

# Clutches

## VOLKSWAGEN TYPE 1 & 2

Type 1  
Type 2

### DESCRIPTION

Clutch is dry, single disc, diaphragm spring type. Clutch operation is mechanical through cable actuation. A prelubricated clutch release bearing is also used.

### REMOVAL & INSTALLATION

#### CLUTCH ASSEMBLY

**Removal** — With engine removed, install a suitable holding tool to prevent flywheel from turning. Mark position of clutch assembly on flywheel for reassembly reference. Loosen clutch mounting bolts alternately and evenly, then remove clutch.

**Installation** — Apply multi-purpose grease to pilot bearing and light oil to felt ring. Lubricate transmission input shaft with molybdenum disulphide powder. Position clutch disc against flywheel and align using a suitable centering tool. Install pressure plate and mounting bolts, tightening alternately and evenly.

#### CLUTCH CABLE

**Removal (Type 1)** — Disconnect clutch cable from clutch operating lever, then withdraw rubber sleeve from guide tube and cable. Remove accelerator pedal and disconnect accelerator cable. Remove push rod lock plate and disconnect brake pedal return spring at push rod pin. Remove pedal cluster mounting bolts, pull back pedal cluster and remove clutch cable by pulling toward front of vehicle.

**Installation** — Lubricate cable with multi-purpose grease. Insert threaded end of cable in guide tube and push completely through. Install pedal assembly with cable connected. Ensure rubber boot is seated correctly on rear of guide tube, connect clutch cable lever, then lubricate and install wing nut. Adjust free play.

**Removal (Type 2)** — Disconnect cable from clutch operating lever on transmission. Pull rubber boot from guide tube and rear of cable. Pull guide tube and cable out of bracket on transmission. From under vehicle, remove pedal cover plate. Unbolt clutch pedal and remove pedal lever assembly from frame. Disconnect cable, bend up lock plate and pull out cable toward front of vehicle.

**Installation** — Lubricate cable with multi-purpose grease and install into guide tube. Connect cable to pedal, push cable through boot, and install boot onto cable guide. Lubricate and install wing nut. Adjust clutch free play.

#### CLUTCH RELEASE BEARING

**Removal** — With engine removed, pry clutch release bearing retaining clips from bearing and clutch arm. **NOTE** — Do not wash bearing in solvent or any cleaning solution; use a clean cloth to clean bearing.

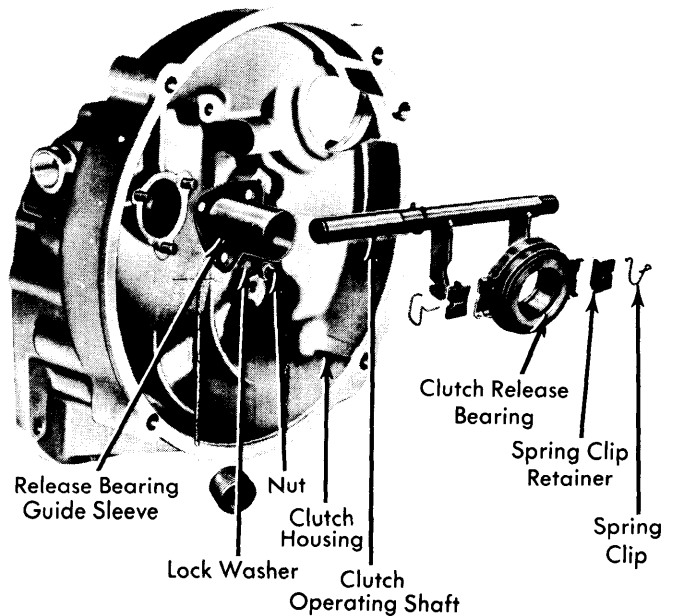


Fig. 1 Clutch Release Bearing Assembly

**Installation** — Roughen plastic ring with coarse emery paper and apply a light coating of molybdenum disulphide paste. Coat pivoting points between bearing and operating shaft with multi-purpose grease. Position bearing to shaft and install retaining clips, making sure they are correctly positioned. With engine installed, check and adjust clutch free play.

#### CLUTCH PILOT BEARING

Clutch pilot bearing is integral with flywheel gland nut. If bearing is defective, flywheel nut must be replaced. See Volkswagen Engines in ENGINE Section for removal and installation procedures.

### ADJUSTMENT

#### CLUTCH ADJUSTMENT

**Guide Tube** — Clutch cable guide tube should sag approximately 1-1 $\frac{3}{4}$ " (25-45 mm). See Fig. 2. This preload is obtained by inserting or removing washers between bracket on transmission and end piece of guide tube. **NOTE** — If sag is greater than 1 $\frac{3}{4}$ ", stiff operation and/or damage may result.

## VOLKSWAGEN TYPE 1 & 2 (Cont.)

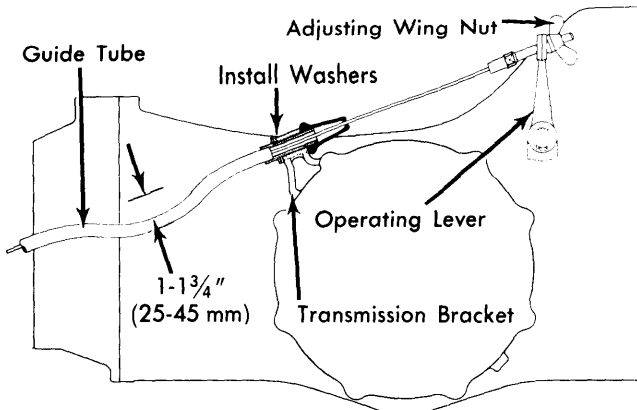


Fig. 2 Clutch Cable Measuring and Adjustment Points

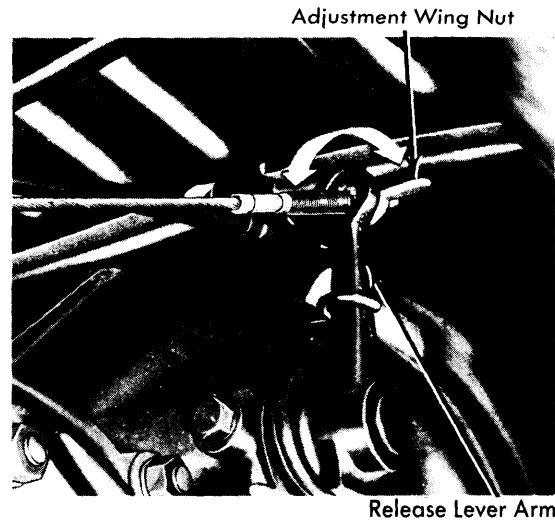


Fig. 3 Clutch Free Play Adjustment Point

**Clutch Pedal Free Play** – 1) Adjust clutch by turning wing nut on operating lever until free play at pedal is approximately  $\frac{5}{8}$ -1" (15-25 mm) for type 2 models or  $\frac{3}{8}$ - $\frac{3}{4}$ " (10-20 mm) for type 1.

2) When free play is correctly adjusted there will be approximately  $\frac{3}{32}$ " (Type 2) or  $\frac{1}{16}$ " (Type 1) clearance between operating lever and wing nut. See Fig. 3. After adjusting, make sure two lugs of wing nut engage cutouts in lever.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Engine-to-Transmission Nuts .....	22 (3.0)
Flywheel-to-Crankshaft Bolt .....	80 (11.0)
Clutch-to-Flywheel Bolts .....	18 (2.5)