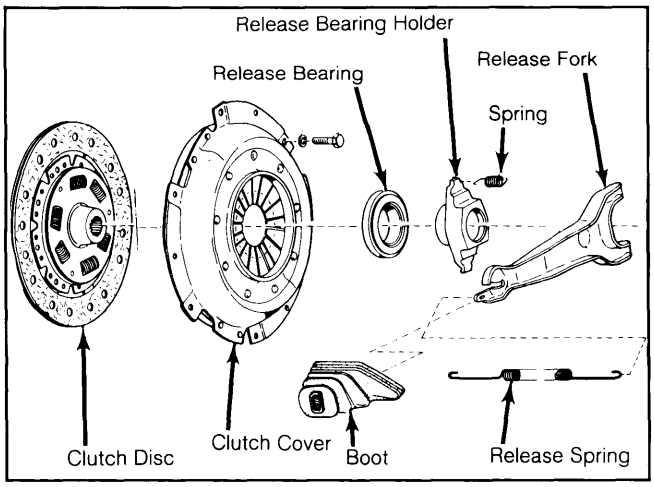
Clutches

SUBARU 1600 & 1800

DESCRIPTION

Clutch is a single dry disc type with a diaphragm spring pressure plate. Actuation is mechanical through a cable. Sealed release bearing requires no lubrication.

Fig. 1: Exploded View of Subaru Clutch Assembly



REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal

1) Remove spare tire and support bracket. Remove battery ground cable. Disconnect clutch cable from release fork. Disconnect speedometer cable at transmission and loosen cable retainer clip.

2) Disconnect back-up lamp switch connector, starter harness (NOT battery cable), and ground cable on vehicle body. Remove starter with battery cable attached. Remove upper engine-to-transmission bolts and loosen lower nuts.

3) Loosen transmission side torque rod stopper nut by about .4" and tighten engine side nut by the same amount. On 4-WD models, separate both the gear selector and 4-WD selector system from the transmission.

4) On all models, raise and support front end of vehicle and remove front exhaust pipe assembly. On 4-WD models, remove transmission cover and rear drive shaft. Plug rear of transmission to prevent oil from running out.

5) Remove exhaust cover and gearshift system from all except 4-WD models. Remove stabilizer, then lower both left and right transverse links. Remove clamp on left side of hand brake cable.

6) Remove nuts from transmission mounting pads. Drive spring pins from inner ends of axle shafts and push wheels out until axles separate from driving splines.

CAUTION: Discard and DO NOT reuse axle shaft spring pins and transverse link nuts.

7) Support transmission with a jack and remove crossmember. Remove nuts securing transmission to engine and move transmission away from engine. Remove pressure plate mounting bolts and take off clutch assembly.

Inspection

1) The minimum depth of rivet heads below the friction surface is .012" (.3 mm). Install disc on input shaft and check runout at outer circumference of disc face. The maximum runout is .028" (.7 mm).

2) Check the pressure plate surface for cracks, burns or scoring. Also check pressure plate for loose rivets or worn diaphragm spring fingers.

Installation

1) Using alignment tool, place disc and pressure plate in position on flywheel. Ensure that there is a gap of 120° between "O" marks on flywheel and pressure plate. Tighten bolts to 12 ft. lbs. (16 N.m) gradually in a criss-cross pattern.

2) Using a molybdenum disulphide grease, lubricate the following: inner groove of release bearing, contact surface of fork and pivot, contact surface of pivot and holder and transmission main shaft splines.

3) Reverse removal procedure to complete installation. Adust clutch pedal free play.

CLUTCH RELEASE BEARING

Removal

With transmission separated from engine, disconnect return springs from transmission and remove bearing assembly. Bearing may be removed from or installed on sleeve using press. DO NOT press on outer race.

NOTE: Release bearing is prelubricated; therefore, do not wash with solvents.

Installation

Lightly coat inner groove of release bearing sleeve and all contact surfaces with multi-purpose grease and reverse removal procedures.

PILOT BEARING

Removal & Installation

Release bearing is pressed into flywheel. DO NOT clean bearing in solvent as it is sealed and prelubricated. Inspect bearing and transmission mainshaft for wear or damage. If replacement is necessary, press bearing in flywheel until it is flush with flywheel face.

ADJUSTMENT

CLUTCH FREE PLAY

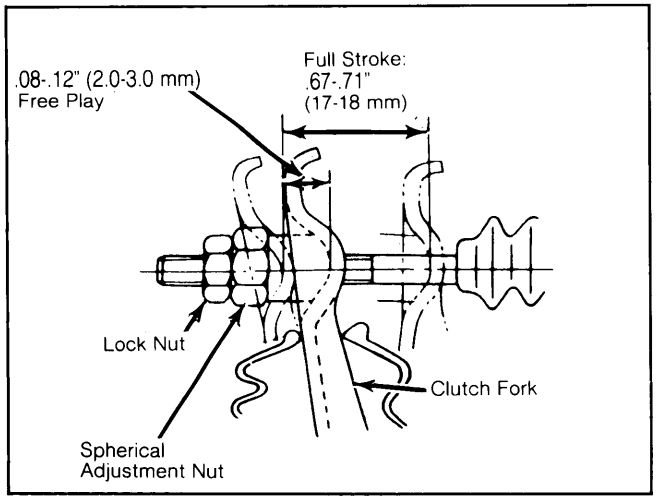
Remove fork return and adjust spherical nut so that there is .08-.12" (2.0-3.0 mm) play at fork end. Use care not to twist cable during adjustment. Attach return spring and ensure that cable is routed without kinks or sharp bends.

CLUTCH ADJUSTMENT SPECIFICATIONS

Application	In. (mm)
Clutch Pedal Stroke	5.1-5.4 (129-137)
Release Fork Stroke	.67-.71 (17-18)
Release Fork Free Play	.08-.12 (2.0-3.0)
Pedal Free Play	.50-.80 (13-20)

SUBARU 1600 & 1800 (Cont.)

Fig. 2: Adjusting Clutch Cable at Release Lever



1600 &1800 models are adjusted in the same manner.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Engine-to-Transmission Bolts	34-40 (46-54)
Stabilizer Bar	13-16 (18-22)
Transverse Link Nuts	43-50 (59-69)
Pressure Plate Bolts	11-13 (14-17)