GENERAL MOTORS

Buick
Chevrolet
Oldsmobile
Pontiac

DESCRIPTION

Single plate dry disc type with a diaphragm spring replacing conventional clutch release springs and release levers. Diaphragm spring is shaped like a dished washer, with inner rim slotted to form many release fingers, and is pivoted on inner and outer pivot rings mounted in clutch cover. Most models have straight release fingers, however, some models have six or all of the release fingers bent upward to provide centrifugal action for increased clutch pressure at higher speeds. Models having six fingers bent upward also have weights on these six fingers. Clutch is operated by either mechanical linkage or cable.

REMOVAL & INSTALLATION

CLUTCH

Removal & Installation – 1) Disconnect propeller shaft and remove transmission. Remove pedal return spring from clutch release fork.

2) On cable operated models, remove clutch fork cover, then disconnect clutch return spring and control cable from clutch fork. On non-cable operated Pontiacs, remove starter, then remove clutch release bearing through rear opening in flywheel housing; remove front flywheel housing shield, then remove housing.

3) On all non-cable operated models except Pontiac, proceed as follows: Remove flywheel housing, then remove clutch release bearing from clutch release fork. On all models, disconnect clutch fork from ball stud by moving it toward center of flywheel.

4) Mark clutch cover and flywheel for reassembly reference. Remove clutch cover by unscrewing bolts evenly, one turn at a time. Remove clutch disc. To install, reverse removal procedure.

CLUTCH CABLE (EXC. CHEVETTE)

Removal – Remove clutch fork cover at side of housing. Disconnect return spring and clutch cable at clutch shift fork. Remove clip and pin that retains cable to pedal arm. Remove cable. *See Ball Stud Adjustment before going on to next step.*

Installation – Install cable in sheath from passenger compartment. Loop cable around pulley and secure to pedal with graphite lubricated pin. Install other end of cable on clutch release fork. Push fork forward until bearing contacts clutch spring fingers and tighten screw pin on cable until it bottoms on fork. Turn pin an additional ¼ turn and drop pin into groove in fork. Attach return spring and install fork cover.

CLUTCH CABLE (CHEVETTE)

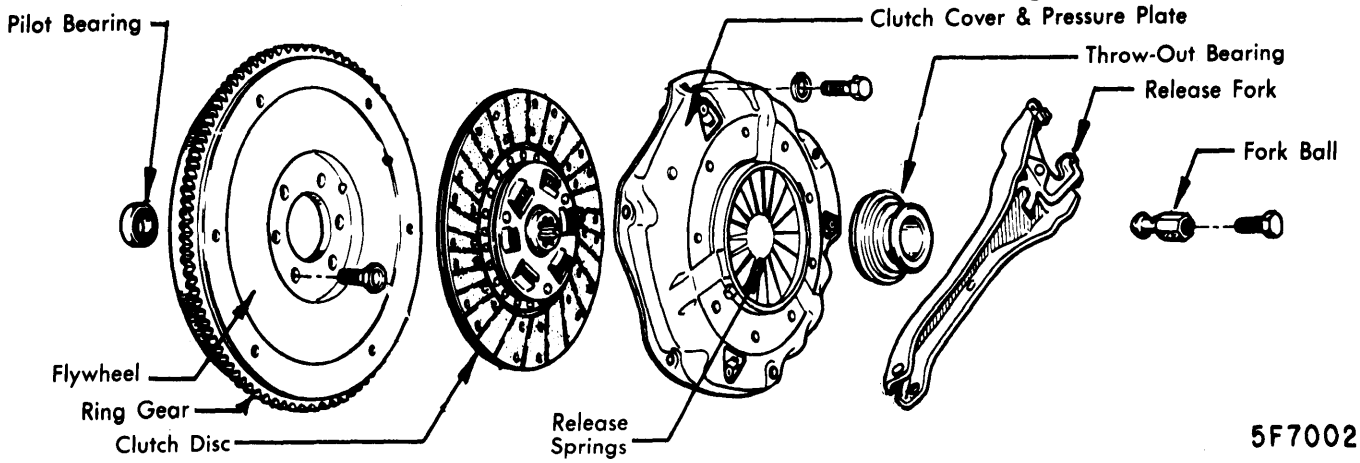
Removal – Disconnect return spring and cable at clutch fork. Disconnect cable from upper end of pedal. Pull cable assembly through body reinforcement and disconnect at fender retainer.

Installation – Push new cable through body reinforcement and secure cable end to pedal arm. Route cable down to fork lever and connect cable to lever. Perform ball stud adjustment, then turn cable adjusting nut 4.35 turns counterclockwise. Alternately, place a .171" gauge block between adjusting nut and lock nut with adjusting nut against clutch fork. Remove gauge block and back off adjusting nut until it contacts lock nut. Tighten lock nut and connect return spring. The above procedures will provide a lash of .812±.25" at clutch pedal.

ADJUSTMENT

BALL STUD ADJUSTMENT

NOTE – This procedure is for vehicles with cable operated clutch after cable or clutch has been replaced. Before cable is attached to release fork, install suitable gauge (J-23644) so that flat end is against front face of clutch housing and hooked end is located at point of cable attachment on fork. Turn ball stud inward by hand until clutch release bearing makes contact with clutch spring fingers. Install and tighten lock nut without changing adjustment. Install ball stud cap and remove gauge.



DIAPHRAGM SPRING CLUTCH ASSEMBLY

GENERAL MOTORS (Cont.)

PEDAL ADJUSTMENT

Cable Operated Clutches (Exc. Chevette) – Remove ball stud cap and loosen lock nut on ball stud end located to right of transmission on clutch housing. Adjust ball stud to obtain .65-1.15" pedal free play. Tighten lock nut without changing setting.

Cable Operated Clutches (Chevette) – Threaded adjusting end is inserted into a hole in clutch fork and adjusted with a spherical seat nut. Release lock nut, adjust spherical nut to obtain .57-1.05" pedal free play. Tighten lock nut without changing setting.

Mechanical Linkage Clutches (Exc. Corvette) – Disconnect return spring from clutch fork. Disconnect clutch fork push rod from countershaft lever and install in gauge (upper) hole of countershaft lever. Rotate countershaft so clutch pedal is firmly against rubber bumper on dash brace. With clutch fork held rearward until clutch release bearing lightly contacts pressure plate release levers, change length of push rod until all lash is removed from system. Reinstall push rod pin in lower countershaft lever hole. Reconnect return spring and check pedal free play.

Pedal Free Play

Application	Inches
Apollo & Omega	7/8 - 1 1/2
Buick (Exc. Apollo)	3/4 - 1 1/4
Camaro	1 - 1 3/8
Chevelle	3/4 - 1 5/16
Nova	3/4 - 1 3/8
Pontiac (Including Ventura)	3/4 - 1 1/4

Corvette – Disconnect spring between toe pan brace and cross shaft lever. With clutch pedal against stop, loosen jam nuts sufficiently to allow adjusting rod to move against clutch fork until release bearing contacts pressure plate fingers lightly. Rotate upper nut against swivel, then back off exactly 4 1/2 turns. Tighten lower nut to lock swivel against upper nut. Install return spring and check clutch pedal free play. It should be 1-1 1/2"; adjust as required.