be sure that you haven't missed anything before taking the time to re-install the bezel ring. You don't want to have to re-open / re-seal it again.

STEP 15: RE-INSTALL / SEAL THE BEZEL RING:

The bezel / gasket / glass must be re-installed exactly the same as noted in STEP 15 in order to seal correctly. Note the position of the 2 notches / tabs.

With the speedometer face / glass side down, while firmly holding the plastic housing, bend the bezel ring (or tabs) back into its original position on the housing. Take your time. Slowly go around-and-around the bezel with a flat screwdriver to bend it back, until it is completely pressed back into its original place tight to the plastic housing. It may not look perfectly flat, but it should be close.

After it is back in place and flat, put a nice clean 1/8" bead of white or clear silicone seal around the entire metal bezel to ensure that no moisture enters the speedometer. Silicone seal is recommended, but not mandatory. Remove the electrical tape (if used) now. If silicone seal was used, wait for it to dry, or work carefully on re-installation to be sure that you don't get it on your hands or speedometer glass.

STEP 16: RE-INSTALL THE SPEEDOMETER ON THE MOTORCYCLE:

Reversal of the previous remaining steps until completed.

STEP 17: INITIAL ROAD TEST:

Ensure that your speedometer / needle are operating properly and sweeping smoothly to the correct speed(s). If not, remove speedometer unit and start over.

DISCLAIMER:

These instructions are for informational purposes only. The author of these instructions accepts no responsibility for any work done on your motorcycle, the installation of a custom speedometer face plate, its accuracy, or any liability with respect to same. Ride safe.