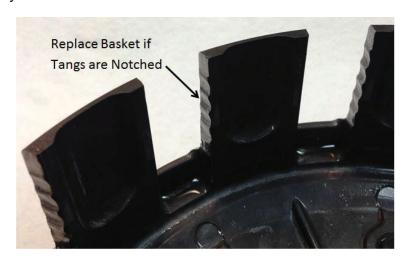


# **READ ME FIRST**

#### **BASKET WEAR**

The Rekluse TorqDrive clutch employs basket sleeves to protect the basket from wear caused by the friction disks. With the sleeves, the basket will no longer notch, which may give the appearance that the basket is not wearing and does not need to be replaced.

Before installation of the basket sleeves, inspect the clutch basket for notching. Do not install sleeves or use product with a notched basket. Notched basket tang faces can cause the sleeves to break. Do not use baskets that have been filed, machined, or modified on the tangs. The basket should also be inspected for any fatigue cracking at the tang bases. Replace basket if necessary.



#### **DAMPER WEAR**

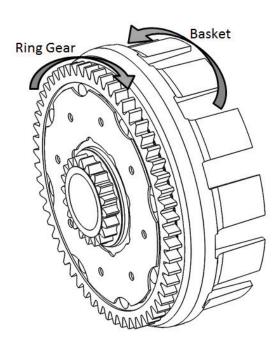
Inspect the clutch basket for damper and/or spring rotational play. Dampers/springs should not be loose. The rubber dampers in the basket assembly will still wear and will eventually breakdown. This is a normal wear item that is usually evident by notching of the basket from the OE friction disks. Since the basket sleeves prevent notching, the basket and dampers should be inspected periodically. This is done best with the basket out of the engine.

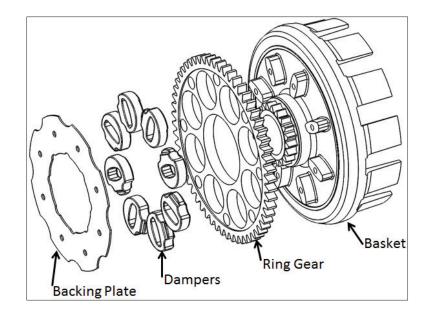
#### To inspect the dampers:

- Remove the basket from the engine, hold the ring gear in one hand and the basket in the other and twist in opposite directions. The rotational play is sometimes accompanied by an audible "click" sound when rotating back and forth.
- If any rotational play can be felt between the basket and the ring gear, the dampers are
  worn and either the dampers and/or basket assembly need to be replaced. If worn
  dampers are not replaced, accelerated wear can occur to the rest of the clutch.

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# Rotate basket and ring gear in opposite directions to check for any rotational play in the dampers





#### PRESSURE PLATE SPRINGS

The Rekluse TorqDrive clutch comes with two sets of pressure plate springs so the rider can choose to have either a lighter lever pull or more torque transfer through the clutch. **DO NOT** use higher force springs than those included in the kit. Clutch and/or engine damage could occur from higher force springs which could result in bike damage, injury and/or death.

#### **NEW FRICTION DISK BREAK-IN**

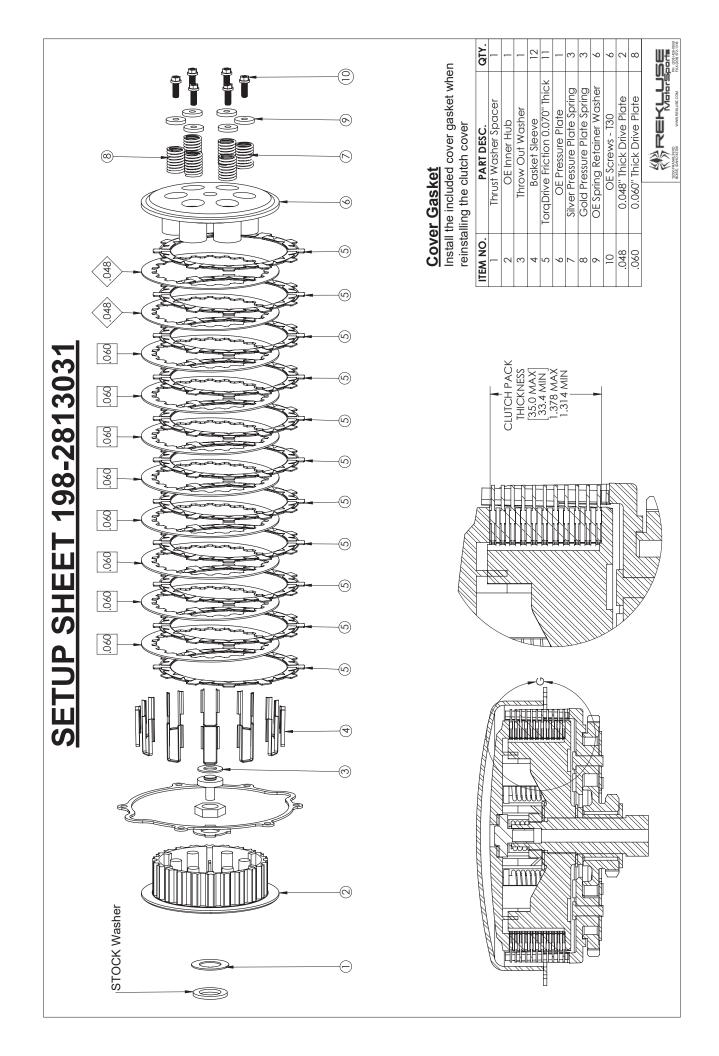
#### **AWARNING**

Failure to follow the oil screen/filter inspection process after break in could cause motor oil delivery failure which can result in motor failure, serious injury, or death.

Following the installation of a new set of friction disks, there will be a short break in period during which the friction disks will wear in somewhat. Following this wear in period, it is vital to inspect the oil screens and/or oil filter.

- Soak new friction disks in oil for at least 5 minutes
- Install new friction disks
- Ride the bike for an initial period
- Inspect the oil screens and/or oil filter, and change oil as necessary

Doc ID: 193-714A Doc Revision: 030518





# INSTALLATION & USER'S GUIDE

TorqDrive Clutch for KTM 250-300

Doc ID: 191-2813031A Revision: 121120

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# **OVERVIEW**

This kit replaces many of the OE (Original Equipment) or "stock" clutch parts. These parts are designed specifically for your motorcycle to ensure optimal performance. The following is a summary of what is replaced:

- This kit will replace all the OE friction disks and drive plates with a Rekluse thin friction EXP clutch pack.
- The OE pressure plate springs are replaced with high quality Rekluse springs.

# **INSTALLATION TIPS**

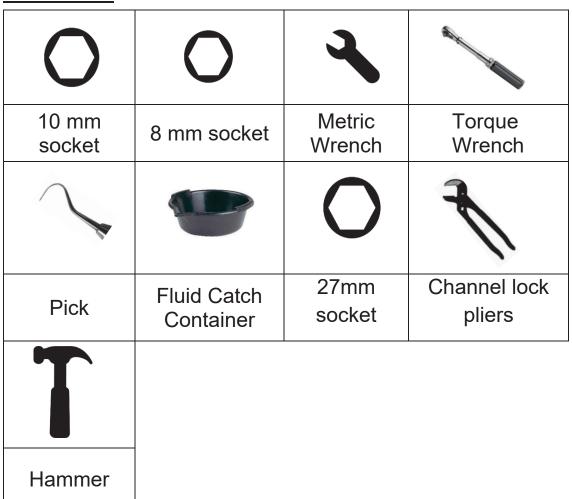
 Read the separate included Safety Information document before operating the vehicle with the product installed.



- Read this entire document before performing any steps.
- If you install this product for a customer or another person, instruct them to read the Safety Information document and the Installation and User Guide before operating the bike with the product.
- Protect eyes and skin wear safety glasses and work gloves.
- Lay the motorcycle on its left side when replacing the clutch. This makes the clutch work easier and eliminates the need to drain the oil. Catch any fuel that may drain from the bike.
- Use the torque values listed in the instructions.
   Otherwise, use the torque specifications found in your OE service manual.
- 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.

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# **TOOLS**

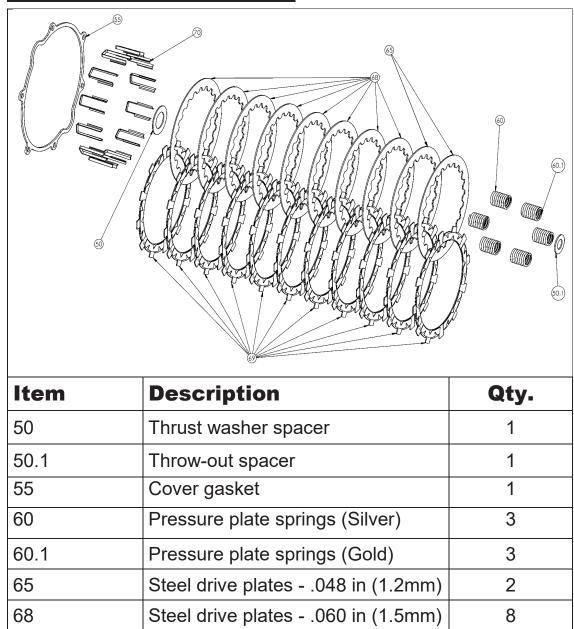


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# **INCLUDED PARTS**

69

70



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

TorqDrive® friction disks

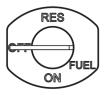
Basket sleeves

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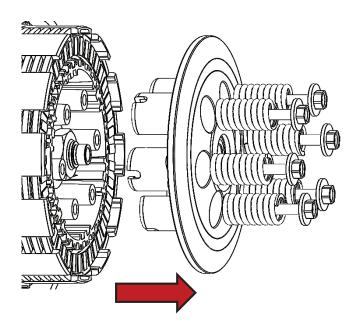
12

# **DISASSEMBLE CLUTCH**

1. If your bike is carbureted, turn the fuel petcock to "OFF."



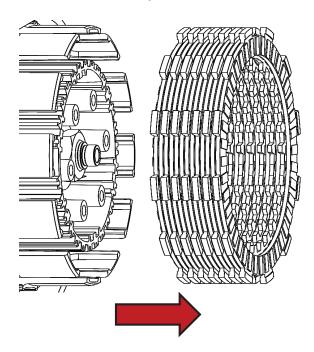
- 2. Shift the transmission into 5<sup>th</sup> gear.
- 3. Lay the bike on its left side. Catch any fuel that might drain in a suitable container.
- 4. Using an 8 mm socket, remove the OE clutch cover. Pay close attention to the length and location of the OE screws so they can each be returned to the same location.
- 5. Using a socket, remove the pressure plate screws and springs, then remove the pressure plate.



**Note:** Your OE parts may look different than pictured depending on the bike.

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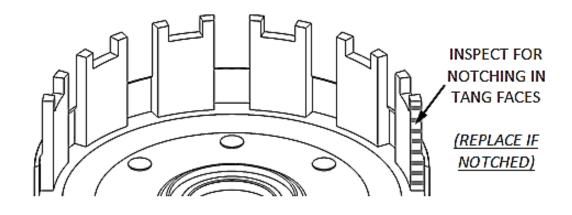
6. Remove the OE clutch pack. Use a pick if necessary to help remove all of the plates.



7. Inspect the clutch basket for spring damper play or notching. Do not install sleeves or use product with a notched basket. Notched basket tang faces or worn dampers can cause the sleeves to break. Do not use baskets that have been filed, machined, or modified on the tangs. Replace basket if necessary.

#### **AWARNING**

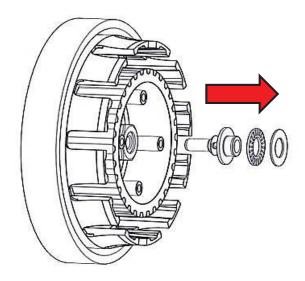
Failure to inspect the basket and replace if necessary could result in death, serious injury, and/or property damage.



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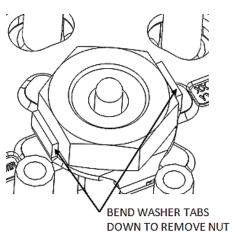
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8. Remove the throw-out assembly, which typically includes a throw-out, needle bearing, and washer. Set this assembly aside. These parts will be reused.



**Note:** The throw-out assembly may look different depending on the bike.

9. Use a hammer and large screwdriver to bend down the edges of the washer tab until it clears the clutch nut.

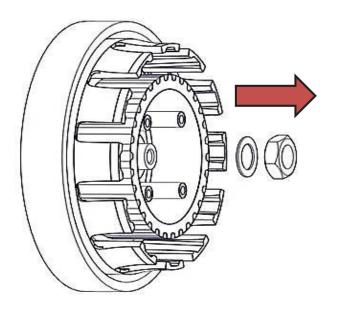


10. Remove the center clutch nut with an impact wrench or breaker bar, and a socket. Set aside. The OE clutch nut will be reused.

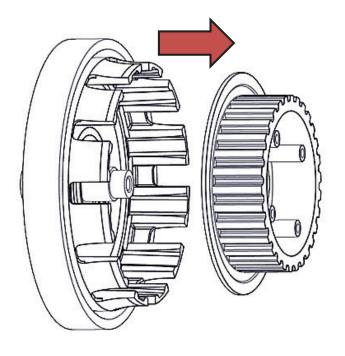
**Note:** Placing the bike in the highest gear and holding the rear wheel by applying the rear brake keeps the shaft from rotating when removing the nut.

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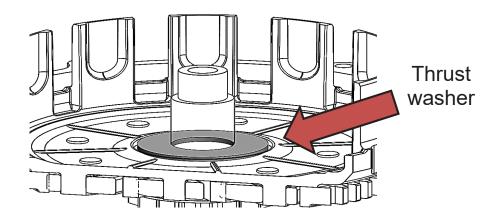
11. Remove the lock washer located under the center clutch nut. Set this aside. The OE lock washer will be reused.



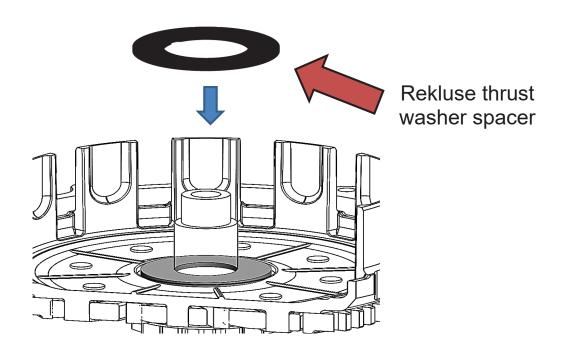
12. Remove the center hub from the clutch basket while leaving the thrust washer on the main shaft.



**Note:** Check that the OE thrust washer is still on the main shaft and not stuck to the bottom of the center hub assembly. The thrust washer must be installed or clutch performance issues will result.



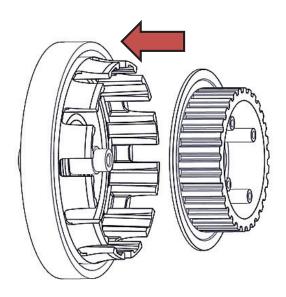
13. Install the Rekluse thrust washer spacer on top of the OE thrust washer.



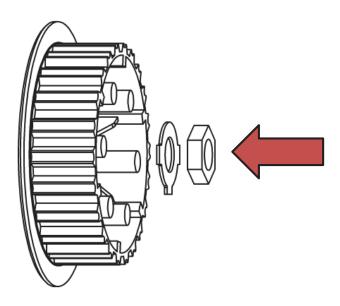
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14. Reinstall the center hub into the clutch basket.

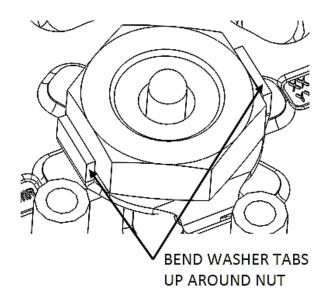


15. Reinstall the OE tab washer, and then reinstall the OE clutch nut.



16. Using the socket and torque wrench, torque the center clutch nut to **74** ft-lb (**100** N-m).

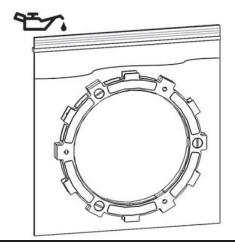
17. Using the channel-lock pliers, bend up **both** tabs of the tab washer tightly around the nut. The tabs can be bent on the straight sides or around the corners.



# **INSTALL THE CLUTCH PACK**

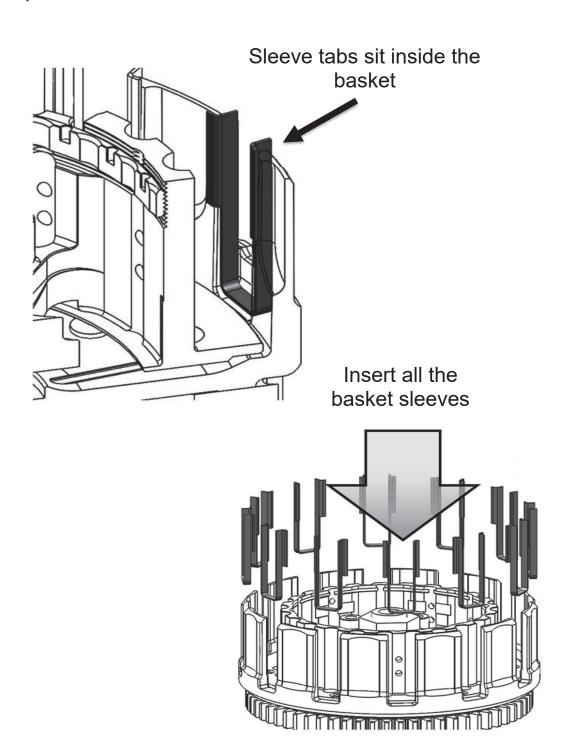
Refer to setup sheet at the end of the manual for a detailed view of clutch.

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

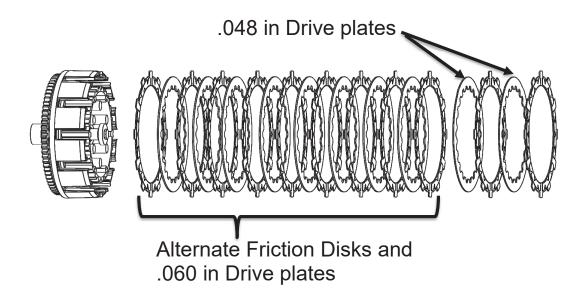


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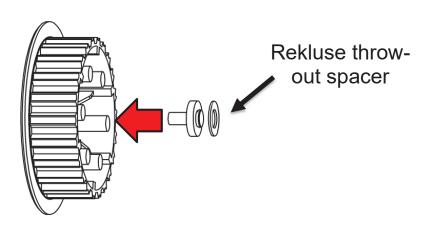
2. Install all the Rekluse basket sleeves into the basket slots. Make sure the bottom of the sleeve is facing down, and the sleeve tabs sit against the inside of the basket. See pictures for reference.



- 3. Install a Rekluse friction disk into the clutch Some friction disks are marked with a small colored dot. This mark is used for processing and can be ignored.
- 4. Alternate eight thin friction disks .070 in (1.78mm) with eight thin steel drive plates .060 (1.5mm).
- 5. Install the .048 in (1.2mm) drive plates and then install the last two friction disks.

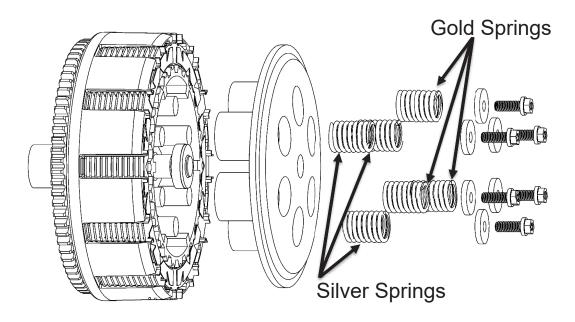


- 6. Reinstall the OE throw-out assembly. (If the throw-out washer is missing, check to see if it is stuck to the underside of the pressure plate.)
- 7. Install the Rekluse throw-out spacer on top of the OE throw-out assembly.



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- 8. Reinstall the pressure plate.
- 9. Install the Rekluse pressure plate springs alternating gold and silver springs to maintain an even distribution. Then reinstall the pressure plate washers and bolts.



10. Using a torque wrench, tighten the pressure plate bolts to **7.4 ft-lb (10 N-m)**.

# **INSTALL THE CLUTCH COVER**

- 1. Install the new Rekluse cover gasket onto the OE clutch cover, then reinstall the clutch cover.
- 2. Torque the cover bolts in a star pattern to **4.5 lb-ft (6 N-m)** per OE specifications.

# **BREAK-IN**

• The clutch will break in within 100-200 miles of normal riding. Until break-in is complete, you may experience more clutch drag than normal.

 It is recommended to do an oil change after the first 1,000 miles to drain any excess clutch debris that occurred from break-in.

# **MAINTENANCE**

To keep your clutch performing at its best, perform regular maintenance on your bike and clutch.

## **Clutch** wear

Rekluse clutches are built using high quality materials but do wear based on the rider's use, type of terrain, and natural wear and tear. To keep your clutch performing at its best, perform regular maintenance on your bike and clutch based on your riding style.

- Always soak new friction disks in fresh oil before installing.
- For optimal clutch performance Rekluse recommends using fresh, clean oil that meets JASO-MA oil rating requirements.

# **Clutch parts**

- Inspect all of your clutch parts at regular intervals for signs of wear or excessive heat, and replace components as necessary. Rekluse recommends inspecting after the first 10 hours of use, then every 20 hours after that.
- Measuring the clutch pack can help determine if the components need replacing. Review setup sheet for minimum and maximum clutch pack heights.
- Replace friction disks or drive plates if they are glazed and/or burnt. See the following sections for examples.
- Keep up with regular oil changes as per the bike manufacturer's recommendations. Clutch performance and longevity depend on oil quality.

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 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 <a href="www.rekluse.com">www.rekluse.com</a> to learn more

## **Basket**

- Inspect the basket dampers and/or springs by checking the play between the ring gear and the basket. Replace the dampers/springs if you feel any play in the assembly.
- Inspect and replace basket sleeves if they appear to be notched from friction disks. Rekluse recommends replacing them every 25 hours for abusive riding/racing, every 50 hours for moderate riding, or every time friction disks are replaced.

# **Disk inspection examples**

When inspecting the clutch pack, the following pictures can be used as a reference. These are best viewed in color by viewing this install document on our website at www.rekluse.com/support.

**Drive Plates** – If the clutch pack is getting high amounts of heat, purple, blue, or black color can be seen on the drive plate teeth. See pictures below. Not all drive plates look the same and may look different than pictured.



**Normal Heat** 

High Heat

**Excessive Heat** 

(Blue)

(Black)

**Friction Disks** – Due to the dark color of the friction material, the friction disks will appear almost black as soon as they are put in oil. During inspection, look for glazing of the friction material. Glazing will appear shiny and feel like glass, even after oil is cleaned from the friction disk. Not all friction disks look the same and may look different than pictured.





**Normal Friction** 

Glazed Friction

# **TROUBLESHOOTING**

# **Clutch Drag**:

 If drag occurs only while the bike is cold, oil is the most likely cause. Be sure to warm up the bike before riding and/or racing. Use of lighter weight oil can help to minimize cold drag.

# Clutch Slip:

 If clutch slip occurs, inspect the clutch for signs of wear or heat and replace components as necessary. Clutch wear is dependent on the riders use.

## **Clutch noise**

For bike models that have clutch squeal or chatter here are some recommendations to reduce or eliminate it:

 Change the oil: Rekluse recommends that you have fresh, clean JASO-MA or JASO-MA2 rated oil for best clutch performance. Dirty or old oil can make the clutch more likely to squeal or chatter.

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# **NEED ADDITIONAL HELP?**

#### Website

www.rekluse.com/support

# **Frequently Asked Questions**

www.rekluse.com/faq

# **Support Videos**

www.rekluse.com/support/videos

#### **Phone**

(208) 426-0659

# **Technical Support**

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

## **Technical Support hours:**

Monday thru Friday: 8:00 a.m. - 5:00 p.m.

Mountain Time zone

Email: tech@rekluse.com

### **Customer Service**

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

## **Customer Service hours:**

Monday thru Friday: 8:00 a.m. - 5:00 p.m.

Mountain Time zone

Email: customerservice@rekluse.com



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