OVERVIEW

- This kit replaces the OEM pressure plate with a high-quality billet component designed for optimal operation and spacing specific to your bike.
- Some of the OEM friction disks will be reused, but all OEM steel drive plates will be replaced with Rekluse TEC drive plates. All 6 of the OEM drive pins will be reused.
INSIDE THIS DOCUMENT

- INSTALLATION
- SETTING THE INSTALLED GAP
- CHECKING FREE PLAY GAIN
- BREAK-IN
- MAINTENANCE
- EXP TUNING OPTIONS & ENGAGEMENT SETTINGS
- SETUP SHEET (model specific)
- SLAVE CYLINDER APPENDIX (only some models)
- 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 left 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.
- 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.
- 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.

TOOLS NEEDED

- 8mm socket
- 27mm socket (most models)
- 8mm & 12mm end wrenches
- 4mm & 5mm Allen keys
- Torque wrench (in-lb & ft-lb, or N-m)
- Channel-lock pliers
- Hydraulic clutch fluid
**INCLUDED PARTS**

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Type</th>
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<tbody>
<tr>
<td>5</td>
<td>Pressure Plate</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>EXP Base *</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Steel Lining Plate</td>
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<tr>
<td>31</td>
<td>Pressure Ring Spacer</td>
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<td>47</td>
<td>Fastener – M5 x 20 T-25 Torx Screw (T-25 Torx bit included)</td>
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<tr>
<td>51</td>
<td>Fastener – 1/4-Turn Pin *</td>
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<td>55</td>
<td>Clutch Cover Gasket</td>
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<tr>
<td>60.X</td>
<td>EXP Adjustment Spring* (extra adjustment springs are included, see setup sheet)</td>
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</tr>
<tr>
<td>63</td>
<td>.040” Thick Steel Drive Plate (2-Stroke ONLY)</td>
<td>6</td>
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<tr>
<td>65</td>
<td>.048” Thick Steel Drive Plate</td>
<td>7</td>
</tr>
<tr>
<td>85</td>
<td>Wedge Assembly *</td>
<td>6</td>
</tr>
<tr>
<td>86</td>
<td>Adjustable Slave Cylinder Assembly (bleed tube included)</td>
<td>1</td>
</tr>
</tbody>
</table>

* Denotes parts assembled as part of EXP disk assembly
BIKE PREP & DISASSEMBLY

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

NOTE: Take note of each OEM clutch cover bolts specific location as length can vary between them. Failure to replace these bolts in the proper location after clutch installation can result in damage to your motorcycle.

2. Remove the OEM clutch parts named in the following diagram. Note the orientation of the Bellville spring and quantity of clutch plates removed.

   Tip:
   a. Be careful the drive pins do not fall into the engine while disassembling.

   3. Separate the clutch pack.

   Inspect the friction disks for signs of heat or wear. Replace if they are burnt or worn.

4. Soak the EXP disk in engine oil for 5 minutes.

INSTALL CLUTCH PACK

2-STROKES only:
If your engine is a 4-stroke, skip to step 5.

Certain friction disks in some 2-stroke models are thicker than the 4-stroke disks, and these differences can greatly affect the overall performance of your clutch and stiffness of your clutch lever pull. The output force of the Belleville spring in your clutch is very sensitive to the clutch pack thickness. Your kit includes 6x extra (thinner) .040” TEC drive plates to compensate for the variation in friction disk thickness if necessary.
Included are 7x .048" [1.2mm] and 6x .040" [1.0mm] drive plates. Only 7x total drive plates will be used in the clutch pack, but you must measure the friction disk thickness to determine if any of the thinner plates must be used instead in the final clutch pack to compensate.

Wipe the excess oil from 6x of your OEM friction disks and stack them together with 7x .048" [1.2mm] drive plates, as well as the EXP disk. Using calipers, measure the overall thickness as shown:

This measurement needs to be 1.213"-1.230" [30.8mm-31.2mm] tall. If it is taller than that, take out 1x .048" [1.2mm] drive plate and replace with 1x .040" [1.0mm] drive plate and re-measure. Repeat until the desired pack thickness is attained.

5. Install a TEC drive plate so that the “shark fin” notches face toward the right. All the drive plates will follow this orientation.

Face the “shark fin” to the right.

NOTE: Proper orientation of the drive plates is critical for optimal clutch performance. If you install them backwards, the clutch will still function but will lack proper modulation performance.

**Note:** Be sure the drive pins sit in the notches of the TEC plate and not in the bigger sections. ALL the TEC plates must be aligned in the drive pins notches or damage may occur. The plates will not move if installed correctly.

6. On top of the TEC drive plate, install the new clutch pack using 6x OEM frictions, 7x Rekluse drive plates and the EXP disk. See figure below for stack order.

**NOTE:** 2-Stroke models must use the combination of drive plates determined in the previous step.
Place the lining plate onto the Rekluse pressure plate. Adding an oil film between them will help them stick together.

7. Install this pressure plate / lining plate combo, keeping the lining plate against the pressure plate. Hold the pressure plate against the clutch pack until it is bolted down in the later steps.

8. Install the Pressure Ring Spacer with the tabs facing up onto the hub posts.

9. Install the OEM slider ring and Belleville spring.

10. Install the OEM pressure ring followed by the Rekluse Pressure Plate Screws.

**CAUTION:** Do not reuse the OEM screws, or clutch cover interference will occur!
NOTE: There are 3 possible settings on the OEM Pressure Ring. Rekluse recommends setting II for all 4-strokes and III for all 2-strokes for optimum performance.

11. Install the clutch cover with Rekluse supplied thick Clutch Cover Gasket.

12. Install the clutch cover bolts in their proper OEM location. Torque the bolts in small increments in a star pattern before tightening the bolts to OEM specifications as shown – **5.9 ft-lb (8 N-m)** and **7.4 ft-lb (10 N-m)**.

   Note: Apply a thin film of engine oil to both sides of the gasket in order to prevent the gasket from sticking to the case.

WARNING: If the Rekluse supplied gasket is not used, damage will occur to the clutch! Failure to install the OEM clutch cover bolts back in their proper location can result in damage to your motorcycle.
SLAVE CYLINDER INSTALLATION

Handle with care! During assembly there is a small ball bearing installed in the slave piston with a small amount of grease. When installing the Rekluse slave cylinder, make sure the ball does not come loose.

13. Stand the bike up and lean it on its kickstand or place it on a suitable bike stand.

14. Starting at the slave cylinder, remove the OEM parts named in the following diagram beginning with the banjo bolt.

15. On a workbench (still away from the engine), bleed the Rekluse slave cylinder by this procedure:

a. Use a 4mm Allen key to make the top O-Ring visible on the adjuster screw.

b. Compress the piston until it bottoms.

c. Pour clutch fluid into the slave cylinder port.

WARNING
Be sure to use the correct clutch fluid! Check the cap of the clutch master cylinder to determine which clutch fluid to use. Failure to use the correct fluid will result in seal damage and/or failure.

d. Turn the adjuster screw clockwise until it bottoms, keeping the fluid topped off.
e. Turn the adjuster screw back to the initial position with the top O-ring visible.

f. Compress the piston until it bottoms out. Repeat the process until there is no longer air escaping from the top port when the piston is compressed.

**NOTE:** When compressing the piston, fluid can shoot out from the slave cylinder port. Be sure to wear eye protection.

16. Check that the ball bearing is still in place.

17. Install the Rekluse slave cylinder on the bike using these parts, ending with the banjo bolt.

**NOTE:** For Husqvarna 450/501 models, use Rekluse supplied Banjo Bolt included in kit.

**NOTE:** Some models have a piston diaphragm seal. DO NOT REUSE them if OEM equipped.

**NOTE:** If you are installing on the Freeride, see the Slave Cylinder Appendix sheet for fitment instructions.
18. Optional: If you purchased the Rekluse Slave Guard accessory, install it now using the instructions in the kit.

22. Using an 8mm wrench, open the bleed port. Air and fluid should come out of the bleed tube. Tighten the bleed port.

19. Remove the cap and bladder from the clutch master cylinder and top off the clutch fluid.

20. Attach the supplied bleed tube to the banjo bolt port and loop it into a suitable catch bottle.

23. Slowly release the clutch lever and check the fluid level in the clutch master cylinder.

21. Pump the clutch lever 3-5 times then hold it against the bar/grip.

24. Repeat the previous 3 bleeding steps until air no longer comes out of the bleed port. Then, check that the clutch lever functions properly. Repeat the bleeding procedure if necessary.

25. Finally, remove the bleed tube.
**INSTALLED GAP SETTING**

**DEFINITION: “Installed Gap”** is the separation in the clutch pack created by the adjustment of the Adjuster Screw in the Slave Cylinder. 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.

26. Using the long end of a 4mm Allen key, turn the adjuster screw clockwise until it stops under moderate pressure. You are trying to feel for the point at which the throwout will start to lift the pressure plate. This is the “starting point”.

**NOTE:** It may take a few tries to find the point at which the system is bottomed out. You should feel a distinguishable change in turning effort at this point.

27. Once you have found the starting point, turn the adjuster clockwise 1 full turn plus 5 marks (or “1+5”). This is NOT your final setting, but it is a good reference point for using free play gain to find the correct setting.

28. Top off the master cylinder with clutch fluid and reinstall the OEM cap and bladder.

**CHECKING 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 5000 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, 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 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: Turn the Adjuster Screw inwardly (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 Adjuster Screw outwardly (counter-clockwise) 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**: 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. 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.

- During EXP disassembly, oil tension may cause wedge pads to stick to the bases and dislodge from the wedge. If the base ramps appear to be in good shape, these pads can be carefully re-inserted into the wedge pockets without affecting EXP performance.

- 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.

- To prolong the life of the clutch, inspect your rubber hub dampers every 20 hours for 450 SX-F models (including factory edition), and every 30 hours for all other bikes. Replace the dampers if the interaction between the two hubs is loose or sloppy. See the “Read Me First” page for inspection procedure. For Best continued performance and lever pull/feel, perform period clutch pack measurement (Before step 5 in manual).

- Inspect all of your clutch parts every 40 hours for signs of wear or excessive heat, and replace components as necessary.
## SPEC TABLE

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<th>MAKE</th>
<th>MODEL</th>
<th>PRODUCT</th>
<th>ENGAGEMENT SETTING</th>
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<tr>
<td>KTM</td>
<td>250/300 2-Stroke</td>
<td>RMS-6186</td>
<td>LOW: 3 Steel &amp; 3 Silver, MEDIUM: 6 Silver, HIGH: 3 Silver &amp; 3 Red</td>
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<tr>
<td>Husqvarna</td>
<td>250/300 2-Stroke</td>
<td>RMS-6186</td>
<td>LOW: 3 Steel &amp; 3 Silver, MEDIUM: 6 Silver, HIGH: 3 Silver &amp; 3 Red</td>
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