

VOLKSWAGEN VANAGON

DESCRIPTION

Clutch is dry, single disc, diaphragm spring type which is hydraulically operated by a firewall mounted master cylinder and a clutch housing mounted slave cylinder. Slave cylinder is non-adjustable and clearance is automatically compensated for by internal design of cylinder.

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

Removal – 1) Disconnect battery ground strap. Remove right upper engine/transmission bolt.

2) Remove hydraulic clutch line bracket from transmission but do not disconnect line. Remove slave cylinder from mounting bracket and suspend with wire.

3) Remove left upper engine/transmission bolt. Remove left lower engine/transmission nut. Remove left drive shaft hex bolts and remove drive shaft from transmission and suspend with wire.

4) Disconnect starter cables, remove right drive shaft hex bolts and suspend drive shaft with wire. Remove right side lower engine/transmission nut.

5) Support engine with chain or engine support (VW 785/1). Disconnect ground strap from near transmission mount. Remove front transmission mount from body.

6) Support transmission using jack (US 618 & US 618/5) and lower front of transmission by loosening engine support (loosen spindle on VW 785/1) until there is enough room to remove transmission. Separate transmission from engine and remove from vehicle.

7) Lock flywheel with VW 215C (or equivalent). Index mark pressure plate and flywheel for reassembly reference. Loosen pressure plate-to-flywheel bolts evenly in a diagonal fashion and remove clutch assembly.

Installation – Apply molybdenum disulphide grease to release bearing. Lubricate transmission input shaft with molybdenum disulphide powder. Position clutch disc against flywheel and align using a centering tool. Install pressure plate and tighten bolts evenly in a diagonal fashion. Replace transmission, reversing removal procedure and noting the following:

- Insert rear bolt for slave cylinder before installing.
- Position air deflector plates correctly.

CLUTCH RELEASE BEARING

Removal – Remove transmission as outlined in Clutch Assembly in this article. Pry off clip retainers from bearing and disengage spring clips. Remove release bearing by sliding off guide tube.

NOTE – Do not wash bearing in solvent or cleaning solution. Wipe with dry cloth to clean.

Installation – Lubricate release shaft and release bearing pivot points with molybdenum disulphide grease. Position bearing to shaft and install spring clips and retainers. Make sure clips are correctly positioned.

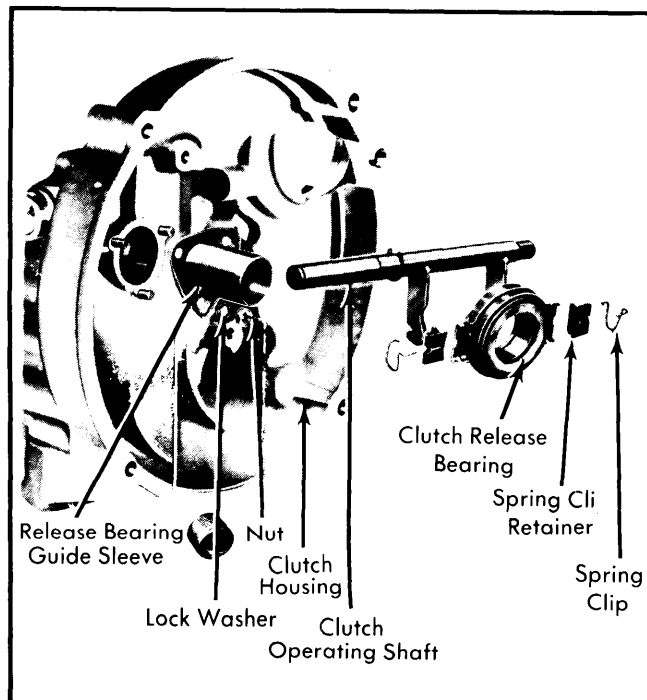


Fig. 1 Clutch Release Bearing Assembly

CLUTCH MASTER CYLINDER

Removal & Installation – Disconnect master cylinder push rod at clutch pedal by removing cotter pin and clevis. Disconnect hydraulic line at cylinder. Remove cylinder attaching bolts and remove cylinder from firewall. To install, reverse removal procedure and pressure bleed the system following bleeder manufacturer's instructions.

CLUTCH SLAVE CYLINDER

Removal – Disconnect hydraulic line from slave cylinder. Disconnect slave cylinder push rod from clutch lever ball. Remove mounting bolts and remove cylinder.

Installation – Grease clutch lever ball lightly. Insert rear bolt to slave cylinder and install on vehicle. Install front bolt, attach hydraulic line and clutch lever. Pressure bleed system following bleeder manufacturer's instructions.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Engine-to-Transmission Nuts & Bolts	22 (3.0)
Drive Shaft-to-Transmission Bolts	33 (4.5)
Pressure Plate-to-Flywheel Bolts	18 (2.5)