

**FOES**  
RACING



## **FOES Shaver 29**

**2013 Model Frameset**

### **OWNERS MANUAL**

*It is your responsibility to read this manual to fully understand your warranty on this Foes frameset*

## **LIMITED WARRANTY**

### **LIMITED TWO YEAR WARRANTY ON FOES Shaver SUSPENSION FRAMES**

Foes warrants the original owner that a new Shaver bicycle frame is free from defects in material and workmanship for a period of two years from the date of the original purchase by the original consumer. Cumt Shocks are covered under warranty by Foes Racing for a period of one year from the date of purchase. This warranty covers manufacturers defects in materials and workmanship. Foes limited warranties do not apply to paint/finish or any other part attached to the bicycle. Including Forks, drive train, brakes, seat, seatpost, handlebar, stem or wheels. Paint/Finish and stickers are covered under a limited one year warranty if deemed defective. Wear and tear are not covered under this warranty. The original owner shall pay all labor and freight charges associated with the repair or replacement of all parts under Foes limited warranties. Even if something is covered under Foes warranties, Foes will not pay the freight costs to, or from, Foes Racing.

#### **WHAT IS NOT COVERED**

Failure due to accident, abuse, neglect, normal wear, improper assembly, improper fit, use of dual crown forks, poor maintenance, maintenance (including assembly) by other than an authorized Foes dealer, or use of parts inconsistent with the use originally intended for the bicycle as sold are not covered by this warranty. What is the originally intended use? Riding in a consistent, smooth manner in an approved location for bicycles. Riding in a manner other than this – jumping repeatedly, jumping to flat ground, improper maintenance, no or maintenance will void the warranty.

Foes warranties remain valid under normal riding conditions and care for each type of frame. Foes warranties will be immediately voided if Foes determines that the frameset/shock's integrity has been compromised by lack of regular care; or has been used for a type of riding other than what the frameset was intended; or the rider's weight/skill level is different than what the shock was built for; or the bicycle was not assembled by a authorized Foes bicycle dealer. If it is determined that the shock has been bottomed repeatedly, or the shock has repeatedly not been able to fully use all of its travel (either of which can be easily determined) due to any of many reasons (low air pressure; incorrect spring rate; damaged shock, etc.), the Foes Warranties on the frame and shock will be voided.

## **WHAT FOES WILL DO UNDER THE WARRANTY**

Foes will repair or replace any part that is determined by Foes to be covered by this warranty. This limited warranty is made ONLY to the original owner and is not transferable. All claims must be made through an Authorized Foes Dealer, and must be accompanied by the original bill of sale or proof of purchase that identifies the bicycle frame by serial number. The original owner is responsible for this and any and all labor and transportation charges associated with the warranted repair or replacement of parts, even if Foes determines that it is under warranty.

## **WHAT IF YOUR FRAME IS NOT COVERED**

If the warranty claim on your Foes frame is determined to be invalid, Foes Racing will offer a replacement frame/swingarm/part of at least equal value at a reduced price. This transaction will be offered only through an Authorized Foes Dealer, and under the following conditions: the frame has been registered with Foes Racing; the Frame is the property of the original purchaser; the owner provides a valid sales receipt. This crash replacement is only available to the original owner, and, for a time period of three years from the original purchase date. The replacement frame must be assembled by an Authorized Foes Dealer to maintain the Foes warranty. All freight charges associated with the crash replacement are the responsibility of the original owner.

## **FOES FRAMES SHOULD BE INSPECTED PERIODICALLY BY A FOES DEALER**

We cannot stress enough that building-up a pro-level frame is not an endeavor recommended for home mechanics. Special tools and skills accumulated over time are needed to accomplish this successfully, and your dealer can answer 99% of all the questions related to the complete build of a high-end frameset. Due to this fact, this manual covers only the most elemental information.

## **USEFUL PRODUCT LIFE**

Every Foes Frameset has a useful product life. The length of this product life will vary with the construction and materials of the frame or fork, the maintenance and care the frame and fork receives over its useful product life, and the type and amount of use the frame or fork is subject to. Users in competitive events, trick riding, jumping, ramp jumping, aggressive riding, riding on severe terrain, riding in severe climate or weather, ...continued

riding with heavy loads, commercial activities, and other types of non-standard use can dramatically shorten the useful life of the Foes Frame or Fork. Any one or a combination of these factors and conditions may result in an unpredictable failure of a Foes Frame or Fork that would not be covered by warranty. ALL FOES FRAMES, FORKS, AND SHOCKS SHOULD BE PERIODICALLY CHECKED BY A RETAIL OUTLET OR A FOES DEALER for indicators of stress and/or potential failure, including cracks, deformation, corrosion, paint peeling, dents, and any other indicators of potential problems. These are important safety checks, and may be very important to help prevent accidents, bodily injury to the rider, and a shortened life of the Foes frameset or fork. THIS IS AN INTEGRATED AND FINAL STATEMENT OF THE FOES LIMITED WARRANTY. FOES DOES NOT AUTHORIZE OR ALLOW ANYONE, INCLUDING FOES DEALERS OR RETAIL BICYCLE OUTLETS, TO EXTEND ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, FOR FOES. NO OTHER REPRESENTATION, AND NO STATEMENT FROM ANYONE BUT FOES, INCLUDING A DEMONSTRATION OF ANY KIND BY ANYONE SHALL CREATE ANY WARRANTY REGARDING THIS FRAME OR FORK. ALL OF THE REMEDIES AVAILABLE TO THE ORIGINAL OWNER ARE STATED HEREIN. IT IS AGREED THAT FOES LIABILITY UNDER THIS LIMITED WARRANTY SHALL BE NO GREATER THAN THE ORIGINAL PURCHASE PRICE AND IN NO EVENT SHALL FOES BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

## **DISCLAIMER**

All other remedies, obligations, liabilities, rights, or warranties, expressed or implied, arising from law or otherwise including, but not limited to, any claimed implied warranty of merchantability, any claimed implied warranty arising from course of performance, course of dealing or usage of trade, and any claimed implied warranty of fitness, are disclaimed by Foes and waived by the original owner. Some states, jurisdictions, countries, and provinces do not allow some or all of the limitations set herein or the exclusion or limitation of incidental or consequential damages. If any provision is found enforceable, only that provision shall be stricken and all others shall apply. This limited warranty does not provide the original owner with certain legal rights and recourse, and the original owner may possess other rights or recourse, depending on the state, jurisdiction, country or province.

***WARNING: BICYCLE RIDING MAY BE HAZARDOUS TO YOUR HEALTH, AND EVEN FATAL! ALWAYS WEAR A HELMET AND PROPER PROTECTIVE CLOTHING.***

# GENERAL SETUP

**CAUTION! YOU WILL DAMAGE YOUR FRAME AND SHOCK IF YOU DO NOT CORRECTLY SET UP AND MAINTAIN YOUR REAR SHOCK AND SUSPENSION.**

## SHOCK AIR PRESSURE WARNING

If you bottom out your shock on a regular basis, you are undersprung or have too little air pressure in your shock, and will damage your frame and shock. Bottoming your shock on a consistent basis is considered by Foes to be improper care of your bicycle frame and shock, and will void the warranty for both, and all other warranties. If you bottom your shock consistently, STOP!... and first check to make certain you have proper air pressure in your shock. (It is vitally important to check the air pressure on the FOX FloatAIR Shock EVERY TIME YOU RIDE.) If you have proper air pressure, then your shock is either undersprung, or it has a problem. At this point it is extremely important to not ride the bicycle, and make plans to get the shock to a Foes technician to have it checked out and/or sprung correctly.

## FOES SPECS FOR BUILDING

- Bottom Bracket Width: 68mm shell
- Bottom Bracket Axle Length: determined by crank choice
- Seat Post Diameter: 31.6mm
- Head Tube Diameter: Top 1 1/8" 44mm Z.S headset only  
: Bottom 1.5" 49.6mm headset only
- Fork Type/Length: Shaver29 was designed around, and works best with a 4.5" or 5.5" single crown fork. **NO DUAL CROWN FORKS!** Use of Dual Crown Forks on the Shaver will void all warranties!
- Front Derailleur: Direct mount type (One Bolt "D" type)
- Rear Hub Spacing: 142mm x 12mm Thru Axle Hub
- Disc Brake: The Shaver29 accepts a standard 6" I.S. rear caliper mounted on the swingarm. Use of larger rotors requires the appropriate manufacturer-sized caliper adapter.

## A WORD ABOUT FORK CHOICE

The Foes SV-29 is a full suspension bicycle! It has 5.5" of rear travel, and was designed as an aggressive trail bicycle. The Foes Shaver is not, by any means, a freeride, jumping, or stunt riding frame. It is made for trail rides that, at one point or another, require the full amount of travel of the shock. The Shaver was made for riders who want to take advantage of longer wheel travel, yet want the lightness for long climbs. This is the reason it is designed around a single crown fork. Therefore, a single-crown fork between 120 and 140 mm works well with this frame.

## GENERAL SIZING GUIDELINES BY RIDER HEIGHT

Small – Riders up to 5'6" (168cm)  
Medium – Riders 5'6" to 6' (168cm to 183cm)  
Large – Riders 6' and up (183cm +)

## FOES Shaver29 FRAME GEOMETRY

A	Size
B	Head Tube Length (inches)
C	Head Tube Angle (degrees)
D	Seat Tube Angle (degrees)
E	Bottom Bracket Height (inches)
F	Chainstay Length (inches)
G	Estimated Wheelbase (inches)
I	Top Tube – Effective (inches)
J	Seatpost Diameter (mm)
K	Rear Wheel Travel (inches)

A	B	C	D	E	F	G	I	J	K
S 17.0	4.1 "	68.25°	71°	13.25	17.9	44.6	22.7	31.6	5.5
M 18.5	4.1 "	68.25°	71°	13.25	17.9	45.6	23.7	31.6	5.5
L 19.5	4.75"	68.25°	71°	13.25	17.9	46.6	24.6	31.6	5.5

## SETTING TOTAL SAG

Sag can be measured at the rear wheel's axle or at the shock. These instructions approach this measurement at the shock. Your FOX Shock should have 5/8" to 3/4" (5.5" travel) of sag when the rider's full weight with gear is at rest on bicycle. The best way to do this is to have someone check the total length of your shock, eye to eye, while you are feet on the pedals and balanced on the bike on level ground. You can use a nearby wall to assist you in your balancing... but don't lean against it – this will give a false measurement. Next (or first), measure the length of your shock at rest (bike lifted at the rear and allowing the shock to fully extend). The difference of these two measurements is your sag.

To adjust the sag you must adjust the spring's preload. This is done by unlocking (loosening the ring's allen set screw) and turning the retaining ring. To get more sag turn the ring counter-clockwise (this will extend the spring). To get less sag turn the retaining ring clockwise (this will compress the spring). Be sure to re-lock the retaining ring! Only through spending the time testing and re-testing will you get proficient at sag setting. Foes recommends that you do not touch your sag until you are very familiar with how your rear suspension works and feels.

expensive damage to your swingarm from occurring. If these were stronger and more resistant to bending and breaking, there is a good chance that these forces would bypass the hangers and destroy the area of the frame attached to the hangers. Derailleur Hangers are available from your Foes Dealer for a nominal fee, and are not covered under any of the Foes warranties. It is a good idea to purchase a few extra hangers to prevent a breakage from interrupting your riding time. The part numbers for the derailleur hangers for the Shaver (FOES axle / Shimano axle) are HA08S , and Shaver (Sram axle) are HA09.



Upper Hole-Long Travel Position 5.5"/ 140mmTravel



Lower Hole-Short Travel Position 5"/ 127mmTravel

**HOW TO CORRECTLY PUMP YOUR SHOCK**

To get the correct pressure in your shock it is important to follow some guidelines. Thread the pump's connector onto the Schraeder valve on the shock. Pump to the desired pressure. Quickly unthread the connector from the Schraeder valve until the connector breaks free. The pressure you have in your shock is the one you pumped to. At this point do not re-attach the pump to check your setting, as it will be inaccurate. This is due to some of the shock's air rushing into the pump's hose, making the reading wildly incorrect.

**GOOD RIDER BICYCLE MAINTENANCE**

- 1) Keep your bike clean. Riding a dirty bike will cause all of your bearings, bushings, contact points, finish, shock shaft and seal head area, and every other moving part to wear much faster than if they were cleaned regularly. Keeping your bike clean will also give you that satisfied feeling of taking care of your investment in a high quality hand-crafted frame. Foes recommends first rinsing loose dust and mud with hose water, taking care not to blast water into areas that water could damage over time by lack of evaporation quickly, like, pivots, bushings, bearings and shock parts, as well as the components installed on your frame, like bottom brackets, head sets, gear sets and the like. Wash the bicycle with a mild dilution of detergent and a soft cloth. Rinse again, taking care not to force water into those areas mentioned. Dry with a towel. A light coating of a light lubricant, like WD-40, can help displace water from areas that are hard to reach. However, it is important to note that these light lubricants can actually wash away oil and grease used to lubricate the bicycle, and render brakes inoperable. If you use a light lubricant, use it only to displace water, and keep it away from brake pads and rotors.
- 2) Keep your bike lubricated. After cleaning your bike, lubricate your chain and drive train with an appropriate lube.
- 3) Periodically check all of the bolts and fasteners on your bike. Do not over-tighten anything, as this too will void your warranties – just check and "snug" each fastener. Also, it is a good idea to check all of your frame's welds and tube junctions for cracks and any damage. Aluminum has a limited life – inspect your frame in a well lit area, and inspect carefully – especially after crashes.
- 4) Keep the shock shaft, and surrounding areas, clean of dirt, debris and crud – wipe it off after every ride.

**MINIMUM - MAXIMUM SEAT POST INSERTION**

In addition to the minimum seat post insertion mark on most seat posts, you must follow the following recommendations for seat post insertion: a 31.6mm seat post must be inserted a minimum of 4" into the seat tube of the frame. Anything less than this will not be covered under warranty.

**REPLACEABLE DERAILLEUR HANGERS**

The Foes SV-29 is equipped with a replaceable derailleur hanger. This part is installed as a safety feature, as well as a convenience to you, the owner. It is not uncommon for foreign objects, such as sticks, stones and other debris to bend your hanger. A bent hanger can occur from shifting hard under load, and/or transporting your bicycle. Foes derailleur hangers are designed to bend and break! This inherent design actually keeps more

**FACTORY SETTINGS**

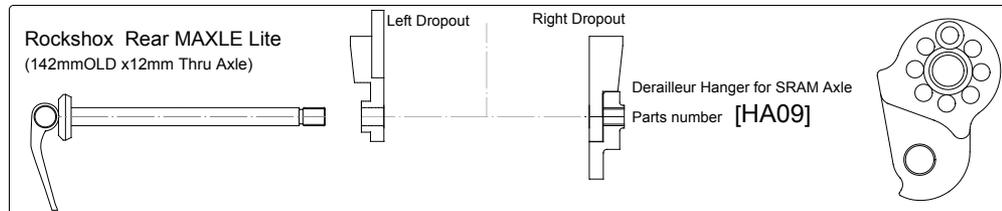
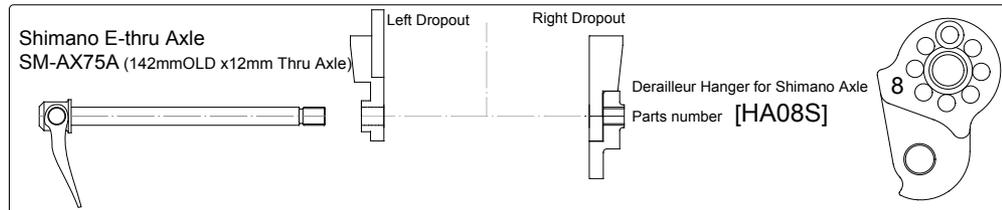
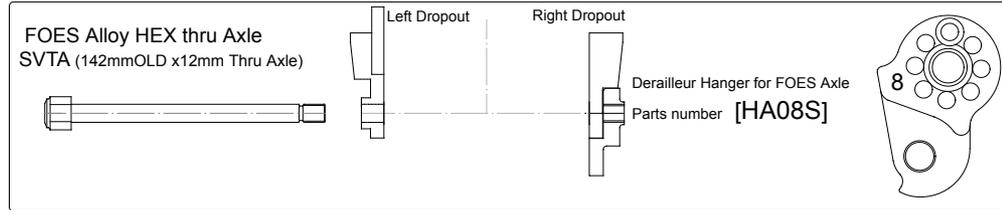
Since your Curnutt was actually built, valved, sprung and pre-loaded according to your specific rider weight, skill level and type of riding you mostly enjoy, your Curnutt shock is about 95% tuned to you right from the factory. The other 5% will be the Bottoming Control, and tuning your Rebound Damping. The 'BOTTOMING CONTROL' section on page 11 will address Bottoming Control and the air pressure that affects it. (If you have an AIR shock, please see its addendum.) Rebound Damping will be addressed in a following section. Your Curnutt XTD Shock is a true fluid-damped, coil-over shock which, uniquely, uses air pressure to control bottoming (as well as reduce fluid foaming). The range of air pressure needed inside your Curnutt XTD is between 65 and 100 psi. This means, between these minimum and maximum pressures lies an ideal setting for the control of bottoming the rear suspension over a given terrain. As said initially, your shock's compression damping is mostly set for you at the factory, yet, adjusting the air pressure will tune your shock's ability to resist bottoming – an important feature for the life and longevity of your Curnutt Shock and Foes Frame.

**BREAK-IN PERIOD**

For the break-in period Foes recommends that you introduce a low pressure, like 65 psi, to start. This is a good setting to break-in your shock, and will allow you to get a good feel for what this pressure will do over a variety of terrain. Your Curnutt will break-in properly in about 10 hours of 'normal' riding. This means that, much like a new motor, the contact-moving surfaces of the shock will 'seat' better if they are allowed to move throughout their entire range or stroke, without introducing them to undue or violent spikes of energy (as in landing from jumps). Once your shock has broken-in, you will be able to much more accurately feel what the shock is doing with more or less air pressure. Adjusting air pressure during the break-in period will be confusing at best. That being said, if your shock repeatedly bottoms over normal trail terrain during break-in, it is appropriate to introduce more air pressure to compensate – 5 psi at a time. Additionally, it should be remembered that proper break-in requires the shock to cycle through its entire stroke or travel. If it appears that your shock is not using its entire stroke (too stiff) – over normal riding conditions - then reducing its air pressure would be an appropriate measure – BUT NEVER GO UNDER 50 PSI!. Once your Curnutt XTD is broken-in, controlling bottoming with proper air pressure and the Ramping Dial will be more accurately achieved.

**Rear Thru Axle with Derailleur Hanger**

SHAVER Rear 142mmOLD x12mm Thru Axle with Derailleur Hanger Nut



**Rear Shock Maintenance**

FOX Float Air shock : for Rear Suspension Maintenance Check Out FOX website or FOX manual CD  
www.foxracingshox.com

# Shaver/F275/SV29-FOX Float CTD adjust

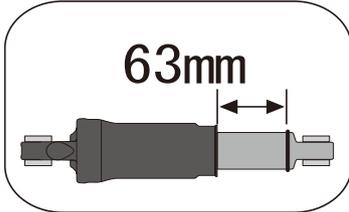
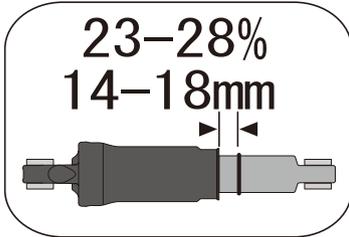


## 1. AIR PRESSURE

the main air spring controls the sag of the shock. For the SV to ride properly it is important to setup the shock with the correct amount of sag. For general riding the SV works best with 25-30 % (16-19mm ) of shock sag. to increase the sag reduce the main spring air pressure. to reduce the sag increase the main spring air pressure.

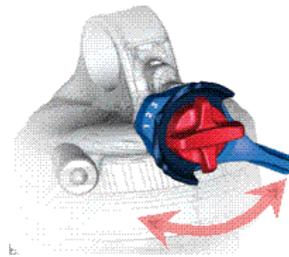
## 2. SAG

Once you have set your baseline air pressure you need to measure the sag. to measure the sag slide the travel indicator (O-ring) up against the shock body. with a friend supporting the bike, sit on the saddle (do not bounce) and allow your body weight to compress the shock. Once you have compressed the shock, get off the bike and measure the distance between the shock body and the new position of the travel indicator (O-ring). this is your sag.



## 3. REBOUND

the rebound adjustment has 14 clicks of adjustment. the rebound knob is the red adjustment dial located above the blue compression damping adjustment lever. as a general rule, adjustments that are too fast (counter-clockwise adjustment) will produce a springy ride with excessive kick-up of the rear end causing a bucking sensation. adjustments that are too slow (clockwise adjustment) will cause packing of the rear wheel indicated by a sluggish ride feeling ride. slower rebound- turn the knob clockwise  
Faster rebound- turn the knob counter-clockwise



## 4. COMPRESSION DAMPING

the compression dampening has three levels of adjustment and is controlled by the blue lever on the shock. the "climb" mode engages the firmest low-speed compression setting for maximum pedaling efficiency. the "trail" mode engages a moderate low-speed compression setting for an optimal blend of pedaling efficiency and bike control, on various riding terrain. Finally, the "descend" mode sets the low-speed compression setting to fully open, for maximum bike control and shock absorbency on steep, aggressive descents.

## 5. TRAIL ADJUST

the trail adjust dial controls the "trail" mode low speed compression adjustment. it has three levels of adjustment and is controlled by the black dial on the shock body. turning the dial clockwise increases low speed compression damping, making the shock feel stiffer under low speed compressions. turning the dial counter-clockwise will decrease low speed compression damping, making the shock feel softer under low speed compressions. please note this adjustment only affects the shock performance while riding in "trail" mode.



### AIRSPRING SETTINGS [ Reference Data ]

Rider Weight (lbs)	120	130	140	150	160	170	180	190	200	210
(kg)	55	59	63	68	73	77	82	86	90	95
Air Pressure (psi)	120	130	140	150	160	170	180	190	210	220

### SAG SETTINGS

Sag %	25	30
Measured (mm)	15	19

### \*EXTERNAL ADJUSTMENTS

Rebound	5 Clicks
compression damping	based on terrain
Trail adjust	Position 2

\*All clicks are counted clockwise, rotating from the all the way out or counter-clockwise dial position.

## MAINTENANCE

Following these guidelines will help maintain the performance of your bicycle and prevent more serious problems from arising.

It is important to remember that service intervals can vary depending on climate, trail conditions and riding frequency.

ACTION	WEEKLY	MONTHLY	3 MONTHS	ANNUALLY
Clean and lube chain	<input type="checkbox"/>			
Check tire pressure	<input type="checkbox"/>			
Clean bike of mud and debris (never spray water directly into frame or components)	<input type="checkbox"/>			
Check brake function	<input type="checkbox"/>			
Check shock pressure, if applicable	<input type="checkbox"/>			
Check for loose bolts and tighten, if necessary	<input type="checkbox"/>			
Check headset and tighten / loosen, if necessary		<input type="checkbox"/>		
Thoroughly clean pivot points with a rag (do not lubricate)		<input type="checkbox"/>		
Replace brake pads, if necessary			<input type="checkbox"/>	
Check tires for wear			<input type="checkbox"/>	
Check spoke tension and retention, if necessary			<input type="checkbox"/>	
Check chain for worn, damaged, or loose links, replace chain if necessary			<input type="checkbox"/>	
Complete tune-up performed by an authorized FOES dealer				<input type="checkbox"/>

## TORQUE

We have attached a brief list of torque specifications for bolts and components that may need to be tightened while performing basic maintenance.

This is just a guide. For specific torque, specifications, please contact the component manufacturer directly.

B.B cups	300 - 360		
Pivot Bolts	125 - 150	Shock Bolts	80 - 95
Seatpost Binder Bolt	150 - 180	Disc Attachment Bolts	45 - 55
Saddle Clamp Bolts	175 - 250	Discbrake mounting Bolts / Adaptor Bolts	100 - 110
Rear Derailleur	70 - 86	Derailleur Hanger Bolts M4	25 - 30
Front Derailleur Clamp	45 - 60	Handlebar Binder Bolt	150 - 180
Chainring Bolts	88 - 132	Stem Binder Bolt	175 - 260



**Caution:** The torque specifications listed should be used as a guide when performing maintenance. Technological advances have made bicycles and bicycle components more complex, and the pace of innovation is increasing. Because of these advances, FOES recommends that you refer to the torque specifications of the manufacture's component you are adjusting. In order to help minimize the chances of injury, do not perform any maintenance that you are no confident can be completed within your abilities.



ADDRESS: 62N SIERRAMADRE BLVD PASADENA CA 91107

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CUSTOMER REGISTRATION FORM	
NAME :	
ADDRESS :	
ZIP/ COUNTRY :	
PHONE :	
E-MAIL :	
SERIAL# :	
BIKE MODEL :	
SIZE /COLOR :	
PURCHASED PRICE :	
PURCHASED DAY :	
PURCHASED FROM :	
BUILT WITH :	

**Shaver**

**Cable Routing Guide** External Full Outer Cable Housing

Top Tube Cable Guides 1: for Front Derailleur Cable 2: for Seat Post Remote Cable



Down Tube Cable Guides 1: for Rear Derailleur Cable 2: for Rear Disc Brake line

**Chain Guide**

Foes Recomend Chain Guide for Two Front chainrings

MRP-2X ISCG05

SRAM/Truvativ -X Guide

\*Not fit - E-13 TRS dual

**A FINAL WORD**

Foes and Curnutt make the finest and toughest framesets and suspensions in the world, capable of standing up to the fastest pro riders and the most brutal courses in competition. But, what our frames don't hold up to is... ignorance, neglect and abuse. Many of the frames, shocks and forks returned to Foes for "Warranty" issues are clearly problems due to ignorance of the important information contained in this instruction manual (and a little common sense).

Therefore, it is vitally important that you read this manual thoroughly, follow its instructions, ride your bicycle as was intended, maintain and respect your Foes frameset, and ask for help from our technical department when questions arise. Following these guidelines will allow you to get the most performance and longevity from your Foes and Curnutt products.



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