



REKLUSE[®]

EXP[™]

REKLUSE MOTOR SPORTS

The Rekluse Core EXP Kit for Honda CRF150R

INSTALLATION & USER'S GUIDE

Doc ID: 191-7718A
Doc Rev: 020315

OVERVIEW

- This kit replaces the OEM core clutch components including the center clutch hub and pressure plate with high-quality billet components designed for optimal operation specific to your bike.
- Most of the OEM friction disks will be reused, but all OEM steel drive plates will be replaced with Rekluse drive plates.

RESOURCES

- Thoroughly read and understand the **Safety Information** document for this product before installing
- Videos related to this product can be viewed online at rekluse.com
- A detailed parts fiche can be found online at rekluse.com/support

INSIDE THIS DOCUMENT

- INSTALLATION
- SETTING THE INSTALLED-GAP
- CHECKING FREE PLAY GAIN & BREAK-IN
- BREAK-IN
- EXP TUNING OPTIONS & ENGAGEMENT SETTINGS
- MAINTENANCE

USE OF OTHER AFTERMARKET PRODUCTS

- If your bike is equipped with an aftermarket clutch cable, or your OEM cable is old or has stretched, you may find that the adjustment range in your cable is different than depicted in this manual.
- If you prefer the use of an aftermarket clutch lever and/or perch, especially the adjustable variety, note that:
 - Some aftermarket lever/perch combos claim “Lighter Lever Pull” which correlates to less lift of the pressure plate (the mechanical advantage is increased, so the distance the pressure plate lifts must decrease). This may have an adverse effect by producing more clutch drag or harder shifts. The lever may be lighter, but you will have to pull the lever in farther to disengage the clutch.
 - Some aftermarket lever/perch combos may provide lever “free play” if desirable.
- This product has not been proven to be compatible with hydraulic conversion kits, as it is difficult to achieve the necessary installed-gap adjustment.

INSTALLATION TIPS

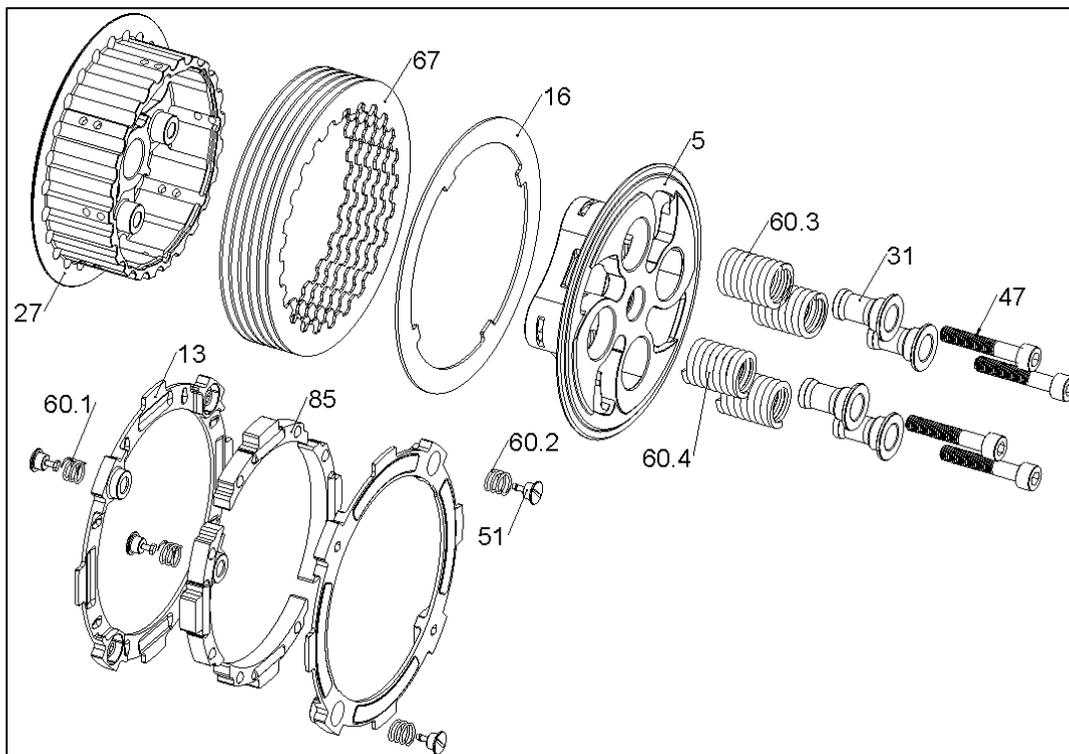
- Watch the “CORE EXP Auto-Clutch Installation Video” by scanning this QR code or visiting rekluse.com/videos.
- Read this entire document before performing any steps, so you will know what to expect.
- Be sure to wear proper eye protection.
- It is recommended to replace the clutch cover gasket any time the clutch cover is removed.
- Laying the bike on its side allows for easy clutch access and eliminates the need to drain oil
- Use clean, quality JASO MA certified oil for motorcycle transmissions for best performance.
- When reinstalling components, use the torque specifications found in your OEM service manual



TOOLS NEEDED

- 8, 10, and 12mm Sockets and/or T-Wrenches
- 2x Dental Pick Tools
- Needle-Nose Pliers
- 24mm Socket
- 8 & 10mm End Wrenches
- Funnel
- 6mm end wrench or Phillips screwdriver
- 5mm and 8mm Hex Keys

INCLUDED PARTS



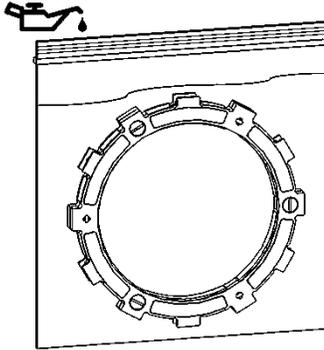
Item	Item Type	Qty
5	Pressure Plate	1
13	EXP Base *	2
16	Steel Lining Plate	1
27	Center Clutch Hub	1
31	Screw Sleeve	4
47	Fastener – M6 Screw (requires 5mm Hex tool)	4
51	Fastener – 1/4 Turn Pin*	6
60.1,60.2	EXP Adjustment Spring* (extra included, see tuning chart)	8
60.3,60.4	Pressure Plate Springs	4
67	Steel Drive Plate	6
85	Wedge Assembly*	4

* Denotes parts assembled as part of EXP disk assembly

Visit Rekluse.com/support for a full parts fiche illustration and part numbers.

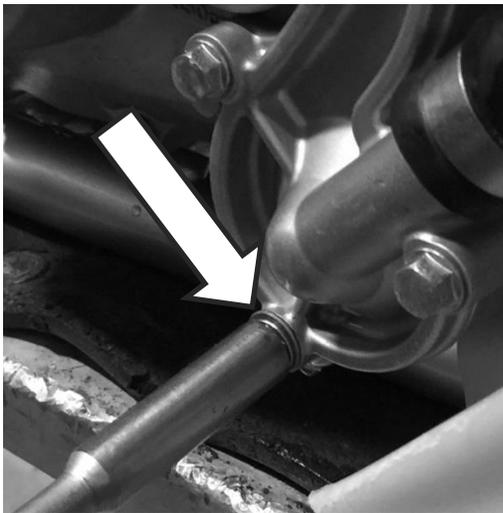
PREP & DISASSEMBLY

1. Soak the EXP disk and Rekluse friction disks in engine oil for at least 5 minutes.

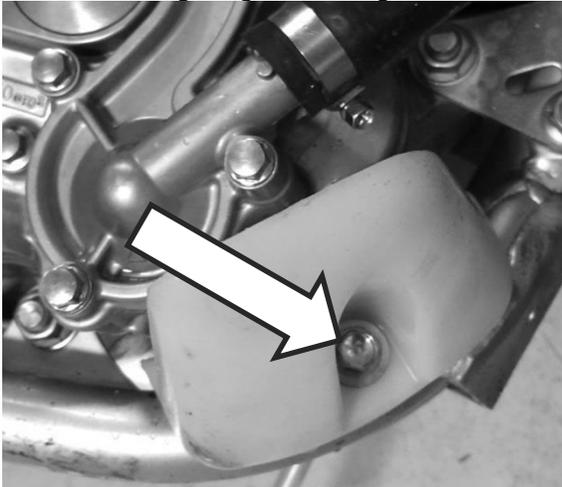


2. Place the bike in 5th gear. This will help later in the installation.

3. With the bike on a side stand or center stand, drain the engine coolant from the bike using an 8mm socket or T-wrench.



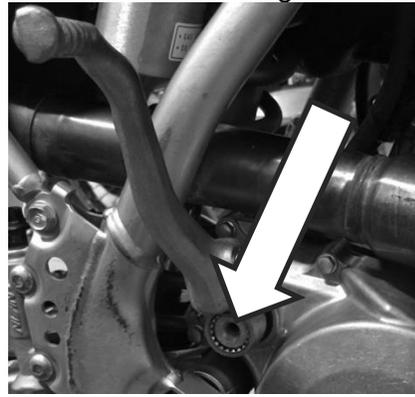
4. Remove the engine guard using a 10mm socket.



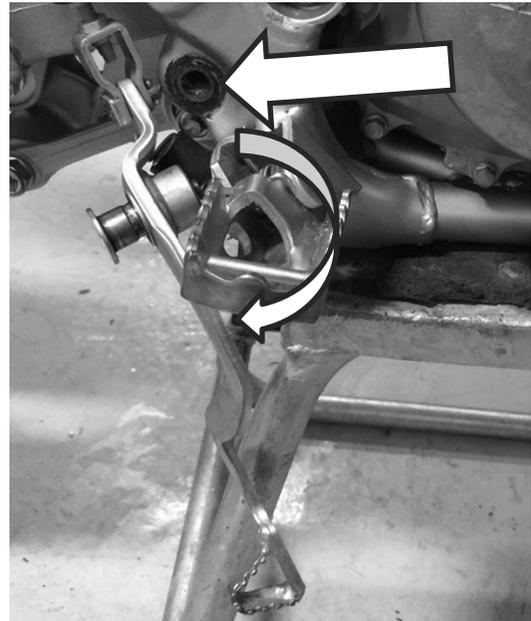
5. Unbolt the water pump cover from the side case.



6. Remove the kick starter using a 12mm socket.



7. Remove the brake pedal bolt using an 8mm Hex Key and rotate the brake pedal away from the clutch cover.



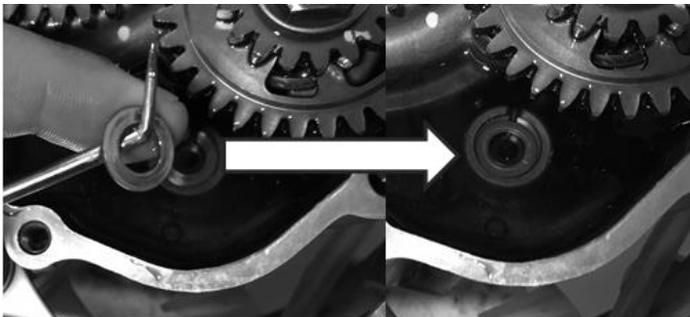
8. To avoid draining the oil, you can lay the motorcycle on its left side. Otherwise, stand the bike vertically on a center stand and drain the oil. In order to not spill oil the bike needs to be all the way down on its side. Catch any fuel that drains.



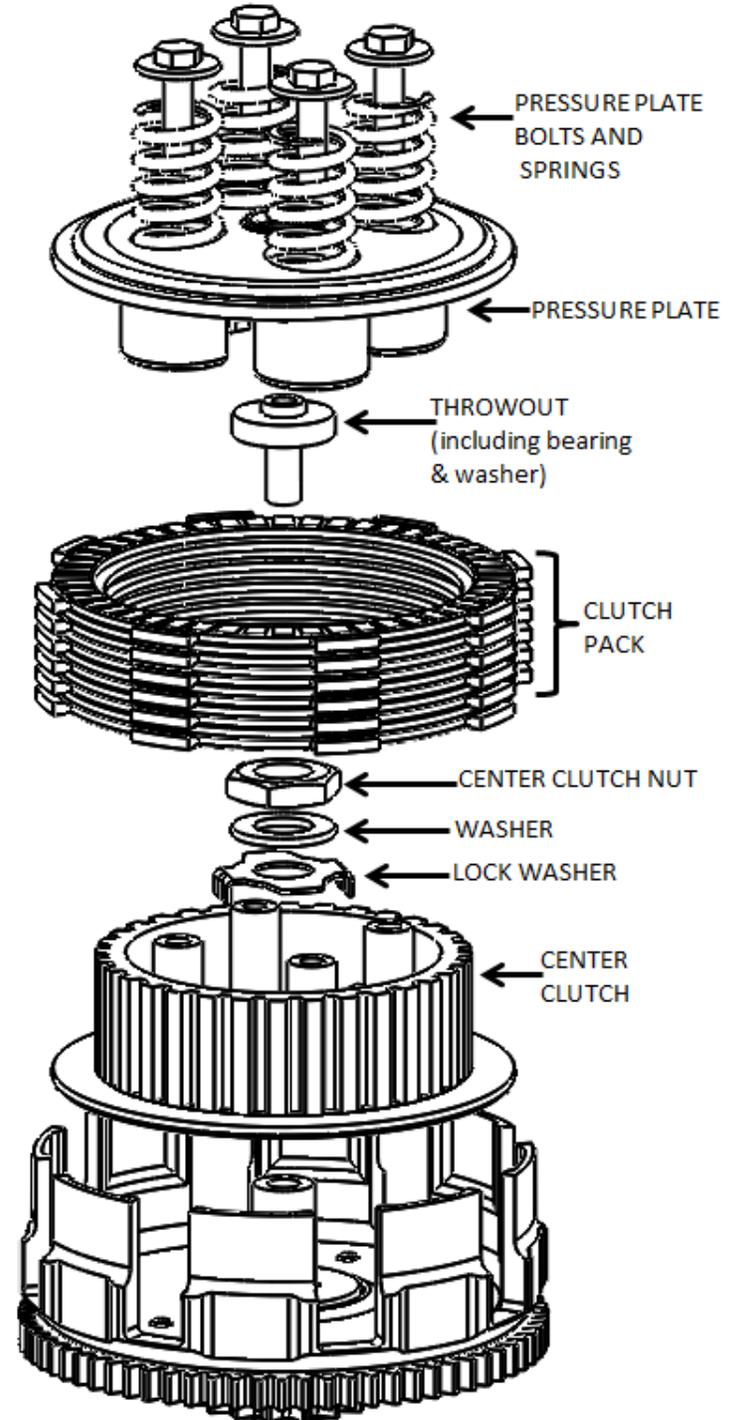
9. Remove the clutch cover bolts and clutch cover, taking care to not damage the cover gasket. Replace this gasket if it is torn or damaged.



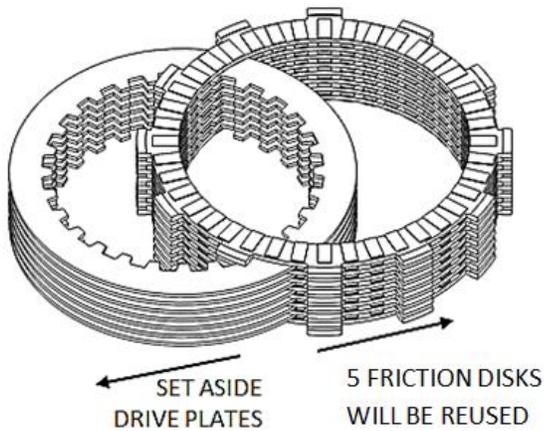
NOTE: Be sure that the copper washer for the water pump as well as the sleeve and O-ring for the water jacket are not displaced.



10. Remove the OEM clutch parts named in the following diagram. Leave the basket installed.



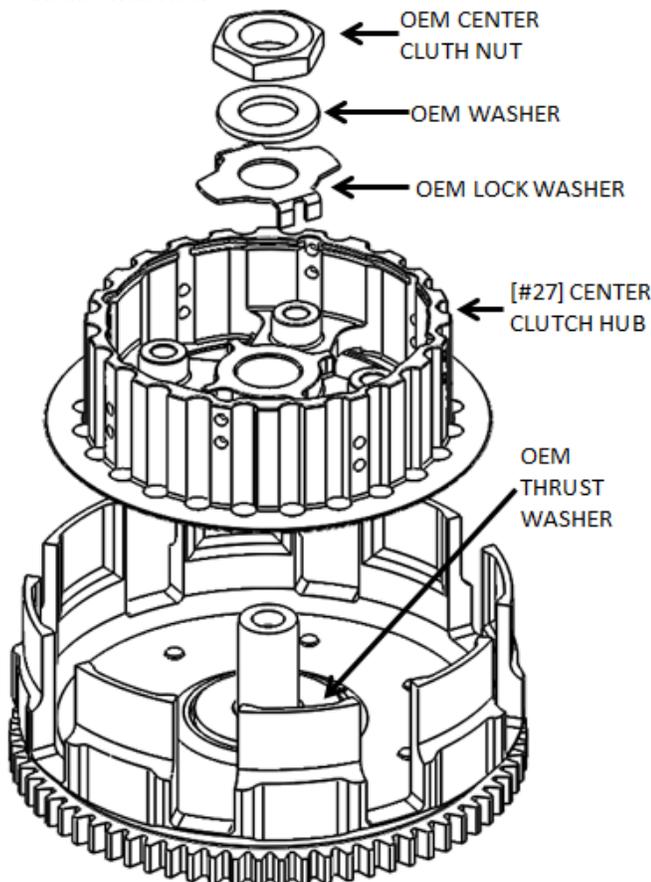
11. Separate the OEM clutch pack.



Inspect the friction disks for signs of heat or wear. Replace if they are burnt or worn. For most models, new friction disks can be purchased from Rekluse.

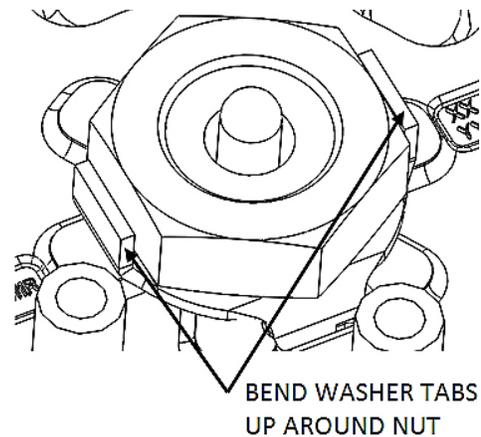
INSTALLATION

12. Install the new center clutch hub with OEM lock washer, washer, and nut on top of the OEM thrust washer.

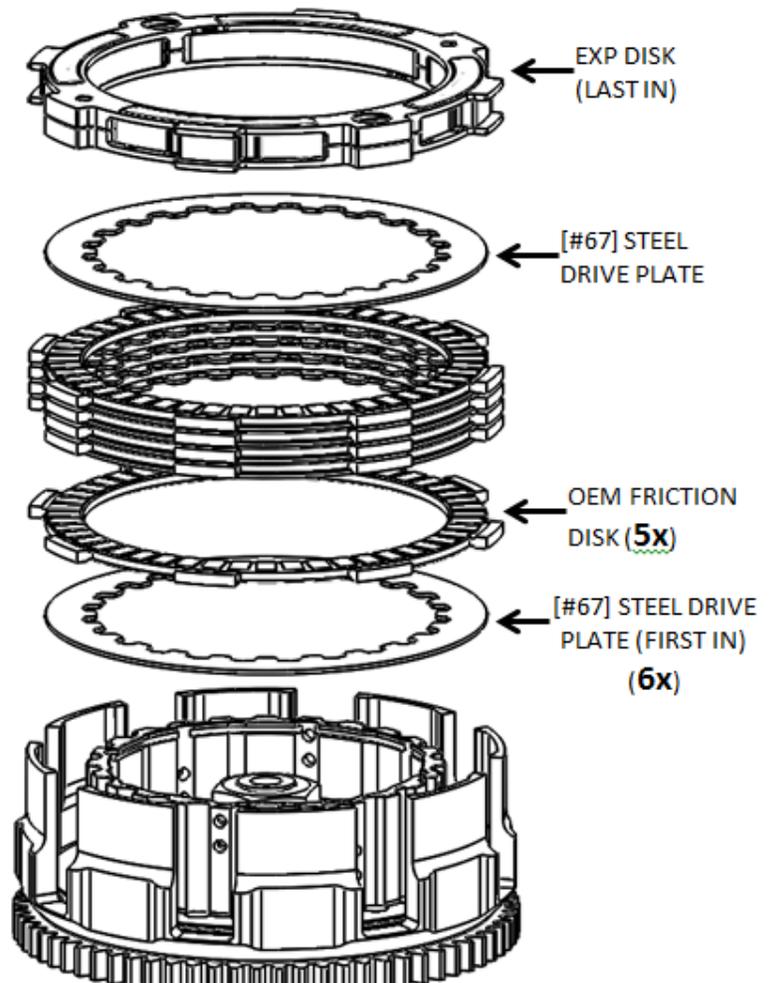


NOTE: If the OEM thrust washer is not in place, it is probably stuck to the backside of your OEM center clutch hub.

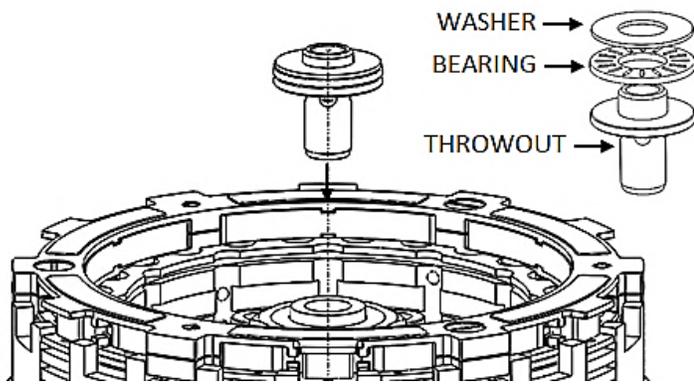
13. Torque the nut to 40 ft-lb (55 N-m), then bend both tabs up. **DO NOT OVER TORQUE**, or the clutch will drag and damage may occur.



14. Install the new clutch pack, starting with a steel drive plate and then alternating OEM friction disks with steel drive plates. The EXP disk goes in last on top of the final steel drive plate.

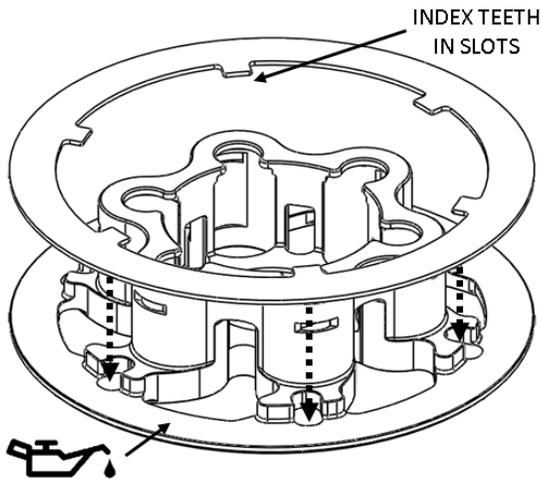


15. Reinstall the OEM throwout.

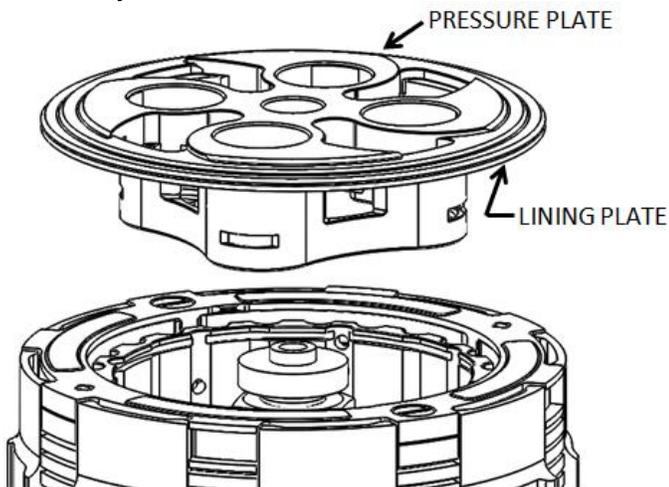


NOTE: If you are missing the top washer, it is probably stuck to the backside of your OEM pressure plate.

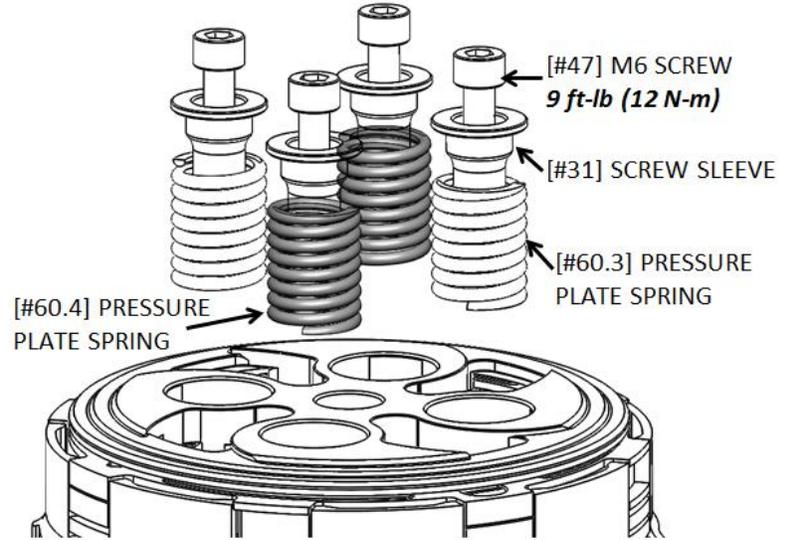
16. Place the Lining Plate onto the Rekluse Pressure Plate. Adding an oil film between them will help them stick together for ease of installation.



17. Install the pressure plate and lining plate assembly.



18. Install the pressure plate springs being sure that the same color springs are directly across from each other.



19. Reinstall the side case cover, rotating the water pump until the gears mesh. The case cover should sit flat on the engine case before starting to bolt it down. Torque bolts to OEM specifications.

20. Reinstall the water pump cover, kick starter, and brake lever. Torque to OEM specifications.

21. With the bike in a vertical position on a center-stand, use a funnel to refill the bike with engine coolant.

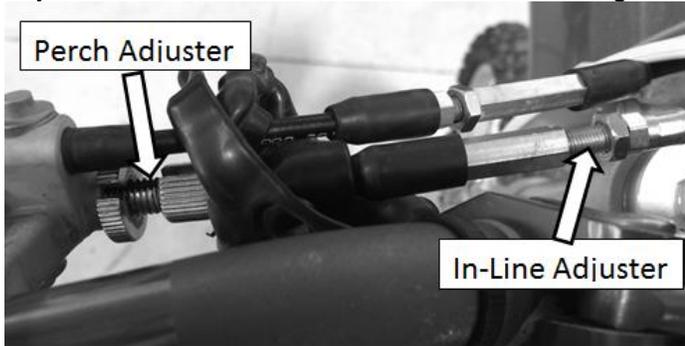
INSTALLED-GAP SETTING

DEFINITION: “Installed-Gap” is the separation in the clutch pack created by the tension adjusted into the clutch cable. This gap is what allows the clutch to spin freely until the desired RPM is reached for engagement; it must be set correctly for optimal performance.

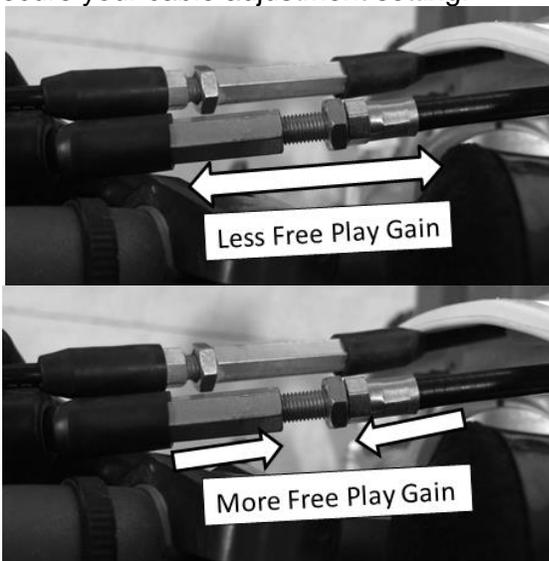
NOTICE

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

- 22. Locate the perch and in-line cable adjusters for the clutch. Set the perch adjustment so that it is about half-way out. The perch adjustment can be used while riding to adjust if necessary. The in-line adjuster will now be used to set the initial setting.



- 23. In the next section you will make adjustments using the front jam nut and perch adjuster to set the desired Installed-Gap based on the lever free play gain. Once this is established and everything functions well, you will tighten the adjuster jam nuts to secure your cable adjustment setting.

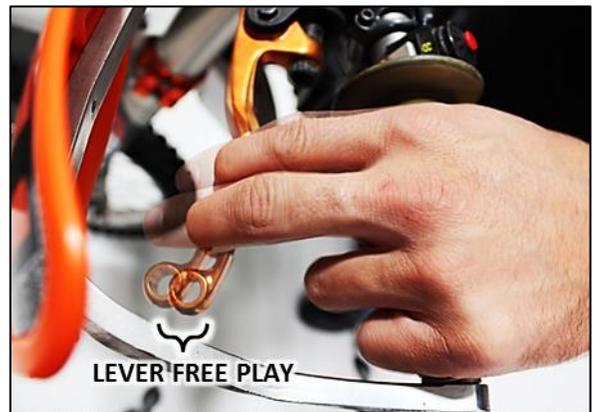


CHECKING LEVER FREE PLAY GAIN

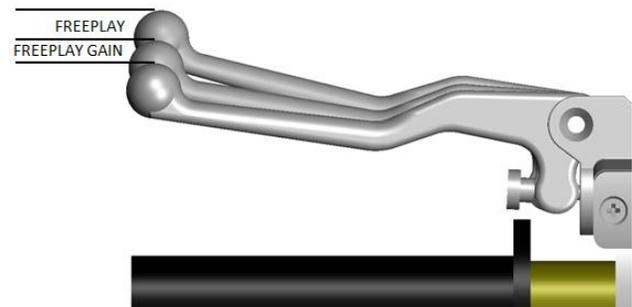
NOTE: Before performing this step, please visit our website at rekluse.com/support to view the TECH VIDEO entitled “How to Check Free Play Gain”.



“Lever Free Play” is essentially the “slack” in the clutch lever before it starts actuating the clutch. Applying a light finger pressure will take up this slack. *With this clutch kit installed, there will be NO lever free play, as the cable is always under tension.*



“Free Play Gain” is the increase of lever free play as the auto-clutch engages. This happens when the RPM increase from idle through around half-throttle (4,500 RPM). Free Play Gain is caused by the expansion of the EXP disk which lifts the pressure plate away from the throwout assembly.



Optimal Free Play Gain yields **1/2-3/4” (12-19mm)** of clutch lever movement, measured at the end of the lever. This measurement at the lever correlates to achieving the ideal installed-gap.



Rubber Band Method:

It is recommended that you use this method first to find your Free Play Gain so you can see what it is. Then, check it by hand as well so that you can effectively and comfortably check free play gain every time you ride.

Wrap the included rubber band around the outer end of the handlebar grip and attach it to the ball end of the clutch lever.

The following steps explain two ways to check Free Play Gain. One will use the rubber band that has been included in the clutch kit and one explains using your hand, which you will perform before every ride.

Place the bike in neutral, start the engine and let it warm up for 2-3 minutes.

NOTICE

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

WARNING

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.



With the bike at idle in neutral, quickly blip (rev) the engine to at least half-throttle (~4,500 RPM) and let it return to idle. **The end of the clutch lever should move in about 1/2-3/4" (12-19mm) toward the handlebar as you rev the engine.**

NOTE: If you are not getting the correct lever movement, see the "Free Play Gain Troubleshooting Guide" on the next page.

Hand Method:

Free play gain should also be checked using your hand, as you will check it by hand before every ride. With the bike at idle, apply enough pressure to the lever to take up the initial freeplay (slack) shown in the photos on the previous page. While continuing to apply light pressure, rev the engine to half-throttle. **The clutch lever should move in 1/2-3/4" (12-19mm) under your finger pressure as you rev the engine and the auto-clutch engages.**



FREE PLAY GAIN TROUBLESHOOTING

Each adjustment should be done in small increments. After each adjustment, repeat the rev-cycle until optimal free play gain is achieved.

Symptoms:

- Clutch lever moves in too far (too much free play gain)
- Clutch has excessive drag
- It is difficult to fully override the clutch with the lever

Answer: Installed-Gap is too small

Solution: TIGHTEN THE CABLE by extending the in-line adjuster or perch adjuster to increase the Installed-Gap.

Symptom:

- Clutch lever does not move enough or does not move at all (too little free play gain)
- Clutch is slipping

Answer: Installed-Gap is too large

Solution: LOOSEN THE CABLE by collapsing the in-line adjuster or perch adjuster to reduce the Installed-Gap.

BREAK – IN

Follow these procedures for a new installation and any time new friction disks, EXP bases, or wedges are installed.

1. Rev cycles: Warm up the bike for 2-3 minutes. With the bike in neutral and your hand **off** of the clutch lever, rev the engine 10 times, being sure to let it **return to idle** between each rev cycle.
2. With the engine running, pull in the clutch lever and click the bike into gear. Slowly release the clutch lever. The bike should stay in place, perhaps with a slight amount of forward creep.
3. Now that the bike is idling in first gear, slowly apply throttle to begin moving. To break in the clutch components, perform the following roll-on starts in 1st and 2nd gear without using the clutch lever: In 1st gear, accelerate moderately to approximately 4,500 RPMs and come to a stop—repeat this 5 times. Next, starting in 2nd gear, accelerate moderately to approximately half-throttle then come to a stop—repeat this 5 times.
4. Now that the EXP is broken-in and the clutch is warm, re-check free play gain at your clutch lever and adjust if necessary. Your clutch pack will expand with heat, so final adjustments should be made when the bike is warm. Now you are ready to ride!

WARNING: DO NOT RIDE WITHOUT SUFFICIENT FREE PLAY GAIN!

Checking free play gain is easy and takes less than a minute to perform. For optimum performance and longevity, check free play gain when the bike is warm at the start of every ride.

NO FREE PLAY GAIN MEANS THE CLUTCH WILL SLIP!

CLUTCH NOISE & DRAG

Noise:

Although it is harmless, some bikes 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. For bikes that tend to have clutch squeal or chatter here are some recommendations to reduce or eliminate it:

- **Oil:** Rekluse recommends that you have fresh, clean JASO-MA rated oil for best clutch performance. Dirty or old oil can make the clutch more likely to squeal or chatter. Some heavy-duty oil stabilizers or other additives have been known to reduce noise and make shifting smoother. Be sure that any additives you might use are approved for use in wet-clutch motorcycles.
- **Installed-Gap:** Adjusting the Installed-Gap will NOT affect clutch squeal or chatter

Drag:

Now that your clutch has more friction disks and therefore surfaces than stock, the clutch may drag more than stock, and possibly may drag more noticeably more when cold. If this occurs, warm the bike up by allowing it to idle for a few minutes before riding.

EXP TUNING OPTIONS

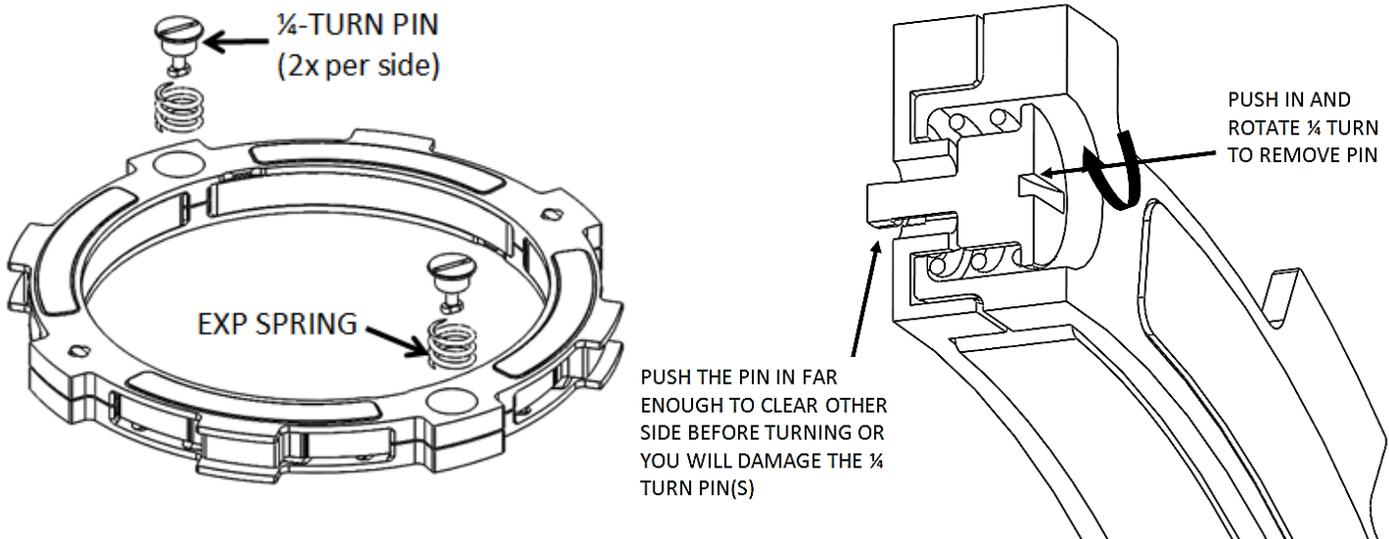
Included are spring options to tune the engagement RPM of the EXP friction disk. The EXP friction disk comes set with the recommended “Medium” setting from Rekluse. See the following chart for settings.

CRF150R:

ENGAGEMENT SETTING	EXP SPRING CONFIGURATION
Low	2 Silver and 2 Steel Springs
Medium	4 Silver Springs
High	2 Silver and 2 Red Springs

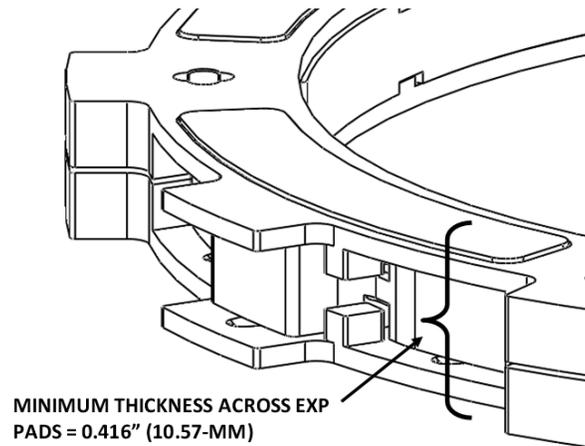
Adjusting the engine idle speed to match your engagement setting is important and greatly affects the overall feel of how the EXP disk engages. To prevent freewheeling and maximize engine braking, set the idle so there is a slight amount of drag while the bike is idling in gear and warmed up. The idle 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.

It is **NOT necessary** to disassemble the EXP halves to change springs! To change springs, remove 2 of the ¼-turn pins from one side of the EXP, replace springs, and re-install ¼-turn pins. Next, flip the EXP disk over and repeat on the other side if necessary. To maintain even pressure when using two different color spring sets, install one color set of 2 on one side of the EXP and the remaining color set of 2 on the other side.



MAINTENANCE

- Maintain adequate free play gain, checking before every ride and adjusting if necessary.
- Keep up with regular oil changes as per the bike manufacturer's recommendations. Clutch function and longevity depends on oil quality.
- Inspect all of your clutch parts **as per OEM intervals** for signs of wear or excessive heat, and replace components as necessary.



- If you find yourself making frequent cable adjustments to fix free play gain, drag, or performance, it is likely time to replace worn clutch disks. Measure your friction disks and replace as necessary as per your OEM manual.
Excessive heat or clutch slip can cause premature clutch failure. Once extreme temperatures are reached, irreversible damage will occur. Inspect your clutch plates; if the friction disks look burnt or glazed, or the drive plates are warped, it is best to replace the entire clutch pack.
- Repeat the break-in procedure anytime the friction disks or EXP bases or wedges are replaced. Always soak friction disks or EXP bases in oil for at least 5 minutes before installing.

REKLUSE®



©2015 Rekluse Motor Sports
Rekluse Motor Sports, Inc.
12000 W Franklin Rd
Boise, Idaho 83709
208-426-0659
support@rekluse.com