

STEP 7

CHECK THE POSITION OF THE TOP ROLLER. ONLY WHEN THE BIKE IS COMPLETELY BOTTOMED OUT SHOULD THE CHAIN BE TOUCHING THE GROOVE IN THE TOP ROLLER. THE TOP ROLLER IS DESIGNED TO BE A GUIDE, NOT TO TENSION THE CHAIN AT ANY POINT IN THE BIKE'S TRAVEL. IMPROPER TOP ROLLER POSITION MAY RESULT IN BROKEN OR LOST ROLLERS, BENT BOOMERANGS AND DROPPED CHAINS. THE BEST METHOD FOR DETERMINING THE TOP ROLLER POSITION IS TO REMOVE THE SPRING OR AIR PRESSURE FROM THE REAR SHOCK AND BOTTOMING THE BIKE OUT COMPLETELY. ROTATE THE BOOMERANG SO THAT THE CHAIN JUST TOUCHES THE TOP ROLLER WHEN THE BIKE IS COMPLETELY BOTTOMED OUT. MARK THE POSITION OF THE BOOMERANG. PLEASE NOTE THAT MRP CHAIN RETENTION DEVICES ARE DESIGNED TO ISCG AND ISCG-05 STANDARDS. OUR EXPERIENCE IS THAT SOME FRAME MANUFACTURERS POSITION THE TABS NOT IN ACCORDANCE TO THE STANDARD. THESE FRAMES MAY REQUIRE MODIFICATIONS OR SPECIAL INSTALLATION INSTRUCTIONS. IF YOU FIND YOU DO NOT HAVE ENOUGH ADJUSTMENT, IT MAY BE DUE TO THE FRAME MANUFACTURER NOT FOLLOWING THE STANDARDS. PLEASE CONTACT MRP FOR FURTHER INSTRUCTIONS FOR FIT.

STEP 8

REMOVE THE DRIVE SIDE CRANK ARM. MAKE SURE THAT THE BOOMERANG IS IN THE POSITION THAT YOU DETERMINED CORRECT IN STEP 7 AND SECURE IT. IF YOU HAVE ISCG OR ISCG-05, TIGHTEN THE ISCG SCREWS. IF YOU ARE USING A BOTTOM BRACKET MOUNT BOOMERANG, TIGHTEN THE BOTTOM BRACKET CUP TO THE MANUFACTURER'S SPECIFICATIONS. THE BOOMERANG MAY WANT TO ROTATE AS YOU TIGHTEN THE CUP, SO DOUBLE CHECK THE POSITION AFTER EVERYTHING IS TIGHT. REINSTALL THE COMPLETE CRANKSET AND BOTTOM BRACKET ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

STEP 9

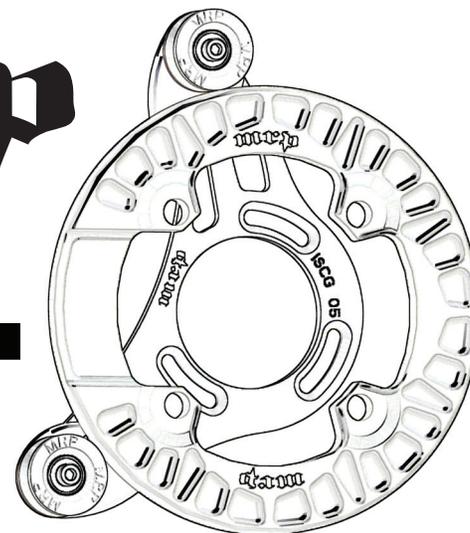
FINISHING TOUCHES. MAKE SURE THAT ALL BOLTS AND SCREWS ARE TIGHT. SADDLE THE BIKE AND BOUNCE AROUND, CHECK TO MAKE SURE THERE IS NO INTERFERENCE BETWEEN THE GUIDE AND THE SUSPENSION ACTION OR LINKAGE ON FULL-SUSPENSION BIKES. CHECK YOUR CHAIN LENGTH BY SHIFTING THROUGH ALL GEARS. IT SHOULD BE EASY TO SHIFT THROUGH ALL GEARS, BUT NOT HAVE A LOT OF EXTRA CHAIN SLACK. KEEP IN MIND THAT MOST FULL SUSPENSION FRAMES REQUIRE ADDITIONAL CHAIN LENGTH TO ACCOMMODATE FOR REAR TRAVEL. CHECK CHAIN LENGTH WITH THE CHAIN ON THE LARGEST REAR COG AND BOTTOMING OUT THE BIKE.

THE MRP DUAL ROLLER SYSTEM IS
PROTECTED BY U.S. PATENT 5725450



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mrp S4



INSTALLATION INSTRUCTIONS

THANK YOU FOR PURCHASING AN MRP CHAIN RETENTION SYSTEM. MRP INVENTED THE BICYCLE CHAIN RETENTION SYSTEM IN THE MID 90'S AND FOREVER CHANGED DOWNHILL AND FREERIDE MOUNTAIN BIKING. MRP'S PATENTED DUAL ROLLER SYSTEM FOUND ON THE S4 COMBINES ULTRA-RELIABLE PERFORMANCE, QUIET OPERATION, AND NEAR UNIVERSAL FRAME COMPATIBILITY. TO ENSURE THE BEST OUT OF YOUR MRP CHAIN RETENTION SYSTEM, WE STRONGLY RECOMMEND THAT YOU HAVE A TRAINED SERVICE TECHNICIAN AT YOUR LOCAL BIKE SHOP INSTALL YOUR MRP. A PROPERLY INSTALLED MRP WILL FUNCTION FLAWLESSLY EVERY TIME!

WE'VE DESIGNED THE S4 TO BE SIMPLE TO INSTALL. BEFORE BEGINNING YOUR INSTALLATION, YOU'LL TYPICALLY NEED THESE TOOLS:

4MM, 5MM, AND 8MM ALLEN KEYS, AN APPROPRIATE BB TOOL (FOR BB MOUNT APPLICATIONS) AND A PEDAL WRENCH



THE S4 IS AVAILABLE IN THREE DIFFERENT MOUNTS, MAKE SURE THAT YOU HAVE THE RIGHT MRP KIT FOR YOUR BIKE.

- *THE DIRECT BOTTOM BRACKET MOUNT BOOMERANG ATTACHES TO THE BOTTOM BRACKET WITH PRESSURE FROM THE BOTTOM BRACKET CUP.*
- *BOTH THE ISCG AND ISCG-05 BOOMERANGS ATTACH TO THREE TABS AROUND THE BOTTOM BRACKET SHELL.*

IF YOU ARE UNSURE IF YOU HAVE ISCG OR ISCG-05 TABS, CONTACT THE FRAME MANUFACTURER. WE RECOMMEND THAT YOU PURCHASE THE PROPER MRP SYSTEM FOR YOUR FRAME TO ENSURE THE BEST FIT AND PERFORMANCE POSSIBLE. MRP DOES MAKE AN ADAPTER THAT CONVERTS AN ISCG MRP KIT TO BOTTOM BRACKET MOUNT. THIS ADAPTER WORKS IN MOST SITUATIONS. IN A FEW SITUATIONS, THE ADAPTER MAY PUSH THE CHAIN LINE OUT AND REDUCE PERFORMANCE, REQUIRE A LONGER BOTTOM BRACKET SPINDLE, OR CRANK MODIFICATION.

INSTALLATION

STEP 1

(IF YOUR BIKE IS NOT ALREADY ASSEMBLED, GO TO STEP 3) USING A PEDAL WRENCH REMOVE YOUR PEDALS.

STEP 2

REMOVE BOTH CRANK ARMS, CHAIN, CHAINRINGS AND DRIVE SIDE BOTTOM BRACKET CUP ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. THIS IS THE PERFECT TIME TO CAREFULLY INSPECT ALL OF YOUR DRIVETRAIN COMPONENTS TO ENSURE THAT THEY ARE IN GOOD WORKING CONDITION. IF ANY DRIVETRAIN COMPONENTS ARE DAMAGED OR WORN OUT, REPLACE THEM TO ENSURE THE BEST PERFORMANCE FROM THE S4.

STEP 3

USING A 4MM ALLEN KEY, LOOSEN THE UPPER AND LOWER ROLLERS UNTIL YOU CAN SLIDE THEM, IN CONJUNCTION WITH THE PLASTIC WEAR PLATES, UP TO THE FURTHEST POSITION OUTWARD FROM THE BB IN THE ADJUSTMENT TRACKS. SLIGHTLY SNUG THEM TO KEEP THEM IN THAT POSITION.



STEP 4

INSTALL THE BASH GUARD AND CHAINRING TO THE CRANK SPIDER. THE BASH GUARD SHOULD BE MOUNTED TO THE SPIDER IN THE LARGE CHAINRING POSITION, OUTSIDE OF THE TABS, WITH THE RECESSED OUTER PORTION UNDERNEATH THE CRANK ARM. THE CHAINRING SHOULD BE POSITIONED IN THE MIDDLE CHAINRING POSITION, INSIDE OF THE TABS. THE NUT OF THE CHAINRING BOLTS SHOULD PASS THROUGH THE CHAINRING FROM THE BACKSIDE, THROUGH THE SPIDER, THROUGH THE INCLUDED THIN, SILVER WASHERS (UNLESS USING SHIMANO SAINT M810 OR SLXM660 CRANKS), AND INTO THE BASH GUARD. YOU MUST USE THE INCLUDED THICK, BLACK WASHERS UNDER THE HEAD OF THE CHAINRING BOLT. TORQUE THE CHAINRING BOLTS TO 43 IN-LBS. IF YOU OVER TIGHTEN THE CHAINRING BOLTS THE POLYCARBONATE MATERIAL MAY CRACK. THE

USE OF LOCTITE, ONE-STEP CLEANERS, OR SOLVENT BASED LUBRICANTS CAN CAUSE PREMATURE FAILURE OF THE BASH GUARD.

STEP 5

INSTALL THE BOOMERANG TO THE FRAME. FOLLOW THE INSTRUCTIONS BELOW FOR THE TYPE OF MOUNTING SYSTEM YOU ARE USING:

ISCG / ISCG-05

IF YOU HAVE ISCG OR ISCG-05 TABS ON YOUR FRAME, INSTALL THE BOOMERANG WITH THE SUPPLIED 4MM BOLTS. THE BOOMERANG IS DESIGNED TO HAVE 30 DEGREES OF ROTATIONAL ADJUSTMENT TO ALLOW FOR PROPER POSITIONING OF THE TOP ROLLER. INITIALLY



POSITION THE BOOMERANG SO THAT THE TOP ROLLER IS AT THE 11:30 POSITION IF YOU ARE LOOKING STRAIGHT-ON AT THE CHAINRING. TIGHTEN THE ISCG SCREWS ENOUGH TO HOLD THE BOOMERANG IN POSITION, BUT LOOSE ENOUGH THAT YOU CAN ROTATE IT TO THE PROPER POSITION IN THE STEPS BELOW.

BOTTOM BRACKET MOUNT

IF YOUR BIKE DOES NOT HAVE ISCG TABS, MOUNT THE BOOMERANG BY REMOVING THE DRIVE SIDE BOTTOM BRACKET CUP AND INSERTING IT THROUGH THE MRP BOOMERANG. MAKE SURE THAT THERE IS NO GREASE AROUND THE OUTSIDE EDGE OF THE BOTTOM BRACKET SHELL OR THE PART OF THE BOTTOM BRACKET CUP THAT ENGAGES THE BOOMERANG. GREASE IN THESE AREAS CAN ALLOW THE BOOMERANG TO SLIP DURING CONTACT. CLEAN THESE AREAS WITH A DEGREASER IF NECESSARY. IN NORMAL SET-UP, THE BOTTOM BRACKET CUP SHOULD SIT INTO THE RECESS IN THE MRP BOOMERANG. INITIALLY POSITION THE BOOMERANG SO THAT THE TOP ROLLER IS AT THE 11:30 POSITION IF YOU ARE LOOKING STRAIGHT ON AT THE CHAINRING. TIGHTEN THE BOTTOM BRACKET CUP ENOUGH TO HOLD THE BOOMERANG IN POSITION, BUT LOOSE ENOUGH THAT YOU CAN ROTATE IT TO THE PROPER POSITION IN THE STEPS BELOW.

STEP 6

INSTALL THE ASSEMBLED DRIVE SIDE CRANK ARM AND BOTTOM BRACKET COMPLETELY ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. POSITION THE ROLLERS SO THAT THEY ARE *ALMOST* TOUCHING THE BASH GUARD. THE ROLLERS DO NOT NEED TO CONTACT THE BASH GUARD, BUT THEY SHOULD NOT BE MORE THAN A FEW MILLIMETERS AWAY FROM IT. IF THE GAP BETWEEN THE ROLLERS AND BASH GUARD IS TOO LARGE, THE CHAIN MAY GET SUCKED BETWEEN THE ROLLER AND BASH GUARD. CHECK TO MAKE SURE THAT THE GROOVE IN THE ROLLERS ARE CENTERED OVER THE CHAIN. IF THEY ARE NOT, YOU MAY NEED TO SHIM THE BOOMERANG AND ISCG OR ISCG-05 TAB INTERFACE USING THE INCLUDED WASHERS.