

Clutch Problem Diagnosis

Anytime a clutch job is undertaken to correct a problem, the cause of the problem must be identified once the transaxle is removed and the parts are available for inspection.

CHATTER: Grease on the clutch disc is the most common culprit; however, a severe leak will make the clutch slip. A leaking clutch shaft seal (or badly cracked release bearing shaft) will allow differential grease to be thrown from the clutch disc hub outward. Keep in mind that a crankshaft seal will leak downward behind the flywheel and out the bottom without getting on the clutch. 60-63 Clutch shaft seals are a smaller size than 64-69, check for the correct size. Clutch chatter can be caused or aggravated by a bad pilot bushing so be sure and change this inexpensive item any time the transaxle is removed, as they take a set while in service. Be sure and pressure oil the bushing with two fingers until the oil sweats out through the sides. Rusted or damaged splines on the clutch shaft or the clutch disc can cause chatter. A very tall first gear ratio such as a three speed combined with a 3.27 differential is just looking for any reason to chatter. A very stiff FC clutch cable can also make a minor chatter problem much worse. Although sometimes blamed for chatter, pressure plates seldom are the culprit unless the surface is extremely rough. They would have to have a bad “wrap up strap” to be the basic cause.

FAILURE TO RELEASE COMPLETELY AND SLIPPING: First of course is proper adjustment. I have seen cables adjusted so badly that they were hitting the transmission mount causing all of the free play to be in the cable and not at the release bearing. The correct parts must have been installed, since mismatching early and late clutch parts will cause a no release or no engagement. A disc installed backwards will not release. Some aftermarket discs with riveted hubs will rub on the crankshaft after they wear down, causing a no release. A broken spring in the pressure plate or a bent clutch shaft can cause a no release situation. A good pre-installation check is to install the shaft in the transaxle, then put the disc on the shaft and turn the differential side gears while watching the disc rotate. Rusted splines on a clutch shaft/clutch disc hub can keep the disc from moving away from the flywheel when released. An excess gear lube leak can cause a disc to “suction stick” to the flywheel briefly, and a disc can rust to the flywheel in our humidity when stored a long time. A disc will generally not slip until the material is worn down to the rivets with a normal pressure plate. When installing new parts, it is wise to bolt up the flywheel, disc and pressure plate, then put the assembly in a press and watch the operation, since pressure plate clearance and spring operation will vary with the re-builder.

ALL flywheels need to be rebuilt and balanced. If you have a late flywheel surfaced, all of the area on the flywheel must be surfaced or you will have a no engagement or slipping. If you have a pressure plate surfaced, it may need to be shimmed to compensate or the clutch will slip prematurely.

Also watch for cracked release bearing shafts which expand and cause the release bearing to drag. Check for badly worn clutch adjusting swivels, clutch cables that are stretched or repaired with the incorrect length, broken welds on the early pedal cross shaft, and numerous other weird things you have inherited from those before you!