

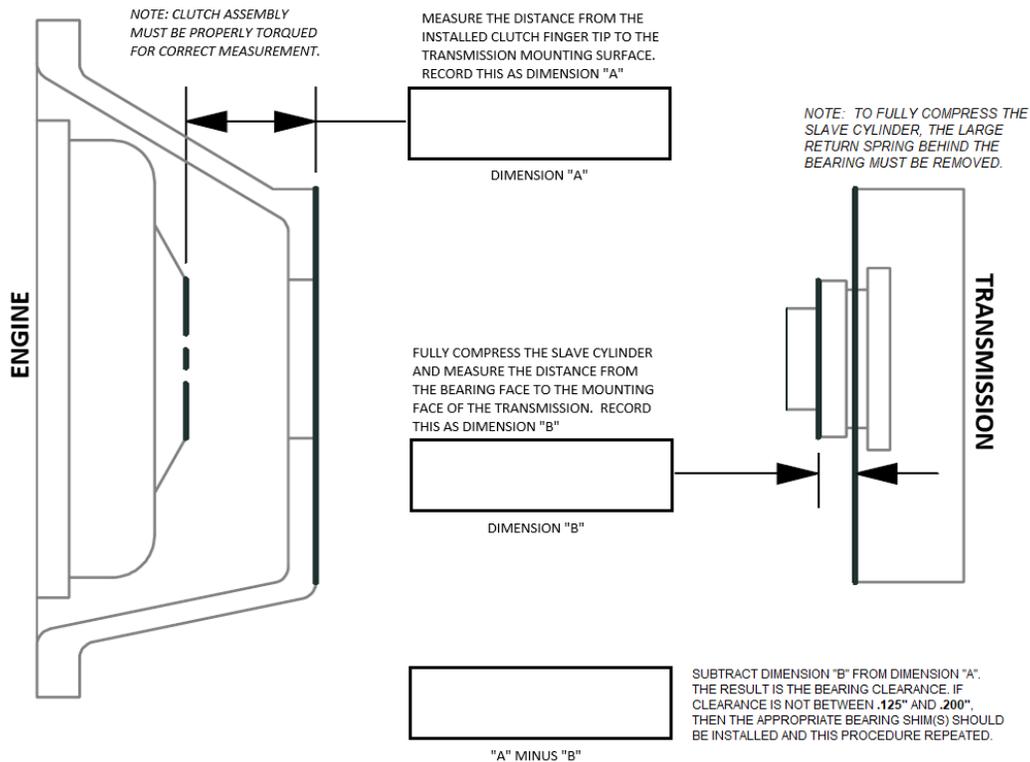


## HYDRAULIC SLAVE/BEARING SHIM INSTRUCTIONS

For every clutch install performed on a newer GM vehicle, the clearance between the slave cylinder bearing face and the clutch fingers must be calculated to determine if a shim is needed for proper installation.

Procedure to determine if a shim is needed for your setup:

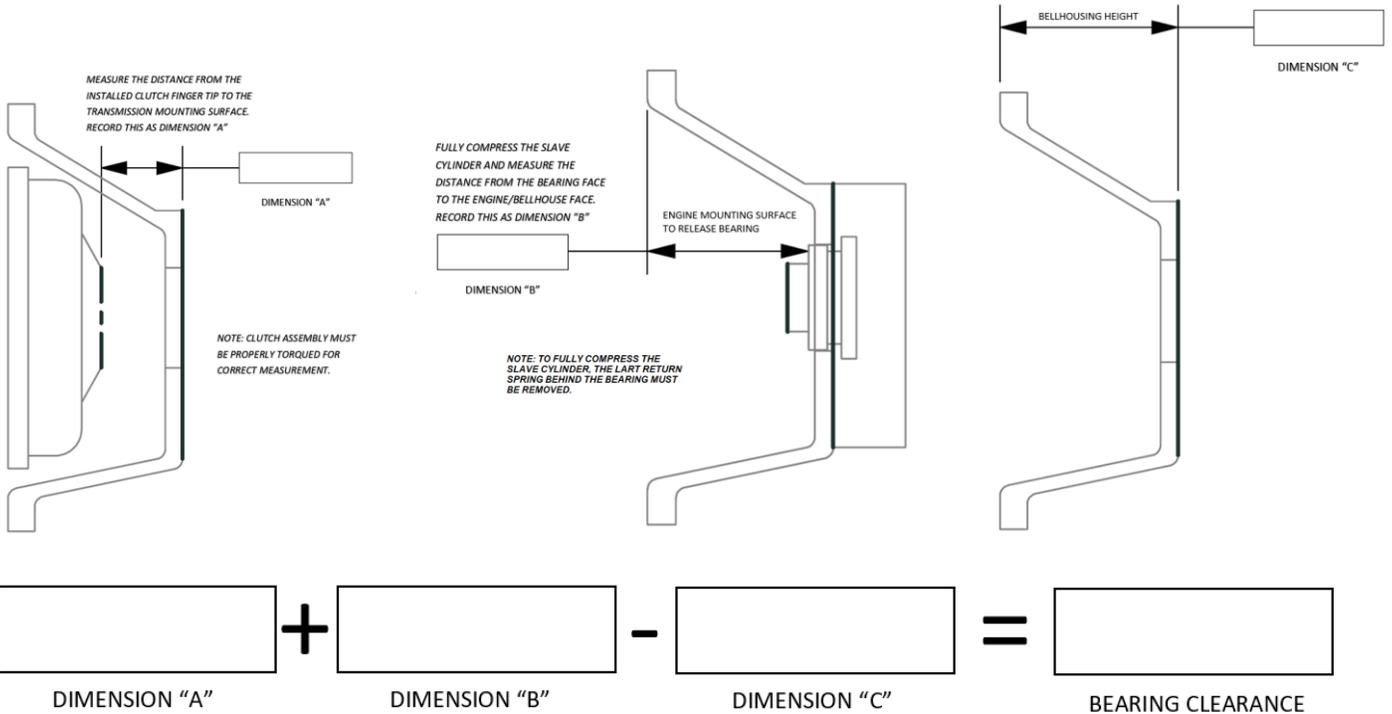
### MEASURING METHOD 1



1. Measure the distance between the bellhousing surface that interfaces with the transmission to the tips of the pressure plate fingers. In order to get a correct measurement, the clutch assembly must be properly torqued. This dimension is "A" on the worksheet above.
2. Measure the distance between the throw-out bearing surface to the transmission mounting surface that contacts the bellhousing. In order to get the correct measurement, the slave spring must be removed and the bearing must be fully collapsed and bottomed out at the end of its travel, making contact with the aluminum base. The dimension gathered here is "B" on the worksheet above.
3. Subtract dimension "B" from dimension "A". The result is the bearing clearance and should be between 0.125" and 0.200". If the result is a value greater than the given range, then the appropriate thickness shim(s) should be installed to reach the optimum clearance range of 0.125"-0.200".

**NOTE:** The bearing clearance is critical for proper clutch wear. If dimension "B" is greater than or equal to "A" there could be a problem with the clutch engagement and could result in premature clutch slip, wear, and failure. Contact the clutch manufacturer before proceeding.

## MEASURING METHOD 2



IF THIS VALUE IS NOT BETWEEN .125" AND .200", THEN THE APPROPRIATE BEARING SHIM(S) SHOULD BE INSTALLED AND THIS PROCEDURE REPEATED. IF NUMBER IS NEGATIVE, THERE COULD BE A PROBLEM WITH THE CLUTCH ENGAGEMENT. DO NOT PROCEED.

1. With the bellhousing bolted to the engine, measure the distance between the bellhousing surface that interfaces with the transmission to the tips of the pressure plate fingers. In order to get a correct measurement, the clutch assembly must be properly torqued. This dimension is "A" on the worksheet above.
2. With the bellhousing bolted to the transmission, measure the distance from the bellhousing surface that interfaces with the engine to the throw-out bearing. In order to get the correct measurement, the slave spring must be removed and the bearing must be fully collapsed and bottomed out at the end of its travel, making contact with the aluminum base. The dimension gathered here is "B" on the worksheet above.
3. Measure the total height of the bellhousing. This is dimension "C" on the worksheet above.
4. Add dimensions A and B. Then subtract dimension C. The result is the bearing clearance and should be between .125" and .200". If the result is a value greater than the given range, then the appropriate thickness shim(s) should be installed to reach the optimum clearance range of 0.125"-0.200".

**NOTE:** *The bearing clearance is critical for proper clutch wear. If the result of step 4 is a negative number then there is no bearing clearance and there could be a problem with the clutch engagement and could result in premature clutch slip, wear, and failure. Contact the clutch manufacturer before proceeding.*