

Subaru WRX/STI Front-Mount Intercooler Kit, 2008

PARTS LIST

1PC Bar-and-Plate Intercooler
1PC Steel Crash Bar w/Mounting Hardware
3PC Hot-Side Intercooler Pipes
3PC Cold-Side Intercooler Pipes
1PC BPV Flange Adapter
1PC Relocation Brackets for Aluminum Overflow Can
2PC 2.25" Straight Couplers
3PC 2.75" Straight Couplers
1PC 2" to 2.75" Transition Coupler
1PC BPV Recirculation Hose
1PC Intercooler to Throttle Body Hose
1PC 2" T-Bolt Clamp
5PC 2.5" T-Bolt Clamps
9PC 3" T-Bolt Clamps
2PC 1.5" T-Bolt Clamps
1PC 12" of Thermal Wrap
1PC 3' of 1/4" Rubber Hose
5PC Black Zip Ties
Optional Air Intake Kit
1PC Oiled Filter
1PC Aluminum Intake Pipe
1PC 3" to 2.75" Transition Coupler
2PC 3" Worm-Gear Clamps
2PC Black High-Temp Zip Ties

TOOLS NEEDED

PHILLIPS HEAD SCREWDRIVER
FLATHEAD SCREWDRIVER
10mm DEEP SOCKET
12mm DEEP SOCKET
13mm DEEP SOCKET
3/8" DRIVE THREE INCH EXTENSION
3/8" DRIVE SIX INCH EXTENSION
3/8" DRIVE RATCHET
10mm RATCHET WRENCH
2.5mm ALLEN KEY
NEEDLE NOSE PLIERS
POP CLIP PLIERS
CUTTING WHEEL

DIFFICULTY LEVEL: 5/5

INSTALL TIME: ≈ 4 hours



DISCLAIMER

- Raise vehicle only on jack stands or on a vehicle lift.
- Allow vehicle to cool completely prior to attempting installation.
- Disconnect the negative battery terminal prior to installation.
- Do not run the engine or drive the vehicle while overheating. Serious damage can occur.
- Please dispose of any liquids properly.
- Mishimoto is not responsible for any vehicle damage or personal injury due to installation errors, misuse, or removal of Mishimoto products.
- Mishimoto suggests that a trained professional install all Mishimoto products.

INSTALLATION INSTRUCTIONS

01) REMOVING THE STOCK AIRBOX

1. Remove the air duct (2x pop clips)
2. Loosen the two worm gear clamps located on the stock intake piping and remove piping
3. Disconnect the MAF sensor from the top of the air box
4. Remove the MAF housing (2x phillips head screws)
5. Remove the stock air box by first removing the nut that mounts the rubber bushing to the front of the airbox. Also remove the bolt on the bottom of the airbox, right below the P/S line. (1x 10mm nuts, 1 x 10mm bolt)

02) REMOVING THE STOCK TOP-MOUNT INTERCOOLER

1. Remove the vacuum hose from the blowoff valve
2. Loosen the intercooler to throttle body hose (1 x 8mm socket or flathead screwdriver)
3. Remove the blowoff valve (2x 10mm bolts). Be careful not damage or lose the blowoff valve gasket. This piece will be reused.
4. Remove the silver mounting bracket to the right of the top-mount intercooler (3x 12mm bolts)
5. Remove the two 12mm bolts between the turbo outlet and the intercooler endtank.
6. Remove the coolant reservoir tank by squeezing the right side tab and pulling outward (just unclips)
7. Using the Mishimoto provided hose, reroute the coolant fluid line to the left side of the engine bay
8. Fully loosen the intercooler to throttle body hose, the stock intercooler can now be removed.

03) INSTALLING THE MISHIMOTO FRONT-MOUNT INTERCOOLER

1. Secure Mishimoto provided overflow relocation brackets ("L" shaped mounting bracket first) to the existing ground strap on the frame. The 10mm ground strap bolt must be removed first.
2. Secure Mishimoto provided triangular mounting bracket to coolant reservoir (2x 10mm bolts and nuts) and relocate the reservoir to the left side of the engine bay next to the radiator (1x 10mm bolt)
3. You can now insert the rerouted coolant line into the coolant reservoir tank
4. Remove the 10mm bolt securing the recirculation hose.
5. Remove the 10mm bolt securing the ventilation hose.
6. Gently pull both hoses out of the way to reveal the worm gear clamp for the throttle body hose.



- Loosen clamp and remove hose.
7. Install Mishimoto provided intercooler to throttle body hose to the throttle body.
 8. Remove the 4 pop clips from the top of the front bumper.
 9. Remove the 6 pop clips located on the bottom of the front bumper.
 10. On each side of the car, remove the 3 pop clips securing the fender liner and proceed to remove the pop clip holding the bumper to the fender, the top pop clip must be pushed inwards at the center in order to disconnect it.
 11. Remove the under tray (2 pop clips, 3 x 12mm bolts)
 12. Carefully remove the front bumper and unclip the connections for the fog lights, you may need an assistant.
 13. Remove crash bar (8x 14mm bolts) Note: you will need to lift up on the crash bar before pulling away).
 14. Using the latches found on the top of the Mishimoto provided crash bar, put the new crash bar in place.
 15. Secure the new crash bar reusing the existing hardware (6x 14mm bolts)
 16. Install Mishimoto front-mount intercooler onto new crash bar, but do not tighten all the way (2x 13mm bolts)
 17. Install 2.75" coupler to the passenger's side end tank of intercooler.
 18. Working from the bottom up, install right side intercooler piping.
 19. Install straight coupler onto the end of the cold-side intercooler piping located in the engine bay.
 20. Install cold-side intercooler piping segment leading from existing piping to previously installed Mishimoto silicone Intake hose
 21. Secure straight coupler onto left endtank of intercooler.
 22. Install straight coupler onto left side intercooler piping in engine bay (note that the straight coupler that merges the upper and lower intercooler piping is longer than the coupler you will use to secure the piping to the throttle body).
 23. Secure silicone coupler onto throttle body.
 24. You can now install the hot side pipes, prepare the hot side pipe and flange by installing the supplied O-ring gasket to the 2 bolt turbo outlet flange.
 25. Install the hot side pipe and flange onto the turbo outlet (2 x 12mm bolts), and tighten to 10-15 ft.lbs. of torque.
 26. Install the 2.25"-2.75" transition coupler on the driver's side endtank of the intercooler.
 27. Install the 2.25" coupler onto the lower hot side pipe, you can also place the supplied T-bolt clamps on as well.
 28. Install the lower hot side pipe and route upwards next to the battery.
 29. Attach the upper hot side pipe between the turbo outlet pipe / flange and the lower hot side pipe. Once secured you can use a 10mm ratcheting wrench to tighten the clamps near the battery.
 30. You can now tighten down and secure all couplers in the kit. (10mm socket)
 31. Install the supplied bypass valve adapter to the bypass valve, make sure that the rubber gasket is still attached. (2 x 10mm bolts)
 32. Install the bypass valve hose from the cold side pipe to the bypass valve adapter, tighten the supplied T-bolt clamps, you may have to slightly adjust the bypass valve position by rotating the valve. (2 x 10mm nuts)
 33. Install intake pipe (if equipped with the optional air intake) by attaching the bracket to the timing cover. (2x 10mm bolts on pipe bracket)
 34. Note: the curved end of the pipe will face towards the fender of the car, the air filter will attach



- to the end with the CNC air diverter.
35. Install the pipe into the turbo inlet hose using the supplied 2.75" – 3.00" transition coupler. Use the supplied worm gear clamps to tighten.
 36. Keep the 10mm bolt loose between the bracket and air intake. The pipe may need to be adjusted slightly.
 37. Reinstall the MAF (2x phillips head screws)
 38. Reconnect MAF sensor cable.
 39. Install air filter to the end of the intake pipe.
 40. Loosely zip tie the coolant reservoir line out of the way. Make sure the hose is not pinched or kinked in anyway.
 41. You can now tighten the 2 mounting bolts for the front-mount intercooler.
 42. With the front bumper removed, it is time to trim off the excess plastic cladding for a flush fit with the added front mount intercooler. Some additional trimming may be necessary to get the proper fit. This may require loosely installing the bumper cover to achieve the best fit. Use a cutoff wheel that can easily cut plastic, you can also file the sharp edges down after cutting.
 43. Reinstall connect fog lights and reinstall the front bumper in the reverse order. The two top clips for the fender lines are installed by pushing in the center of the clip, inserting through the bumper cover and fender. Then with you index finger, reach around and push the center clip back towards the rear of the vehicle, this will lock the clip in place.
 44. Reinstall the undertray (2 x pop clips and 3 x 12mm bolts).
 45. You have now successfully installed the Mishimoto 2008-2014 Subaru WRX Front-Mount Intercooler Kit. Enjoy!

