INSTALLATION GUIDE

TorqDrive Kit for Harley-Davidson
Big Twin Motorcycles

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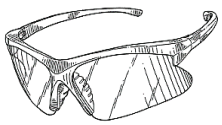
OVERVIEW

This kit replaces many of the OE (Original Equipment) or “stock” clutch parts. These parts are designed specifically for your motorcycle to ensure optimal performance. The following is a summary of what is replaced:

- OE friction disks
- OE drive plates
- OE spring hold-down ring

INSTALLATION TIPS



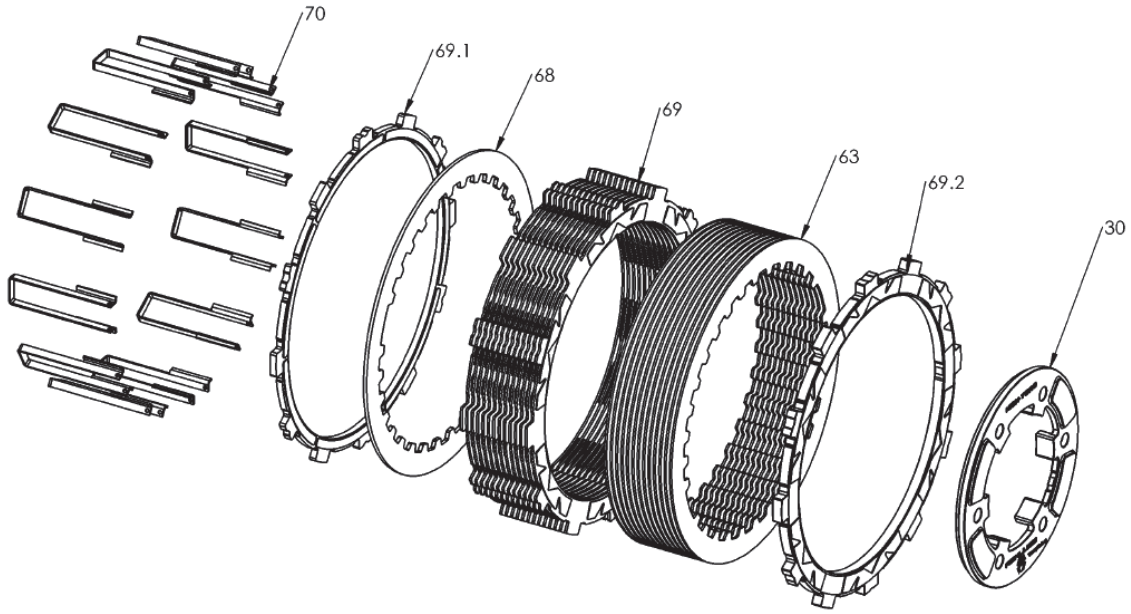
- Read the separate included Safety Information document before operating the vehicle with the product installed.
- This kit is compatible ONLY with the OE clutch components.
- Read this entire document before performing any steps.
- If you install this product for a customer or another person, instruct them to read the **Safety Information** document and the **Installation Guide** before operating the bike with the product.
- Protect eyes and skin – wear safety glasses and work gloves.
- Use the torque values listed in the instructions. Otherwise, use the torque specifications found in your OE service manual.
- Different spring options may be available purchased from Rekluse (depending on the bike model) for:
  - Motorcycles with taller gearing or modified engines with increased horsepower
  - Customers looking for a lighter lever pull
- For optimal clutch performance Rekluse recommends using fresh, clean oil that **meets JASO-MA** oil rating requirements. Rekluse offers Factory Formulated Oil™ developed specifically for Rekluse products. Rekluse Factory Formulated Oil is a perfect complement to any OEM or aftermarket wet clutch. Visit www.rekluse.com to learn more.

TOOLS

• Hex key set (Standard SAE)	• Torque wrench (in-lb & ft-lb, or N-m)
• Torx bit set, including T27 Torx bit	• End wrenches (Standard SAE)

• 10 mm socket	• 2 dental pick tools

INCLUDED PARTS

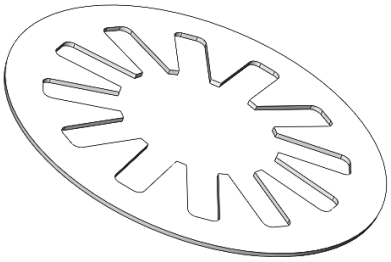


Item	Description	Qty.
30	Spring hold-down ring	1
69.2	TorqDrive® thick friction disk	1
63	Steel drive plate - .040” (1 mm)	13
69	TorqDrive® thin friction disks	13
68	Steel drive plate - .065” (1.6 mm)	1
69.1	TorqDrive® damper (judder) friction disk - .150” (3.81 mm)	1
70	Basket sleeves	12

a full parts fiche illustration and part numbers.

BELLEVILLE SPRING OPTIONS

Typically, the OE Belleville spring is reused when installing a Rekluse TorqDrive clutch pack. However, if the bike has a highly-modified engine, and the OE clutch did not provide enough torque capacity, alternate springs can be purchased to optimize the clutch setup.



The following numbers reflect the engine torque output that the clutch can comfortably withstand using the provided spring ring for each given clutch spring.

All Belleville spring adjustments can be performed through the derby cover without removing the primary cover.

TorqDrive Clutch Torque Capacity			
		Max Engine Output Torque (ft-lb)	
Spring Part Number	Spring Marking	'98-'06 Models (excluding '06 Dynas)	'07+ Models (including '06 Dynas)
37882-06	Blue	117	124
37871-04	Yellow	140	149
37807-03	Pink	170	181
37951-98 (Screamin' Eagle After-Market Only)	None	187	199

SPRING RING OPTIONS

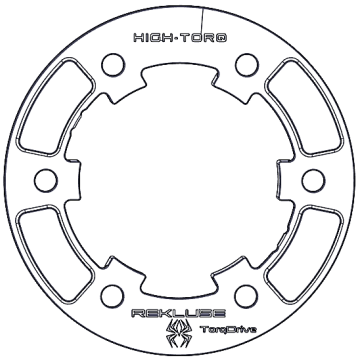
The spring ring provided with this kit is designed to provide maximum torque capacity without increasing lever pull effort.

Rekluse also offers a Light-Lever Spring Ring as an available purchase option, which can decrease the clutch lever pull effort by up to 30% lighter than stock. **If you have a 96 in³ engine or**

smaller, you may desire to purchase the Light-Lever Spring Ring from Rekluse for the added benefit of a lighter clutch lever pull. This ring clamps the OE Belleville spring in a way that reduces the spring force on the clutch pack, and is a great option for Dynas and Softails.

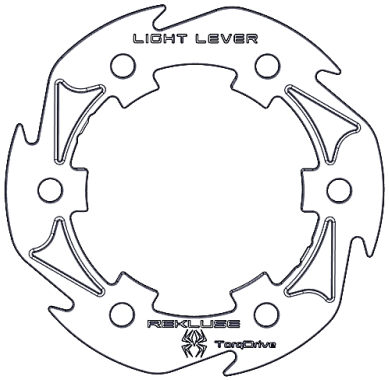
The following charts show:

- High-Torq Ring (provided in this kit): Retains stock lever pull effort while delivering nearly 50% more torque capacity than OE.
- Light Lever Ring: Provides up to a 30% decrease in lever pull effort while maintaining the OE torque capacity.



High Torque Capacity
Spring Ring

High-Torq Spring Ring (provided)			
Spring Part Number	Spring Marking	Max Engine Output Torque (ft-lb)	
		’98-’06 Models (excluding ’06 Dynas)	07+ Models (including ’06 Dynas)
37882-06	Blue	117	124
37871-04	Yellow	140	149
37807-03	Pink	170	181
37951-98 (Screamin’ Eagle After-Market Only)	None	187	199

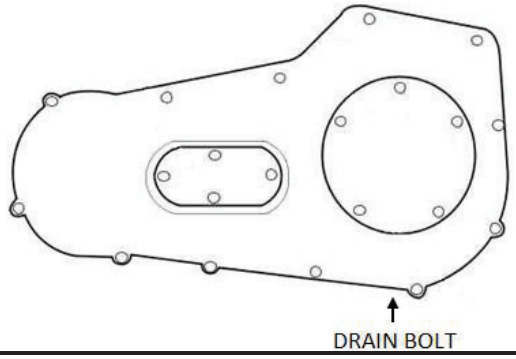


Light Lever Pull
Spring Ring

Light-Lever Spring Ring (option)			
Spring Part Number	Spring Marking	Max Engine Output Torque (ft-lb)	
		’98-’06 Models (excluding ’06 Dynas)	07+ Models (including ’06 Dynas)
37882-06	Blue	89	94
37871-04	Yellow	98	104
37807-03	Pink	112	119
37951-98 (Screamin’ Eagle After-Market Only)	None	112	119

PREPARE BIKE FOR INSTALLATION

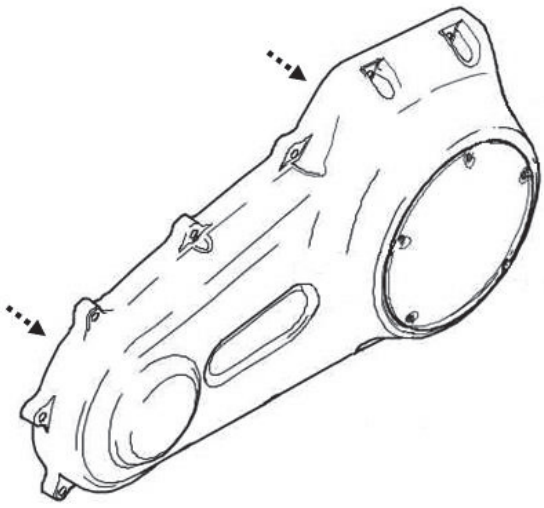
1. Stand the bike up on a lift or suitable bike stand.
2. On the primary chain case, use a wrench to remove the oil drain plug, then drain the oil into a suitable container.



3. Remove any parts that are attached or blocking the primary chaincase cover. These may include the left floorboard, foot peg(s), shift lever, and/or the side stand.

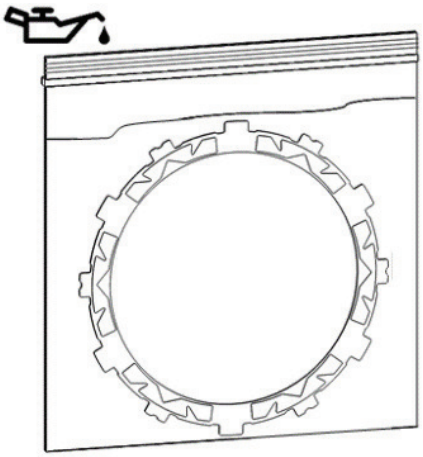
Note: *Before removing the shift lever, shift the bike into 5th gear.*

4. Remove the primary chaincase cover.

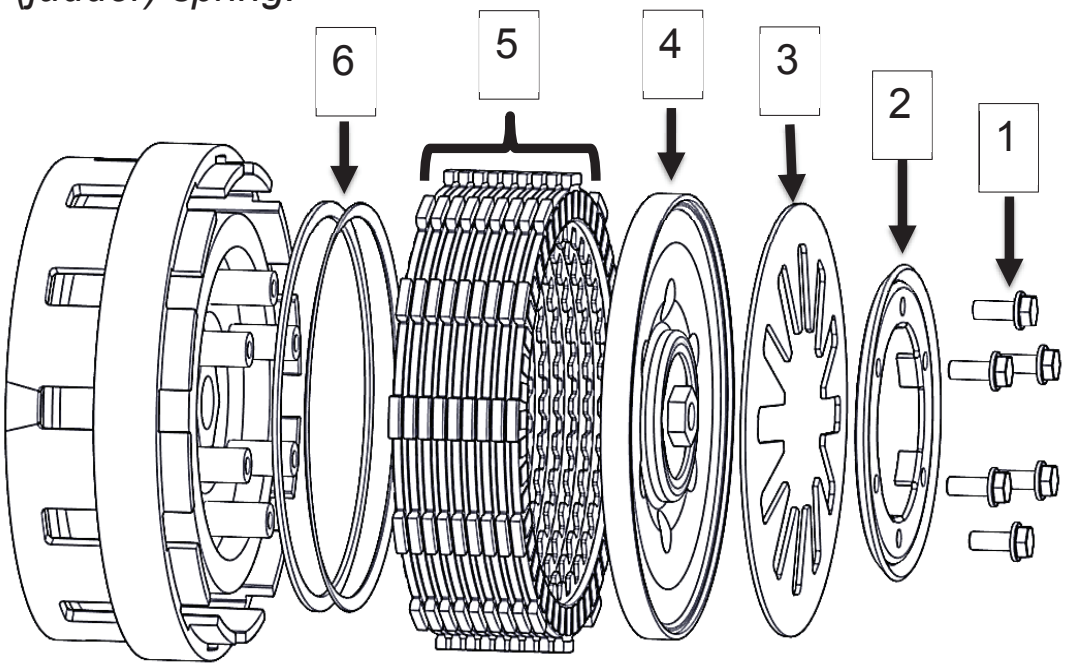


DISASSEMBLE CLUTCH

1. Soak the TorqDrive® friction disks in new primary chaincase oil for 5 minutes. Make sure the friction disks are coated on both sides.



2. Remove the following OE parts. *You may need to use dental pick tools to reach and remove the bottom plates and damper (judder) spring.*



1	Pressure plate bolts
2	Spring hold-down ring
3	Belleville spring
4	Pressure plate
5	Clutch pack
6	Damper (judder) spring and seat

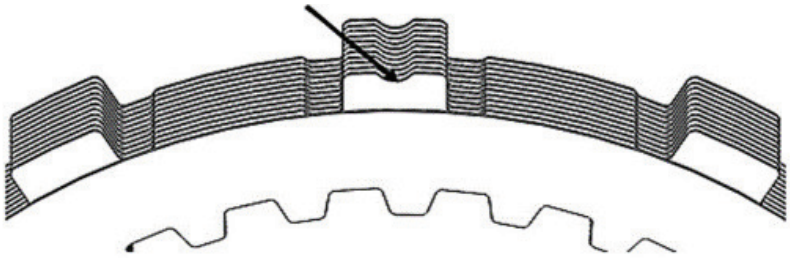
Note: *Set the pressure plate bolts, Belleville spring, pressure plate, and damper spring seat and spring aside. They will be reused.*

INSTALL THE CLUTCH PACK

Notes for Clutch Pack Installation:

- When assembling the clutch pack, it is important to line up the alignment notches on the friction disk tabs. *Correct alignment is critical for optimal performance.*

Align notches of friction disks

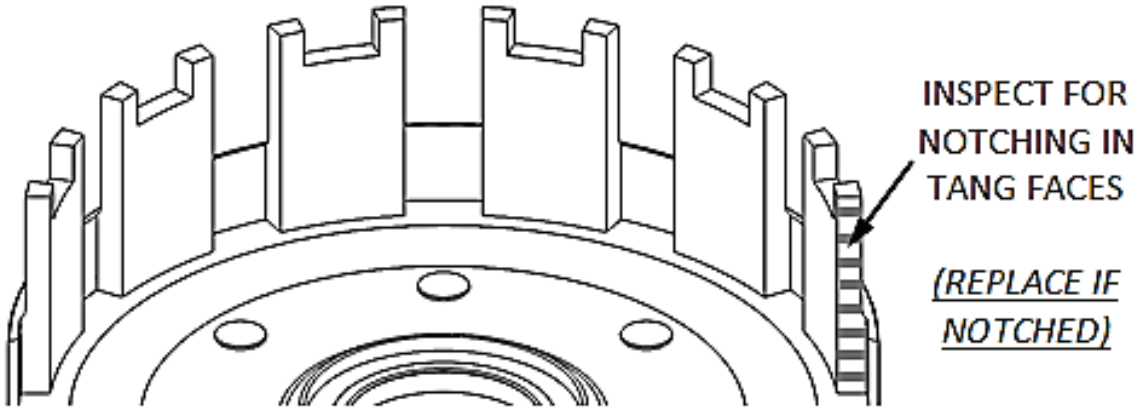


- *Some friction disks are marked with a small colored dot. This mark is used for processing and can be ignored.*

1. Inspect the clutch basket for notching. Do not install sleeves or use product with a notched basket. Notched basket tang faces can cause the sleeves to break. Do not use baskets that have been filed, machined, or modified on the tangs. Replace basket if necessary.

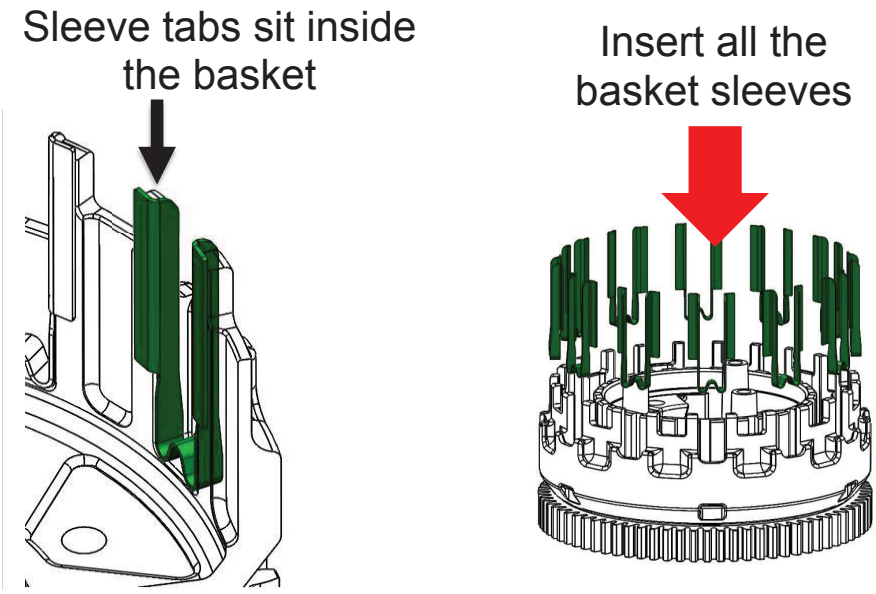
⚠WARNING

Failure to inspect the basket and replace if necessary could result in death, serious injury, and/or property damage.

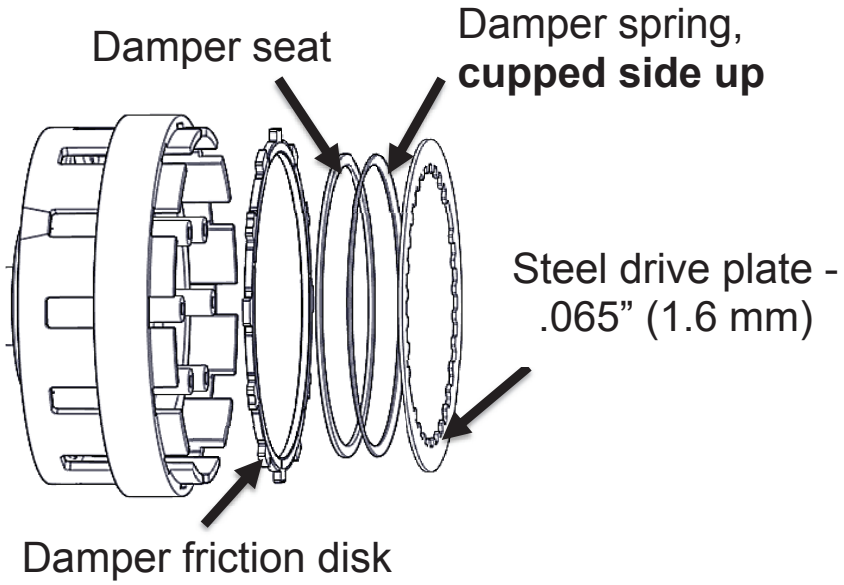


2. Install **ALL** the Rekluse basket sleeves into the basket slots. Make sure the sleeve tabs sit against the inside of the basket, then push the sleeves down until they contact the bottom of the tang slot. See pictures for reference.

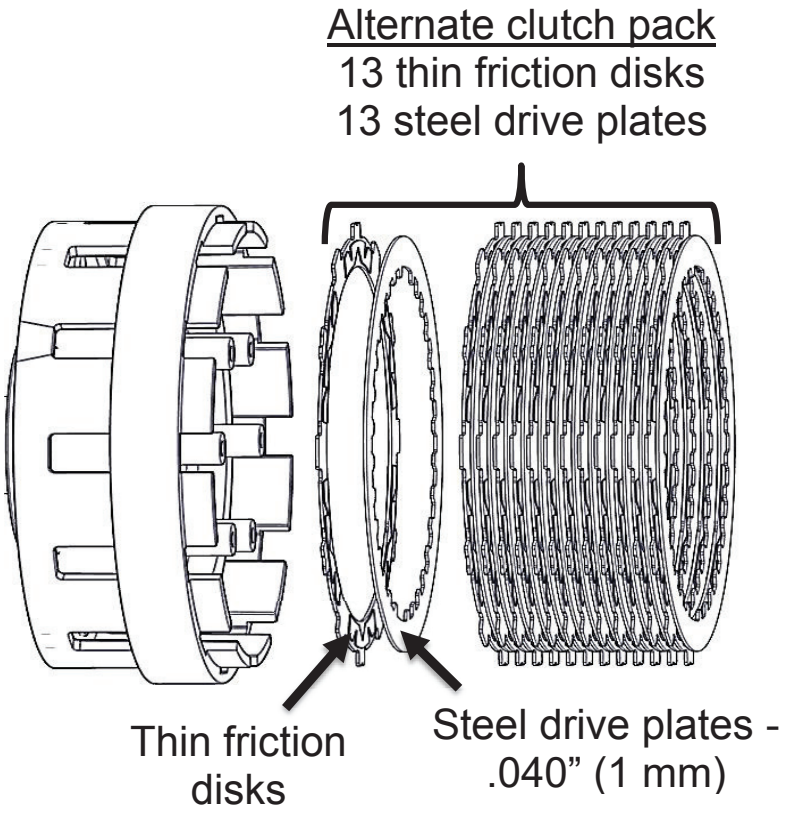
Note: *When seated in the basket, the sleeves will stick slightly above or below flush with the top of the basket. This is normal.*



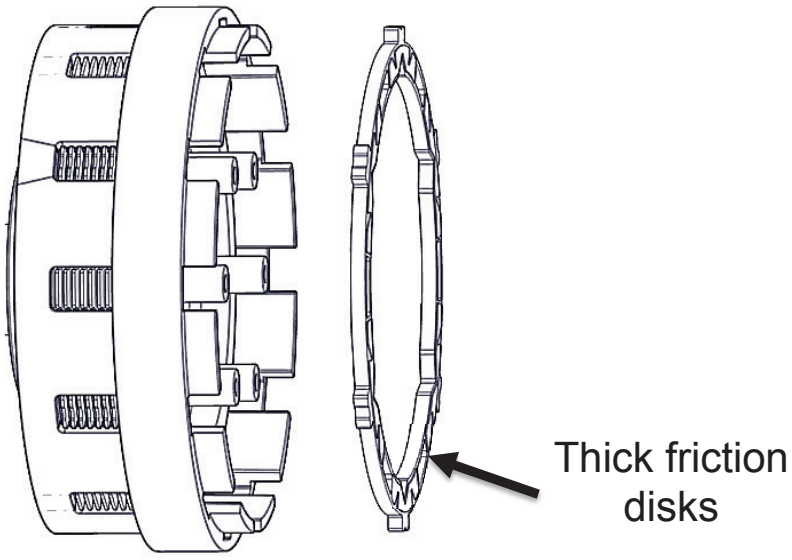
3. Install the Rekluse damper (judder) friction disk into the basket, then reinstall the damper (judder) seat and spring, cupped side up, followed by the .065” (1.6 mm) steel drive plate.

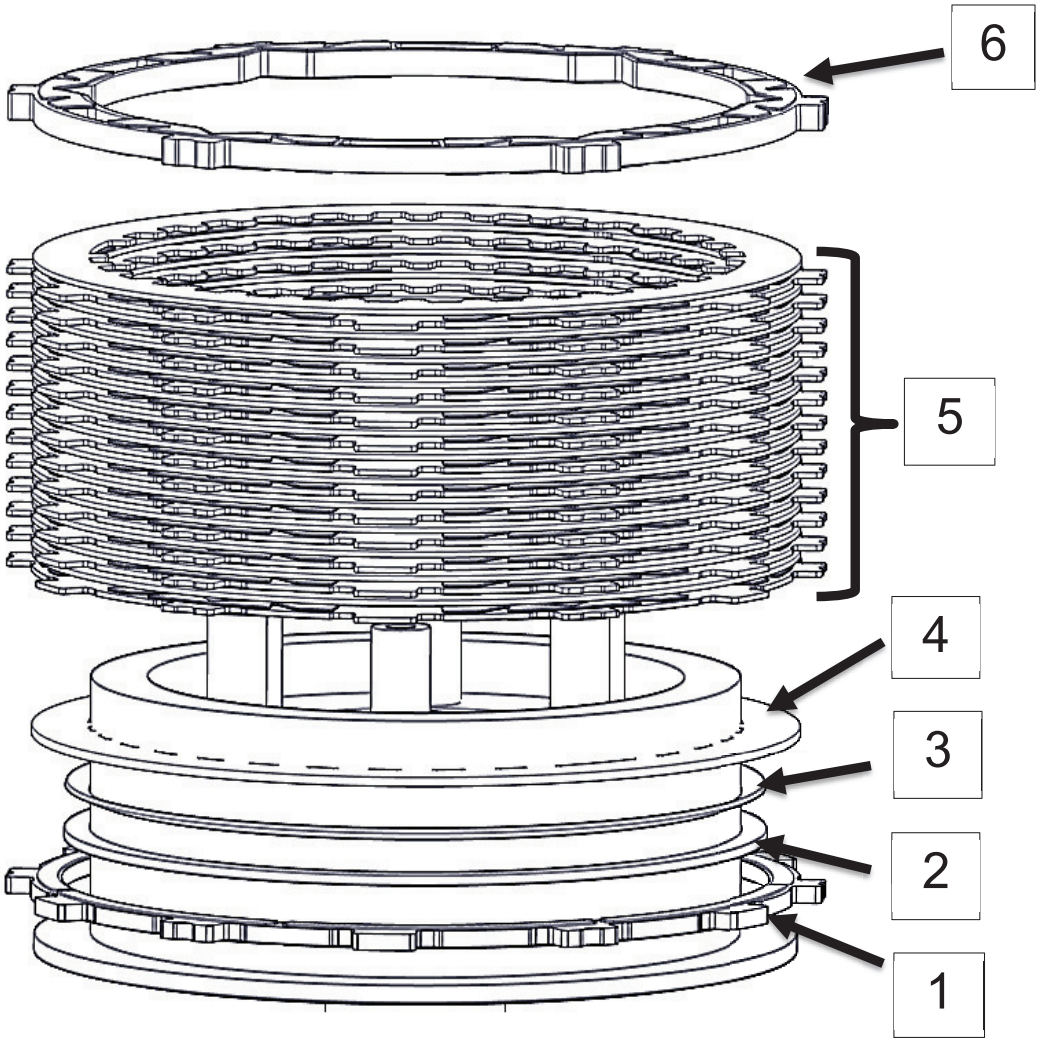


4. Alternate 13 thin friction disks with 13 steel drive plates. *Remember to align the notches on the friction disks when installing the clutch pack.*



5. On top of the last steel drive plate, install the thick friction disk.

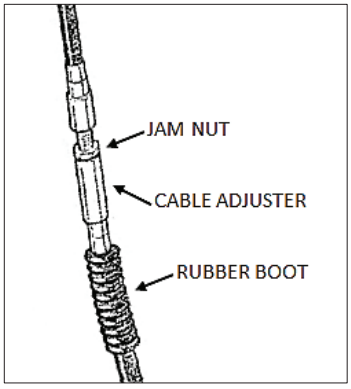




1	Damper (judder) friction disk
2	Damper spring seat
3	Damper spring- cupped side up
4	Steel drive plate - .065” (1.6 mm)
5	Alternate 13 thin friction disks with 13 -.040” (1 mm) steel drive plates
6	Thick friction disk

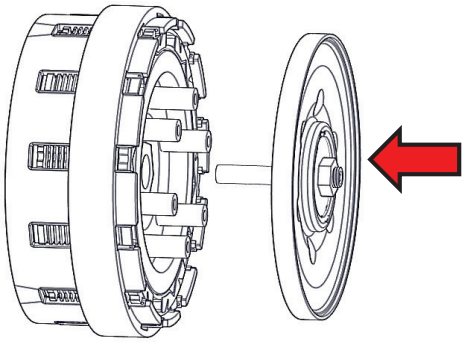
INSTALL THE PRESSURE PLATE

For cable actuated bikes only:
Fully collapse the in-line cable adjuster so that the cable slack makes the clutch lever very sloppy at the perch.



Note: *Adding cable slack ensures that the cable will not have excessive stress during the pressure plate adjustment.*

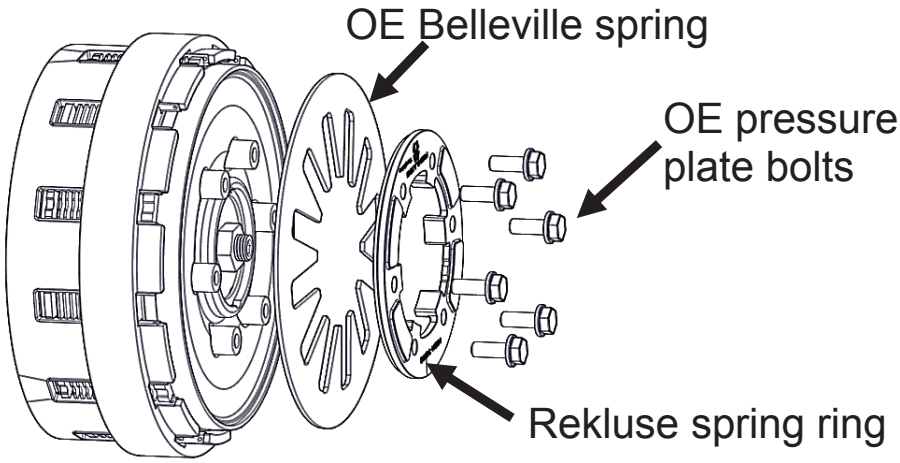
1. Reinstall the OE pressure plate with the throw-out and adjuster still installed.



2. Install the OE Belleville spring and the Rekluse spring ring, then reinstall the OE pressure plate bolts.

Note: *For high-output engines, refer to the Belleville spring options section to determine the best Belleville spring choice for your particular engine's output.*

If you have a 96in³ engine or smaller and you prefer a lighter clutch lever pull, see the spring ring options section for more information.



3. Using a 10 mm socket, torque the pressure plate bolts in a star pattern to OE specification.

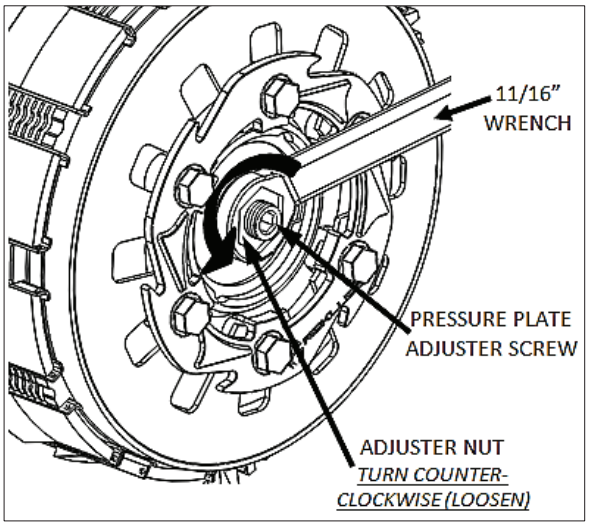
ADJUSTING THE CLUTCH

This section applies to cable actuated bike models only. Hydraulic models self-adjust, so these owners may skip to the primary cover installation section.

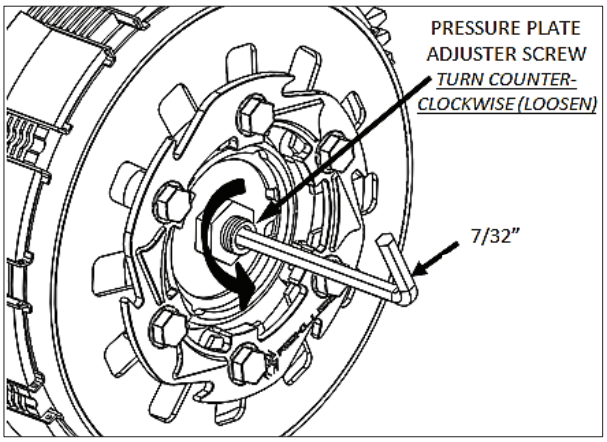
1. Ensure that the inline cable adjuster is fully collapsed. *The clutch lever should be floppy and will move freely all the way to the handlebar.*

Note: *Failure to check and verify free play can cause failure or damage to this product.*

2. Loosen the adjuster nut using an 11/16” wrench or socket, so that the adjuster screw can be turned freely in the next step.

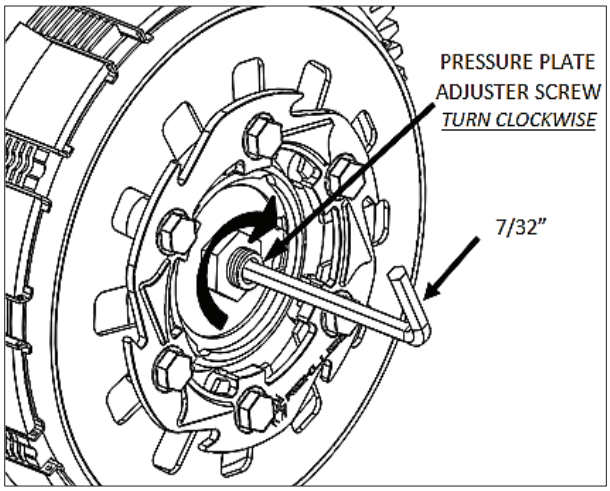


3. Using the long end of a 7/32” hex key, turn the adjuster screw **counterclockwise** (out) until it spins freely with little effort.

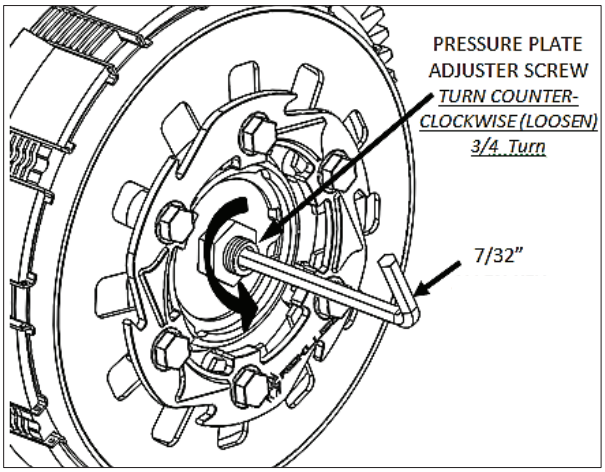


5. Using the hex key, gently turn the adjuster screw **clockwise** until it stops under moderate pressure. You are trying to feel for the point at which it bottoms out and starts to lift the pressure plate (you will feel an abrupt increase in turning effort).

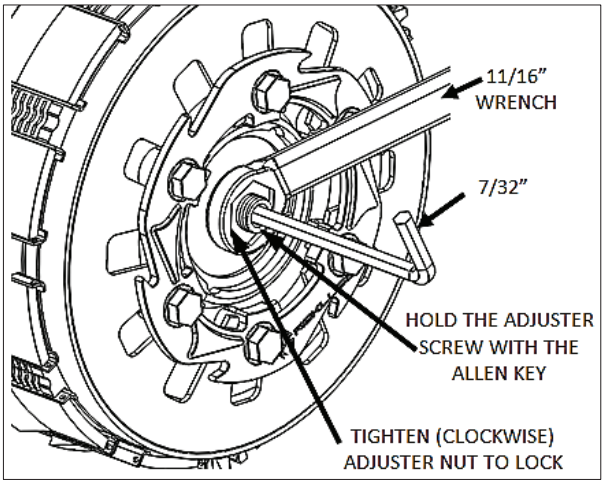
   - This position is called your starting point.



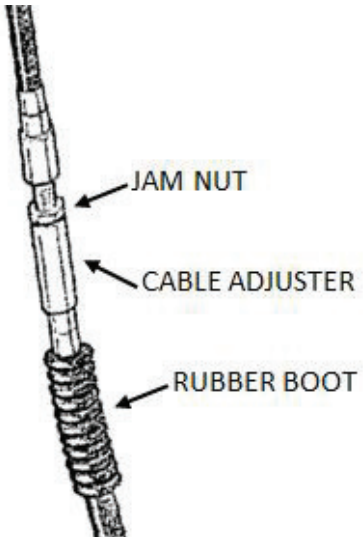
6. From this starting point, loosen (turn **counterclockwise**) the adjuster screw ¾ of a turn.



7. Holding the adjuster screw with the hex key, tighten the jam nut **clockwise** on the adjuster with an 11/16” wrench.



8. Expand the in-line adjuster until the cable slack is between 1/16” and 1/8” at the lever perch to set the lever free play.



Note: *“Lever free play” is essentially the “slack” in the clutch cable before it starts actuating the clutch. Applying a light finger pressure will take up this slack.*

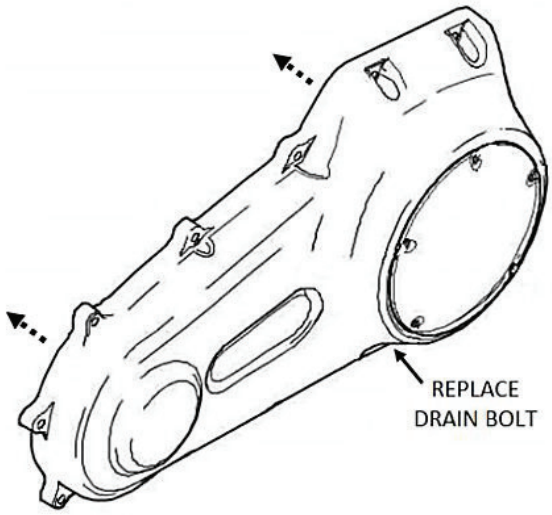
PRIMARY COVER INSTALLATION

1. Thoroughly clean the mating surfaces of the primary cover and the engine case.

2. Reinstall the primary gasket (or new gasket).

3. Reinstall the primary cover, then torque the cover bolts to OE specifications.

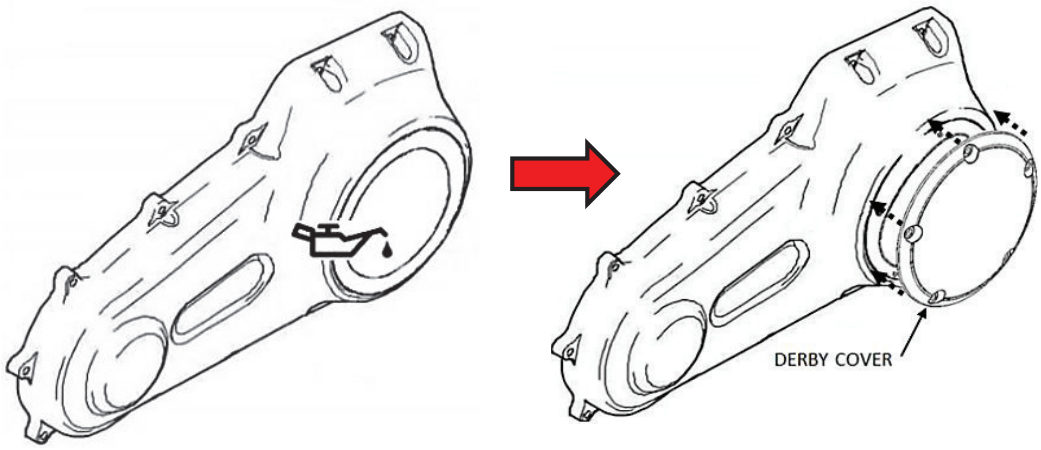
4. Reinstall the drain bolt, then torque the drain bolt to OE specifications.



5. With the primary cover installed, use a T-27 Torx bit to remove the derby cover.

6. Using a funnel, add 1 quart of oil to the primary case through the derby cover cavity. Use the OE recommended oil or any quality primary oil.

7. Reinstall the derby cover and torque bolts to OE specifications.



BREAK IN THE NEW CLUTCH

The clutch will break in within 100-200 miles of normal riding. Until break-in is complete, you may experience more clutch drag than normal.

- It is recommended to do an oil change after the first 1,000 miles to drain any excess clutch debris that occurred from break-in.

MAINTENANCE

To keep your clutch performing at its best, perform regular maintenance on your bike and clutch.

- Re-adjust the clutch and lever free play every 5,000 miles.
- Keep up with regular oil changes according to the bike manufacturer's recommendations. Clutch performance and longevity depend on oil quality. Tired, dirty, or worn oil may cause excessive clutch drag or noise.
- Use oil recommended by the manufacture of your bike.
- For optimal clutch performance Rekluse recommends using fresh, clean oil that **meets JASO-MA** oil rating requirements.
- Inspect all of your clutch parts for signs of wear or excessive heat, and replace components as necessary. This includes

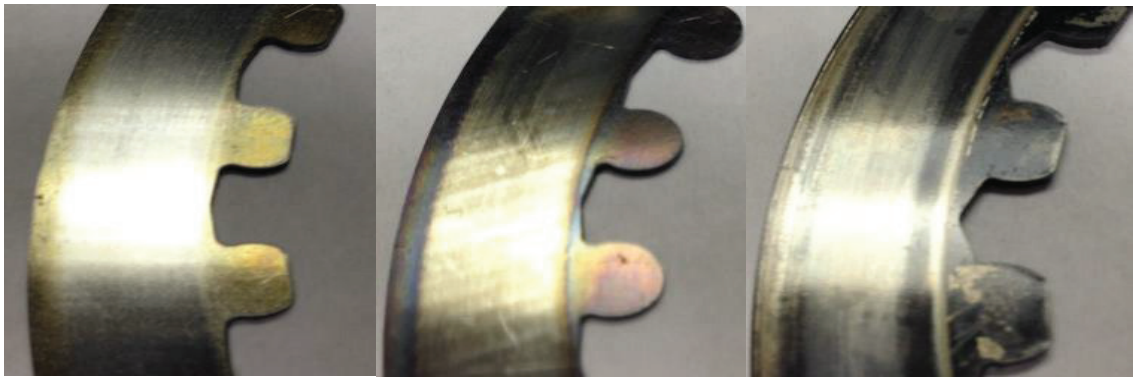
your basket sleeves. Clutch wear is dependent on the riders use.

- Measuring the friction disks for wear. This can help determine if the components need replacing.
  - Rekluse thin friction disk minimum allowable thickness = **0.068” (1.7 mm)**
- Replace friction disks if they measure below specifications or if the disks are glazed and/or burnt.
- Repeat the break-in procedure anytime you replace the frictions disks. Always soak friction disks in oil for at least 5 minutes before installing.
- Replace the drive plates if they show signs of excessive heat.

Disk inspection examples

When inspecting the clutch pack, the following pictures can be used as a reference. **These are best viewed in color by viewing this install document on www.rekluse.com/support.**

Drive Plates – If the clutch pack is getting high amounts of heat, purple, blue, or black color can be seen on the drive plate teeth. See pictures below. Not all drive plates look the same and may look different than pictured.



Normal Heat | High Heat (Blue) | Excessive Heat (Black)

Friction Disks – Due to the dark color of the friction material, the friction disks will appear almost black as soon as they are put in oil. During inspection, look for glazing of the friction material. Glazing will appear shiny and feel like glass, even after oil is cleaned from the friction disk. Not all friction disks look the same and may look different than pictured.

Normal Friction

Glazed Friction

TROUBLESHOOTING

Clutch Drag:

- *Cold Drag Only* – Cold drag is normal. The clutch will usually have some amount of drag before the oil warms to operating temperature. Be sure to warm up the bike before riding.

- *Hot and Cold Drag* – Change oil. Check for warped or non-flat drive plates in the clutch pack.

Clutch Slip:

- If clutch slip occurs, inspect the clutch for signs of wear or heat.
- Use of the high torque spring ring will reduce the chance of clutch slipping and/or excessive heat. If this is already in place and the problem persists, refer to the Belleville Spring Options section of this document for more information.

NEED ADDITIONAL HELP?

Website
www.rekluse.com/support

Frequently Asked Questions
www.rekluse.com/faq

Support Videos
www.rekluse.com/support/videos

Phone
(208) 426-0659

Technical Support
Contact Technical Support for questions related to product installation, tuning, and performance.

Technical Support hours:
Monday thru Friday: 8:00 a.m. - 5:00 p.m.
Mountain Time zone

Email: tech@rekluse.com

Customer Service
Contact Customer Service for additional product information, orders, and returns.

Customer Service hours:
Monday thru Friday: 8:00 a.m. - 5:00 p.m.
Mountain Time zone

Email: customerservice@rekluse.com