



Congratulations! You have purchased the finest clutch kit available. This **patented** "dual quadrant" technology is revolutionary to the industry! This technology is **ONLY AVAILABLE** from Super Torquer Systems, Inc.!

## STS1KAW 38-12

### How to Install and Use the Heel Clicker™ Clutch Weight System and Most Frequently Asked Questions

(Kawasaki 4-Tower clutch design only)



#### **WARNING! READ BEFORE INSTALLATION!**

Personal injury and damage to property can result from the improper installation and use of any product, including the Heel Clicker Clutch Kit. Installation of this kit should not be attempted unless you are a trained service technician or have a thorough and complete knowledge of CVT systems and their repair and tuning. Novice tuner should not attempt installation. It is recommended that a qualified dealership or repair facility install this kit.

**DEFINED WARNING:** This is a high performance product for use in sanctioned racing events only and is not for installation or operation by "consumers" as defined by the Magnuson-Moss Warranty Act. **DO NOT** install any performance parts unless you have the technical ability to properly set up the entire machine to compensate for the installation of these parts.

The expertise and necessary work needed to install products varies from one product to another. Instructions (where provided) are given to assist in installation only and are not a substitute for mechanical expertise. References to performance gains, reliability, ease of installation and tuning are based on our experiences. This is **NOT** a guarantee of similar performance in every installation. While we sell tested and proven products, individual results may vary.

**U.S. Patent # 6,346,056**

**Before you begin to install your Heel Clicker™ clutch kit, please note the following:**

- **DO ACCEPT** only genuine HEEL CLICKER™ parts. This kit is assembled with made-to-specification parts. Accept no substitutes.
  - **DO ALWAYS** use the same combination of fasteners on each weight arm and shoulder. NO EXCEPTIONS.
  - **DO** make sure the weight arms are balanced (weigh the same) before installation.
  - **DO** make certain you have any excess side play shimmed out of the pivot area of your weight arm.
  - **DO** make sure your Stationary pin and nut are new or in like-new condition and securely fastened.
  - **DO** make sure your drive belt is in good condition. Also, verify that your center-to-center and offset adjustments are correct.
  - **DO** use LOCTITE™ (not included in kit) or similar product on each fastener after you determine the proper combination for your setup.
  - **DO NOT** grind or alter any portion of the weight arm or shoulder.
  - **DO NOT** adjust the mass while the weight is mounted on the stationary pin in the clutch.
  - **DO NOT** operate your machine without checking the full range of motion of each weight to make sure you clear the spider assembly and related areas.
  - **DO NOT** exceed 6200 RPM's.
  - **DO NOT** allow an unqualified person to make any adjustments to your clutch kit.
  - **DO NOT** install a Heel Clicker™ clutch kit in any clutch assembly that has excess wear, damage, or is in otherwise questionable condition.
- 

**Provided in this kit are the following items:**

- Four (4) bushed billet Heel Clicker™ clutch weights
- Twelve (12) 1/4x28x1/4" stainless steel button headed bolts--2.5 grams approx.
- Twelve (12) 1/4x28x3/8" stainless steel button headed bolts--3.5 grams approx.
- Twenty-four (24) 6.0mm steel washers --1.0 gram approx.
- One primary clutch spring, Orange (15-260)
- One secondary spring, Silver (75-110)
- Eight (8) 6mm studs
- Eight (8) 6mm flanged lock nuts
- Six (6) 6mmx1mil machine washers
- Two (2) 8mmx1mil machine washers
- One Heel Clicker™ Super Torquer Systems, Inc., sticker

**NOW YOU ARE READY TO INSTALL YOUR NEW  
HEEL CLICKER™ CLUTCH KIT.**

- 1) Remove the drive clutch from the machine. Disassemble the cover and remove the drive spring, and clutch weights.
- 2) You are now ready to tune the Heel Clicker™ weights for your particular application. The Heel Clicker™ weights are adjustable for different applications.

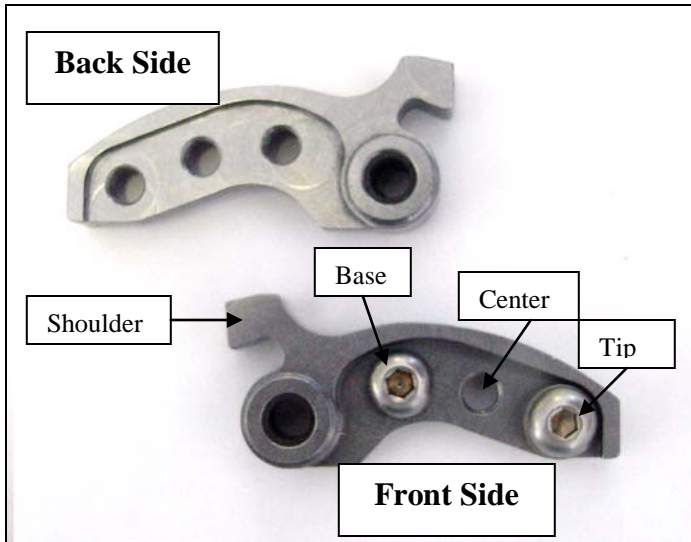
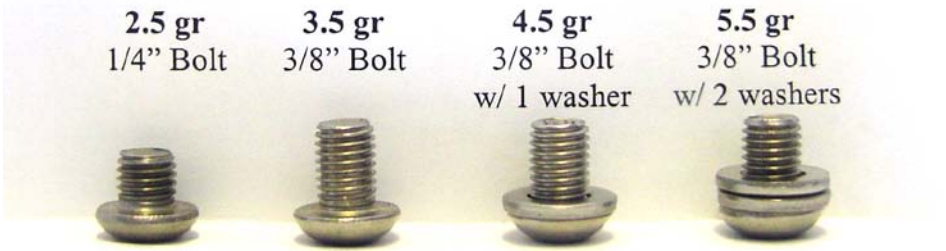


Figure #1 (Kawasaki weights not exactly as pictured)

The application chart tells you how to set the clutch weights up for stock Kawasaki applications. Find your model and determine how much weight to add to each of the base, center and tip hole locations. When adjusting the weight with the button head bolts (2.5 or 3.5 grams each) and washers (1.0 gram each), make sure the bolt and washer are installed from the front side. Figure #1 above shows the base hole with a 1/4" bolt and the tip hole having the 3/8" bolt w/ 1 washer on it. Some Kawasaki ATV models require no center or tip hole adjustments.

For reference, the next picture shows the combination bolt/washers needed to achieve each gram total listed in the application chart.

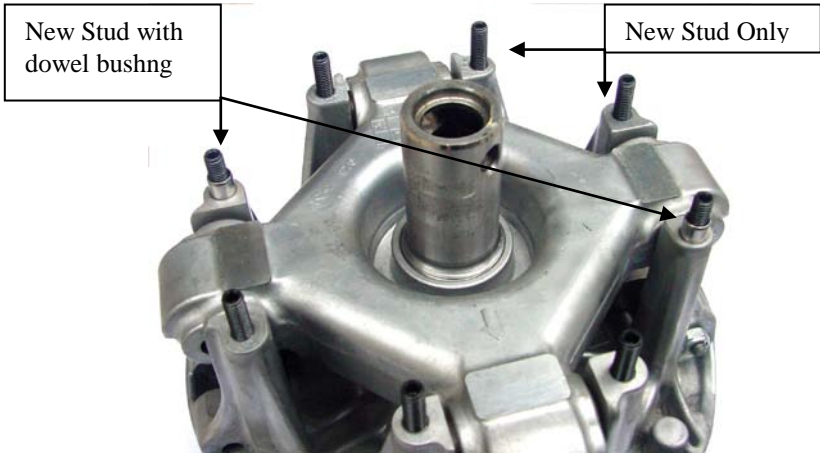


**IMPORTANT NOTE: Never use more than two washers on the 3/8" long bolt and zero on the 1/4" bolt!**

**Application Chart for Heel Clicker™ Clutch Weights**

<u>Model</u>	<u>Base</u>	<u>Center</u>	<u>Tip</u>	<u>Primary</u>	<u>Secondary</u>
KFX 700	0.0	0.0	0.0	Orange	Silver
V-Force 700	0.0	0.0	0.0	Orange	Silver
Prairie 700	0.0	0.0	0.0	Orange	Silver
Brute Force 750	0.0	0.0	0.0	Orange	Silver
Prairie 650	0.0	0.0	0.0	Orange	Silver
Brute Force 650	0.0	0.0	0.0	Orange	Silver
King Quad ('05 ONLY) (Suzuki)	0.0	0.0	0.0	Orange	Silver

- 3) Set all four clutch weights up with the same weight in each location. Install all four clutch weights using the OEM stationary pins
- 4) Install the orange primary clutch spring supplied with this kit.
- 5) **It is critical to properly set the primary spring pocket height for top end speed performance.** Please follow closely and refer to the pictures provided.
  - 5A) Hand tighten the enclosed 6mm studs in the holes of the clutch. Replace the two stock 8mm dowel bushings on the appropriate studs



5B) Place a 8mm machine washer over the 8mm dowel bushngs. The other six studs receive a single 6mm machine washer.

**8mm washer    6mm washer**



5C) Place the cover over the studs in the original position making sure the alignment arrows on the spider and cover match. This is necessary to ensure correct balance within the clutch, Put a 6mm flanged lock nut on each stud. While using a 10mm wrench to hold the nut in a stationary position, use an allen wrench to back the stud up to and even with the nylon at the top of the nut. Torque the nut/stud combo to 6 ft-lbs of torque. See picture for further clarification.



- 6) Install the Silver secondary spring in the secondary clutch.
- 7) After installing the kit and you have decided on your settings, put the side cover back on. Always replace the side cover gasket with a new one. Before you tighten the side cover on completely, push down on the cover from the top and hold while tightening the cover screws. This helps ensure the clutch weights do not come in contact with the inside of the clutch cover. It is imperative that the weights do not come in contact with the cover during

## Most Frequently asked Questions

**I seem to have lost top speed?** Moving weight to the tip hole will increase top speed. Our specifications are given for aggressive trail and hard pulling conditions. Top speed on hard pack is achieved by moving weight to the tip location instead of the center location. Keep the amount of weight the same, just move it. This is a key tuning tip used by many top tuners. Also see Helix Recommendations below.

**How can I get more engagement RPM?** By removing weight from the clutch arm location(s), engagement RPM will rise. Also, using larger diameter rollers will tuck the weight and engagement RPM will also raise. Placing weight in the hole on the tip will also work.

**How can I get less engagement RPM?** The stock Kawasaki primary spring will have less engagement rpm than the Heel Clicker springs. You can use whichever provides the ride characteristics you prefer.

**What Helix should I run with the Heel Clicker weights?** We have found the stock helixes work well, but tend to slip the belt at top speed. Running shallower helix angles will work better.

## **Limited Warranty**

Super Torquer Systems, Inc., (“Manufacturer”) warrants that the clutch arms sold hereunder will be free from defects in material and workmanship when subject to normal and proper use for the original purchaser’s ownership. If the clutch arms do not conform to this limited warranty during the warranty period of one (1) year from the date of purchase, the Buyer shall notify Super Torquer Systems, Inc., in writing of the claimed defect and demonstrate to Manufacturer’s satisfaction that said defects are covered by this limited warranty. If the defects are properly reported to Manufacturer within the warranty period, and the defects are of such type as to be covered by this warranty, the sole and exclusive obligation of the Manufacturer shall be, at its own expense, to furnish replacement product, or at Manufacturer’s option, replacement parts for the defective product. Removal, shipping and installation of the replacement product or parts shall be at the Buyer’s expense.

Manufacturer does not warrant against damages or defects arising out of improper or abnormal use or handling of the clutch arms; against defects or damage occurring from improper installation, against sudden impact arising from abnormal occurrences (ex., belt breaking or clutch slams shut unexpectedly); nor damages incurred to the machine from the use of this product.

Purchaser is responsible to do maintenance checks on the complete CVT system on a regular basis to ensure proper operation. Normal wear components including, but not limited to, springs and bushings are not covered by warranty.

**U.S. Patent # 6,346,056**

Super Torquer Systems, Inc.  
1006 6<sup>th</sup> Av NW  
Little Falls, MN 56345  
Revised: 06/06