



INSTALLATION & USER'S GUIDE

Adventure TorqDrive Clutch
For Suzuki SV650 and V-Strom DL650

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OVERVIEW

This guide shows you how to replace your OE (Original Equipment) or “stock” clutch parts with your new Rekluse manual clutch parts. The following parts are replaced:

- OE drive plates
- OE friction disks

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.

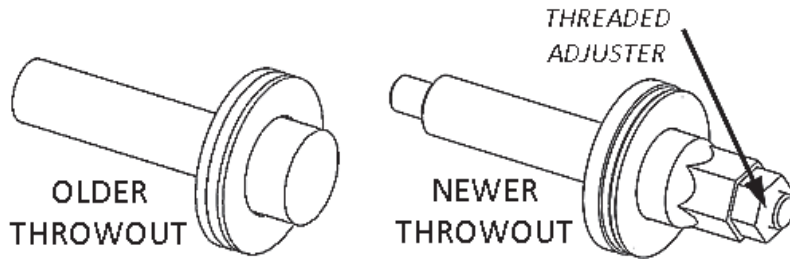


- If you install this product for a customer or another person, instruct them to read the **Safety Information** document and the **Installation and User Guide** before operating the bike with the product.
- Protect eyes and skin – wear safety glasses and work gloves.
- Lay the motorcycle on its left side when replacing the clutch. This makes working on the clutch 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.

Important Notes











- **For SV650 models**, this kit does NOT fit the Gen-1 (1999-2002) bike model-years, as they have a radically different clutch design than the newer models. For Gen-1 bikes, there are no Rekluse products available.
- The **DL650 (aka V-Strom 650) and SV650 models** received a change to their throw-out design between 2009 and 2012, depending on the specific model.

This change, which arrived between 2009-2010 for SV650 models, and in 2012 for DL650 models, provides added adjustability to the throw-out so that more clutch cable stretch can be accommodated. Cable adjustments are made based on the type of throw-out.

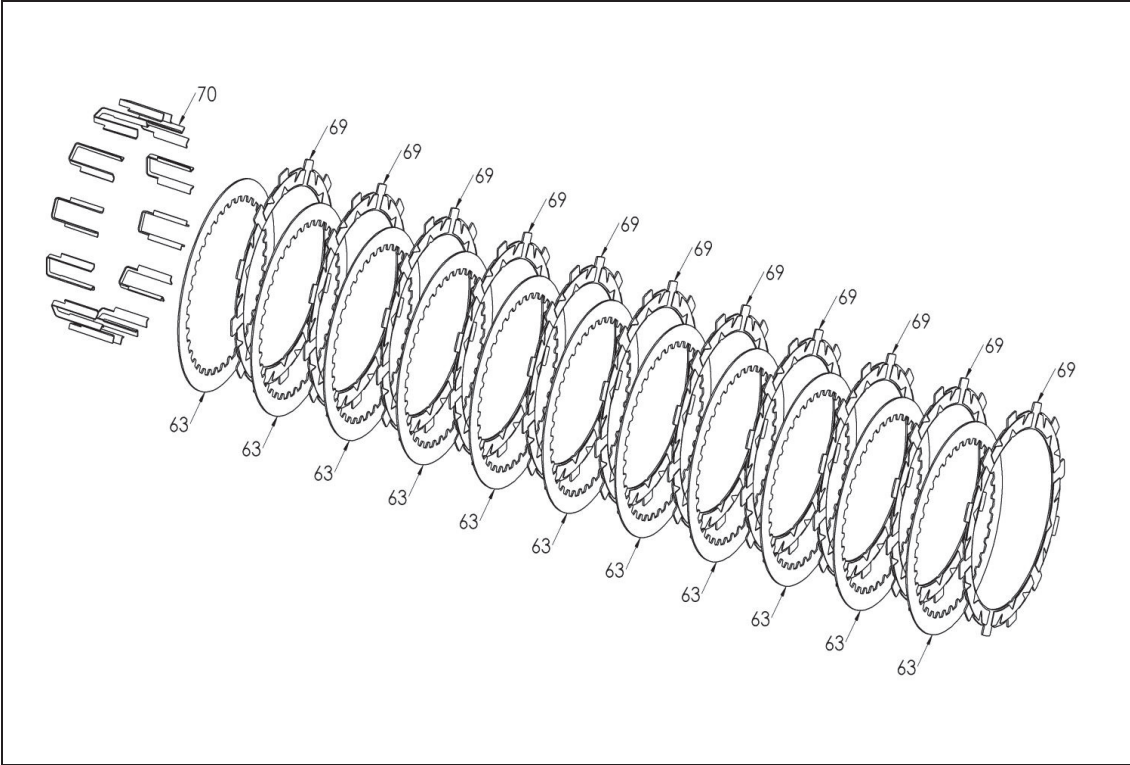


- Rekluse recommends purchasing a new clutch cover gasket from your dealer any time you reinstall the clutch cover assembly to avoid leaks.

TOOLS NEEDED

	 8 mm	 10 mm	
Fluid Catch Container	8 mm Socket	10 mm Socket	Torque Wrench
			
Metric Hex Key Set	Pliers	Screwdriver	Pick
			
10 mm Wrench	12 mm Wrench		

INCLUDED PARTS

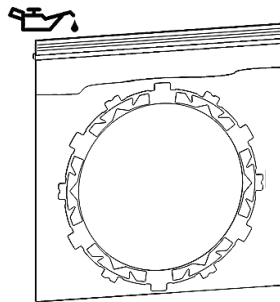


Item	Description	Qty.
63	Steel drive plates	11
69	TorqDrive® friction disks	11
70	Basket sleeves	12

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

DISASSEMBLE THE CLUTCH

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



2. Stand the bike on a suitable bike stand. Drain the engine coolant through the water pump housing's drain bolt.



3. Drain the engine oil into a suitable container. To avoid draining the oil, you can lay the bike on its left side.

4. On the topmost coolant hose, use pliers to squeeze the hose clamp and remove the hose from the cover assembly.



Note: *The other 2 hoses on the water pump housing can remain attached during the installation.*

5. Remove the clutch cover assembly bolts and set them aside. They will be reused.

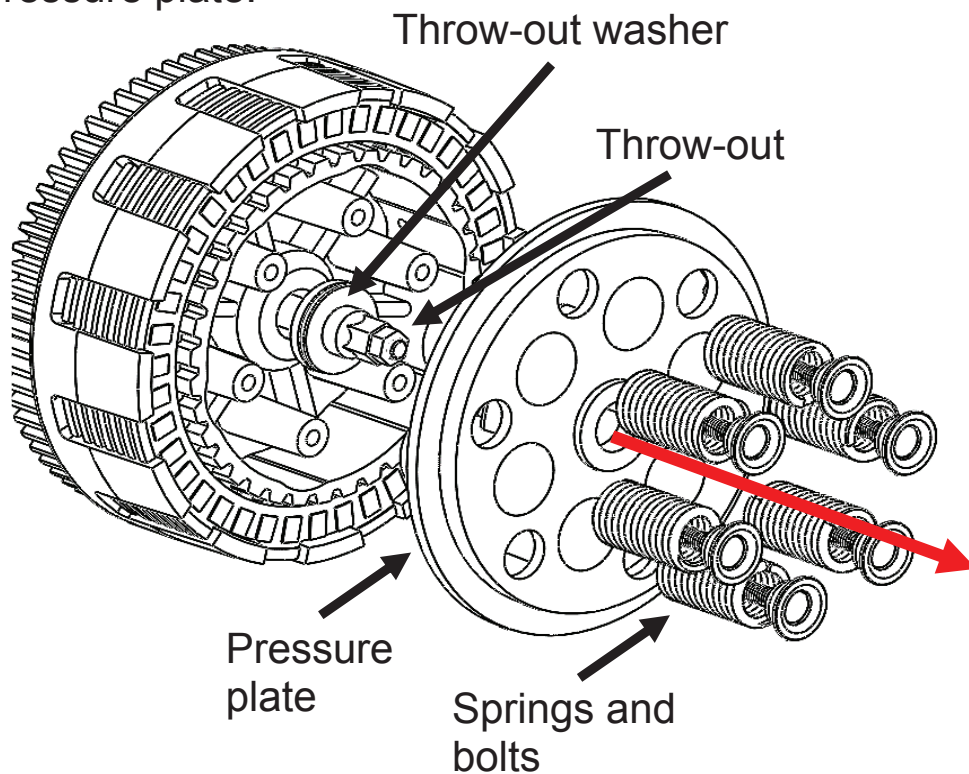
Note: *You may need to loosen or remove the right foot peg from the frame to achieve enough clearance to remove the clutch cover.*



6. Lift the cover assembly and swing the whole cover away from the clutch, taking care not to damage the hoses or cover gasket.



7. Remove the OE bolts and springs, then remove the pressure plate.



Note: Check that the OE throw-out washer and bearing are still in the hub. These parts can stick to the back of the pressure plate when it is removed.

8. Remove the entire OE clutch pack. These will not be reused.

CLUTCH PACK INSTALLATION

Notes for clutch pack installation

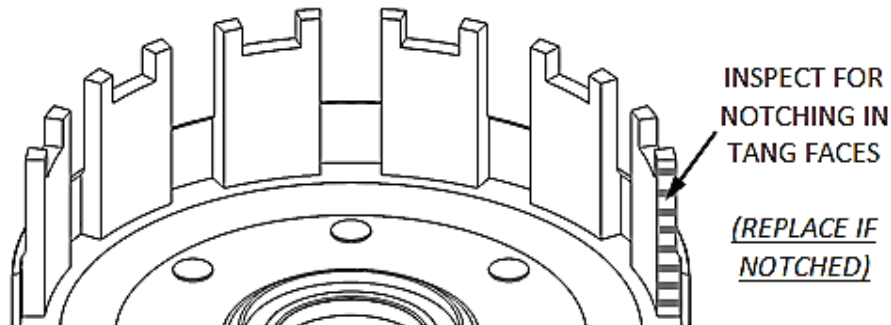
- *Some friction disks are marked with a small colored dot. This mark is used for processing and can be ignored.*
- *Some OE basket have “half slots” at the top of the basket tangs. Rekluse products require the entire clutch pack be installed into the MAIN (deeper) basket slots. Do not use the “half slots.” See the following picture for reference.*



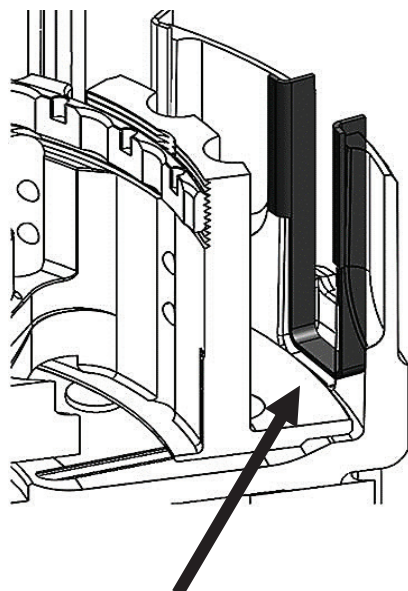
- *Inspect the clutch basket for spring damper play or notching. Do not install sleeves or use product with a notched basket. Notched basket tang faces or worn spring dampers can cause the sleeves to break.*

⚠ WARNING

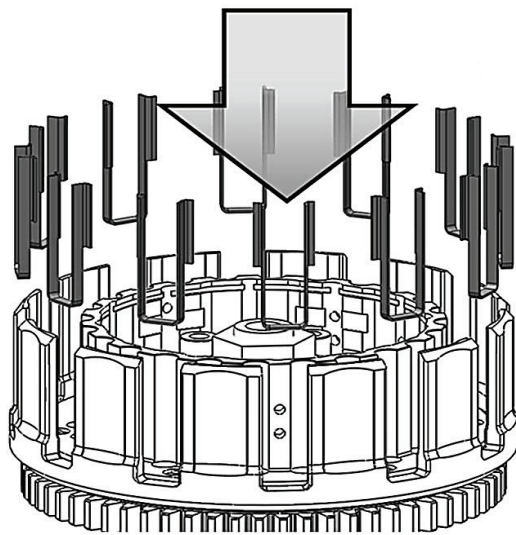
Failure to inspect the basket and replace if necessary could result in death, serious injury, and/or property damage.



1. Install all of 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 following pictures for reference.



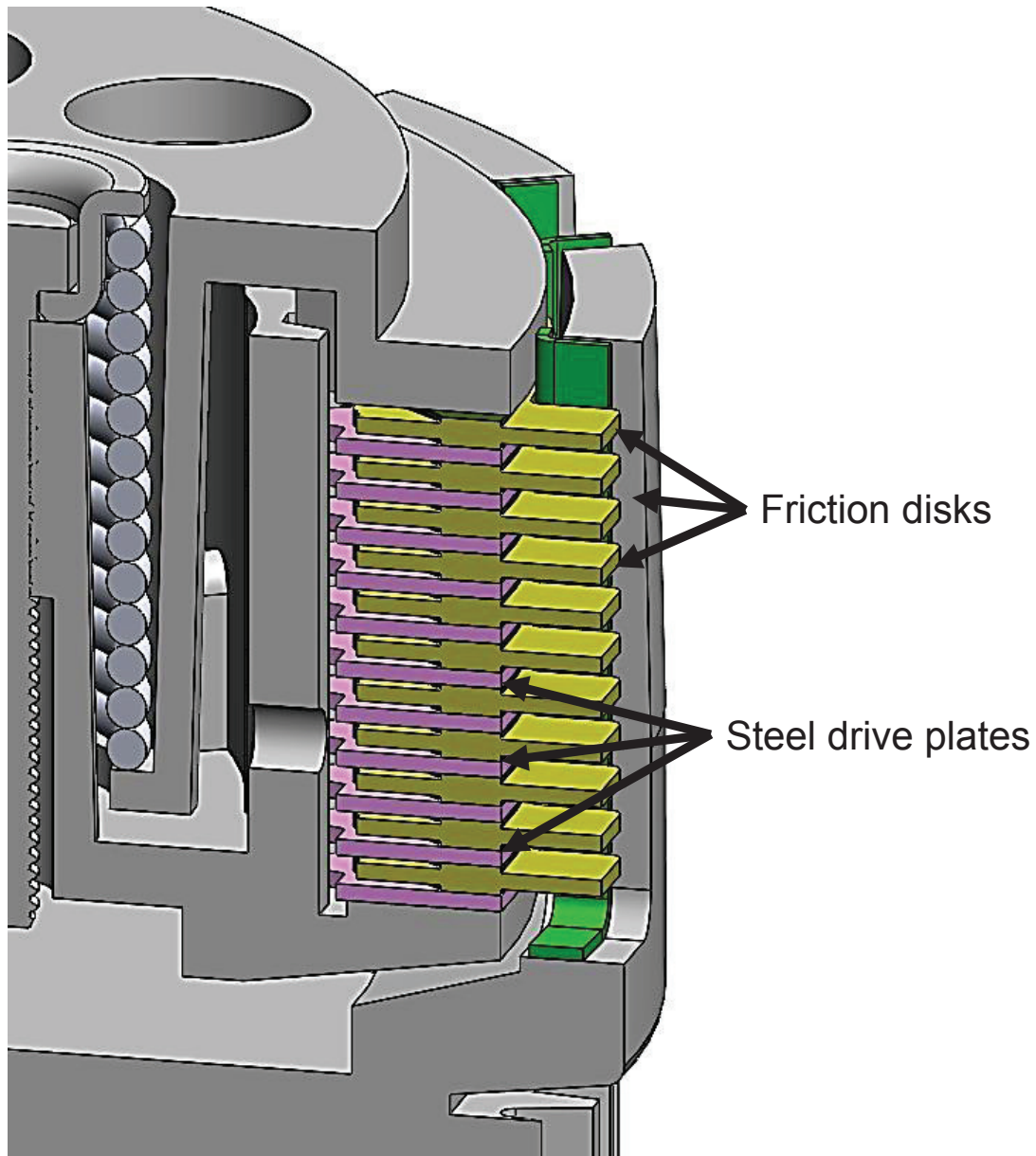
Install all the basket sleeves



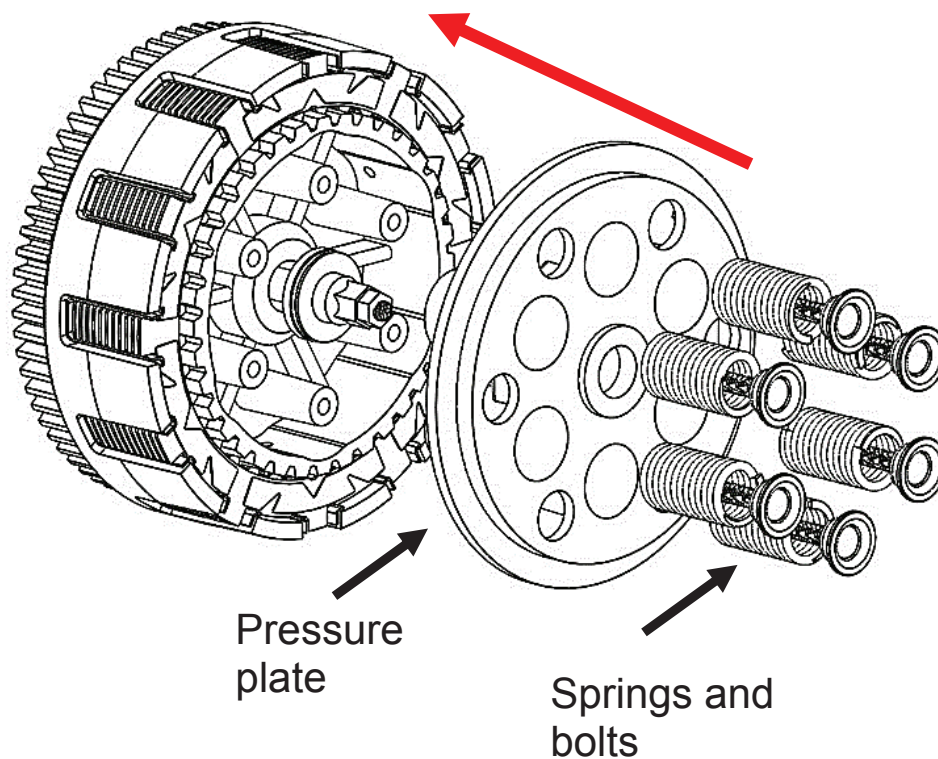
Note: When seated in the basket, the sleeve tops will sit flush with the top of the basket.

2. First, install a steel drive plate, then install a friction disk.
3. Continue alternating all 10 steel drive plates with all 10 friction disks, ending with a friction disk.

Clutch pack cross section

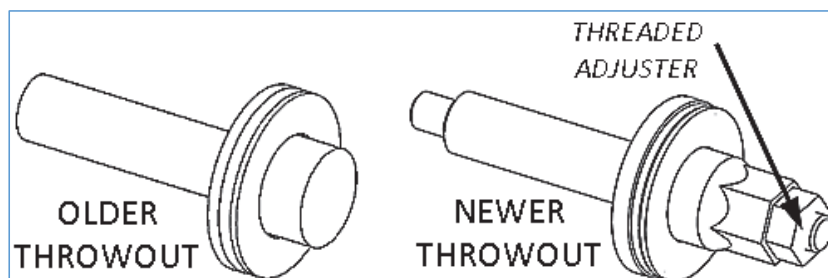


4. Reinstall the pressure plate, then reinstall the pressure plate springs and bolts.



5. Torque the pressure plate bolts in small increments in a star pattern to OE specifications.
6. Check for lever free play: OE spec= 10-15mm (0.4-0.6in) movement measured at the ball-end of the lever.
7. Adjust lever free play using the in-line cable adjuster.

Note: For models with the adjustable throw-out **ONLY**. If you have the older (non-adjustable) throw-out, skip to **Step 8**. If necessary, refer to the **OVERVIEW** section on the first page to understand the throw-out for your bike model.



Cable adjustments with adjustable (newer) throw-out:

Use these steps to ensure that the clutch cable and throw-out are optimally adjusted.

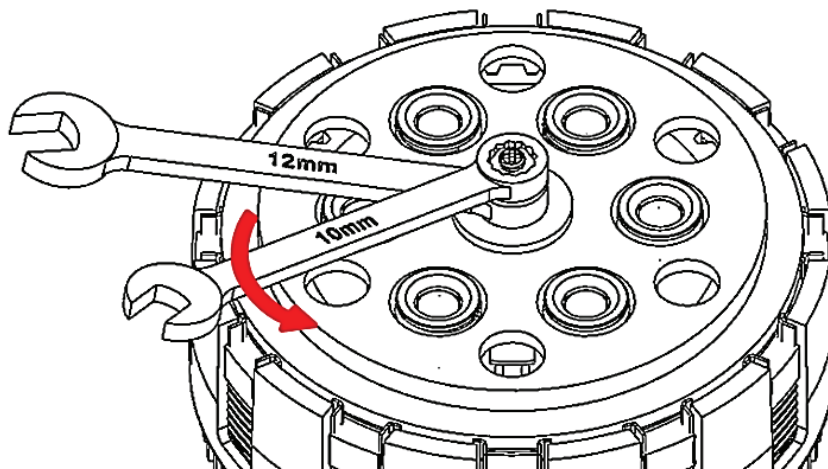
a. First, set the clutch lever freeplay to OE spec using the in-line threaded cable adjuster. OE spec= 10-15mm (0.4-0.6in) movement measured at the ball-end of the lever.

b. Check your in-line adjuster to see how much of the available cable adjustment remains.

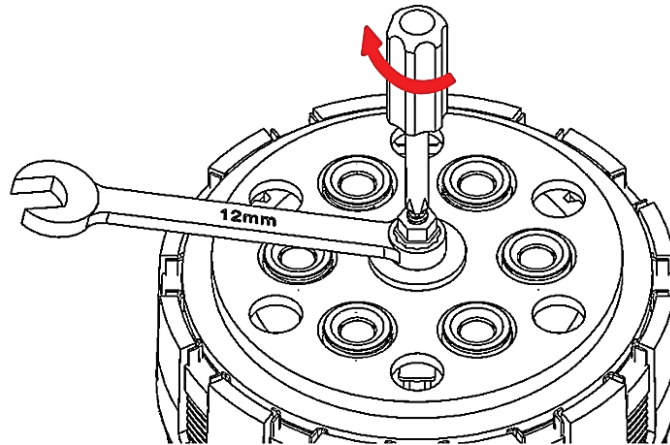
*If you have used over half of the available threads, go to sub-step c. If you have more than half of the cable's adjustability range leftover, skip to **step 8**.*

c. If you have used over half of the available threads on the in-line cable adjuster, adjust the throw-out by doing the following:

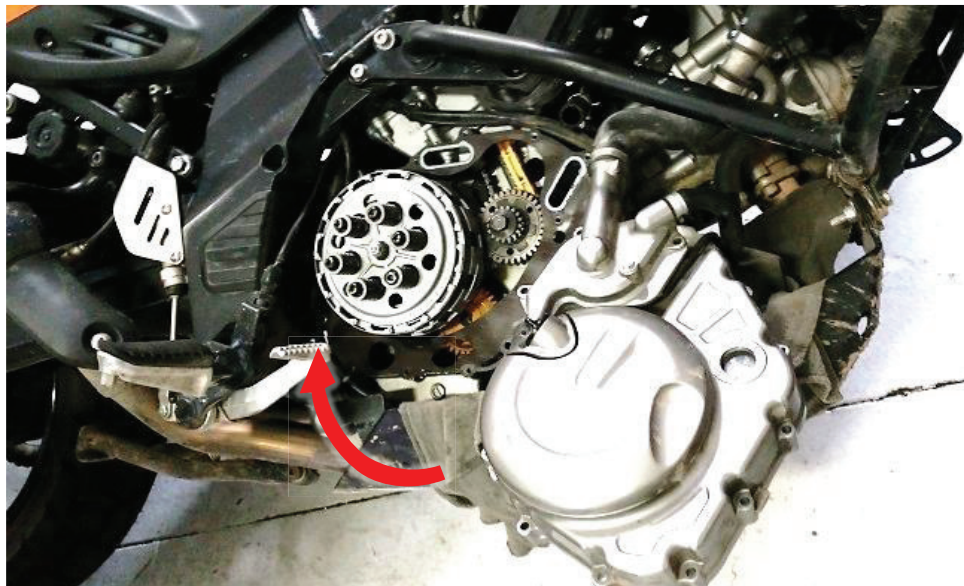
- Loosen the in-line cable adjuster to the midpoint of its adjustment range (where about $\frac{1}{2}$ of the available threads are exposed).
- Using 12mm and 10mm wrenches, loosen the jam nut on the clutch throw-out.



- While using the 12mm wrench to keep the throw-out from spinning, turn the adjuster screw clockwise with a Phillips-head screwdriver until the throw-out lifts far enough to nearly tighten the clutch cable.



- Tighten the jam nut at this new set position, and reconfirm lever freeplay.
8. Reinstall the clutch cover gasket. *Rekluse recommends installing a new clutch cover gasket from your dealer when reinstalling the clutch cover.*
 9. Lift the cover assembly and swing the whole assembly toward the clutch, taking care to correctly align the water pump gear with the cover.



10. Reinstall the clutch cover bolts. Lightly tighten the cover bolts in a star pattern.
11. Torque the clutch cover bolts in small increments to OE specifications.
12. Reattach the topmost coolant hose, then use pliers to squeeze the hose clamp and secure it to the cover assembly.
13. Reattach the right foot peg if it was removed during installation.
14. Add oil according to the OE instructions.

BREAK-IN

- Break-in will occur over the first 1-2 hours of use, depending on the rider. During break-in more clutch drag may occur than normal.
- It is recommended to do an oil change after the first 1000 miles to drain any excess clutch debris that occurred from break-in.

TROUBLESHOOTING



Clutch Drag:

- Cold Drag Only – If drag occurs only while the bike is cold, oil is the most likely cause. Be sure to warm up the bike before riding/racing. Use of new or lighter weight oil can help to minimize cold drag.
- Hot and Cold Drag –Check for any warped steel drive plates or frictions in the clutch pack, or other signs of wear caused by extreme heat.

Clutch Slip:

- If clutch slip occurs, inspect the clutch for signs of wear or heat.

MAINTENANCE

To keep your clutch performing at its best, perform regular maintenance on your bike and clutch. Clutch longevity and performance is greatly increased with oil quality and other bike factors that reduce engine heat.

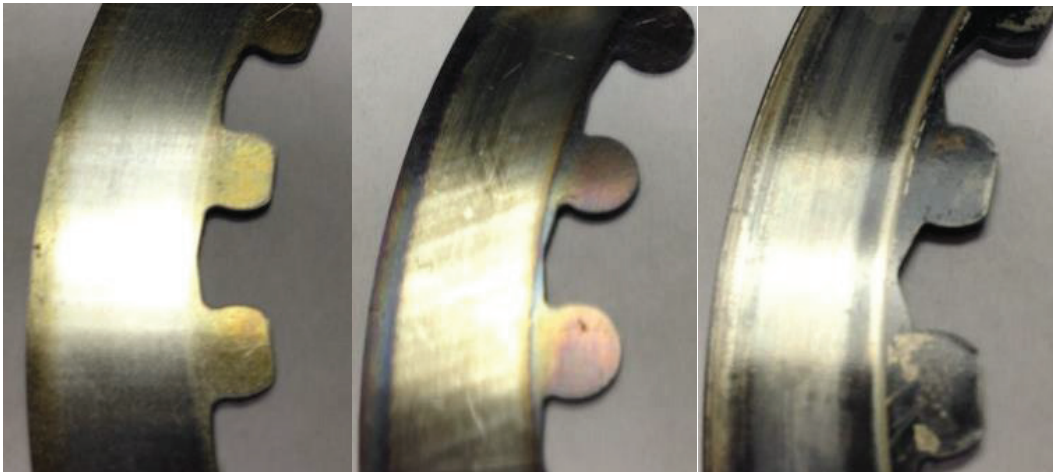
- Inspect all of your clutch parts at regular maintenance intervals for signs wear or excessive heat, and replace components as necessary. Clutch wear is dependent on the riders use.
- Inspect and replace basket sleeves if they appear to be notched from friction disks.
- Keep up with regular oil changes as per the bike manufacturer's recommendations. Clutch performance and longevity depend on oil quality.
- For optimal clutch performance Rekluse recommends using fresh, clean oil that **meets JASO-MA** oil rating requirements.
- Repeat the break-in procedure anytime you replace the friction disks. Always soak friction disks in new oil for at least 5 minutes before installing.

- Oil recommendations can be viewed under Tech Tips on our website at www.rekluse.com/support/videos/atv-mc-support-videos.

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 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
(Blue)

Excessive Heat
(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

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.

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.

Hours:

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

Mountain Time zone

Email: customerservice@rekluse.com