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## CLUTCH INSTALLATION INSTRUCTIONS

### **14" CAST / ANGLE-SPRING / TWO PLATE / PULL TYPE CLUTCH**

1. Check the condition of the flywheel. If it is cracked or warped, refer to the manufacturers recommendations concerning resurfacing or replacement.
2. Check pilot bearing condition and fit in flywheel. It is always recommended to replace the pilot bearing.
3. Check the transmission main drive gear spline (input shaft) for excessive wear. Worn splines will prevent clutch discs from sliding freely. Make sure the disc slides back and forth on the splines without any binding.
4. Make sure that the drive pins are square with the friction surface of the flywheel. The constant pounding of the old center plate may have changed the position of these pins. Make sure that all of them are checked using the proper alignment tool. It is always recommended to replace the drive pins. If anti-rattle springs are to be utilized, install them now.
5. Install two guide studs (3/8-16 thread and 2" long) at the eleven (11) and one (1) o'clock positions.
6. Position the front disc into the flywheel making sure the side marked **flywheel side** faces the engine (flywheel).
7. Install the intermediate plate over the driving pins. The intermediate plate must "float" freely on the pins.
8. Install the alignment tool through the rear disc, making sure that the side marked **pressure plate side** faces the transmission. **Note: The long part of the hub should be toward the transmission.** Position the alignment tool thru the spline of the flywheel disc and into the pilot bearing hole.
9. Position the cover assembly over the guidestuds on the flywheel by sliding it over the alignment shaft, centered but not supported by the alignment shaft. Start the bolts. **IMPORTANT:** Make sure the adjusting mechanism is at the bottom, where you can get to it after the transmission is installed.
10. Tighten the bolts at 35-40 ft. lbs., in an even, modified star pattern. Make sure that the cover assembly seats properly on the flywheel. Replace the two guide studs with bolts and tighten to 35-40 ft. lbs.
11. Remove all the blocks under the release bearing cage.
12. Remove the alignment tool.
13. Position the clutch brake, if needed, on the main drive gear.
14. Install the transmission using extreme care not to hang the weight of the transmission on the clutch. The disc will bend causing non-release. Locate the release yoke in the proper relation to the release bearing housing as the transmission is moved into place.
15. **The release bearing housing has been pre-packed with some grease, however it must still be lubricated when the clutch is installed or premature failure may occur. Do not over grease, as the excess will find its way to the clutch friction material.**
16. **If for some reason the clutch is to be removed, be sure to insert the wooden blocks between the release bearing cage and the top of the cover.**

See reverse side for Adjustment and Maintenance Procedures

## Adjustment Instructions

1. Remove the inspection cover at the bottom of the clutch housing.
2. Check the adjustment of the clutch. If a clutch brake is installed, clearance between the top of the bearing cage and the brake plates when the brake plates are positioned against the transmission should be a minimum of  $\frac{1}{2}$ ". Without a clutch brake the minimum dimension should be  $\frac{3}{4}$ ".
3. Turn flywheel until the adjustment lock is at inspection hole. Remove cap screw and lock.
4. Release clutch by depressing the pedal. The adjusting ring will turn **only** while the pedal is depressed and the clutch is in the released position.
5. Turn the adjusting ring clockwise to move the bearing cage towards the transmission. Turn the adjusting ring counter clockwise to move the bearing cage towards the flywheel.
6. After approximately  $\frac{1}{2}$ " clearance is achieved, replace the adjustment lock. This observation must be made while the clutch is in the engaged (pedal up) position.
7. On original installation, adjust the pedal linkage to insure approximately  $\frac{1}{8}$ " between the yoke and the wear pads. All future adjustments should be made on the clutch adjusting ring and **not** on the pedal linkage. If the amount of pedal free-play is excessive, adjust with the pedal adjusting screw. Do not alter the  $\frac{1}{8}$ " dimension.

## Maintenance Tips

1. Lubricate the clutch release bearing at each chassis lubrication period, using high **temperature grease**. Do not over grease, as the excess will find its way to the clutch friction material.
2. Adjust the clutch **before the pedal clearance has disappeared**. Failure to do this will result in slippage, and an adjustment may not help.
3. If the clutch is hydraulically assisted, make sure the slave and master cylinder are functioning properly. For hydraulic linkage adjustment, refer to the specific vehicle manufacturers' procedures.

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