



BMW S54 Silicone Throttle Body Intake Boot Set Installation



Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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KIT CONTENTS



**Throttle Body Couplers
(to replace the stock rubber couplers)**



**50-70mm & 60-80mm Hose Clamps
(to secure the intake boots to the throttle bodies)**

INSTALLATION NOTES

- **RH** refers to the *passenger side* of the vehicle.
- **LH** refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

Turner Motorsport cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.



NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

REMOVING THE STOCK INTAKE SYSTEM

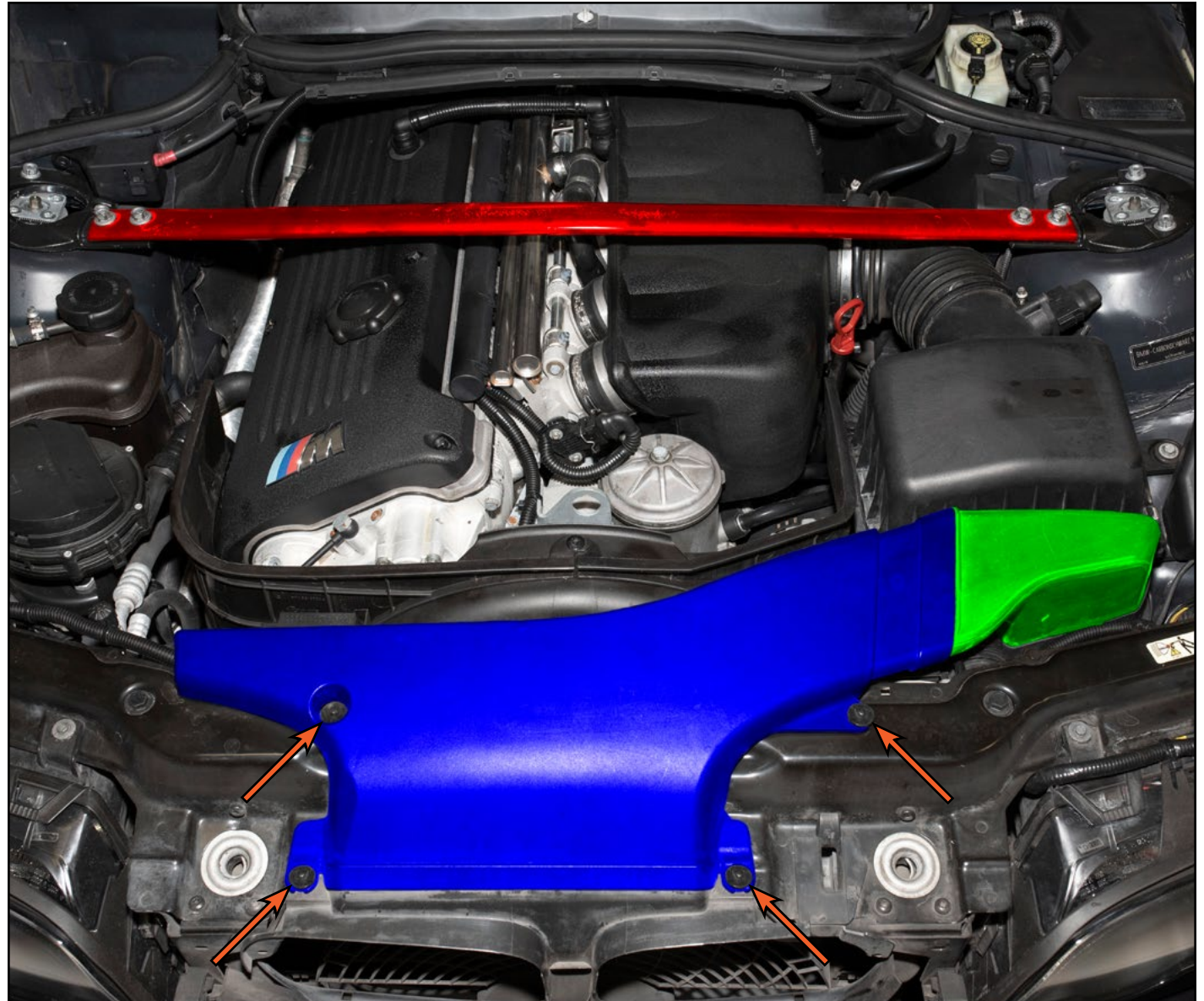
Step 1:

Disconnect the negative (-) battery terminal (not shown).

Remove the four 13mm nuts which secure the strut tower brace (highlighted in **RED** in the photo on the right).

Remove the plastic push rivets (arrows) which secure the intake air duct (highlighted in **BLUE**) into place. Needle nose pliers work really well for these clips, especially the one recessed inside the scoop.

Lift the inlet duct (highlighted in **GREEN**) upward to remove it from the air filter housing.



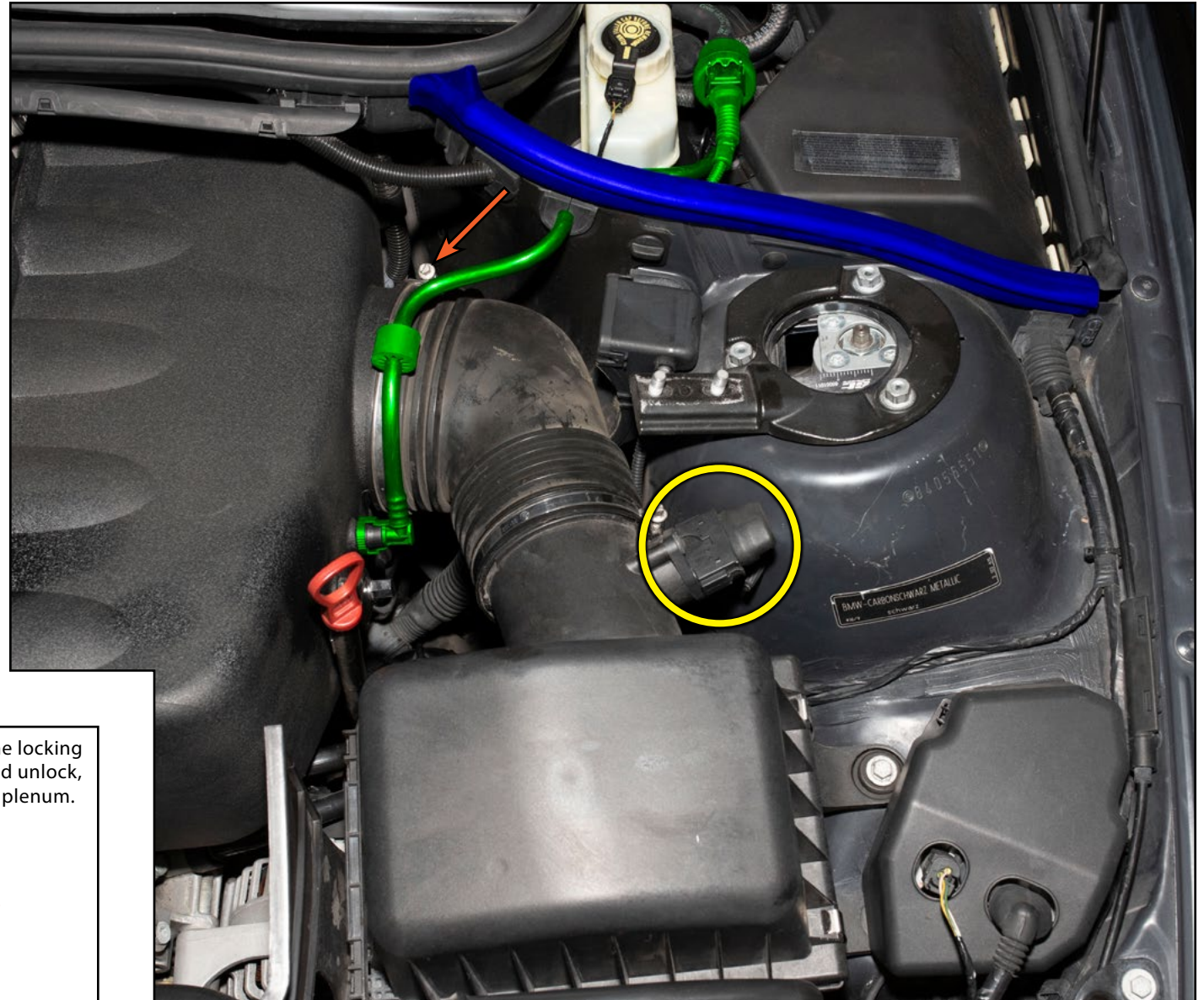
REMOVING THE STOCK INTAKE SYSTEM

Step 2:

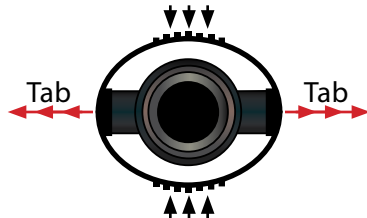
Disconnect the air shut off pipe (highlighted in **GREEN** in the photo on the right) from the stock plenum as described in the illustration below. Release the electrical connector from the air shut off valve, then remove the valve from the rubber hose.

Lift the cowl seal upward (highlighted in **BLUE**), then remove the air shut off valve assembly from the vehicle.

Loosen the hose clamp (arrow) which secures the coupler to the plenum, then disconnect the MAF sensor (circled in **YELLOW**).



TO REMOVE: Squeeze the knurled sides of the locking ring together and the tabs will expand out and unlock, allowing you to pull the connector off of the plenum.



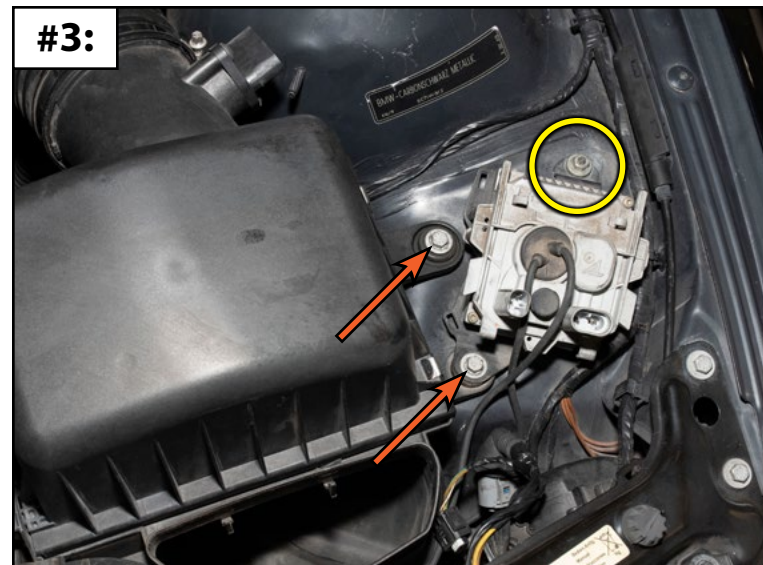
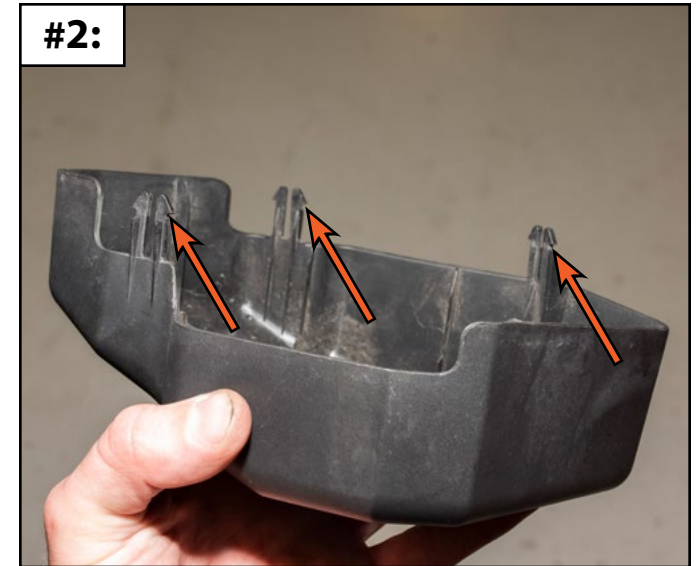
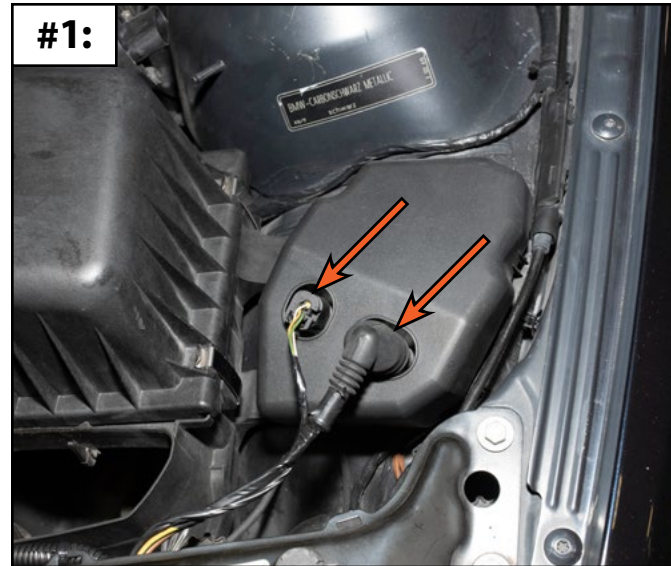
REMOVING THE STOCK INTAKE SYSTEM

Step 3:

Release the harness connectors from the LH xenon ballast, located just in front of the LH strut tower (**ORANGE** arrows in **photo #1**).

Release the clips which secure the plastic cover onto the LH xenon ballast (**ORANGE** arrows in **photo #2**). These clips can be tricky to see, let alone reach. Try using a small 90° pick to apply gentle pressure to the clips while you carefully lift upward on the cover.

Remove the two 10mm bolts from the LH xenon ballast (**ORANGE** arrows in **photo #3**), then loosen the 10mm nut (circled in **YELLOW** in **photo #3**). Swing the ballast out of the way to make room for the air filter housing to be removed.



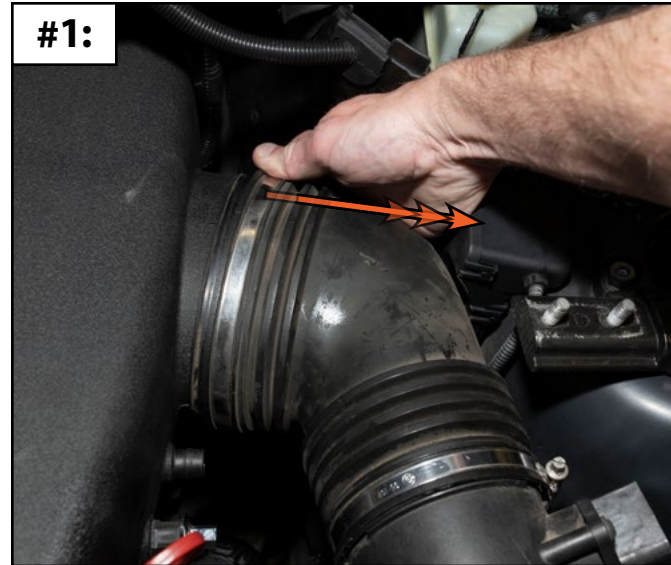
REMOVING THE STOCK INTAKE SYSTEM

Step 4:

Pull the flex coupler off of the stock plenum (**photo #1**).

Lift the air filter housing out of the engine bay as shown (**photo #2**).

Loosen the three $\frac{1}{4}$ turn fasteners on the cabin filter housing cover (arrows in **photo #3**), then remove the cover and the cabin filter beneath it (not shown).

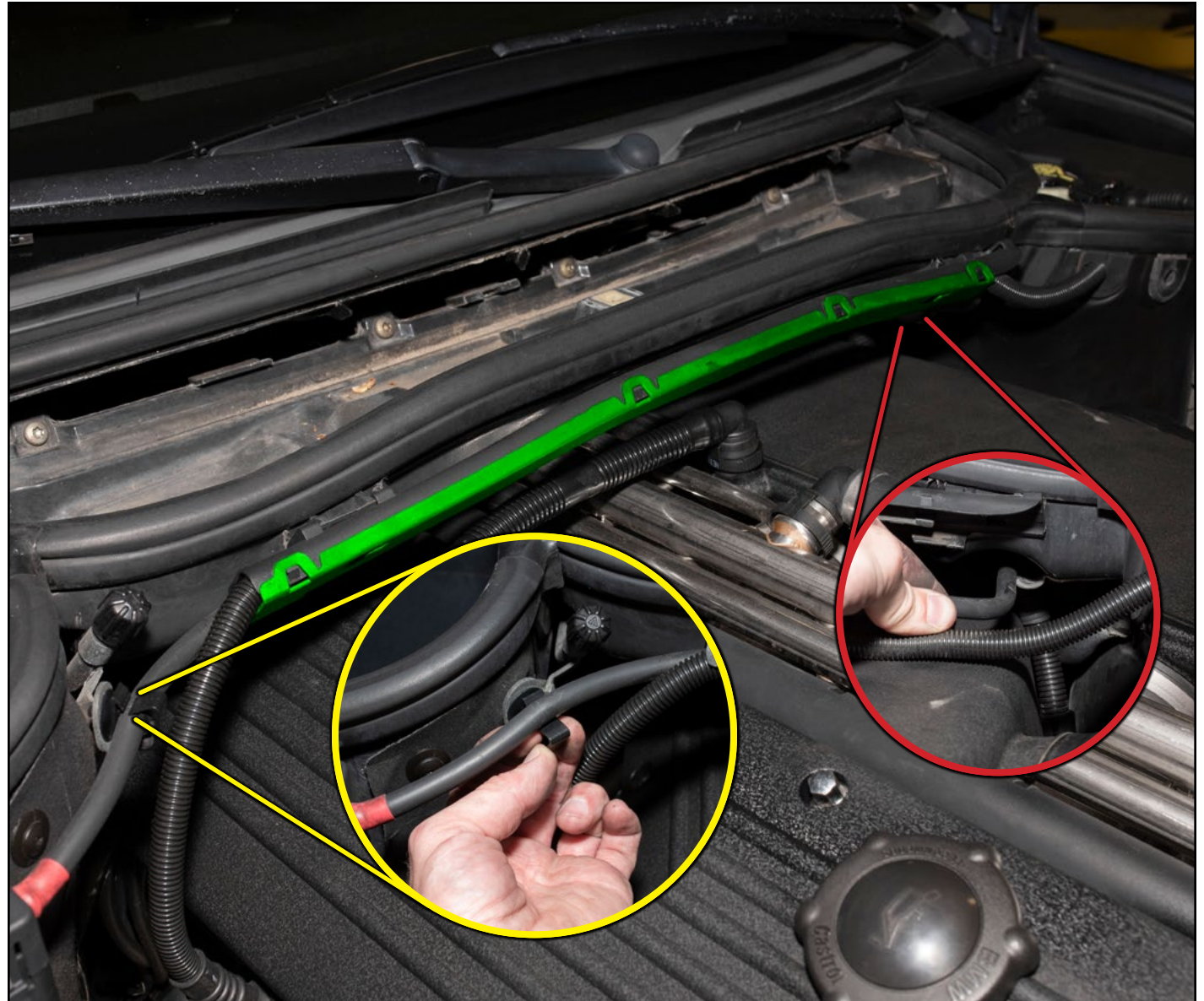


REMOVING THE STOCK INTAKE SYSTEM

Step 5:

Remove the cable channel cover (highlighted in **GREEN** in the photo on the right) by releasing all of the clips and pulling it off.

Release the two cables from the channel (not shown), then release the power cable from the RH strut tower (**YELLOW** inset photo), and pull the cable free from the support bracket located underneath the cabin filter housing on the LH side (**RED** inset photo).



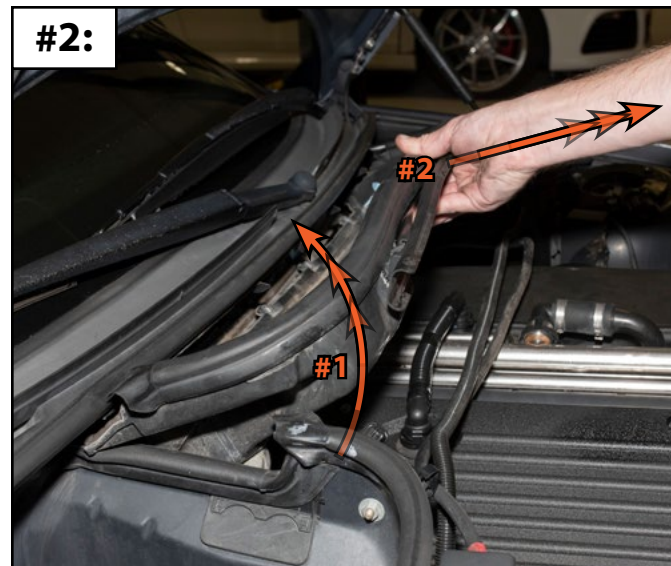
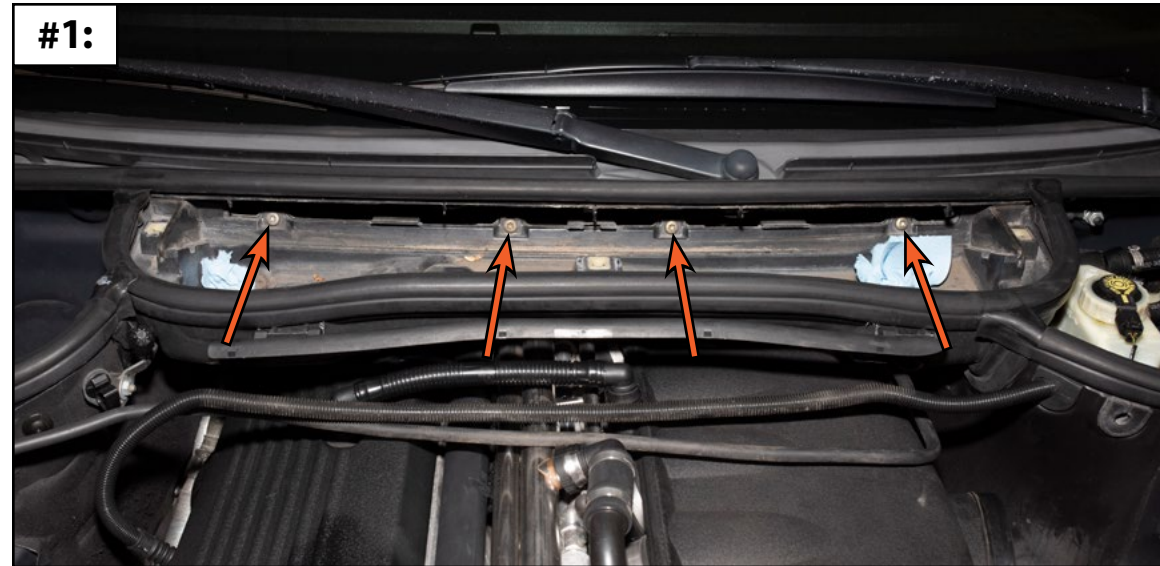
REMOVING THE STOCK INTAKE SYSTEM

Step 6:

Remove the four T30 screws which secure the cabin filter housing into place (arrows in **photo #1**). It's a good idea to stuff some paper towels into the drain holes inside the housing, this way if you drop any of the screws they won't fall and get lost down behind the engine.

Lift the front of the cabin filter housing upward slightly, then pull it toward the front of the vehicle to remove it (**photo #2**).

Remove the stock crankcase vent pipe which runs from the valve cover to the plenum (highlighted in **GREEN** in **photo #3**).

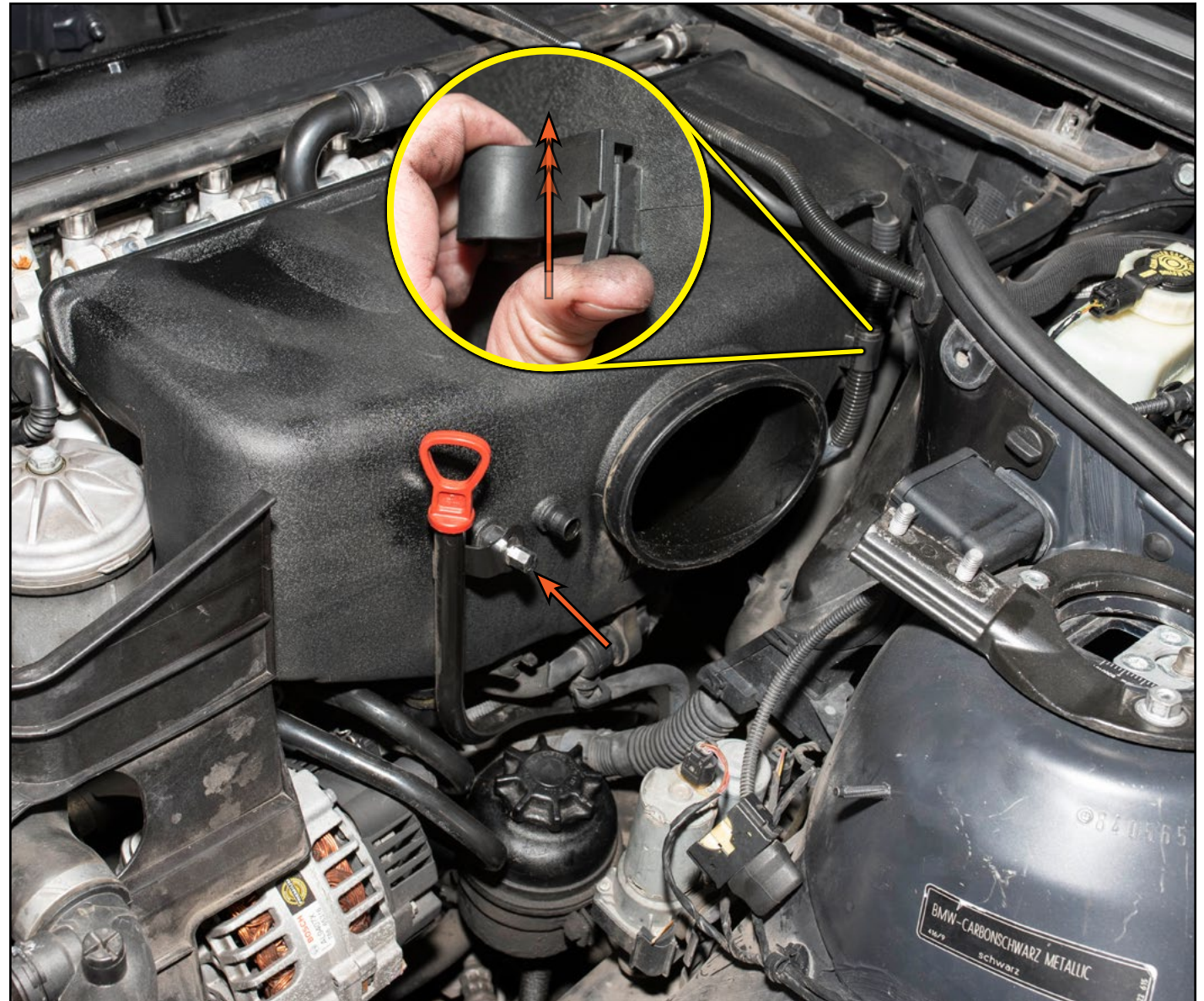


REMOVING THE STOCK INTAKE SYSTEM

Step 7:

Remove the 10mm nut which secures the engine oil dipstick tube to the side of the plenum (arrow in the photo on the right).

Release the bracket which secures the starter cable to the side of the plenum by gently pulling outward on the tab while sliding the bracket upward (YELLOW inset photo). This bracket is a bit tough to reach, be careful to not drop it down behind the engine.

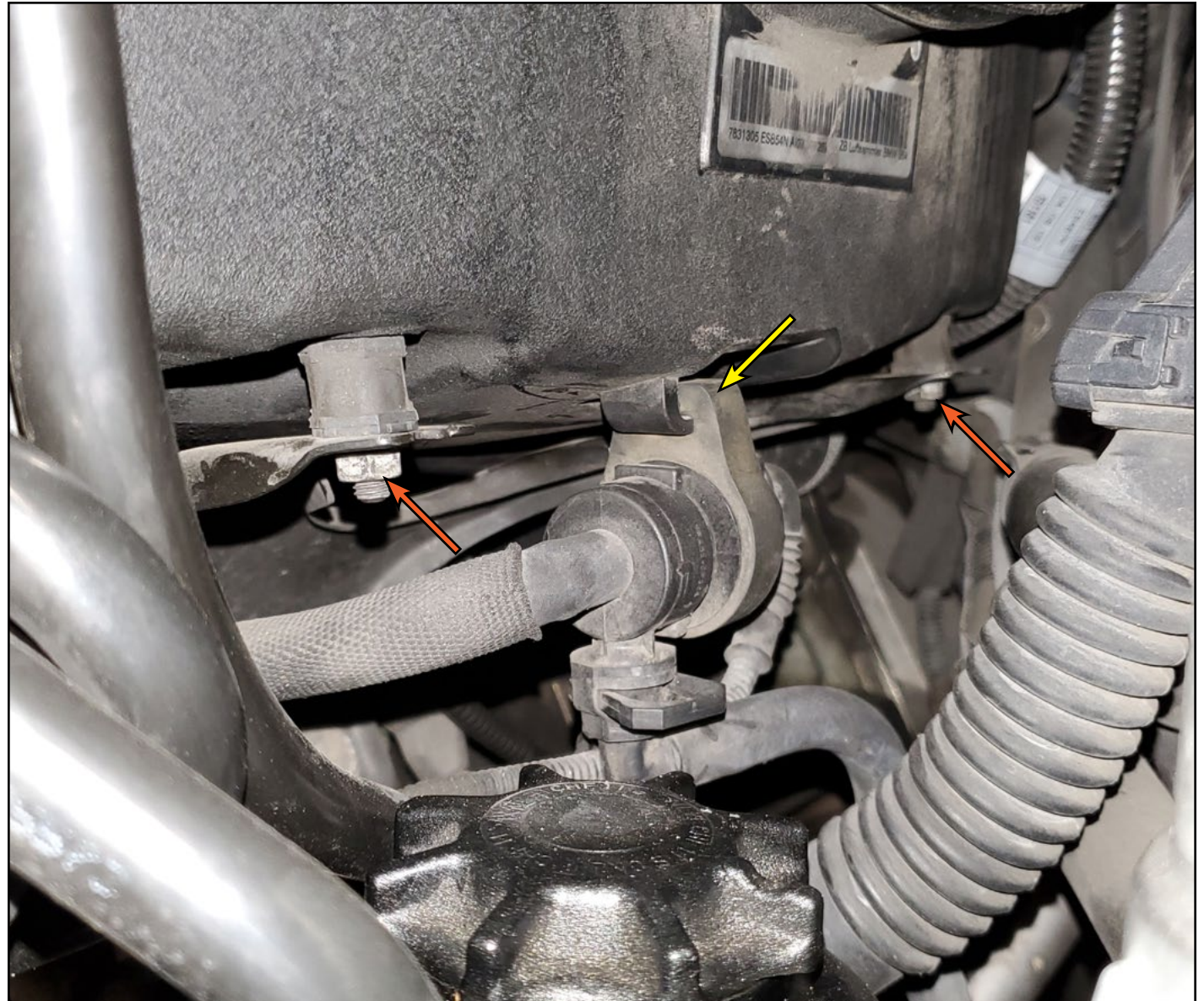


REMOVING THE STOCK INTAKE SYSTEM

Step 8:

Looking underneath the plenum, remove the two 10mm nuts which secure it to the mounting bracket (**ORANGE** arrows in the photo on the right).

Pull the rubber solenoid hanger off of the clip underneath the plenum (**YELLOW** arrow in the photo on the right).

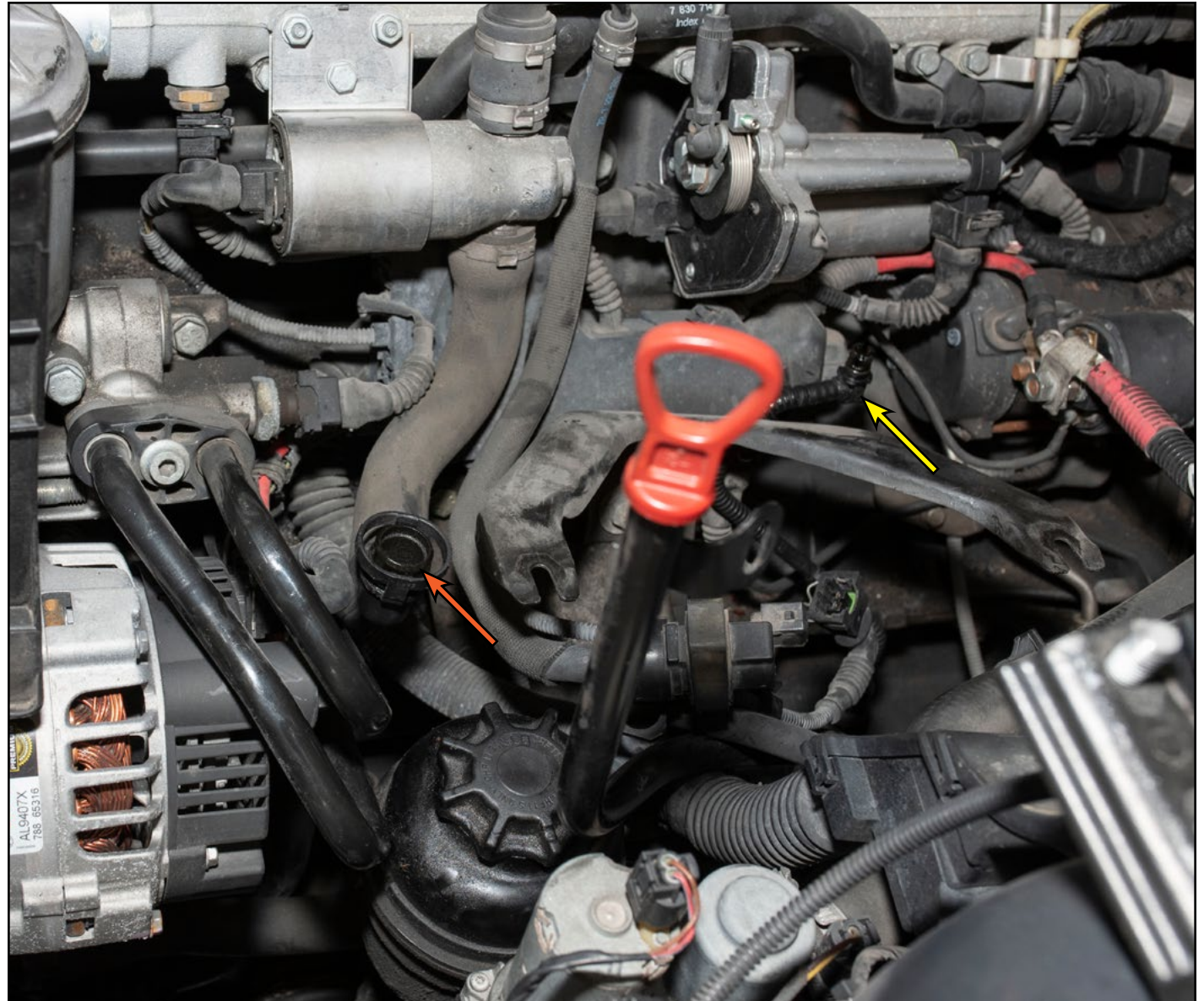


REMOVING THE STOCK INTAKE SYSTEM

Step 9:

Now we need to disconnect the two pipes from the plenum. The photo on the right shows their locations (**ORANGE** and **YELLOW** arrows) with the plenum already removed for maximum visibility.

The small pipe toward the rear is especially tricky to reach. You may be able to reach it from inside the plenum, or if you have small hands you might be able to reach underneath the plenum and pull it free.



REMOVING THE STOCK INTAKE SYSTEM

Step 10:

Release the two hoses from the back side of the plenum (shown in the **YELLOW** inset photo).

The upper hose is easy to reach (represented by a **BLUE** dashed line), the lower hose is a bit more difficult (represented by a **GREEN** dashed line).



REMOVING THE STOCK INTAKE SYSTEM

Step 11: Small Hose Pick or Flat Blade Screwdriver

Now it's time to remove the clamps from the clamps on the throttle body couplers. First, release the clamps (shown in **photo #1**), then pull them off of the couplers (**photo #2**).



REMOVING THE STOCK INTAKE SYSTEM

Step 12:

Now it's time to remove the plenum. Start by firmly grabbing the plenum and pull it off of the throttle bodies slightly (**photo #1**), then lift the plenum upward slightly and pull it the rest of the way off of the throttle bodies (**photo #2**).

Once all six throttle body couplers have been released you can remove the plenum from the engine bay (**photo #3**).



INSTALLING THE NEW SILICONE THROTTLE BODY INTAKE BOOT SET

Step 1:

Install the new silicone couplers onto the throttle bodies, and lay the clamps onto them. It's important to align the clamps in a way which allows for easy access while not interfering with the linkage for the throttle bodies.



INSTALLING THE NEW SILICONE THROTTLE BODY INTAKE BOOT SET

Step 2:

Carefully guide the plenum into the engine bay and align it with the throttle body couplers. Next, working from the rear to the front, push the plenum toward the engine until it is fully seated into all of the couplers (not shown).

Tighten all of the throttle body coupler clamps down until they are snug.

Remember, it's important to align the clamps in a way which allows for easy access, but won't interfere with the throttle body linkage.



INSTALLING THE NEW SILICONE THROTTLE BODY INTAKE BOOT SET

Step 3:

Reinstall the cabin filter housing and filter, intake air ducts, air filter housing, xenon ballast cover, strut tower brace and any other components in the reverse order of removal.



Your S54 Silicone Throttle Body Intake Boot Set installation is complete!



These instructions are provided as a courtesy by Turner Motorsport

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