



Thank you for purchasing a BSH Intercooler Kit. The kit should include the following components.

Please make sure they are all in the box before continuing. If you bought any additional upgrades their specific parts list will be included separately. Required tools are not included.

This kit should only be installed by a professional. This guide is only meant as an outline and is not intended to teach a novice how to do the job. If you are unsure of your ability stop and take your car to a professional.

<b>Components:</b>	<b>Tools:</b>
(1x) Intercooler Core	T20 Torx
(2x) Charge Pipes	T25 Torx
(2x) Straight Silicone Hose	T30 Torx
(1x) Silicone Hump Hose	Flat Head Screwdriver
(1x) Silicone 45° Bend	Phillips Head Screwdriver
(1x) 2" T-Bolt Clamp	4mm Allen Wrench
(7x) 2.5" T Bolt Clamps	13mm Wrench
(2x) Mounting Blocks	Blue Loctite
(4x) Sheet metal Screws	
(4x) Allen Screws	
(4x) Washers	
(1x) Intercooler Pipe Adapter	
(2x) Air Guidance Plates	



### Step 1:

Park the car on a flat level surface. Using the manufacturers specifications raise the front end of the vehicle and position on jack stands. **DO NOT WORK ON A CAR NOT PROPERLY SUPPORTED.**



### Step 2:

Remove the front bumper. Start by removing the front grill. The first screws to remove are on the top of the grill, there are two more holding it in right that are accessed through the center honeycomb in the lower section of the bumper. Use a T20 torx to remove these screws. Once removed lift the grill up and off the bumper.



Next remove the lower dust shield. You will need to get underneath the car for this. There are 12 T25 torx and 4 T20 Torx screws holding the shield in. Once all 16 are removed you will be able to slide the shield out.



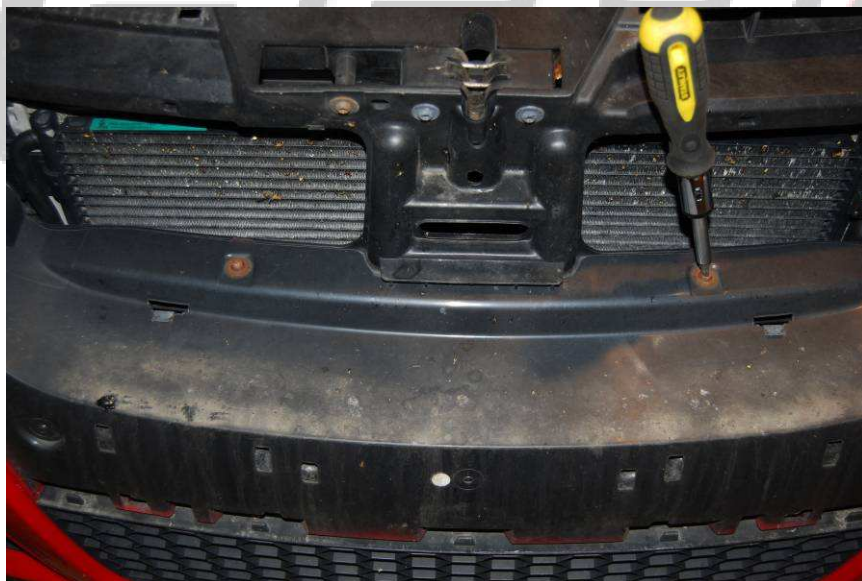
Next move onto the wheel liners. There are three horizontally positioned T25 torx screws holding the bumper to each wheel liner. Each side also has one vertically position T25 Torx screw.



Next remove the one T25 Torx screw on each side connecting the bumper to the front fenders and the single T20 torx screws holding the upper portion of the wheel liner to the front bumper.



The last set of screws to remove is positioned right in the center of the bumper in the area where the grill originally covered. These are two T30 torx screws.



With all the screws out slide the bumper away from the car. While taking the bumper off be prepared to unclip the bulbs for the bumper marker lights (Pull Straight out), the fog lights(Twist out fog light counterclockwise), and if your car is equipped with head light washers be prepared to cap or cover the exposed hole to prevent fluid from draining out.



**Step 3:**

Using your 13mm wrench, unbolt the horn on the passenger side from its bracket. Flip the horn over so it's on the top side of the bracket and bolt it back down. The driver's side horn can either be bent upwards or relocated to the top of the bracket like the passenger side.



**Step 4:**

Using the supplied sheetmetal screws, bolt the supplied mounting blocks to the core support. Mount in this orientation. Pull the wiring harness down below the mounting blocks.



**Step 5:**

Remove factory air guidance flaps from both sides of the shroud. You can either unclip them or just cut them off.



**Step 6:**

Mount the intercooler core to the mounting blocks (Center the intercooler). Make sure to use blue loctite on the screws when installing.



### Step 7:

Using your flat head screwdriver, remove the rubber intercooler pipe from the passenger side of the car. The side of the intercooler pipe that was attached to the metal (FSI) plastic (TSI) charge pipe off the turbo contains an O-ring that will fit over the supplied intercooler pipe adapter. Swap the O-Ring over and clip the supplied adapter into place.



### Step 8:

Slide the shorter of the two intercooler pipes into the straight coupler on the intercooler. Leave it loose and slightly angled downward. Next, slide the small end of the 45° silicone pipe onto the discharge pipe adapter installed in step 7. Now slide the intercooler pipe into the large end of the 45° silicone pipe. If this is difficult, you can use glass cleaner as lubricant since it will quickly evaporate and not continue to lubricate the joint.



### Step 9.

With a flathead screwdriver, remove the rubber intercooler pipe from the intercooler outlet on the drivers side of the vehicle. Then use a 7mm socket and 1/4" drive ratchet to remove the hose clamp that connects to the stock throttle body pipe. If the hose clamp does not loosen and you completely remove the screw, use a screw driver to push up on the reaction block of the hose clamp to loosen it and discard the clamp. Twist the hose off, be mindful of oil that may drip out of the hose since this is one of the lowest points in the system. Clean the oil from the bottom of the stock throttle body pipe.



### Step 10.

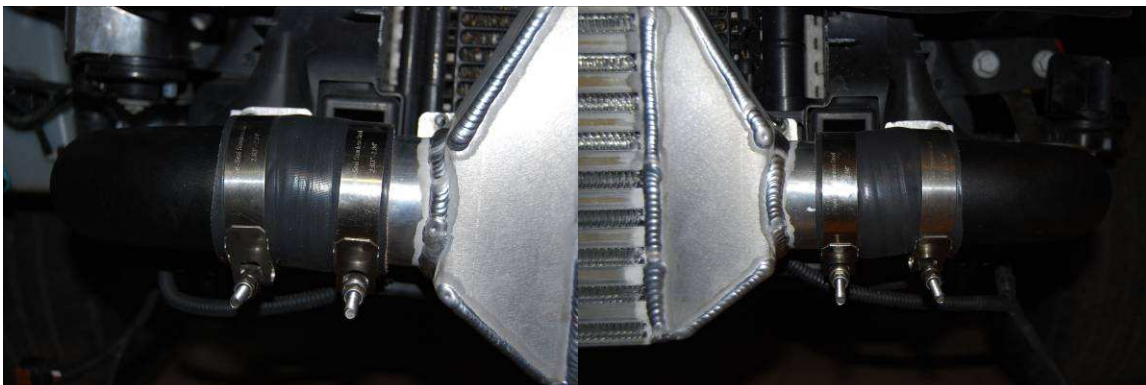
Slide the short end of the remaining intercooler pipe into the intercooler. Then, slide the silicone hump hose over the other end of the intercooler pipe. Slide the opposite end over the stock throttle body pipe. Leave all locations loose for now.





### Step 11.

Use the 2.5" clamp on the turbo discharge tube. Use the remaining clamps at the remaining locations (45° silicone pipe outlet, IC inlet x2, IC outlet x2, throttle body hump pipe x2). Tighten the 3" clamps with a ratchet and 10 mm deep well socket until the pipes are sealed (be cautious with the stock plastic throttle body pipe). Tighten the 2.5" clamp with a ratchet and an 11mm deep well socket until the pipe is sealed. Be mindful of the orientation of the clamps just in case you have to tighten them later if there is a leak (make them easily accessible).





### **Step 12.**

Now leak check the system by spraying the joints with plenty of window cleaner (so it will evaporate and not cause lubrication of the joints after evaporation). Start the car and run checking for bubbles. Rev the engine so that a high amount of airflow will go through the pipe work. Bubbles will show up where there are leaks if there are any. If you unhooked the battery, when you turn the key to the on position, do not start it. Allow the throttle body to align for 30 seconds and then start the car. It will run poorly if this isn't completed before starting the engine. When you are completed, turn the car off and prepare to reinstall the front bumper.

### **Step 13.**

Install the air guidance plates between the mesh and the painted plastic. You do not need to remove the honeycomb to install the plates. Slide them into place and they will snap in.



Reinstall the front bumper in reverse order of step 2. Connect the fog lights, the sidemarkers, and the headlight washers (if applicable). Slide the bumper on. Start the T30 Torx Screws in the center to hold the bumper in place. On each side, attach the bumper to the fender with the T25 Torx screws as well as

to the wheel liner. Then, install the front wheel liners. There are four T25 Torx screws, 3 horizontal and in the vertical orientation. Then install your dust shielding on the bottom. There are 12 T25 Torx and 4 T20 Torx. Make sure all screws are tightened underneath the vehicle. Slide the grill back into place with the tabs clicked into their sockets. Tighten the four T20 Torx screws.

Reinstall the batter cover if that was removed. Take the car off of stands or lift, close the hood, and enjoy.

You should only be left with these pieces (2 factory intercooler hoses, one hose clamps, 2 factory air guidance plates):

