

CLUTCH INSTALLATION AND ADJUSTMENT GUIDE

For most Medium Duty and Heavy Duty Push Type Clutches

Use the following guidelines to ensure your clutch works and performs as intended and to improve the life of the product. It is strongly recommended that periodic checks and adjustments of the clutch linkage are performed to ensure correct free play is maintained. Following these recommendations will help to ensure that your **warranty** will be kept in force.

CLUTCH INSTALLATION AND FLYWHEEL PREPARATION FOR BOTH SINGLE AND TWO PLATE CLUTCH ASSEMBLIES

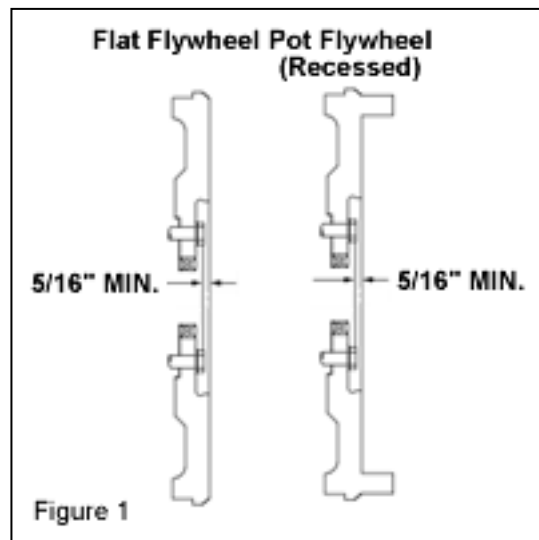
Inspect Engine Flywheel (Single or Two Plate)

1. Check recessed type flywheels for correct depth.
2. Inspect the release bearing and carrier and flywheel pilot bearing. Pilot bearing should be a hand press fit in the flywheel recess and a slip fit on the transmission input shaft. The release yoke or fork should contact the release bearing carrier pads evenly to prevent a bind on the front bearing cap extension.
3. The friction face of the flywheel must be free from heat cracks, score marks, or taper and must be parallel to the crankshaft mounting flange. The presence of any of these conditions will have an adverse effect on clutch function and life.

NOTE: Extremely Important - every time a flywheel is reinstalled or replaced it must be inspected for misalignment.

Installing Single Plate Clutch Assembly

1. It is a good idea to try the cover assembly on the flywheel without the disc assembly to insure proper fit where cover is piloted on the O.D.
2. Install driven disc, making sure that it is properly positioned and insert an aligning shaft. Normally the long end of the driven disc hub extends toward the transmission, but in a few instances the long end may face toward the engine. A minimum of $5/32$ " must be maintained between the pilot bearing and the flywheel side disc hub. The minimum distance of $5/16$ " must be maintained between the flywheel friction face and the flywheel to crankshaft mounting bolt heads (Figure 1).
3. Bolt the cover assembly to the flywheel using only SAE Grade 8 cap screws, tighten progressively in sequence (Figure 2) until the cover is drawn up tight using 35 to 45 lbs.-ft. of torque. Extreme care must be exercised to insure that the flywheel ring or cover is seated in the piloting rim on recessed type flywheels.
4. Remove the cover assembly shipping block or hold down bolts, only after bolting to flywheel.



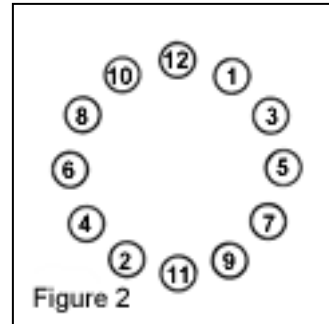
Installing Two Plate Clutch Assembly

1. Two plate assemblies have an intermediate plate with driving lugs which fit into mating slots of the flywheel or adapter ring.
2. Before installing a two plate assembly, the intermediate plate should be set into the driving slots of the flywheel or adapter ring and clearances checked. A gap of .006" to .012" is recommended.
3. The two disc assemblies for a two plate clutch may or may not be identical or interchangeable. In most cases they will not be interchangeable and will be marked either flywheel side or pressure plate side. They must be positioned with the side of the disc as marked, next or adjacent to the respective part. A minimum of $5/32$ " must be maintained between the pilot bearing and the flywheel side disc hub. The minimum distance of $5/16$ " must be maintained between the flywheel friction face and the flywheel mounting bolt heads (Figure 1).

NOTE: If the disc assemblies are equipped with cera-metallic button facing it is suggested that the facing material on the two discs be lined up.

4. When installing two plate clutches, it is essential that a splined shaft or aligning shaft be used to properly align the two disc assemblies.

5. With a spline alignment tool place the driven discs and intermediate plate on the flywheel. Attach the clutch cover assembly to the flywheel using the 12 cap screws provided in the adapter kit. Do not tighten any cap screws until all 12 have been installed and finger tight, torque to 35-45 lbs.-ft. (Figure 2)



6. Remove the cover assembly shipping blocks or hold down bolts and spline alignment tool.

7. To obtain complete disengagement the release levers must be actuated a specified distance from the engaged position. Assuming the release bearing clearance (distance between the clutch release levers and release bearing) to be 1/8" when the clutch is in the engaged position, the release bearing must move forward 1/8" to take up this clearance before it contacts the release levers. After the release bearing contacts the release lever 1/2" of additional travel is required to disengage the clutch assembly (Figure 3).

Clutch Linkage Adjustment (Single or Two Plate)

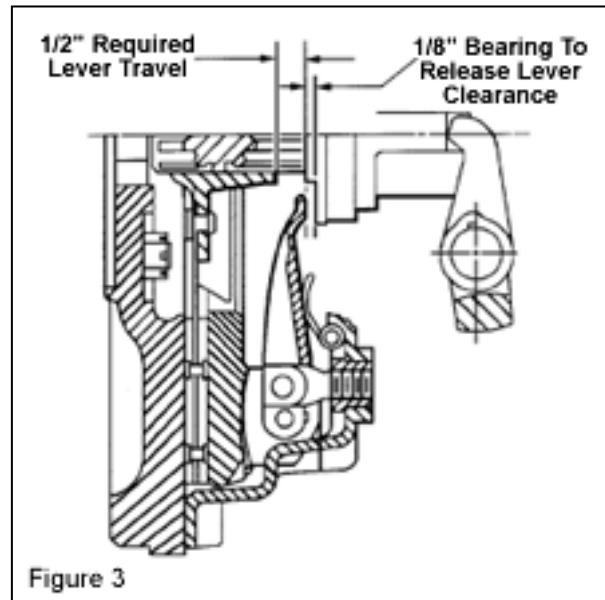
Never wait for the clutch to slip before making a pedal adjustment.

1. Keep the clutch pedal in proper adjustment by frequent inspection of the "Free Travel" (the first easy movement of the clutch pedal).

2. Check clutch pedal with your hand to be positive that "Free Travel" is a result of actual release bearing clearance and not caused by worn linkage (Figure 4).

3. Proper clutch pedal "Free Travel" is approximately 1 1/2". The gradual reduction from this amount is a normal condition caused by wearing of the disc friction facings.

4. If inspection indicates clutch pedal *Free Travel* is less than 1/2", immediate adjustment of the clutch pedal linkage should be made to restore proper 1 1/2" *Free Travel* (Figure 4). This 1 1/2" pedal "Free Travel" normally results in 1/8" clearance between the clutch release levers and release bearing.



5. If excessive free play is present in the clutch pedal linkage due to worn parts, the worn parts must be replaced. Excessive wear of the release linkage may give a false impression of the actual amount of release bearing clearance.

CAUTION: Excessive clutch pedal "Free Travel" may prevent complete clutch disengagement while insufficient clutch pedal "Free Travel" may cause slippage and short clutch life.

Clutch Linkage Requirements (Single or Two Plate)

The clutch pedal linkage is required to move the release bearing approximately 5/8". This 5/8" is made up of 1/8" clearance between the bearing and the release levers (free play) and 1/2" that the release lever must move inward to complete clutch disengagement (Figure 3).

