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## **CLUTCH INSTALLATION INSTRUCTIONS**

### **15-1/2" CAST / ANGLE-SPRING / TWO PLATE / PULL TYPE CLUTCH**

1. Check the condition of the flywheel. If it is cracked or warped, refer to the manufacturer's 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. Install two guide studs (7/16-14 thread and 5" long) at the eleven (11) and one (1) o'clock positions.
5. Insert the alignment tool through the release bearing sleeve in the new clutch. 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.**
6. Insert the intermediate plate in the clutch cover and align the driving lugs with the slots provided. Where available, the positive separator pins in the intermediate plate must be flush with the cast lug on the pressure plate side.
7. Install the front disc by sliding over the alignment tool, making sure the side marked **flywheel side** faces the engine (flywheel).
8. The unit is now ready to be installed on to the flywheel. Position the clutch over the guide studs and slide it forward until contact is made with the flywheel surface. Start six bolts with lock washers and tighten finger tight. Lightly tap the aligning tool to make sure that it is centered and seated into the pilot bearing. **IMPORTANT:** Make sure the adjusting mechanism is at the bottom, where you can get to it after the transmission is installed.
9. 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.
10. Remove all the blocks under the release bearing cage.
11. Remove the alignment tool.
12. Position the clutch brake, if needed, on the main drive gear.
13. 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.
14. **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.**
15. **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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