

FIAT X1/9

DESCRIPTION

Clutch is a dry, single plate, diaphragm spring type. Clutch actuation is hydraulic, using a firewall mounted master cylinder and a clutch housing mounted slave cylinder. A prelubricated clutch release bearing is also used.

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal – 1) Disconnect positive battery cable. Remove air cleaner and carburetor cooling duct. From inside engine compartment, separate slave cylinder from transmission case. Install engine support. Remove upper transmission-to-engine mounting bolts.

2) Working from under vehicle, remove any guards which may interfere with transmission removal. Disconnect shifting flexible link and swing it out of the way. Disconnect backup light wires and seat belt warning system wire. Remove starter and exhaust pipe. Disconnect ground strap.

3) Remove nuts from the hub end of half shaft. Remove attaching hardware mounting suspension control arm to supports. Free half shaft from hub end and fix other end to transmission to prevent premature disconnection.

4) Remove the following items: Flywheel cover, engine cross-member support, and lower engine-to-transmission bolts. Remove transmission/differential from below vehicle. Mark clutch position on flywheel and remove clutch.

Installation – To install, reverse removal procedure using suitable tool (A. 70210) to center clutch assembly.

CLUTCH MASTER CYLINDER

Removal – Steering column must be removed to gain access to clutch master cylinder. Disconnect and cap master cylinder hydraulic line. Remove two bolts attaching cylinder to support plate. Withdraw cylinder from actuating rod and remove from vehicle.

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

CLUTCH SLAVE CYLINDER

Removal – Remove slave cylinder hydraulic hose and union. Disconnect cylinder push rod from clutch release bearing fork. Slightly compress return spring and remove two mounting bolts; slowly withdraw cylinder from support plate.

Installation – To install, reverse removal procedure ensuring slave cylinder snugly fits against support and that hydraulic system is bled.

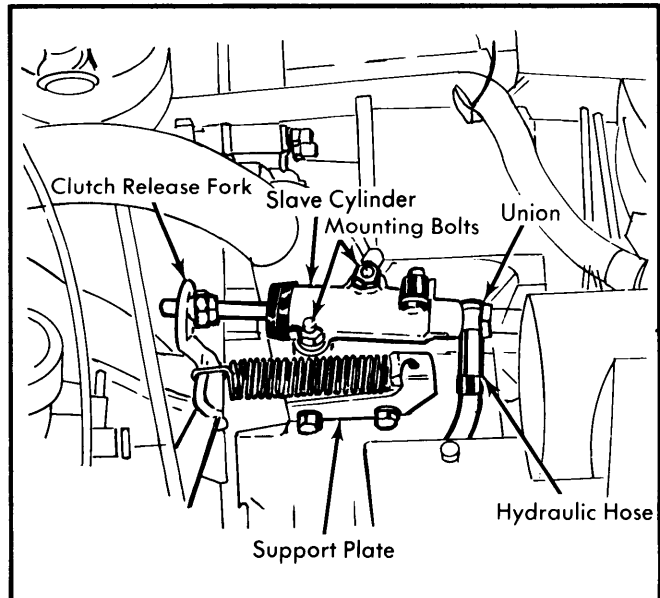


Fig. 1 Clutch Slave Cylinder Location

ADJUSTMENT

CLUTCH PEDAL HEIGHT & FREE PLAY

Clutch pedal height is adjusted by turning pedal stopper until total pedal travel is 6.75" (171 mm). Free play is adjusted to 1.25" (32 mm), by turning adjusting nut on slave cylinder.

OVERHAUL

CLUTCH MASTER CYLINDER

Disassembly – Ease rubber dust boot back and remove snap ring, using long nosed pliers. Remove seal and complete plunger assembly. Pull out remaining gasket, seal and spring.

Reassembly – Lightly coat all components with brake fluid. Insert spring and seal into position. Fit piston assembly and seal, then install snap ring. Slip boot over cylinder housing.

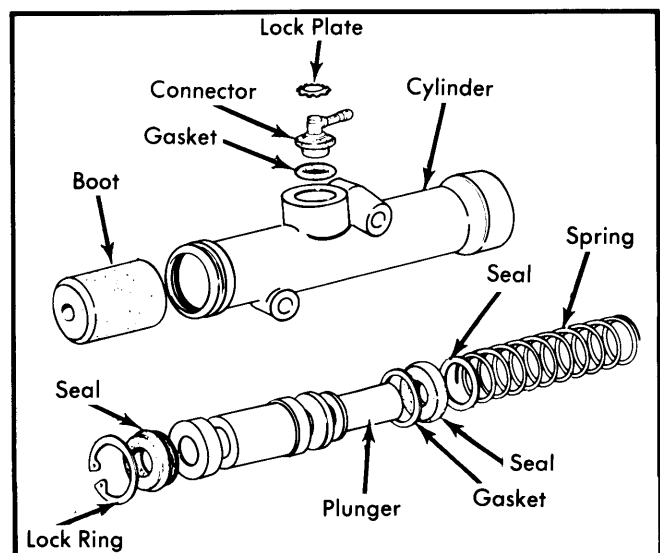


Fig. 2 Exploded View of Clutch Master Cylinder

Clutches

FIAT X1/9 (Cont.)

CLUTCH SLAVE CYLINDER

Disassembly – Pull push rod from slave cylinder and slide dust boot off housing. Shake piston assembly out of cylinder, then remove lock ring, washer, spring, bushing and seals.

Reassembly – Lightly coat all components with brake fluid before reassembly. Insert rear seal, and piston assembly. Refit spring, washer, and lock ring. Install dust boot and push rod.

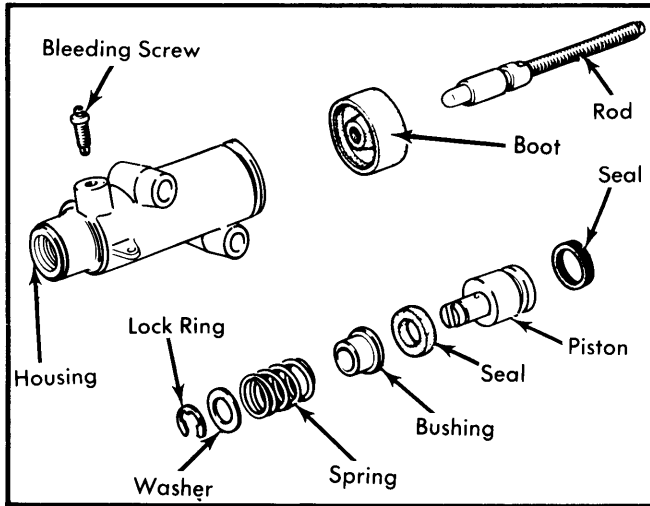


Fig. 3 Exploded View of Clutch Slave Cylinder

TIGHTENING SPECIFICATIONS

| Application | Ft. Lbs. (N·m) |
|--|----------------|
| Clutch-to-Flywheel Bolts | 11 (15) |
| Clutch Release Fork Bolt | 18 (24) |
| Slave Cylinder Push Rod Adjusting Nut | 18 (24) |
| Slave Cylinder Support Plate-to- Transmission Case Bolt | 18 (24) |
| Support Plate-to-Transmission Case Stud Nut | 18 (24) |
| Transmission-to-Engine Bolts | 56 (76) |