### 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. Position gauge finger so that it contacts pilot bearing bore. Rotate flywheel one revolution. Maximum runout is 0.005” (0.13 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 0.008” (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).

- **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).

### Set-up and Lubricate

#### Adjust Bearing Position

1. Measure the distance between the release bearing and the clutch brake. The correct distance should be 0.560” – 0.567” (12.70 – 14.22 mm). If correct go to Step 3.

2. To change bearing position, you must internally adjust the clutch. Push pedal and hold pedal down when adjusting. Push and turn adjusting nut. Turning the adjusting nut clockwise moves the bearing toward the transmission.

#### Verify Clutch Brake Squeeze

3. Insert 0.010” (0.25 mm) feeler gauge between the release bearing and the clutch brake. Press the pedal down to clamp the gauge.

   - If the gauge does not clamp, adjust linkage to achieve clutch brake squeeze then recheck Step 3.

4. Slowly let up on the pedal and check the pedal position at the moment the gauge can be removed.

   - If the pedal is less than 1/2” (12.7 mm) or more than 1” (25.4 mm) from the floor when the gauge can be removed, readjust the linkage. (Repeat Steps 3 and 4.)

#### Lubricate

- **Important:** Eaton recommends the use of Roadranger EP2 for release bearing lubrication, or an equivalent Lithium Complex, NLGI #2 or #3 grease with an NLGI LB/GC performance rating and a dropping Point temperature of 220° C (428° F) or higher. Failure to use the proper grease may affect bearing life and void the warranty coverage on your Eaton product.

  - Apply ample grease that visibly exits the opening and contacts the transmission shaft. This will lube the clutch brake when pedal is pressed.

- **Transmission**

#### Verify Free-Play

5. Do not change bearing position.

6. To change yoke finger and bearing wear pads clearance, adjust the upper pedal stop to raise or lower the pedal in the cab.

7. Apply grease to the input shaft and yoke.

8. Apply grease to the cross shaft bushings and linkage pivot points.

9. Grease the release bearing until grease purges from the rear of the release bearing onto the input shaft.

#### Verify Clutch Brake Squeeze

1. Insert 0.010” (0.25 mm) feeler gauge between the release bearing and the clutch brake. Press the pedal down to clamp the gauge.

2. Slowly let up on the pedal and check the pedal position at the moment the gauge can be removed.

   - If the pedal is less than 1/2” (12.7 mm) or more than 1” (25.4 mm) from the floor when the gauge can be removed, readjust the linkage. (Repeat Steps 3 and 4.)

#### Adjusting Nut

- **Note:** Refer to CLSM0200 and CLSL1511

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**Eaton 15.5” Advantage Series Manual Adjust Clutch**

**CLMT1353 EN-US**

**October 2017**

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Install Clutch to Flywheel

1. **Install Clutch to Flywheel**
   - Use the Eaton Clutch Selector Guide (CLSL1511) to make sure you have the correct clutch.

2. **Measure the flywheel bore.** Use the Eaton Clutch Selector Guide (CLSL1511) to verify that the damper will fit into the flywheel bore.

3. **Insert aligning tool through bearing.**

4. **Install second disc onto aligning tool.** Follow the orientation instructions on the disc.

5. **Install lock washers and mounting bolts (7/16” x 14 UNC x 5” stud) finger tight.** Replace studs with lockwashers and bolts.

6. **Progressively tighten mounting bolts in a crisscross pattern starting with a lower bolt.** Torque to 40–50 lbs. ft. (54–68 N·m).

7. **Verify bearing position is 3/8”–5/8” (9.5–15.9mm) from cover.**

8. **Remove the aligning tool. Be sure shipping blocks are removed.**

9. **Put transmission in gear. Be sure new clutch brake has been installed.**

10. **Make sure that the yoke fingers remain in the up position until they are over the release bearing housing.**

11. **Progressively tighten mounting bolts in a crisscross pattern starting with a lower bolt.** Torque to 40–50 lbs. ft. (54–68 N·m).

12. **Verify bearing position is 3/8”–5/8” (9.5–15.9mm) from cover.**

13. **Remove the aligning tool. Be sure shipping blocks are removed.**

14. **Put transmission in gear. Be sure new clutch brake has been installed.**

15. **Make sure that the yoke fingers remain in the up position until they are over the release bearing housing.**

16. **Position transmission so it is square to and aligned with engine.**

17. **Mesh splines by moving transmission forward and rotating the output shaft. Do not use excessive force. Do not let the transmission hang unsupported in the discs.**

18. **Install two 7/6” x 14 UNC x 5” studs into upper mounting holes.** Install assembled clutch.

19. **Install lock washers and mounting bolts (7/16” x 14 UNC x 2 1/4” grade 5) finger tight.** Replace studs with lockwashers and bolts.

20. **Progressively tighten mounting bolts in a crisscross pattern starting with a lower bolt.** Torque to 40–50 lbs. ft. (54–68 N·m).

21. **Verify bearing position is 3/8”–5/8” (9.5–15.9mm) from cover.**

22. **Remove the aligning tool. Be sure shipping blocks are removed.**

23. **Put transmission in gear. Be sure new clutch brake has been installed.**

24. **Make sure that the yoke fingers remain in the up position until they are over the release bearing housing.**

25. **Position transmission so it is square to and aligned with engine.**

26. **Mesh splines by moving transmission forward and rotating the output shaft. Do not use excessive force. Do not let the transmission hang unsupported in the discs.**

27. **Install mounting bolts and torque to OEM specs.**