



# **INSTALLATION & USER'S GUIDE**

RadiusCX  
For Yamaha DDS Clutch

Doc ID: 191-7907176A  
Revision: 020323

# **TABLE OF CONTENTS**

OVERVIEW .....	3
INSTALLATION TIPS .....	3
TOOLS NEEDED .....	4
INCLUDED PARTS .....	4
DISASSEMBLE THE CLUTCH .....	5
INSPECT THE DAMPERS .....	7
INSTALL The HUB .....	8
INSTALL THE CLUTCH PACK .....	9
Preparing the Clutch Pack.....	9
Installing the Clutch Pack .....	10
ADJUSTMENT METHOD .....	11
SET THE INSTALLED GAP: INTERNAL METHOD .....	12
Install the PRESSURE PLATE & SPRING .....	13
CHECKING FREE PLAY GAIN .....	17
Step 1: Check Free Play Gain .....	19
The Rubber Band Method .....	19
The Hand Method.....	22
Step 2: Break in the new clutch .....	23
Step 3: Adjust the installed gap and Recheck Free Play Gain .....	26
FREE PLAY GAIN INTERNAL ADJUSTMENTS.....	27
MAINTENANCE .....	28
Disk inspection examples.....	30
TROUBLESHOOTING .....	31
Performance issues.....	31
Clutch noise.....	31
EXP TUNING OPTIONS .....	32
Changing the springs .....	32
APPENDIX A: EXTERNAL ADJUSTMENT METHOD .....	34
FREE PLAY GAIN EXTERNAL ADJUSTMENTS.....	36
BUMP-STARTING .....	37
Externally Adjusted Clutch .....	37
Internally Adjusted Clutch.....	37
NEED ADDITIONAL HELP? .....	38

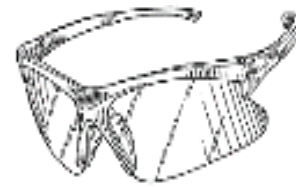
## **OVERVIEW**

This kit replaces many of the OE (Original Equipment) clutch parts while reusing some of the OE clutch parts. Some of the components replaced in this kit include:

- The OE center clutch hub and OE pressure plate will be replaced with high-quality billet components.
- All OE steel drive plates will be replaced with Rekluse drive plates
- All OE friction disks will be replaced with Rekluse TorqDrive® disks

## **INSTALLATION TIPS**

- Read the safety information sheet included with your kit.
- Watch the “RadiusCX Auto Clutch Installation Video” by visiting [www.rekluse.com/support/videos](http://www.rekluse.com/support/videos).
- Protect eyes and skin – wear safety glasses and thin disposable work gloves.
- Read this entire document before performing any steps.
- Lay the motorcycle on its left side when replacing the clutch. This makes the clutch work easier and eliminates the need to drain the oil.



### **NOTICE**

It is recommended that a new OE hub nut (Yamaha part # 90179-18015-00) is used.

- Use an air or electric impact wrench to remove the center clutch nut. If one is not available, you can place the bike in top gear and hold the rear brake while loosening the center clutch nut with a socket and breaker bar.
- For optimal clutch performance, Rekluse recommends using fresh, clean oil that **meets JASO-MA or MA2** 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](http://www.rekluse.com) to learn more.
- Motorcycles with taller gearing or modified engines with increased horsepower may require heavier wedges. These can be purchased separately from Rekluse.

## **TOOLS NEEDED**

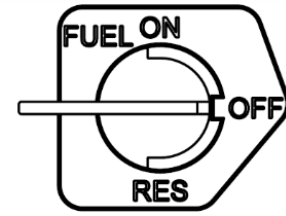
- 8 mm Socket
- 10 mm Socket
- 27 mm Socket
- T-30 Torx Bit
- Torque Wrench (lb-ft or N-m)
- Feeler Gauges
- Fluid Catch Container
- Oil

## **INCLUDED PARTS**

Visit [www.rekluse.com/support](http://www.rekluse.com/support) for a full parts fiche illustration and part numbers.

# **DISASSEMBLE THE CLUTCH**

1. Turn the fuel petcock to “OFF” if applicable.



2. Lay the bike on its left side. Catch any fuel that might drain in a suitable container.



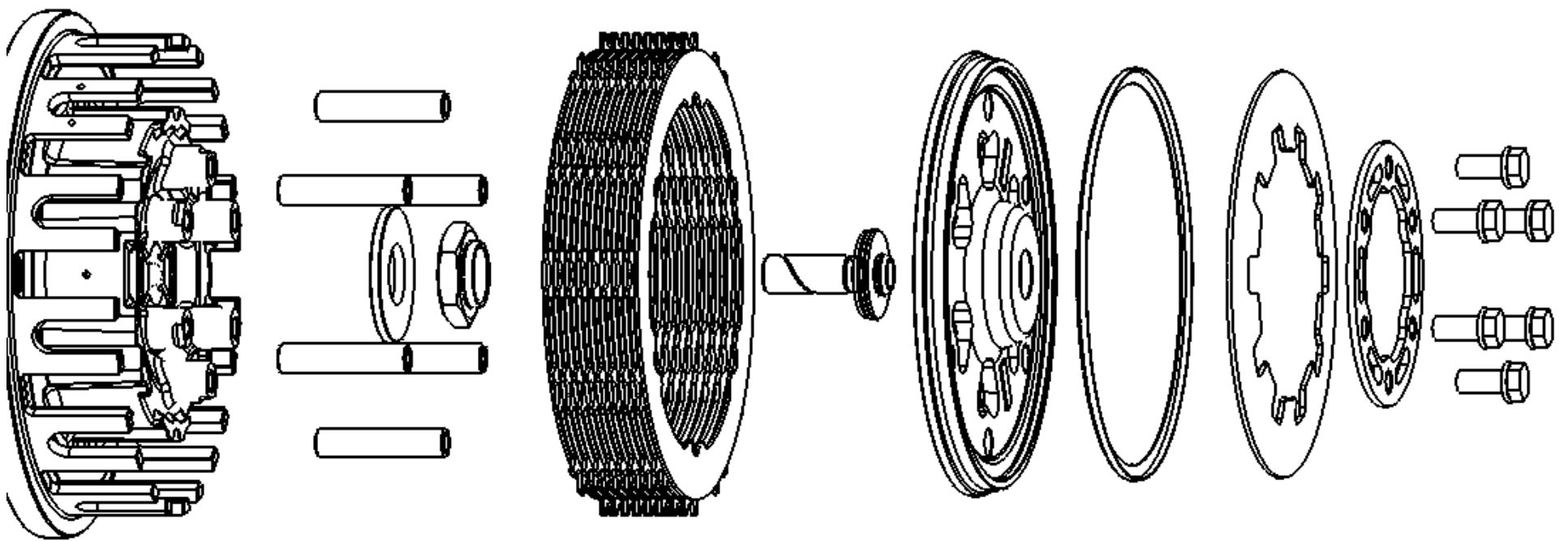
3. Remove the clutch cover. If your bike has an oil plug, loosen the plug before removing the cover.





4. Remove the following OE parts. When removing the Belleville spring, make sure to note the orientation of the spring. See the following picture for reference.

- 6 pressure plate screws
- Pressure ring
- Belleville spring
- Pressure plate steel liner
- Pressure plate
- Throw-out bearing and washer
- Clutch pack
- 6 drive pins
- Center clutch nut and washer  
(Removed in step 5)

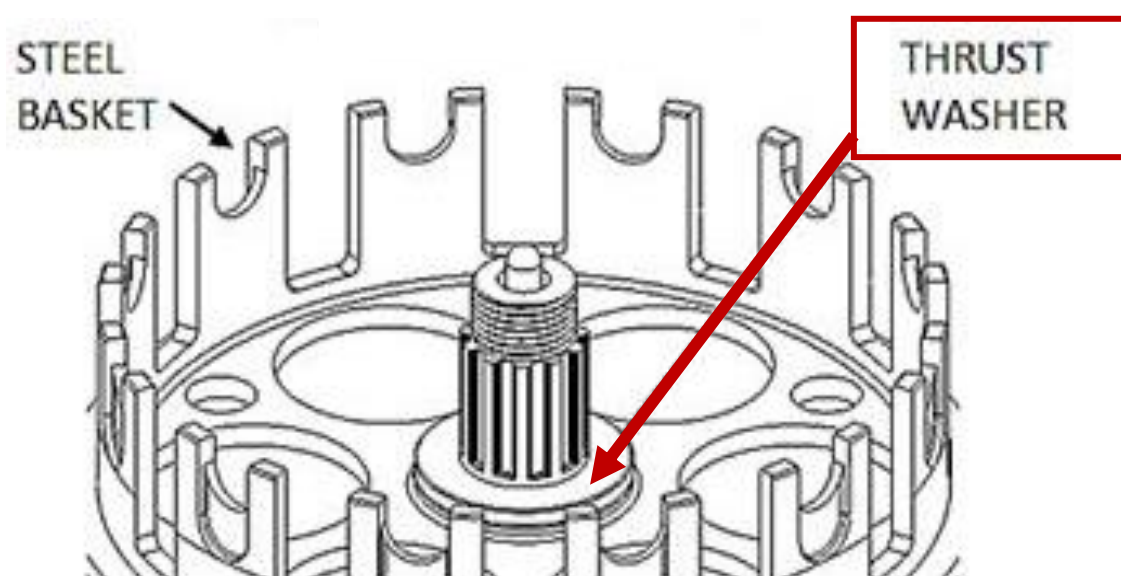


**⚠ CAUTION**

***Be careful that the drive pins do not fall into the engine while disassembling.***

5. Un-stake the hub nut from the shaft and remove it.

6. Remove the center hub assembly from the steel basket while leaving the thrust washer on the main shaft.

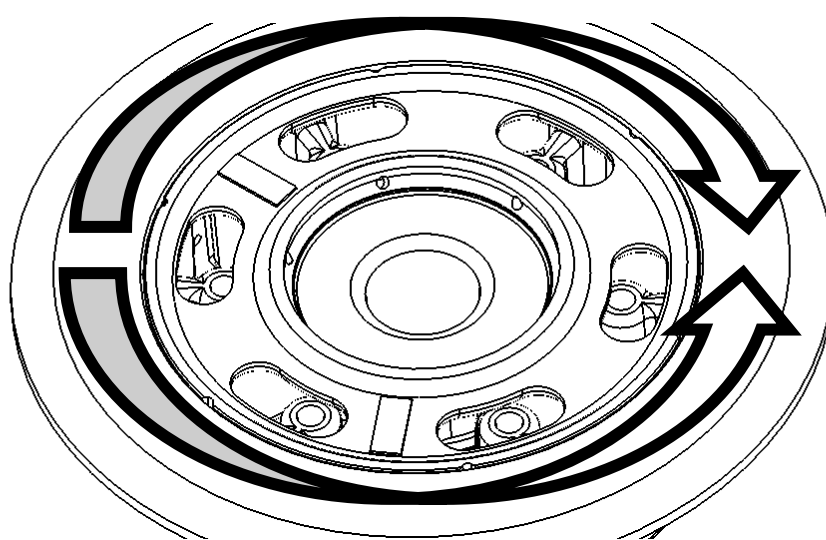


## NOTICE

*Check that the thrust washer is still on the main shaft and not stuck to the bottom of the center hub assembly. Missing the thrust washer will cause clutch performance issues.*

## **INSPECT THE DAMPERS**

If the OE dampers are worn they must be replaced. Any movement between the dampers will shorten the life of your clutch. To inspect this, try to rotate the inner hub while holding the outer hub

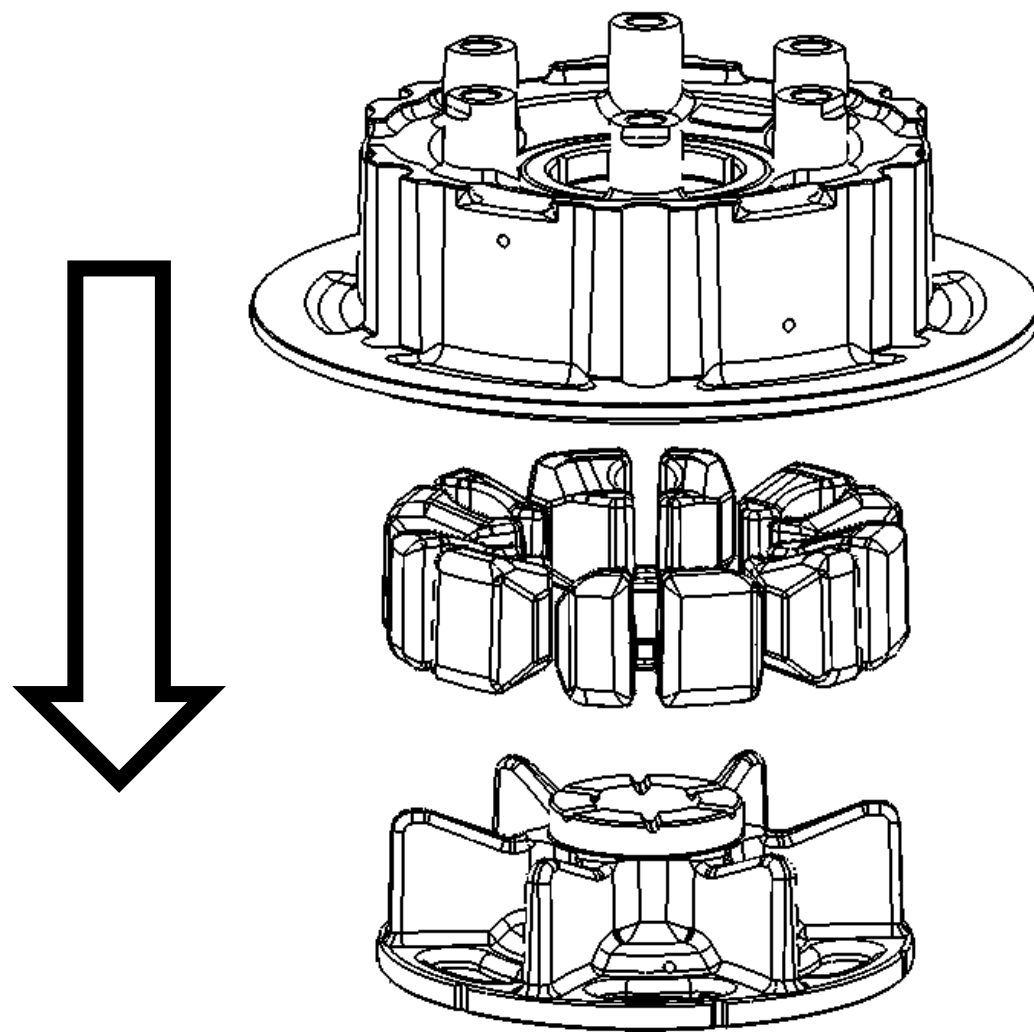


## NOTICE

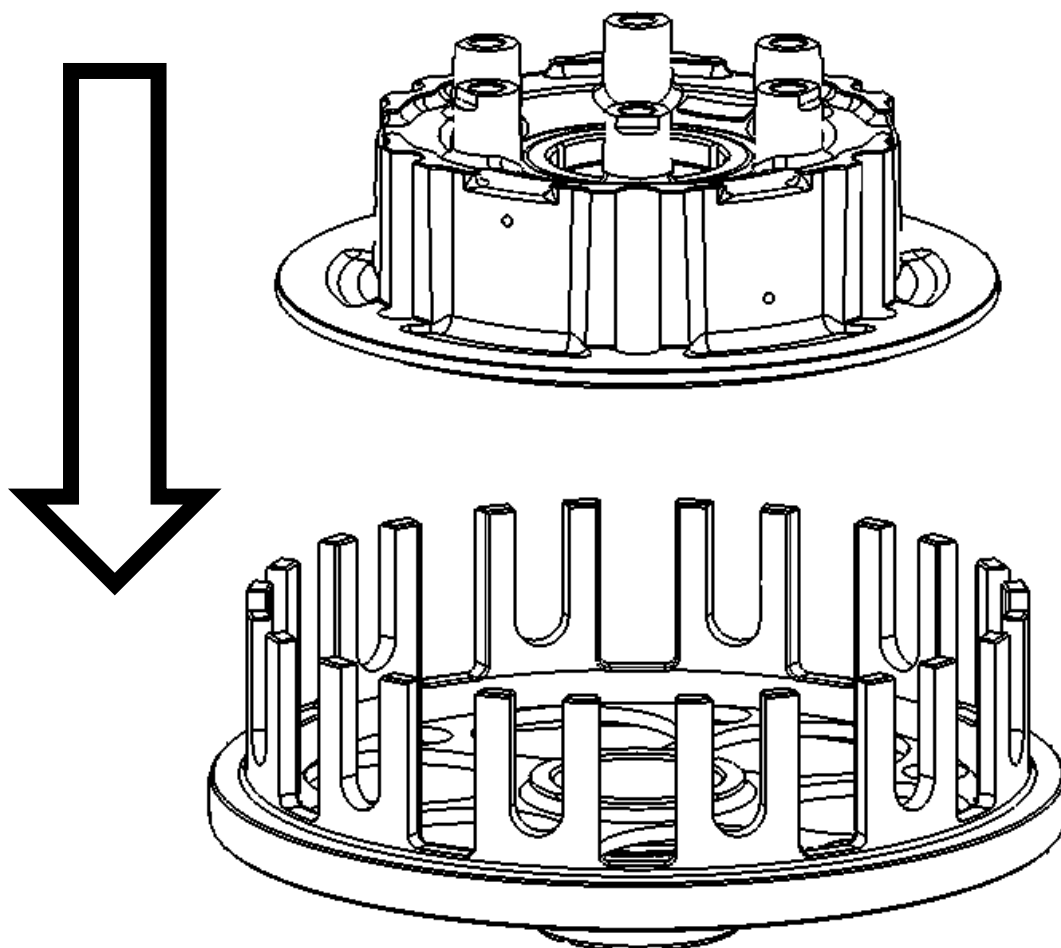
*Rekluse recommends replacing the dampers if you feel any play between the two hubs.*

## **INSTALL THE HUB**

1. Remove the 6 rubber dampers from the OE center hub assembly.



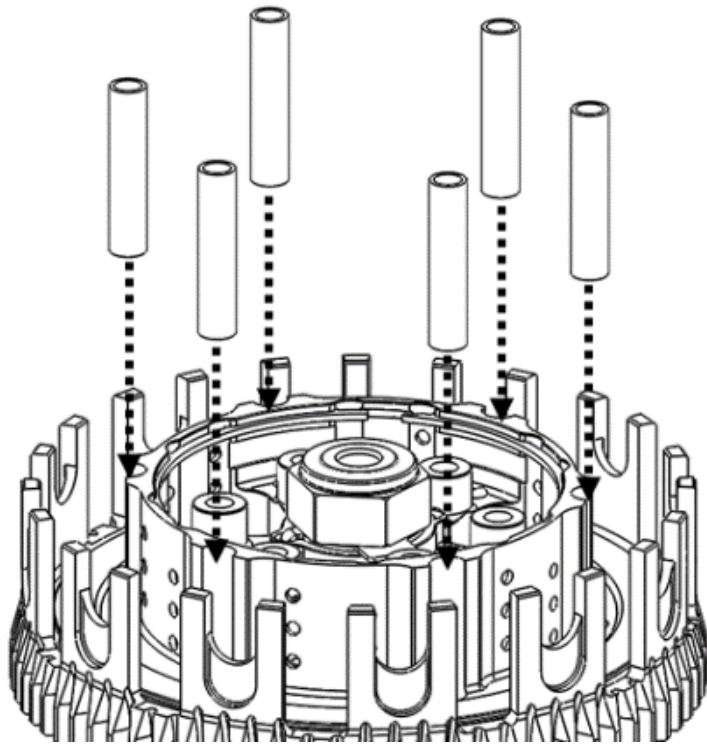
2. Install the 6 OE rubber dampers and inner hub onto the Rekluse outer hub.



3. Install the new center hub assembly onto the shaft.



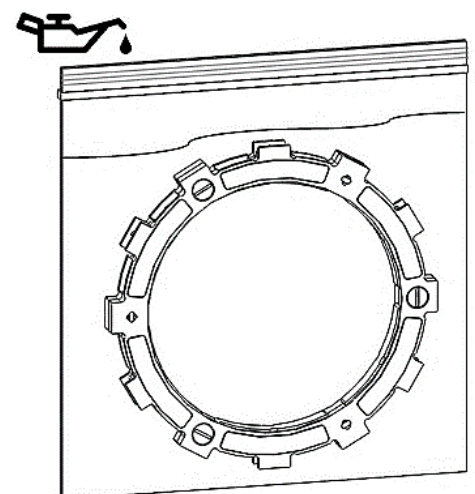
4. Reinstall the OE washer.
5. Apply blue threadlocker to a new OE hub nut and torque it to **77 ft-lb (105 Nm)** before staking it to the shaft.
6. Seat the 6 included Rekluse drive pins into the Rekluse outer hub.



## **INSTALL THE CLUTCH PACK**

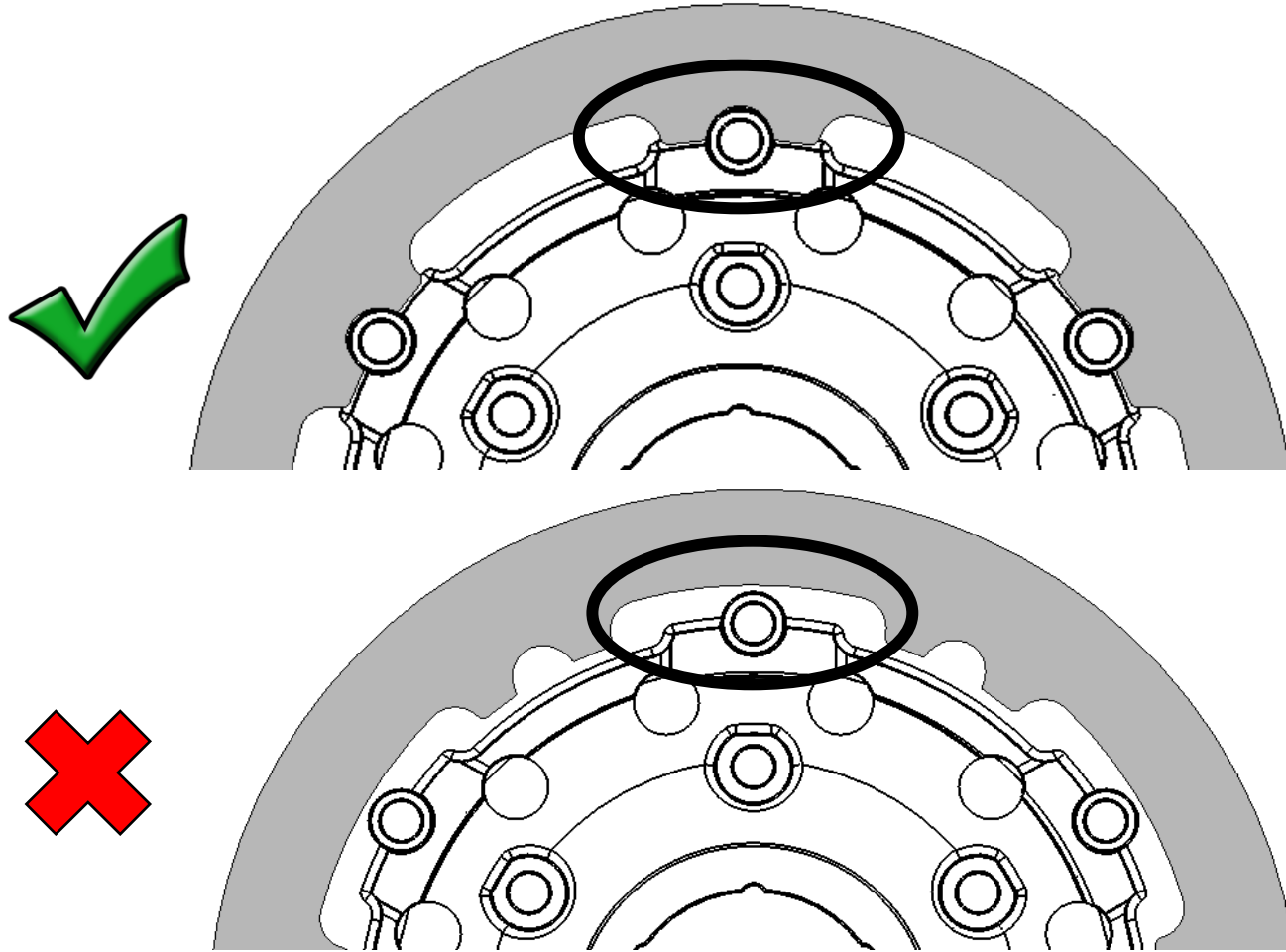
### **Preparing the Clutch Pack**

1. Measure the clutch pack thickness.
  - a. Stack all Rekluse friction and drive plates together and measure the total thickness.
  - b. Refer to the ring Setting Chart on the **Setup Sheet** at the back of the manual and note which setting to use when installing the ring.
2. Soak the friction disks and EXP disk in new oil for at least 5 minutes. Make sure the EXP and friction disks are coated on both sides.

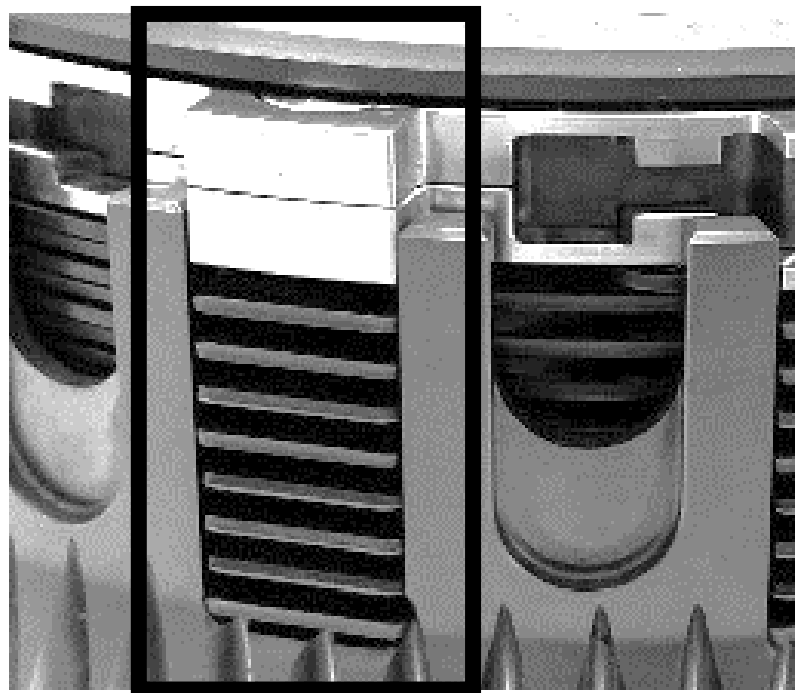


## Installing the Clutch Pack

1. Install the clutch pack one plate at a time according to the **Setup Sheet** at the back of the manual. Follow the plate order shown in the **Setup Sheet**.



**Note:** ALL the drive plates must be aligned in the drive pins notches or damage may occur. The plates will not move when installed correctly.



### NOTICE

Some OE baskets have “half slots” at the top of the basket tangs. Rekluse products require the entire clutch pack, including the EXP disk, to be installed into the MAIN (deeper) basket slots.

## **ADJUSTMENT METHOD**

The installed gap for the RadiusCX clutch can be adjusted in two ways. Choose the way you adjust the installed gap based on your riding preference.

1. **Internal Adjustment** uses the adjuster ring
2. **External Adjustment** uses the dial at the perch.

If you want to maintain the stock lever feel and stock lever free play, then adjust the gap internally. If you would like the advantage of adjusting at the perch, then adjust the gap externally. Rekluse recommends beginning with the internal adjustment using the adjustment ring to produce an experience close to stock. To adjust the gap externally, see **APPENDIX A** for instructions.

<b>Adjustment Comparison</b>	<b>Internal</b>	<b>External</b>
Stock lever feel	✓	*
Stock lever reach	✓	*
Maintains lever free play (slack) like stock	✓	
Eliminates lever free play (slack), delivering a quick and responsive lever feel		✓
Quick install gap adjustment at the perch		✓
Allows easier bump starting		✓
Lever override is less sensitive to gap setting		✓

\*An adjustable reach lever allows the lever starting point to be tuned much like the way lever free play is often used for this with a stock clutch.



## SET THE INSTALLED GAP: INTERNAL METHOD

The installed gap must be set correctly for the auto-clutch to function. This is done by setting the adjuster ring, shown below.



To set the adjustment:

1. Turn the ring **clockwise** to its lowest position.
2. Place a straight edge on top of the clutch pack so that it sits on the top drive plate. (The OE hold-down ring can be used if no bar or ruler is available).





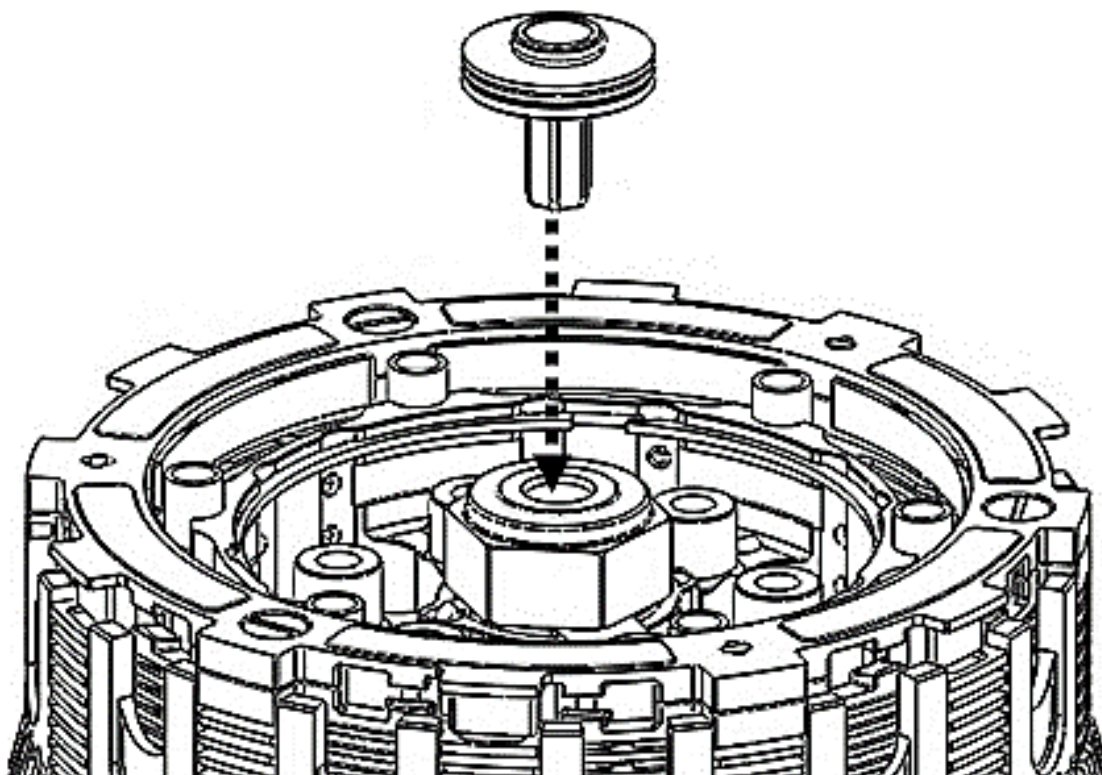
3. Turn the ring **counter-clockwise** until it contacts the straight edge so that the top of the ring is even with the top of the clutch pack



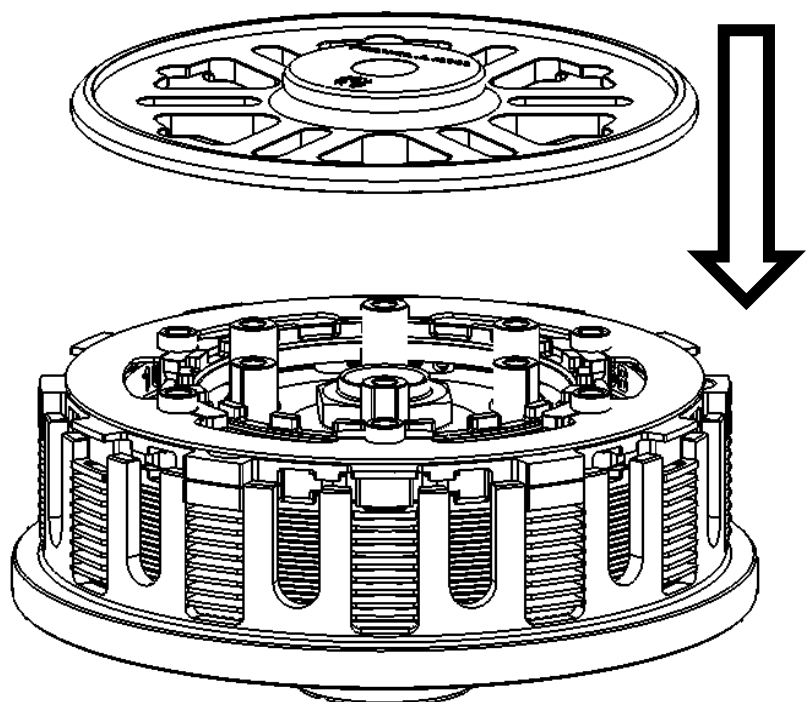
4. Remove the straight edge and mark a location on the hub and adjuster ring.
5. Turn the adjuster ring **one full turn counter-clockwise**
6. Use feeler gauges to check that the gap is **.025"-.030"** between the top drive plate and the pressure plate, once it is installed. Do not insert the feeler between the drive plate and friction. This can damage the friction material.

## **INSTALL THE PRESSURE PLATE & SPRING**

1. Reinstall the OE throw-out.

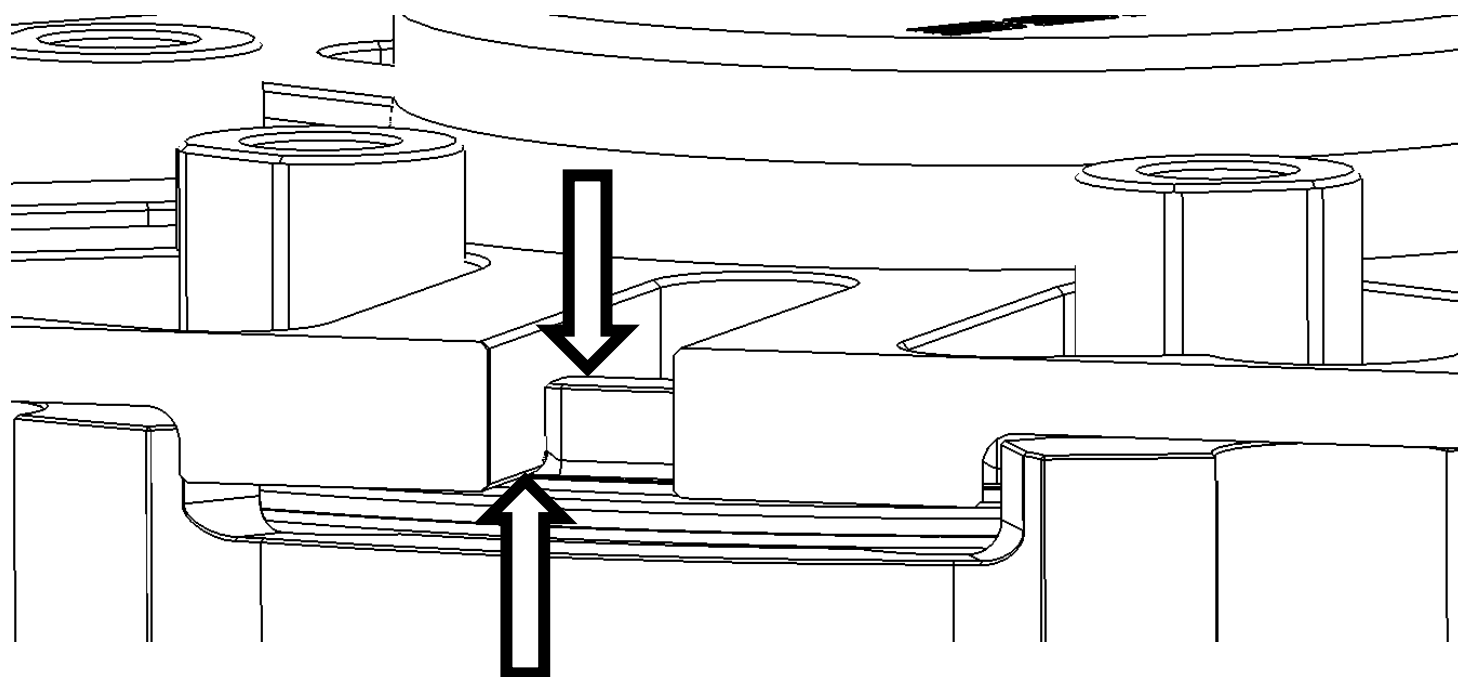


2. Install the pressure plate. It may be necessary to turn the adjuster ring slightly so that the pressure plate indexes properly with the adjuster.



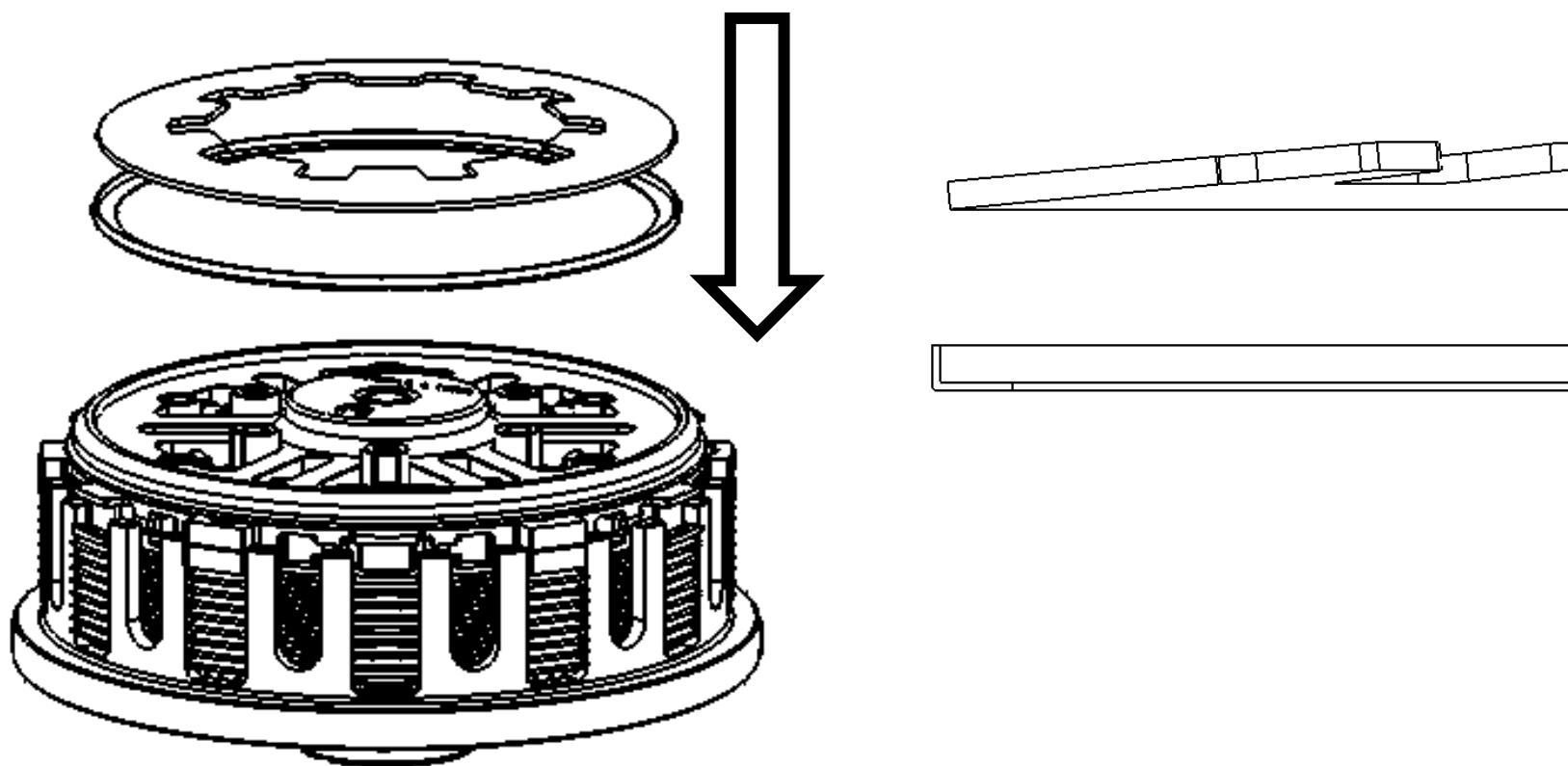
### NOTICE

*The pressure plate spokes must sit between the notches on the adjuster ring. If the pressure plate is not lined up so that it falls between the notches, the ring may need to be turned slightly.*

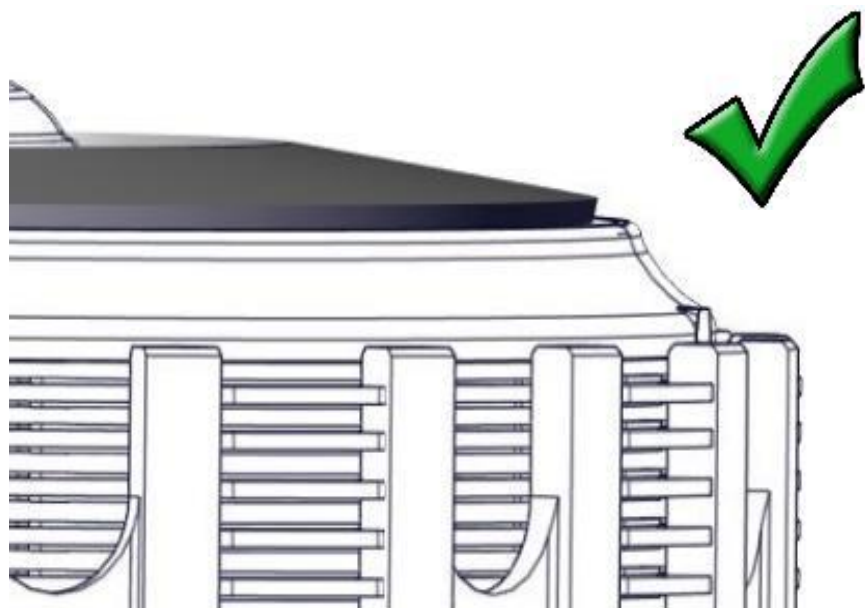




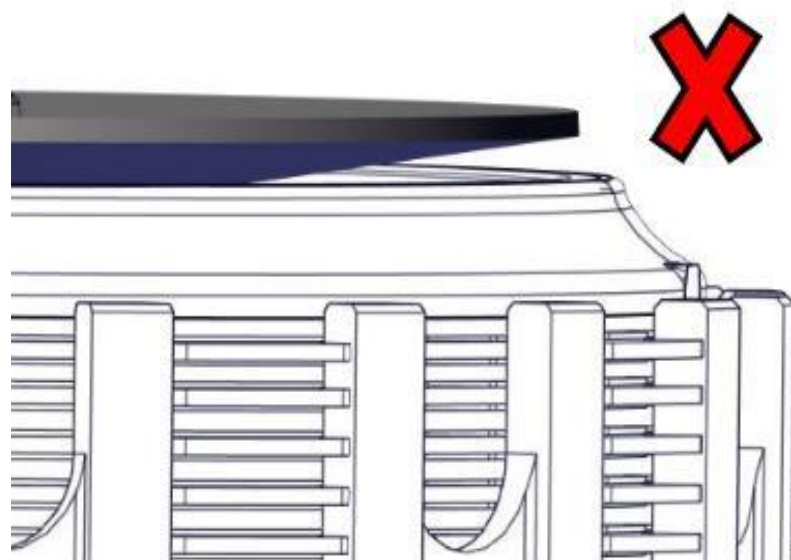
3. Place the OE steel pressure plate liner in the Rekluse pressure plate. (It may be stuck to the OE pressure plate). Place it with the flat side down.



4. Place the OE Belleville spring onto the pressure plate.



Correct – The Belleville spring sits flat against the steel liner.

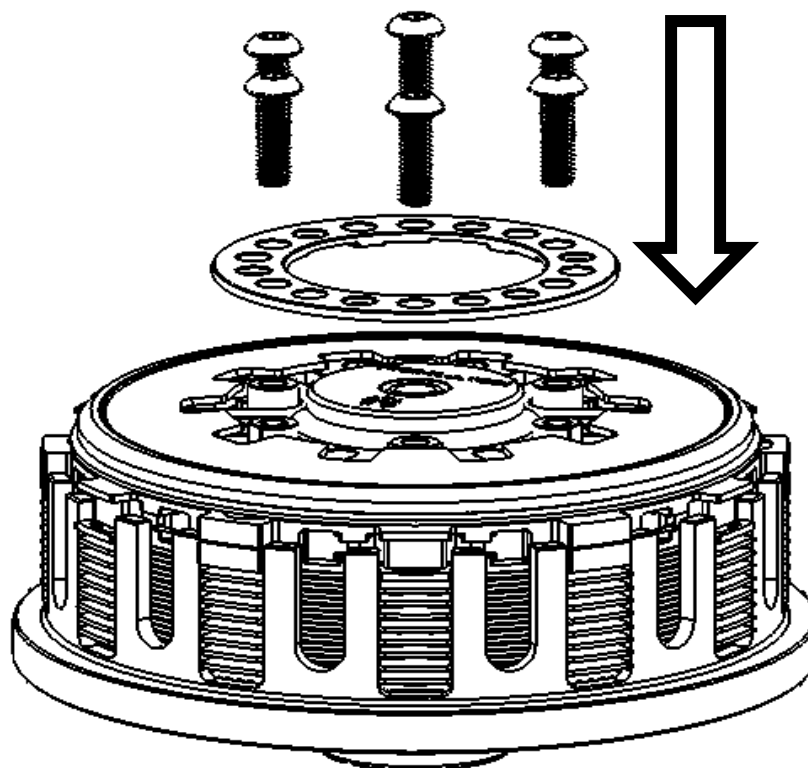


Incorrect – The Belleville spring is upside down.

### NOTICE

*The outer edge of the Bellville spring will make contact with the steel liner. If it does not, the Bellville spring is upside down.*

5. Install the Rekluse spring ring, flat side up, and the Rekluse screws. Make sure to use the correct setting for your clutch pack height as shown in the **Setup Sheet**, the default setting is **II**



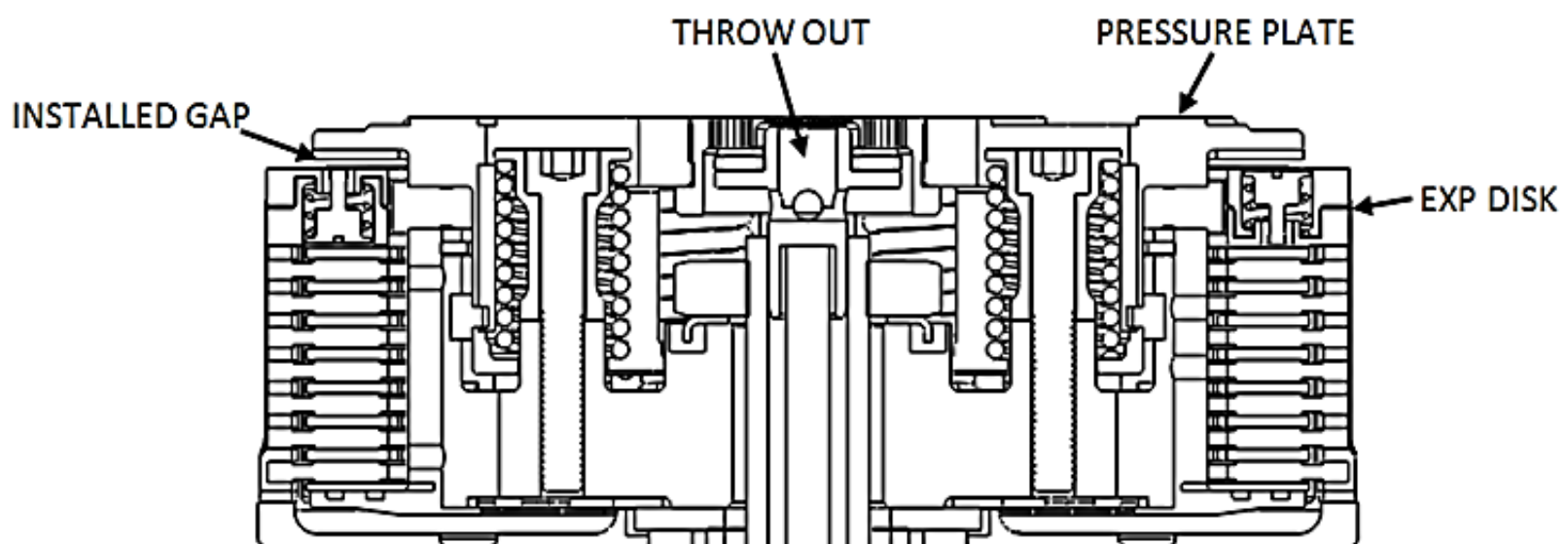
6. Tighten the screws in a star pattern by hand, then torque to **9 lb-ft (12 N-m)**.
7. Remove the OE cover gasket from the OE clutch cover and install it onto the new Rekluse clutch cover.
8. Install the Rekluse clutch cover with the OE cover bolts. Tighten the bolts in a star pattern by hand, then torque to **7.4 lb-ft (10 N-m)**.

## **CHECKING FREE PLAY GAIN**

“Free Play Gain” allows us to verify the Installed Gap without physically inspecting the clutch.

Maintaining the proper Installed Gap is crucial for clutch performance.

The “installed gap” is the free space in the clutch pack that allows the EXP disk to engage and disengage. The EXP will spin freely until the engagement RPM is reached and the EXP disk expands to close the gap and apply pressure to the pressure plate, which in turn drives the motorcycle forward.



### **⚠ WARNING**

**Failure to check and verify Free Play Gain can cause failure or damage to this product. Setting the correct installed gap is critical for clutch performance.**

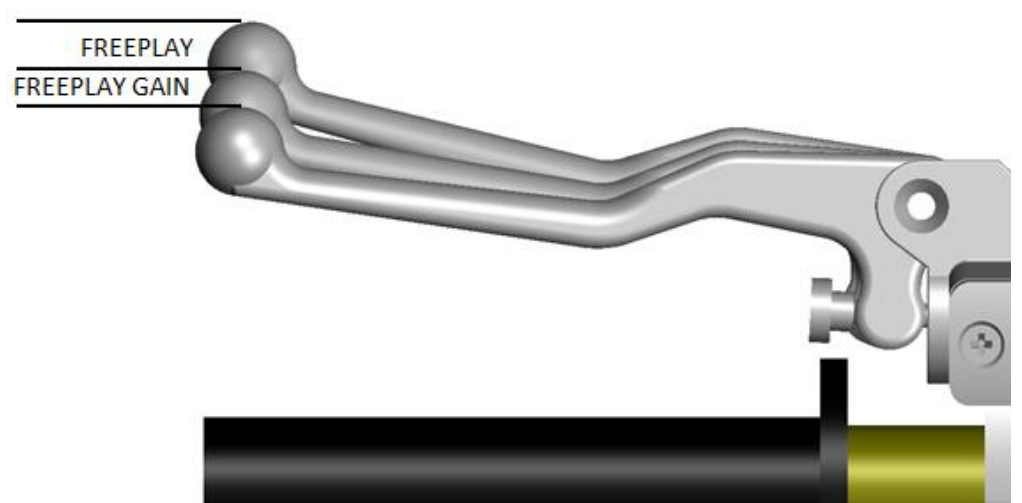
Check out the Free Play Gain video at:  
[www.rekluse.com/support/videos](http://www.rekluse.com/support/videos).

Free Play Gain is different from the “normal” free play you are used to with your stock clutch. With the Rekluse auto clutch, Free Play Gain is the result of the EXP disk expanding and lifting the pressure plate to engage the clutch.

Free Play Gain happens when the engine's RPM increases and the EXP closes the installed gap. The amount of Free Play Gain you feel in the lever corresponds to the amount the pressure plate has been lifted by the EXP disk expansion.

Checking Free Play Gain allows you to externally monitor the installed gap so you can know when to adjust if the installed gap is too large or too small.

The correct installed gap is verified by observing and feeling the increased free-play movement in the clutch lever. This extra movement is called "Free Play Gain."



If there is too much Free Play Gain, the installed gap is too small. The bike may drag and stall because it has difficulty disengaging the clutch. It may also be difficult to shift. Too much Free Play Gain will not hurt the clutch, but it will negatively affect clutch performance.

With too little or no Free Play Gain, the installed gap is too large. This means when the EXP is fully expanded it does not lift the pressure plate. The clutch may slip and make the bike seem like it is losing power. The bike may not move forward even though the engine RPM increases as if the clutch lever is slightly pulled. Too little Free Play Gain will cause the clutch system to burn up.

Optimal Free Play Gain yields 1/8"-1/4" (3-6mm) of clutch lever movement, measured at the ball end of the lever.



## Step 1: Check Free Play Gain

The following steps explain **2 ways** to check Free Play Gain. One way uses the rubber band Rekluse includes in the clutch kit, and one uses your hand. You can use either method to check for Free Play Gain.

Rekluse recommends that you begin with the rubber band method first to check for Free Play Gain and then learn the hand method. The rubber band will help you learn how to recognize Free Play Gain until you are comfortable with the hand method. Learning to check Free Play Gain by hand effectively and comfortably can make it easy to check Free Play Gain every time you ride.

### The Rubber Band Method

Use the rubber band method for the initial setup. It can also be used before each ride until you feel comfortable checking the Free Play Gain using the hand method.

#### **▲ WARNING**

**BEFORE YOU BEGIN, verify that the bike is in NEUTRAL before checking Free Play Gain. Failure to do so may result in the bike lurching forward, and loss of control and/or injury may result.**

**A Rekluse auto-clutch can make your motorcycle appear to be in neutral when in gear, even when the engine is running and the clutch lever is released.**

**Motorcycles equipped with a Rekluse auto-clutch can move suddenly and unexpectedly and cause riders to lose control. To avoid death, serious injury, and/or property damage, always sit on the motorcycle to start it.**

- a) Before you begin, place the bike in **NEUTRAL**, start the engine, and let it warm up for 2-3 minutes to idle down and warm the engine oil.

- b) Stretch the included rubber band between your thumbs, then place the top end of the rubber band on the outer end of the left handlebar grip.



- c) While holding the top end of the rubber band against the handlebar, stretch the band downward, then loop it through itself.

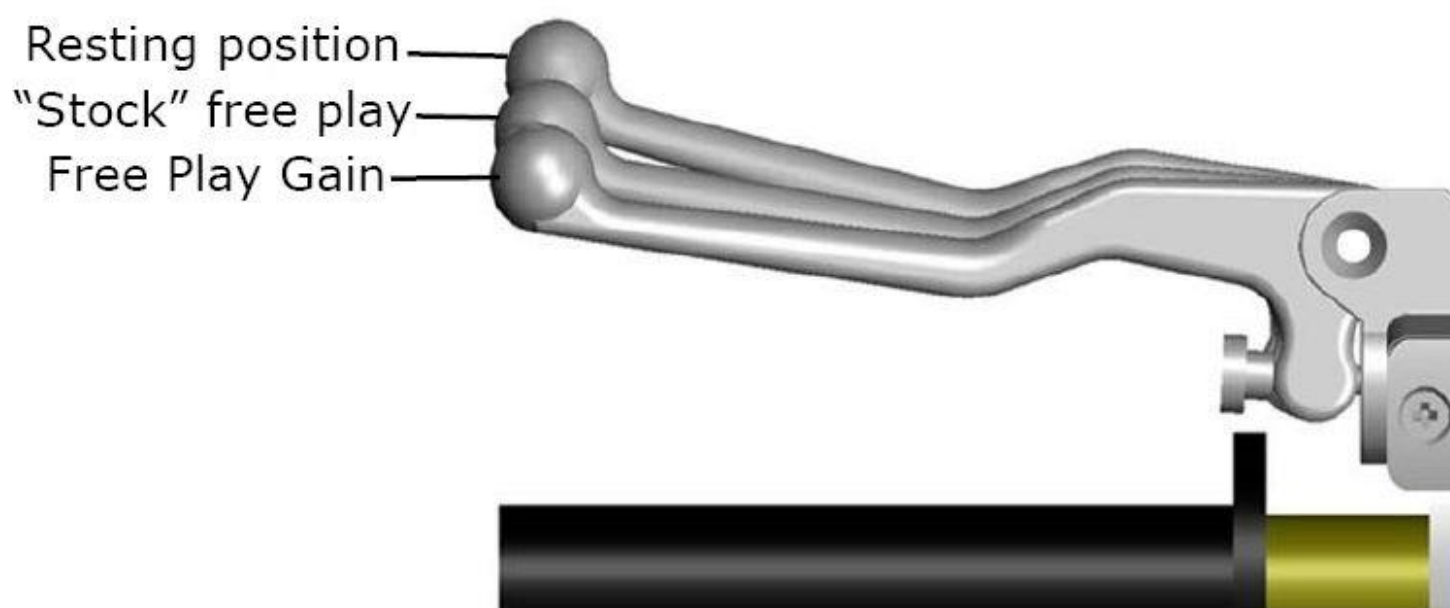




- d) Pull the band through the loop, then attach it to the outside end of the clutch lever. This will take up the initial free play (slack) and put the lever in a position to detect the Free Play Gain.



- e) While still in **NEUTRAL**, quickly rev the engine between 5,000-7,000 RPM (1/2 to 3/4 throttle), then let it return to idle. Notice the movement in the clutch lever when the engine is revved. This is your Free Play Gain.



**NOTICE**

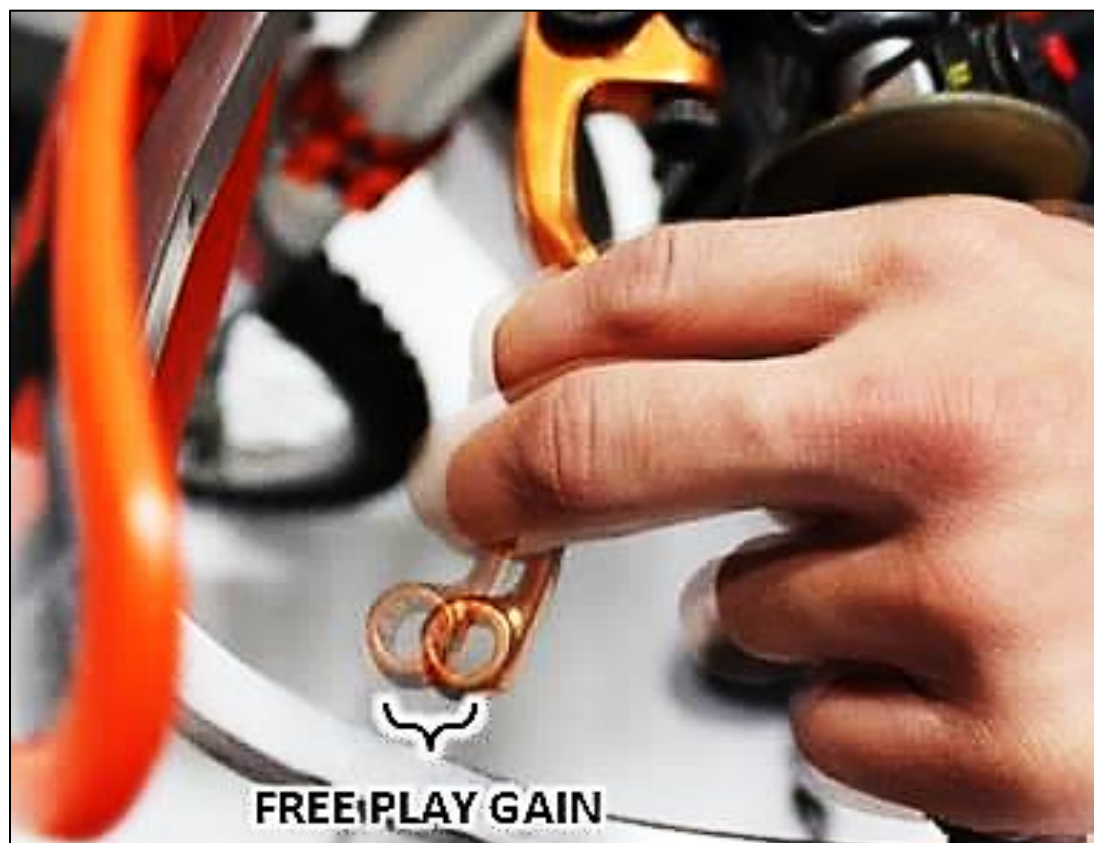
*It is very important the motor returns to idle before revving the engine again or Free Play Gain will not be correct.*

- f) When the bike returns to idle, rest your hand across the clutch lever. Rev the engine again to 5,000-7,000 RPM so you can observe the movement while feeling for Free Play Gain with your hand.

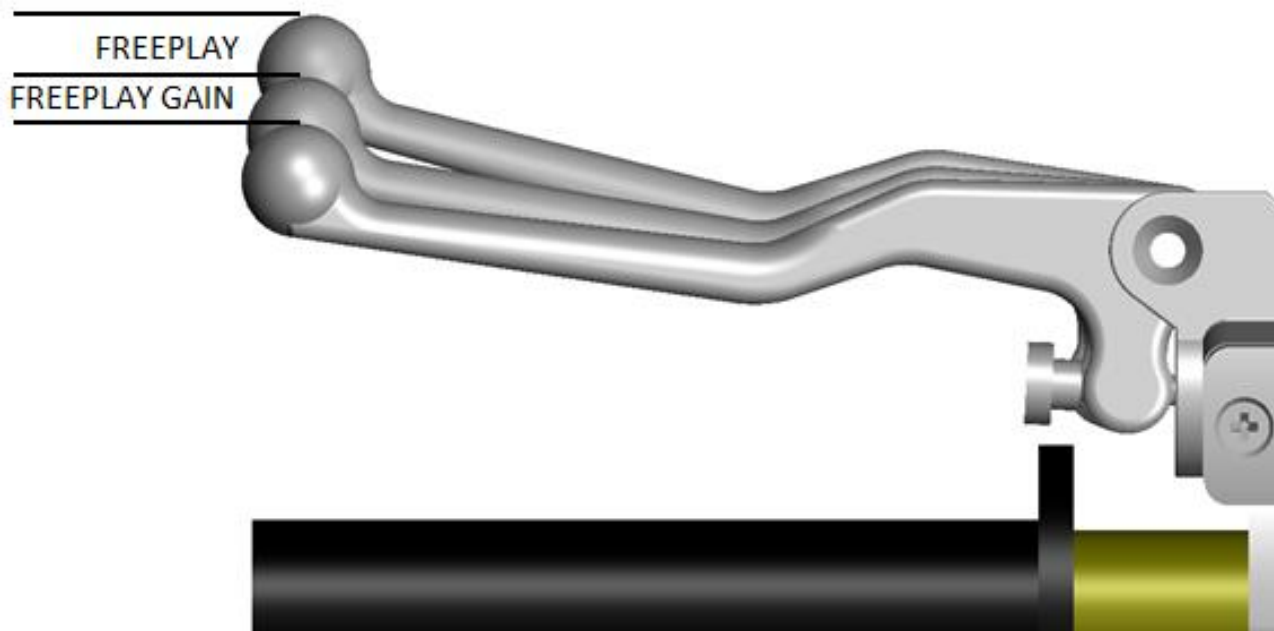
## **The Hand Method**

Use the hand method to check Free Play Gain before the start of every ride for optimum performance and longevity of your new clutch.

- a) Before you begin, place the bike in **NEUTRAL**, start the engine, and let it warm up for 2-3 minutes to idle down and warm up the engine oil.
- b) With the bike at idle, apply enough pressure to the clutch lever to take up the initial free play (slack) in the clutch lever.



c) While still in **NEUTRAL**, continue to apply light pressure and quickly rev the engine between 5,000-7,000 RPM (1/2 to 3/4 throttle), then let it return to idle. Notice the movement in the clutch lever when the engine is revved. This is your Free Play Gain.



d) When the bike returns to idle, rev the engine between 5,000-7,000 RPM a second time to feel the Free Play Gain again.

e) Continue with Step 3 to break in the new clutch.

### **NOTICE**

*The lever may move more than 1/8"-1/4" (3-6mm) toward the handle when the engine is revved because there is too much Free Play Gain (movement of the clutch lever). This changes as you adjust the installed gap.*

## **Step 2: Break in the new clutch**

Once you install your new clutch, it is important to break it in. A series of roll-on starts are used to break in the clutch. Follow these procedures for breaking in your clutch and any time new friction disks, EXP bases, Teflon pads, or wedges are installed.

### **▲ WARNING**

**Failure to follow the break-in procedure and oil screen inspection process could cause motor oil delivery failure which can result in motor failure, serious injury, or death.**

Break-in Procedure	Number of times
<p><b>Rev Cycles:</b></p> <ol style="list-style-type: none"> <li>Place the bike in <b>NEUTRAL</b>.</li> <li>With your hand <b>off</b> the clutch lever, rev the engine 10 times, being sure to let it <b>return to idle</b> between each rev cycle.</li> </ol> <p style="text-align: center;"> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">1</span> <span style="background-color: black; color: white; border-radius: 50%; padding: 2px 8px; font-weight: bold;">N</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">2</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">3</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">4</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">5</span> </p>	<p>10 rev cycles</p>
<ol style="list-style-type: none"> <li>With the engine still running, pull in the clutch lever, then click the bike into 1<sup>st</sup> gear. Slowly release the clutch lever. The bike should stay in place or have a slight amount of forward creep.</li> </ol> <p style="text-align: center;"> <span style="background-color: black; color: white; border-radius: 50%; padding: 2px 8px; font-weight: bold;">1</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">N</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">2</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">3</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">4</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 8px;">5</span> </p> <ol style="list-style-type: none"> <li>With the bike idling in first gear, slowly apply the throttle to begin moving.</li> <li>Without using the clutch lever, accelerate moderately to approximately 5,000 RPM to fully lock up the clutch and come to a complete stop. Repeat 10 times.</li> </ol> <p><b>NOTICE</b></p> <p><i>If the engine wants to stall or the creep is excessive, the idle may be too high or the installed gap may be too small. Make necessary adjustments before proceeding.</i></p>	<p>10 roll-on starts</p>



6. Without using the clutch lever, start in 2<sup>nd</sup> gear, then accelerate moderately to approximately 5,000 RPM and come to a complete stop. Repeat 10 times.



10 roll-on starts

7. Place the bike in **NEUTRAL** and recheck Free Play Gain.

8. Continue to step 4 to adjust the installed gap until the Free Play Gain of the clutch lever is 1/8" (3 mm).



Recheck Free Play Gain and adjust the installed gap

**NOTICE**

*Your clutch pack will expand with heat, so the final adjustment to Free Play Gain should be made when the bike is warm. Remember not to ride without sufficient Free Play Gain.*

**CAUTION**

**Do not perform 3<sup>rd</sup> gear starts with this product. Starting in 3<sup>rd</sup> gear will burn up the clutch and decrease the performance of this product in a short amount of time.**

### Step 3: Adjust the installed gap and Recheck Free Play Gain

Once you have learned how to check Free Play Gain, you need to finish adjusting the installed gap, then recheck until Free Play Gain is between 1/8"-1/4" (3-6mm). The gap is adjusted by turning the adjuster ring.

- a) Take off the clutch cover and remove the spring ring, spring, and pressure plate
- b) Move the adjuster ring one notch:
  - a. Too much free play gain (installed gap too small):  
**counterclockwise**
  - b. Too little free play gain (installed gap too large):  
**clockwise**



- c) Continue to adjust the ring until the correct Free Play Gain is achieved.
- d) Refer to the following pictures and chart in the next section for additional adjustment information.

#### **NOTICE**

*The Free Play Gain will change as the clutch pack wears over time.*



## **FREE PLAY GAIN INTERNAL ADJUSTMENTS**

Make each adjustment in small increments - one notch at a time. After each adjustment, recheck Free Play Gain until you achieve the optimal 1/8"-1/4" (3-6mm) of clutch lever movement.

<b>Symptom</b>	<b>Reason</b>	<b>Solution</b>
<ul style="list-style-type: none"><li>• Clutch lever moves in too far (too much Free Play Gain)</li><li>• Clutch has excessive drag or stalls</li><li>• It is difficult to fully override the clutch with the lever</li></ul>	Installed gap is too small	Turn the adjuster ring counterclockwise 1-2 notches to increase the installed gap and decrease Free Play Gain. Recheck Free Play Gain.
<ul style="list-style-type: none"><li>• Clutch lever only moves slightly or does not move at all (too little Free Play Gain)</li><li>• Clutch slips</li><li>• Bike seems to lose power</li></ul>	Installed gap is too large	Turn the adjuster ring clockwise 1-2 notches to reduce the installed gap and increase Free Play Gain. Recheck Free Play Gain.

# **MAINTENANCE**

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

- Keep up with regular oil changes as per the bike manufacturer's recommendations. Clutch performance and longevity depend on oil quality.

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](http://www.rekluse.com) to learn more.

Oil recommendations can be viewed under Tech Tips on our website at [www.rekluse.com/support/videos/atv-mc-support-videos](http://www.rekluse.com/support/videos/atv-mc-support-videos).

- Inspect all of your clutch parts for signs of wear or excessive heat, and replace components as necessary. Clutch wear is dependent on the rider's use.

<b>Maintenance Protocol</b>	<b>Maintenance Intervals</b>
Check and verify Free Play Gain	Every ride
Inspect all clutch parts for excessive wear or heat. Replace as needed.	Refer to the OE service manual

- The spring ring can be optimized based on the wear and height of the clutch pack. See the attached Setup Sheet for the spring ring optimization table to adjust the spring ring.
- Measuring the clutch pack and/or the EXP disk can help determine if the components need replacing. See the Setup Sheet for the specific clutch pack measurements.

- Inspect the dampers, and replace them if you feel any movement between the two hubs. Refer to the section on inspecting the dampers for more information.
- Maintain adequate Free Play Gain. Check before every ride and adjust if necessary.
- Repeat the break-in procedure anytime you replace the EXP bases, Teflon pads, EXP wedges, or friction disks. Always soak friction disks or EXP bases in oil for at least 5 minutes before installing.
- Replace friction disks if they measure below the specifications listed on the attached Setup Sheet or if the disks are glazed and/or burnt.
- 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 from [www.rekluse.com/support](http://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 the 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 the 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**

## **Performance issues**

If you find yourself frequently adjusting the clutch to fix Free Play Gain or drag, the clutch disks might be worn. Excessive heat or clutch slip can cause premature clutch failure as well. Once extreme temperatures are reached, irreversible damage will occur.

- Inspect all of your clutch parts for signs of wear or excessive heat, and replace components as necessary. Clutch wear is dependent on the rider's use.
- Measuring the clutch pack and/or the EXP disk can help determine if the components need replacing. See the attached Setup Sheet for the specific clutch pack measurements.

## **Clutch noise**

Although it is harmless, some bike models may have “squeal” or “chatter” coming from the clutch at low RPM as it engages. Clutch squeal is caused by the clutch components vibrating as the clutch engages and can become more audible as the clutch gets hot. Adjusting the installed gap will NOT affect clutch squeal or chatter.

For bike models that have clutch squeal or chatter here are some recommendations to reduce or eliminate it:

- Change the oil: For optimal clutch performance Rekluse recommends using fresh, clean oil that **meets JASO-MA or MA2** oil rating requirements. Dirty or old oil can make the clutch more likely to squeal or chatter.

# **EXP TUNING OPTIONS**

Adjusting the engine idle speed to match your engagement setting is important and greatly affects the overall feel of how the EXP disk engages. To prevent freewheeling and maximize engine braking, set the idle so there is a slight amount of drag while the bike is idling in gear and warmed up. The idle should not be so high as to move the bike forward in gear with the throttle closed. However, with a small opening of the throttle, the bike should move forward.

You can tune the engagement RPM of the EXP disk by changing the spring configuration. The EXP disk comes set with the recommended “**Medium**” setting from Rekluse. Use the following steps to change the springs. It is **NOT necessary** to disassemble the EXP halves to change springs!

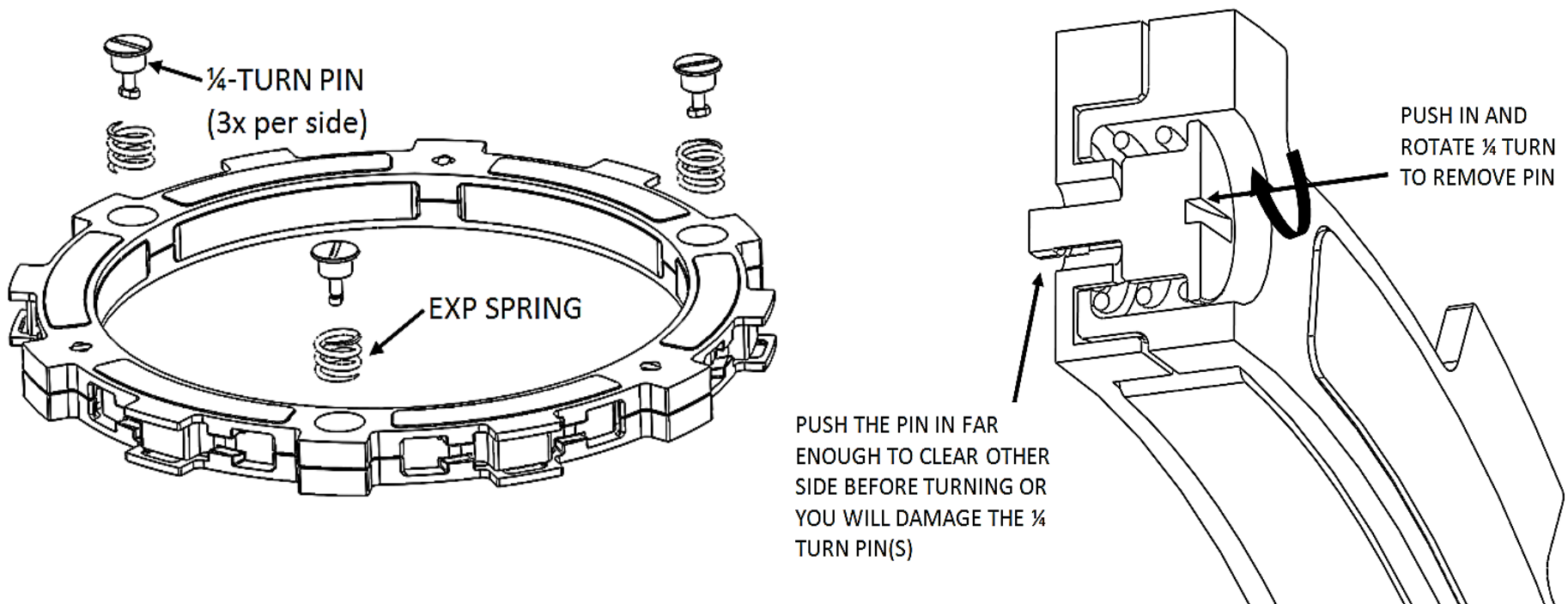
## **Changing the springs**

1. Using a flat-blade screwdriver, push the ¼ turn pin in far enough to clear the opposite side of the EXP to unlock the pin.
2. With the pin still pushed past the base, turn 90° to remove the pin and spring.
3. Remove the remaining 2 pins and springs from the same side of the EXP base.
4. Drop a new spring into the spring slot on the base, then add the ¼ turn pin.
5. Push the turn pin in far enough to clear the base, then turn 90° and release the pin. The pin should sit almost flush with the EXP base.
6. Flip the EXP friction disk over, and repeat on the other side depending on engagement preference.
7. If you need to disassemble the EXP disk, you can watch the video on our website under Tech Tips at [www.rekluse.com/support/videos/atv-mc-support-videos](http://www.rekluse.com/support/videos/atv-mc-support-videos).



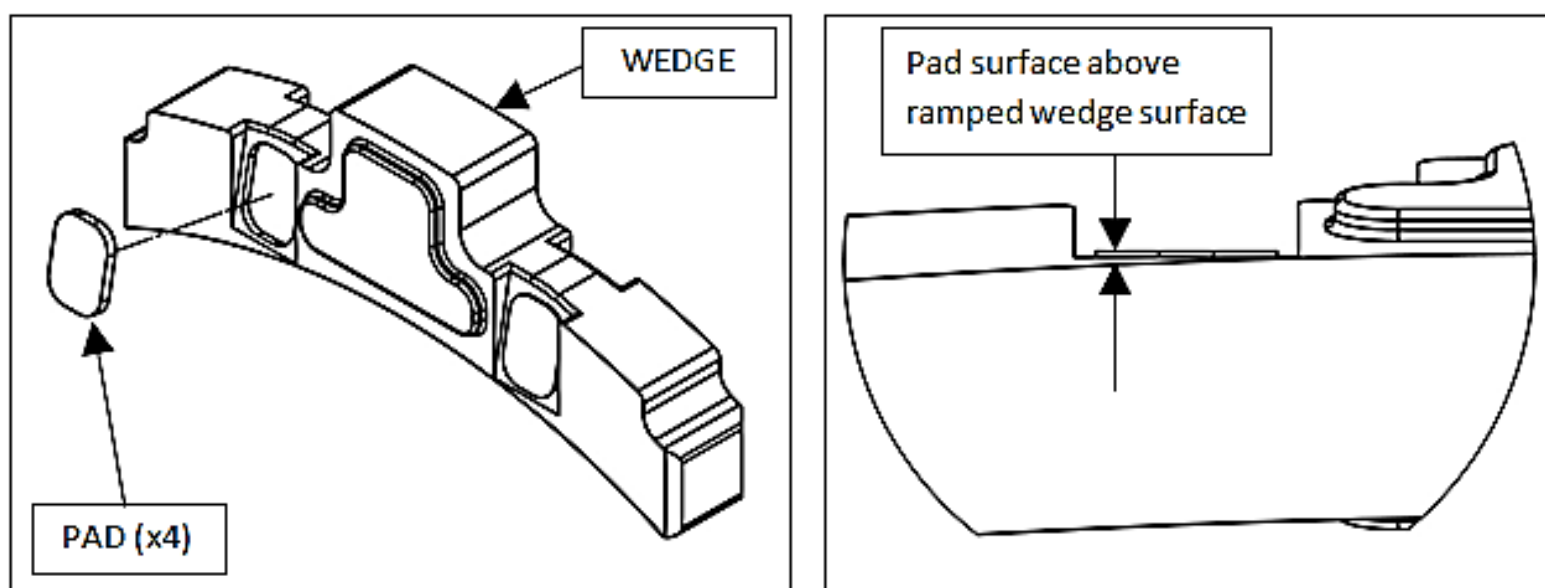
## NOTICE

To maintain even pressure, when using two different color spring sets, install one set of 3 on one side of the EXP and the remaining set of 3 on the other side.



## CAUTION

**If you disassemble the EXP, the Teflon pads may fall out or be stuck to the ramp surfaces of the EXP bases. Take care to ensure all pads are correctly placed into wedge pockets using gentle pressure to avoid damage to the pad surfaces before reassembling the EXP. Properly seated pads will be secured in place once the EXP is reassembled. Operating the clutch without the pads in place will cause part damage or failure.**



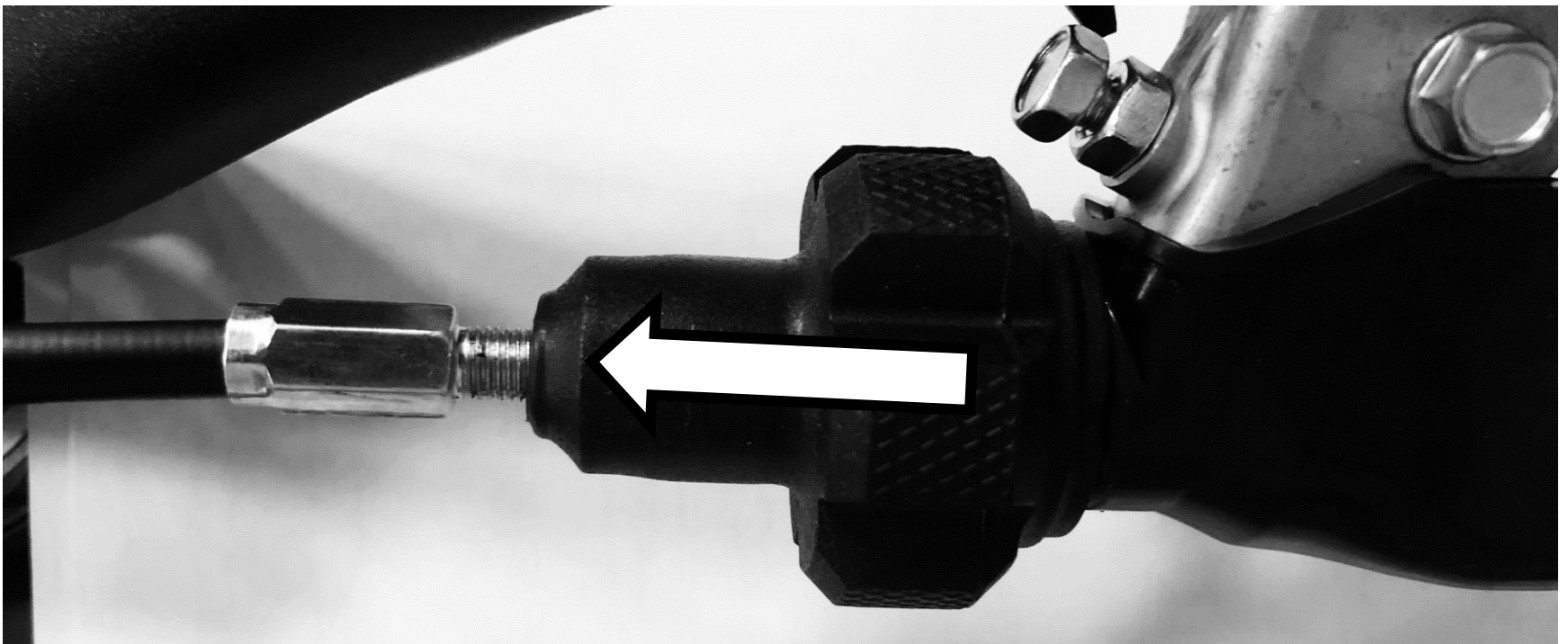
## **APPENDIX A: EXTERNAL ADJUSTMENT METHOD**

1. Remove the clutch cover, clutch spring bolts, clutch spring, and pressure plate
2. Remove the hub adjuster ring

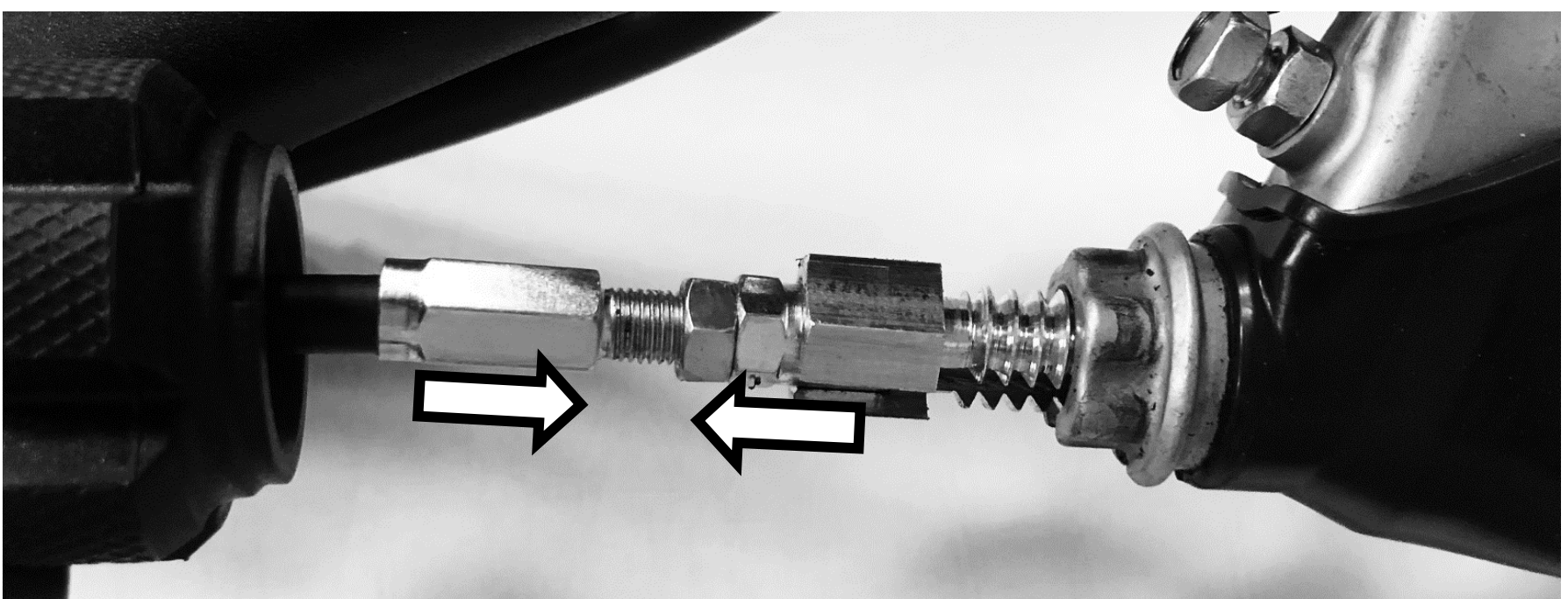
### **⚠ CAUTION**

***The internal hub adjuster ring cannot be left in the clutch when using the external method. This can cause clutch failure***

3. Reinstall the clutch pressure plate, clutch spring, and spring bolts as described in the installation section of the manual.
4. Slide the perch adjuster boot away from the lever to access the inline adjuster.

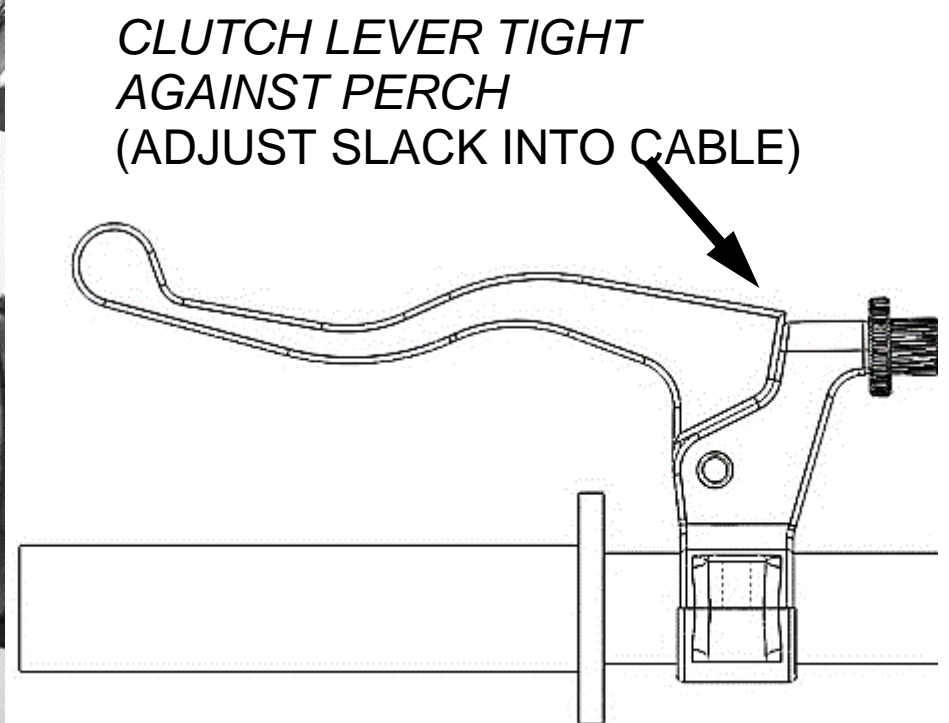
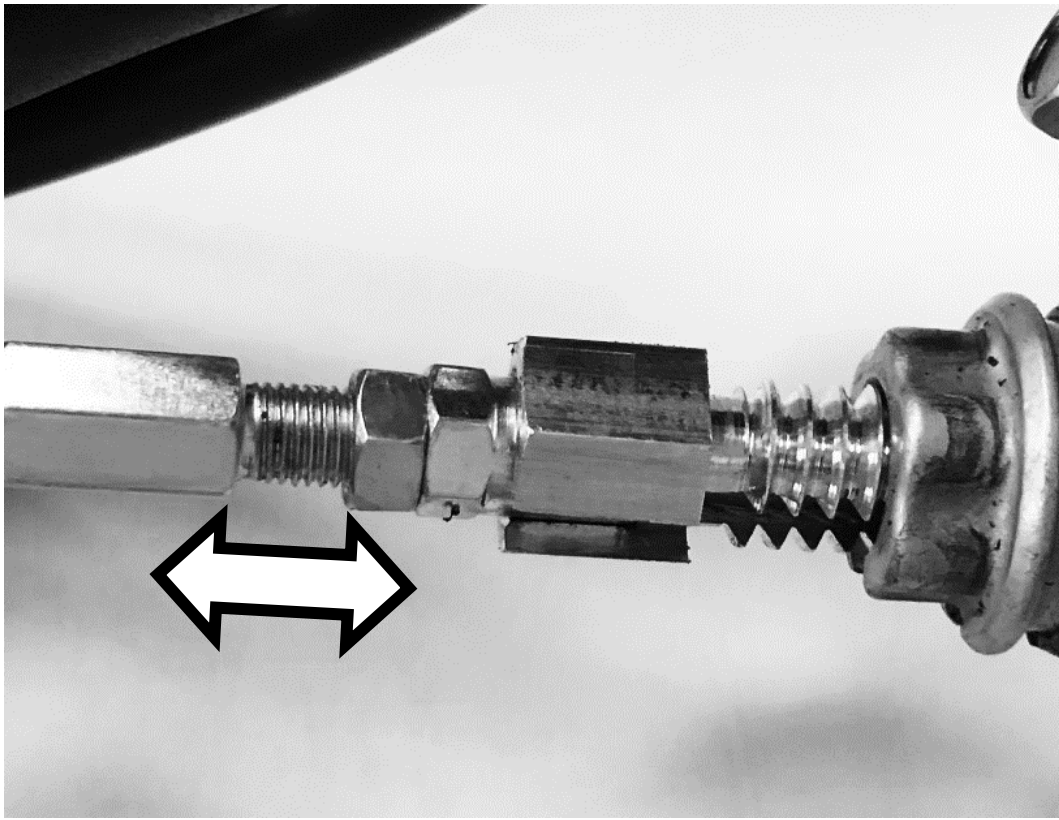


5. Loosen the jam nut and completely collapse the in-line cable adjuster (the smaller threads).





- Expand the inline adjuster to the point where there is no lever free play (the clutch lever is tight against its perch). At this point, there should be no cable slack.



- Continue to expand the in-line cable adjuster **5 turns**. This will lift the pressure plate. This is not your final setting. It is your ***starting point*** for setting the installed gap. This will vary by bike.
- Check the Free Play Gain. Refer to the “Free Play Gain” Section for details.
- If Free Play Gain is not optimal, the installed gap needs to be adjusted.
  - Adjust the installed gap by adjusting the cable at the clutch lever perch or in-line cable to achieve the correct amount. The installed gap should be fine-tuned in small increments and then recheck Free Play Gain.
  - Refer to the table below to set the properly installed gap based on your Free Play Gain.
- When Free Play Gain is optimal, follow the Break In Procedure

### **NOTICE**

*It is recommended to set the gap using the in-line adjuster (small threads) first so that any minor adjustments can be done with the perch adjuster (large threads) after the initial starting point is found.*

## **FREE PLAY GAIN EXTERNAL ADJUSTMENTS**

<b>Symptom</b>	<b>Reason</b>	<b>Solution</b>
<ul style="list-style-type: none"><li>• Clutch lever moves in too far (too much Free Play Gain)</li><li>• Clutch has excessive drag or stalls</li><li>• It is difficult to fully override the clutch with the lever</li></ul>	Installed gap is too small	<p>Tighten the cable; increase the length of the in-line cable adjuster housing and/or the lever perch adjuster (extend the adjusters) until the correct amount of Free Play Gain is achieved.</p> <p>Recheck Free Play Gain.</p>
<ul style="list-style-type: none"><li>• Clutch lever only moves slightly or does not move at all (too little Free Play Gain)</li><li>• Clutch slips</li><li>• Bike seems to lose power</li></ul>	Installed gap is too large	<p>Reduce the length of the cable housing (collapse the adjusters) until the correct amount of free play gain is achieved.</p> <p>Recheck Free Play Gain.</p>



## **BUMP-STARTING**

If your bike needs to be bump-started due to a dead battery or any other reason, follow the steps below to quickly bump-start your bike.

### **⚠ CAUTION**

***When the installed gap is collapsed, the clutch may not be able to fully disengage***

### **Externally Adjusted Clutch**

1. Use the perch adjuster or in-line cable adjuster to remove cable tension until you have lever free-play (slack).
2. Bump-start the bike. The clutch will function like a manual clutch at this point.
3. Once the vehicle is running, readjust the cable tension to properly set the installed gap using Free Play Gain.

### **Internally Adjusted Clutch**

1. Remove the clutch cover, spring, and pressure plate.
2. Turn the adjuster ring clockwise to collapse the gap.
3. Reassemble the clutch and install the cover.
4. Bump start the bike. The clutch will function like a manual clutch at this point.

### **⚠ CAUTION**

***It is not recommended to ride any further than necessary with the clutch's installed gap collapsed.***

## **NEED ADDITIONAL HELP?**

### **Website**

[www.rekluse.com/support](http://www.rekluse.com/support)

### **Phone**

(208) 426-0659

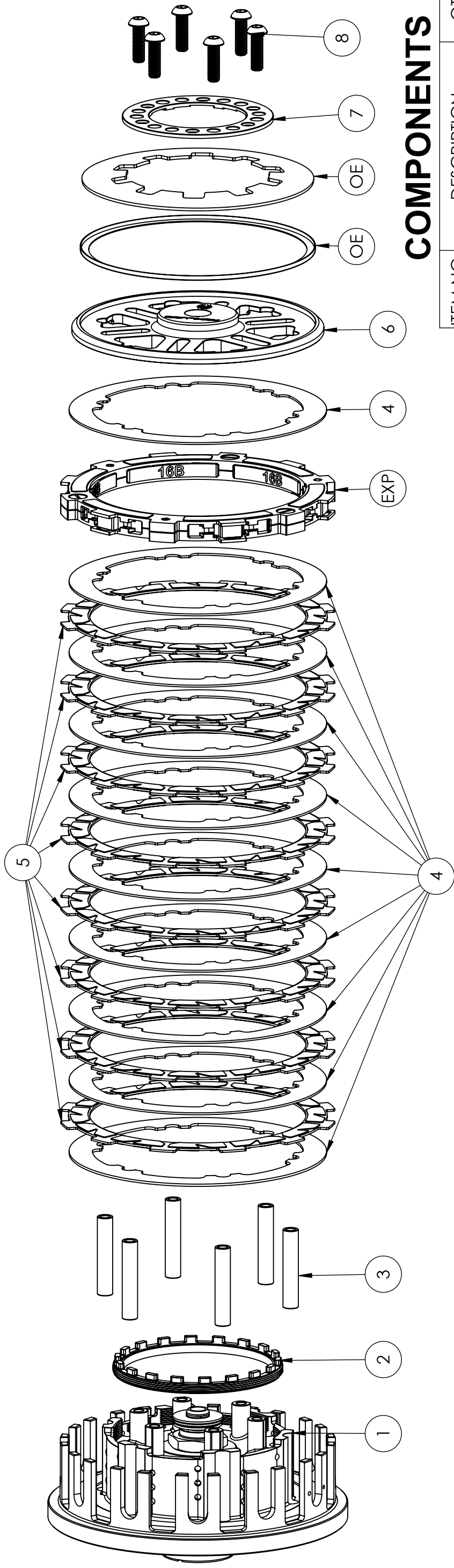
Monday thru Friday: 8 am – 5 pm Mountain Time

### **Email**

[tech@rekluse.com](mailto:tech@rekluse.com)



# SETUP SHEET 198-7907176



## COMPONENTS

ITEM NO.	DESCRIPTION	QTY.
1	Hub	1
2	Adjuster Ring	1
3	Drive Pin	6
4	Drive Plate	10
5	Torque Drive Friction	8
6	Pressure Plate	1
7	Spring Ring	1
8	M6 x 20 Screw	6
EXP	EXP	2
OE	OE Components	Var.

## SPRING RING SETTING

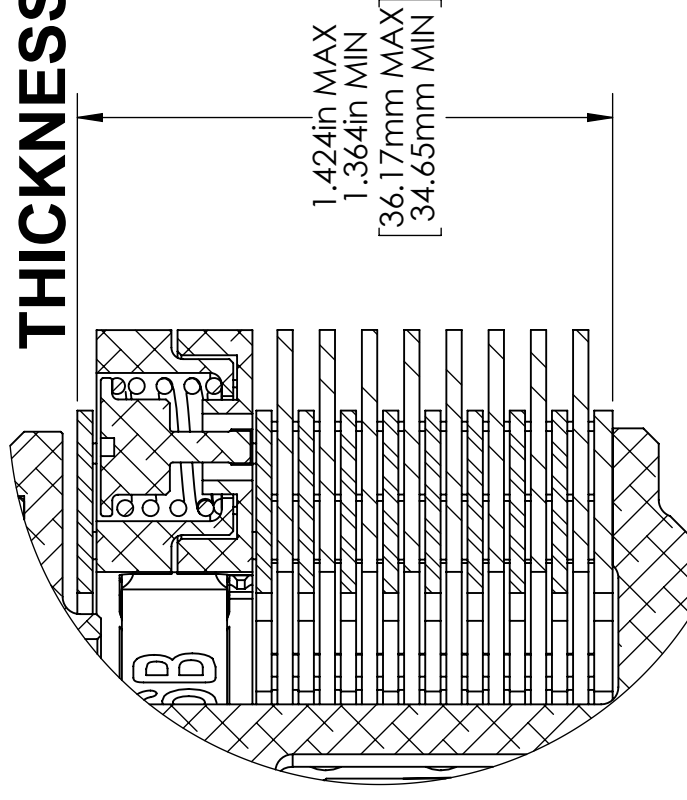
Clutch Pack Thickness in (mm)	Setting
1.364-1.384 (34.6-35.2)	I
1.384-1.404 (35.2-35.7)	II
1.404-1.424 (35.7-36.2)	III

## TUNING OPTIONS

ENGAGEMENT RPM	EXP SPRINGS
LOW	6 BLUE
MEDIUM *	3 BLUE & 3 GOLD
HIGH	6 GOLD

\* MEDIUM SETTING IS PREINSTALLED IN THE EXP DISC

## CLUTCH PACK THICKNESS



1.424in MAX  
1.364in MIN  
36.17mm MAX  
34.65mm MIN

## SERVICE LIMITS

COMPONENT	STANDARD	SERVICE LIMIT
TORQDRIVE FRICTION	.068-.072in 1.73-1.83mm	.065in 1.65mm
EXP	.426-.446in 10.8-11.3mm	.416in 10.6mm