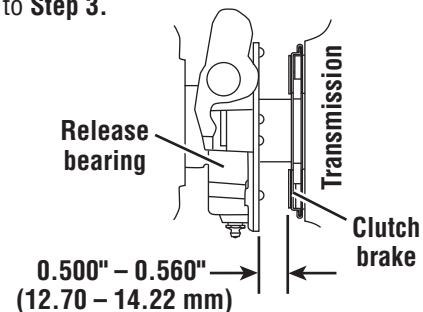


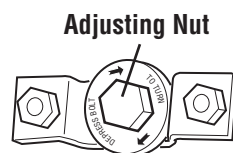
# 4 Set-up and Lubricate

## Adjust Bearing Position

- 1 Measure the distance between the release bearing and the clutch brake. The correct distance should be 0.500" – 0.560" (12.70 – 14.22 mm). If correct go to **Step 3**.

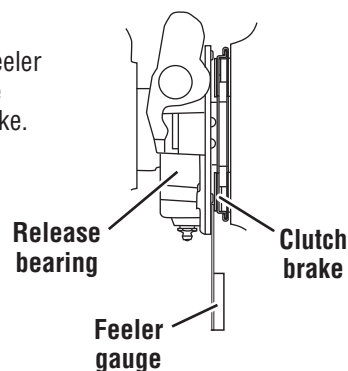


- 2 To change bearing position, you must internally adjust the clutch. Push pedal and hold pedal down when adjusting. Push and turn adjusting nut. Turning the adjusting nut clockwise moves the bearing toward the transmission.



## Verify Clutch Brake Squeeze

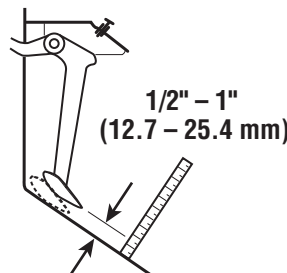
- 3 Insert 0.010" (0.25 mm) feeler gauge between the release bearing and the clutch brake. Press the pedal down to clamp the gauge.



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

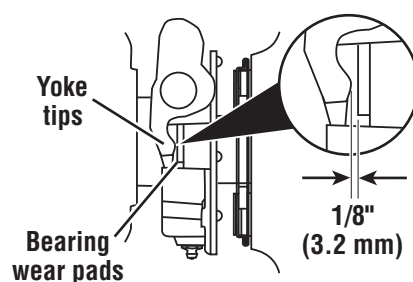
- 4 Slowly let up on the pedal and check the pedal position at the moment the gauge can be removed.

- 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**.)



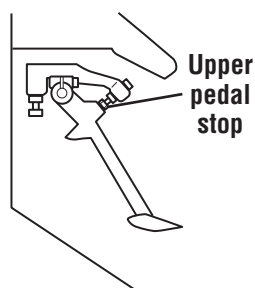
## Verify Free-Play

- 5 Check distance between yoke tips and bearing wear pads. This distance should be 1/8" (3.2 mm).



- ⚠ Do not change bearing position.

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



## Lubricate

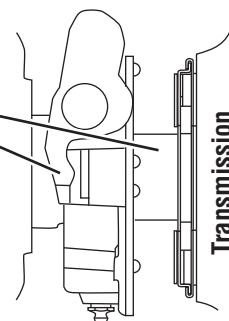
- ⚠ **Important:** Eaton recommends the use of Roadranger EP2 for release bearing lubrication, or an equivalent Lithium Complex, NLGI #2 or #3 grease with a NLGI LB/GC performance rating and a dropping Point temperature of 220° C (428° F) or higher. Failure to use the proper grease may affect bearing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

- 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.



## Installation Procedure

# Eaton 15.5" Advantage Series Manual Adjust Clutch CLMT1353 EN-US

October 2017



BACKED BY  
**Roadranger**  
SUPPORT

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

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**Note:** Refer to CLSM0200 and CLSL1511



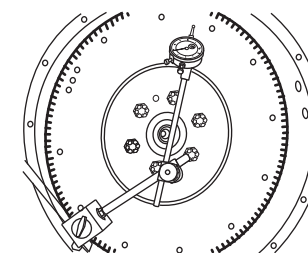
# 1 Measure

## 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:

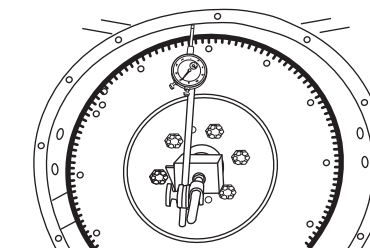
### Flywheel Face Runout

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).



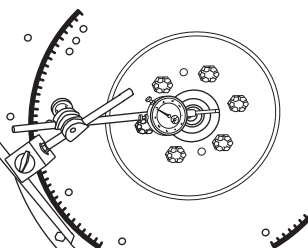
### Flywheel Housing I.D. Runout

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).



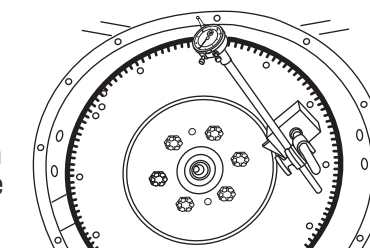
### Pilot Bearing Bore Runout

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).

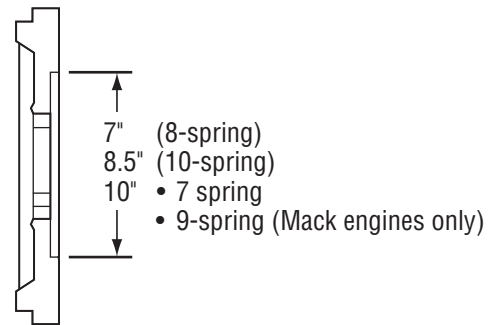


## 2 Install Clutch to Flywheel

**NOTICE:** Use the Eaton Clutch Selector Guide (CLSL1511) to make ensure you have the correct clutch.

**WARNING:** An assembled clutch weighs about 150 lbs (68 kg). Avoid the risk of injury. Use proper equipment when lifting a clutch.

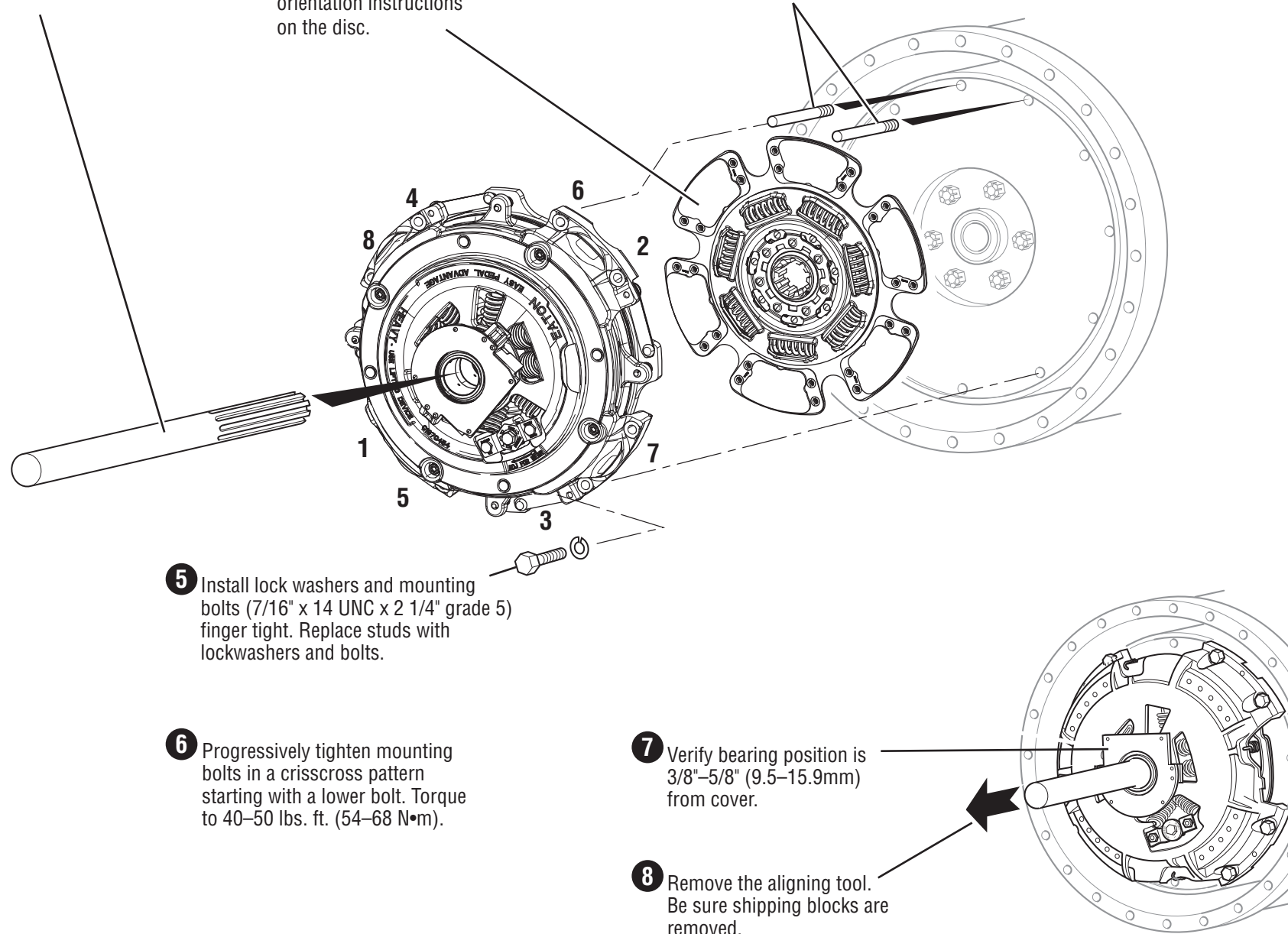
- 1** Measure the flywheel bore. Use the Eaton Clutch Selector Guide (CLSL1511) to verify that the damper will fit into the flywheel bore.



- 2** Insert aligning tool through bearing.

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

- 4** Install two 7/6" x 14 UNC x 5" studs into upper mounting holes. Install assembled clutch.



- 5** 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.

- 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.

## 3 Install Transmission

### Check Transmission For Wear

Replace any worn components.

#### Transmission Bearing Retainer Cap

A worn/rough bearing retainer cap may cause the clutch brake to wear prematurely.

#### Release Yoke

Worn fingers can cause bushing wear and yoke interference when the pedal is down.

#### Input Shaft

Wear (roughness) can reduce sleeve bushing life and cause it to come out.

#### Measure Input Shaft

Length should be 8.657" (219.89 mm) nominal, and not greater than 8.71" (221.23 mm). Ref. 1990 SAE handbook 4:36.106. Replace transmission bearing retainer cap if length is greater than 8.71" (221.23 mm).

#### Cross Shaft and Bushings

Excessive wear at these points can cause side loading on the sleeve bushing, bushing failures and yoke bridge contact with the clutch when the pedal is down.

#### Input Shaft Splines

Any wear on the splines will prevent the driven discs from sliding freely, causing poor clutch release (clutch drag). Slide discs full length of shaft to check for twisted shaft splines.

#### Clutch Brake

Replace.

### Fasten Transmission To Flywheel Housing

**CAUTION:** Rotate the release fork fingers around the release bearing as the transmission is installed. Clutch damage may occur if the yoke is improperly installed.

- 1** Put transmission in gear. Be sure new clutch brake has been installed.
- 2** Make sure that the yoke fingers remain in the up position until they are over the release bearing housing.
- 3** Position transmission so it is square to and aligned with engine.

- 4** 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.

- 5** Install mounting bolts and torque to OEM specs.

