



GAU-100x Gauge System Installation Instructions

IMPORTANT! Read these instructions thoroughly before installing or using this product.

1. Introduction

Thank you for purchasing a WRXtra Gauge System for your Subaru Impreza. Please read these instructions carefully to ensure optimum product performance. This product is designed for installation in 2002 or later Subaru Imprezas.

2. Contents of package:

- (1) Gauge Pod
- (4) Gauge Pod Screws and Clips
- (1) Main Wiring Harness
- (1) Illumination Wiring Harness
- (1) Red T-Tap
- (1) 3/8" Cable Clamp
- (1) Cable Clamp Screw
- (12) Zip Ties
- (1) Spare Fuse

If you ordered a boost gauge, your package will also have:

- (1) Silicone Boost Gauge Line
- (2) 1/2" Hose Clamps
- (1) 3/8" Hose Clamp
- (1) 3/8" Cable Clamp

If you ordered an oil pressure gauge, your package will also have:

- (1) Sandwich Adaptor w/Sender(s)
- (1) Sandwich Adaptor Threaded Post

3. Tools Required:

#2 Phillips Screwdriver (Both standard and stubby)
Slotted Screwdriver or 8mm Nutdriver
12mm & 15/16" Sockets
Long (>12") Socket Extension
17mm Box Wrench
7/16" Crow's Foot Wrench
Pliers

4. Preparing for Installation

IMPORTANT: Before beginning any work, remove the negative (-) cable from the battery.

Interior:

1. Remove cup holder by opening it and removing the 2 Phillips screws that attach it. There is a tab on the underside that will interfere with the stereo surround trim, so be careful removing it. The cup holder should pull straight back and up to clear the tab. Set cup holder aside.



2. Remove the stereo surround trim by pulling it off, starting where the cup holder was removed and working your way around. There are 4 clips that hold it in place. Set trim aside.



3. Remove the vent assembly by pulling it off. Disconnect the hazard switch plug and set assembly aside.



4. Remove clock by pulling it straight up. It may help to push back on the 2 clips that hold the front of the clock in the dash. They are directly above the vent openings. Disconnect the clock plug and set assembly aside.

5. Remove the 6 Phillips screws that secure the stereo. Pull the stereo out enough to disconnect the antenna, ground, and main connector. Set stereo aside.



Engine Compartment:

If your kit includes an oil pressure and/or temperature gauge, perform the following steps. If not, skip to step 6.

NOTE: This step can be done at any time before the kit is installed. It may be more convenient to co-ordinate this step with a scheduled oil change.

1. Following standard oil changing procedures, drain the crankcase oil and remove the filter.

2. Apply a light film of oil to the sandwich adaptor O-ring. Install the sandwich adaptor body with the oil pressure sender towards the rear of the car. Install the threaded post finger tight.

3. Position the sandwich adaptor so that there is even clearance between sender(s) and the exhaust, oil pan, etc. Continue to tighten the threaded post to 30 to 40 lbs. ft. using a 1" deep socket.



4. Install a new filter and tighten to manufacturer's specifications.



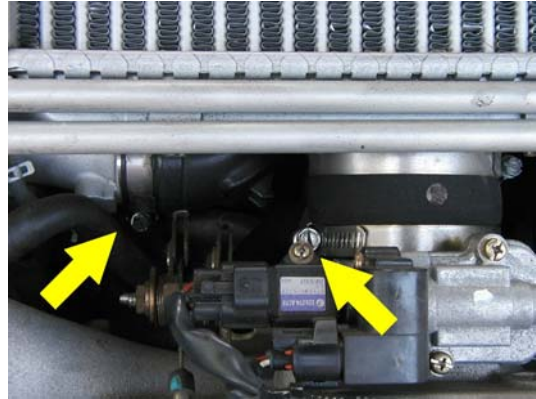
5. Reinstall oil drain plug and fill crankcase with the appropriate amount of manufacturer recommended oil.

NOTE: While it is not necessary, removing the intercooler allows for easier access to the firewall area for routing cables. If you choose to remove the intercooler, follow these steps. If you choose to leave it in place, skip to step 13.

6. Remove the 3 rubber hoses from the intercooler by pulling them off the metal tubes.



7. Loosen the hose clamp on the intake side of the intercooler-to-intake hose.
8. Loosen the hose clamp on the turbo side of the turbo-to-intercooler hose.



9. Remove the (2) 12 mm bolts holding the blowoff valve (BOV) to the intercooler and set them aside. Leave the BOV hoses attached.



10. Remove the (2) 12 mm bolts holding the intercooler to the mounting brackets and set them aside.



11. Standing on the driver's side of the vehicle, grasp the intercooler firmly and move it towards the back of the vehicle to remove the intercooler-to-intake hose from the intake, and then towards the drivers side of the vehicle to remove the turbo-to-intercooler hose from the turbo.
12. Lift the intercooler up and out of the vehicle.
13. Locate and remove the large firewall grommet directly above the heater hoses and to the left of the clutch master cylinder.

5. Installation

1. Locate the end of the wiring harness with the 2 modular plugs.
2. Feed the 2 plugs through the hole in the firewall. The easiest way to do this is to attach a stiff wire (such as a straightened coat hanger) to the end of the harness. Insert the other end of the wire through the hole, then go inside the passenger's compartment and pull the wire through. If your kit includes a boost gauge, feed the boost hose through at this time.

NOTE: You may need to trim the firewall insulation slightly to allow the plugs to fit.

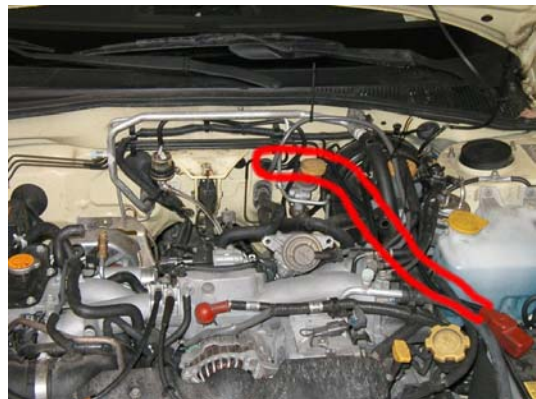
WARNING: Do not force the harness through. Doing so may damage the connectors and cause the gauges to not work, or work incorrectly.

3. Pull the harness into the passenger's compartment until the firewall grommet makes contact with the firewall.



4. From the engine compartment, push the grommet into the firewall hole until it locks in place.

5. Run the main harness behind the clutch master cylinder. Locate the throttle cable as it exits the firewall to the right of the clutch master cylinder. The main harness will follow the throttle cable to the battery.



6. Lift the red safety cap from the positive terminal on the battery. You will see a nut that secures several ring terminals to the battery clamp. Remove this nut.



7. Locate the ring terminal on the main harness. Feed the ring terminal into the red safety cap and slip it over the stud with the other ring terminals.

8. Secure the nut and reposition the red safety cap.



9. If your kit includes an oil pressure and/or temperature gauge the wiring harness near the battery connection will split into two sections. Run the section of the wiring harness that does not go to the battery connector between the battery and the windshield washer reservoir down to the engine cross member.



10. Run the wiring harness along the top of the cross member lip and secure with the metal clips. Push the connector(s) onto the spade terminal(s) on the sender(s). Orange is for oil temperature (small sender) and brown is for oil pressure (large sender)



If your kit includes a boost gauge, follow these steps. If not, skip to step 16.

11. Locate the hose attached to the blow off valve (BOV).



12. Cut through the BOV hose approximately 1" after the bend with a hose cutter or sharp utility knife.



13. Locate the brass T on the end of the long hose supplied in the kit and insert the barbed ends into the ends of the cut BOV hose.



14. Use the 2 large hose clamps to secure both ends of the BOV hose to the brass T. Snap the clamps together and use pliers to tighten.

15. Attach the hose as shown in the picture using the included zip ties. Pull extra hose into passenger's compartment.



16. If you removed the intercooler, reinstall it now by following the steps in reverse order.

17. In the passenger's compartment, route the main harness and boost hose (if applicable) as shown. Fasten using the trim screw and cable clamp(s).



18. Run the main harness and boost hose (if applicable) into the center dash area where the stereo is installed. The boost line continues up to the left of the center vents and the main harness continues up to the right of the vents.

19. Locate the unused plug on the stereo wiring harness. It may be taped in place. Plug the 2 spade connectors of the illumination harness into the female connectors of the unused plug. It does not matter which spade connector goes where.



20. Run the illumination harness parallel to the main harness to the right of the center vents. At this point the ends of the main harness, illumination harness, and boost line (if applicable) will be accessible where the clock was installed.



21. Locate the plug that went to the clock. Peel back 1-2" of tape from the wires going into the plug.



22. Install the red T-Tap on the yellow wire with the green stripe. Position the wire in the slot, fold the T-Tap together, and lock using pliers.



23. Attach the adhesive-backed mounting base to the top of the vent duct as shown.



24. Plug the yellow wire with the green stripe on the main harness into the T-tap. Secure the assembly to the mounting base with a zip tie.



25. Reinstall the stereo, making sure to connect the modular plug, antenna, and ground. Attach the ground wire from the gauge harness as shown.



26. Reinstall the vents by attaching the hazard switch plug and snapping them into position.

27. Reinstall the cup holder.

28. Reinstall the stereo surround by aligning the clips and pressing them into place.

29. Install the mounting clips for the gauge pod. The silver clips go in the rear holes and the black clips go in the front slots.

30. Position the gauge chassis over the dash. Connect the boost line (if applicable) to the barbed fitting on the back of the gauge. Secure with the small hose clamp.

31. Connect the illumination, power, and sender plugs. The plugs are all unique so they cannot be connected incorrectly.

32. Position the gauge pod chassis in the dash opening and secure it to the dash with the mounting screws.

33. Test fit the gauge pod cover. It should snap into place with the faceplate flush and even against the back of the cover opening and the gauges tight against their cutouts. If everything looks good, you are done. If not, proceed to step 29.



34. The faceplate can be adjusted front and back by loosening the 4 screws that hold the faceplate to the gauge pod chassis and sliding the faceplate. The height of the chassis as it sits in the dash opening can be adjusted by slightly bending the mounting tabs on the side of the chassis. Since every dash is a little different, you may have to make a couple adjustments for satisfactory fit.
35. Double-check all connections to make sure they are secure. Secure any wires or hoses with the provided zip ties to prevent them from contacting moving parts or interfering with the driver or controls.
36. Reconnect the ground cable at the battery.

IMPORTANT: When you start your vehicle for the first time, make a careful inspection of all hoses and fittings. Oil leaking onto a hot turbo or exhaust can cause fires. If you discover any leaks, immediately shut off the engine and investigate.

Congratulations. Your gauges are now installed. If your electronic gauges fail to function, always check the fuse first. A spare fuse is included in the kit. Make note of where your gauges indicate during normal driving. This will give you a good baseline to know when something is wrong.

Typical gauge readings:

Oil Pressure (Hot): 25-30 PSI Idle, 80-90 PSI max

Oil Pressure (Cold): 100 PSI or more

Oil Temperature (Hot): 180-210 normal operating range*

* Measured with the sandwich adaptor; oil plug adaptor will read lower.

This document is available online at <http://www.wrxttra.com> in the Documentation section.

Document #DOC-1010