

Subaru WRX/STI Front-Mount Intercooler Kit, 2001–2007

PARTS LIST

1PC BAR-AND-PLATE INTERCOOLER
1PC STEEL CRASH BAR W/ MOUNTING HARDWARE
2PC HOT-SIDE INTERCOOLER PIPES
2PC COLD-SIDE INTERCOOLER PIPES
1PC BPV FLANGE ADAPTER
1PC RESISTOR BLOCK RELOCATION BRACKET W/ MOUNTING HARDWARE
2PC LOWER INTERCOOLER BRACKETS W/ MOUNTING HARDWARE
1PC ALUMINUM OVERFLOW CAN W/ MOUNTING HARDWARE
1PC TURBO-TO-HOT PIPE COUPLER (FOR STOCK TURBO)
1PC TURBO-TO-HOT PIPE COUPLER (FOR AFTERMARKET TURBO)
1PC 2.25" STRAIGHT COUPLER
2PC 2.75" STRAIGHT COUPLERS
1PC 2.75" X 3.25" LONG STRAIGHT COUPLER
1PC 2.00"–2.75" TRANSITION COUPLER
1PC BPV RECIRCULATION HOSE
1PC PCV HOSE
1PC 2" T-BOLT CLAMP
4PC 2.5" T-BOLT CLAMPS
7PC 3" T-BOLT CLAMPS
1PC 1.5" WORM-GEAR CLAMP
1PC BYPASS VALVE GASKET
1PC BLACK NYLON HOSE FITTING, 3/4" I.D.
1PC BLACK NYLON TEE-HOSE FITTING, 3/4" I.D.
1PC 12" OF THERMAL WRAP

TOOLS NEEDED

- 10mm socket
- 12mm socket
- 13mm socket
- 14mm socket
- 3/8" drive 6" extension
- 10mm wrench (preferably self-ratcheting)
- 12mm wrench (preferably self-ratcheting)
- 3/8" drive ratchet
- Flathead screw driver
- Pop-clip pliers
- Cutting dykes
- Needle-nose pliers
- Small channel lock pliers
- Cut-off wheel
- File

DIFFICULTY LEVEL: 5/5

INSTALL TIME: ~ 5hours



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 FACTORY AIRBOX

1. If equipped with the stock airbox, remove the stock inlet hose by disconnecting the two worm-gear clamps.
2. Disconnect the MAF sensor plug and set aside.
3. Remove the airbox by removing the two lower 12mm bolts.
4. If configured with the Mishimoto intake, transfer the MAF sensor to the Mishimoto air intake pipe. (Phillips screwdriver)
5. If configured with the Mishimoto intake, install the supplied Mishimoto air filter onto the intake pipe.
6. If equipped with the Mishimoto intake, attach the air intake pipe and filter onto the turbo inlet pipe. (The standard coupler is used with the stock induction hose, whereas the transition coupler is used with some aftermarket silicone induction hoses.)
7. Disconnect the plugs near the passenger side strut tower.
8. Disconnect the resistor near the passenger side strut tower.
9. Install the resistor relocation bracket onto the stock resistor mounting bracket. This bracket is small with two welded studs attached.
10. Now you can reattach the sensors and plugs to the passenger side strut tower. [Use resistor in #8 or sensor in #10? Also, are they plural or singular?]
11. Remove the upper grille piece. (2x pop clips on top, 1x pop clip on the lower back side)
12. Remove the bolts that secure each headlight housing. (3x 10mm per headlight)
13. Remove the pop clips from the top of the front bumper. (7x pop clips)
14. Disconnect the fender liners from the front bumper cover. (2 x pop clips per side)
15. Remove the plastic airbox resonator from the inner fender. (2 x 12mm nuts)
16. Disconnect fog light connections.
17. Remove pop clips from the bottom of the front bumper. (3x pop clips)
18. Remove the foam piece covering the crash bar.
19. Remove the stock crash beam. (8x 14mm bolts)
20. Bend the three tabs on the radiator support bracket upward to make room for the intercooler.
21. Replace the stock crash beam with the supplied crash bar/intercooler mounting bar, and hand-tighten the hardware to hold the bracket in place. (reuse stock 14mm bolts)



22. Remove the two 10mm bolts from the top of the coolant reservoir tank and disconnect the hose. Remove the coolant reservoir tank from the engine bay.
23. Remove the 10mm bolt from the fan shroud. The supplied mounting bracket will attach here.
24. Remove the three 10mm bolts that secure the vent bracket to the front of the factory top-mount intercooler.
25. Disconnect the rubber hoses from the bracket in front of the top-mount intercooler.
26. Remove the two 12mm bolts securing the factory bypass valve, but do not remove the valve.
27. Loosen the clamp from the turbocharger outlet.
28. Remove the bolts securing the intercooler on each side. (2x 12mm bolts)
29. Remove the intercooler bracket from the intake manifold. (2x 10mm bolts)
30. Remove the intercooler mounting bracket near the turbocharger. (2 x 12mm bolts)
31. Mount the straight black fitting into the Mishimoto-supplied silicone hose.
32. On the other side of the Mishimoto silicone hose, install the provided black T-style fitting.
33. Connect the Mishimoto silicone hose to the factory PCV (valve cover ventilation) hose.
34. Using the provided fire-proof heat wrap, wrap the top fuel line (Note: always wear gloves when working with this wrap. It is constructed with fiberglass)
35. Secure the Mishimoto charge pipe onto the turbocharger outlet using the provided coupler. Tighten the clamps slightly. (10mm socket) (Stock TD04 or VF series turbochargers will use the smaller outlet hose, whereas aftermarket 16G/18G turbos will use the larger outlet hose.)
36. Maneuver the second portion of the charge pipe up through the bottom of the car, behind the frame, until it meets the other segment of Mishimoto piping next to the battery. (To aid in installation, you can disconnect the battery from the vehicle and move it to the side to give you more room.)
37. Join the two hot-side pipes by the battery. Fully tighten the two clamps on the coupler. (10mm socket or 10mm ratcheting wrench)
38. Position the intercooler onto the previously installed intercooler bracket. Hand tighten hardware to hold the intercooler in place. (13mm bolts)
39. Secure the charge pipe onto the end tank of the intercooler using the silicone coupler.
40. Secure the Mishimoto cool-side charge piping onto the throttle body of the car and slightly tighten the worm-gear clamps. (Do not fully tighten at this time.)
41. Maneuver the cold-side intercooler piping in front of the wheel well and through the circular cutout of the well.
42. Secure the pipe to the end tank of the intercooler and slightly tighten the worm-gear clamps. (10mm socket)
43. Join the two segments of cold-side piping together in the engine bay using a silicone coupler and worm-gear clamps. Tighten the clamps. (10mm socket)
44. Adjust the position of the stock blow-off valve by slightly turning the valve while squeezing the spring clamp.
45. Install the bypass valve adapter onto the bypass valve, ensuring the gasket is placed between the adapter and valve to prevent any leaks. Secure with the stock hardware. (2 x 12mm bolts).
46. Attach the bypass valve hose from the bypass valve to the port on the cold-side pipe, near the throttle body. Secure with the supplied worm-gear clamps. (Flathead screwdriver)
47. Recheck all couplers for proper fit. Check that none of the couplers have slipped off the pipes. You can now fully tighten all the clamps on the system.



48. Install the lower intercooler mounting brackets on the bottom of the intercooler. They attach to the vehicle using the existing 12mm bolts on the radiator support. (2 x 10mm bolts on the intercooler side)
49. Tighten the upper mounting bolts for the intercooler.
50. Attach the supplied overflow bottle to the overflow bottle mounting bracket. (2 x 10mm bolts)
51. Attach the overflow bottle and bracket to the fan shroud, and reinstall the overflow hose. (2 x 10mm bolts)
52. Install the three supplied brackets onto the crash bar. The larger holes of the brackets should face upward, and the bumper cover attaches to these brackets. (6x 10mm bolts)
53. The lower bumper cover will be modified to fit the intercooler. Use a cutoff wheel to trim the excess plastic pieces to ensure proper fit. This may take several tries to get the fitment to fit exactly.
54. Reinstall the lower bumper cover. The top pop clips will attach to the three brackets on the Mishimoto crash bar.
55. Reattach the lower splash shield.
56. Reattach the fender liners to the bumper cover. [covers?]
57. Please note: This intercooler kit cannot retain the use of your fog lights, if equipped.
58. Reattach the headlights, and reconnect all harnesses.
59. Reattach the upper grille to the vehicle.

