

TRIUMPH

Spitfire
TR6

DESCRIPTION

Clutch is dry, single plate, diaphragm spring type. Clutch actuation is hydraulic, using a firewall mounted master cylinder and a clutch housing-mounted slave cylinder. Due to self-adjusting feature of clutch assembly, no adjustment, with the exception of bleeding hydraulic system, is necessary.

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal — 1) Raise vehicle and support with safety stands at front and rear. Disconnect battery. Remove front seats, carpet, dashboard support, and gearshift lever. Remove floorpan above transmission.

2) Disconnect drive shaft from transmission flange, and speedometer cable from extension housing. Disconnect exhaust pipe from support bracket. Remove slave cylinder but do not disconnect hydraulic line.

3) Remove gearshift lever extension housing and cover hole in transmission. Remove bolts attaching transmission to support, raise engine and transmission assembly, and remove support crossmember. Disconnect and remove starter.

4) Remove bolts attaching transmission to engine and remove transmission assembly. Mark pressure plate and flywheel for reassembly reference, alternately and evenly loosen bolts attaching clutch assembly to flywheel, and remove clutch assembly.

Installation — Center clutch disc on flywheel using a suitable alignment tool, then install pressure plate and tighten attaching bolts evenly. To complete installation, reverse removal procedure.

CLUTCH MASTER CYLINDER

Removal — Drain hydraulic system through slave cylinder bleeder screw. Pull back rubber boot (if equipped) and remove clevis pin securing master cylinder push rod to clutch pedal. Disconnect hydraulic line at cylinder. Remove bolts securing master cylinder to mounting bracket and remove cylinder.

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

CLUTCH SLAVE CYLINDER

Removal — Drain hydraulic system through slave cylinder bleeder screw. Disconnect hydraulic line from cylinder, disconnect push rod from clutch fork, and remove slave cylinder.

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

CLUTCH RELEASE BEARING

Spitfire — With transmission assembly removed, remove clutch fork pivot pin and remove fork and bearing assembly. Drive pins from fork and remove bearing and sleeve. Using a suitable press, remove bearing from sleeve. To install, reverse removal procedure. Lubricate all bearing contact points with multi-purpose grease.

TR6 — With transmission removed, remove lock bolt securing clutch fork to clutch fork shaft and withdraw shaft. Remove fork and bearing and sleeve assembly. Using a suitable press, remove bearing from sleeve. To install, reverse removal procedure. Safety wire clutch fork shaft lock bolt.

PILOT BUSHING

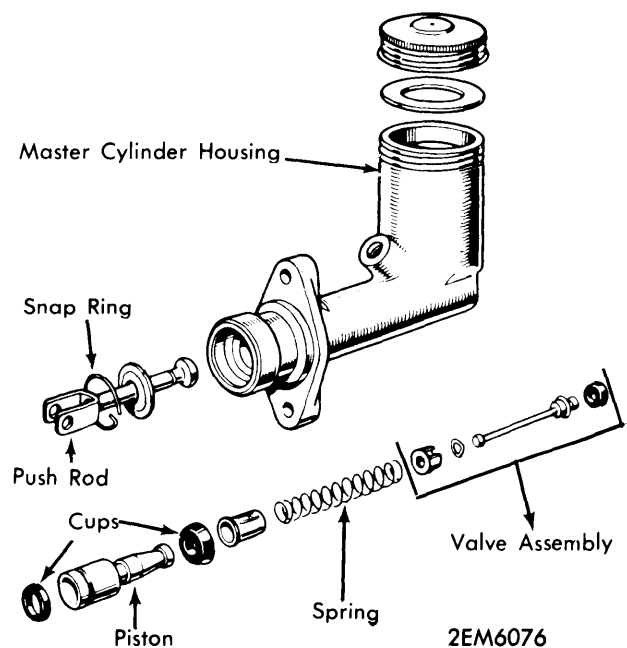
Bushing to support transmission input shaft is located in flywheel end of crankshaft. If bushing is worn or damaged, remove using a suitable puller. Lubricate new bushing with multi-purpose grease and install using a suitable driver.

OVERHAUL

CLUTCH MASTER CYLINDER

Disassembly — 1) Slide rubber boot up push rod sufficiently and remove snap ring, push rod, and washer. Remove piston, spring and seal assembly. *NOTE* — Removal is made easier if compressed air is applied to fluid outlet port of cylinder.

2) Straighten prong of spring retainer and remove retainer and spring from piston. Remove valve stem from keyhole slot in retainer. Remove valve seal and spacer from valve stem. Remove seal from piston.



MASTER CYLINDER ASSEMBLY

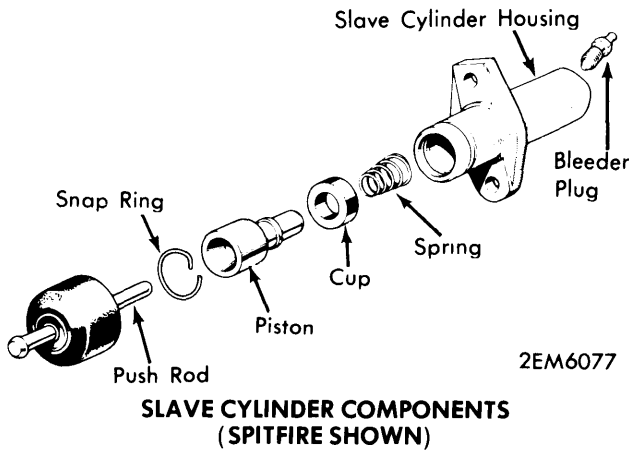
TRIUMPH (Cont.)

Reassembly — 1) Install a new seal on valve stem, and install spacer, spring, and spring retainer. Install a new seal on piston with seal lip facing spring. Install spring retainer on piston and carefully depress retainer prong.

2) Lubricate bore of cylinder with clean brake fluid and install seal assembly, spring and piston. Install a new rubber boot on push rod, and install push rod, washer, and snap ring into cylinder. Slide rubber boot into position on cylinder.

CLUTCH SLAVE CYLINDER

Disassembly — Remove rubber dust seal and push rod. Remove snap ring (if equipped), and withdraw piston, seal, cup filler (if equipped), and spring. Thoroughly clean all parts in brake fluid and inspect for wear or damage; replace parts as necessary.



Reassembly — Lubricate cylinder bore and all components with clean brake fluid. Install all parts in reverse order of removal.

ADJUSTMENT

HYDRAULIC SYSTEM BLEEDING

1) Remove filler cap from master cylinder reservoir and fill with hydraulic fluid. Attach a rubber hose to slave cylinder bleeder screw, and insert opposite end of hose into a container partially filled with hydraulic fluid.

2) Loosen bleeder screw approximately one-half turn. Push clutch pedal to bottom of stroke and allow to return unassisted. Continue operation until fluid being discharged into container is free of air bubbles. Tighten bleeder screw on down stroke of pedal. Check fluid level in reservoir and refill as necessary.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Clutch-to-Flywheel	
Spitfire	16-22 (2.2-3.0)
TR6	16-20 (2.2-2.7)
Transmission-to-Engine	
Spitfire	10-14 (1.4-1.9)
TR6	15-20 (2.0-2.7)