

# How to Adapt an SM465 Transmission to an AMC Engine

This modification has primarily been developed for conversions replacing the SR4, T4 and T5 Jeep® transmission as used in 1980-86 CJ vehicles with a GM465 Muncie truck 4 speed.

1972-79 AMC 6 and V8 engines can also be used with this transmission but must be equipped with a bellhousing, release arm, release bearing, and clutch disc from a 1980-86 6 cylinder CJ. The 465 Muncie uses two types of lower bolt holes. One offers clearance for a bolt and the other is drilled and tapped for the bolt to screw into. Either of these types will work with this procedure.

You can save some parts chasing and cost of machine work by using our #465-AMC kit as it has a modified 465 retainer, special pilot bushing and socket-head bolts. If your machinist does the work, the following section will offer him a guide. If you are using our #465-AMC kit, skip the information in the sidebar at the right about modifying the retainer and pilot bushing that follows.

## Modifying the Retainer

The 465 front bearing retainer will be modified by machining the large diameter of the retainer in a lathe. This will be reduced in size from 5.125" to 5.000". Machine a steel bushing in a lathe to be a light press fit on the Muncie front bearing retainer. If using a new retainer, the dimensions of this bushing will be 1.371" inside diameter, 1.430" outside diameter, and 2.625" long. If the retainer is used, then inside dimension must be compensated for wear on the retainer when figuring the size for the press fit.

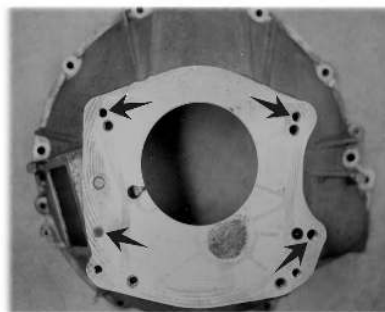
## Pilot Bushing

A special pilot bushing is required and can be made as follows: Machine a piece of aluminum or steel to 1.816" outside diameter, 1.093" inside diameter and .500" long. Press a standard Chevy pilot bushing (Dorman #690-014) into this adapter and press the adapter/pilot bushing into the AMC crankshaft torque converter bore.



Install the modified retainer on the GM transmission using 5/16-18 x 7/8 socket head (Allen) bolts. The transmission locating bore on the rear face of the bellhousing must be bored out to 5.000" diameter. This procedure will require a vertical milling machine or a large lathe. With this type of equipment the bellhousing modification is quick and easy and should be able to be done at a local machine shop. If you cannot get this done locally, we can provide this service, as well as drilling and tapping of the bellhousing. Place the bellhousing on the floor, engine side down (you may have

to put a couple of 2x4's or similar under it) and stand the transmission on its face on the bellhousing. In other words, just like it would be in use, only now it's standing vertically. Align the cover gasket surface of the transmission with the dowel pin holes in the bellhousing. Transfer the mounting bolt hole pattern of the transmission to the bellhousing. Drill the two upper holes with a letter "U" or 23/64" size drill and tap these two holes 7/16-14.



If the SM465 has lower holes that are not threaded, proceed as follows: Drill the lower drivers side hole of the 465 through with a 1/2" drill. Drill the lower passenger side hole with a 27/64" drill and tap this hole 1/2-13 thread. On the lower drivers side hole, install a 7/16" bolt with the head inside the bellhousing and a nut and lockwasher at the ear of the transmission. Use a 1/2-13 bolt in the passenger side lower hole. If the 465 has lower holes that are threaded proceed as follows: Drill the lower drivers side hole through the bellhousing with a 15/32" drill. This bolt will be 7/16-14 with the head inside the housing. Drill the lower passenger side bolt with a letter U or 23/64" size drill and tap this hole 7/16-14. A 7/16-14 bolt should just pass through the lower ears on threaded type 465 transmission. If not, a few strokes with a round file will provide clearance.

While these written instructions may sound complicated, the actual procedure is really quite simple and the end result is most worthwhile.

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