

REKLUSE



REKLUSE MOTOR SPORTS

z-Start™ Perch Adjuster

INSTALLATION GUIDE

z-Start Revision 3.000
RMS200 – Perch Adjuster
194-200
Manual Revision: 121906

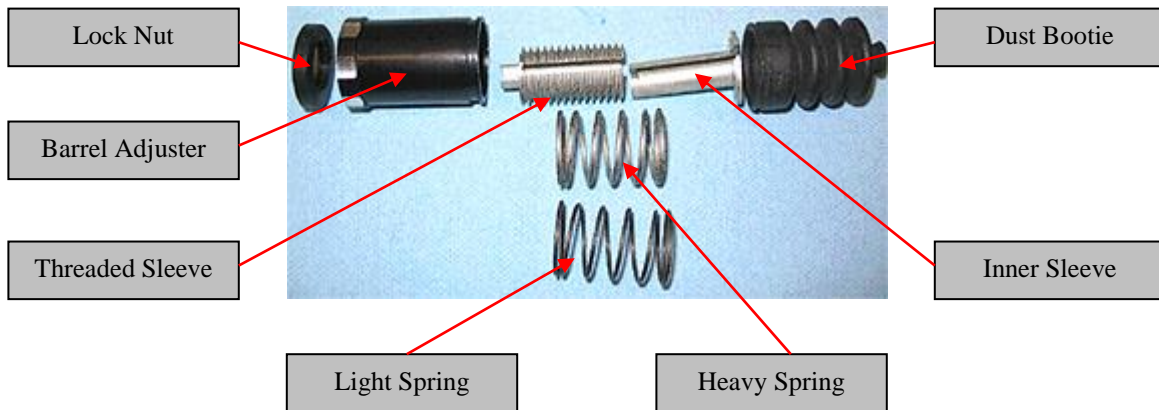
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INCLUDED PARTS FOR THE Z-START PERCH ADJUSTER

Item	Part #	Item	Part #
<input type="checkbox"/> Lock Nut	181-089	<input type="checkbox"/> Threaded Sleeve	181-088
<input type="checkbox"/> Barrel Adjuster	181-087	<input type="checkbox"/> Inner Sleeve	181-090
<input type="checkbox"/> Light Spring	442-408	<input type="checkbox"/> Dust Bootie	419-905
<input type="checkbox"/> Heavy Spring	442-409		



BASIC Z-START PERCH ADJUSTER OPERATION

IMPORTANT: *The z-Start Perch Adjuster **does not adjust clutch cable slack**, it only **adjusts the engagement** of the z-Start Clutch. Cable slack adjustment is done with the stock cable slack adjusters.*

The z-Start Perch Adjuster applies an adjustable opposing spring force through the clutch cable to adjust the engagement of the z-Start Clutch. The softer spring will enable the clutch to engage lower in the RPM range. The stiffer spring will enable the clutch to engage higher in the RPM range. The z-Start Perch adjuster houses a spring. The more the spring is compressed (i.e., more threads showing), the more delay there will be in clutch engagement (i.e. more clutch slip). Conversely, the less the spring is compressed (i.e., fewer threads showing), the quicker the clutch will engage.

Installation Tips

- Adjusting and maintaining the proper cable slack is **critical**. If there is not enough cable slack, the clutch will slip excessively and cause rapid clutch wear. If there is too much cable slack, the z-Start Clutch will drag and cause engine stall.
- A properly maintained clutch cable increases the adjustability and performance of the z-Start. A cable that is dirty or bound up can cause the clutch to slip excessively. Rekluse recommends lubricating the cable with a dry lubricant like graphite or Teflon.
- The **clutch cable casing** must be free to slide at least 1 inch (2cm) towards the clutch perch. If clutch cable casing cannot move freely, check the cable routing and remove the clutch cable from any cable ties or frame hooks that are preventing free travel.
- ATVs or Motorcycles with handlebar risers, tall handlebars, trail computers, steering stabilizers, etc. may require a longer clutch cable to ensure proper performance. Contact Rekluse to order longer clutch cables.

NOTE: Some models require a special Rekluse clutch cable. Contact Rekluse to order clutch cables for the following machines:

- 2006-2007 YZ450F (part # 450-914)
- 2006-2007 YZ250F (part # 450-912)
- 2005-2007 WR450 (part # 450-911)
- All KX250F/RMZ250 (part # 450-913)
- All KX450F (part # 450-915)
- All KX65/RM65 (part # 450-917)

BIKE PREPARATION

1. **z-Start Pro customers only:**
Remove the 1.5-inch (C150) Spring from inside the clutch. Be sure to leave the throw-out spacer and Lever Return Spring Carrier in place on top of the throw-out
2. Disconnect the clutch cable from the clutch lever and perch. Ensure the cable is free of excess drag by manually pushing and pulling the cable end in and out while holding the clutch cable casing. If the cable has friction, lubricate it with a dry lubricant like graphite or Teflon. Replace cable if necessary.
3. Grab the clutch cable casing above the handlebars and pull the clutch cable casing towards the perch. You need to have at least 1" (2cm) of travel in both directions. If the clutch cable casing does not slide freely remove it from any cable ties that are preventing it from doing so.
4. Modify the stock perch adjuster dust bootie/cover so that the Threaded Sleeve of the z-Start Perch Adjuster can locate into the stock perch adjuster. The idea is to trim the stock cover so it will support the Threaded Sleeve when the Threaded Sleeve is pushed into the stock cover. **See following pictures.**



Trimming to increase opening of stock perch cover.

Checking fit of Threaded Sleeve inside of stock perch cover.

Note: The stock perch adjuster dust bootie may differ from the examples shown above.

INSTALLING PERCH ADJUSTER

- Slide the Rekluse Dust Bootie over the lever end of the cable and over the cable casing so it is 2 inches (4-cm) from the end of the clutch cable casing. **See following picture.**

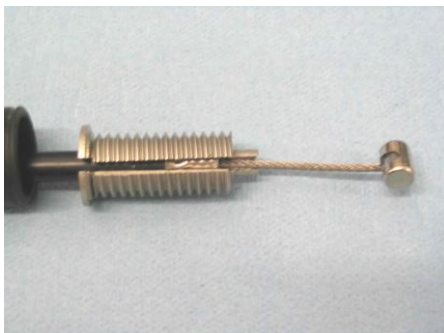


- Slide the Inner Sleeve over the end of the clutch cable and over the cable casing so that the cable casing end is nested completely inside the Inner Sleeve. **See following picture.**



Note: The cable sheath may need to be pulled back or modified and/or some light filing of the cable casing end may be required to allow the Inner Sleeve to slide all the way on.

- Slide the Threaded Sleeve over the end of the clutch cable and over the previously installed Inner Sleeve. **See following picture.**

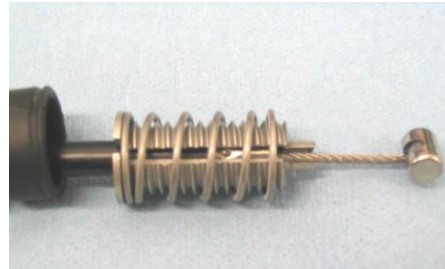


- Choosing a Spring:**

- The *Light Spring* allows *quicker engagement* and more adjustment for engagement settings close to engine idle—it is the recommended spring for trail riding.

- The *Heavy Spring* gives *slower engagement* allowing more clutch slip—it is the recommended spring for high engine RPM riding like motocross.

- Slide one of the included springs over the cable and down around the Threaded Sleeve. **See following picture.**

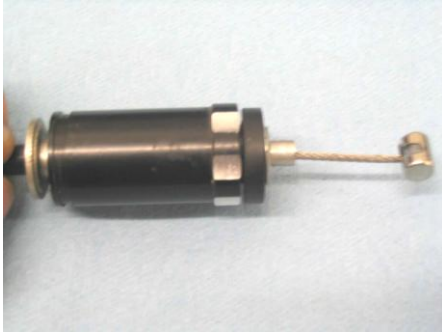


- Slide the Barrel over the cable and other previously installed z-Start Perch Adjuster components. Next, thread the Barrel onto the Threaded Sleeve so that 3-4 threads are showing out the end of the Barrel. **See following pictures.**



INSTALLING PERCH ADJUSTER (continued)

11. Slide the Lock Nut over the cable and thread it onto the Threaded Sleeve up against the Barrel. **See following picture.**



12. Slide the stock clutch perch cover(s) over the cable. **See following picture.**



13. Attach the clutch cable end to the clutch lever and pull/slide the cable through the stock clutch perch and stock clutch cable slack adjuster. Index the end of the z-Start Perch Adjuster into the stock clutch cable slack adjuster (make sure the nipple of the z-Start Perch Adjuster seats into the stock clutch cable slack adjuster). **See photo below for proper alignment.**



14. Carefully reinstall the stock dust booties taking care not to tear the rubber. Make sure there is no interference from the dust booties keeping the z-Start Perch Adjuster from seating within the stock clutch cable slack adjuster. **See following pictures.**

Note: Thread the stock perch adjuster all the way in so it is easier to slide everything into place.



SETTING CLUTCH CABLE SLACK

IMPORTANT: Cable slack adjustment is **critical**. The cable slack must be adjusted properly and maintained frequently. Failure to do so will result in clutch failure.

Adjusting cable slack is different with a z-Start automatic clutch installed. Cable slack adjustment requires starting the motor and revving to and *maintaining* a minimum of 4500 RPMs (approximately ½-throttle) while checking for lever free play. **There must be clutch lever free play while holding a minimum of 4500 RPMs.** If there is too much cable slack, the clutch will drag causing the engine to stall and reducing the ability to disengage the clutch at higher RPMs.

WARNING: Ensure the bike is in neutral or it could lunge forward unexpectedly when revving the engine.

15. **With the motor off**, adjust the cable slack until you feel an increase in lever resistance approximately ½" away from grip. As you pull the clutch lever, you should feel light resistance from the spring inside the z-Start Perch Adjuster. You should feel a significant increase in resistance as the clutch lever begins to release the pressure plate.
16. **Place the bike into neutral** and start the engine. While holding a minimum of 4500 RPMs, check for ½" (1cm) of play at the end of the clutch lever before you feel significant resistance. Adjust cable slack accordingly using stock cable slack adjuster(s).
17. Check that the clutch cable can compress the spring within the perch adjuster and move freely in and out. Check that the clutch cable movement is not restricted when the handlebars are turned or as the front forks travel up and down.

Tip: If you are having trouble getting enough cable slack, some models have a threaded adjuster built into the actuator arm end of the clutch cable at the case. Move both of the nuts to the actuator arm side of the bracket to pick up more cable slack. **See following picture.**



Tip: Use one finger with light pull when checking for lever free play. This will make it easier to distinguish between light resistance of the spring within the Rekluse perch adjuster and the significant resistance of releasing the pressure plate.

ADJUSTING CLUTCH ENGAGEMENT RPM

18. Turning the Barrel of the z-Start Perch Adjuster adjusts how much force is applied to the z-Start Clutch to tune engagement/disengagement.

Turning the Barrel so that **more threads** of the Threaded Sleeve are showing will **delay clutch engagement** to a higher RPM and **increase clutch slip**.

Turning the Barrel so that **fewer threads** of the Threaded Sleeve are showing will **quicken clutch engagement** and **reduce clutch slip**.

Note: The Light Spring gives less clutch slip—the Heavy Spring gives more.

WARNING: Do not turn the Barrel so more than 0.55" (1.4cm) of threads are visible past the Lock Nut (when the Lock Nut is seated against the Barrel). Doing so can prevent the z-Start from fully engaging and can damage the spring and cause excessive clutch slip.

19. Once clutch engagement is set, attach the Rekluse Dust Boot to the z-Start Perch Adjuster Barrel and secure the Lock Nut.

Note: When adjusting the Barrel you will need to slide the dust boot off and loosen the lock nut to adjust the clutch engagement. Be sure to secure the lock nut and replace the dust boot after the adjustment is finished.

Note: Adjusting clutch engagement RPM also directly affects compression braking. Turning the barrel so that more threads show will cause the vehicle to free wheel at a higher RPM. Turning the barrel so that fewer threads show will cause the vehicle to free wheel at a lower RPM.

TROUBLESHOOTING GUIDE

PROBLEM:

REMEDY:

Adjusting Barrel of z-Start Perch Adjuster has no effect on the clutch's engagement

Re-check cable slack setting. See page 8.

Clutch slips excessively

There may be too little clutch cable slack. See page 8.

Clutch engagement unsmooth or inconsistent

Check routing of clutch cable to ensure that the cable casing is free to slide back and forth between the perch and actuator arm.

Clutch slips excessively at low RPM

Ensure that none of the dust covers are interfering with nesting of the z-Start Perch Adjuster into the stock perch. See page 7.

MAINTENANCE AND USE

- Keep your cable well-lubricated and free of kinks. A poorly maintained cable will have a negative effect on the performance of the z-Start. Replace the clutch cable if necessary.
- Make sure the clutch cable is routed properly and has a free range of motion towards the perch. With the engine off, grab the clutch cable an inch or so back from the perch adjuster and push it into the perch adjuster. Make sure the cable moves freely into the perch adjuster without any binding. Perform this check throughout the range of motion of the handlebars. Bark busters, trail computers, and steering stabilizers may interfere with the clutch cable's free motion. If necessary, pull any cable slack towards the handlebars and use a zip tie to hold cable "loosely" away from any interference. If the clutch cable does not have sufficient free play throughout the handlebar's range of motion, the clutch may slip leading to excessive wear of your clutch plates.
- Excessive mud on the clutch actuator arm or clutch perch can cause interference leading to slipping of the clutch.
- The z-Start External Perch Adjuster is not an "on-the-fly" adjuster. Only make adjustments while stopped.
- To adjust the z-Start External Perch Adjuster, pull the dust boot off of the end of the Barrel Adjuster and loosen the lock nut. While holding the Threaded Outer Sleeve with one hand, turn the Barrel Adjuster in or out with the other hand.
- The lighter spring will provide a quick clutch engagement (less slip), the heavier spring will provide a slow clutch engagement (more slip).
- The z-Start External Perch Adjuster should be cleaned every 25 hours of use, or sooner if riding in very dusty or muddy conditions. To clean, remove the z-Start External Perch Adjuster. Use compressed air or soapy water to remove dirt and dust and allow to dry.
- The z-Start External Perch Adjuster Inner Sleeve has a Teflon-impregnated anodized coating. You may also use a dry lubricant, such as Teflon or graphite, never oil-based lubricants. Dri-Slide is a good product to use for this application.