

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.

3) Disconnect back-up light wires and seat belt warning system wire. Remove starter and exhaust pipe. Disconnect ground strap.

4) 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.

5) Remove the following items: Flywheel cover, engine crossmember 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 tool (A.70210) to center clutch assembly.

CLUTCH MASTER CYLINDER

Removal

Remove lower steering column cover. 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. Check hydraulic system for leaks.

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. Remove the cylinder from the support plate.

Installation

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

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

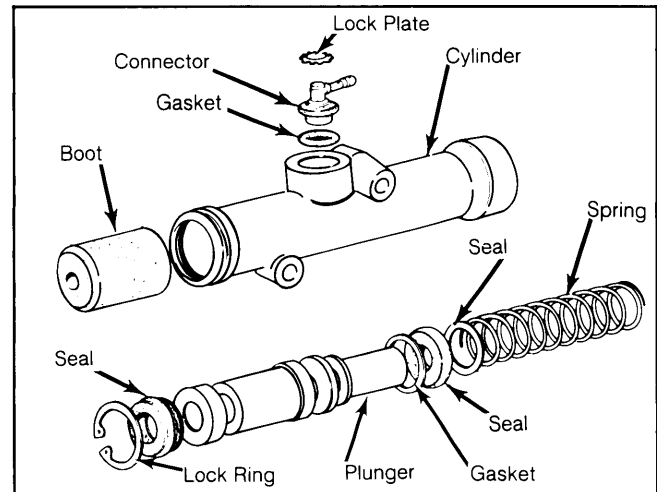
Disassembly

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. 1: Exploded View of Clutch Master Cylinder

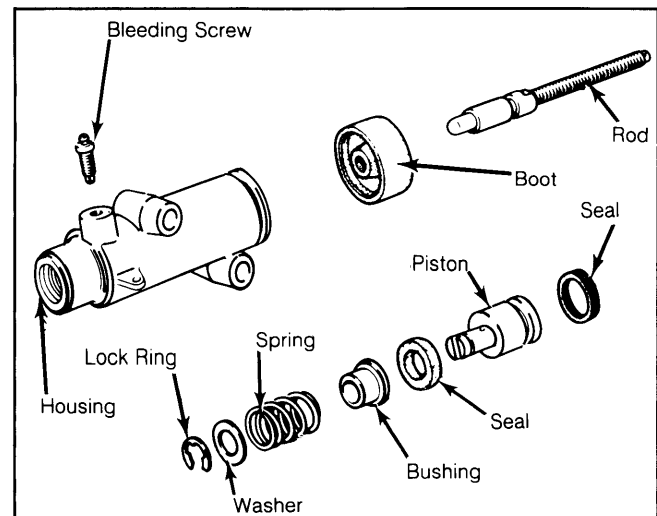


CLUTCH SLAVE CYLINDER

Disassembly

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

Fig. 2: Exploded View of Clutch Slave Cylinder



Clutches

FIAT X1/9 (Cont.)

Reassembly

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

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)