

## PORSCHÉ

911  
914

## DESCRIPTION

Clutch is dry, single disc, diaphragm spring type. Clutch actuation is mechanical, using a clutch pedal, cable, release fork, and release bearing.

## REMOVAL &amp; INSTALLATION

## CLUTCH ASSEMBLY

**Removal** — 1) Remove engine and transmission from vehicle as an assembly, then separate transmission from engine. See *Engine Removal* in *ENGINE* Section.

2) Mark pressure plate and flywheel for reassembly reference, then progressively loosen clutch attaching bolts one turn at a time in a diagonal selection until spring pressure is released. Remove clutch assembly.

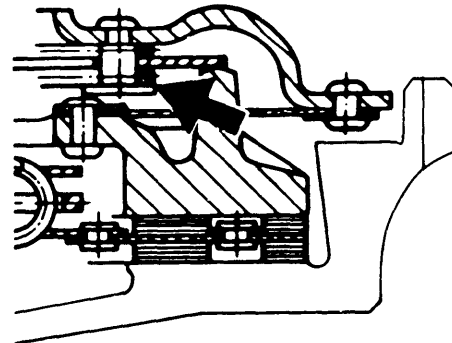
**Inspection** — 1) Check pressure plate and disc for wear, cracks, burning or loose rivets. Replace any part found defective. Check ends of diaphragm spring for wear marks from release bearing. Wear of .011" is acceptable.

2) Lay a straightedge across pressure plate face and check for distortion; up to .011" is permissible. Place clutch disc on input shaft and see that it moves freely on splines. Check disc for lateral runout. Maximum allowable runout for 911 is .024"; for 914, maximum allowable is .020".

3) Check clutch release bearing for noise or rough operation. Do not wash bearing in any cleaning solution; clean with a lint free cloth only. Replace bearing if contaminated or loud. Check pilot bearing in crankshaft for rough operation, replace as necessary.

**Installation** — 1) Place graphite grease or molybdenum disulphide grease in crankshaft pilot bearing, and moisten felt seal with engine oil. Install clutch disc on flywheel using a

suitable aligning tool to center disc. Coat diaphragm spring of pressure plate with a thin coat of molybdenum disulphide grease (see illustration).



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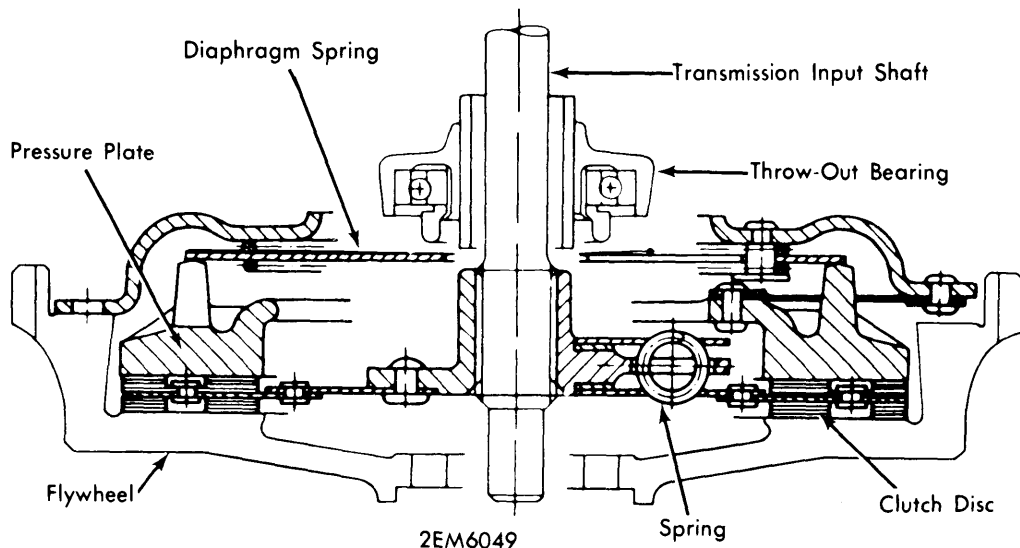
## LUBRICATING DIAPHRAGM SPRING

2) Install pressure plate to flywheel, aligning marks made at disassembly. **NOTE** — If a new clutch is installed, balancing marks on clutch and flywheel should be offset 180°. Install and tighten clutch attaching bolts one turn at a time in a diagonal sequence to prevent distorting pressure plate.

3) On 911 models, when transmission is installed on engine, pull release lever in a direction opposite engine. There must be a distance of at least .787" between release lever and transmission housing.

## CLUTCH CABLE (911 Models)

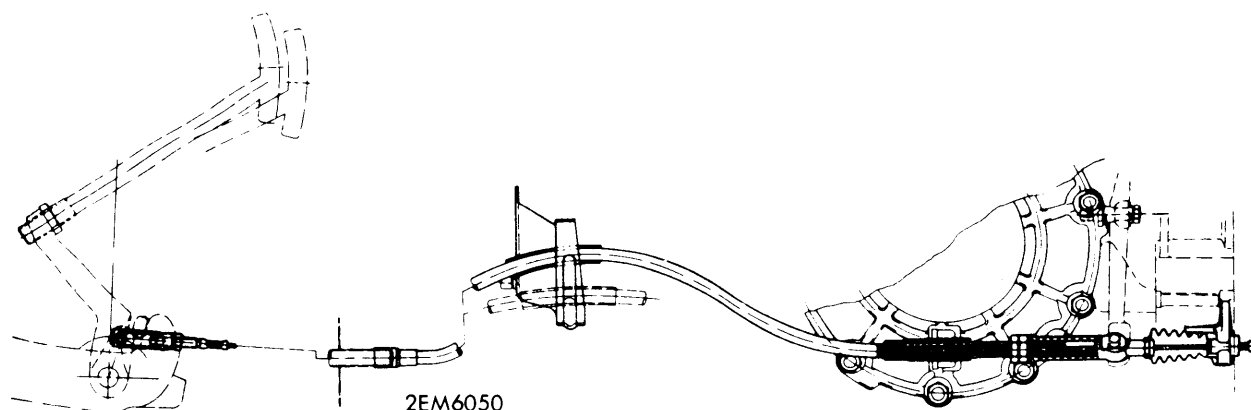
**Removal & Installation** — Loosen floor mats and fold them over. Raise rubber tunnel cover at front and fold over. Loosen lock nut of clevis at brake pedal, disengage retaining spring from clevis and remove bolt. Unscrew clevis and lock nut from threaded portion of clutch cable and pull out cable to the rear. Loosen lock nut from adjusting nut and unscrew clutch cable from fork clevis. To install, grease cable and reverse removal procedure. Adjust clutch clearance.



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## CLUTCH ASSEMBLY

## PORSCHE (Cont.)



CLUTCH CABLE ASSEMBLY

### CLUTCH CABLE (914 Models)

**Removal & Installation** — Unscrew self-locking adjusting nut from rear threaded end of cable and detach cable. Remove cable pulley. Remove console housing, cover and floor board. Loosen lock nut from pedal clevis, push clevis pin retainer up and pull clevis pin out. Unscrew cable from clevis and pull cable out rearward. To install, coat cable and pulley with grease and reverse removal procedures. Adjust clutch free play and pedal travel.

### CLUTCH RELEASE BEARING

**Removal** — Remove engine from vehicle. Separate engine and transmission. Disconnect clutch return spring. Remove clutch release bearing from guide sleeve.

**Installation** — Apply a thin coat of graphite grease to clutch release fork. Install bearing. Adjust throw-out bearing  $1\frac{3}{32}$ " (50mm) back from face of clutch using suitable tool (P 35a).

*NOTE* — Do not wash clutch release bearing in cleaning solvent. Bearing is pre-packed and requires no lubrication.

### PILOT BEARING

**Removal & Installation** — Check pilot bearing and seal for wear or damage. If replacement is necessary, remove flywheel. Using an arbor press, press bearing out from clutch side of flywheel. Press new bearing in from crankshaft side of flywheel. Grease bearing with molybdenum disulphide grease and oil seal with engine oil.

## ADJUSTMENT

### CLUTCH ADJUSTMENT

**All Models** — Loosen cable casing lock nut. Turn adjusting nut until clutch pedal has .8-1" (20-25mm) of free play. To check free play, pull clutch back towards rear of car.

### PEDAL ADJUSTMENT

**All Models** — 1) With engine and transmission warm, depress clutch pedal to stop. In this position reverse gear must just be able to be engaged silently.

2) When clutch pedal is fully depressed, clutch release lever should move .6" (15mm) to completely disengage clutch. If cable housing rests on bottom of guide clamp when pedal is fully depressed, inner cable must be adjusted at yoke end.

3) Measure from threaded cable end of yoke to outer edge of lock nut. Measurement should be .7-.9" (17-22mm), adjust if necessary. If cable housing rests on bottom of guide clamp when clutch pedal is fully depressed, inner cable must be lengthened at yoke end.

4) If arc of cable is too large, allowing cable to come out of guide clamp when pedal is released, inner cable must be shortened at yoke end.

## TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.(mkg)
Flywheel	
911 Series.....	108 (14.9)
914 Series.....	80 (11.1)
Clutches	
911 Series.....	18 (2.5)
914 Series.....	15 (2.1)