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 housing.

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

Removal (Exc. Chevette) – 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.

Removal & Installation (Chevette) – 1) 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.

2) Push new cable through body reinforcement and secure cable end to pedal arm. Route cable down to fork lever and connect. Install return spring.

3) Install ring in first fully visible groove in cable from sleeve. Release cable. Depress clutch pedal four times minimum to be sure all parts of clutch control system are properly seated. Readjust pedal free play if necessary.

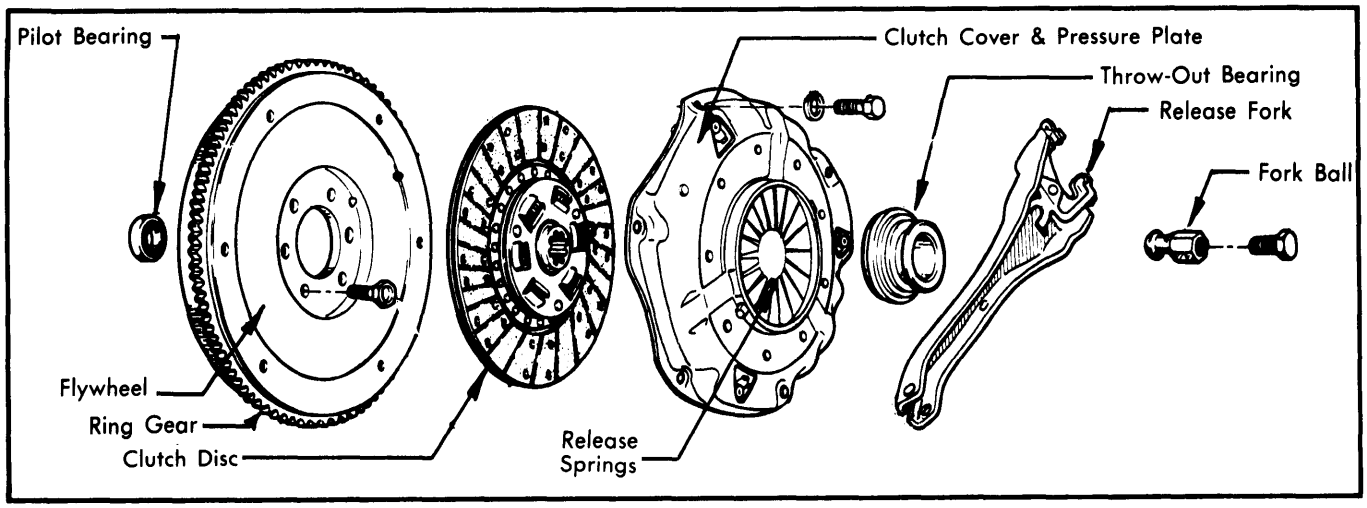

Fig. 1 Exploded View of Diaphragm Spring Clutch Assembly

GENERAL MOTORS (Cont.)

ADJUSTMENT

BALL STUD ADJUSTMENT

NOTE – *This procedure is for vehicles with cable operated clutch after cable or clutch has been replaced*

With throw-out bearing, clutch fork and ball stud installed, place gauge J-28449 so flat end is against front face of clutch housing and hooked end is aligned with bottom depression in clutch fork. Turn ball stud clockwise by hand until clutch release bearing makes contact with clutch spring and fork is snug on gauge. Install lock nut and tighten to 25 ft. lbs. being careful not to change ball stud adjustment. Remove gauge by pulling outward at housing end.

PEDAL ADJUSTMENT

Cable Operated Clutches (Exc. Chevette) – **1)** With return spring removed, place cable through hole in clutch fork. Pull cable until clutch pedal is firmly against rubber bumper. Push clutch fork forward until throw-out bearing contacts clutch spring fingers.

2) Screw pin on cable until it bottoms out on fork surface. Turn one quarter additional revolution clockwise and drop pin into groove in fork. Attach return spring.

Cable Operated Clutches (Chevette) – **1)** Place cable through hole in clutch fork and seat. Install return spring. From engine compartment, pull cable away from dash until clutch pedal is firmly against pedal bumper and hold in position. Install ring in first fully visible groove in cable from sleeve. Release cable. Depress pedal to floor several times to be sure all parts of clutch control system are properly seated.

2) If there is insufficient clutch pedal lash, remove ring from cable and allow cable to move into dash by one cable notch and reinstall ring. Reverse this procedure if there is excessive pedal lash.

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.

Clutch Pedal Free Play Specifications

Application	Inches
Buick	
Century	.70-1.30″
Regal	.70-1.30″
Skylark	.85-1.45″
Skyhawk	.65-1.15″
Chevrolet	
Chevette	.58-1.08″
Monza	.65-1.15″
Malibu	.67-1.27″
Corvette	1.00-1.50″
All Others	.85-1.45″
Oldsmobile	
Starfire	.69-1.13″
Omega	.88-1.50″
Cutlass	.67-1.27″
Pontiac	
All	.70-1.30″

Mechanical Linkage Clutches (Corvette) – Disconnect spring between toe pan brace and cross shaft lever. With clutch pedal against stop, loosen jam nut 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 4½ turns. Tighten lower nut to lock swivel against upper nut. Install return spring and check clutch pedal free play. It should be 1-1½″; adjust as required.