

REKLUSE



REKLUSE MOTOR SPORTS

The Rekluse Core EXP Clutch

INSTALLATION GUIDE

191-7700

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OVERVIEW

To complete the installation, you will be performing the following steps:

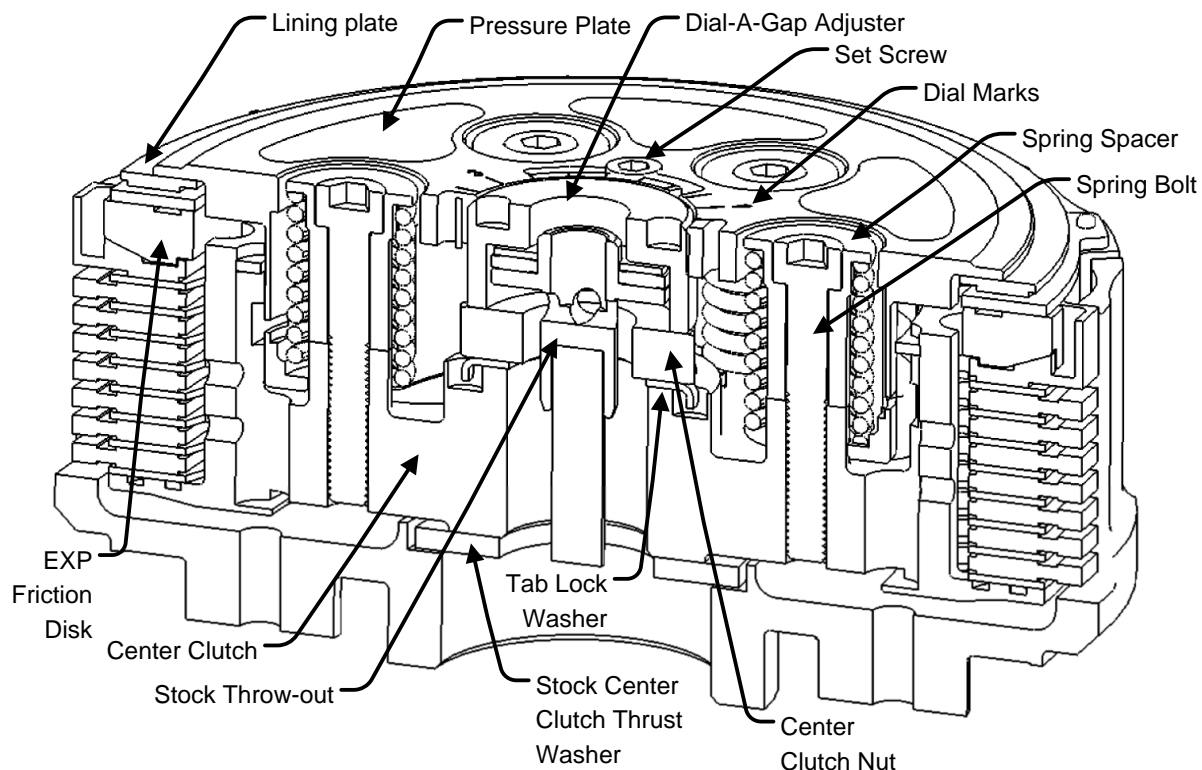
- Removal of your stock pressure plate, clutch pack and center clutch
- Installation of the Rekluse Core center clutch
- Installation of Rekluse drive plates with 7 friction plates from the stock clutch pack (you will leave out 1 or 2 stock frictions, depending on model)
- Installation of the Rekluse EXP friction disk
- Installation of the Rekluse EXP pressure plate and springs
- Setting the installed gap for break-in
- Performing clutch break-in
- Re-setting the installed gap after break-in
- Verifying proper free play gain

INSTALLATION TIPS

- Be sure to use proper eye protection
- Laying the bike on it's side makes it easier to work on the clutch and eliminates the need to drain the oil
 - Be sure to turn off the gas, work in a ventilated area and be prepared to catch any gas that may drain from vent tubes
- An air or electric impact wrench works well to remove the center clutch nut
 - or place the bike in top gear and hold the rear brake while loosening the center clutch nut
- Channel-lock style pliers work best to bend the tabs of the lock washer up over the center clutch nut
- Read and understand the maintenance guide

TOOLS NEEDED

- 27mm, 29mm, or 30mm socket (for stock center clutch nut)
- 32mm (or 1-1/4") socket (for Rekluse center clutch nut)
- 5mm hex key (for Rekluse springs)
- 4mm (or 5/32") hex key (for set screws)
- Channel locks (to bend tabs of Rekluse tab lock washer)
- 8mm, 10mm socket (for removing clutch cover and stock springs)



1. Soak the friction pads of the EXP assembly and the lining plate in oil for at least 5 minutes. Putting oil in the bag the EXP is packaged in will make this easy.
2. Adjust 5-8 turns of slack into the clutch cable at the clutch lever perch and place the bike in 4th or 5th gear.
3. Lay the motorcycle on its left side and remove the clutch cover.
4. Remove the stock springs, pressure plate, center clutch, throw-out, and clutch pack.
5. Install the Rekluse center clutch, with **stock center clutch thrust washer** behind it, onto the main shaft.
6. Install the Rekluse tab lock washer so the 2 pre-bent tabs index down into the 2 corresponding holes of the Rekluse center clutch.

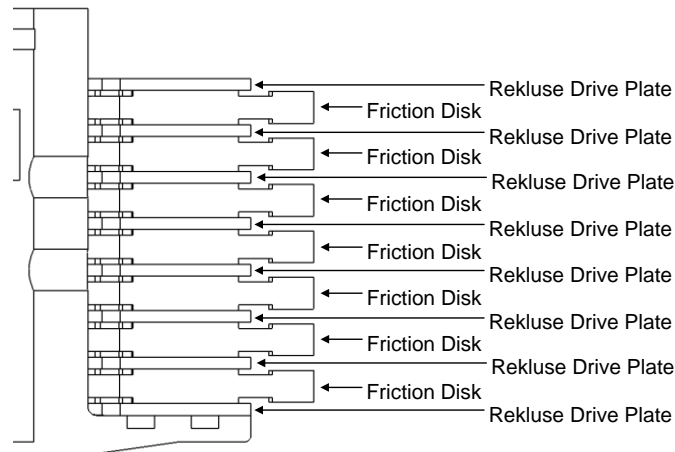
NOTE: KX450F, KLX450 customers, do not re-use the stock Belleville lock washer. You will only use the Rekluse tab lock washer underneath the Rekluse Nut.

NOTE: the stock center clutch thrust washer, throw-out with needle bearing and flat washer and the friction plates will be re-installed.

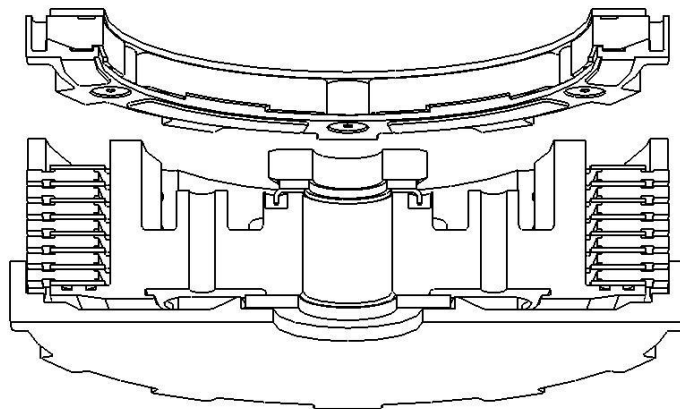
7. **HONDA Models only:** Install the stock flat washer, which was between the stock lock washer and stock nut, on top of the Rekluse tab lock washer.

8. Install the included Rekluse 32-mm center clutch nut (**RMZ-450 owners, re-use stock center clutch nut**). Torque the nut to the value specified in your motorcycle owner's manual. Once torqued, bend the tabs of the Rekluse tab lock washer up to secure the nut.

9. Configure clutch pack as shown below and install onto Rekluse center clutch. You will install **7 stock frictions** and **8 Rekluse drive plates starting and ending with a Rekluse drive plate**.

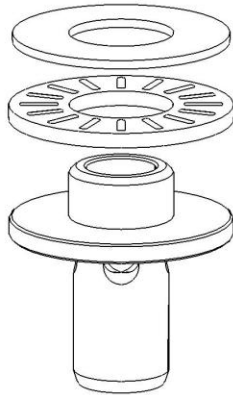


10. Install the **EXP friction disk with the friction pads down** (see below) against the top Rekluse drive plate. The top of the EXP friction disk, which has no friction pads, should be facing up toward you.



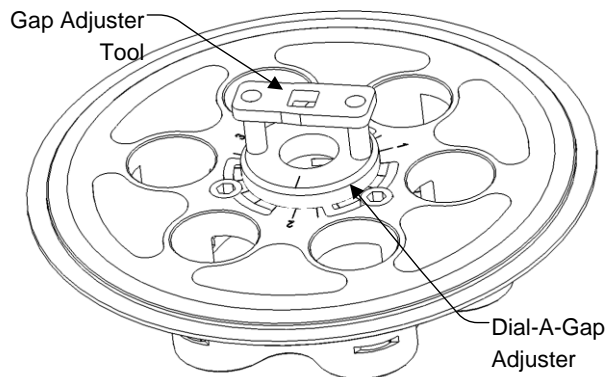
11. Install the stock throw-out, with needle bearing and flat washer on top, onto the throw-out rod.

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



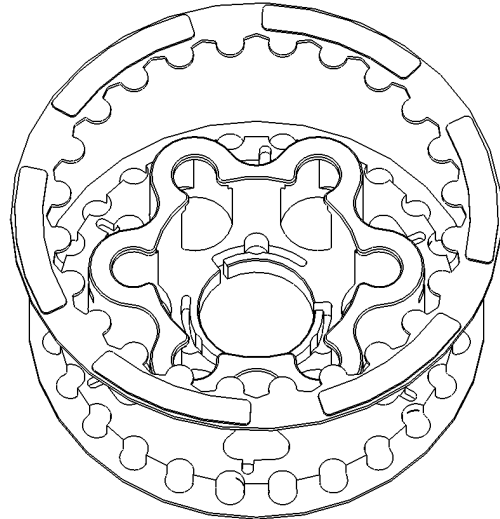
12. Thread the Dial-A-Gap adjuster into the pressure plate so it is about $\frac{1}{4}$ " (6.5-mm) above the top of the pressure plate. Use the spanner tool to turn the Dial-A-Gap adjuster.

Next, loosely thread the 3 set screws into the corresponding holes of the pressure plate—do not tighten them, you will do so later.



13. Place the lining plate onto the Rekluse pressure plate as shown below. Index

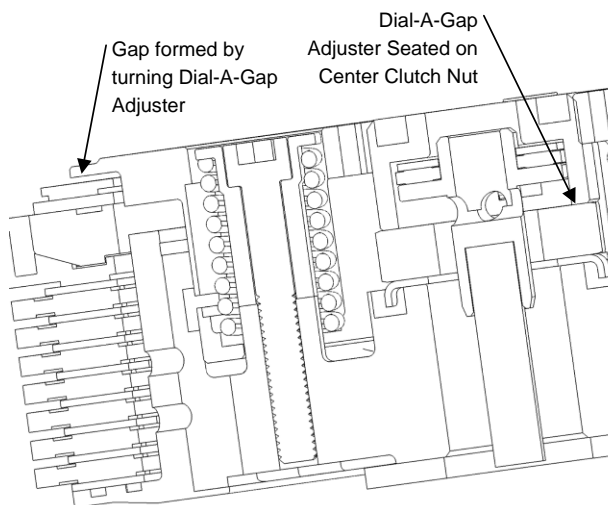
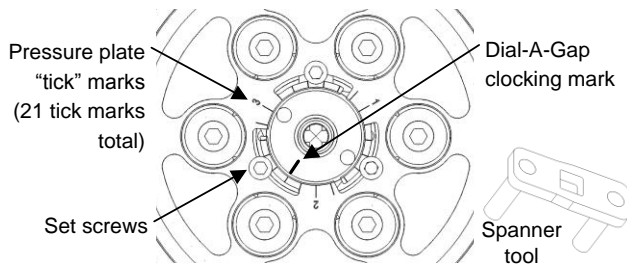
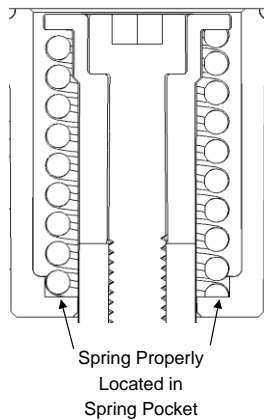
the teeth of the lining plate into the mating slots on the Rekluse pressure plate. **The friction pads of the lining plate should face out as shown below.**



14. Install Rekluse pressure plate with lining plate onto the Rekluse center clutch. **Hold the pressure plate and lining plate together** while installing onto center clutch to ensure the lining plate teeth remained indexed into the pressure plate.

15. Install the included Rekluse springs into the pockets of the pressure plate. Place the spacers and bolts into the springs and thread each bolt in a couple of turns. Then **rotate each spring one turn counter-clockwise to ensure the spring is properly located in its spring pocket** (see picture next page).

Torque each bolt to 9 ft-lbs (12 N-m).



16. Insert the pins of the spanner tool into the Dial-A-Gap adjuster. **By hand**, turn the spanner tool clockwise to thread the Dial-A-Gap adjuster inward. **Use firm pressure** to turn the adjuster until it comes to a stop against the center clutch nut. Make note of where the mark on the adjuster lines up with the tick marks on the pressure plate. This is your **starting point**.

17. Check to **make sure there is lever free play**. If the clutch lever is tight, then adjust a few more turns of slack into the cable and repeat step 16.

18. Using the included adjuster tool and a $\frac{1}{4}$ " drive ratchet, turn the Dial-A-Gap adjuster clockwise, 1 full turn past the **starting point** you found in step 16. Use the tick marks to keep track of where you started. The adjuster tool can also be turned with a 12mm or 13mm wrench from its square ends.

NOTE: As the pressure plate gets raised by the adjuster, the clutch may slip and start to spin before you reach 1-full turn. With the bike in gear you can hold the rear tire to turn against.

19. Once the gap is set, tighten down the 3 set screws in the Rekluse Pressure Plate to lock the Dial-A-Gap adjuster into place. To tighten the screws evenly, go around in 3 steps. The set screws should be tightened to 60-70 in-lbs (7-8 N-m); moderately tight with a 4mm allen key. Do not over-tighten the set screws or you will damage the threads in the pressure plate. It is not necessary to put thread locking compound onto the set screws.

20. Install clutch cover with the included gasket(s). Some models require stacking 2 gaskets.

NOTE: Some versions of the 02-08 CRF450R Rekluse clutch covers require the included gaskets for clearance with Core EXP clutch. Covers with Part # 470-013 and 470-013A require use of the gasket. Contact Rekluse if your cover does not have a part number.

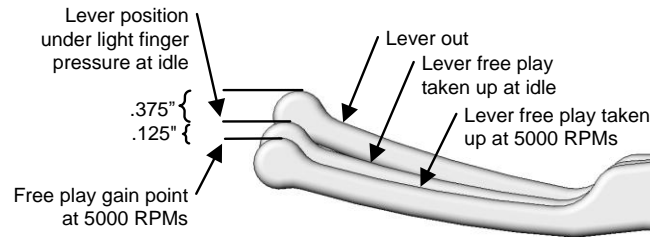
21. Set Clutch Lever Free Play and Check for Lever Free Play Gain

Adjust the clutch lever free play at the clutch perch according to your service manual or personal preference. You must have at least a slight amount of clutch lever free play just like the stock clutch.

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

With the bike at idle, pull on the clutch lever lightly with a single finger so the lever free play is taken up but the clutch is not disengaged. While continuing to apply light pressure, rev the engine to at least 5000 RPMs from idle. **The clutch lever should move in under your finger pressure slightly as you rev the engine.** This is known as free play gain.

Measured at the end of the clutch lever, the lever should come in a minimum of 1/8" (3-mm) as the engine is revved.



See the User's Guide for more information about Free Play Gain.

If there is no lever free play gain, you will need to reset the installed gap as described in steps 16 through 18.

22. Clutch Break-in

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 some forward creep.

Once you have the bike idling with first gear engaged, slowly apply the throttle to begin moving. To break-in the clutch components it is best to perform some roll on starts, without using the clutch lever, in 2nd and 3rd gear. In 2nd gear, accelerate moderately to approximately 5000 RPMs and come to a stop—repeat this 20 times. Next, starting in 3rd gear, accelerate moderately to approximately 5000 RPMs then come to a stop—repeat this step 10 times.

23. Resetting Installed Gap After Break-In

After break-in, the installed gap must be reset due to the initial “seat-in” of the clutch components. Before resetting the installed gap, allow the clutch to cool for 20 minutes with the cover off.

Adjust 3-4 turns of slack into the clutch cable at the clutch perch, remove the clutch cover and loosen the 3 locking set screws in the pressure plate. Using the spanner tool, turn the Dial-A-Gap adjuster counter-clockwise until it is loose.

Follow steps 16 through 18 again to reset the installed gap, but reset to **1 full turn plus 3 tick marks** for the post break-in installed gap. This is the recommended Rekluse installed gap setting.

Be sure to tighten the 3 locking set screws in the pressure plate to lock the Dial-A-Gap adjuster in place. Adjust the clutch lever free play as previously instructed.

Check for free play gain as described in step 21. With an installed gap of 1 turn + 3 tick marks, the free play gain should be approximately 1/8” (3-mm) measured at the end of the lever. If you cannot feel any free play gain in the lever you must reset the installed gap.

Read the included User Guide for more information about setup and maintenance of the Core EXP clutch.

NOTE: Whenever installing new frictions or a new EXP assembly, you must go through the break-in procedure as described in steps 16 through 23. Always soak new friction disks in oil prior to installing.

NOTE: Checking free play gain is simple and takes less than a minute to perform. For maximum clutch plate life, take a moment to check for free-play gain at the start of every ride.

WARNING: DO NOT RIDE WITHOUT SUFFICIENT FREE PLAY GAIN. Your clutch may seem to operate ok but it is not getting full clamping force and may slip without you recognizing it. This can lead to premature failure of the clutch friction disks including the EXP friction disk.

EXP TUNING OPTIONS:

Included with the Rekluse Core EXP is 3 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 following chart.

| Engagement Setting | Spring Configuration |
|--------------------|--------------------------|
| Low | 6 Red Springs |
| Medium | 3 Red and 3 Blue Springs |
| High | 6 Blue Springs |

NOTE: When using 3 Red Springs with 3 Blue Springs, you must stagger the different colored springs so the wedges are loaded evenly. For example, you will have 1 Red spring followed by 1 Blue spring until all 6 locations have one spring.

Adjusting the engine idle speed to match your engagement setting is important and greatly affects the overall feel of how the EXP friction 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. This does not mean the bike is rolling forward, but with a small increase in throttle starts to move.

Optional Light Wedge Kit (RMS-256): This kit, consisting of 6 lighter wedges, gives the option of softening the engagement rate of the EXP friction disk. They make the clutch feel smoother and less aggressive. Contact Rekluse for more information.

To change springs, remove the 6 flat head screws with the included T-10 Torx tip. When re-installing screws, **use medium strength blue Loctite, and torque screws to 26 in-lbs.**

