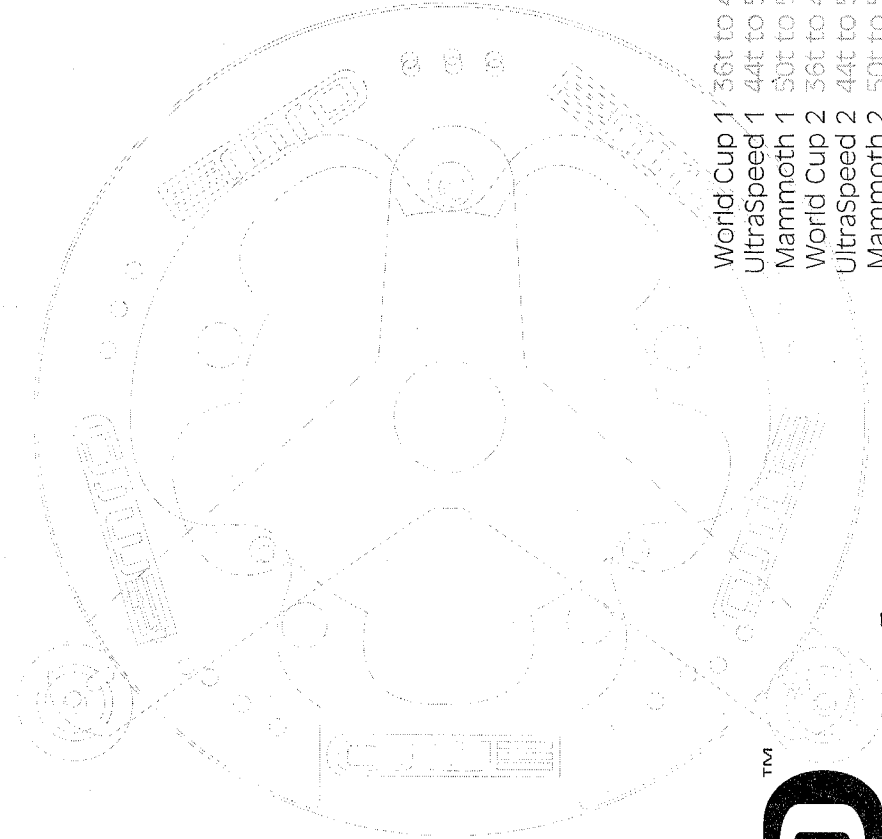


WARRANTY

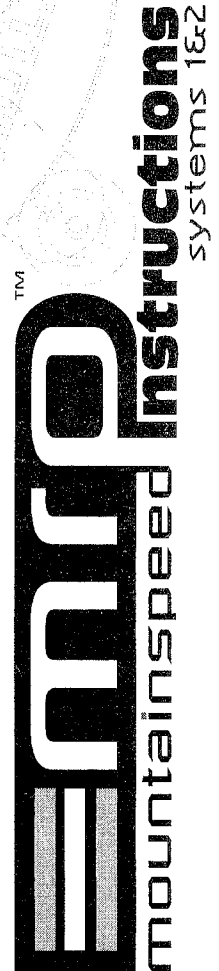
MountainSpeed warrants, to the original retail purchaser ("Consumer") who retains ownership of the bicycle and or motorcycle on which the suspension spring(s), chainguide, throttle tube, footpeg(s), bar mount cones, or other product(s) ("Product(s)") was originally installed, all Product(s) for life against factory defects in material and workmanship (other than defects in the finish) when used under normal use and operating conditions. This warranty shall not apply to any Product(s) that has not been properly installed by a qualified technician, any Product(s) that has (have) been improperly serviced, or any Product(s) that has been misused. This warranty does not apply to any Product(s) that has been modified, altered, or subject to abuse, negligence, accident or collision; improperly installed or installed on any bicycle or motorcycle for which it was not designed. This warranty does not cover consequential damages, loss of time or revenues, inconvenience, loss of use of the bicycle and/or motorcycle, damage to the bicycle and/or motorcycle or components of the bicycle and/or motorcycle, any other type of consequential damages, or other incidental or indirect damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives the consumer specific legal rights and the consumer may also have other rights that may vary from state to state. Mountainbiking and motorcycling are dangerous sports which include the potential for serious injury or even death. High performance systems significantly change the overall feel of your bike or motorcycle requiring you to become familiar with the system's operational function and feel. MountainSpeed Inc. accepts absolutely no responsibility or liability for any damage or injury incurred while using this product regardless of any reason.



A Division of Eko Sport Inc
 580 N Westgate Dr
 Grand Junction, CO 81505
www.mrbike.com
 Ph: 970-241-3518
 Fax: 970-241-3529



World Cup 1 36t to 44t
 UltraSpeed 1 44t to 50t
 Mammoth 1 50t to 54t
 World Cup 2 36t to 44t
 UltraSpeed 2 44t to 50t
 Mammoth 2 50t to 54t
 Slalom 36t to 40t
 MiniMe 30t to 34t



READ THE INSTRUCTIONS COMPLETELY BEFORE BEGINNING!

Every MRP installation is a custom fit which depends on your year, make and model of your frame, crank arm, chain ring, bottom bracket and cassette selection. It is crucial for optimum performance that whom ever is going to install your changed fully understand these instructions. If you have any doubt about how an MRP should be installed, we strongly recommend that you have an experienced shop do it for you. A properly installed MRP will function flawlessly every time!

Tools-

Proper crank arm bolt wrench (Allen key, 12mm socket, etc.)

Crank arm Puller

Proper BB tool (to fit your style BB)

5mm Hex Key

Two 4mm Hex Keys

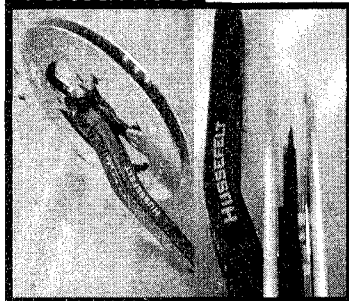
2mm Hex Key (System #2 only)

Thread Lock (i.e. Blue Loctite)

File (may not be needed)

Hack Saw (may not be needed)

1 & tech note



1- Mounting the plates

Remove crank arm from drive and non drive side. Remove chain rings from drive side crank. Mount the desired chain ring in the Middle position, with the outer plate in the big chain ring position. If installing a system #1 chain guide, the inner plate will mount to the inside of the chain ring, using the bolt spacers included. The plates should be mounted with the chamfered edges towards the chain ring.

Tech Note- Sometimes when installing a system #1, the chain ring and plates need to be mounted in the out board position (starting from the outside of the crank, outer plate, spacer, chain ring, spider, inner plate). This will be determined in step #5.

2.0

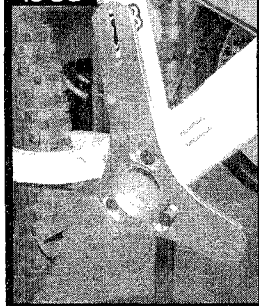


2.0-Mounting the boomerang

BB style mount- Remove BB from the frame and loosen the non-drive side cup. Loosely install the rollers (for system #2, also the 5 set screws). Mount the boomerang to the frame using the BB, but do not tighten at this time. Go to step 2.1 to determine correct top roller location.

ISCG style mount- If your bike is equipped with International Standard Chain Guide (ISCG) tabs, the ISCG boomerang will bolt directly to these tabs with supplied bolts. The boomerang is designed to have 30 degrees of rotation on these bolts. This allows you to properly position the top roller. Follow the directions below (3.2) to determine the correct location. Be sure to use thread lock on the mounting bolts!

ISCG



2.1-You will need to determine the correct location for the top roller before tightening. When the bike is completely bottomed out, the chain should just be touching the groove in the top roller. This location is generally at about 12:00 for long travel bikes (6" and up) and at 11:30 for shorter travel bikes. This location is very important for the chain guide to function properly (see tech note for details). Once the boomerang is positioned properly, tighten the BB to the manufactures specified torque Drive and non drive sides). If mounting a system #2, tighten the set screws on the bottom of the boomerang using a 2mm allen key.

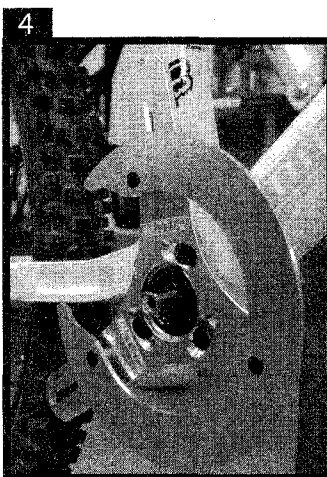
2.1 & tech note



Tech Note- The top roller is designed to be guide, not to tension the chain at any point in the bike travel. This is very important! Improper top roller position will result in broken or lost rollers, bent boomerangs, and dropped chains. The exact method to determine the location for the top roller is to remove the spring from rear shock, allowing you to bottom the bike out. With the crank installed, and the chain on the front chain ring, rotate the boomerang so that the chain just touches the top roller when the bike is completely bottomed out.

4- SYSTEM #2 ONLY!- Mount the three studs to the inner plate with the bolts provided. Slide the inner plate into the three holes in the boomerang so that the swing arm passes through the opening in the plate.

Tech note- It may be necessary to trim some material off of the lower tip of the inner plate so that it will slide under the swing arm. Remember that the top roller location is very important- do not rotate the boomerang back so that the inner plate fits under the swing arm!



5- Cranks and rollers- Install the crank arms, and tighten to the manufactures specified torque. Put the chain on the front chain ring, and align the rollers so that the groove is centered over the chain. The rollers are reversible, so it may be necessary to flip the rollers to get the proper alignment (additional washers can also be added behind the roller to achieve proper spacing). The rollers should be touching the plates, so that they rotate together. It is necessary to tighten the rollers from both sides simultaneously!

Tech Note- System #1- If the inner plate hits the boomerang or the swing arm, the chain ring and plates may be mounted in the out board position (starting from the outside of the crank, outer plate, spacer, chain ring, spider, inner plate). This is not possible on all cranks, however, so you may need a longer BB, or a System #2.

6- System #2 Inner Plate- Slide the inner plate toward the chain ring. This is Crucial! This distance should be equal to or less than the distance between the outer plate and the chain ring. The smaller the gap you have without the chain rubbing is the best set up. Tighten the three set screws to hold the inner plate.

Tech Note- The changed is designed so that when you are in your lowest gear (Biggest rear cog) the chain should tap the inner plate.

7- Finishing touches- Be sure all the bolts are tight (Drive and Non-drive BB cups too!) Check your chain length by shifting the bike through its gears. It should be able to go into all of the gears easily, but should not have a lot of extra slack.

Tech Note- The wheel base of some long travel full suspension bikes gets considerably longer as the bike goes through its travel. This means that the length of chain needed at bottom out is longer than that needed at top out. Make sure that the chain is long enough to allow the bike to go through all of its travel! The results of a chain not being long enough can be ugly!

