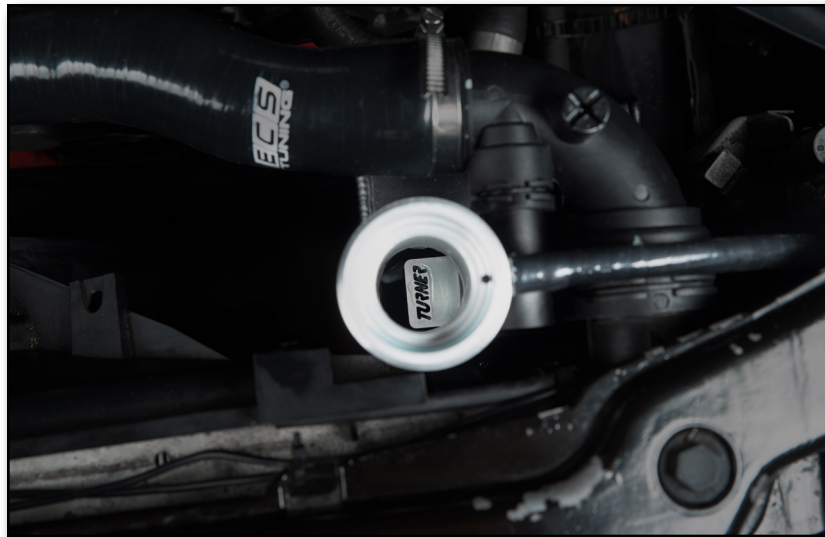




BMW M52/M54 Heavy Duty Expansion Kit Installation



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.

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.



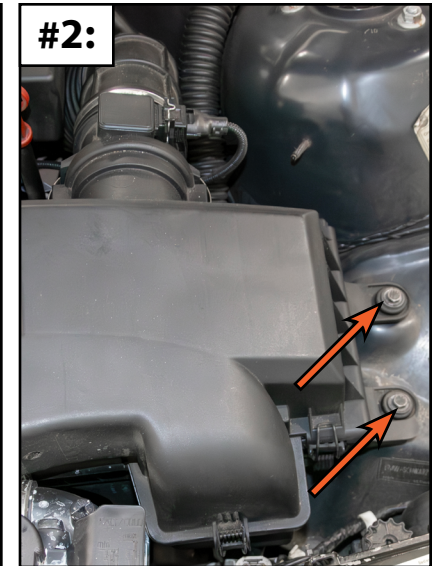
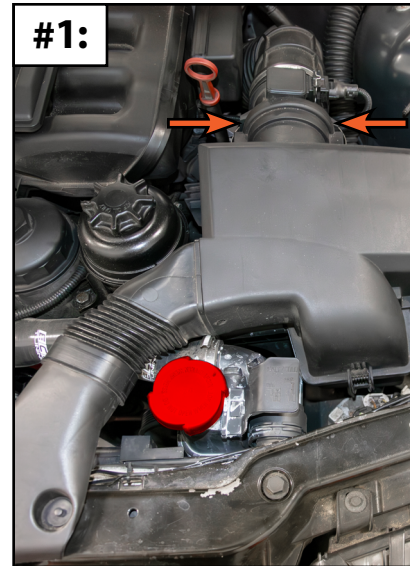
NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

REMOVING THE STOCK EXPANSION TANK

Step 1: Flat Head Screwdriver, 10mm Socket & Ratchet

With the engine cold, open the expansion tank cap (highlighted in **RED** in **photo #1**), then release the latches that secure the airbox to the inlet pipe (arrows in **photo #1**).

Remove the two bolts that secure the airbox to the vehicle (arrows in **photo #2**).



Step 2: Trim Removal Tool

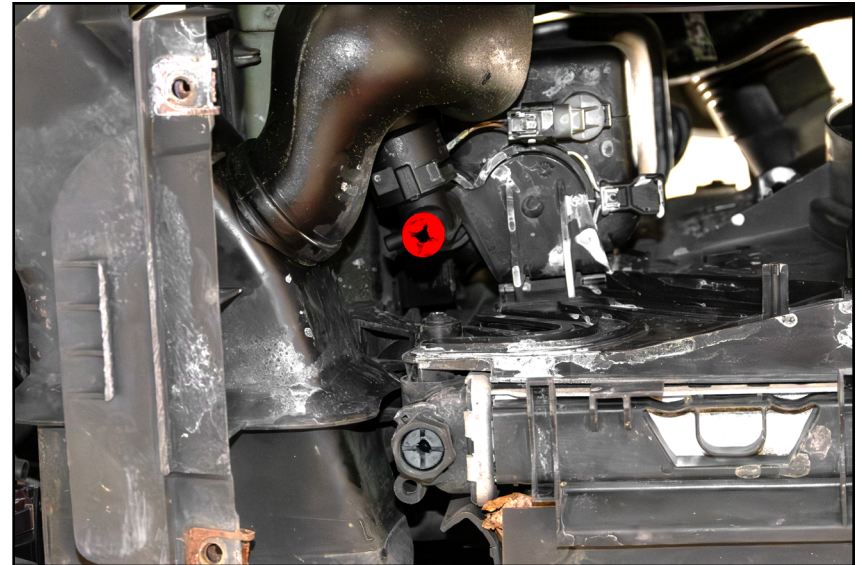
Release the clips (highlighted in **RED**) that secure the intake duct to the core support, then pull upward on the airbox to release it from its mounting grommets and remove the intake duct and airbox as one assembly.



REMOVING THE STOCK EXPANSION TANK

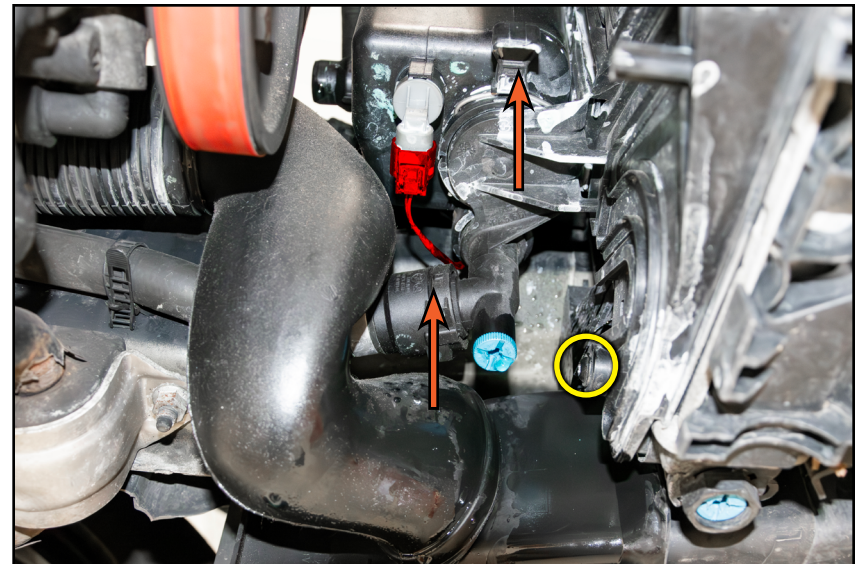
Step 3: Flat Head Screwdriver

Loosen the drain valve (highlighted in **RED**) on the bottom of the expansion tank and allow the coolant to drain.



Step 4: Angled Pick Tool & T25 Torx

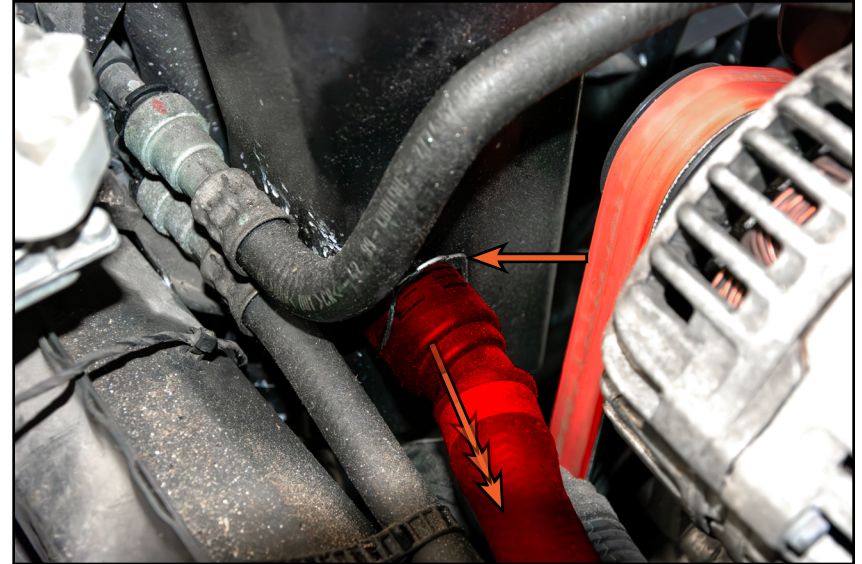
Disconnect the coolant level sensor connector (highlighted in **RED**). Release the two spring clips (arrows) that secure the lower radiator hose and the expansion tank to the mounting plate. Remove the screw (circled in **YELLOW**) that secures the lower mounting plate to the shroud.



REMOVING THE STOCK EXPANSION TANK

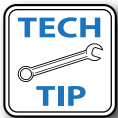
Step 5: Angled Pick Tool

Release the spring clip (arrow), then disconnect the expansion tank hose (highlighted in **RED**) from the expansion tank.

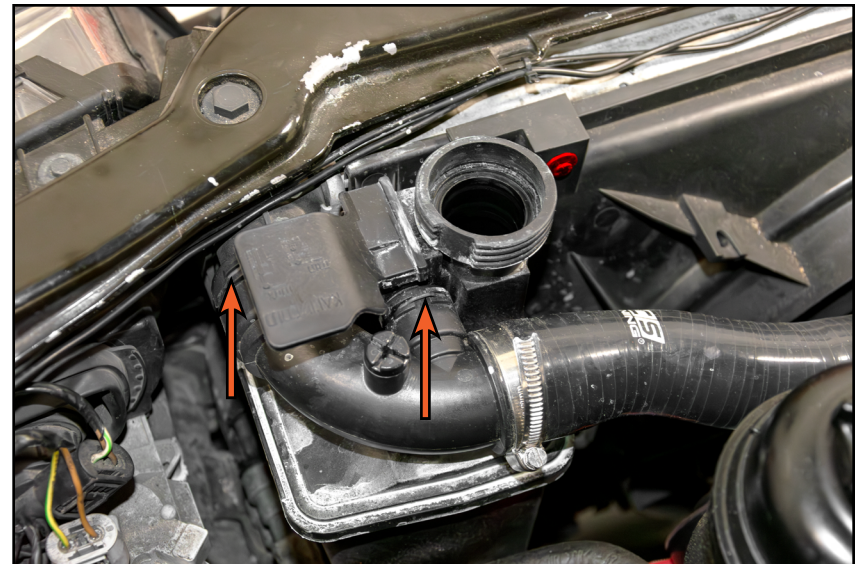


Step 6: Angled Pick Tool & T25 Torx

Release the two spring clips (arrows) that secures the upper coolant hose to the expansion tank, then pull the hose free from the expansion tank. Remove the screw (highlighted in **RED**) that secures the upper portion of the mounting plate to the shroud and remove the expansion tank and mounting plate from the engine bay.



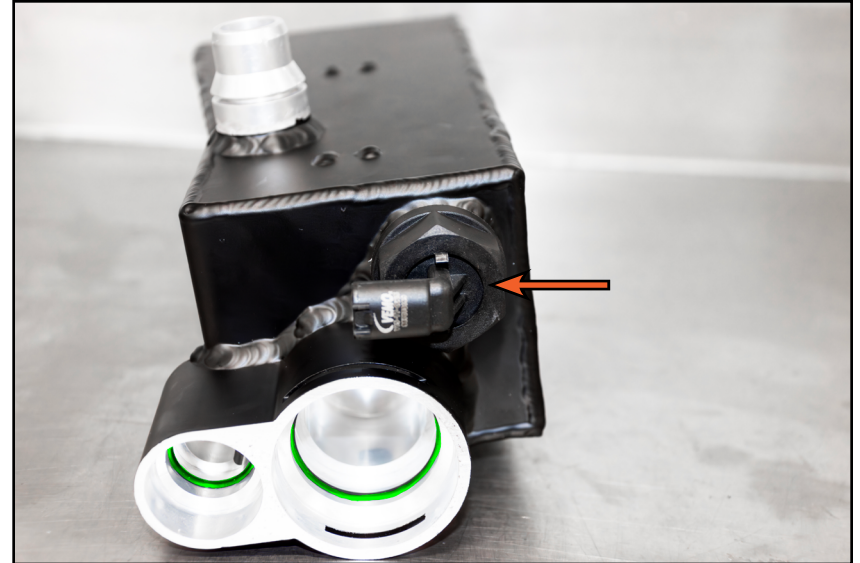
The expansion tank can be removed and replaced without removing the mounting plate, however, we found that installing the new expansion tank onto the mounting plate outside of the vehicle was easier for installation purposes and reduces the chances of damaging the mounting plate.



INSTALLING THE NEW ALUMINUM EXPANSION TANK

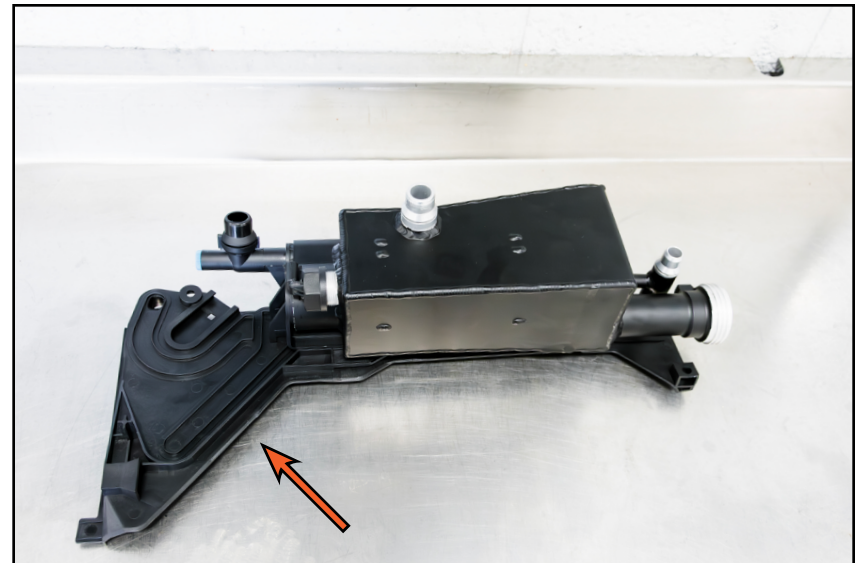
Step 1: 22mm Wrench

Install the new coolant level sensor (arrow) into the new expansion tank and tighten it until snug. Install the provided O-rings (highlighted in **GREEN**) into the bottom of the expansion tank as shown.



Step 2:

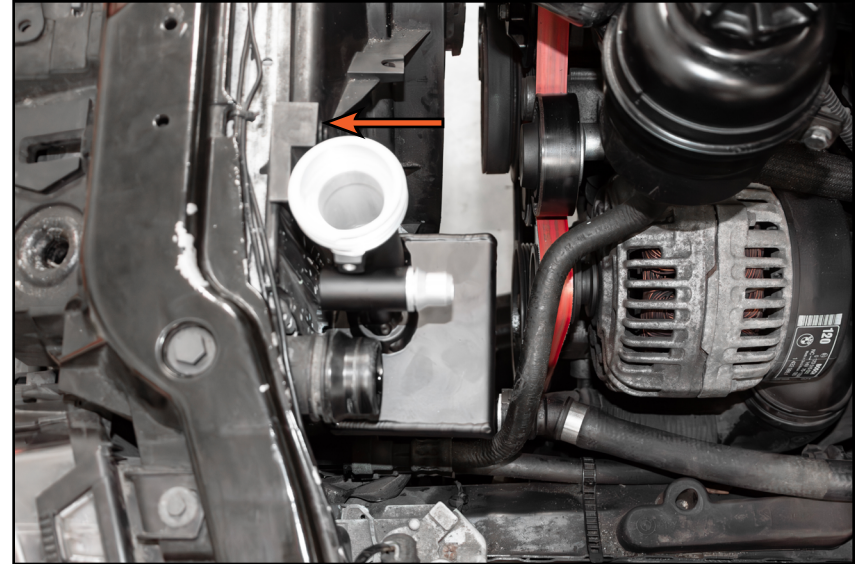
Slide the new heavy duty aluminum expansion tank onto the mounting bracket until it is fully seated onto the bracket, then reinstall the spring clip (not shown).



INSTALLING THE NEW ALUMINUM EXPANSION TANK

Step 3: T25 Torx

Reinstall the mounting bracket with the HD tank already installed onto it into place by aligning the tabs at the bottom (not shown) and securing the upper portion by reinstalling the screw (arrow)



Step 4:

Reconnect the coolant hose (highlighted in **GREEN**) ensuring the spring clip snaps back into place.

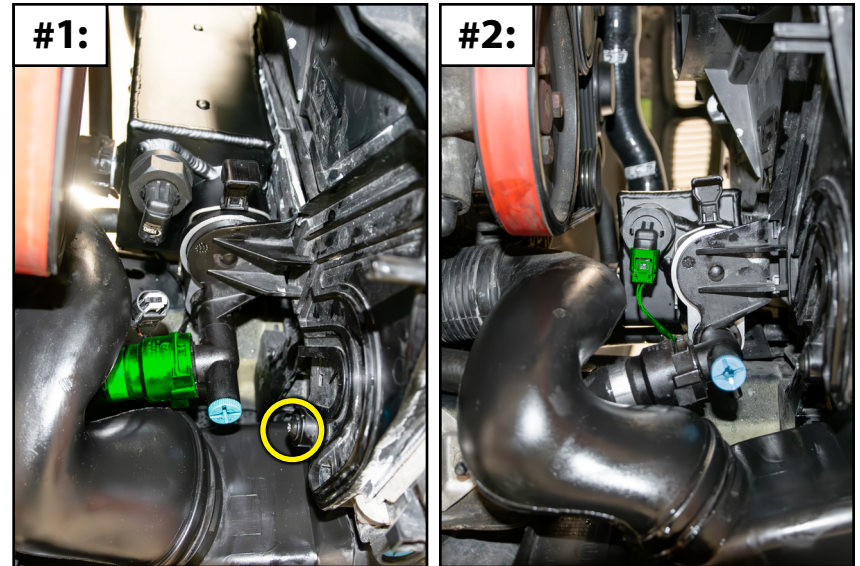


INSTALLING THE NEW ALUMINUM EXPANSION TANK

Step 5: T25 Torx

Reinstall the screw (circled in **YELLOW** in **photo #1**) that secures the lower mounting plate to the shroud. Reconnect the coolant hose (highlighted in **GREEN** in **photo #1**) ensuring the spring clip snaps back into place.

Reconnect the coolant level sensor connector (highlighted in **GREEN** in **photo #2**)



Step 6:

Reconnect the upper coolant hose (highlighted in **GREEN**) ensuring the spring clips snap back into place. Thread the supplied barbed fitting (arrow) into the top of the expansion tank.



INSTALLING THE NEW ALUMINUM EXPANSION TANK

Step 7: Razor Blade

Trim off the flared end of the provided overflow hose (highlighted in **GREEN**) and slide it onto the fitting. Route the hose to a suitable location, trimming to length as needed.

Fill the expansion tank with new coolant.

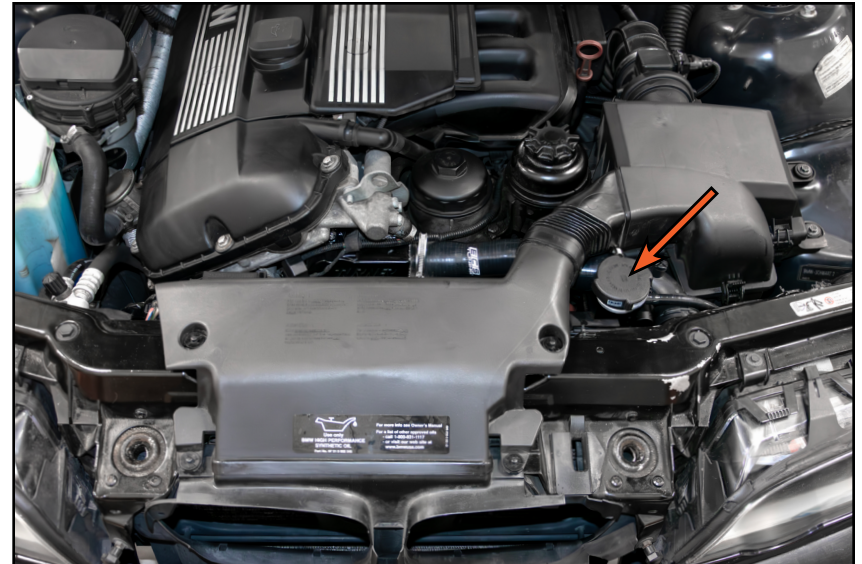
- The Turner logo inside the tank serves as the fill gauge. Once the coolant rises up to the logo plate it is full.
- Coolant level is only to be adjusted when the engine is COLD, and when the vehicle is sitting on a level surface.



Step 8: 10mm Socket & Ratchet

Reinstall the expansion tank cap (arrow), start the car, bleed the coolant system and check for leaks.

Congratulations, your installation is complete!



Your Heavy Duty Expansion Tank Kit installation is complete!



These instructions are provided as a courtesy by Turner Motorsport

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