



INSTRUCTIONS

BMW E46 M3 2001- AA Short Shifter

Tools required: 12mm, 13mm socket
Flat blade screwdriver 12" long
Needle nose screwdriver
Extra help with strong arms

Installation time: 2.0 Hour

Professional installation and / or use of a lift is highly recommended.

Procedure: Performed Inside the car



NOTE: If you have a lighted gearshift knob, do this first !!!

-At the base of the gear lever is a shift boot surrounding the lower shaft.

-Remove the shift boot by detaching the shift boot base from the console area, it is snapped in at the four sides.

-Locate the lighted knob wire that comes from the shift knob, there is a wire connector that can be de-attached, otherwise the lighted knob feature will now be non functional.



-Remove the factory gearshift knob by pulling straight up.

-Lift the rubber that is around the gearshift. Again, this shift boot just comes straight up.

-Remove the foam insulation under the shift boot.



Factory shift knob separated from boot so that AA shift knob can be installed.

Procedure: Performed under the car



-The rear exhaust and heat shield needs to be removed to access installation of the short shifter.

-Support the rear exhaust before removal, **it is heavy.**

-The rear exhaust has (2) mounts on the left side and (1) on the right side. Use 13mm socket to remove the nuts.

-A lift is recommended. The rear muffler is removed with the rear resonator as one piece.

-If doing this without a lift, disconnect the rear muffler from the resonator to save weight and ease of removal.



-Disconnect the chassis rear brace to ease the rear muffler removal.



Rear chassis brace removed for illustration.



-Have a friend ready before the rear muffler is disconnected. **Again, it is heavy.**



-(2) plates cover the rear exhaust flanges to the exhaust catalyysts.

-Use 13mm socket to remove plates

-Do not unbolt the flanges connecting the rear muffler to exhaust catalysts.

-They come down as one piece.

Procedure: Performed under the car



-Plates being removed



-Disconnect the front resonator to where it joins the front pipes.



-Rear exhaust on the ground



-With the rear exhaust removed, the heat shield needs to be removed as well to access the gear shifter

Procedure: Performed under the car



-Left side of heat shield mounted to under carriage.



-Right side of heat shield mounted to under carriage



-All preliminary components remove to gain access for the short shifter installation.



-Heat shield separated from the undercarriage of the M3.

Procedure: Performed under the car



-Factory shifter visible above the drive shaft.

-At the end of the factory shifter, a "E-Clip" connects the shifter rod to the factory shifter. Use a small screwdriver or needle nose pliers to separate the "E-Clip"

-Push the shifter rod out of the factory shifter.

-At the end of the aluminum carrier assembly, the carrier has a pointed spear like end. This spear like end goes through a round cylindrical bushing that just snap up and into the drive shaft tunnel at the rear. Unsnap the cylinder bushing by putting a 5mm wide flat blade screwdriver about 1 ft long in groove of bracket that holds rubber mount up and pry outwards.

-Cylindrical bushing should jump out.

NOTE: Take note of how bushing comes off (Usually rubber flange will be towards front of car).



-Shown is a factory shifter with carrier and clip.

-Inspect and make a note of the components.

-DO NOT WORRY, the AA Short Shifter comes with new components including retaining clip and hardware.

-Notice the retaining clip and the barbs on the side of the clip. Noticing how the clip secures to the gearbox helps understand removal of the retaining clip.



-In some cases the retaining clip it is hard to see making it almost un-visible.

-Lower back of gearbox by dropping gearbox cross-member for a easier access.

-Using a long screwdriver, try to pry off the retaining clip.

-It has barb like ends that attaches to the side of the gearbox to secure this retaining clip.

-Pry with as much force that is needed. If the clip becomes damaged, a new retaining clip is provided in the AA short Shifter Kit.

-With the retaining clip out, the complete carrier assembly can be removed from the under carriage of the car.

-Complete carrier and factory shifter comes out as one piece.



-AA Short Shifter with components shown, ready to be installed.

-Install the AA carrier, not the shifter at this time.

-Install a new retaining clip to the carrier front, and rotate until the barbs are secure.

-Install the spear like end of the carrier into the cylindrical bushing. Remember, the rubber flange on this bushing faces forward.

-Push up the rear of the carrier until it snaps in place.



-While sitting in the drivers seat, inspect the AA Short Shifter for proper amount of white lithium grease. This is recommended on the shifter cup before installation.

-Test that the new AA short shifter carrier assembly is properly secured.

-Install the AA Short Shifter through the carrier hole and push down the shifter.

-Push until the white cup makes a “CLICK” sound indicating that it is secured.



-Reinstall the console area back in reverse order.

-Install the gear shift knob



-Connect to the end of the AA Short Shifter, a “E-Clip”.

-This connects the shifter rod to the new AA Short Shifter. -Use a small screwdriver or needle nose pliers to install the “E-Clip”

Parts removed and shown for illustration.

-Reverse all the heat shield, mounting parts, etc. back in reverse order. Check back all nuts, etc. for proper torque.

-Perform a basic function test, going through the gears without the engine running. If everything seems OK, start the car and do a road test.

This concludes the installation.