

## **Rocky Mountain Westy Shortened Oil Pan Dipstick Tube Retrofit**

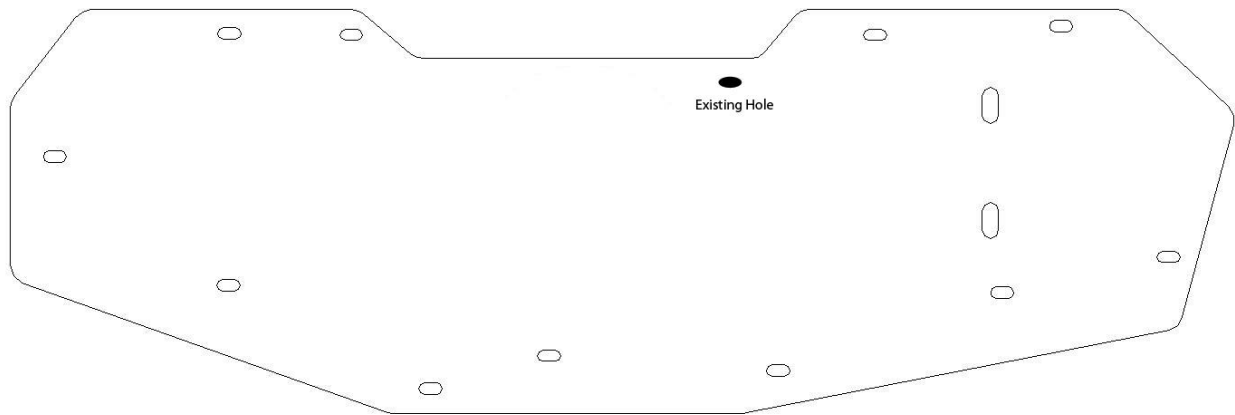
### **Installing the Dipstick Tube**

*Your dipstick tube bracket and hardware may look a little different than pictured in these instructions due to variations from model to model. Installation is similar throughout the configurations.*

1. Install the push-to-connect fitting into the oil pan by threading it in until the top of the fitting protrudes about ½ inch from the top of the oil pan. When the fitting is correctly installed, there will be little to no threads showing above the oil pan. This may take some effort. Temporarily place tape over the fitting to prevent contaminants entering in oil pan.



2. Next you'll be installing the supplied aluminum bracket on the Rocky Mountain Westy heat shield. All new heat shields are crafted with the correct hole configuration for the dipstick tube bracket. You can determine whether you have a new or old style heat shield by looking at the area around hole in the diagram below. If there are two holes in the marked position you have a new style heat shield and you can skip the following modification to your heat shield. If you have just one hole in the marked position you will need to drill a second. Please read through the following steps completely before drilling.



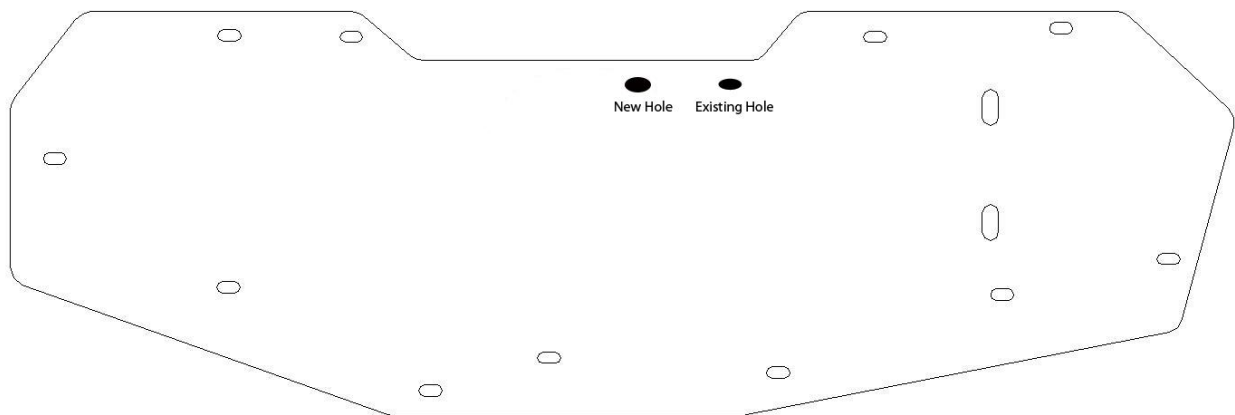
2a. We'll be using the existing hole in the diagram above to mark the additional hole required for the bracket. Align the dipstick tube bracket with the heat shield as shown in the photo using the right-side hole in the bracket aligned with the existing hole.



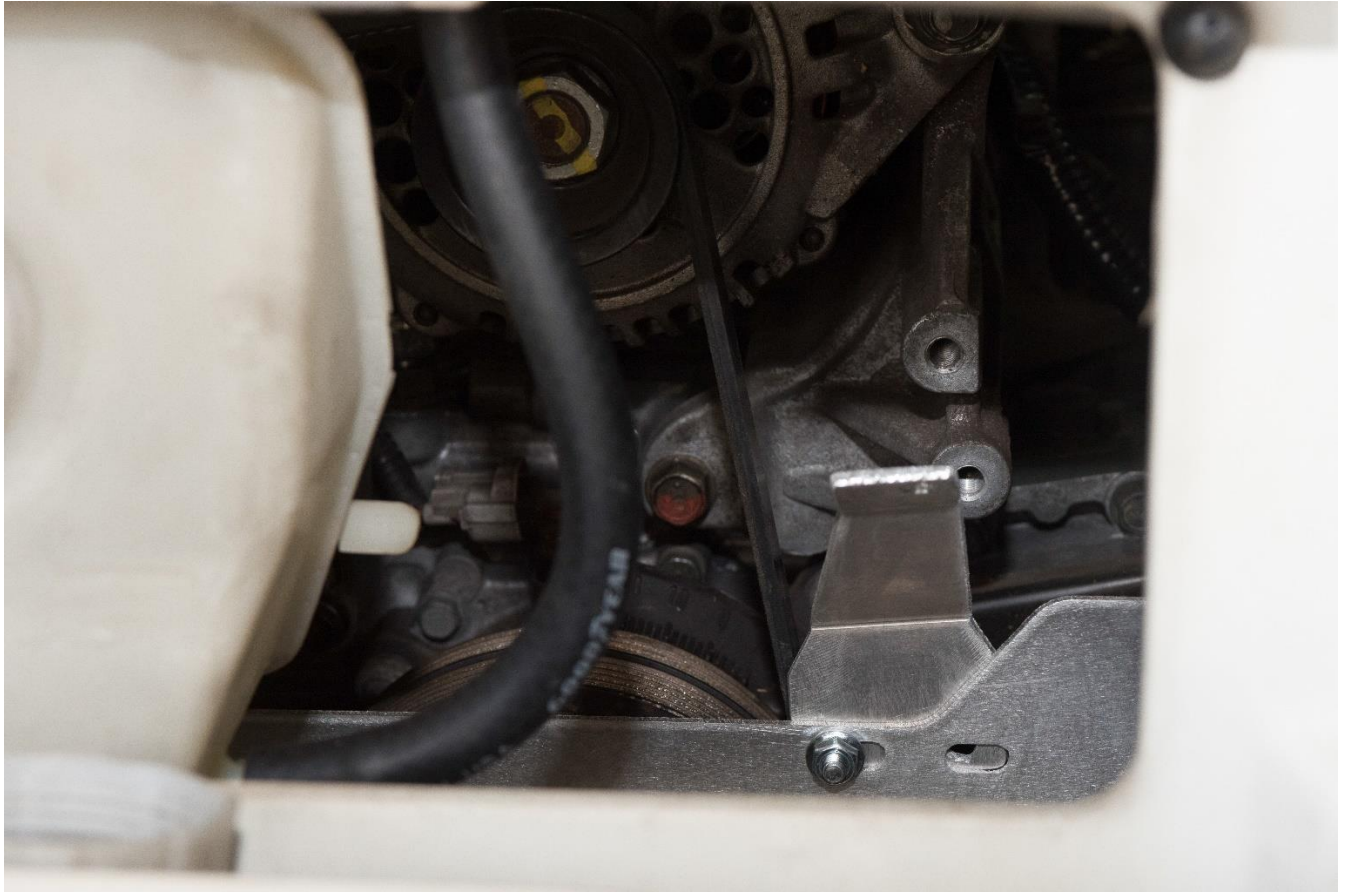
Mark the heat shield through the left hole and remove the bracket. Center punch at your mark and carefully drill a new hole with a 1/8" and then a 1/4" bit. Use a file to slot the new hole to match the existing hole.

IF YOU'RE DRILLING THE HOLE WITH THE HEAT SHIELD INSTALLED WE RECOMMEND PUTTING A BLOCK OF WOOD BEHIND YOUR HEAT SHIELD SO THAT YOU DON'T INADVERTENTLY DRILL INTO YOUR TIMING COVER!!!

Your end result should look like this:



3. Loosely bolt the bracket onto the engine side of the heat shield using the inside slot as shown in the photo below.



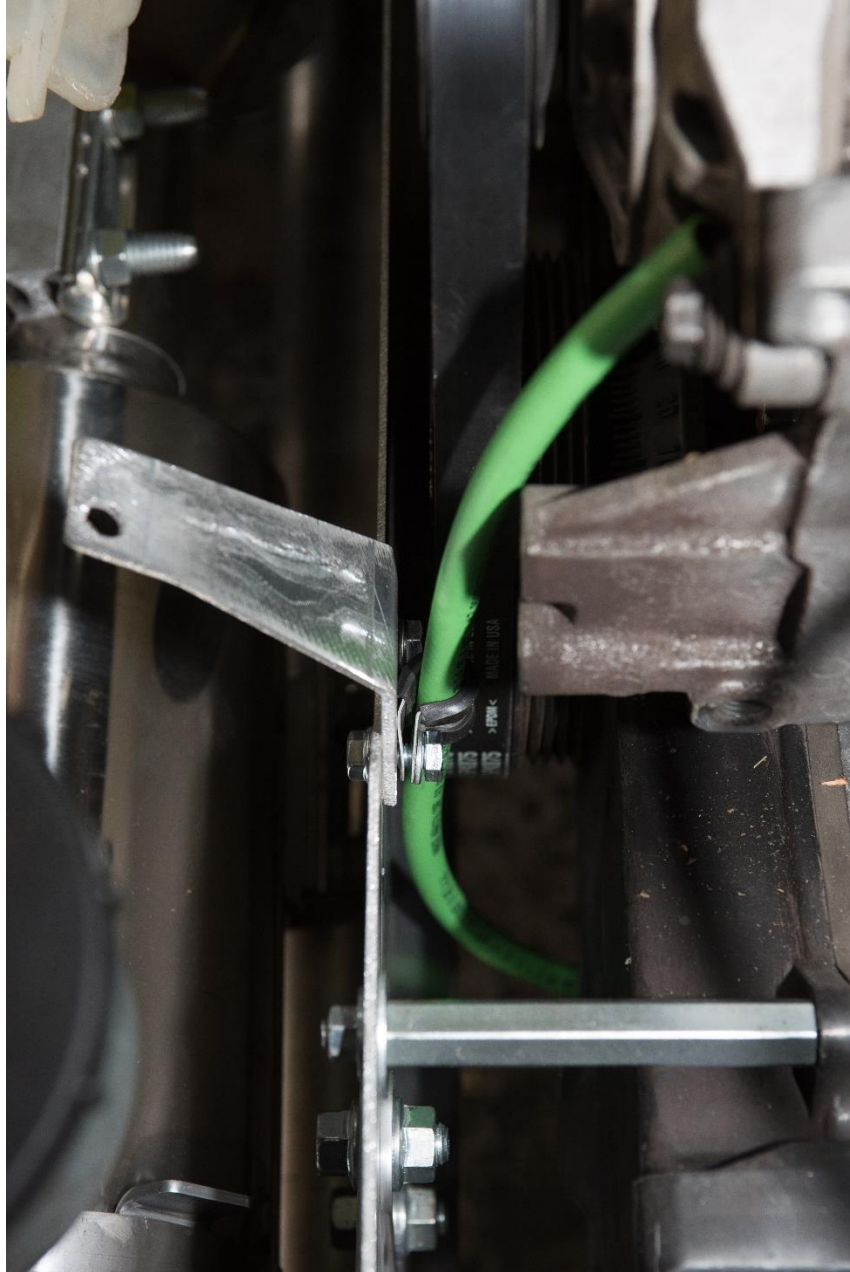


4. Take a look at your dipstick tube and notice that one end is slightly larger in diameter. This side faces up toward the dipstick handle. Remove the tape you placed on the oil pan brass fitting and install the smaller end of the dipstick tube into the oil pan by pushing it firmly. This is a one-way fitting: once you start installing the tube you will not be able to pull it back out so make sure you're sure about which end is correct.

Push firmly until you feel the tube hit a stopping point inside the fitting.



5. Slide the p-clamp over the top of the dipstick in such a way that the flat part of the clamp rests against the heat shield. Insert a bolt from the engine side of the p-clamp and through the bracket and heat shield. Loosely install a washer and nut on the rear-side of the heat shield. The dipstick tube will be positioned in between the two bracket mounting bolts. See photo below for reference.



6. Slide the black plastic routing clamp over the dipstick tube so that the bolt hole on the clamp lines up with the bolt hole on the right side of the bracket. Insert a bolt through the clamp and bracket and loosely install a nut onto the exposed threads.



7. Position the tube so that it runs in as vertically straight as possible. Be very aware of the crankshaft pulley and ensure that the dipstick tube clears the pulley with plenty of space. Tighten the fasteners making sure that the dipstick doesn't shift while doing so.

8. With a funnel, pour a small amount of engine oil into the tube. Lubricate the dipstick with engine oil and insert it into the tube. Go slowly and work the lubrication into the tube. There will be some resistance until the sides of the tube are fully coated with oil. If the dipstick becomes difficult to insert, pull it out and relube the tube and stick. Once the dipstick is fully inserted, remove it and insert it a number of times. You will notice that the stick will install more and more smoothly each time.



9. Prime and install Subaru filter and fill with approximately 4.5 quarts of 5/30 motor oil for the 2.5 liter and 10/30 for the 2.2 liter. Refer to Subaru specifications pertaining to your specific engine for oil type, weight and service intervals.