

## FORD MOTOR CO.

## DESCRIPTION

Two different types of clutches are used in Ford vehicles. Both types are single plate, dry types, with one being non-centrifugal and the other being semi-centrifugal. Clutch release is accomplished through hydraulic linkage on "P" models, and through mechanical linkage on all others. On a hydraulic clutch, pedal pressure is transmitted to clutch fork through master cylinder and slave cylinder. On a mechanical clutch, pedal pressure is transmitted through a series of rods and an equalizer shaft.

## REMOVAL &amp; INSTALLATION

## CLUTCH

**Removal & Installation** — Raise and support vehicle under frame. Disconnect clutch fork return spring and clutch fork push rod at clutch fork. On "P" models, remove slave cylinder attaching bolts, and support cylinder out of way. Remove transmission. See *appropriate article in MANUAL TRANSMISSION SERVICING Section*. On vehicles equipped with two piece clutch housing, remove underpan, clutch fork, and clutch release bearing. On vehicles equipped with one piece clutch housing, remove starter and clutch housing. Mark flywheel and clutch cover for reassembly, then loosen clutch

cover attaching bolts evenly until clutch cover spring tension is relieved. Remove bolts and remove clutch assembly from vehicle. To install, clean flywheel surface, and reverse removal procedure. Tighten bolts evenly and alternately.

## CLUTCH MASTER CYLINDER

**Removal & Installation** — Disconnect clutch pedal push rod at clutch pedal. Disconnect master cylinder hydraulic line at master cylinder, and remove master cylinder attaching bolts. Remove master cylinder from vehicle, remove cylinder cover, and drain fluid from cylinder. To install, reverse removal procedure, and bleed system. See *Hydraulic System Bleeding*.

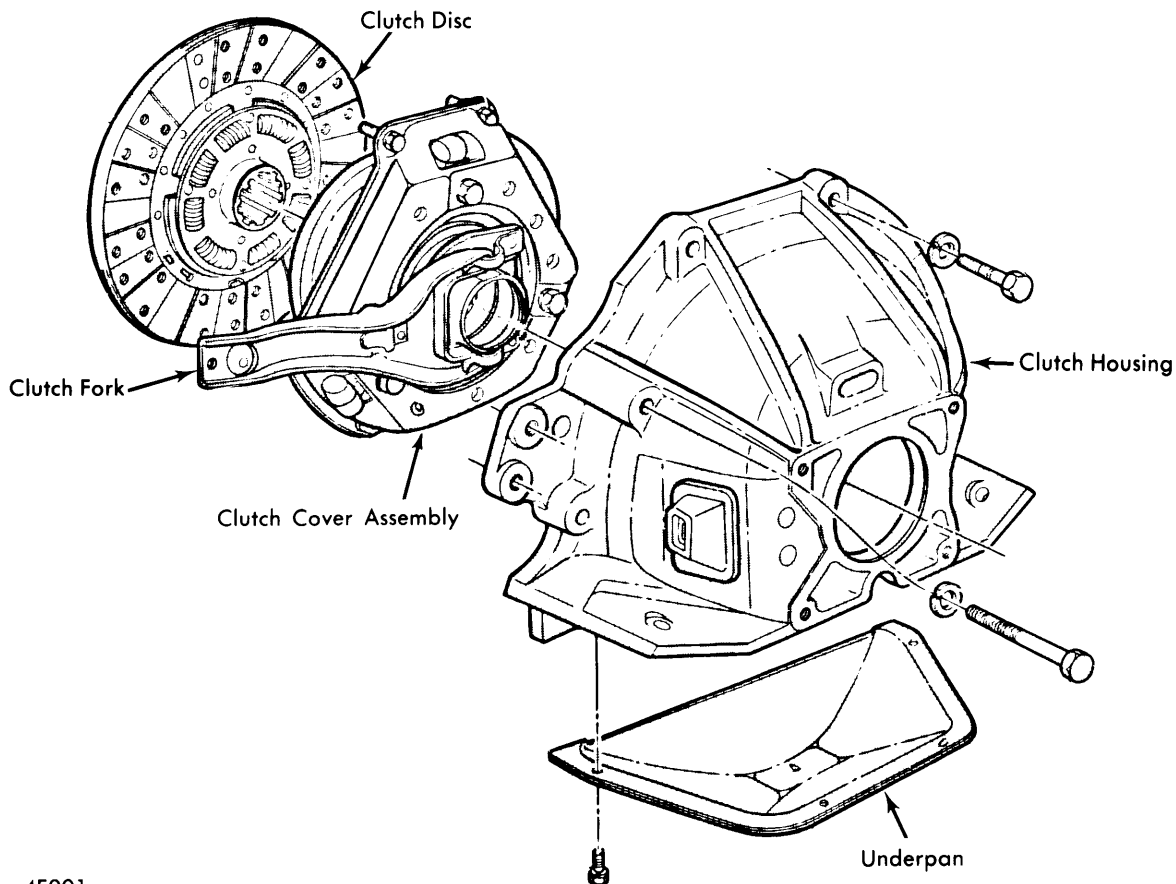
## CLUTCH SLAVE CYLINDER

**Removal & Installation** — Clean outside of cylinder thoroughly and disconnect hydraulic line at slave cylinder. Remove bolts attaching slave cylinder to clutch housing, and remove cylinder from vehicle. To install, reverse removal procedure and bleed system. See *Hydraulic System Bleeding*.

## OVERHAUL

## CLUTCH MASTER CYLINDER

**Disassembly & Reassembly** — With master cylinder removed from vehicle, remove dust boot and piston stop from end of cylinder. Remove piston, cup, and spring from cylinder bore, and inspect cylinder for damage. To reassemble, reverse disassembly procedure, using new rubber parts.



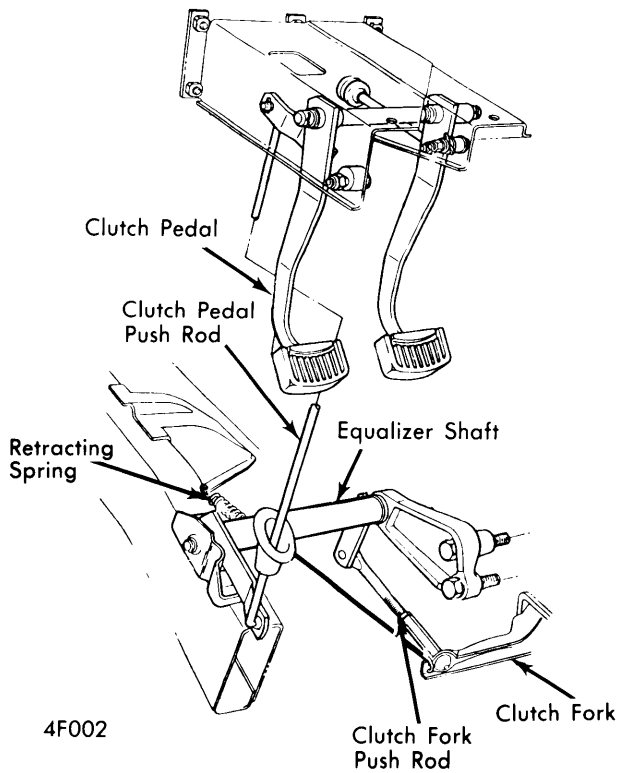
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CLUTCH ASSEMBLY (TYPICAL)

## FORD MOTOR CO. (Cont.)

### CLUTCH SLAVE CYLINDER

**Disassembly & Reassembly** — With slave cylinder removed from vehicle, remove dust boot and retainer ring. Remove piston and cup from cylinder bore. Inspect cylinder for signs of excessive wear and damage. To reassemble cylinder, reverse disassembly procedure, using new rubber parts.



TYPICAL CLUTCH LINKAGE

### ADJUSTMENT

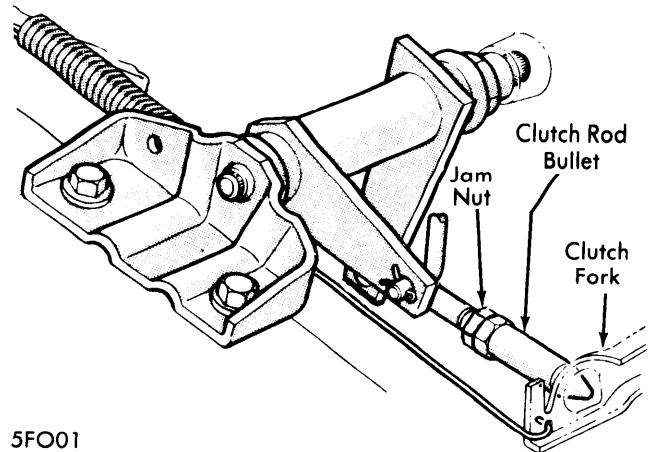
#### CLUTCH PEDAL HEIGHT

**Bronco Only** — Measure total travel of clutch pedal. If total travel is less than 6¾" or more than 7", move clutch pedal bumper stop until total pedal travel is within these specifications.

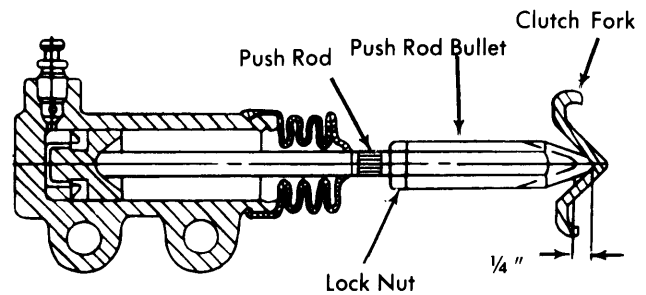
#### CLUTCH PEDAL FREE TRAVEL

**Models W/Mechanical Linkage** — The amount of pedal movement from full stop to point where clutch release bearing contacts clutch fingers is pedal free travel. Specified travel for all models is ¾-1½". Adjustment is made by loosening jam nuts at clutch fork rod. Adjust bullet at clutch fork end of rod until specified pedal free travel is obtained.

**Models W/Hydraulic Linkage** — With slave cylinder push rod bottomed against internal stop, push clutch fork back until release bearing contacts clutch forks. Loosen lock nut and adjust bullet at end of clutch rod until ¼" clearance between end of bullet and clutch fork is obtained.



PEDAL FREE TRAVEL ADJUSTMENT  
(MECHANICAL TYPE LINKAGE)



PEDAL FREE TRAVEL ADJUSTMENT  
(HYDRAULIC TYPE LINKAGE)

### HYDRAULIC SYSTEM BLEEDING

**Pressure Bleeding Method** — Clean bleeder screw on slave cylinder, and attach bleeder hose to screw. Submerge free end of hose in jar ½ full of clean brake fluid. Pressurize clutch master cylinder, and open and close bleeder screw at four second intervals until no air appears in fluid running from bleeder hose. Check that fluid level in master cylinder is within ½" of top, and that clutch fork push rod travel is at least 1⅛".

**Gravity Flow Method** — Attach transparent hose to funnel, and attach free end of hose to bleeder screw on slave cylinder. With funnel held higher than master cylinder, and bleeder screw open slowly pour fluid into funnel until fluid level in master cylinder is within ½" of top. Check that clutch fork push rod travel is at least 1⅛".

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Clutch Cover-to-Flywheel .....	23-28
Clutch Housing-to-Engine Block .....	40-50
Transmission-to-Clutch Housing .....	70-90
Adjusting Nut Lock Nuts .....	12-18