

# RAM 78125 Series Hydraulic Release Bearing Instructions

**WARNING:** This bearing is designed for use with stock diaphragm style or lever clutches. This bearing has a total travel of .700 inch.

This hydraulic bearing is designed to work with a .750 inch master cylinder.

Use only a DOT 3 or equivalent non-silicone brake fluid. Use of other petroleum based fluids will result in o-ring failure.

Before installing your bearing, check the bellhousing for proper alignment to the engine block. Misalignment between the bellhousing and crankshaft centerline will lead to problems with the release bearing and premature failure of the clutch assembly. Check your bellhousing manufacturer instruction sheet for alignment instructions. Or, to check alignment use a dial indicator with the base mounted to the crank flange to check the transmission pilot hole for concentricity to the crankshaft centerline within +/- .010 inch. Check the face of the bellhousing (where the transmission mounts) for squareness to the back of the block. Variance should be no more than +/- .010 inch side to side and top to bottom.

**CAUTION:** This hydraulic bearing does not have a retraction mechanism and all measurements should be taken with the bearing manually retracted. DO NOT OVERTRAVEL THE PISTON. The piston can be pushed completely out of the bearing base and this will cause leakage of fluid and possible damage to painted surfaces of the vehicle.

## Installing the Hydraulic Bearing

With the bellhousing and clutch installed measure the distance from the bellhousing face to the clutch fingers. Record this number for later reference in setting the bearing clearance.

Remove the transmission bearing retainer bolt from the lower-left side opposite the fork opening window of the bellhousing. Replace it with the enclosed 5/16 or 3/8 stud as needed. Install a jam nut on the stud and tighten against the retainer. The inlet and bleed fittings should be pointing towards the fork opening on the bellhousing. If you are using the optional remote bleed line kit, replace the bleed fitting on the hydraulic housing with the fitting supplied in the kit. Attach the bleed line to the fitting as it will be routed through the fork hole in the bellhousing.

Secure the 1/8 pipe to #3 and bleed fittings in the bearing assembly. The 1/8 pipe fitting should be located toward the window of the housing when positioned over the bearing retainer.

Slide the hydraulic release bearing over the bearing retainer with the inlet and bleed fittings towards the fork opening in the bellhousing and down over the stud installed in the retainer. The bearing will float on this stud when the slave is operated.

Measure the distance from the release bearing face to the transmission mounting surface. Adjust the height of the bearing on the retainer stud using the supplied conical shims until the distance from the bearing face to the transmission mounting surface is .150-.200" inch less than the distance from the bellhousing face to the clutch fingers measured at the beginning of the install. After making sure this dimension is correct, proceed to installing the transmission and connecting/bleeding the bearing.

## Installing the transmission

Lubricate the o-ring on the inside of the bearing assembly base. Attach a #3 line to the inlet fitting and the remote bleed line, if used. Install the required shims on the collar. Start the bearing on the input collar until the o-ring contacts the collar. Start the transmission into the bellhousing, routing the feed lines into the bellhousing and through the fork hole. As you continue installing the transmission, the bearing will be pushed back into position on the collar.

Now connect the hydraulic feed line and bleed the system thoroughly.

If more or less travel is needed to disengage the clutch assembly, adjust the shims and recheck the position of the bearing on the transmission.

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Part Number 78125 includes:

1 - 78125 bearing assembly	1 - 3/8-16 stud
1 - 1/8 pipe to #3 fitting	6- Conical shims
1 - Bleed fitting	1 - Remote bleeder kit
1 - 5/16 -18 stud	

Accessories/repair parts:  
78505 - O-ring kit  
78015 - Replacement Bearing