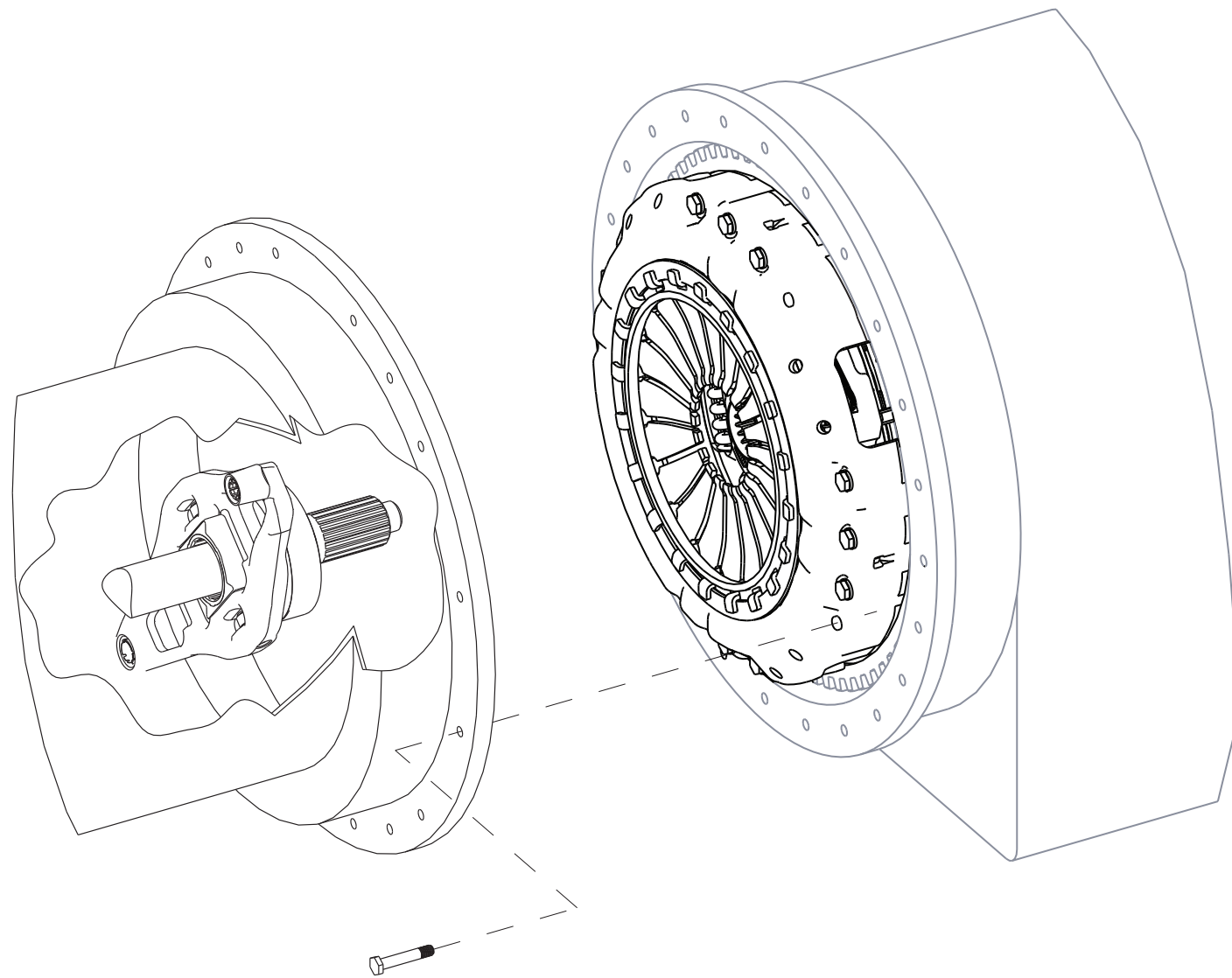


4 Install Transmission per OEM Guidelines



Note: Reference Endurant 12-Speed Automated Transmission Service Manual .

- 1 Replace Release Bearing.
- 2 Replace Input Shaft Pilot Bearing Wear Sleeve.
- 3 Push the upper end of the Release Yoke back until it locks to reset the Linear Clutch Actuator (LCA)
- 4 Refer to OEM Guidelines for transmission installation.
- 5 Refer to OEM and/or transmission manufacturer regarding clutch calibration requirements after transmission installation.

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

Installation Procedure

Eaton 430 mm Push Type Self-Adjusting Clutch CLMT4309 EN-US

July 2023

Eaton
Vehicle Group
P.O. Box 4103
Kalamazoo, MI 49003 USA
800-826-HELP (4357)
www.eaton.com/roadranger

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Printed in USA
Reference Materials
CLSM200 and CLSL1511

1 Measure

NOTICE: Flywheel machining is not recommended. If flywheel is machined clutch cover may not fully seat or properly attach to flywheel and may cause:

- Fault Code 250 to set Active
- "CC" in display and unable to complete a Clutch Calibration

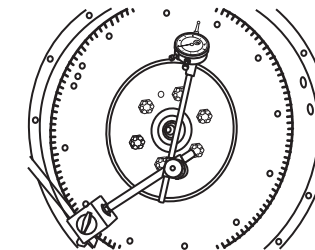
Flywheel replacement is recommended if out of specification, refer to OEM and/or engine manufacture.

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:

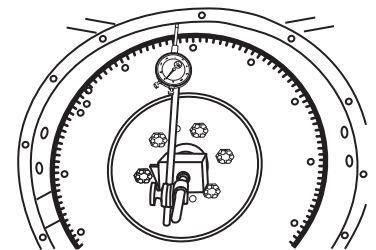
Flywheel Face Runout

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



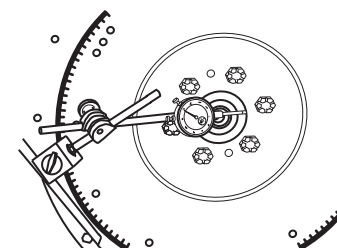
Flywheel Housing I.D. Runout

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).



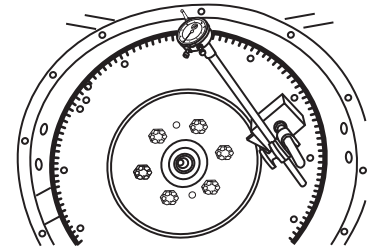
Pilot Bearing Bore Runout

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 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).



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.

CAUTION: Use only M10 x 1.5 x 80mm, minimum class 10.9, flange type fasteners for the Clutch Cover cap screws. Refer to OEM. Failure to use the correct fastener may result in component damage and/or severe injury.

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)
- Service Manual - Endurant: HD TRSM0950 or XD TRSM0960

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. Do not remove 4 stand-off bolts.

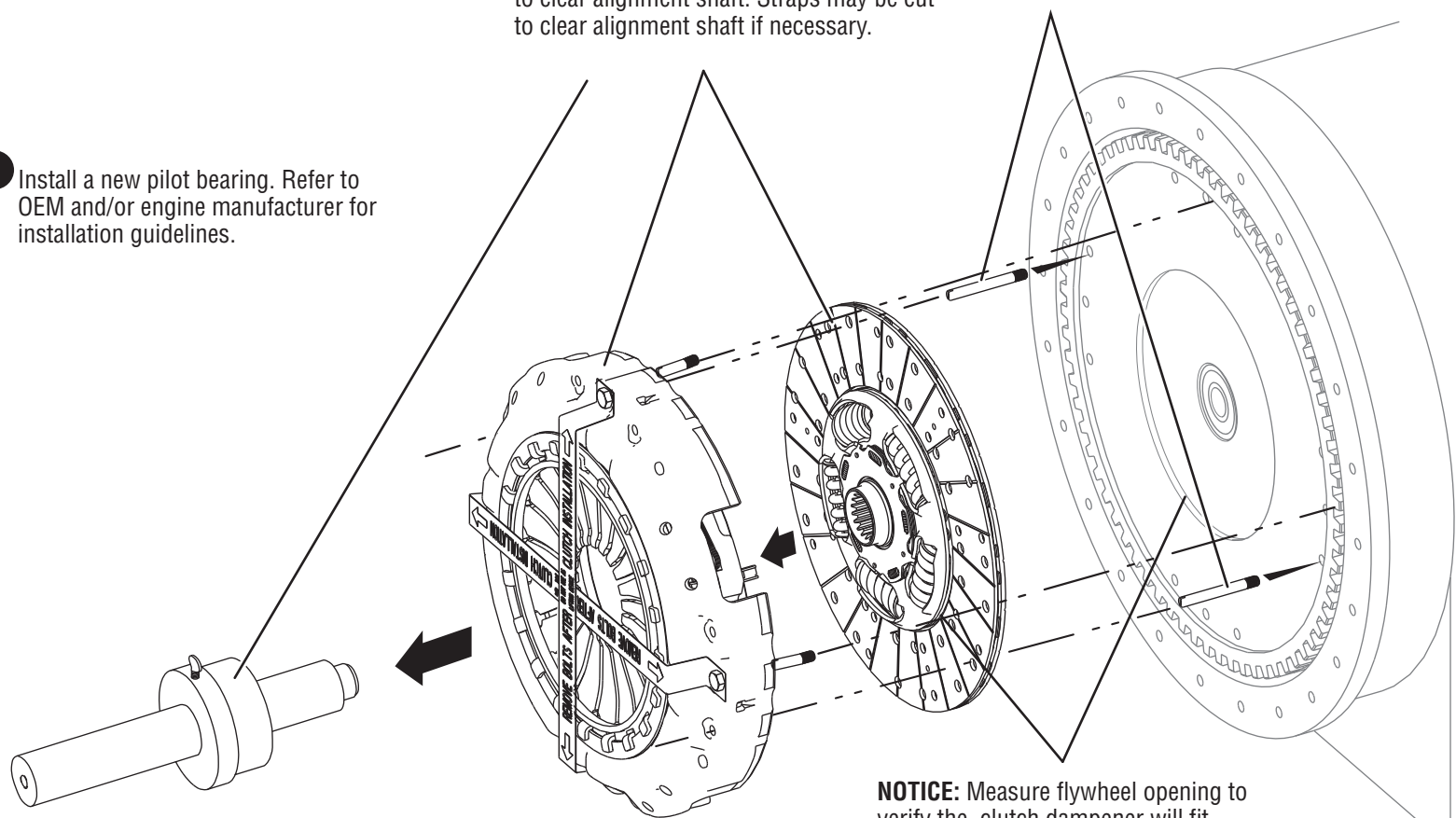
NOTICE: Shipping straps are flexible, move to clear alignment shaft. Straps may be cut to clear alignment shaft if necessary.

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.

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

NOTICE: Measure flywheel opening to verify the clutch dampener will fit flywheel opening size. Refer to service manual Endurant: HD TRSM0950 or XD TRSM0960.



3 Install Assembled Clutch

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

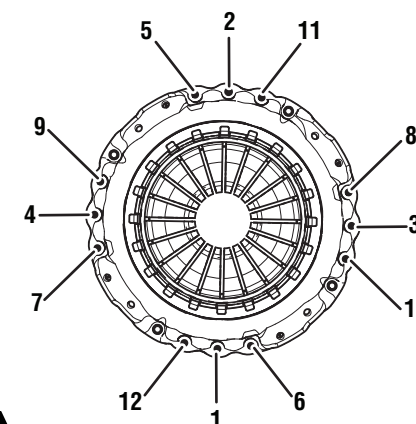
2 Slide Clutch Cover and Driven Disc on to the flywheel and install 6 Clutch Cover cap screws at the 5, 6, 7, 10, 11 and 12 positions (refer to cap screw callout image below). Torque finger tight plus 1/2 rotation clockwise.

NOTICE: Ensure clutch cover is fully seated into pilot lip on the flywheel rim at the 6 o'clock position.

3 Remove the Clutch Alignment Shaft.

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

5 Install 6 remaining Clutch Cover cap screws finger tight.



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

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

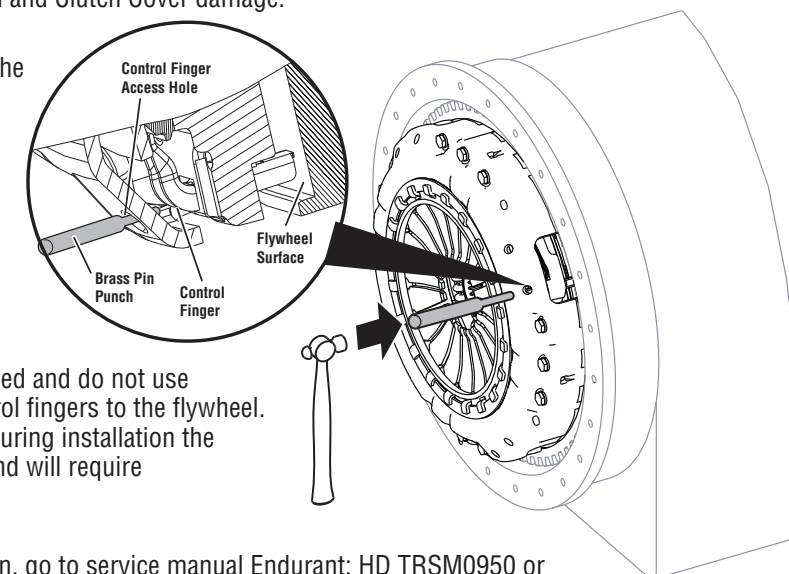
8 Torque cap screws 1 through 12 to **57-67 N•m (42-50 lb-ft.)**.

9 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.

CAUTION: Reference cap screw callout image for proper torque sequence used in steps 6 through 9. Failure to follow the torque sequence may result in flywheel and Clutch Cover damage.

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: 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.

12 Prior to transmission installation, go to service manual Endurant: HD TRSM0950 or XD TRSM0960 - Clutch Service Procedure, Measure Diaphragm Spring Finger Height.

