

HC-X_{patent pending}

Installation instructions for The HC-X secondary clutch system for Arctic Cat Roller Secondary clutches.



WARNING! READ BEFORE INSTALLATION!

Personal injury and damage to property can result from the improper installation and use of any product, including the HC-X Bolt-on 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.

Provided in this kit are the following items

One wide roller spring cap

One multiradius Helix (patent pending). 38,42,46,50,42/34,54/46,46/38

One Aluminum Helix adapter.

Three Stainless Steel 6mm x 12mm Cap screws and lock washers

Three 10x24x5/8 Stainless Steel Cap screws and lock washers.

Instructions

Two Secondary Springs Red (80lb-155lb, 60lb/in. rotational)

Yellow(40-100, 50 lb/in. rotational)

- 1) Remove Secondary Clutch from the machine.
- 2) Remove Spring Cap, spring and Helix.
- 3) Install Aluminum Helix adapter using the three 10x24x5/8 Cap screws and lock washers (see figure#1).



Figure #1



Figure #2

- 4) Install the helix Using the three 6x12mm Cap screws and Lock washers, Torque to 15 ft-lbs. See figure #2
- 5) Install spring cap and secondary spring. Twist the spring to the stock hole for initial tuning. Use the existing OEM nylon lock nuts. Torque to 20 ft-lbs. See figure#3



Figure#3

- 6) Install Secondary clutch back on machine using the OEM shims, bolts, and collar.

Most frequently asked Questions

How do the multi-radius helixes compare to constant radius helixes? A good reference is a 12 degree progressive angle. Our 50 straight cut multiradius helix acts like an Arctic Cat 58/46 on the up shift, but a straight 46 on the backshift. Our 54/46 acts like a 62/40.

The Rollers are not touching evenly on the Helix, How do I fix it? A great deal of attention is paid on exacting dimensions of the HC-X assembly. Unfortunately Arctic Cat does not machine the helix base plate area of the Movable sheave like other manufacturers. This allows slight errors when the helix is bolted in place. The helix can be rotated to three different locations to get the best combination of roller to helix contact.

What secondary spring should I use? The decreasing radius touch point allows for more belt squeezing at the full shift our point. This means softer springs can be used or steeper helix angles. Our Red secondary spring is recommended with the 50 degree helix for aggressive trail and snowcross. The Yellow spring is used for maximum top speed applications. Mountain application always use the Red spring.

Can I use the HC-X with conventional clutch weights, or do I have to use Heel Clicker weights? For the best performance a combination of Heel Clicker and HC-X is the best, but the HC-X is a stand alone product and can be used with conventional weights.

Limited Warranty

Super Torquer Systems, Inc., (“Manufacturer”) warrants that the parts 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 parts 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 parts; 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.

**Super Torquer Systems, Inc.
1006 6th Ave. N.W.
Little Falls, MN. 56345**