

PORSCHE

911S
924
930 Turbo Carrera

DESCRIPTION

All models use a dry, single disc, diaphragm spring type of clutch system. Clutch operation is mechanical. Pedal is connected to release lever by cables. All models have similar clutch disc designs: 930 models have thicker clutch lining, stronger springs, and larger diameter hubs. 930 models also have release lever mounted so a shorter, thicker cable can be used.

REMOVAL & INSTALLATION

CLUTCH ASSEMBLY

1) On 911 S and Turbo Carrera, remove engine and transaxle from vehicle. On 924, follow removal procedures except that it is only necessary to move central tube with transmission back far enough to remove clutch disc and pressure plate. See *Engine Removal in ENGINE Section*.

2) Index mark pressure plate and flywheel for reassembly. Insert clutch alignment tool. Loosen clutch mounting bolts alternately and evenly until spring pressure is released. Slip clutch assembly from vehicle.

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.

2) Lay a straightedge across pressure plate face and check for distortion; up to .011" (.3 mm) is permissible. Place clutch disc on input shaft and see that it moves freely on splines. Check disc for maximum allowable runout of .24" (.6 mm).

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 Fig. 2.

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.

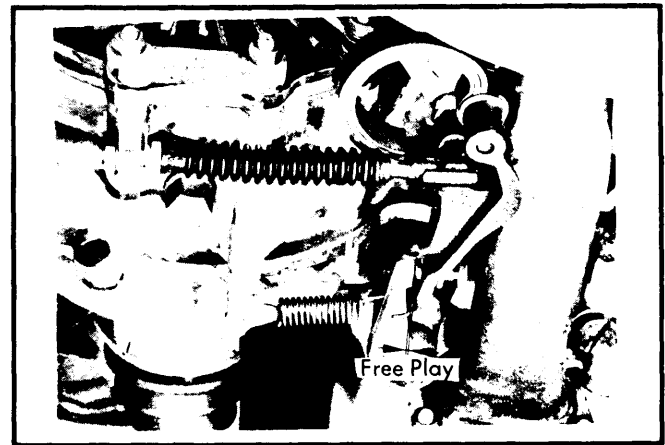


Fig. 2 View of Clutch Adjusting Mechanism (911S & 930)

CLUTCH RELEASE BEARING

Removal (911S & 930) – Bearing is removed with pressure plate and must be removed by laying pressure plate on bearing. Remove snap ring and take out bearing together with washers.

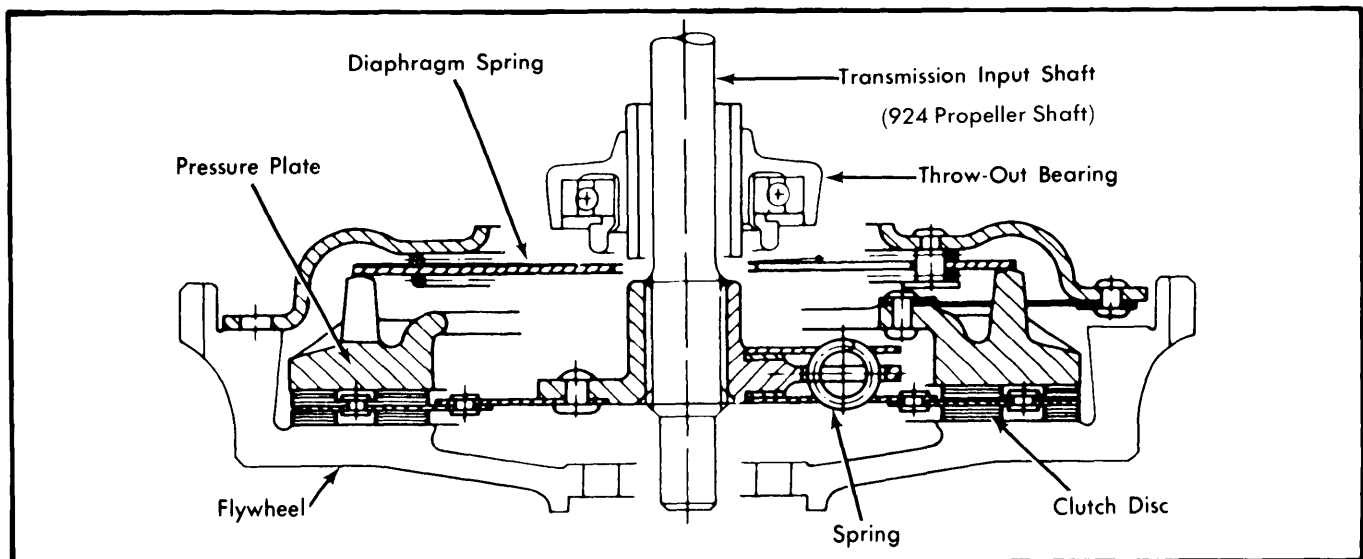


Fig. 1 Sectional View of Clutch Assembly

PORSCHE (Cont.)

Removal (924) — With clutch removed, detach bearing spring clips from release lever. Move lever forward and take release bearing off of guide tube.

Installation — Apply thin coat of suitable lubricant to guide tube and reverse removal procedures.

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

ADJUSTMENT

CLUTCH ADJUSTMENT

911S & 930 — Clutch free play must be checked at transmission adjusting lever due to auxiliary clutch spring. With cable snug, adjust play to .004" (1.0 mm). See illustration. Clutch pedal travel may be adjusted at stop on floor plate, if required. Release travel distance for 91 should be .984±.002" (25±.5 mm) and for 930 should be 1.063±.002" (27±.5 mm) when measured at cable end.

924 — Lower end of clutch cable should measure 5.438±.078" (138±2 mm) when measured from lower edge of cable holder to pin at release lever with release bearing against diaphragm spring. To adjust, turn outboard release lever on shaft and tighten in position. Adjust cable with counter-nuts on holder to give .8-1" (20-25 mm) free play at clutch pedal.

Clutch Pedal Free Play	
Application	Free Play
911S & 924	.8-1.0" (20-25 mm)
930	.9" (23 mm)

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 (All Models)	108 (15)
Clutch	
911S	25 (3.5)
924	23 (3.2)
930	14-18 (2.0-2.5)