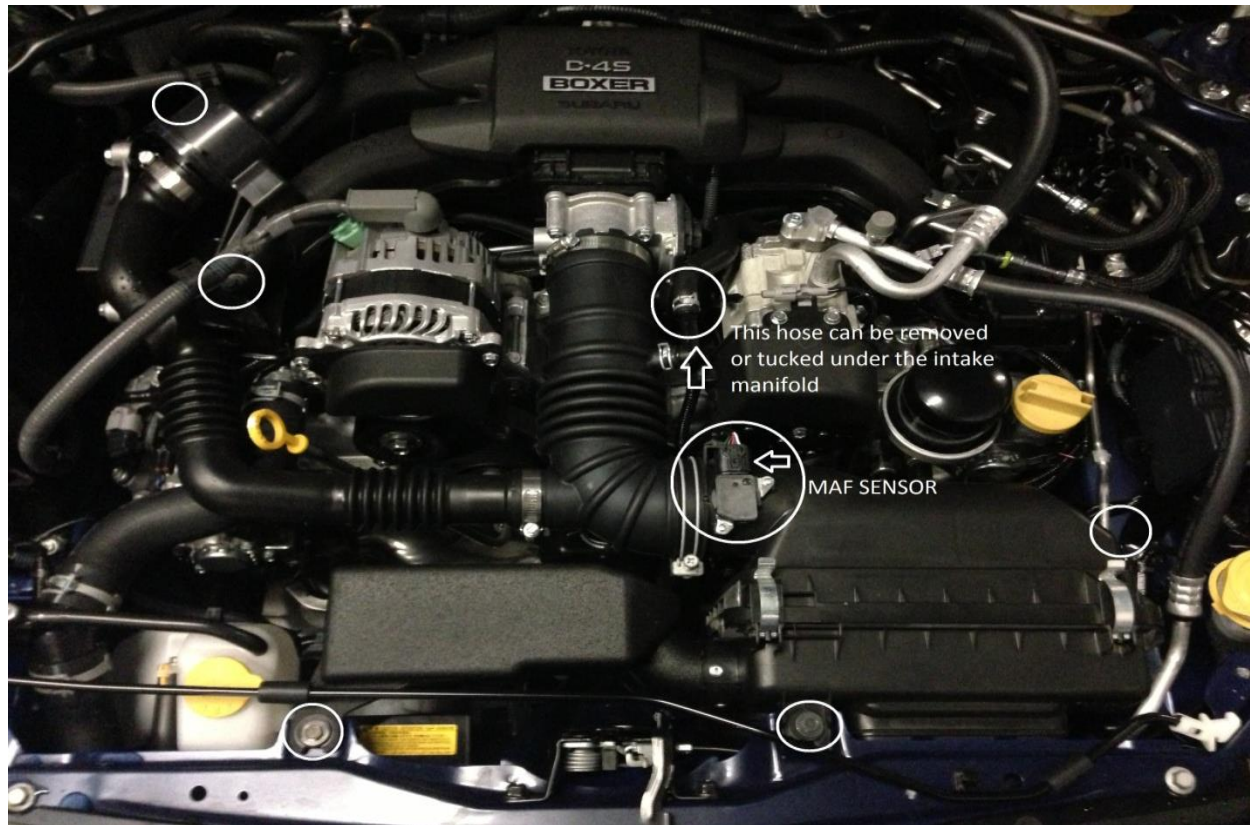


FBM FRS/BRZ Base Kit Install

Removing Factory Air Intake

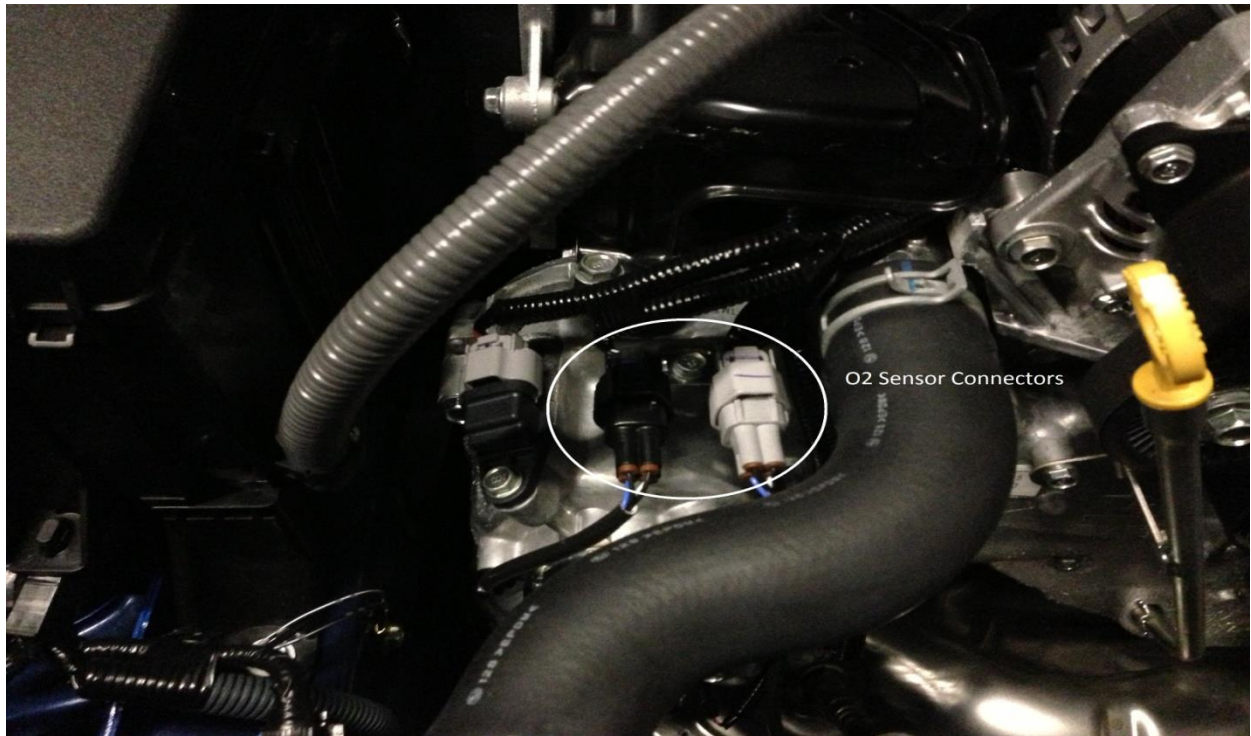
Disconnect the MAF sensor plug and remove the factory intake and intake components.



FBM FRS/BRZ Base Kit Install

Removing Exhaust Manifold

Disconnect the (2) factory O2 sensors.



Remove the aluminum and black under panel.



FBM FRS/BRZ Base Kit Install

Remove the O2 sensor on the side of the factory exhaust manifold. Remove the (2) 14mm bolts connecting the factory exhaust manifold and over pipe. Then remove the (6) 14mm bolts holding the factory exhaust manifold. Keep the manifold and over pipe gaskets. You will be reusing them. If you would like to use new gaskets you may, but they are not provided.



FBM FRS/BRZ Base Kit Install

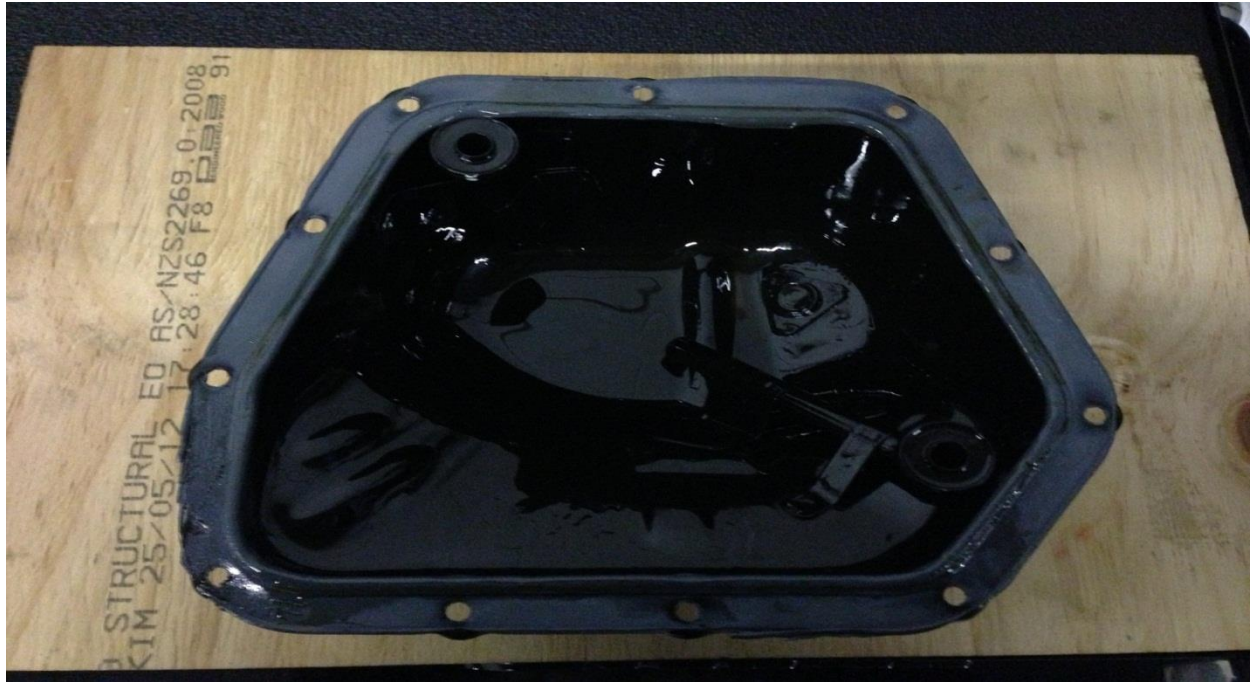
Removing Oil Pan

Drain the oil pan. Remove the factory oil pan by unbolting the (11) 10mm bolts. The oil pan does not have a gasket and is sealed by RTV sealant. It will be a little bit tough to remove the pan. The easiest way we found to remove the oil pan is using a small pry bar or screw driver and stick it in the front passenger side of the pan and gently pull down. Be careful not to pry too much on the surface of the engine. You should be able to stick your fingers in between the oil pan and the engine to pull the rest of the pan off.



FBM FRS/BRZ Base Kit Install

The oil pan will have a slight bend on the corner of the pan. Remove the two round gaskets and turn the oil pan upside down and using a soft rubber hammer tap the corner to flatten it back out. It helps to lay it face down on a piece of wood.



Using a razor blade, scrap off the old RTV from the oil pan. Wipe down the and clean the surface of the engine.

FBM FRS/BRZ Base Kit Install

You will have to drill the oil pan for the return bung. Shave part of the oil pan to clear the return bung. Drill the hole for the bung in the front of the pan. Grind the paint off inside the pan and weld the bung. The bung should be clocked slightly to the left. We advise checking the fitment on the car before compeltly welding the bung on.



FBM FRS/BRZ Base Kit Install

Remove/Install Slim Fans/Intercooler

Remove the front plastic under panels.

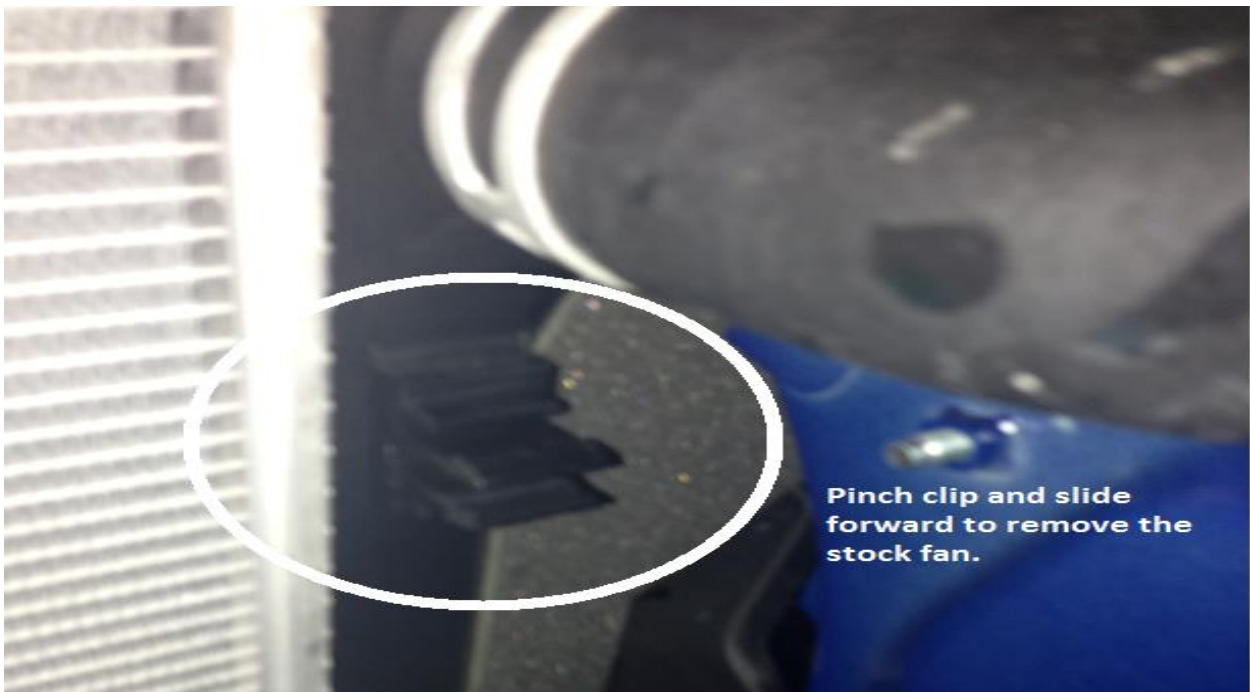


Remove the (2) 10mm bolts holding the coolant reservoir in place. This will be relocated with our supplied brackets. Save one of the 10mm bolt. You will be using it to mount the reservoir with the supplied relocation brackets.



FBM FRS/BRZ Base Kit Install

Unplug the factory fans plugs and remove the factory fans.



FBM FRS/BRZ Base Kit Install

Remove the front bumper. There is (4) plastic screw on each side of the splash guard. When those are removed you can pull back the splash guard and remove the side markers. Disconnect the connectors on the side marker and remove the plastic pop rivet. Remove the (5) 10mm bolts and the (2) plastic pop rivet and the metal bar lifts off. Pull firmly on the corners of the bumper and the bumper will come off. Disconnect the fog light wiring.



Remove the (2) 10mm bolts holding the front intake. Keep one of the two bolts for the intake tube. It will be used to mount the new intake.

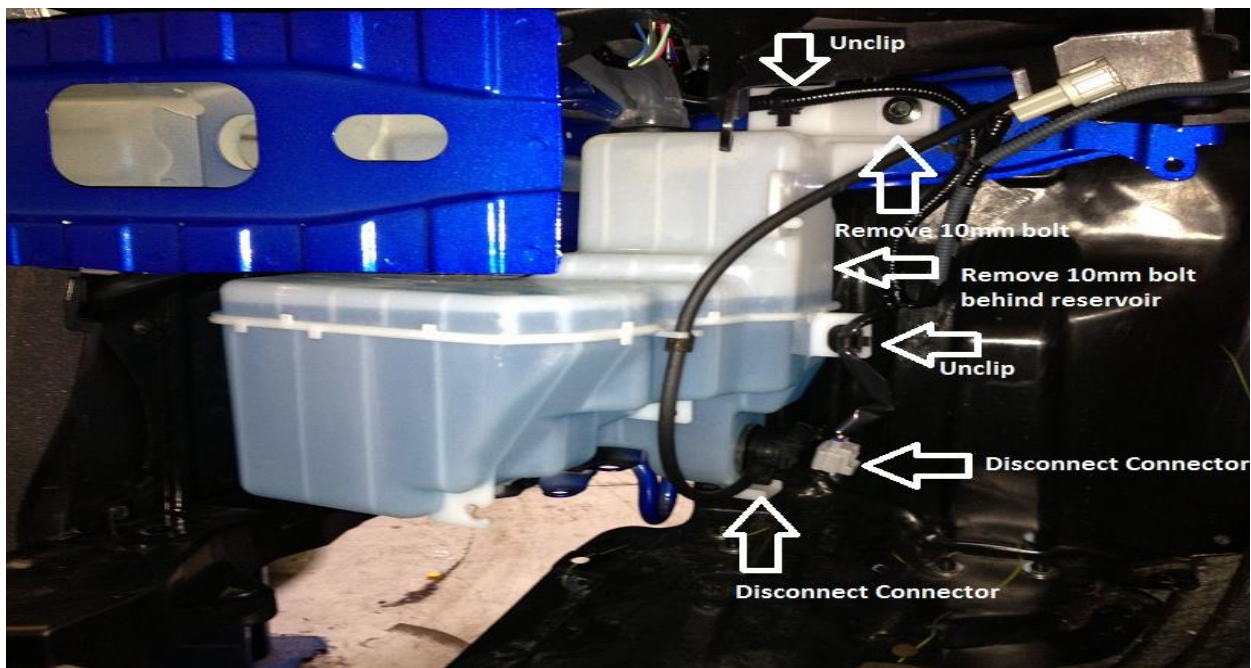


FBM FRS/BRZ Base Kit Install

Remove the (6) 12mm bolt holding the bumper support in place. There are four bolts up to and two on the bottom. Disconnect the latch and set the support bar aside.



Remove the washer fluid reservoir.



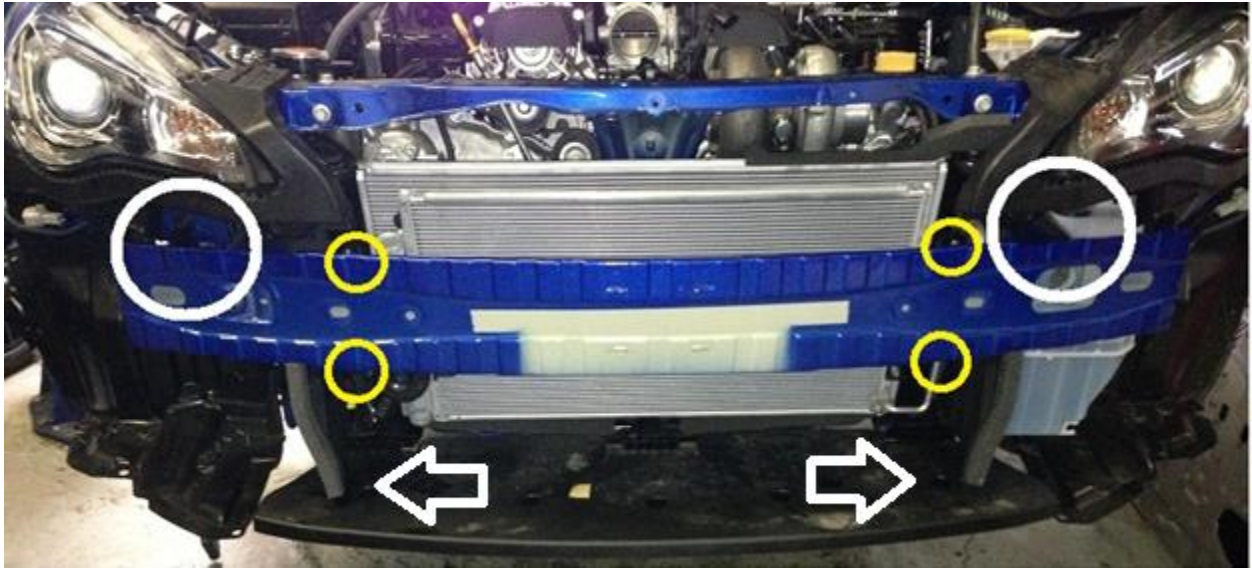
FBM FRS/BRZ Base Kit Install

Remove the horn from the bumper support. Relocate the horn using the bolt and nut from the horn bracket.



FBM FRS/BRZ Base Kit Install

Remove the (8) 12mm bolt holding the bumper support and the two plastic pop rivet. Set the bumper support aside. There is some modification to fit the intercooler in place. Remove the (4) 10mm bolts holding the A/C condenser in place.



Install the slim fans. Slip the tie through the fan mount with the cushion between the fan and the radiator. Stop when you see the tie at the other end of the radiator and attach the clip to the end. The easiest way to do this is to pass the tie all the way through the A/C condenser and the cut off the excess part of the tie.



FBM FRS/BRZ Base Kit Install

Cut off the stock fan connector off the stock fan. Using the butt connectors, match up the wire colors and crimp the stick fan plug to the driver side slim fan. The passenger side fan will be wired up with butt connectors.



FBM FRS/BRZ Base Kit Install

Reinstall the A/C condenser bolts and reinstall the washer fluid reservoir. When reinstalling the neck of the reservoir tuck the mounting tab behind the headlight.



The bumper support bar will need some modification to fit flush with the under panel. We used a unibit for this or separate drill bits will work too. The hole to mount the support bar will need to be drilled to 9/16. This will allow the bar to be pushed up 1/2" up. There is also a hole on the front of the support bar that need to be drill to 7/16 to fit the intercooler hardware. Put the support back on while pushing up and bolting the support back on.



FBM FRS/BRZ Base Kit Install

Mount the intercooler with the tabs behind the bumper support. Mount it with the supplied 7/16 bolt, nut and lock washer. Reinstall the first plastic front under panel.



Remove the plastic pieces on the support bar. They are on with (1) push pop rivet on each side. Drill two plastic tabs on each piece to remove the front portion. Reinstall on the car. Reinstall the plastic pop rivet on the bottom of each plastic piece to the front under panel.



FBM FRS/BRZ Base Kit Install

Trim some of the plastic with a utility knife to make room for the intercooler piping. You will also need to trim part of the washer reservoir tab.



Installing Oil Feed

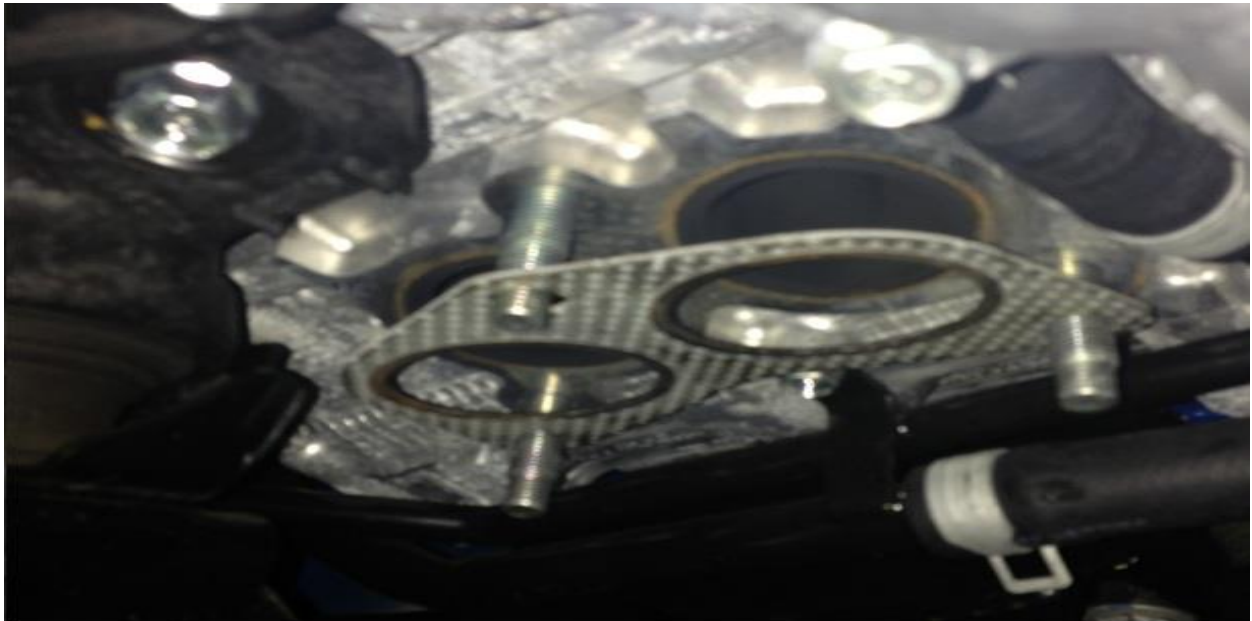
Remove the oil pressure sensor. This is located beneath the oil filter. Install the brass fitting in place of the oil pressure sensor. The 90 degree -4 fitting should be installed in front of the brass fitting pointing down and the oil pressure sensor to the side. Use thread sealant or Teflon tape on the threads.



FBM FRS/BRZ Base Kit Install

Install Turbo Manifold/Wastegate/Turbo

Install the manifold gasket and turbo manifold. If you are reusing the stock gasket you can just put them on and let them hang until you put the turbo manifold on. Tighten up the manifold bolts.



Before installing the turbo, install the -4 turbo restrictor using thread sealant or Teflon tape. Also install the oil return flange with the gasket between the flange and turbo. Screw the -10 fitting using thread sealant or Teflon tape. Install the turbo onto the manifold with the T3 gasket in between the manifold and turbo. The turbo will need to be clocked. Loosen the bolts on the exhaust side to move the center section and loosen the bolt on the compressor side to move the compressor housing. Retighten when clocked.

FBM FRS/BRZ Base Kit Install

The return line is not assembled. The reason for this is, when welding the return bung they are not always in the exact same spot. This allows you to cut the return line to the correct length. First you want to remove the tape from the nylon line. Remove the bottom sleeve from the fitting and clamp it into the vise. Push the nylon line into the sleeve. You can put a little bit of grease on the inside of the line to help the fitting rotate easier. Install the top part of the fitting and turn it until it bottoms out. Check the length of the line between the oil pan bung and oil drain fitting. Cut off any excess line. Repeat the same steps for the fitting on the other end of the line.



FBM FRS/BRZ Base Kit Install

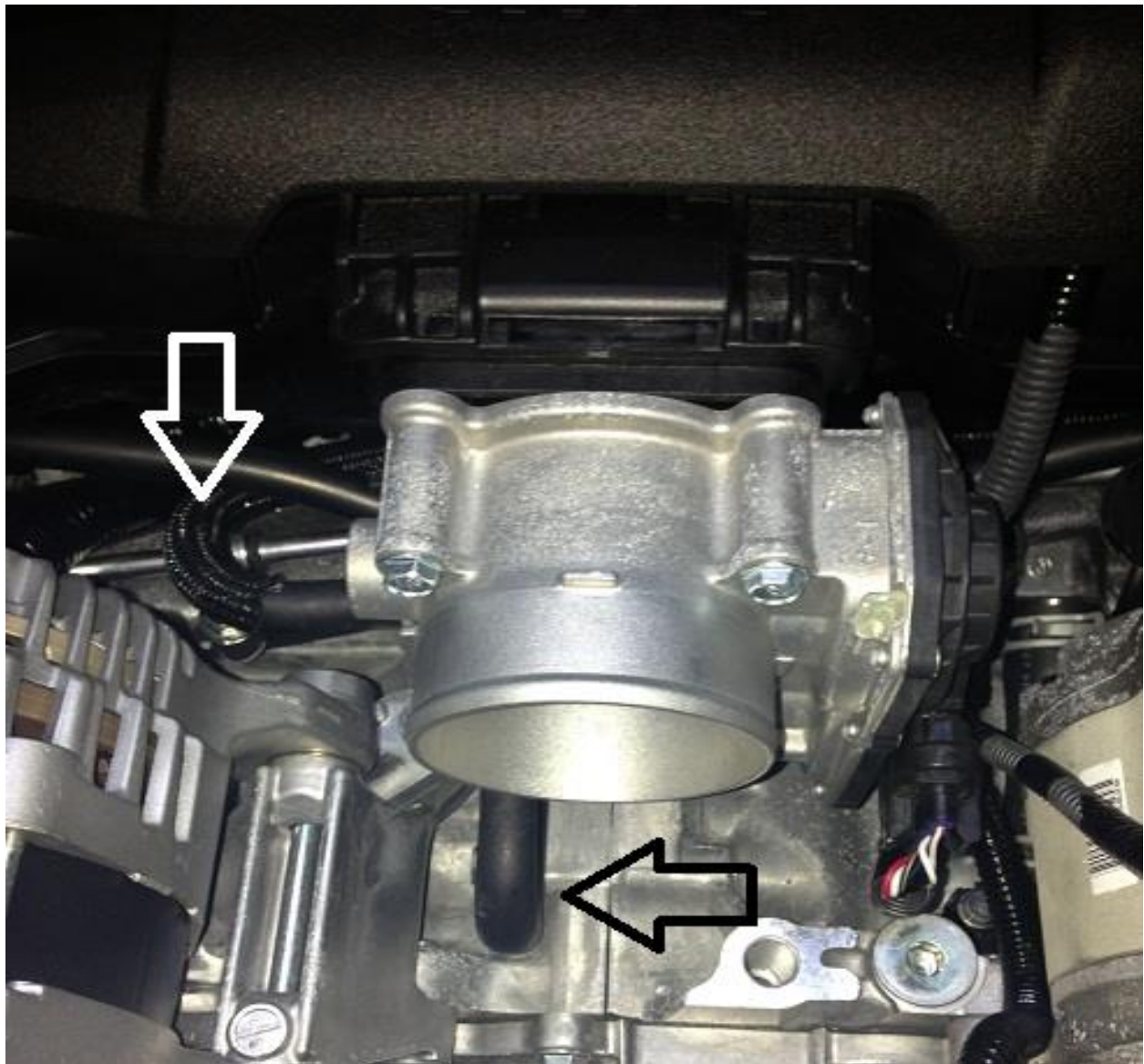
Install the wastegate onto the turbo manifold. There is a 7psi spring preinstalled in the wastegate. There are two ports on the side of the waste gate and one port on the top of the wastegate. One of the two side ports will be a vacuum source for the wastegate and the other port will be blocked off. The top port will be vented to atmosphere. Then install the dump tube to the wastegate with the gasket in between.



FBM FRS/BRZ Base Kit Install

Installing Water Lines/ Oil Feed Line

There are two coolant lines that connect to the throttle body that will be used for the water lines on turbo. These hoses will need to be cut in half. The supplied barb fitting will go in between the line and the water line for the turbo will go in the middle. There are two water lines, the longer line will go to the front of the turbo and the shorter line goes to the rear of the turbo. The longer line routes to the coolant line to the left of the throttle body and the shorter line routes to the coolant line in front of the throttle body.



FBM FRS/BRZ Base Kit Install

The mesh sleeve on the coolant line to the left of the throttle body will need to be cut back. Once you cut it back you can cut the coolant line at the middle of the U. Using the supplied clamps, clamp the lines.



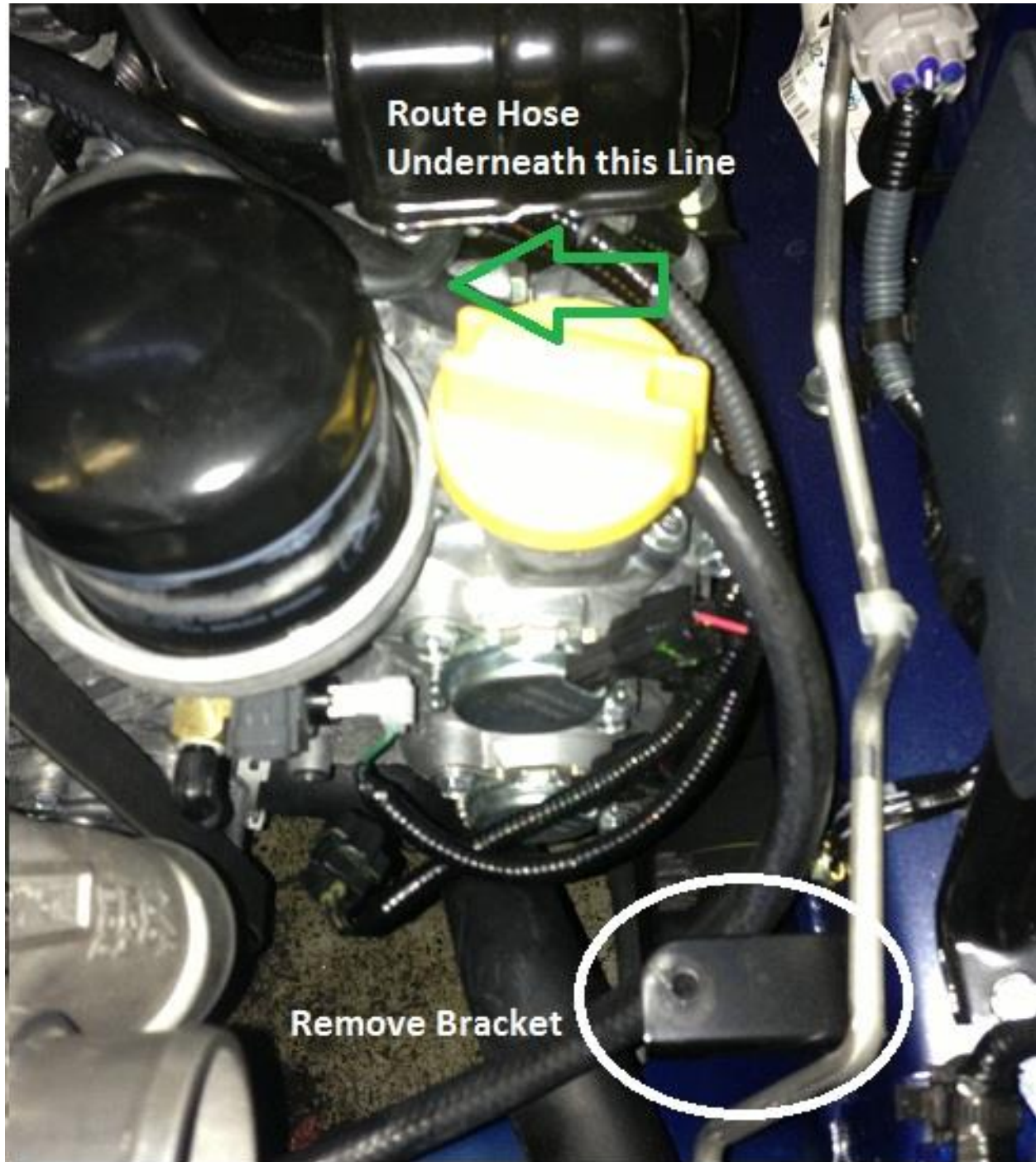
FBM FRS/BRZ Base Kit Install

The easiest way to install the fitting is to install the banjo onto the water line first and then bolt it to the turbo with a 21mm wrench. The front water line will come with a heat resistant sleeve.



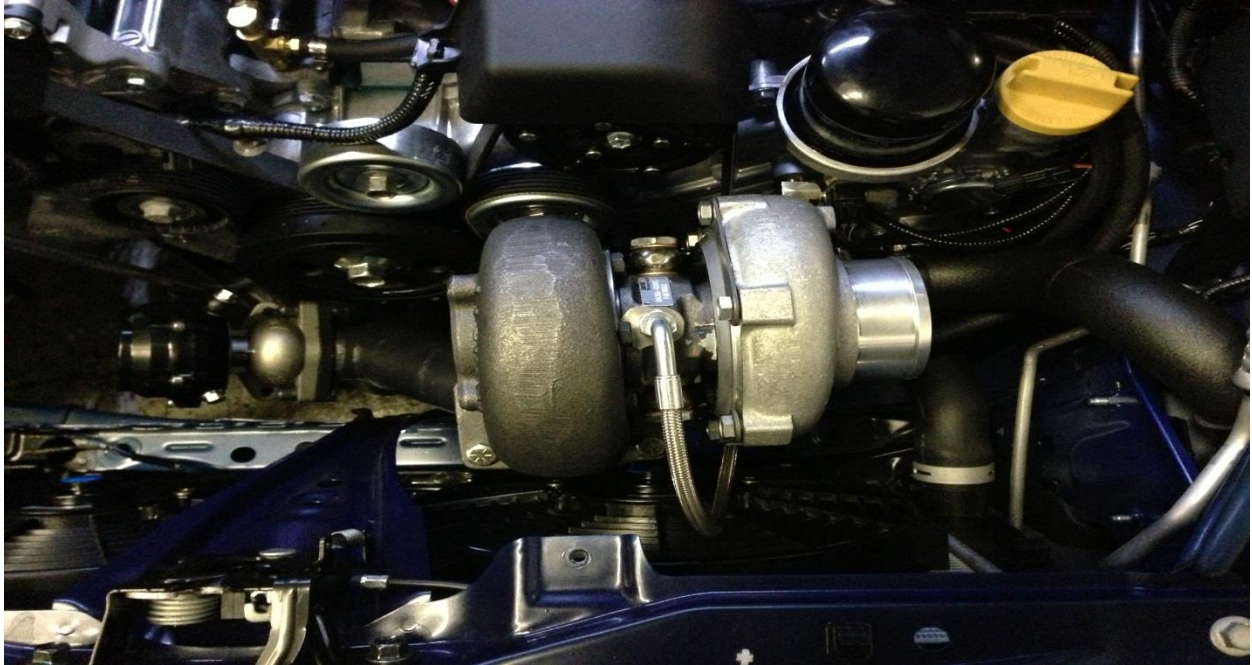
FBM FRS/BRZ Base Kit Install

Remove the small bracket on the driver side frame rail. Route the water lines to the right of the oil fill and underneath the A/C compressor to the brass fitting.



FBM FRS/BRZ Base Kit Install

The oil feed line will route toward the front of the motor and loop under the turbo to the -4 fitting.



FBM FRS/BRZ Base Kit Install

Installing Intake Manifold Tee

Remove the intake cover to expose the vacuum source. Remove the vacuum plug. Attach the 4" of 3/8 line onto the vacuum tee. The vacuum plug will go to the bottom of the vacuum tee. The 1/4 barb will be your vacuum source for the blow off valve and the wastegate tied together with the supplied vacuum tee.



FBM FRS/BRZ Base Kit Install

Installing Intercooler Piping

Remove the passenger side head light. There are (5) 10mm bolts to remove. (2) bolts on the top, (2) bolts on the side and (1) bolt on the bottom of the headlight. Remove plastic headlight cover and then pull headlight out. Unclip the harness from the headlight. (BRZ ONLY) This connector will need to stay unclipped to clear the intercooler piping.



FBM FRS/BRZ Base Kit Install

Install the cold side intercooler piping and BOV. Install the MAF sensor.



FBM FRS/BRZ Base Kit Install

Install the hot side intercooler piping. The intercooler piping will fit very snug behind the bumper. Fit the pipes with the clamps loose and clip the bumper on. With the bumper on you should be able to make any adjustments underneath. Tighten the clamps and install and adjust the pipe to the turbo.



FBM FRS/BRZ Base Kit Install

Installing Coolant Reservoir

The stock reservoir sits on the stock fan so it will have to be relocated. We provide two brackets to mount the coolant reservoir. Bolt the small bracket to the reservoir. Then bolt the larger bracket to the frame. Slide the reservoir onto the bottom bracket and using a spare 10mm bolt the top bracket to the support.

