

VOLVO

164
240

DESCRIPTION

Clutch is diaphragm spring type. Clutch assembly consists of the following components: Pressure plate, diaphragm spring, sheet metal clutch housing, clutch disc, and clutch release bearing. Clutch actuation is mechanical, using a cable to connect clutch pedal with release fork or lever. Clutch release assemblies differ between the 240 series and the 164 models, but accomplish the same results.

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal – 1) Suitably support engine by hoisting or by placing a jack beneath oil pan. Remove console (if equipped) and gearshift lever. Disconnect battery ground cable. On 164 models, remove radiator mounting bolts.

2) Raise vehicle and support with safety stands. Drain transmission fluid, and remove transmission support crossmember and rear engine mounting. Disconnect speedometer cable and electrical leads from transmission.

3) Disconnect exhaust pipe support bracket and drive shaft from transmission. On 164 models, position a suitable transmission jack under transmission, remove clutch housing to engine attaching bolts, and withdraw transmission to rear to remove.

4) On 240 models, remove one lower transmission mounting bolt and its opposing upper mounting bolt, install guide pins. Remove remaining mounting bolts and separate transmission from clutch housing. Remove upper starter bolt, release bearing, clutch cable from fork, and cable sleeve from bracket. Remove clutch housing.

5) On all models, loosen bolts attaching pressure plate to flywheel alternately and evenly in a diagonal progression to release spring pressure, then remove bolts and clutch assembly.

Installation – Position clutch disc (with long end of hub facing rearward) against flywheel, and center using a suitable aligning tool. Install pressure plate, tightening attaching bolts alternately and evenly in a diagonal progression. To complete installation, reverse removal procedure and adjust clutch free play.

CLUTCH CABLE

Removal, 240 Series – Remove return spring and disconnect clutch cable at clutch fork; extract cable. Remove cover panel under instrument cluster. Remove clevis pin at upper end of cable. Separate clutch fork adjustment mechanism from clutch housing, if necessary. Force cable out of rubber grommet located in firewall.

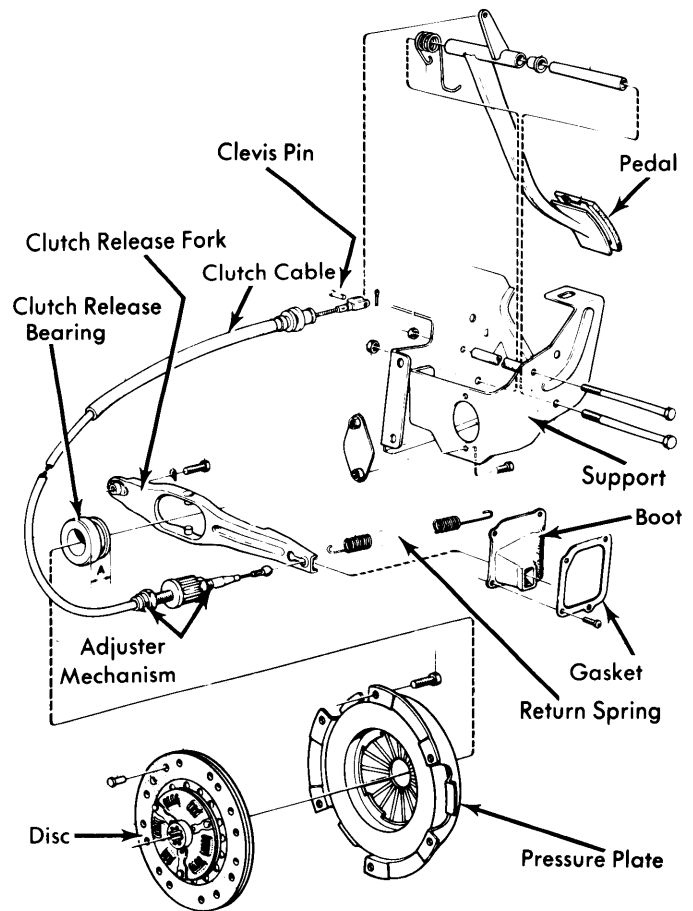


Fig. 1 Exploded View of Clutch System
(240 Series Shown)

Installation – Insert new cable into rubber grommet, feed it through cable guide and attach at upper end with clevis pin. Position adjustment mechanism into clutch housing. Attach cable to clutch fork, then refit return spring.

Removal, 164 Models – Unhook return spring from release fork. Loosen rear nut (and front nut if required) and remove cable from release fork. Remove nut and cable sleeve from clutch housing. Remove panel under instrument cluster (if required) and disconnect clutch cable from pedal. Unscrew nut for cable sleeve and remove cable.

Installation – To install, reverse removal procedure and adjust clutch free play.

CLUTCH RELEASE ASSEMBLY

Removal, 164 Models Only – With transmission and clutch housing removed, remove bolt retaining clutch fork to shaft. Remove release bearing and slide shaft out of clutch housing. If required, press out bushings using a drift.

Clutches

VOLVO (Cont.)

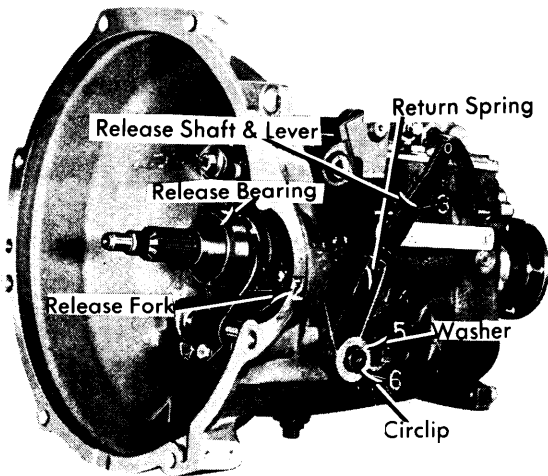


Fig. 2 Installed View of Clutch Release Mechanism
(164 Models Shown)

Installation — Press new bushings into housing using a suitable driver. Coat all bearing contact surfaces with a thin layer of grease, and install into position on fork. Hold release fork in position and install release shaft. Install lock bolt.

PILOT BEARING

Remove retaining clip and remove bearing using puller (SVO 4090). Pack bearing with heat resistant grease and install into crankshaft using a driver. Install retaining clip.

ADJUSTMENT

CLUTCH FREE PLAY

240 Series — Using adjustment mechanism attached to clutch housing, set free play. Adjustment is correct when approximately .12-.16" (3-4 mm) clutch fork free play is obtained (see illustration).

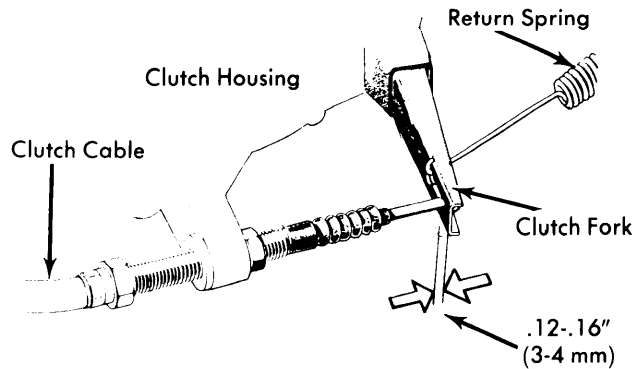


Fig. 3 View Showing Clutch Fork Free Play
Measuring Point on 240 Series

164 Models — Clutch free play, measured at release lever, is adjusted by screwing fork on cable in or out until desired play is obtained. If adjustment is insufficient, cable sleeve may be adjusted at clutch housing by loosening or tightening adjusting nuts at cable bracket. Adjustment is correct when clutch lever free play is between .16-.20" (4-5 mm).

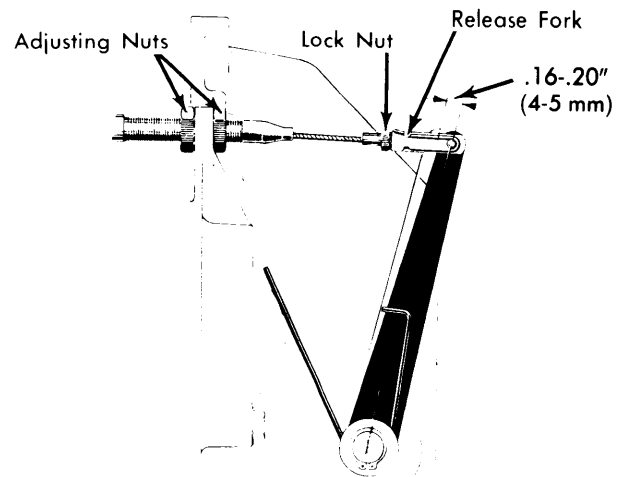


Fig. 4 View Showing Clutch Fork Free Play
Measuring & Adjusting Points on 164 Models