Measure Engine Flywheel Housing and Flywheel

Engine flywheel housing and flywheel must meet these specifications or there will be premature clutch wear. Remove old Pilot Bearing. All gauge contact surfaces must be clean and dry. Use a dial indicator and check the following:

**Flywheel Face Runout**
- Secure dial indicator base to flywheel face near the outer edge. Rotate flywheel one revolution. Maximum runout is 0.008" (0.20 mm).

**Pilot Bearing Bore Runout**
- Secure dial indicator base to flywheel housing face. Position gauge finger so that it contacts pilot bearing bore. Rotate flywheel one revolution. Maximum runout is 0.005" (0.13 mm).

**Flywheel Housing I.D. Runout**
- Secure dial indicator base to crankshaft. Put gauge finger against flywheel housing pilot I.D. Rotate flywheel one revolution. Maximum runout is 0.008" (0.20 mm).

**Flywheel Housing Face Runout**
- Secure dial indicator base to flywheel near the outer edge. Put gauge finger in contact with face of flywheel housing. Rotate flywheel one revolution. Maximum runout is 0.008" (0.20 mm).

Replace Input Shaft Pilot Bearing Wear Sleeve, refer to TRSM0950 Input Shaft Pilot Bearing Wear Sleeve Disassembly/Assembly.

Push the upper end of the Release Yoke back until it locks to reset the Linear Clutch Actuator (LCA).

Refer to OEM Guidelines for transmission installation.

Refer to OEM and/or transmission manufacturer regarding clutch calibration requirements after transmission installation.

**Note:** Ensure to perform the clutch calibration requirements or transmission performance will be degraded.

**In Case of Clutch Failure:**
- If clutch is not functioning properly, ensure the following:
  - TCC clutch plates are not burned.
  - Clutch agent is not depleted.
  - Clutch plates are not warped.
  - Clutch plates are not binding.

**NOTICE:** Ensure to perform the clutch calibration requirements or transmission performance will be degraded.
**2 Assemble Clutch**

**Special Instructions**
Install Clutch Alignment Shaft (RR1087TR) onto a clutch jack. Refer to clutch jack manufacturer guidelines for proper installation instructions.

**WARNING:** Clutch weighs approximately 125 lbs. Failure to properly secure the Clutch Alignment Shaft to the clutch jack may result in component damage, severe injury or death.

**Special Tools**
- Clutch Installation Tool Kit (RR2000CL)
- 6 ounce (170 gram) hammer
- 3/8 inch (9.525 mm) brass pin punch (Starrett® B248E Pin Punch, Brass Drive 3/8" or equivalent)

**NOTICE:** Do not remove 4 stand-off bolts. Straps may be cut to clear alignment shaft.

**1** Install a new pilot bearing. Refer to OEM and/or engine manufacturer for installation guidelines.

**2** Install the Clutch Cover and Driven Disc onto the jack-mounted Clutch Alignment Shaft.

**CAUTION:** Install Driven Disc following orientation instructions on disk toward flywheel.

**3** Install two flywheel Alignment Pins (RR1063TR-3) into the flywheel directly across from each other, at approximately 3 and 9 o’clock.

**NOTICE:** Do not install the alignment pins into the center threaded hole of the 3-threaded hole groups.

**4** Install two flywheel Alignment Pins (RR1063TR-3) into the flywheel directly across from each other, at approximately 3 and 9 o’clock.

**5** Install two flywheel Alignment Pins and 4 stand-off bolts with straps from the clutch cover.

**6** Install 6 remaining Clutch Cover cap screws finger tight.

**7** Torque cap screws 1 through 4 to 30 N•m (23 lb-ft.).

**8** Torque cap screws 5 through 12 to 30 N•m (23 lb-ft.).

**9** Torque cap screws 1 through 12 to 57-67 N•m (42-50 lb-ft.).

**10** Remove the Clutch Alignment Shaft.

**11** Locate the 4 Control Fingers in the Clutch Cover.

**12** Use a 6 ounce (170g) hammer and a 3/8 inch (9.525mm) brass pin punch and lightly tap the 4 control fingers until they contact the flywheel.

**CAUTION:** Keep fingers clear to avoid personal injury.

**CAUTION:** Only use tools specified and do not use excessive force to seat the control fingers to the flywheel. If control fingers are damaged during installation the clutch will not properly adjust and will require replacement.

**3 Install Assembled Clutch**

**1** Align the Clutch Cover to the flywheel Alignment Pins and insert the Clutch Alignment Shaft into the pilot bearing.

**CAUTION:** Use only M10 x 1.5 x 83mm, minimum class 10.9, flange type fasteners for the Clutch Cover cap screws.

**2** Slide the Clutch Cover (and Driven Disc) on to the flywheel and install 6 Clutch Cover cap screws finger tight.

**3** Remove the 2 flywheel Alignment Pins and 4 stand-off bolts with straps from the clutch cover.

**4** Install 6 remaining Clutch Cover cap screws finger tight.

**5** Torque cap screws 1 through 4 to 30 N•m (23 lb-ft.).

**6** Torque cap screws 5 through 12 to 30 N•m (23 lb-ft.).

**7** Torque cap screws 1 through 12 to 57-67 N•m (42-50 lb-ft.).

**8** Re-torque cap screws 1 through 12 to 57-67 N•m (42-50 lb-ft.) to ensure Clutch Cover is fully seated to flywheel.

**10** Locate the 4 Control Fingers in the Clutch Cover.

**11** Use a 6 ounce (170g) hammer and a 3/8 inch (9.525mm) brass pin punch and lightly tap the 4 control fingers until they contact the flywheel.

**CAUTION:** Keep fingers clear to avoid personal injury.

**CAUTION:** Only use tools specified and do not use excessive force to seat the control fingers to the flywheel. If control fingers are damaged during installation the clutch will not properly adjust and will require replacement.