



**BMW N52 High-Flow Water Pump Upgrade Kit**  
**Installation Instructions - [Click HERE to Shop](#)**



**Skill Level**  
**1 - Easy**  
**Basic Skills**  
**Required**



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.

## TABLE OF CONTENTS

Installation and Safety Information .....	<a href="#">pg.3</a>
Removing the Stock Water Pump.....	<a href="#">pg.4</a>
Installing the New Water Pump Upgrade.....	<a href="#">pg.7</a>
Bleeding Procedure .....	<a href="#">pg.11</a>

## 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

ECS Tuning 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 WATER PUMP

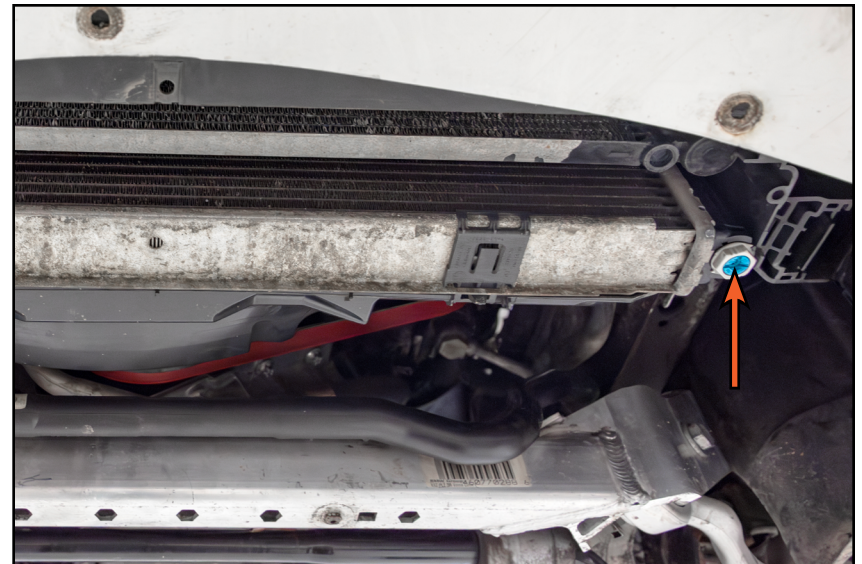
### Step 1:

Loosen the coolant reservoir cap (highlighted in **RED**) to relieve the pressure from the coolant system, then remove the cap.



### Step 2: Flathead Screwdriver

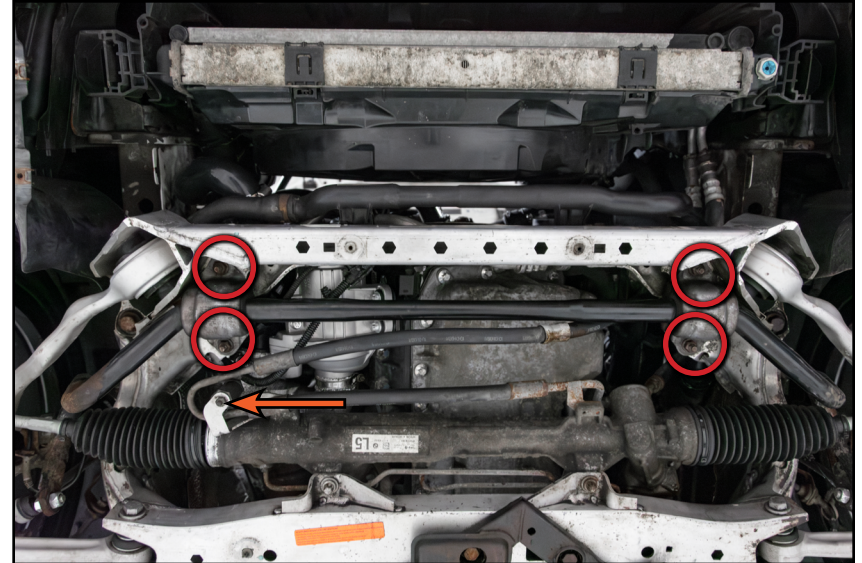
Safely lift and support the vehicle, then crack the drain valve (arrow) that is located at the bottom of the radiator on the LH side and drain the coolant system.



## REMOVING THE STOCK WATER PUMP

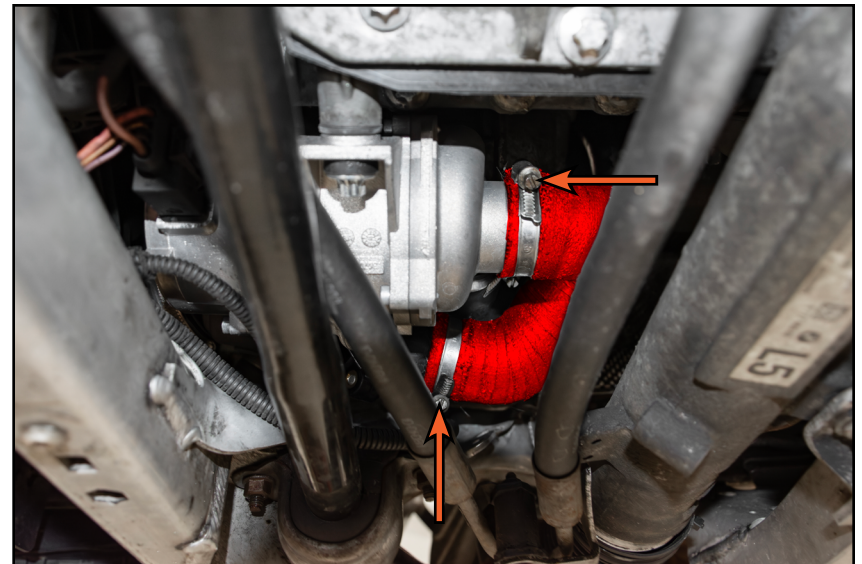
**Step 3:** 10mm Wrench, 10mm Socket, 13mm Socket & Ratchet

Remove the hardware (arrow) that secures the bracket for the power steering hoses and set the bolt aside. Remove the nuts (circled in **RED**) that secure the sway bar mounting brackets to the subframe, then lower the sway bar safely out of the way.



**Step 4:** 6mm Socket & Ratchet

Loosen the clamps (arrows), then remove the coolant hose (highlighted in **RED**) from the thermostat and the water pump.



## REMOVING THE STOCK WATER PUMP

### Step 5: 6mm Socket & Ratchet

Loosen the clamp (arrow), then disconnect the coolant hose (highlighted in **RED**) from the water pump and the engine.

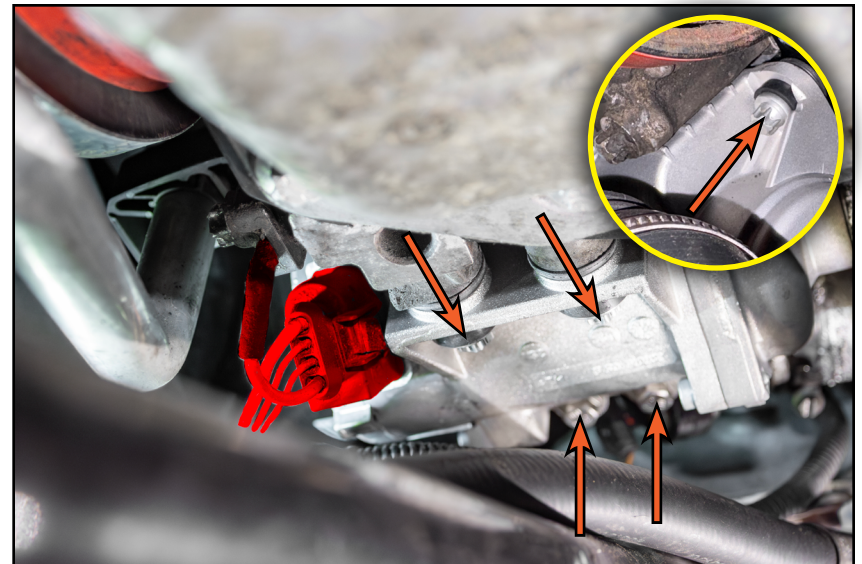


### Step 6: E12 Torx Socket, 10mm Socket & Ratchet

Disconnect the connector (highlighted in **RED**) from the water pump, then remove the bolts (arrows) that secure the water pump to the thermostat & engine.



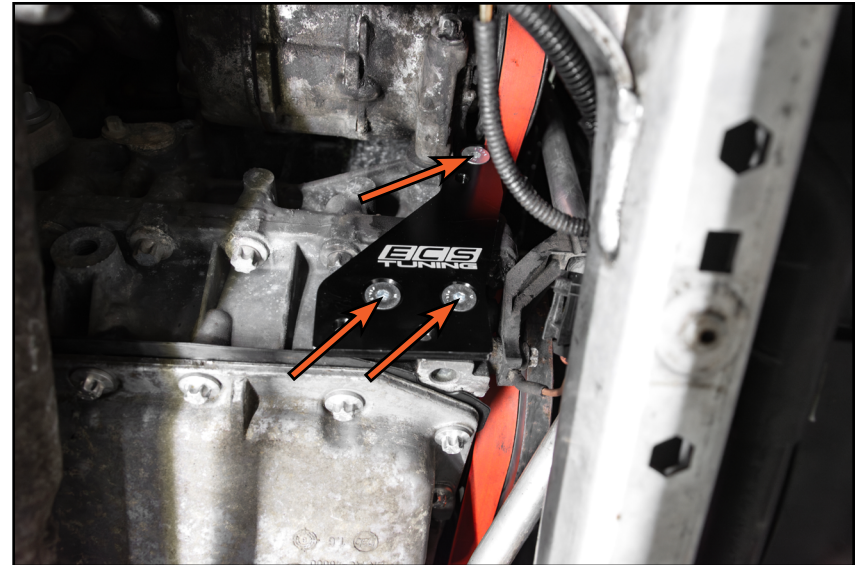
There is an additional bolt (arrow in inset photo) that secures the water pump to the engine block above the water pump.



## INSTALLING THE NEW WATER PUMP UPGRADE

### Step 1: 5mm Hex (Allen) Socket & Ratchet

Install the provided relocation bracket and secure it to the engine block with the provided screws (arrows) and torque them to 15 Nm (11 ft-lbs).



### Step 2: E12 Torx Socket & Ratchet

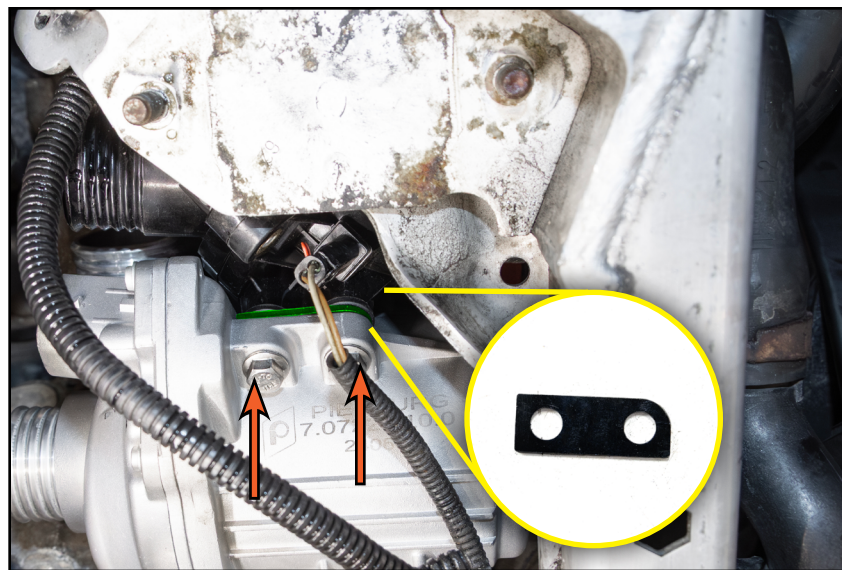
Install the new water pump onto the relocation bracket and torque the provided hardware (arrows) to 15 Nm (11 ft-lbs).



## INSTALLING THE NEW WATER PUMP UPGRADE

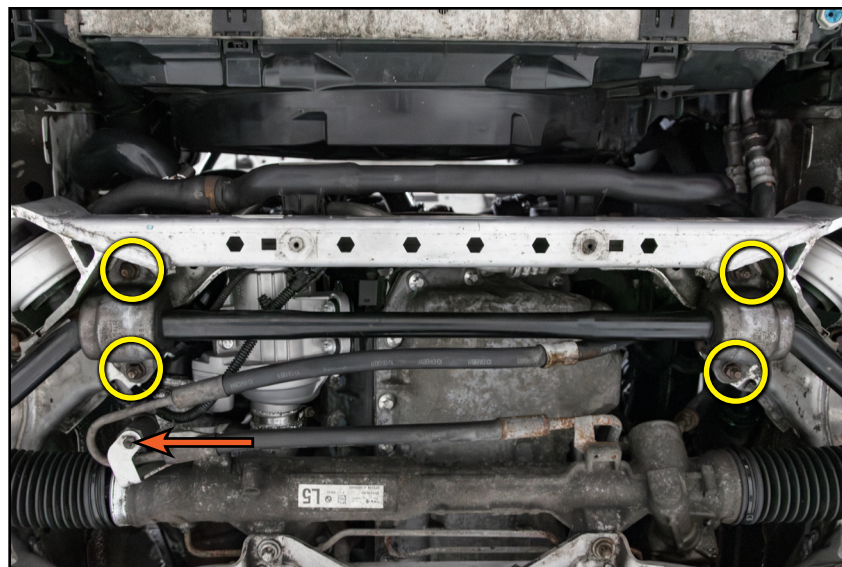
### Step 3: 10mm Socket & Ratchet

Place the provided spacer (inset photo) in between the water pump and the thermostat housing (highlighted in **GREEN**), then reinstall the bolts (arrows) to secure the thermostat to the water pump and torque them to 15 Nm (11 ft-lbs).



### Step 4: 10mm Wrench, 10mm Socket, 13mm Socket & Ratchet

Reinstall the hardware (arrow) to secure the bracket for the power steering hoses to the subframe, then reinstall the nuts (circled in **YELLOW**) to secure the sway bar mounting brackets to the subframe and torque the nuts to 21 Nm (16 Ft-lbs).



## INSTALLING THE NEW WATER PUMP UPGRADE

### Step 5: 6mm Socket & Ratchet

Reconnect the coolant hose (highlighted in **GREEN**) between the engine block to the water pump and tighten the clamps (arrow) until snug.



### Step 6: 6mm Socket & Ratchet

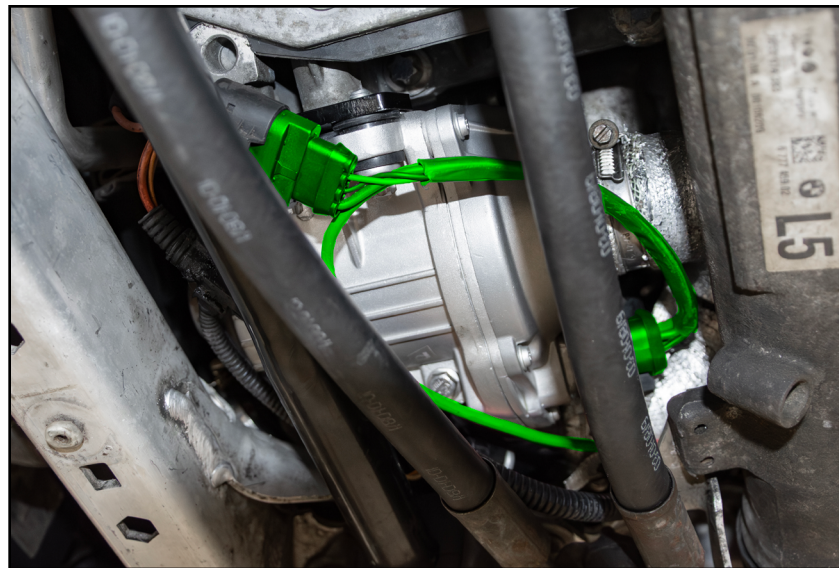
Reinstall the coolant hose (highlighted in **GREEN**) between the thermostat to the water pump and tighten the clamps (arrows) until snug.



## INSTALLING THE NEW WATER PUMP UPGRADE

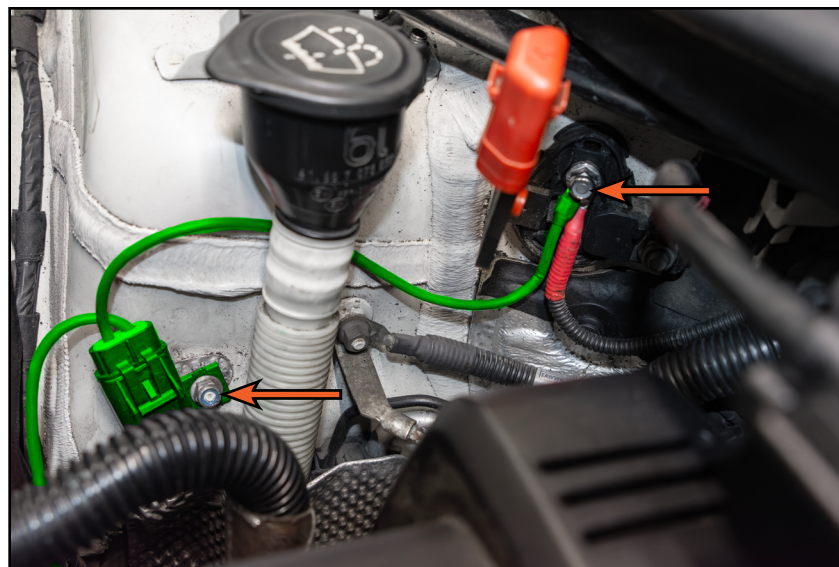
### Step 7:

Connect the provided wiring harness (highlighted in **GREEN**) to the water pump, then connect the harness to the stock N52 water pump connector.



### Step 8: 10mm Socket & Ratchet

Remove the 10mm nuts (arrows), then mount the harness (highlighted in **GREEN**) to the RH fenderwell and install the positive wire onto the smaller post as shown. Reinstall the nuts and tighten them until snug.



## BLEEDING THE COOLING SYSTEM

### Step 1:

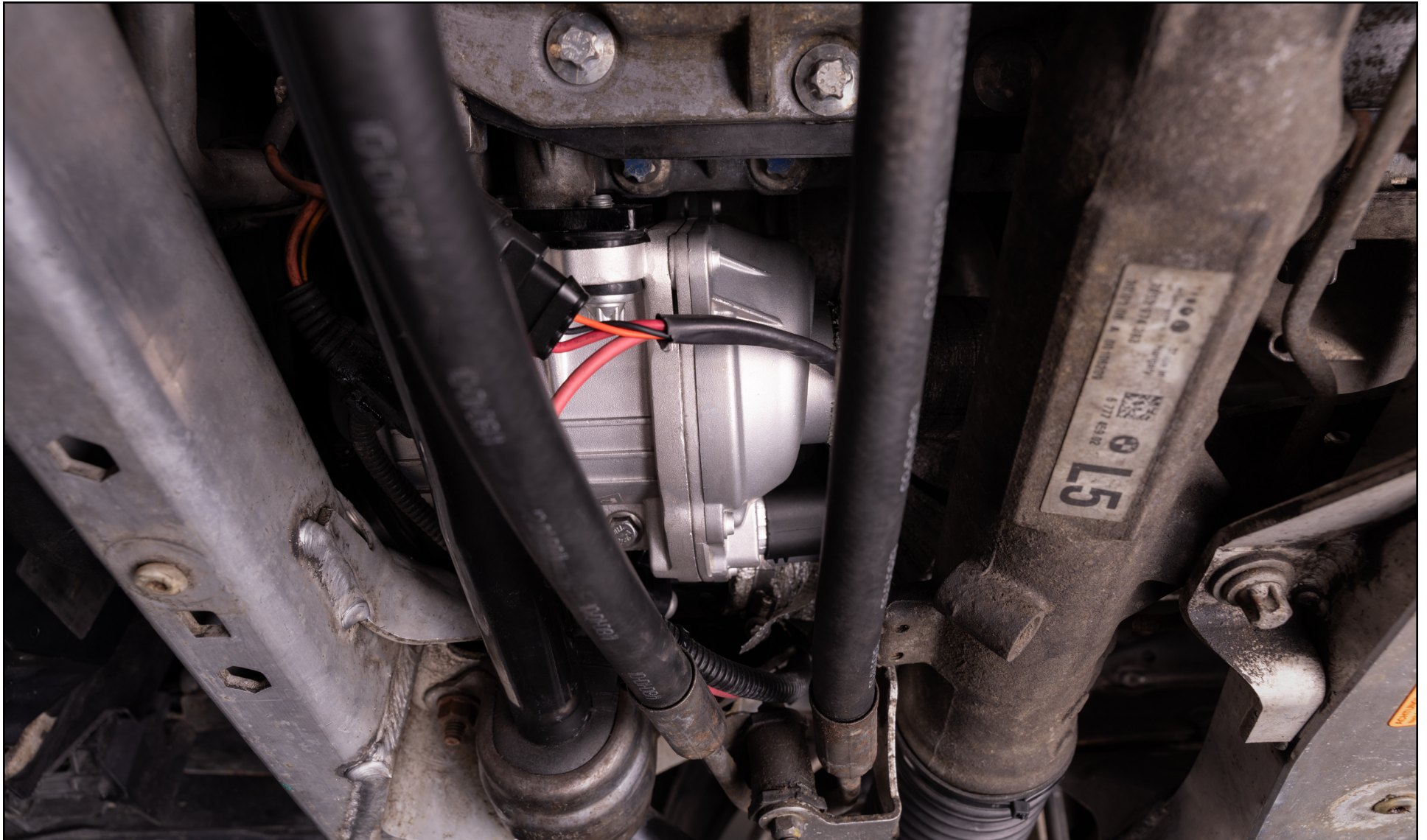
Bleeding procedure:

1. Ensure that the expansion tank bleeder screw and the cap are both tightened down.
2. Connect a battery charger.
3. Switch the ignition to ON (**engine OFF**).
4. Set the temperature controls to the highest setting (~84° F).
5. Set the blower speed to the lowest setting.
6. Press and hold the accelerator pedal to the floor for 10-12 seconds. This will activate the electric coolant pump.
7. The coolant pump will cycle on and off for 12 minutes, **this is normal**.
8. After 12 minutes have passed, the coolant pump will stop cycling, at this point you can turn the ignition off.
9. Disconnect the battery charger.
10. Return the climate controls to their previous settings.
11. Check and top up the coolant level.
12. Reinstall the expansion tank cap.
13. Check for leaks.



***Congratulations, your installation is complete!***

## Your N52 High-Flow Water Pump Upgrade Kit installation is complete!



### **These instructions are provided as a courtesy by ECS Tuning**

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.

Although this material has been prepared with the intent to provide reliable information, no warranty (express or implied) is made as to its accuracy or completeness. Neither is any liability assumed for loss or damage resulting from reliance on this material. SPECIFICALLY, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY IS MADE OR TO BE IMPLIED WITH RESPECT TO THIS MATERIAL. In no event will ECS Tuning, Incorporated or its affiliates be liable for any damages, direct or indirect, consequential or compensatory, arising out of the use of this material.