

TOYOTA CELICA, COROLLA, CORONA, & PICKUP

Celica
Corolla 1600
Corona
Pickup

DESCRIPTION

Clutch is a dry, single plate, diaphragm spring type. Clutch is hydraulic using a firewall mounted master cylinder (all models similar) and a clutch housing mounted slave cylinder. Pickup slave cylinders are adjustable type similar to those used in past years. Other models use a new, non-adjustable slave cylinder. As the clutch disc wears, clearance is automatically compensated for by slave cylinder internal design.

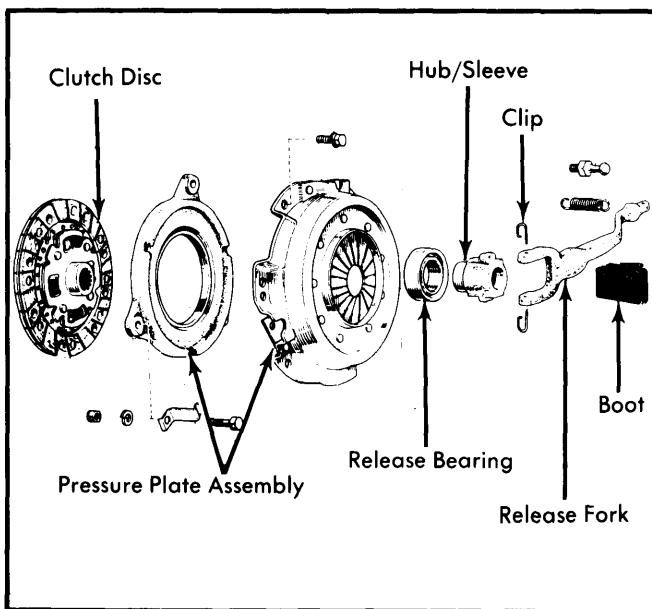


Fig. 1 Exploded View of Typical Clutch Arrangement.
Some Models Have Different Pressure Plate Assy.
and Others Have Different Hub/Sleeve Retainer
Springs.

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

NOTE — Clutch removal procedures are of a general nature written to cover all Toyota models.

Removal — 1) Disconnect battery cable. Remove air cleaner and drain cooling system, then disconnect top radiator hose. Disconnect accelerator control rod linkage. Remove shift lever boot and shifter assembly. Remove starter.

2) Raise vehicle and support at front and rear with jack stands. If equipped, remove protective cover from under engine.

3) Remove clutch slave cylinder, but only disconnect hydraulic line if necessary. Disconnect exhaust pipe support bracket from mounting and separate exhaust pipe from manifold. Disconnect speedometer cable and electrical leads from transmission.

4) Scribe index marks on drive shaft and coupling for reinstallation reference, then remove drive shaft. Insert suitable plug into extension housing to prevent oil spillage.

5) Support transmission using a floor jack and remove rear support crossmember. Lower jack and remove bolts mounting transmission to engine. Index mark clutch assembly and flywheel for reassembly. Loosen bolts securing clutch assembly alternately and evenly until pressure is released from clutch. Lift out clutch assembly.

Installation — To install, reverse removal procedure and note the following: Use a suitable aligning tool to center clutch disc on flywheel. Tighten clutch pressure plate attaching bolts alternately and evenly in a diagonal progression. With transmission installed, adjust clutch.

CLUTCH MASTER CYLINDER

Removal — Remove cotter pin and clevis pin connecting master cylinder push rod to clutch pedal, then disconnect push rod. Disconnect hydraulic line from cylinder, remove cylinder attaching nuts at firewall, and remove cylinder from vehicle.

Installation — To install, reverse removal procedure and note the following: When installing master cylinder, make sure rubber boot hole faces downward. Adjust pedal height and free play, and bleed hydraulic system.

CLUTCH SLAVE CYLINDER

Removal — Raise and support vehicle with safety stands. If equipped, remove protective cover under engine. Disconnect hydraulic line. Back off push rod (if necessary) and remove slave cylinder attaching nut with slave cylinder.

Installation — To install, reverse removal procedure and bleed hydraulic system.

CLUTCH RELEASE BEARING

Removal — With transmission removed, check release bearing for freedom of rotation with bearing still installed on hub. To remove, disconnect spring clips from bearing collar and slide bearing off transmission input shaft. Use a press to remove and install bearing on sleeve.

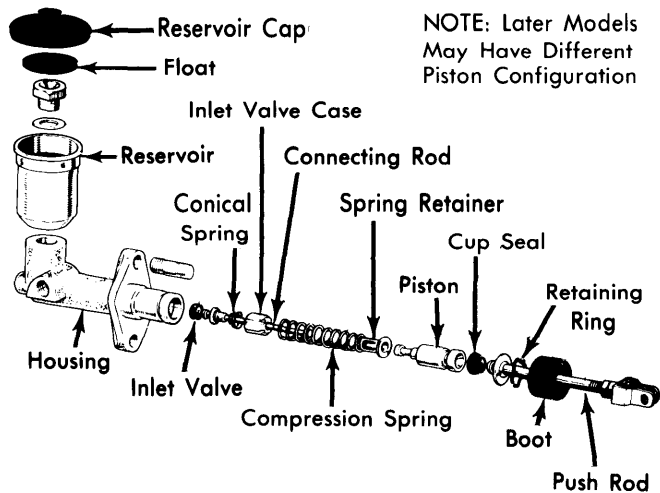
Installation — Slide bearing and collar over transmission input shaft and secure to release lever with new retaining clips. Apply grease to diaphragm spring contact points before installing transmission.

OVERHAUL

CLUTCH MASTER CYLINDER

Disassembly — 1) With cylinder removed from vehicle, clamp it into a soft jawed vise. Remove reservoir, snap ring, and push rod. Pull out piston, cup, and remaining internal components. Further disassemble piston by prying up spring retainer and separating retainer from piston.

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NOTE: Later Models May Have Different Piston Configuration

Fig. 2 Exploded View of Clutch Master Cylinder Corolla Shown – All Similar

Inspection – Wash all parts in clean brake fluid. Check master cylinder piston to bore for a clearance of .006" (.15 mm); replace components as necessary. Check compression spring for distortion or weakening and reservoir for damage. Make sure vent hole in reservoir is open.

Reassembly – Dip cylinder cups into clean brake fluid or coat with rubber grease before assembly. Assemble piston components in reverse order of disassembly. Install piston assembly, push rod, and reservoir into master cylinder.

CLUTCH SLAVE CYLINDER

Disassembly – On all cylinders, remove rubber boot and push rod. On Pickup models, remove piston and cup. On all other models, remove piston assembly and spring. On all models, remove bleeder screw, if necessary.

Inspection – Thoroughly clean all parts with clean brake fluid and inspect for wear or damage. **NOTE** – Manufacturer recommends replacing seals each time slave cylinder is disassembled.

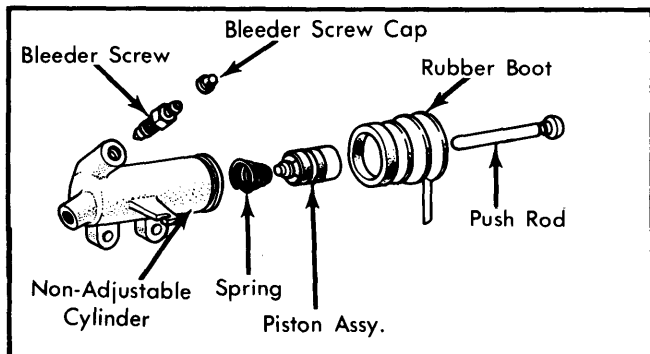


Fig. 3 Exploded View of Slave Cylinder Celica, Corolla, Corona Shown

Reassembly – Soak all parts in clean brake fluid before assembly. Install seals on piston. On all models except Pickup, fit spring into cylinder followed by piston assembly. On Pickup models, fit piston assembly into cylinder. On all models, install rubber boot and push rod. Put bleeder screw back in place and fit cap.

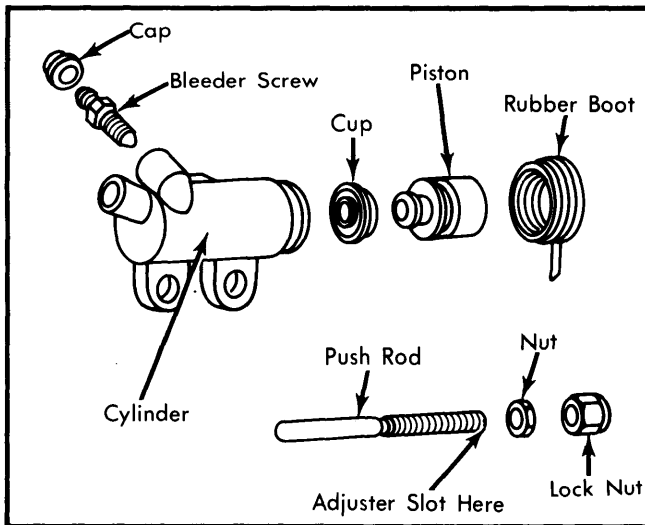


Fig. 4 Exploded View of Slave Cylinder Pickup Models Only

ADJUSTMENT

PEDAL HEIGHT

Adjust pedal stop bolt at top of pedal assembly until specified pedal height is obtained. Height is measured from floor mat to top of pedal pad.

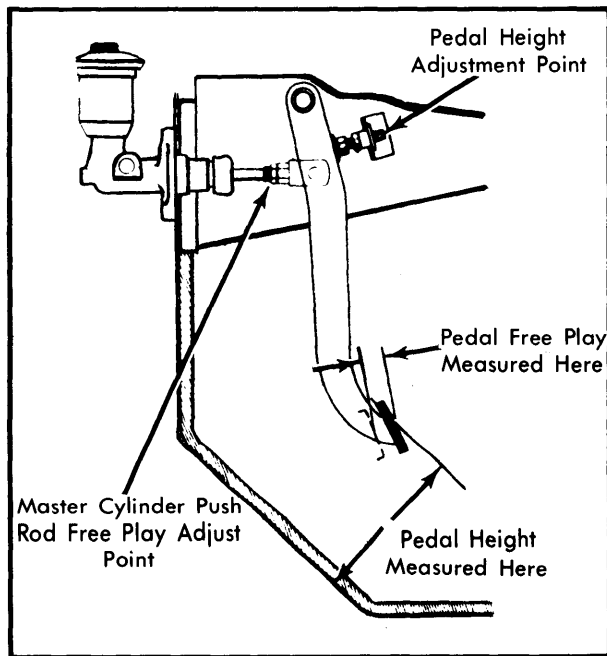


Fig. 5 Pedal Height and Free Play Measuring Points

Clutches

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Pedal Height Specifications

Application	Height
Celica	6.48" (164.5 mm)
Corolla	6.65" (169 mm)
Corona	6.29-6.69" (160-170 mm)
Pickup	6.29" (160 mm)

Pedal Free Play Specifications

Application	Free Play
Pickup	1-2" 2&-50 mm)
All Others197-.591" (25-50 mm)

PEDAL FREE PLAY

Except Pickup — To obtain specified free play (measured at pedal) loosen lock nut (See Fig. 5) on push rod and adjust rod in or out as necessary.

Pickup — Prior to performing free play adjustment outlined above, clutch fork free play must be adjusted. Fork free play determines amount of clearance between clutch release bearing and clutch. Loosen lock nut on slave cylinder push rod and screw push rod in or out until .08-.12" (2.0-3.0 mm) free play is obtained. After performing both adjustments pedal free play should be accurate.

HYDRAULIC SYSTEM BLEEDING

1) Raise vehicle and support with safety stands. Make sure clutch master cylinder reservoir is full of fluid. Remove bleeder screw cap and loosen bleeder screw. Place a finger on vent hole of bleeder screw and push clutch pedal to bottom of stroke three or four times.

2) With pedal fully depressed, remove finger and allow air to vent out. Repeat procedure three or four times or until pressure is felt. Install a flexible hose on bleeder screw and insert free end into a container partially full of brake fluid.

3) Push pedal to bottom of stroke, loosen bleeder screw, and allow fluid to bleed into container. Tighten bleeder screw and release clutch pedal. Repeat procedure until air bubbles are no longer seen in container, then close screw on a down stroke of pedal. Check system for leaks and fill master cylinder.

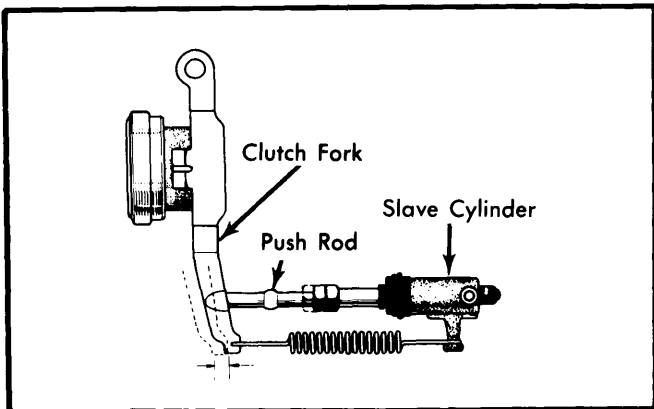


Fig. 6 Clutch Fork Free Play Measurement.
Only Pickup Models Still Use This Slave Cylinder

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Pressure Plate-to-Flywheel	11-16 (1.5-2.2)
Clutch Housing-to-Engine	36-58 (5.0-8.0)