



REKLUSE[®] CoreEXP[™]

REKLUSE MOTOR SPORTS

The Rekluse Core EXP Kit for Cable-Actuated Motorcycles

INSTALLATION & USER'S GUIDE

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Doc Rev: 052518

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.

INSIDE THIS DOCUMENT

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



INSTALLATION TIPS

- Watch the “CORE EXP Auto-Clutch Installation Video” by following 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 use proper eye protection.
- Laying the bike on its side makes clutch work easier and eliminates the need to drain the oil.
- An air or electric impact wrench works well to remove the center clutch nut, or you can place the bike in top gear and hold the rear brake while loosening the center clutch nut with a socket.
- Channel-lock pliers work best to bend the tabs of the washer up over the center clutch nut.
- Use clean, quality JASO MA certified transmission oil for best performance.
- Bikes with taller gearing or modified engines with increased horsepower may require heavier wedges and/or stiffer pressure plate springs which can be purchased separately from Rekluse.
- Reinstall the judder spring and seat with the new clutch to reduce chatter and squeal.

Note: Installing the stock judder (boss) spring and seat is optional. However, this option is not available for all models. If your bike did not come with a stock judder spring, it can be purchased separately from a Honda dealer. Rekluse recommends installing the judder spring, seat, and friction on Honda 450s, 450X, and 2-stroke CR250R. This part will also fit the Kawasaki 450s.

The Honda part numbers for both Honda and Kawasaki:

Judder Spring Seat: #22125-MBN-670

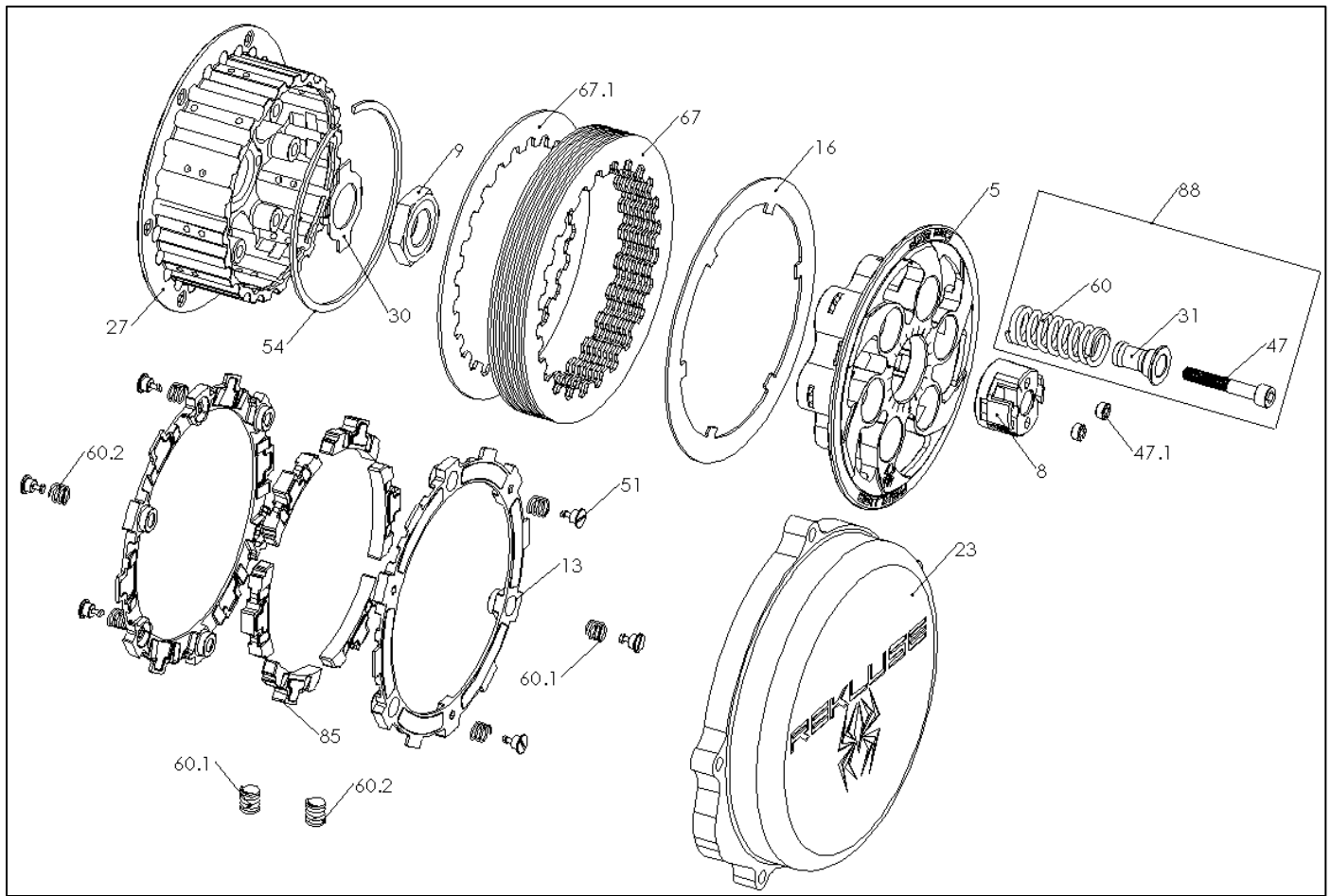
Judder Spring: # 22402-MBN-670

CL Friction Disk: #22201-MBN-670

TOOLS NEEDED

- 8mm socket
- 1¼” or 32mm socket
- Various end wrenches
- 4mm & 5mm Allen keys
- Torque wrench (in-lb & ft-lb, or N-m)
- Channel-lock pliers

INCLUDED PARTS



Item	Item Type	Qty
5	Pressure Plate	1
8	Pressure Plate Adjuster	1
9	Center Clutch Nut (requires 1¼" or 32mm socket tool)	1
13	EXP Base *	2
16	Steel Lining Plate	1
23	Clutch Cover	1
27	Center Clutch Hub	1
30	Lock-Tab Washer	1
31	Screw Sleeve ^^	5/6
47	Fastener – M6 Screw (requires 5mm Allen tool) ^^	5/6
47.1	Pipe Plug	2
51	Fastener - 1/4-Turn Pin *	6
54	Oil Retaining Ring	1
60	Pressure Plate Spring	5/6
60.X	EXP Adjustment Spring * (extra included, see last page for tuning options)	6
67	Steel Drive Plate ++	8
67.1	Thin Steel Drive Plate (.040" [1.0mm]) ++	1
85	Wedge Assembly *	6
88	Core Clutch Spring Kit Assembly	1
Not Shown	Throw-out Assembly (<i>Honda CRF250X and Husqvarna 450/510 models only</i>)	1
Not Shown	Brake Pedal Spacers (<i>only some models – see "Clutch Cover" section</i>)	1

* Denotes parts assembled as a component of the EXP disk assembly
 ++ Depends on model – see "Hub & Clutch Pack Installation" section
 ^^5 for 250F class bikes, 6 for 450F class bikes including 250 2-strokes

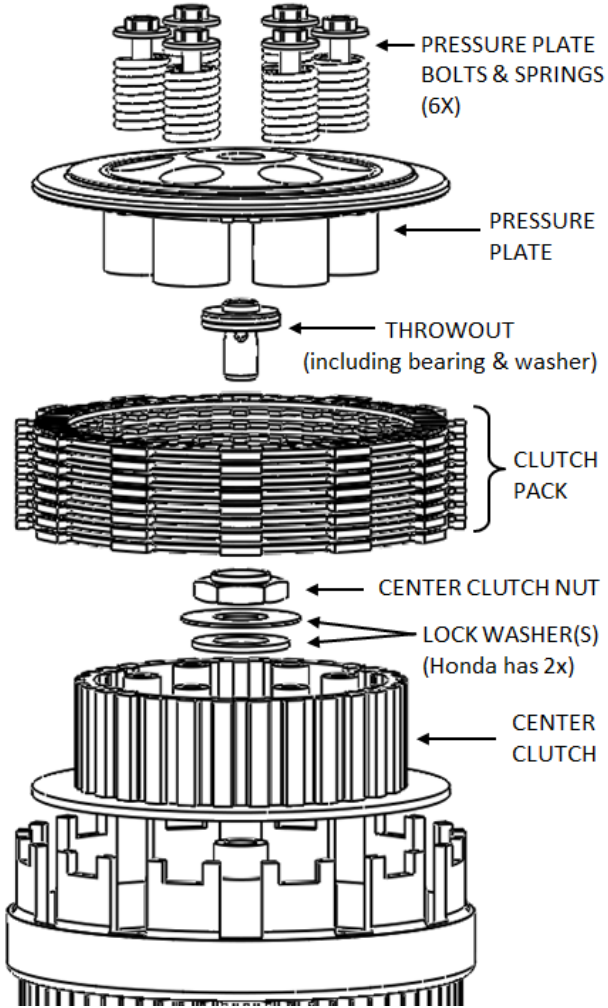
Visit rekluse.com/support for a full parts fiche illustration and part numbers.

PREP & DISASSEMBLY

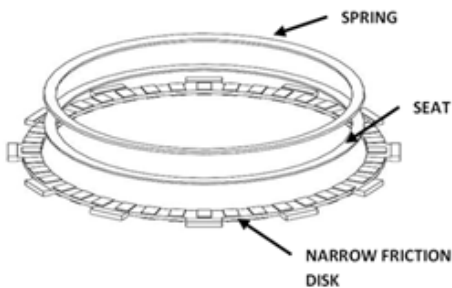
1. Lay the bike on its left side. Catch any fuel that might drain in a suitable container. Remove the clutch cover.



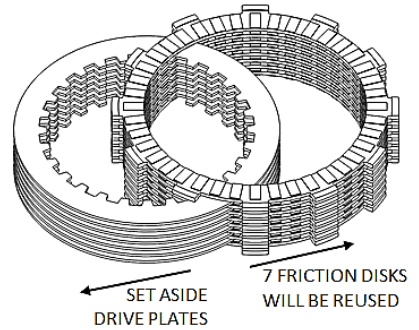
2. Remove the OEM clutch parts named in the following diagram. Leave the basket installed.



Note: Some models come equipped with a judder spring seat and judder spring. These are typically found at the bottom of the clutch pack inside a narrower friction disk. Be sure to remove these parts with the clutch pack.

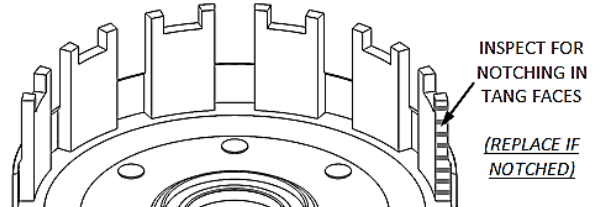


3. Separate the OEM clutch pack.

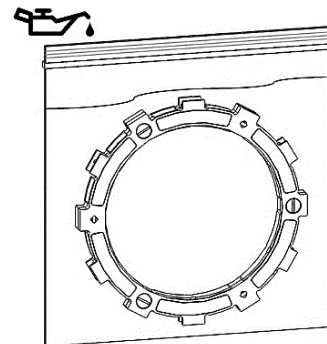


Inspect the friction disks for signs of heat or wear. Replace if they are burnt or worn. For most models, new friction disks can be purchased from Rekluse.

4. Inspect the basket for cushion slop or notching. If notched or worn, it is recommended to install a Rekluse Billet Clutch Basket (available for most models).



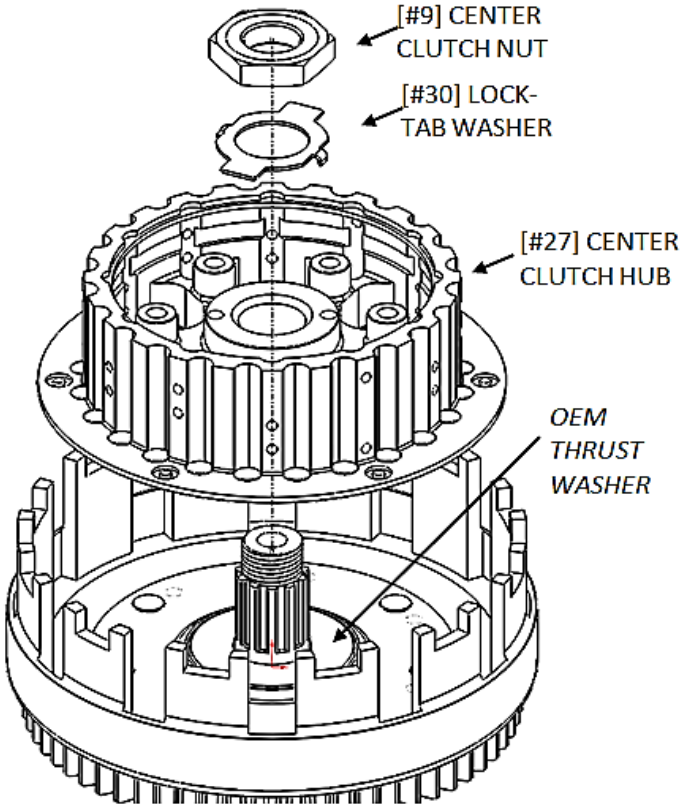
1. Soak the EXP disk in engine oil for 5 min.



HUB & CLUTCH PACK INSTALLATION

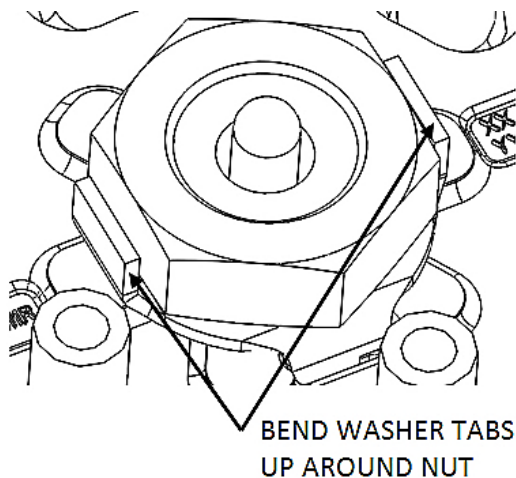
2. Install the new center clutch hub, washer, and nut on top of the OEM thrust washer. You **must** use the nut provided, as it is specifically sized for contact with the pressure plate adjuster.

Note: Only use the supplied lock tab washer under the Rekluse center nut when installing the Hub.



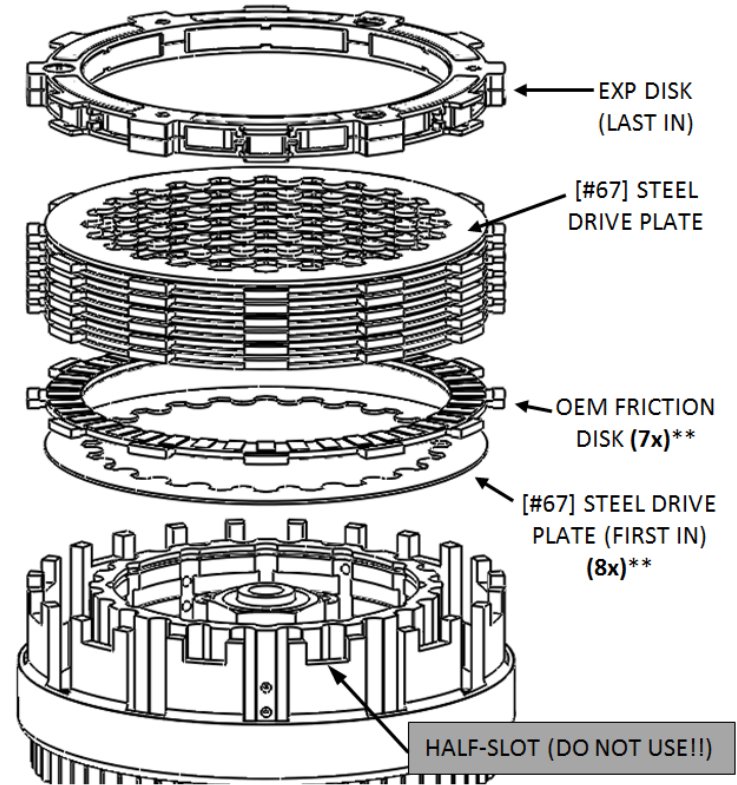
NOTE: If the OEM thrust washer is not in place, it is probably stuck to the backside of your OEM center clutch hub.

3. Torque the nut to 50 ft-lb (70 N-m), then bend both tabs up. **DO NOT OVER TORQUE**, or the clutch will drag and damage may occur.



4. Install the new clutch pack, starting with the thin drive plate and then alternating OEM friction disks with thick drive plates.

NOTE: Some OEM Baskets have "half-slots" at the top of the basket tangs. Rekluse products require that **all friction disks, including EXP disk, are seated into the MAIN (deeper) basket slots.**



** 450+ CC 4-STROKES & 250+ CC 2-STROKES ONLY:
USE THE .040" (1mm) DRIVE PLATE [#67.1] ON BOTTOM

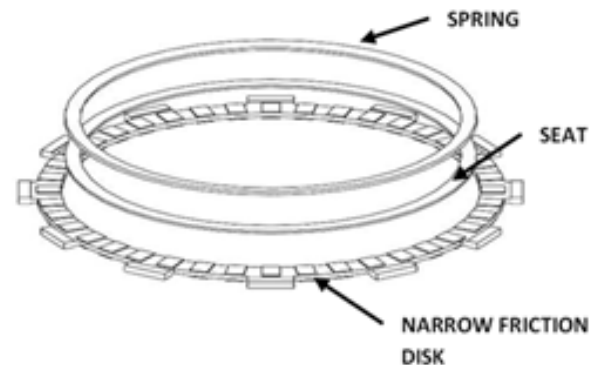
CRF450 owners only:

Honda 450s - '09 or Newer:

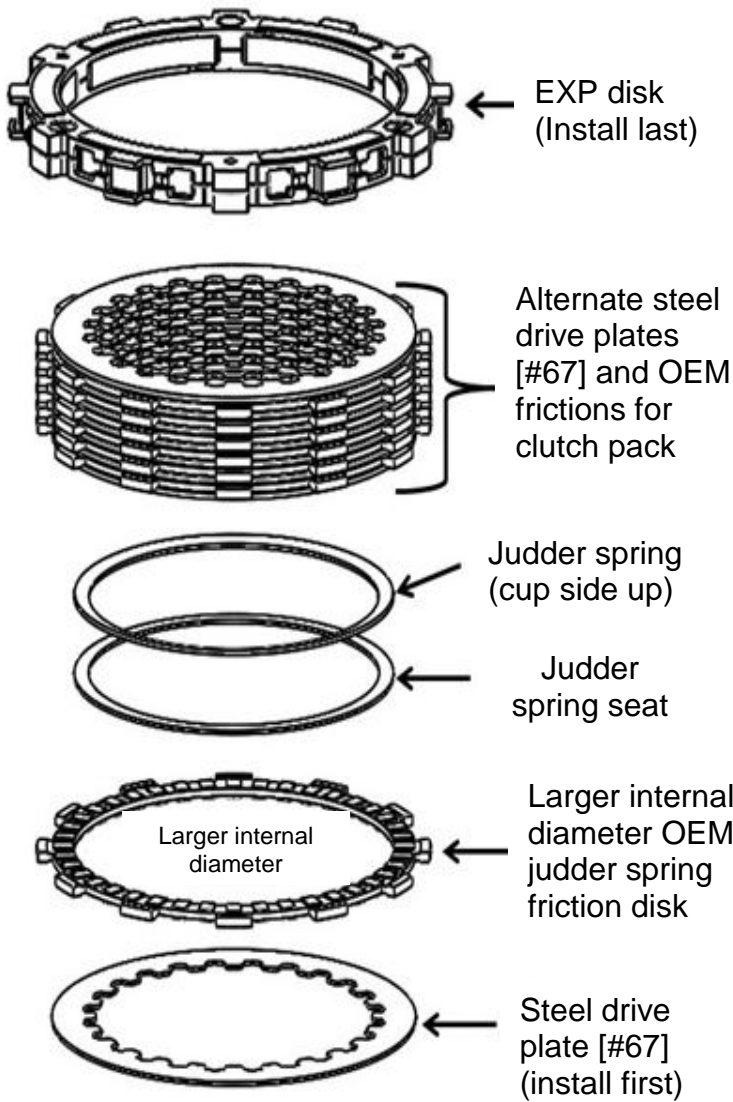
Install the first .040" steel drive plate, then reinstall your narrow OEM friction disk as the **bottom most friction**, with the OEM judder spring seat and judder (boss) spring oriented **cup side up**.

Older Honda 450s, 450X, 2-stroke CR250R, and Kawasaki 450s: The judder spring, seat, and friction can be added to the clutch pack to reduce/prevent clutch pack squeal and chatter. These parts are not required, but recommended.

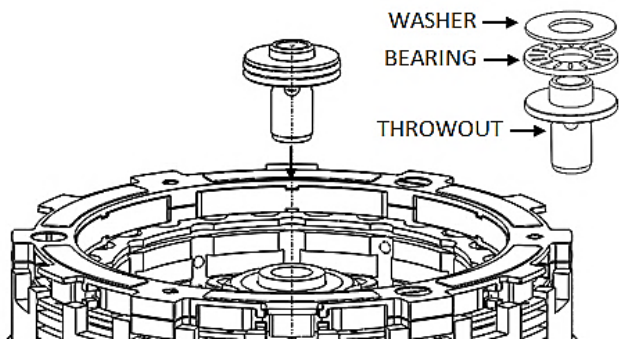
NOTE: Installing the judder (boss) spring will help reduce the clutch chatter and squeal during engagement. However, installing the stock judder spring and seat are optional.



- If judder spring and seat are installed, assemble the clutch following the graphic on the next page. .

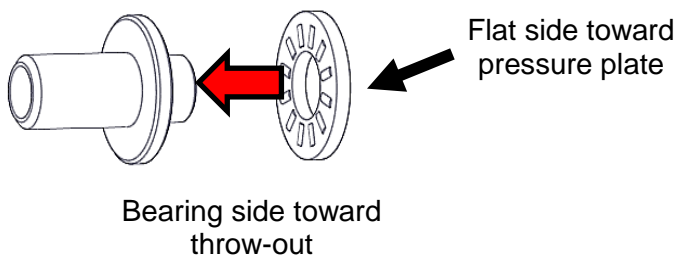


5. Honda CRF250X and Husqvarna 450/510 owners, skip to the next step. All other models, reinstall the OEM throw-out assembly.

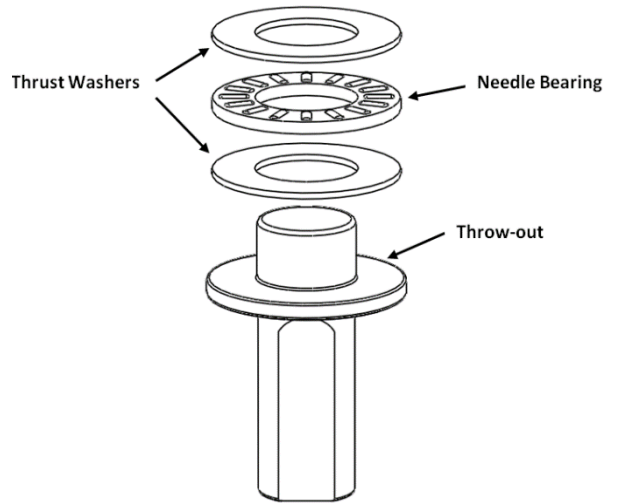


NOTE: If you are missing the top washer, it is probably stuck to the backside of your OEM pressure plate.

CAUTION: Suzuki RM-Z450 Models: The needle bearing only has the bearings on one side. Make sure that the bearing side is facing the throw-out and the flat side is facing the pressure plate.

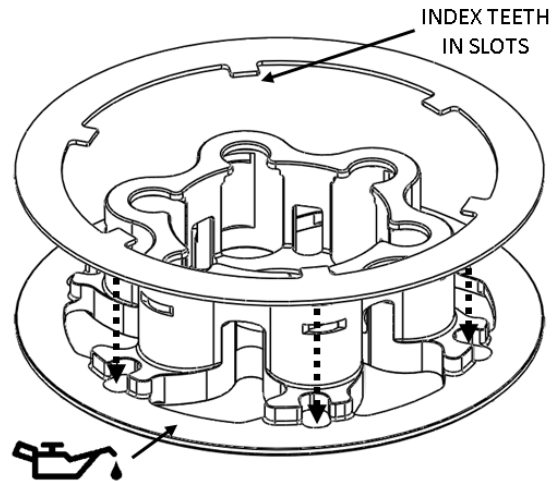


CRF250X and Husqvarna 450/510 owners only. Install the included Rekluse throw-out assembly with the thrust washers sandwiching the needle bearing as shown below. A separate note showing the same configuration is also packaged with the throw-out assembly.

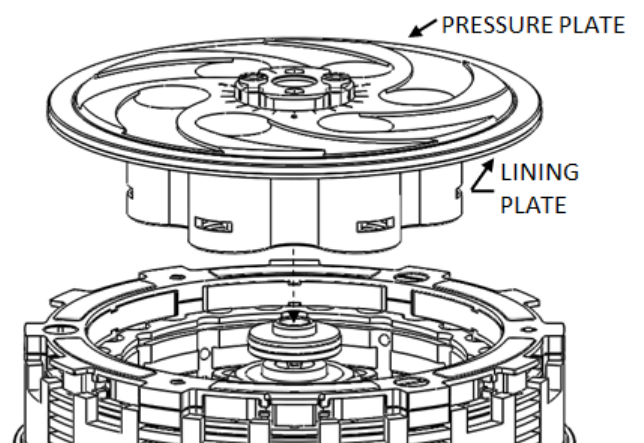


PRESSURE PLATE INSTALLATION

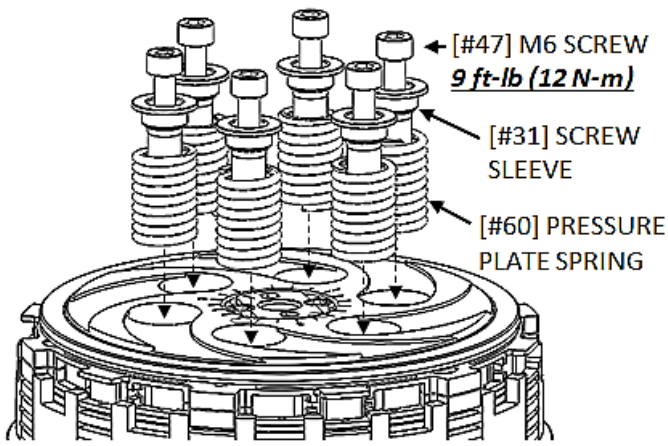
6. Place the Lining Plate [#16] onto the Rekluse Pressure Plate [#5]. Adding an oil film between them will help them stick together for ease of installation.



7. Install this pressure plate subassembly.

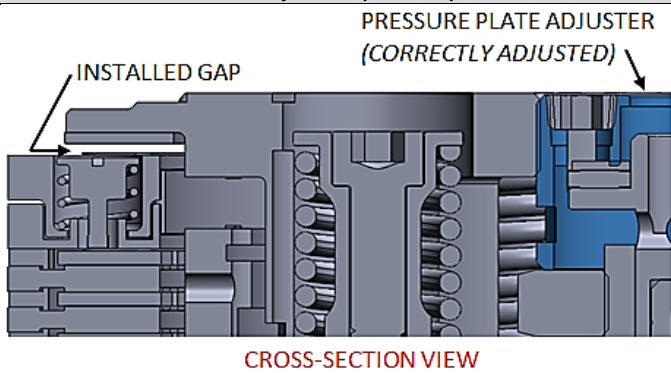


8. Install the pressure plate springs.



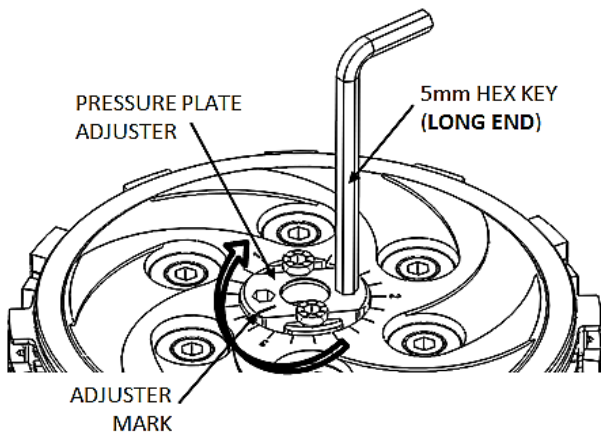
INSTALLED GAP SETTING

DEFINITION: “Installed Gap” is the separation in the clutch pack created by the adjustment at the Pressure Plate Adjuster. 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.



9. Insert the **long end** of a 5-mm hex key into one of the two hex holes in the pressure plate adjuster. By hand, **gently** thread the pressure plate adjuster inward until it comes to a stop against the center clutch nut.

NOTE: The pressure plate comes with the set screws and adjuster installed. The set screws have a tapered thread, so if they are ever removed, ensure the knurled side faces up.

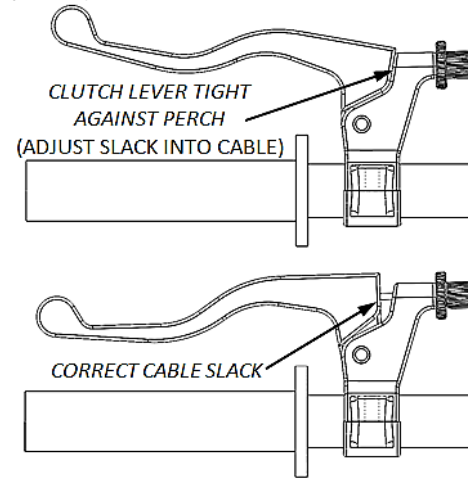


10. At this point, make a note of where the mark on the adjuster aligns with the tick marks on the pressure plate. This is your **starting point**.

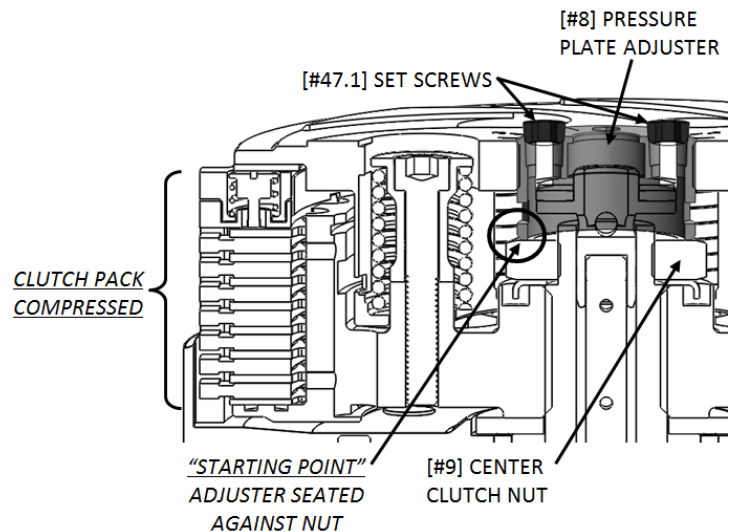
NOTE: It may take a few tries to find the correct starting point. Keep trying until you feel the distinguishable change in turning effort.

11. Check to **make sure there is clutch lever free play**. If the lever is tight against the perch, then adjust a few turns of slack into the cable and re-check your starting point. (If there is not enough adjustment at

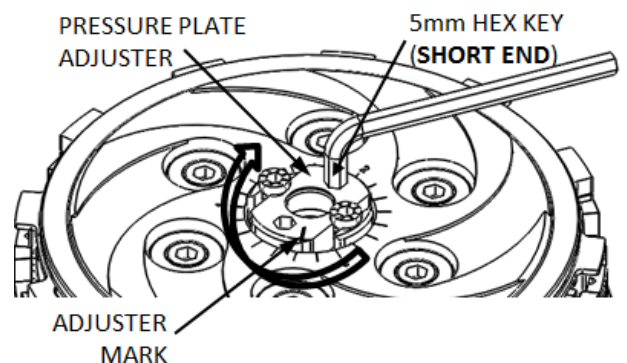
the perch, you may need to adjust using the in-line cable adjuster).



NOTE: The pressure plate adjuster should bottom out and lift against the center clutch nut, not the throw-out. Slack in the clutch cable ensures that you find the correct starting point.

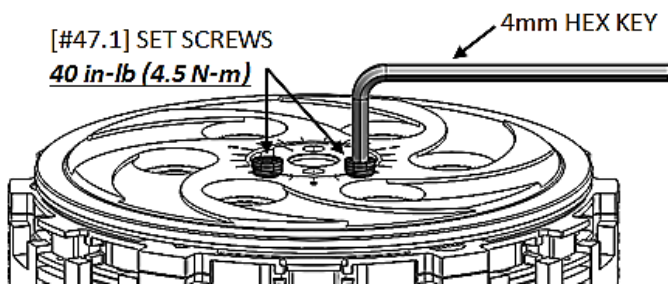


12. Now, insert the **short end** of the 5-mm hex key into the pressure plate adjuster, and turn it clockwise **one full turn plus 2 tick marks past the starting point** (aka “1+2”).

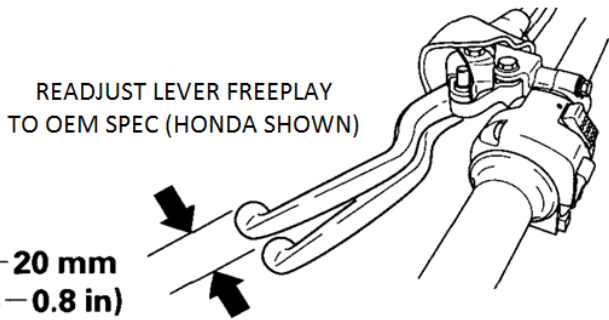


NOTE: As you turn the adjuster, the clutch may slip and start to spin before you reach 1-full turn. With the bike in gear you can hold the rear brake for leverage.

13. Once the installed gap is set, use a 4-mm hex key to tighten the two locking set screws in the pressure plate adjuster to lock it into place. Tighten the screws evenly in 3-4 steps. The tops of the set screws should be flush or slightly below flush with the top of the adjuster when torqued correctly. It is **not** necessary to put thread locking compound onto the set screws.

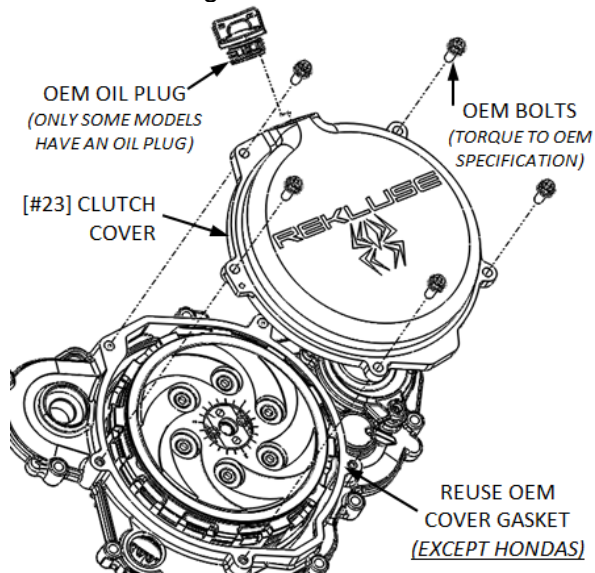


14. Now that your gap adjustment is set, readjust the clutch lever freeplay to OEM specification.



CLUTCH COVER

15. Your new Core EXP clutch is taller than the OEM clutch, so the Rekluse Clutch Cover has been designed for clearance with all moving parts. You must use the Rekluse Clutch Cover or interference and clutch damage will occur.



Model-Specific Clutch Cover Notes:

- Honda**
 Optional: reuse OEM gasket or use included O-ring cord. Make sure the ends of the cord meet at the top of the clutch cover to prevent leaks.
- Kawasaki KX250F / KX450F / KLX450F
 Yamaha YZ450F (10+) / YZ250 2 stroke 1999-2014**
 To provide clearance between the cover and brake pedal, install the included thin brake pedal spacer (part number 184-170) between the frame and pedal in place of the OEM spacer. Use Loctite to secure the brake pedal bolt upon reassembly.
- Yamaha YZ250 2 stroke 2015**
 To provide clearance between the cover and brake pedal, install the included thick brake pedal spacer (part number 180-089) between the frame and pedal in place of the OEM spacer. Use Loctite to secure the brake pedal bolt upon reassembly.

CHECKING LEVER FREE PLAY GAIN

WARNING

Always make sure 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.

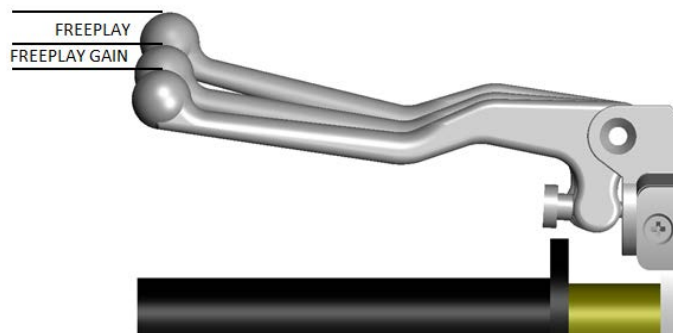
NOTE: Before performing this step, please visit our website at rekluse.com/support to view the TECH VIDEO entitled “How to Check Free Play Gain”.



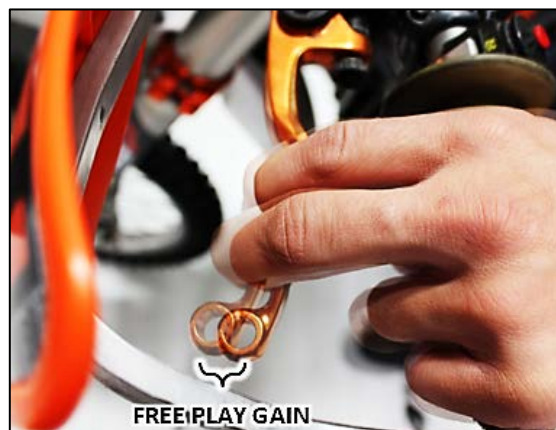
“Lever Free Play” is essentially the “slack” in the clutch lever before it starts actuating the clutch. Applying a light finger pressure will take up this slack.



“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 5,000 RPM. Free Play Gain is caused by the expansion of the EXP disk which lifts the pressure plate away from the throw-out assembly.



Optimal Free Play Gain yields 1/8” (3mm) of clutch lever movement, measured at the end of the lever. This measurement at the lever correlates to achieving the ideal installed gap.



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.

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.

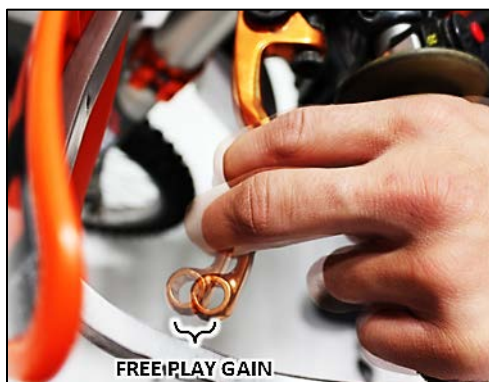


With the bike at idle in neutral, quickly blip (rev) the engine to at least 5,000 RPM and let it return to idle. **The clutch lever should move in about 1/8" (3mm) toward the handlebar as you rev the engine.**

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 at least 5,000 RPM. **The clutch lever should move in 1/8" (3mm) under your finger pressure as you rev the engine and the auto-clutch engages.**



BREAK - IN

Follow these procedures for a new installation and any time new friction disks or 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 5,000 RPMs and come to a stop—repeat this 5 times. Next, starting in 2nd gear, accelerate moderately to approximately 5,000 RPMs then come to a stop—repeat this 5 times.
4. Now that the EXP is broken-in and the clutch is warm, recheck free play gain and make any final adjustments. 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 freeplay gain when the bike is warm at the start of every ride.

FREE PLAY GAIN

TROUBLESHOOTING

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

Symptom:

- 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: Adjust the pressure plate adjuster inward (clockwise) 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: Turn the pressure plate adjuster outwardly (counterclockwise) to reduce the Installed Gap. It may be helpful to re-find the starting point.

CLUTCH NOISE

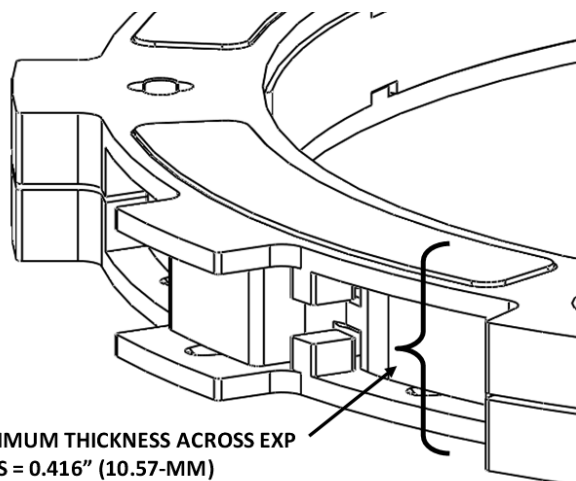
Although it is harmless, some bike models may have "squeal" or "chatter" coming from the clutch at low RPM as it engages. Clutch squeal is caused by the clutch components vibrating as the clutch engages and can become more audible as the clutch gets hot. For bike models that tend to have clutch squeal 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.
- **Clutch Basket:** Available for some models, a Rekluse Clutch Basket will eliminate clutch squeal and chatter in most cases because it is precision machined from high quality material and includes long-life clutch dampers. A clutch basket that is damaged or has worn-out dampers tends to increase clutch noise.
- **Installed Gap:** Adjusting the Installed Gap will NOT affect clutch squeal or chatter

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 **every 40 hours** for signs of wear or excessive heat, and replace components as necessary.



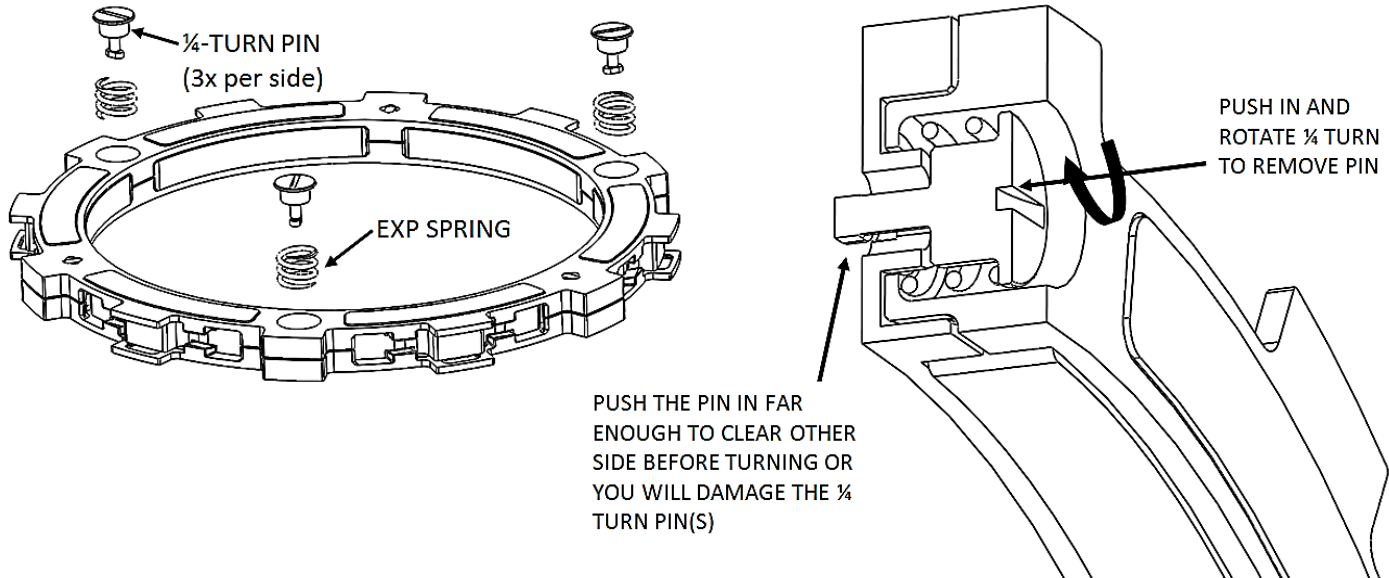
- Repeat the break-in procedure anytime the friction disks or EXP bases or wedges are replaced. Always soak friction disks or EXP bases in oil for at least 5 minutes before installing.

EXP TUNING OPTIONS

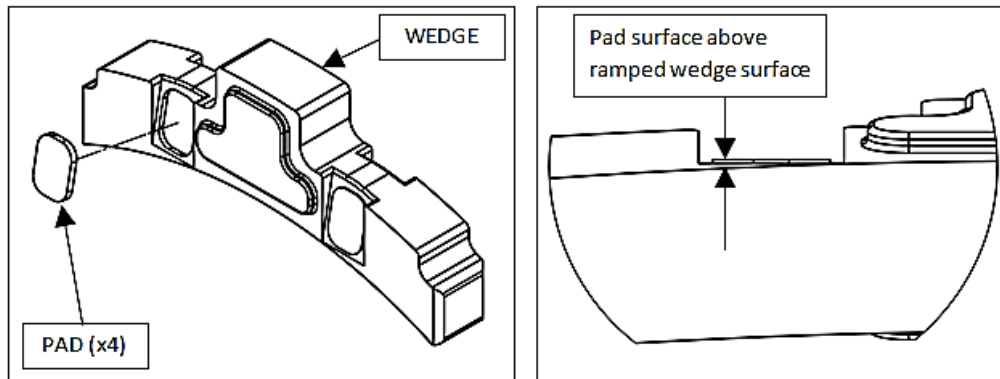
Included are spring options to tune the engagement RPM of the EXP disk. The EXP disk comes set with the recommended “Medium” setting from Rekluse. See chart on next page for setting options.

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.

It is **NOT necessary** to disassemble the EXP halves to change springs! To change springs, remove 3 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 3 on one side of the EXP and the remaining color set of 3 on the other side.



CAUTION: If you disassemble the EXP, bearing 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.



EXP ENGAGEMENT SETTINGS BY PRODUCT

Make	Bike Model	Product	Low Springs	Medium Springs	High Springs
GasGas	250/300	RMS-7700	6 Red	3 Red 3 Blue	6 Blue
Honda	CRF450R	RMS-7710	6 Red	3 Red 3 Blue	6 Blue
Honda	CR250R	RMS-7711	6 Red	3 Red 3 Blue	6 Blue
Honda	CR250R	RMS-7720	6 Red	3 Red 3 Blue	6 Blue
Honda	CRF250R	RMS-7712	3 Silver 3 Red	6 Red	3 Red 3 Blue
Honda	CRF250X	RMS-7712	6 Silver	3 Silver 3 Red	6 Red
Honda	CRF450R	RMS-7713	6 Red	3 Red 3 Blue	6 Blue
Honda	CRF450R	RMS-7714	6 Red	3 Red 3 Blue	6 Blue
Honda	CRF250R	RMS-7716	3 Silver 3 Red	6 Red	3 Red 3 Blue
Honda	CRF450X	RMS-7719	6 Red	3 Red 3 Blue	6 Blue
Beta	250/300	RMS-7721	6 Red	3 Red 3 Blue	6 Blue
Beta	350/400/450/498/520	RMS-7723	6 Red	3 Red 3 Blue	6 Blue
Sherco	250/300	RMS-7724	6 Silver	3 Silver 3 Red	6 Red
Husaberg	FE 390/450/570	RMS-7727	6 Red	3 Red 3 Blue	6 Blue
KTM	450/505 SXF/XCF	RMS-7730	6 Blue	3 Blue 3 Gold	6 Gold
KTM	400/450/530 EXC/XCR	RMS-7732	3 Red 3 Blue	6 Blue	3 Blue 3 Gold
KTM	250/300 SX/XC/XCW	RMS-7736	6 Red	3 Red 3 Blue	6 Blue
KTM	125/144/150/200	RMS-7737	6 Silver	3 Silver 3 Red	6 Red
KTM	250 SXF/XC-F/XCFW	RMS-7738	3 Silver 3 Red	6 Red	3 Red 3 Blue
Kawasaki	KX250F	RMS-7740	3 Silver 3 Red	6 Red	3 Red 3 Blue
Kawasaki	KX450F / KLX450F	RMS-7745	6 Red	3 Red 3 Blue	6 Blue
Husqvarna	TC/TE 310	RMS-7755	6 Silver	3 Silver 3 Red	6 Red
Husqvarna	TC/TXC/TE 250	RMS-7755	6 Silver	3 Silver 3 Red	6 Red
Husqvarna	TC/TE 450/510	RMS-7756	6 Red	3 Red 3 Blue	6 Blue
Suzuki	RMZ450	RMS-7764	6 Red	3 Red 3 Blue	6 Blue
Suzuki	RMZ250	RMS-7767	6 Red	3 Red 3 Blue	6 Blue
Yamaha	YZ250	RMS-7770	6 Red	3 Red 3 Blue	6 Blue
Yamaha	YZ250F / WR250F	RMS-7771	3 Silver 3 Red	6 Red	3 Red 3 Blue
Yamaha	YZ450F / WR450F	RMS-7773	6 Blue	3 Blue 3 Gold	6 Gold
Yamaha	YZ450F	RMS-7776	6 Blue	3 Blue 3 Gold	6 Gold
Yamaha	YZ450FX / WR450F	RMS-7776	3 Blue 3 Red	6 Blue	3 Blue 3 Gold
Yamaha	YZ250F / WR250F / YZ250FX	RMS-7778	3 Steel 3 Silver	6 Silver	3 Silver 3 Red