

Clutches

RENAULT 18i, FUEGO, FUEGO TURBO & LE CAR

DESCRIPTION

Clutch system is single disc dry plate type. Main components are: Disc, diaphragm spring operated pressure plate, ball bearing type clutch release bearing, release fork, and pilot bearing. Clutch operation is mechanical through cable actuation.

REMOVAL & INSTALLATION

NOTE: On all models, manufacturer recommends the replacement of flywheel bolts if flywheel is removed. Clean flywheel-to-crankshaft mating flange and coat with Loctite Autoform. Install flywheel. Coat new bolts with Loctite and torque to specifications.

CLUTCH ASSEMBLY

Removal (Fuego)

1) Disconnect the battery. Disengage the clutch from the release fork and remove the housing stop. Place T.AV. 509-1 support spacers between lower shock pins and lower suspension arm shafts. Raise and support vehicle.

2) Remove the front wheels. Take off brake calipers and support out of the way. Disconnect upper ball joints and tie rod ends at steering knuckle. Drive out drive shaft roll pins on side gear shafts.

3) Tilt the stub axle carrier, disengaging the drive shaft from the side gear shaft. Disconnect the speedometer cable, gear shift linkage and wiring to backup lights and emission control switches.

4) Support transmission with a jack. Remove transmission mounts, clutch cover and engine-to-transmission bolts. Remove starter.

5) Slide transmission back and away from vehicle. Mark pressure plate and flywheel for reassembly and remove clutch assembly.

Installation

1) Lightly coat the input shaft differential side gear splines with Molykote grease. Use centering tool to center disc and pressure plate. Torque bolts gradually in star pattern.

2) Drive shaft and side gear alignment holes must be aligned and roll pins installed. Reverse removal procedure to complete assembly.

Removal (Le Car)

1) Disconnect battery. Disconnect speedometer cable from transmission. Remove water pump belt, camshaft belt and air injection components. Remove both upper starter bolts (it may be necessary to use special wrench Ele. 565).

2) Remove clutch housing mounting bolts. Take off calipers and support out of way. Disconnect tie rods at steering rack end. Disconnect upper ball joints. Separate axle drive shafts by pulling stub axle out and down.

NOTE: Be careful not to damage oil seal lips on differential adjusting ring nuts.

3) Remove bolts from support tab on underside of transaxle. Disconnect and free clutch cable lever. Remove tubular crossmember bolts and slide crossmember out rearward. Use a jack and support front of transaxle. Remove front mount.

4) Remove lower starter bolt. Remove clutch cover and any side reinforcement bolts. Remove transaxle from vehicle. Mark pressure plate assembly for installation reference and remove entire clutch assembly.

Installation

To install, reverse removal procedure. Larger end of clutch disc hub should face engine. Use centering tool to align pressure plate and disc. Lightly grease input shaft and axle drive shaft splines. Make sure axle drive shafts fully seat into side gears.

Removal (18i)

1) Disconnect battery ground cable. Disconnect battery cables at starter and starter solenoid. Remove starter retaining bolts. Loosen top bolt of engine mount.

2) Swing rear starter bracket into horizontal position. Pull starter back as far as it will go, rotate starter 90° and remove starter. Disconnect clutch cable from fork and remove housing stop.

3) Place support spacers (T. Av. 509.01) between lower shock retaining bolts and lower suspension arm shafts. Remove front wheels. Remove front brake calipers.

4) Using a drift punch and hammer, tap roll pins out of side gears. Disengage upper ball joints and tie rod ends. Tilt stub axle carriers to free drive shafts from side gears.

5) Disconnect back-up light wires, emission control wires and speedometer cable from transmission. Disconnect gearshift linkage. Remove clutch protective cover. Support transmission with jack.

6) Remove left and right transmission supports. Remove transmission retaining bolts. Pull transmission rearward and remove transmission from vehicle. Mark pressure plate assembly for installation reference and remove entire clutch assembly.

Installation

To install, reverse removal procedure. Larger end of clutch disc hub should face engine. Use centering tool to align pressure plate and disc. Lightly grease input shaft and axle drive shaft splines. Make sure axle drive shafts fully seat into side gears.

CLUTCH CABLE

Removal & Installation (Fuego & 18i)

Disconnect cable from lever on transaxle. Unhook the cable from the pedal. Installation is reverse of removal procedure.

Removal (Le Car)

1) Free transaxle end of cable by removing locknut and adjusting nut. Remove the left hand glove compartment tray. Unhook the clutch pedal return spring.

2) Remove clutch pedal retaining clip and cable-to-pedal clevis pin. Slide pedal off of pivot rod. Free cable from sleeve stop on pedal bracket, and remove cable.

Installation (Le Car)

To install, reverse removal procedure and note the following: Lubricate pedal bores and retaining pins with Molykote BR 2 lubricant. Adjust clutch free play.

CLUTCH RELEASE BEARING & FORK

Removal

With transaxle removed, disconnect the return spring from release bearing and fork, and slide bearing off transmission input shaft. Using tool (Emb. 384), extract

RENAULT 18i, FUEGO, FUEGO TURBO & LE CAR (Cont.)

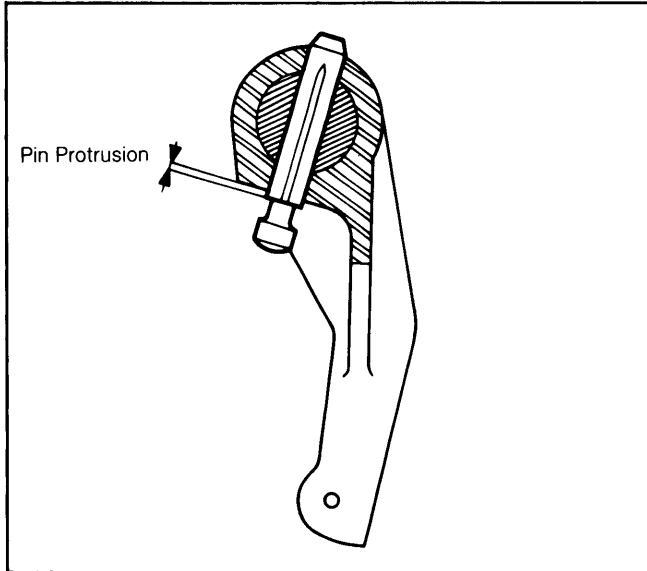
fork retaining roll pins. Remove fork shaft, fork, and return spring.

Installation

1) Lubricate fork shaft with Molykote BR 2 grease. Slide shaft into transaxle housing (fitted with rubber seal) and through release fork and return spring.

2) Align holes in shaft with those in fork and install roll pins, making sure that pins protrude .039" (1 mm) on forward side of fork. See Fig. 1.

Fig. 1: Installing Release Fork Pins



Pin protrusion must be .039" (1 mm).

3) Lubricate bearing sleeve and fork fingers with Molykote BR 2 grease, and slide bearing onto transmission input shaft. Install return spring, placing ends in holes of release bearing support and in fork.

4) Lubricate bearing face and portion of clutch diaphragm spring which bearing contacts with Molykote BR 2 grease. Install transmission and adjust clutch free play.

PILOT BEARING

Removal

Remove the transaxle, clutch assembly and flywheel. Using extractor tool (Mot. 11) or equivalent to remove bearing from crankshaft.

Installation

Using driver, install pilot bearing into crankshaft. Bearing is prelubricated and factory sealed. Install flywheel, clutch assembly and transaxle. Adjust clutch free play.

OIL SEAL

Removal

Remove transaxle from vehicle. Remove the clutch housing attaching bolts and separate clutch housing from transmission. Remove oil seal from clutch housing.

Installation

Fit oil seal into place over special tool (B. Vi. 526 or 488). Coat paper gasket with sealer. Place tool inside clutch release bearing guide to spread seal lip. Refit clutch housing on transaxle and slide tool along clutch shaft, then remove tool. Tighten clutch housing nuts.

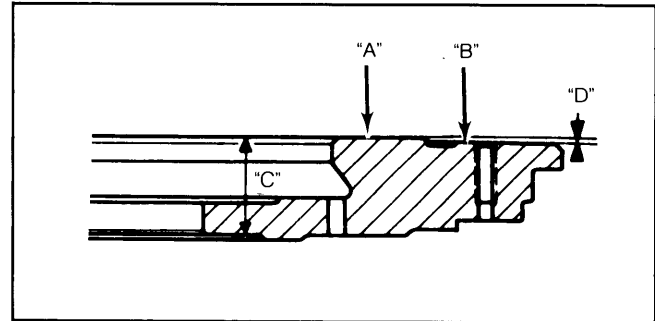
OVERHAUL

FLYWHEEL

Le Car

1) The Le Car is equipped with a stepped flywheel. If resurfacing is necessary, check dimension "C" first. If "C" is less than .894" (22.7 mm), the flywheel must be replaced. See Fig. 2.

Fig. 2: Flywheel Resurfacing Tolerances



Replace flywheel if "C" is less than .894" (22.7 mm).

2) Remove dowel pins. When resurfacing the flywheel, dimension "D" between surfaces "A" and "B" must be .020" (.5 mm). Replace the locating dowels so that they protrude .276" (7 mm) above the flywheel face.

ADJUSTMENT

CLUTCH FREE PLAY

Fuego & 18i

1) Depress clutch pedal until it contacts pedal stop. Pull clutch cable at release lever end to take up slack. Keep release bearing held against pressure plate by pushing on release lever.

2) Measure clearance between release lever and clutch cable stop. Clearance must be 3/32" (2.5 mm). Loosen lock nut to adjust.

Le Car

Loosen lock nut. Turn adjusting nut to obtain a clearance of 1/8-5/32" (3-4 mm) between release lever and cable stop.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Flywheel-to-Crankshaft	37 (49)
Clutch Housing-to-Transmission	
Le Car	
8 mm Bolts	15 (20)
10 mm Bolts	30 (41)
18i	
8 mm Bolts	18 (24)
10 mm Bolts	26 (35)