REKLUSE MOTOR SPORTS

The Rekluse EXP Clutch

INSTALLATION GUIDE

Doc ID: 191-6178A
Revision: 040519

OVERVIEW

- The OEM pressure plate and drive plates will be replaced
- The OEM throw-out will need to be reconfigured to work with the included needle bearing assembly.

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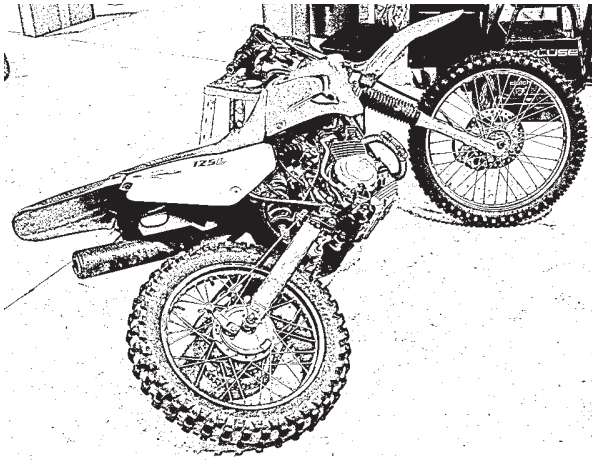
INSIDE THIS DOCUMENT

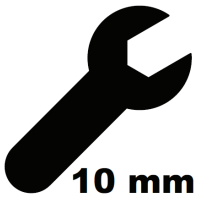
INSTALLATION TIPS

- Protect eyes and skin – wear safety glasses and thin disposable work gloves.

- Work in a ventilated area.
- Lay the bike on its left side to avoid draining the oil. Catch fuel that may drain from vent tubes.



TOOLS NEEDED

			
6mm Allen key	10 mm socket	10mm end wrench (x2)	Motor oil
			
Torque wrench			

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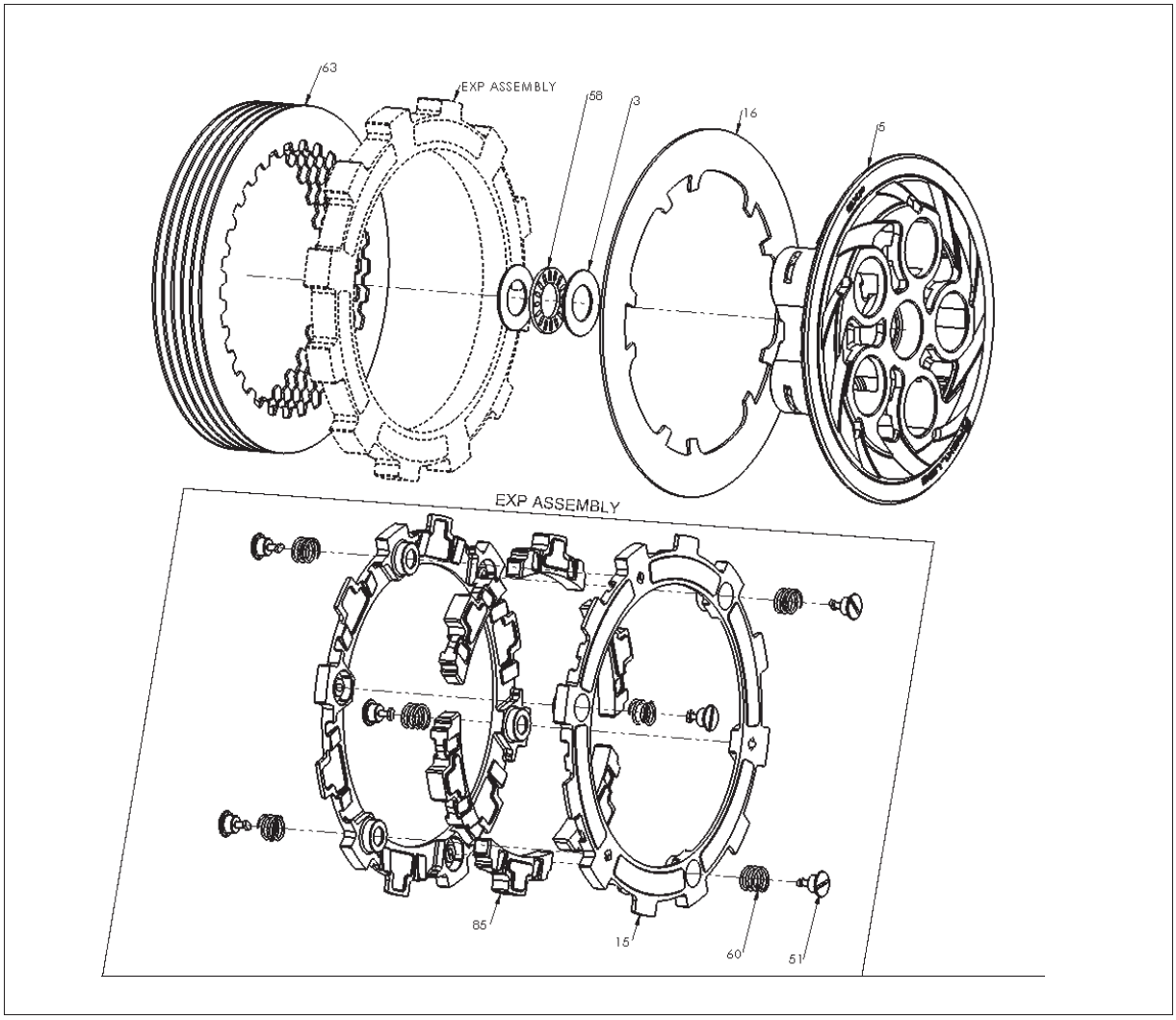
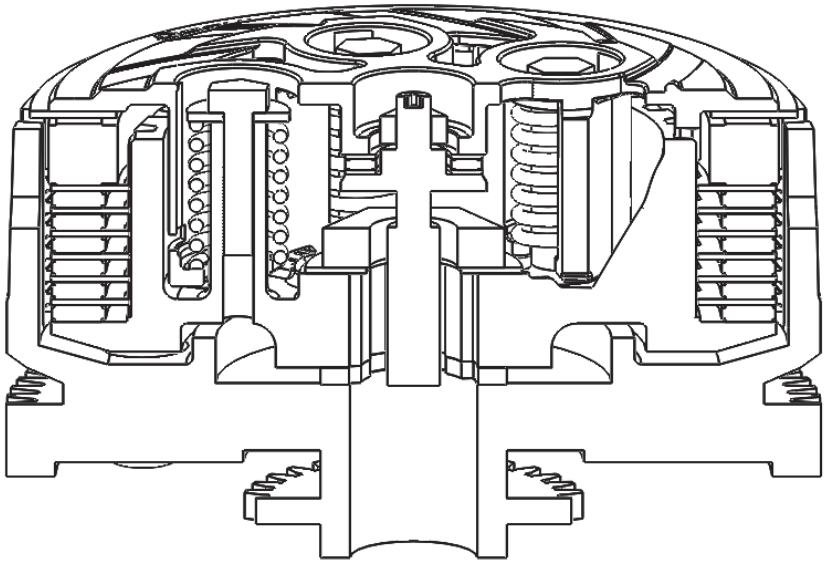
INCLUDED PARTS



Item	Part Number	Description	Qty.
3	414-130	Hardware – Washer	2
5	113-031A	Pressure Plate	1
15	140-213B	EXP Base	2
16	143-031A	Lining Plate	1
51	415-000	Fastener – ¼-turn Pin	6
58	433-302	Thrust Bearing	1
60	442-007	EXP Spring (Steel)	3
63	460-632	Drive Plate - 0.040”	6
85	741-013A	Wedge Assembly	6
Not Shown	419-121	Black FPG Rubber Band	1

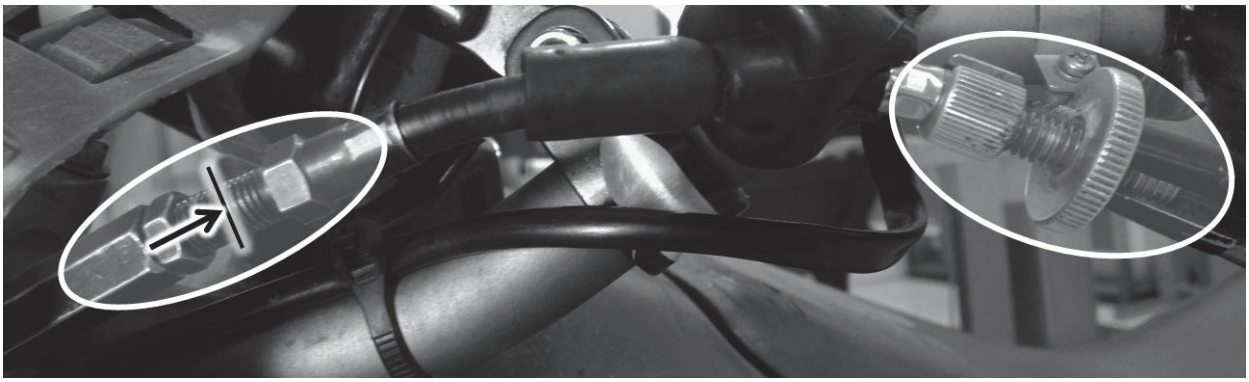
INSTALLATION

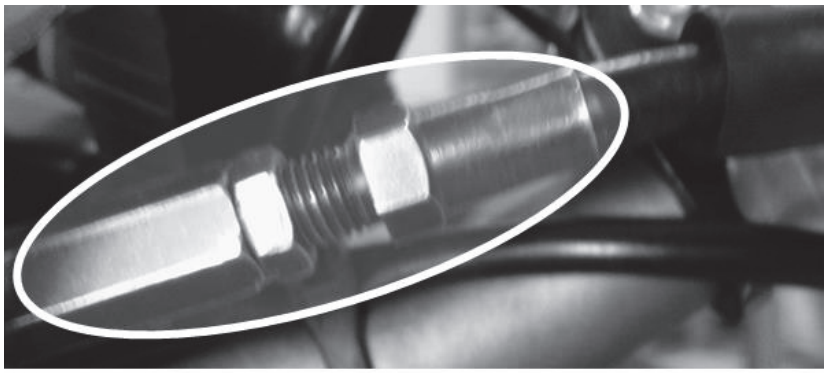
REKLUSE EXP



PRE-INSTALLATION ADJUSTMENTS

Adjust the in-line cable adjuster and perch adjuster so it is **midway through** its adjustable range.





ADJUSTED TO MIDWAY

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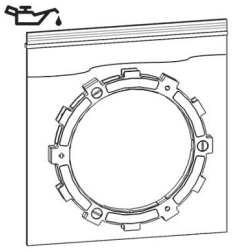
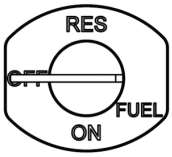
PREP AND DISASSEMBLY

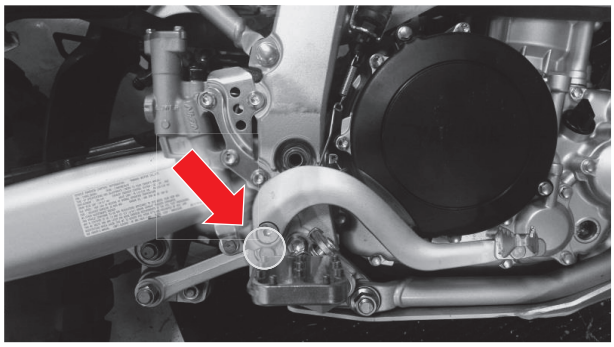
1. Soak the EXP disk and friction disks in engine oil for 5 minutes. Make sure the EXP and friction disks are coated on both sides.

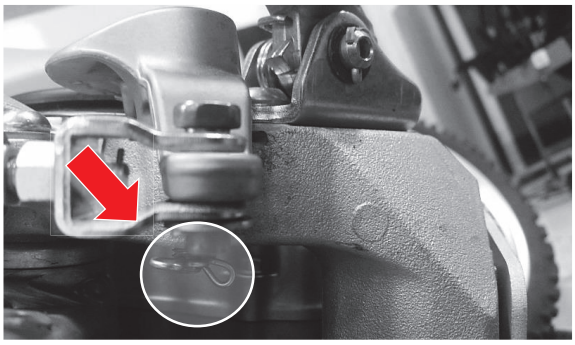


2. Turn the fuel petcock to “OFF” and lay the bike on its left side.

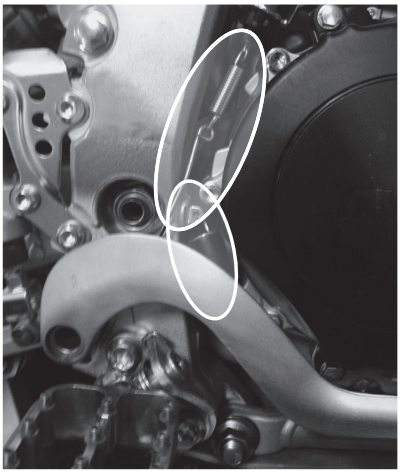


3. Remove the brake pedal pivot bolt, start first by removing the cotter pin, remove the springs and move the pedal out of the way. NOTE: There is a washer on the backside of the bolt between the pedal and the frame.

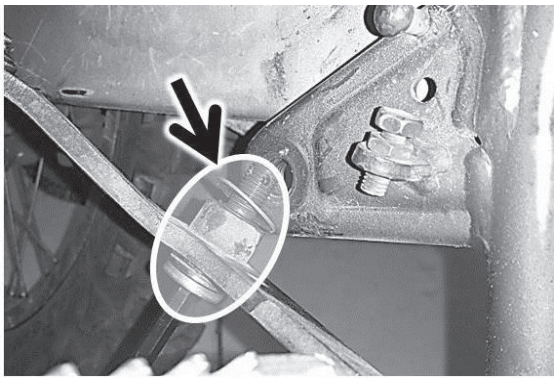




Remove Pin



Disconnect springs



Locate washer

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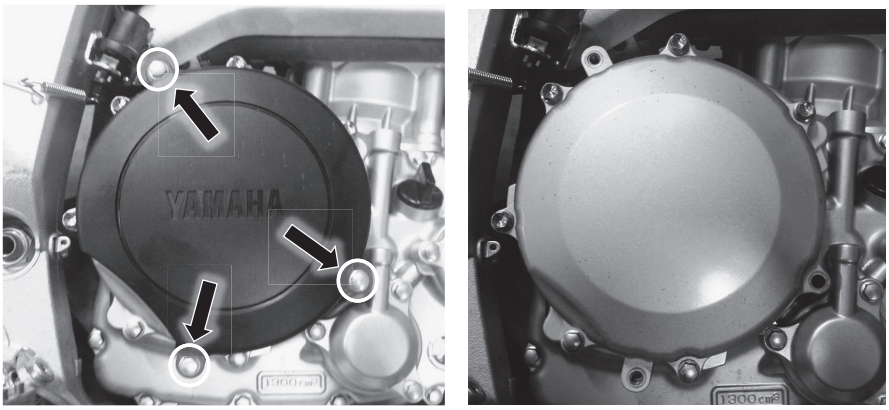
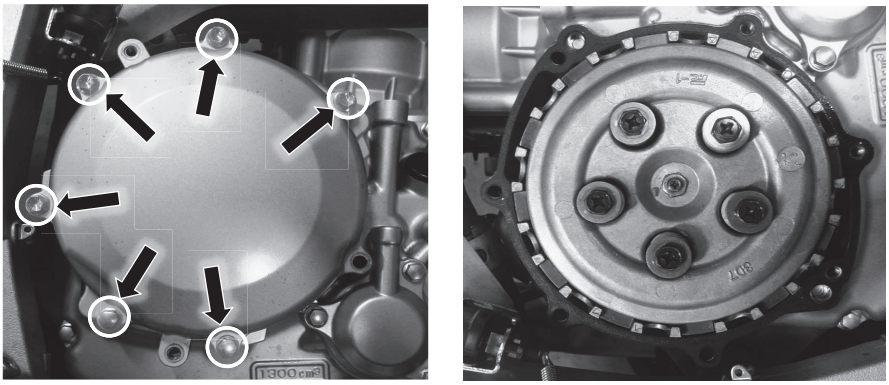
4. Remove the 3 side case cover bolts and remove the side case cover.

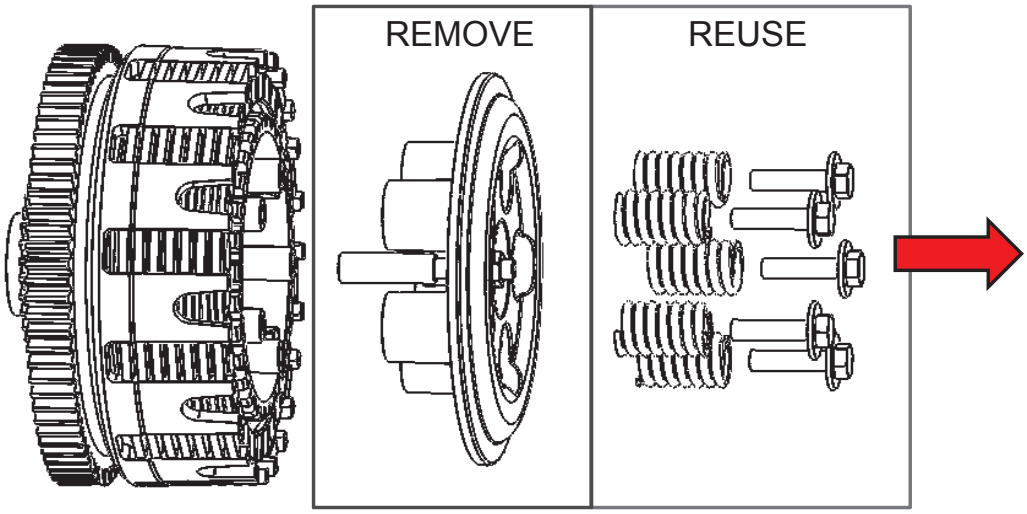


5. Remove the 6 remaining side case bolts and remove the side case.

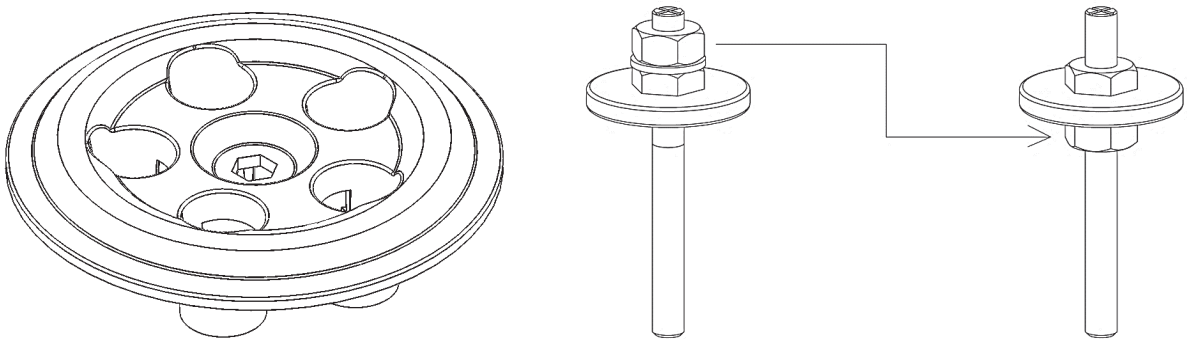


NOTE: Inspect the OEM side case gasket. If the gasket is damaged or torn it will need to be replaced before final Installation.

6. Remove the pressure plate bolts along with the springs and pressure plate assembly. The springs and bolts will be reused.



7. Remove the throw-out from the stock pressure plate by removing the top nut and washer. Move the top nut and washer to the underside of the shoulder washer. For a starting point, fully tighten the underside nut.



NOTE: Begin with the throw-out in this configuration. If you run out of cable adjustment in the later steps to correctly set the installed gap, the top nut may need to be moved back to its original position. (The top nut and washer above the shoulder washer.)

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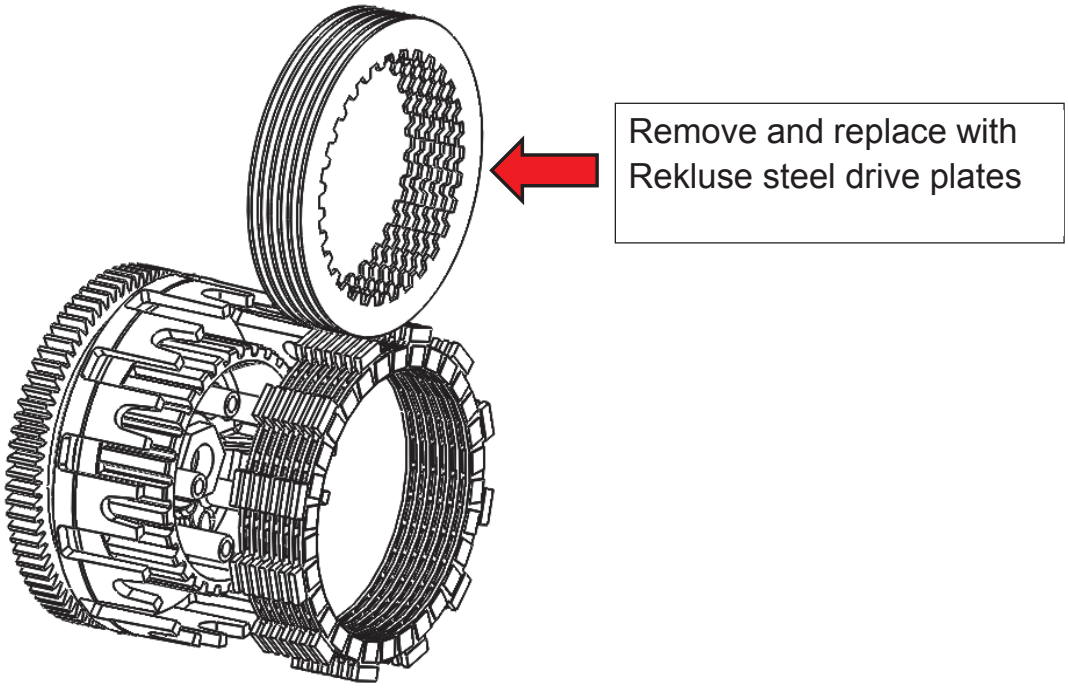
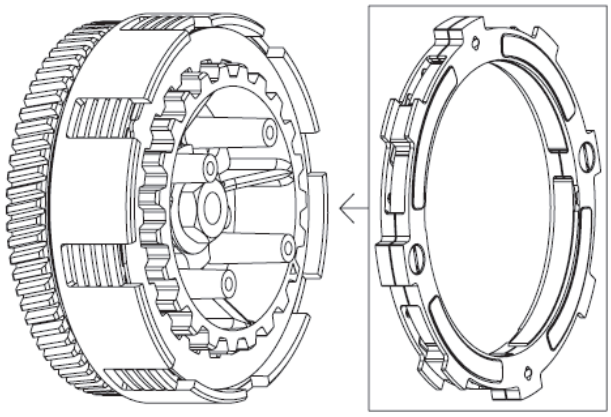
8. Remove clutch pack and replace all of the OEM drive plates with the Rekluse steel drive plates.
9. Start with an OE friction disk, then alternate Rekluse drive plates with friction disks.

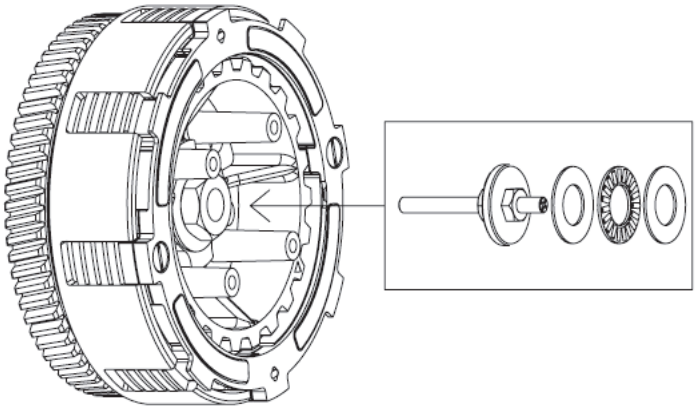
NOTE: Do not install the last friction disk. It will be replaced by the EXP disk.



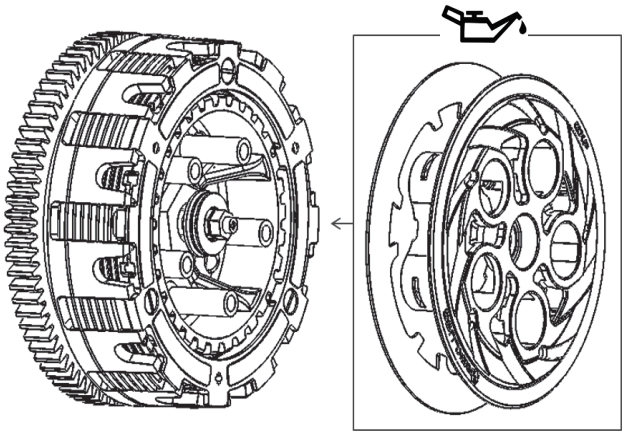
10. Insert the EXP disk in place of the very last OEM friction.



11. Install the reconfigured throw-out (step 7) followed by the needle bearing assembly.



12. Couple the Rekluse lining plate with the Rekluse pressure plate, using a thin film of oil between the surfaces to keep the lining plate in place. Once the lining plate has been coupled with the pressure plate, install them on to the clutch pack.



SETTING THE INSTALLED GAP

The installed gap is critical for this product to function correctly. The gap is set using tension in the cable.

13. Install the OEM pressure plate springs and bolts. In a star pattern, tighten opposing bolts in 3-turn increments so the pressure plate will go down evenly. Once the bolts are seated, fully hand tighten them.
14. **Torque the bolts to 50 in-lb (5.7 N-m)**.
15. Remount the side case. Torque to **7.2 ft-lb (10 N-m)**.
16. Remount brake pedal.
17. Use the adjuster at the clutch perch and/or the in-line cable adjuster to remove all cable slack so there is no free play between clutch lever and clutch perch. The lever should not move freely.
18. Check your Free Play Gain using the instructions in the next section.
19. Continue to adjust the cable until you have the correct Free Play Gain.

NOTE:

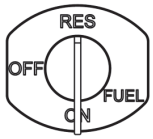
Sometimes your bike might run out of cable adjustment before all the lever free play is removed. If you do run out of cable adjustment, return to Step 7 and move the top nut and washer back to their original position on top of the shoulder washer.

CHECKING FREE PLAY GAIN

⚠ 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.

20. Turn fuel petcock to “ON” and start the bike. Let it warm up.



21. There are 2 methods to check Free Play Gain: rubber band method or hand method. First, use the rubber band method to understand the concept of Free Play Gain. Then, become comfortable with the hand method so you can use it as the primary method to check Free Play Gain in the future.
22. Check Free Play Gain before every ride.

⚠ 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 clutch lever 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.

RUBBER BAND METHOD

- **Shift the bike into neutral.**
  Wrap the included rubber band around the outer end of the handlebar grip and attach it to the ball end of the clutch lever. With the transmission in neutral, rev the engine to 5,000 RPM and observe the lever movement. The lever should move in about **1/4"-3/8” (6-9mm)**.

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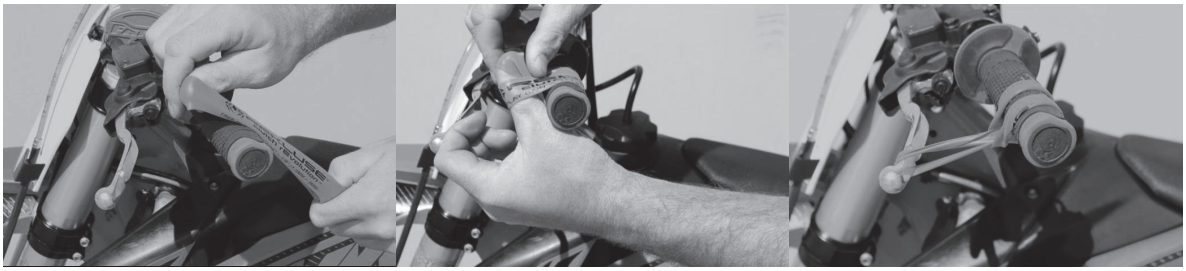
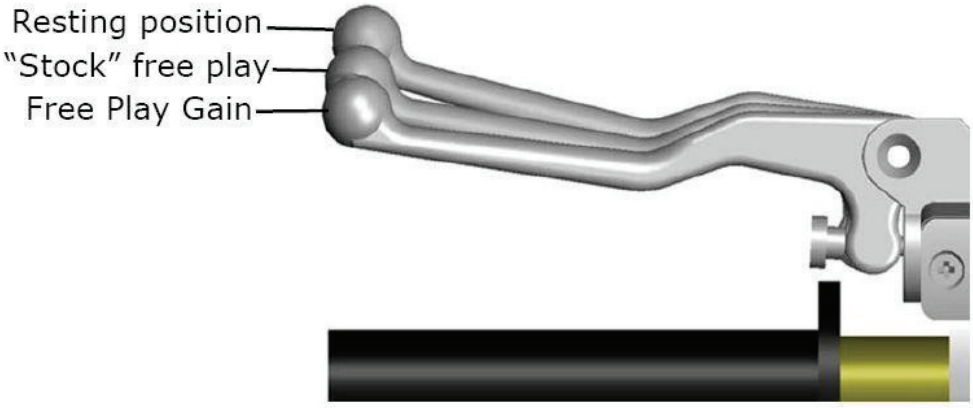


- **HAND METHOD**
  Use your finger instead of the rubber band. Place light pressure on the clutch lever and rev the engine slightly passed the mid-range rpm. The lever should move in about 1/4” (6.35mm).



23. If Free Play Gain is optimal, proceed to the BREAK-IN PROCEDURE. If Free Play Gain is not optimal, use the in-line cable adjuster or perch adjuster to achieve the correct amount.

- **Too much Free Play Gain**? The installed gap is too small. Increase the length of the cable housing (extend the adjusters) until the correct amount of Free Play Gain is achieved.
- **Not enough Free Play Gain?** The installed gap is too large. Reduce the length of the cable housing (collapse the adjusters) until the correct amount of Free Play Gain is achieved.

  Still having trouble? Refer to the TROUBLESHOOTING GUIDE for more information.

BREAK-IN PROCEDURE

After desired Free Play Gain is achieved, it is time to break in the EXP disk.

24. REV CYCLES: With the transmission in neutral and no pressure on the clutch lever, rev the engine to about 5,000 RPM and let it return to idle. Perform 10 rev cycles.

25. ROLL-ON STARTS: Pull in the clutch lever and click the transmission into first gear. Slowly release the clutch lever. The engine should stay running and the bike should have minimal forward creep. 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.

    a. FIRST GEAR: Slowly roll on the throttle to begin moving. Accelerate to around 5,000 RPM and come to a stop. Perform 5 first gear roll-on starts.

    b. SECOND GEAR: Click the transmission into second gear and perform 5 roll-on starts.

26. Re-check Free Play Gain and adjust if necessary.

NOTE: Do not perform 3rd gear starts with this product. 3rd gear starts over time will burn up the clutch and decrease the performance of this product in a short amount of time.

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.
- 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.
- Inspect all of your clutch parts at regular maintenance intervals for signs of wear or excessive heat, and replace components as necessary. Clutch wear is dependent on the riders use.
- Maintain adequate Free Play Gain. Check before every ride and adjust if necessary.
- Replace the drive plates if they show signs of excessive heat.

TROUBLESHOOTING GUIDE

FREE PLAY GAIN TROUBLESHOOTING

Free Play Gain is the visual representation of the installed gap in the clutch pack. As the EXP disk expands, it fills the installed gap and then pushes on the pressure plate to engage the clutch. This pressure plate movement is seen and felt at the lever when light finger pressure is applied during a rev cycle.

Free Play Gain should be fine-tuned in small increments using the clutch cable in-line adjuster and perch adjuster. After each cable adjustment, perform a few rev cycles in neutral with light pressure on the lever to re-check Free Play Gain.

- **COLLAPSE THE CABLE HOUSING** to reduce cable tension, thus relaxing the throw-out and decreasing the installed gap in the clutch – this will **INCREASE FREE PLAY GAIN**.

- **EXPAND THE CABLE HOUSING** to increase cable tension, thus pushing the throw-out into the pressure plate and increasing the installed gap in the clutch – this will **REDUCE FREE PLAY GAIN**.

If the cable housing reaches the fully collapsed or fully expanded state and Free Play Gain is still not optimal, the side case may need removed to make coarse adjustments with the throw-out.

OPTIMIZING EXP ENGAGEMENT

For best performance, engine idle speed should be adjusted to match the EXP engagement setting.

NOTE: Make sure Free Play Gain is optimal before adjusting idle speed.

With correct Free Play Gain and the bike in gear, the bike should move forward under slight opening of the throttle. If not, one of the following symptoms is likely:

- HIGH IDLE – the bike moves forward with the throttle fully closed. Solution: reduce idle RPM.
- LOW IDLE – the bike moves forward after engine RPM becomes noticeably higher than idle RPM. Solution: increase idle RPM.

NEED ADDITIONAL HELP?

Website
www.rekluse.com/support

Frequently Asked Questions
www.rekluse.com/faq

Support Videos
www.rekluse.com/support/videos

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

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

Hours:

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Mountain Time zone
Email: customerservice@rekluse.com

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