BMW M54 DISA Valve Installation Instructions

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.

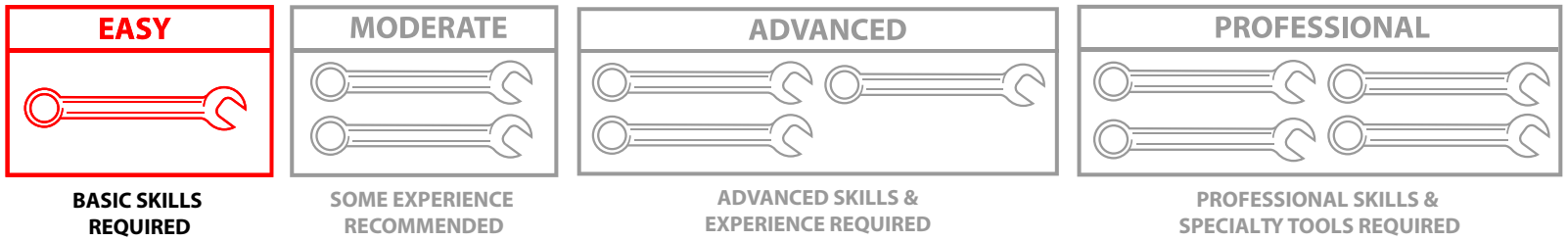
INTRODUCTION

BMW M54 DISA Valve ES#2763045, ES#2763043, ES#25793, ES#2580544

When the DISA Valve on your M54 powered BMW fails it can cause a number of issues:

- A loud noise in the engine bay
- Hesitation at low RPM
- Rough idle, & a “Check Engine Light” with lean codes

If the DISA Valve in your BMW is making noise we suggest you replace it immediately. The pin which holds the flap in place can slip out and get sucked into the engine, causing serious internal damage.



Replacing the DISA Valve in your M54 powered BMW is an easy project that an experienced technician will be able to complete in an hour or two. Plan accordingly based on your experience level. The DISA Valve is located on the intake manifold, and can be accessed relatively easily. The DISA Valve kits which we have assembled here at ECS Tuning will make the hardest part of the job the easiest, since they include all of the hardware necessary for added peace of mind. Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. Thank you for purchasing your BMW Disa Valve from ECS Tuning, we appreciate your business!

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KIT CONTENTS

DISA Valve

Hardware (Included in ES#2763045 & ES#2763043)

REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

We recommend that you have a complete selection of tools and equipment necessary for automotive repair. Below is a list of the tools we used to install the BMW M54 DISA Valve. Additional tools may be required for any issues that arise during installation.

- 3/8" Drive Ratchet ..... Available at ecstuning.com ..... ES#2765902
- 3/8" Drive Torque Wrench ..... Available at ecstuning.com ..... ES#2221245
- Flat and Phillips Blade Screwdriver(s) ..... Available at ecstuning.com ..... ES#2225921
- Torx Bit Sockets: T30 ..... Available at ecstuning.com ..... ES#11418
- Schwaben Hose Clamp Pliers ..... Available at ecstuning.com ..... ES#2702616
- Schwaben LED Underhood Light ..... Available at ecstuning.com ..... ES#2769963
- Schwaben Deluxe Two Shelf Service Cart ..... Available at ecstuning.com ..... ES#2763365
- Schwaben Magnetic Tray ..... Available at ecstuning.com ..... ES#1899375
- 3/8" Sockets: 13mm ..... Available at ecstuning.com ..... ES#2763772
- 3/8" Drive Extensions

SHOP SUPPLIES AND MATERIALS

- Hand Cleaner/Degreaser ..... Available at ecstuning.com ..... ES#2167336
- Aerosol Brake Cleaner ..... Available at your local auto parts store
- Shop Rags ..... Available at your local auto parts store
- Aerosol Spray Lubricant/Penetrating Oil ..... Available at your local auto parts store

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.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always 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. Always make sure that the vehicle is securely supported on jack stands.

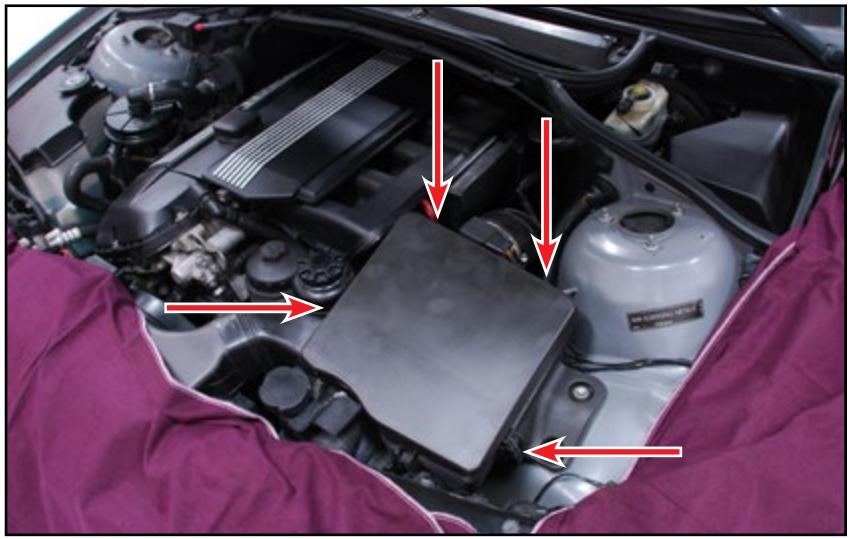
REMOVING THE ORIGINAL DISA VALVE

Step 1: Fender Covers, Underhood Light

Open the hood and protect the front bumper and fender with covers, then illuminate your work area.

Step 2:

Release all four latches which secure the air box lid to the air box. The latch on the driver's side front is easy to reach, the other three are a bit more difficult to see.



REMOVING THE ORIGINAL DISA VALVE

Step 3: Flat Blade Screwdriver

Gently pry up on the clip on the Mass Air Flow sensor to release the connector, then pull the connector out of the sensor.

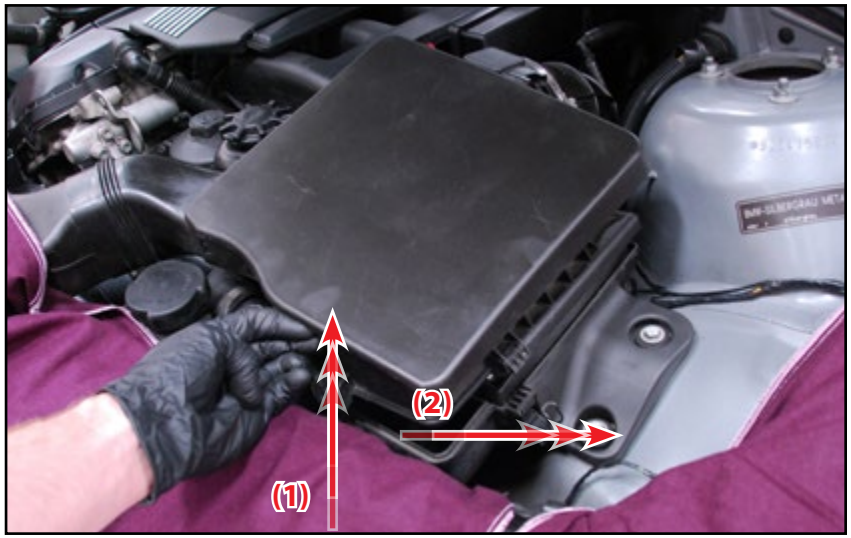
Step 4: Flat Blade Screwdriver

Loosen the hose clamp securing the intake boot to the Mass Air Flow sensor, then pull the boot off of the sensor.

REMOVING THE ORIGINAL DISA VALVE

Step 5:

Gently lift up on the air box lid and move it slightly towards the driver's side of the vehicle.



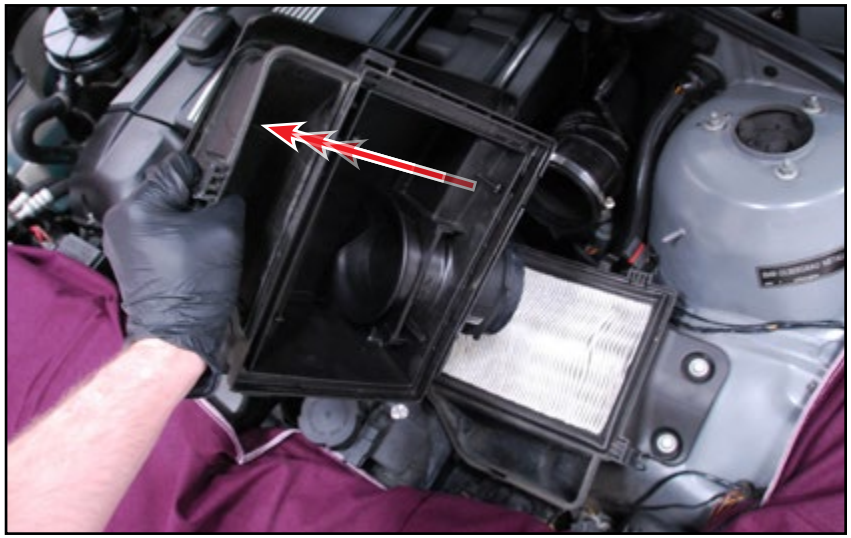
Step 6:

Remove the air box tube from the air box lid by gently pulling the tube out of the lid, then remove the air box tube from the cowl mounted intake in the same manner.

REMOVING THE ORIGINAL DISA VALVE

Step 7:

Remove the air box lid from the vehicle and set it aside.



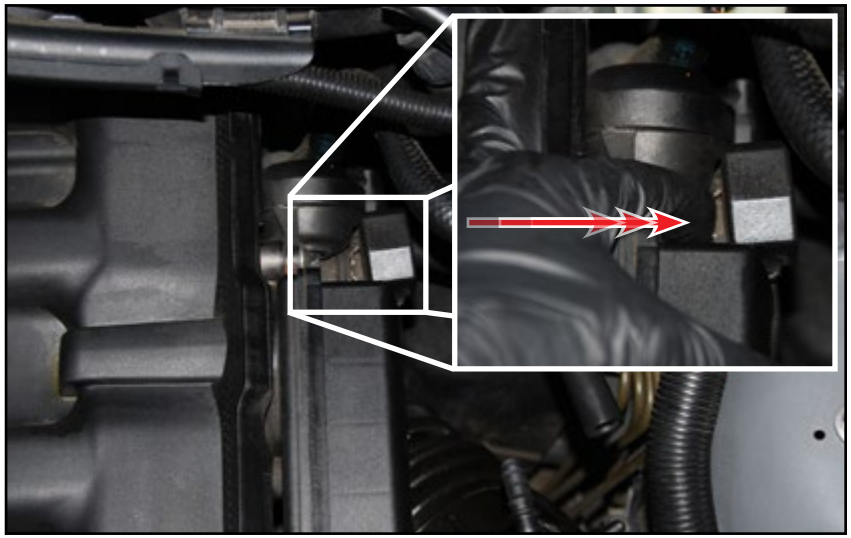
Step 8:

Pull the breather hose off of the air intake boot then push the breather hose to the side.

REMOVING THE ORIGINAL DISA VALVE

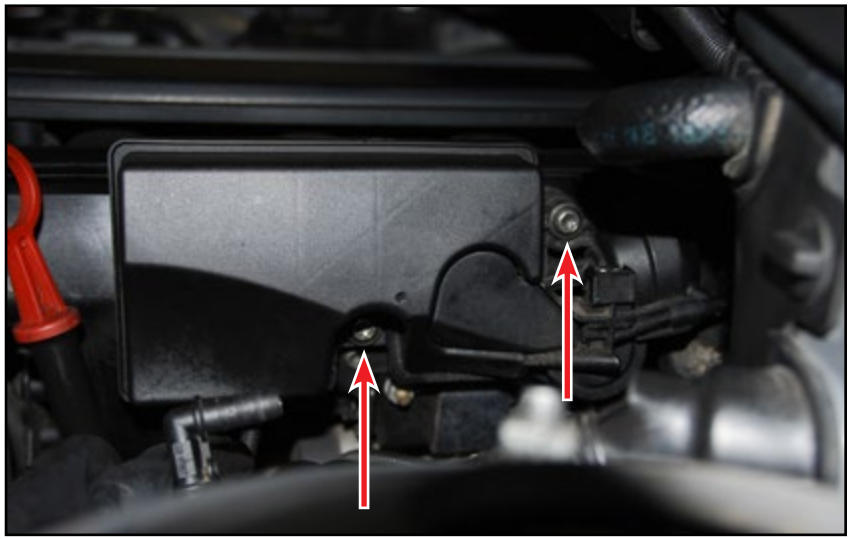
Step 9:

Release the connector on the DISA valve by pushing in on the retaining clip with your finger, then pull the connector off of the valve. Push the connector and wiring harness off to the side so it is out of the way.



Step 10: 3/8" Drive Ratchet, T40 Torx Bit Socket

Locate and remove the two bolts which secure the DISA valve to the intake manifold.



REMOVING THE ORIGINAL DISA VALVE

Step 11:

Begin by sliding the DISA valve out of the intake manifold approximately one inch. Place your finger on the valve as shown in the photo and rotate the flap downward until it is closed, if the flap is not closed it will be very difficult to remove from the intake manifold.

Step 12:

Turn the DISA valve slightly as shown in the photo in order to gain the necessary clearance to slide it out of the intake manifold, and remove it from the vehicle.

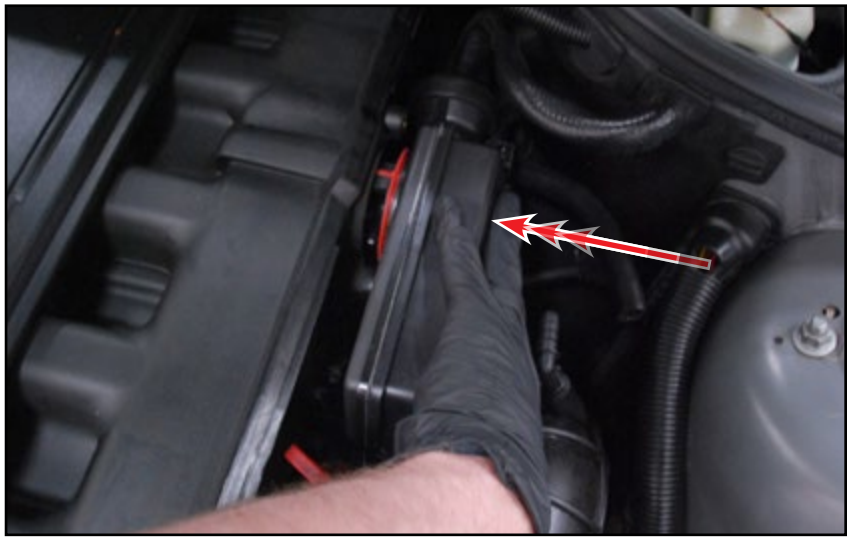
INSTALLING THE NEW DISA VALVE

Step 1:

Wipe away any contaminants from the gasket surface inside the intake manifold with a clean, lint-free towel. Place your finger on the valve as shown in the photo and rotate the flap downward until it is closed, and continue to hold the flap closed as you slide the valve into the intake manifold.

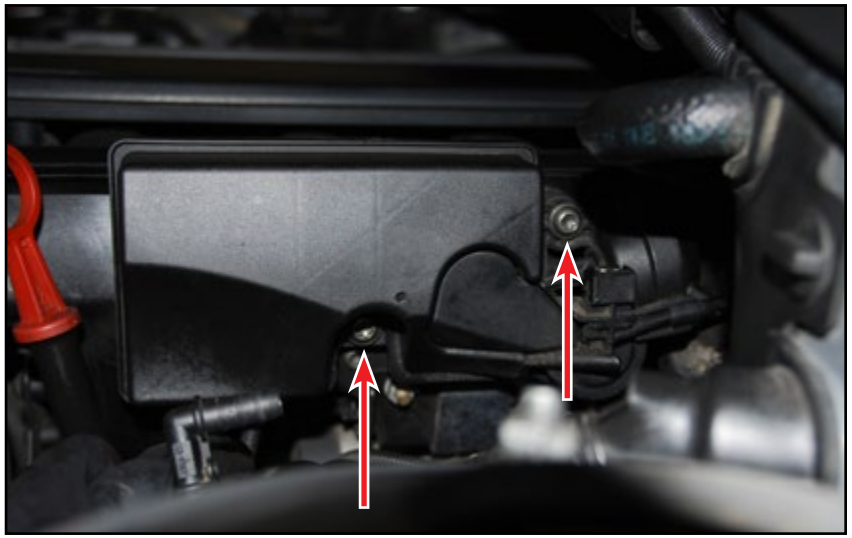
Step 2:

Press in firmly on the valve to make sure it is fully seated into the manifold.

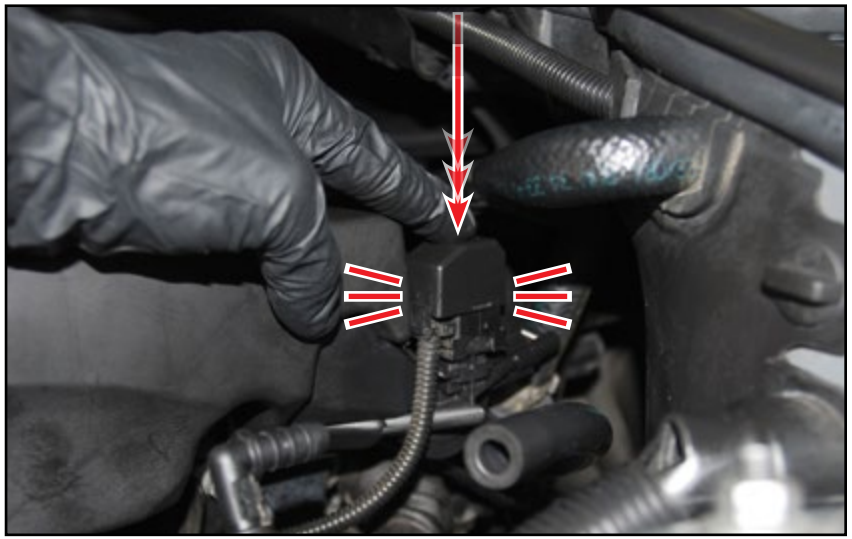


3/8" Drive Torque Wrench, T40 Torx Bit Socket

Install the two bolts which secure the DISA valve to the intake manifold, then tighten them to 10 Nm (7 Ft/lbs).



Reinstall the DISA valve electrical connector by pushing the connector down onto the valve until it "clicks" into place.



- [ ] Reinstall the breather hose into the air intake boot
- [ ] Reinstall the air box tube into the air box lid and the cowl mounted intake
- [ ] Reinstall the air box lid onto the air box
- [ ] Reinstall the air intake boot onto the MAF sensor and tighten the hose clamp
- [ ] Reconnect the MAF electrical connnector

Your BMW M54 DISA Valve installation is complete!

These instructions are provided as a courtesy by ECS Tuning.

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