

AES Installation Bulletin

Bronze Bushings Installation (Part Number: MF3511(2 bushings in kit))

Product Models covered: Magnum Countryside 3500P, 3500L, 3502 Series & 7500 Furnace Appliances with fuel stirrer option.

Topic: This Installation bulletin covers the removal and replacement of the bronze bushings in the fuel stirrer sleeve, the procedure for removing stove components to complete the installation and what tools are needed to complete the installation. For additional information, see Technical Bulletin T-0052 (Fuel Stirrer, Shaft, & Bushings) online at www.magnumheat.com

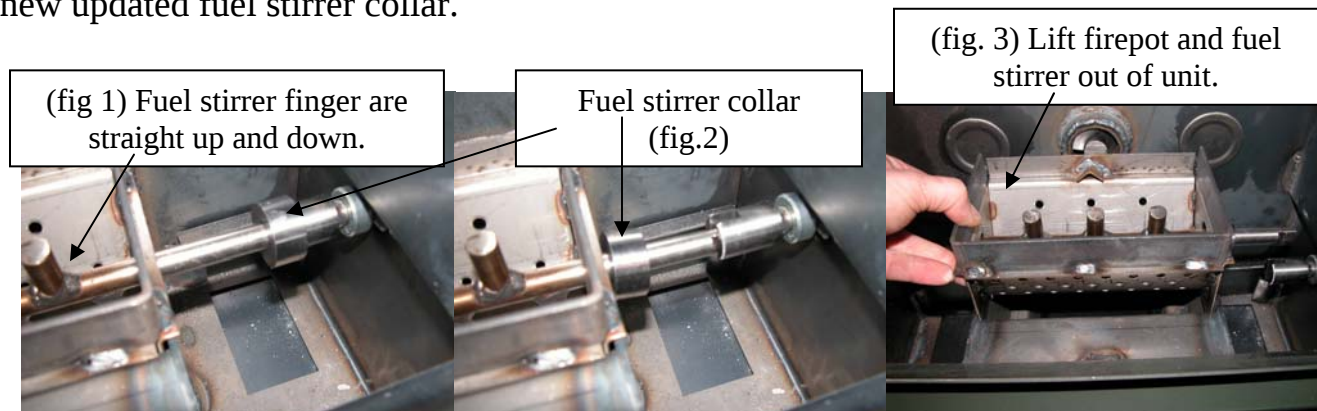
Tools needed: Standard screwdriver to loosen the three screws on the right side panel, 1/8th inch Allen wrench, bushing driver set MF3655), ¼" or 5/16" hex driver, socket or box end wrench, round file, small ball peen hammer, high temp synthetic oil spray.

Parts needed to order: MF3511 bushing kit, MF3514 shaft assembly, P6092 collar, MF3655 removal/install tool.

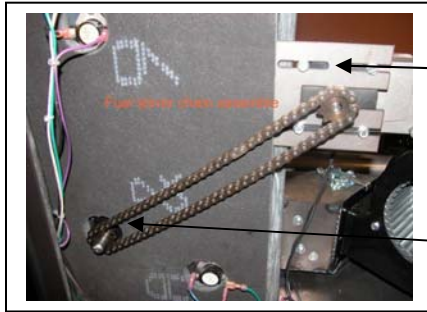
Procedure:

- ❖ Remove the firepot and fuel stirrer.
 - Position fuel stirrer fingers so they are straight up and down (fig. 1).
 - To move the fuel stirrer fingers to this position turn fuel heat setting on, turn fuel stirrer switch on and rotate fuel stirrer fingers until straight up and down, turn off all switches, unplug the appliance.
 - Move the fuel stirrer collar towards the firepot (fig. 2).
 - This releases the fuel stirrer from the fuel stirrer drive shaft.
 - Lift the firepot and the fuel stirrer up and out of the stove (fig. 3).

NOTE: Some of the older units have either a set screw or bolt on the fuel stirrer collar, when you are turning the fuel stirrer watch for the screw/bolt, stop the stove, release screw/bolt. You may need to turn the stove on again to rotate the fuel stirrer. If you are replacing the fuel stirrer drive shaft assembly with the bushings (recommended) you will get a new updated fuel stirrer collar.



- ❖ Open the right side panel by turning the locking spring (newer models) or removing the screws (older models). (Using a standard flat screwdriver or ¼” hex driver). You will need to lift the two top lids to open the panel.



- ❖ Remove the fuel stirrer chain.
 - Loosen the fuel stirrer motor screws using a 5/16” socket or box end wrench and slide the motor forward. Take the chain off the bottom fuel stirrer sprocket and let it hang from the top sprocket.



- ❖ Remove the bottom fuel stirrer sprocket.
 - Loosen the two Allen set screws holding the fuel stirrer sprocket on, using a 1/8” Allen wrench and pull the sprocket toward you off of the ½” shaft.



- ❖ Remove the fuel stirrer drive shaft. The drive shaft will come out towards the firepot. Sand the end where the sprocket was attached to remove any burrs. Slide toward the firepot and remove.

Removing/ Replacing the Bronze bushings

- ❖ The Bronze bushings are pressed into the fuel stirrer bushing housing. They might be hard to remove and you want to be careful not to break the welds that hold the bushing housing onto the firebox structure. If you are using the bushing driver kit, take the 9/16” x 12” long driver and tap the bearings out toward the inside of the firebox. (See fig. 4)

If you are not using a bushing driver or are having trouble with the bushings moving, take a 19/32 or 39/64 drill bit, and drill out the bushings. Then scrape the rest of the bushing out of the housing using a round file or other object.

Once the bushings are out, clean the area and using the ½” bushing install shaft, slip the bushings over the shaft and tap them into place flush with the outside of the round washer that is welded to the outside of the unit. (See fig. 5)

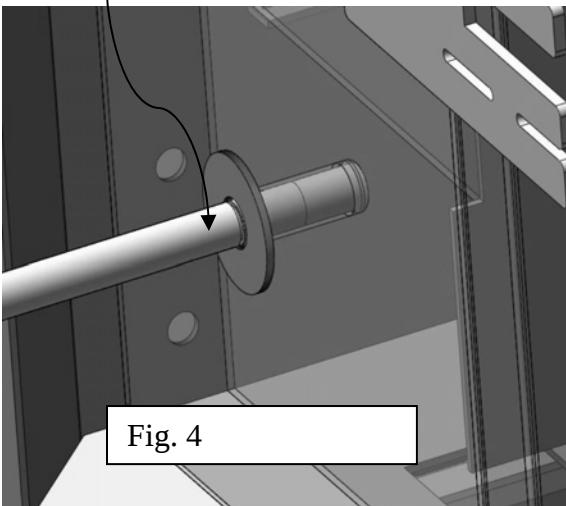


Fig. 4

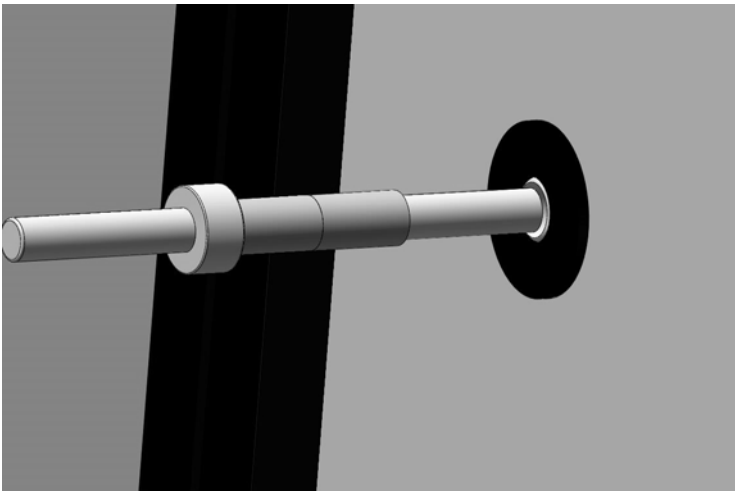


Fig. 5

Once you have installed the bushings check with the new fuel stirrer drive shaft for free rotation of the shaft in the bushing assembly. To do this, spray a little of the high temperature oil on the shaft and on the bronze bushings, then reassemble the fuel stirrer drive shaft from inside of the unit in reverse of the removal. Make sure that the shaft spins freely in the bushings. If they do not, then lightly sand the inside of the bushing assembly with a round file to remove any burrs or flat spots from pressing the bushings in.

Check the shaft for free rotation and then assemble the fuel stirrer system in reverse of the disassembly.

Note: when the fuel stirrer drive shaft assembly is installed there should be approximately 1/32" of back and forth play when adjusting the sprocket and the 1/2" locking collar. There should also be approximately 1/16" of end play in the fuel stirrer once the firepot is installed.

Note: when installing the chain drive tighten the chain so that there is approximately a 1/8" droop or sag in the chain. Do not over tighten so that the chain is tight or the new bushings will bind and wear out.