

# Clutches

## BORG & BECK

American Motors (1965-73)  
 Buick (1968-70)  
 Chrysler Corp. (1965-73)  
 Oldsmobile, Exc. F-85 (1965-69)  
 Pontiac & Tempest (1965-69)  
 Studebaker (1965)  
 Jeep (1970-73)

NOTE - Some models use other types of clutch.

CLUTCH OVERHAUL CAUTION: Clutch manufacturer recommends no overhaul of these clutches.

### DESCRIPTION

Single plate, dry disc type. Release levers, mounted on bolts piloted in pressure plate and retained in clutch cover, actuate clutch struts which provide "knife-edge" action. Semi-centrifugal type clutches have centrifugal roller assemblies between the pressure plate and the cover. Centrifugal action on these rollers increases the pressure plate load as the engine speed increases.

### CLUTCH PEDAL ADJUSTMENT

American Motors (1965-73) & Jeep (1970-72) - Pedal freeplay should be 7/8" to 1 1/8" (1" preferred). Adjust at connecting link between throwout lever release idler shaft assembly. Lengthen link to reduce free travel.

Jeep (1973) - Pedal freeplay should be 1/2" to 3/4". Adjust as follows: First adjust bellcrank outer support bracket to provide about 1/8" endplay. Then adjust clutch fork release rod to obtain 1/2" to 3/4" freeplay.

Buick (1968-70) - Pedal lash should be 5/8-7/8". Be sure pedal at full release position contacts rubber stop, and clutch fork is touching fingers on pressure plate. Adjust release rod so clevis pin just fits into clutch fork, with no lash at the pedal, then back off release rod 3 full turns. Reinstall retainer and pin. Free travel should be 6 5/8". To adjust, bend rubber bumper stop mounting or trim thickness off.

Chrysler Corp. (1965-73) - Adjust self-locking nut on clutch fork rod to provide 5/32" free movement at fork-to-pushrod pin. This will correct 1" free pedal travel.

Oldsmobile (1965-69) - Adjust free pedal travel to 3/4-1" by loosening locknut on adjusting rod, remove swivel retainer, and adjust swivel. Reinstall retainer and tighten locknut before checking free travel.

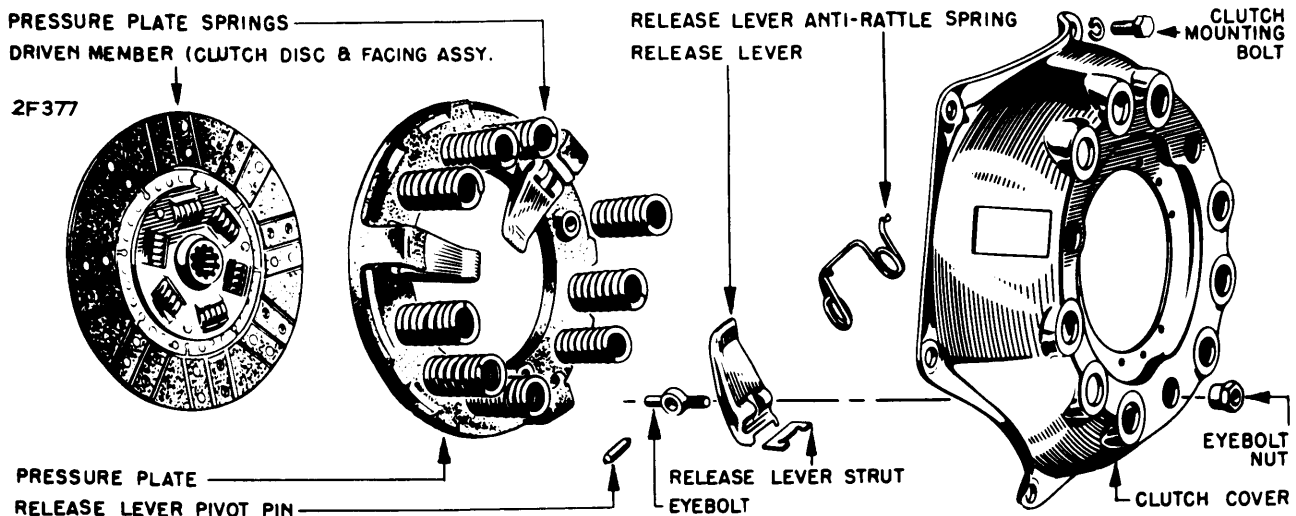
Pontiac & Tempest (1963-69) - Free pedal travel should be about 1". To adjust, disconnect return (or anti-rattle) spring. Loosen trunnion locknuts and move pushrod and clutch fork rearward until release bearing lightly contacts release fingers. Turn rear nut up to the trunnion. Shorten pushrod 7 full turns Pontiac 1963-64 and Tempest 1963; 3 1/2 turns Pontiac 1965-67 and Tempest 1964-67 and reinstall spring.

Studebaker (1962-65) - Brake pedal must first be properly adjusted and clutch pedal brought to the same height by turning clutch pedal stopscrew. NOTE - On power brake cars, adjust so clutch pedal height is 6 1/4-6 1/2" from top of pedal pad to floor mat. Turn adjusting nut on clutch over-center spring so spring length is 10", then adjust clutch pedal-to-bellcrank rod so there is 1/2" clearance between top end of bellcrank and body flange on front side of firewall. Now turn clutch operating rod adjusting nuts as necessary for 1/2-1" pedal free travel measured at pedal pad.

► HILL HOLDER NOTE: Check setting whenever clutch pedal adjusted and adjust operating rod so Hill Holder releases at same time clutch is engaged.

### CLUTCH REMOVAL

American Motors (1965-73) - Remove transmission, starter, throw-out bearing and sleeve, and clutch housing. Mark flywheel and clutch cover for reassembly. Remove clutch fork. When removing clutch cover, loosen attaching screws in rotation, to avoid warping cover.



BORG & BECK CLUTCH ASSEMBLY (TYPICAL)

## BORG & BECK (Cont.)

**Jeep (1970-73)** – Remove transmission (on some models transmission and transfer case will come out as one unit). Remove starter, throw-out bearing and sleeve, and clutch fork. Mark flywheel and clutch cover for reassembly. When removing clutch cover, loosen attaching screws, in rotation, to avoid warping cover.

**Buick (1968-70)** – Remove transmission. On LeSabre and Wildcat, release equalizer assembly. Remove pedal return spring. On LeSabre and Wildcat, disconnect rod assembly from clutch fork. Remove flywheel housing and throwout bearing. Disconnect clutch fork from ball stud by forcing it to center of flywheel housing. Mark clutch cover and flywheel to insure correct indexing at installation. Loosen clutch cover bolts gradually, remove pressure plate and disc.

**Chrysler Corp. (1964-72)** – Remove or detach linkage, and transmission, clutch housing pan and release bearing. **CAUTION** - Do not force bearings and pullback spring off fork prongs. Mark cover and flywheel for reassembly. Loosen clutch attaching bolts in succession a few turns at a time to release spring tension, then remove clutch assembly.

**Oldsmobile (1965-69)** – Remove transmission, clutch return spring and rod assembly, clutch release bearing,

spring and rod assembly. Remove clutch release bearing, flywheel housing; release yoke and ball stud will remain with housing. Scribe cover assembly for installation, remove clutch cover assembly-to-flywheel attaching bolts, remove clutch cover and disc. **CAUTION** - Clutch pedal uses high tension overcenter springs to help apply clutch. When removing linkage, place a 4" x 4" block under pedal to hold pedal above overcenter point.

**Studebaker (1960-65)** - Disconnect battery. On 6 Cyl. remove dipstick and tube and starter mounting capscrews (do not disconnect cables) and tie starter out of way. On V8, remove starter. On all models, remove clutch operating shaft. Remove transmission assembly. Disconnect engine rear support from crossmember. Raise engine at oil pan and remove crossmember. On V8, remove clutch housing cover plate. Remove clutch housing. **NOTE** - On 6 Cyl., remove dowel bolts first. Mark flywheel and clutch for reassembly, remove attaching bolts, and remove clutch assembly.

- **CLUTCH DRIVEN DISC INSTALLATION CAUTION** - On 194" and 283" engines, driven disc is **always** installed with the grease slinger on disc toward transmission (rear) side of assembly. This supersedes any previous information.