



Thank you for the purchase of your Killer B Motorsport 2 Bolt 4-1 Holy Header!

This guide is intended to help you install your Holy Header 2-Bolt Header.

Please allow 1-3 hours for install. YOUR VEHICLE MAY BE HOT, PROCEED WITH CARE.

RECOMMENDED TOOLS

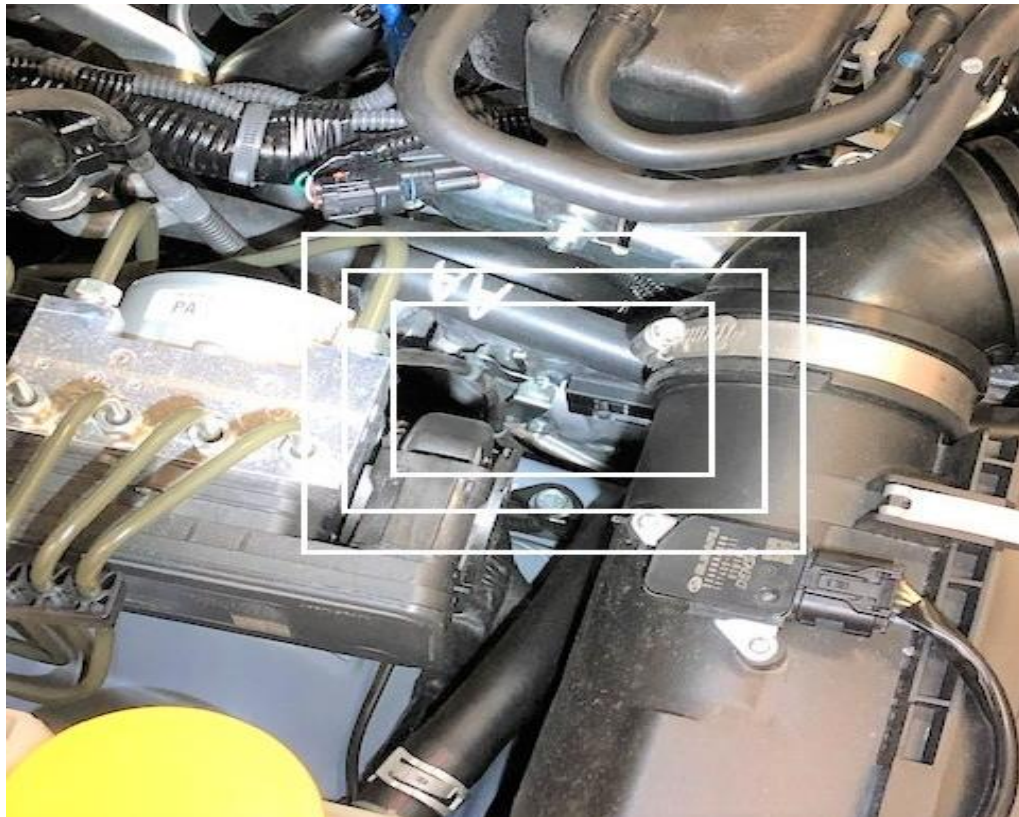
- Torque wrench capable of 28 ft-lbs.
- 3/8" drive socket wrench: long or short
- 12mm shallow and deep well sockets
- 14mm medium and deep well sockets
 - 14mm wrench
 - Flathead screwdriver
- Oxygen sensor wrench or 7/8" open end wrench
 - Side cutters
- 6" and 9" length 3/8" drive extensions
 - Small pointed pick
 - Zip tie



1. Open the hood and locate the connector for Air/Fuel Ratio sensor. Disconnect the sensor from the harness and release the black clip that secures the sensor harness to the power steering line. Remove this clip and set aside for OE parts storage. Using a small pick, remove the bulkhead harness side of the A/F sensor from its bracket, it will not rest in the same bracket while installed with the Killer B Motorsport Holy Header.



2. Using a 12mm socket and wrench, loosen the bolt that secures the cylinder 3 coil pack in place. You do not need to remove the bolt or coil pack; the bracket will slide out with the bolt slightly loosened. Remove the bracket from the sensor harness using a pick or needle nose pliers. Set the bracket with your unused OEM parts.



3. With the bracket removed from the A/F sensor harness, retighten the bolt that secures the coil pack to the rocker cover, to 11.7 ft-lbs



4. Raise and secure the vehicle using a floor jack and stands.
5. Remove belly pan: Remove the (3) 12mm-head bolts from the pan. Use a flathead screwdriver to carefully remove the 6 plastic clips from both sides of the pan, then remove the (2) rear Plastic clips on the rear of the pan.



6. Locate the A/F Ratio sensor harness (from underneath the vehicle) and carefully guide it down so it hangs freely.

Note: You can remove the A/F sensor at this time, while the exhaust manifold is still installed, or you can remove it from the manifold after it has been removed from the vehicle.



7. Remove the heat shields from of the exhaust manifold. The driver's side shield requires you to remove (3) 12mm bolts, then both halves of the shield. The passenger side shield is only one piece and requires the removal of (4) 12mm bolts. Allow the shield to hang from the base of the A/F sensor until you remove it. One of the bolts that secures the passenger side heat shield also serves as a grounding point for one of two ground straps. With the passenger side heat shield removed, this ground strap will need to be secured nearby.



Note: Circled in the photo above, is the location of one end of a ground strap, normally fastened to the heat shield. You will be required to relocate this item for the Killer B Motorsport Holy Header installation. It will now remain secured to the passenger side exhaust AVCS valve body (08+ STI ONLY), using a spare, short 10mm bolt. For turbo models other than 08+STI, the bottom of the cylinder head is still equipped with threaded areas to secure the ground strap, where there is an absence of an AVCS valve body.

8. Remove the headshield carefully from the sensor to preserve the protective sheathing on the A/F ratio sensor wiring. Set all shields and hardware aside for storage.
9. Using a 14mm socket and wrench, 6" or 9" long 3/8" drive extension and a 14mm open end wrench, loosen the 2 nuts and bolts securing the OE manifold to the up pipe. Discard all 3 used gaskets and replace with new.



10. Set aside the 14mm wrench. Use the same 14mm socket/wrench/extension to loosen and remove the (6) 14mm nuts from the exhaust manifold.
11. If you elected to change over the A/F sensor in step 6, proceed to next step 12 now. Using an oxygen sensor wrench/socket, loosen and remove the A/F sensor from the OE manifold. Apply a light amount of anti-seize on the sensor threads and...
DO NOT OVERTIGHTEN THE SENSOR!



12. Install Killer B Motorsport Holy Header on vehicle, hand tight, with (2) new manifold gaskets. **DO NOT TORQUE YET!**
13. Install up pipe gasket and hardware hand tight. **ENSURE PROPER ALIGNMENT OF MANIFOLD AND UPPIPE** before torqueing.

14. Using a torque wrench, tighten the (6) exhaust manifold to cylinder head bolts to 28 ft-lbs, starting from the center stud hole of each flange. Exhaust flanges must be torqued starting from the center, then to the outside.
15. Leave the torque wrench on the same setting, tighten the (2) nuts and bolts that secure the manifold to the up pipe: 28 ft-lbs. **ENSURE PROPER UPPPIPE ALIGNMENT BEFORE FINAL TORQUE IS APPLIED.**
16. **2008+ STi**, to prevent the A/F sensor wiring from contacting the exhaust manifold/header, unplug the passenger's side exhaust cam sensor and then route the sensor through the slack in the cam sensor. Reconnect the cam position sensor after the A/F sensor is routed through the cam sensor's slack.

The following year ranges do not need to follow step 16:

08-14 WRX

05-09 LGT/OXT

09-13 FXT

Vehicle model aside, every installer should inspect the A/F routing to prevent customers from getting stuck on the side of the road with a P0131- A/F sensor circuit low voltage DTC.

Be sure to take up any slack- try using zipties to secure the sensor harness to a stationary component or an electrical pigtail.

17. While under the vehicle, take the A/F ratio sensor connector and route it up between the passenger side frame rail and the passenger side rocker cover. Try to get the harness and connector to stay propped up so you can lower the vehicle and reconnect the sensor to the bulkhead harness. Reinstall the belly pan using the (3) 12mm bolts and the 8 plastic clips. Lower the vehicle, grab the A/F sensor connector from above the vehicle and reconnect it. Secure the harness to the engine harness with a zip tie so that there is no movement.
18. Start engine and ensure there are no exhaust leaks or Check Engine Light.