2003 TECHNICAL INFORMATION

KONA BICYCLE COMPANY

Kona is based in Ferndale, Washington and Vancouver, BC. During the last few years, many riders and publications have discovered our local North Shore and Galbraith Mountain trails. While everybody thinks that they ride extreme trails, many would gape in disbelief down some of the near vertical ramps, ladders and root entangled mud slides that we ride on every day. This may not be the best riding, but it is very brutal on equipment and riders. It is in these conditions that we evaluate frame design and components. The feeling is, if it works here, it should work anywhere.

The Kona name comes from our fascination with volcanic things. We're located on the Northern edge of the volcanic Cascade Mountain Range, which runs down the Pacific Coast from Canada to Southern California. The Hawaiian Islands are a volcanic chain, so the Kona name connection came along naturally.

Kona was founded in 1988 by long-time riders and racers who had previously worked for other pioneering West Coast mountain bike companies. The original Kona bicycles were custom machines based on our own preference in high-performance off-road bikes. This tradition of making thoughtful, reliable, well-balanced bicycles is still the cornerstone of the Kona way.

FRAME DESIGN

Kona is constantly evaluating and adjusting our frame designs as rider demands and technology change. Rather than re-inventing the mountain bike every season based on the latest trend, we choose to fine-tune our proven designs. While the sloping top tube design that we pioneered over 14 years ago has been largely imitated, we have continued to improve function with significant and subtle refinements. Rather than rush into dual suspension by buying someone else's design, we took nearly two years to design, develop and test prototype after prototype until we settled on the Kona 4-bar walking beam system. Kona is an independent and rider oriented company that believes in doing things our own way.

KONA DUAL SUSPENSION DESIGN FEATURES

Kona Walking Beam 4-Bar Linkage

All Kona dual suspension bikes use a mult-pivot 4-bar walking beam suspension. This allows us more options to individually tune the suspension geometry for Cross-Country, Back-Country, Out of Bounds or Downhill -

**** Compact rear triangle for quick acceleration***
**** Pivot locations cancel pedaling input on suspension***
**** Cartridge bearing pivots for ultra plush ride***
**** High torsional rigidity for ride performance & longer bearing life***
**** Cold-forged swingarms, dropouts, yokes, headtubes & bottom brackets for high strength & durability***
**** Custom-tuned rear shocks by Fox Racing Shox***

CROSS-COUNTRY DUAL SUSPENSION – Kahuna, Kahuna Deluxe, Kikapu, Kikapu Deluxe, King Kikapu

Kona Cross-Country dual suspension bikes are suited for lightweight, cross-country trail performance. Frame without shock weighs less than 4.5 pounds. Lightweight components are used throughout. The latest in Fox suspension shocks, FLOAT, with Air Negative function is featured for high efficiency. Not recommended for downhill racing, dual slalom, tricks or stunts. ***Not designed for double clamp suspension forks - warranty is voided.***

* Active, rising rate design built with Fox rear shock. Leverage ratio of 2.25:1, produces 3.4" of rear wheel travel
* Asymmetric chain stays with cold forged dropouts have replaceable derailleur hangers and I.S. disc mounts
* Lightweight seat stays connect to cold forged swing arms
* Cartridge bearing pivots on seat tube/rocker pivot and bottom bracket yoke reduces stiction
* Custom tuned Fox Vanilla (Kahuna), Fox Float (Kahuna Deluxe), Fox Float R (Kikapu), Fox Float L with lockout (Kikapu Deluxe) and Fox FLOAT RL with lockout (King Kikapu)
* Made in 14", 16", 18", 19", 20", 21", 23" sizes. Rear triangle is standard for all sizes
* Kahuna stock spring rates: 14"–450 lbs, 16"–500 lbs, 18"–550 lbs, 19"–600 lbs, 20"–650 lbs, 21"–700 lbs, 23" – 700lbs

KIKAPU DELUXE *(Mokomoko in 2002)/* ***KING KIKAPU***

TOP TUBE	∅38 x 1.5/0.9/1.3t	Easton Ultralite round 7005
DOWN TUBE	∅44.5 x 2.4/1.0/1.3t	Easton Ultralite bi-oval 7005
SEAT TUBE	∅31.8 x 2.35/2.0t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅19 x 1.6t	Round 7005
CHAIN STAYS	∅25.4 x 1.6t RH ∅25.4 x 1.7/0.9'1.4t LH	Rectangular-tapered (R) Rectangular 7005 (L)

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	27.0mm	68 x 113mm - splined	1-1/8"

* Complete bike weights: Kikapu Deluxe 18" – 26.9 lbs, King Kikapu – 24.1lbs

KAHUNA / KAHUNA DELUXE *(new model) /* ***KIKAPU*** *(Manomano in 2002)*

TOP TUBE	∅38 x 1.6t	Round 7005
DOWN TUBE	∅44 x 2.2/1.0/1.3t	Round 7005
SEAT TUBE	∅31.8 x 2.35t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅19 x 1.5t	Round 7005
CHAIN STAYS	∅25.4 x 1.7t	Oval 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Std.	27.0mm	68 x 110mm – square (Kahuna) 68 x 110mm – splined (Kahuna DL & Kikapu)	1-1/8"

* Complete bike weights: Kahuna 14" – 28.5 lbs, Kahuna Deluxe 16" – 28.9 lbs, Kikapu 18" – 27.9 lbs

KING – Frame only *(new model)*

TOP TUBE	∅38 x 1.5/0.65/1.2t	Scandium round
DOWN TUBE	∅50 x 1.3/0.8/1.5t	Scandium bi-oval
SEAT TUBE	∅30.6-31.8 x1.7t	Round Scandium
HEAD TUBE	∅41 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅20.5 x 1.6/1.2t	Round Scandium
CHAIN STAYS	∅25.4 x 1.5/0.8/1.1t	Square - Oval Scandium

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	27.2mm	N/A	1-1/8"

* 19" Frame (without shock) weighs 4.1lbs

A *(new model)*

TOP TUBE	∅34.9 x 1.6/0.9/1.6t	Round 7005
DOWN TUBE	∅44 x 2.4/1.0/1.4t	Round 7005
SEAT TUBE	∅31.8 x 2.35t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Round 7005
SEAT STAYS	∅19 x 1.6t	Round 7005
CHAIN STAYS	∅25.4 x 1.6t	Round 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
N/A	N/A	27.0mm	68 x 110mm	1-1/8"

* Complete 18" bike weighs 25.3lbs

BACK COUNTRY DUAL SUSPENSION – Dawg, Dawg Dee-Lux, Dawg Primo

Kona Back Country dual suspension bikes are suited for long, demanding endurance style riding. Frame is designed for high performance and durability, using Kona Clump Light 7005 Aluminum tubing. ***Not designed for double clamp suspension forks - warranty is voided.***

* Active, rising rate design built with Fox shocks. Leverage ratio of 2.7:1, produces 4" of rear wheel travel
* Chain stays with cold forged dropouts connect to asymmetric chain stay yolks
* Replaceable derailleur hangers and I.S. disc mounts
* Rectangular seat stays connect to a cold-forged yolk and cold forged swing arms
* Custom drawn Kona Clump Light tubing is rectangular at the head tube adding strength and torsional rigidity
* Cartridge bearing pivots on seat tube/swing arm pivot, seat stay yoke and bottom bracket yoke
* Custom tuned Fox Float R (Dawg) and Fox Float RL (Dawg Dee-Lux)
* Made in 15", 17", 18", 19", 20" sizes. Rear triangle is standard for all sizes

DAWG** (Bear in 2002)**, DAWG DEE-LUX** (Bear Dee-Lux in 2002)**, DAWG PRIMO

TOP TUBE	∅55 x 1.8/0.95/1.5t	Kona Clump Lite 7005
DOWN TUBE	∅62.5 x 2.2/0.8/1.5t	Kona Clump Lite 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅24/19 x 1.3/1.5/1.3t	Rectangular 7005
CHAIN STAYS	∅34/18 x 1.8t	Rectangular 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	30.0mm	68 x 113mm – splined	1-1/8"

* Complete bike weights: Dawg 14" – 29.5lbs, Dawg Deluxe 17" – 28.9 lbs, Dawg Primo 17" – 27.9 lbs

Out Of Bounds Dual Suspension – Stinky, Stinky Dee-Lux, Stinky Primo, Stinky JR

Kona Out of Bounds dual suspension bikes are suited for extreme riding where steep sections predominate. Frame is designed for high strength and durability, using heavy-duty Kona Clump 7005 Aluminum tubing. Heavy-duty components and shocks are featured for maximum strength. Bikes are heavier than cross-country dual suspension, and are fitted with double chain rings to allow for steep uphill riding. ***Designed for double clamp suspension forks.***

* Rising rate design built with Fox shock. Leverage ratio of 2.8:1, produces 7" of travel (Stinky Dee-Lux, Stinky Primo)
* Ratio of 3:1, produces 6" of travel (Stinky)
* Main chain stay pivot located above horizontal hub axle plane close to the bottom bracket, minimizing pogo effects caused by changes in effective chain stay length. This helps eliminate pedaling forces from activating suspension
* Chain stays & cold forged dropouts connect to asymmetric chain stay yolks
* Replaceable derailleur hangers and I.S. disc mounts
* Rectangular seat stays connect to a cold-forged yolk and cold forged swing arms
* Custom drawn Kona Clump tubing is rectangular at the head tube adding strength and torsional rigidity
* Cartridge bearing pivots on seat tube/swing arm pivot, seat stay yoke and bottom bracket yoke
* Custom tuned Fox Vanilla (Stinky), Vanilla RC (Stinky Dee-Lux, Stinky Primo)
* Made in 15", 17", 18", 19", 20" sizes. Rear triangle is standard for all sizes
* Spring rates: 15"–450 lbs, 17"–500 lbs, 18"–550 lbs, 19"–600 lbs, 20"–650 lbs (Stinky, Stinky Dee-Lux, Stinky Primo)

STINKY / STINKY DEE-LUX / STINKY PRIMO

TOP TUBE	∅54 x 1.8/1.15/1.5t	Kona Clump OB 7005
DOWN TUBE	∅62.5 x 2.4/1.2/1.5t	Kona Clump OB 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅24/19 x 1.75t	Rectangular – tapered 7005
CHAIN STAYS	∅45/17 x 1.6t	Rectangular – tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	30.0mm	68 x 113mm – splined	1-1/8"

* Double clamp compatible up to 170mm travel forks
* Complete bike weights: Stinky 15" – 38lbs, Stinky Dee-Lux 17" – 38.5lbs, Stinky Primo 17" – 41.6lbs

STINKY JR *(new model)*
Built for short Out of Bounds riders. The Stinky JR has 4" of travel front and rear and uses 24" wheels. The low center of gravity and OB geometry make this bike easy to ride in more demanding terrain.

TOP TUBE	∅55 x 1.8/1.15/1.5t	Kona Clump OB 7005
DOWN TUBE	∅55 x 2.2/1.2/1.5t	Kona Clump OB 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅24/19 x 1.3-1.5-1.3t	Rectangular 7005
CHAIN STAYS	∅35/18 x 1.6t	Rectangular 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	30.0mm	68 x 113mm splined	1-1/8"

* Spring rate: 300 lbs. Complete bike weighs 33.2 lbs

DOWNHILL BIKES - Stinky Nine, Stab, Stab Primo
Frames are designed for high strength and durability, using heavy-duty Kona Clump 7005 Aluminum tubing. Heavy-duty components and shocks are featured for maximum strength. ***Designed for double clamp suspension forks.***

* Active, rising rate design built with Fox shocks 8.5" eye to eye: 2.5" stroke (Stab), 8.75" eye to eye: 2.75" stroke (Stinky). A leverage ratio of 2.8:1, produces 7" of travel (Stab), a ratio of 3:3, produces 9" of travel (Stinky Nine, Stab Primo). Adjustable rear dropouts allow 1" of wheelbase adjustment
* Swing arms, yokes, head tubes and bottom brackets are cold forged for rigidity and durability
* Kona custom butted 7005 aluminum tubing is DH specific
* Cartridge bearing pivots on seat tube/swing arm pivot, seat stay yoke and bottom bracket yoke
* Custom tuned Fox Vanilla RC shock (Stab, Stinky Nine), Vanilla DH shock (Stab Primo)
* Stab made in 15", 17", 18". Rear triangle is standard for all sizes
* Spring rates are: 15" - 450 lbs., 17" - 550 lbs., 18" – 650 lbs.
* Stinky Nine made in 15", 17", 18". Rear triangle is standard for all sizes
* Stab Primo made in small, medium and long. Rear triangle is standard for all sizes
* Spring rates for Stinky Nine and Stab Primo are: Small - 500 lbs., Medium - 600 lbs., Long – 700 lbs.

STAB

TOP TUBE	∅54 X 2.2/1.15/1.5t	Kona Clump 7005
DOWN TUBE	∅62.5 x 2.4/1.2/1.5t	Kona Clump 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅24/19 x 1.75t	Rectangular – tapered 7005
CHAIN STAYS	∅45/17 x 1.6t	Rectangular – tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H" style	International Standard	30.0mm	68 x 113mm - splined	1-1/8"

* M.R.P. Chain guide system. Double clamp compatible up to 170mm travel. Complete "Small" bike weighs 41.1lbs

STINKY NINE

TOP TUBE	∅62.5 x 2.4/1.2/1.5t	Kona Clump 7005
DOWN TUBE	∅62.5 x 2.4/1.2/1.5t	Kona Clump 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅24/19 x 1.6t	Rectangular – tapered 7005
CHAIN STAYS	∅59/17 x 1.6t	Rectangular – tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
DH - 12mm	International Standard	30.0mm	68 x 113mm - splined	1-1/8"

* Machined replaceable dropouts with 12mm through axle
* Adjustable wheelbase
* M.R.P. Chain guide system
* Double clamp compatible
* Complete 17" (Medium) bike weighs 47.2lbs

STAB PRIMO

TOP TUBE	∅54 X 2.2/1.15/1.5t	Kona Clump 7005
DOWN TUBE	∅62.5 x 2.4/1.2/1.5t	Kona Clump 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅24/19 x 1.75t	Rectangular – tapered 7005
CHAIN STAYS	∅59/17 x 1.6t	Rectangular – tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
DH - 12mm	International Standard	30.0mm	68 x 118mm - splined	1-1/8”

* Machined replaceable dropouts with 12mm through axle
* Adjustable wheelbase
* Double clamp compatible
* M.R.P. Chain guide system
* Complete bike (Small) weighs 43.7lbs

SERVICE NOTES FOR DUAL SUSPENSION

* While the 4-Bar linkage system is very torsionally rigid and requires less maintenance than a **single pivot** design bearings and bushings will wear out. Bushing kits and replacement rear stays are available from Kona Mountain Bikes for all suspension frames.

* Cartridge bearings give the suspension a smoother ride. These bearings also require more attention than do bushings. Contaminated bearings can rust & seize, and cause frame damage. Regularly inspect the bearings and make sure that they allow the linkage to move freely.

SET-UP NOTES FOR SUSPENSION

REAR SUSPENSION

For 2003, Kona uses 8 different models of shocks on their rear suspension models. These are all made by FOX USA and include Vanilla, Vanilla R, Vanilla RC, Vanilla DH RC, FLOAT, FLOAT R and FLOAT RL.
FLOAT shocks are air sprung and have negative air that creates a more active initial stroke. Vanilla shocks are coil-over style shocks. If the shock model ends with R, it signifies that the shock has external rebound adjustment. If the shock model ends with RC, it signifies that the shock has external rebound and compression adjustment. If the shock model ends with an RL it signifies that the shock has external rebound and lockout. For any rear suspension bike it is necessary to adjust **sag** in order to get the best performance. Set-up is done best when you have someone that can help you.

1. Refer to chart to determine the eye to eye w/o rider measurement. This is the linear distance between the upper and lower bolts that attach the shock to the frame. Check to make sure that the bike has the correct length of shock.

2. Sit on the bike with your weight in a neutral position (centered). Have an assistant measure the distance between the upper and lower shock mounting bolts (eye to eye w rider sag). For a good starting point, you want to match the measurement listed in the eye to eye w rider sag column.

3. To increase the eye to eye measurement, add air pressure on Float shocks or tighten the pre-load spring on Vanilla shocks. To decrease the eye to eye measurement release air pressure (Float) or loosening the pre-load spring (Vanilla).

4. Repeat steps 2 - 3 until proper sag is achieved.

MODEL	EYE TO EYE W/O RIDER	SHOCK TRAVEL	WHEEL TRAVEL	EYE TO EYE W/RIDER SAG
Kahuna & Kikapu models, A Vanilla/ Float /Float R /Float L /Float RL /Vanilla RL	6.5” 165 mm	1.5” 38.1mm	3.5” 86mm	6.1” 155mm
Dawg / Dawg Dee-Lux / Dawg Primo Float R / Float R / Float RL AVA	6.5” 165 mm	1.5” 38.1mm	4 " 101mm	6.1” 155mm
Stinky VANILLA	7.9” 200mm	2” 50.8mm	6 " 152mm	7.4” 187.3mm
Stinky Dee-Lux / Stinky Primo / Stab Vanilla R / Vanilla RC / Vanilla RC	8.5” 216mm	2.5” 63.5mm	7 " 178mm	7.4” 200.1mm
Stinky Nine / Stab Primo Vanilla RC / Vanillla DH	8.75” 222 mm	2.75” 70mm	8.6” - 213mm short wheelbase	8” 204mm

Rebound Adjustment (R)
Rebound is adjusted using the red clicker knob on the shock. The rebound adjuster controls the speed at which the shock returns after compression. The shock has 12 clicks offering a wide range of adjustment. Rebound should be set so that the shock will return as fast as possible without pushing the rider off of the saddle. During your first few rides experiment with the adjusters noting the setting and the ride. The proper setting is a personal preference and varies depending on rider weight, riding conditions and riding style.

Compression Adjustment (RC)
Compression is adjusted using the blue clicker knob on the shock. The compression adjuster controls the speed at which the shock compresses through the stroke of the shock. The shock offers a wide range of adjustment. Rebound should be set so that the shock will return as fast as possible without pushing the rider off of the saddle. During your first few rides experiment with the adjusters noting the setting and the ride.

Compression Adjustment (RL)
Rebound is adjusted using the red clicker knob on the shock. Compression is locked out using the blue lever on the shock.

FOX SHOCK TERMINOLOGY

SHOCK SAG: The amount the shock compresses with rider sitting on bike in normal riding position. This is usually 15% to 25% of total shock travel. Cross country: 15% to 25% suggested, Downhill 25% suggested

COMPRESSION DAMPENING: The oil resistance felt when trying to compress the shock

REBOUND: After a shock is compressed it will extend because of spring force

REBOUND DAMPENING: Rebound dampening controls the rate at which the shock will extend

PRELOAD: The initial amount of force placed on the spring

SPRING RATE: The force needed to compress the spring one inch

FLOAT: *FOX LOAD OPTIMUM AIR TECHNOLOGY* is air technology. This air negative spring technology self adjusts the air negative chamber to optimum performance based on the positive air chamber pressure. This technology delivers the performance of a coil with the ease of adjustability and lightweight of an air shock.

FOX PUMP INSTRUCTION
Thread pump onto air valve (approximately 4 turns). When pump is properly installed PSI will register on pump gauge. Stroke the pump a few cycles. The pressure should increase slowly. If pressure increases rapidly check to make sure that pump is properly fitted and tightened onto the Schraeder valve. If shock has no air pressure, the gauge will not register. Pump to desired PSI setting. When unthreading pump from air valve fitting, the sound of air loss is from the pump hose, NOT the shock itself

NOTE: If you re-attach the pump, the hose will re-fill with air. The will result in a lower PSI registering of approximately 15 to 20 PSI on the gauge. Average setting is 100-300 PSI. DO NOT EXCEED 300 PSI. Replace shock valve cap before riding. Fox pump is an option, available from Kona.

FRONT SUSPENSION

For 2003 Kona models use a variety of suspension forks. Travel ranges from 2" to 8" depending on the model. For any suspension fork you have to adjust **sag** in order to get the best performance. Fork makers suggest that the sag measures ¼ of the total travel. Sag for all suspension forks can be measured the following way:

1. Make sure that the stanchion protectors (dirt boots) won't interfere with your set-up. They can be removed or one can be zip strapped to the top of the stanchion tube right under the fork crown.
2. Install a zip strap around the stanchion and slide it down until it makes contact with the dust seal located at the top of the fork leg.
3. Sit on the bike with your feet on the pedals. Prop yourself against a wall. Do not bounce on the pedals or the saddle.
4. Carefully get off of the bike without bouncing or compressing the suspension.
5. Measure the distance between zip strap and the black seal to get the **sag**. Decrease sag by increasing the forks pre-load (turn knobs clockwise) or increasing the forks air pressure, increase sag by decreasing pre-load (turn knobs counter clockwise) or decreasing the forks pressure. Refer to chart below for recommended sag

MODEL	FORK	SHOCK TRAVEL	RECOMMENDED SAG
MAKENA	Suntour M-5000	1.2" - 30mm	N/A
HULA	Suntour SF-XCC-D	2" - 50mm	N/A
LANA'I	Suntour SF-XCC-D	2.5" – 63mm	N/A
HAHANNA - AL	Suntour SF-XCC-E	2.5" – 63mm	0.6" – 16mm
FIRE MOUNTAIN	Rock Shox Judy TT	3.1" - 80mm	0.8" – 20mm
BLAST	Marzocchi EXR Comp	3.1" - 80mm	0.8" – 20mm
LAVA DOME	Marzocchi EXRComp	3.1" - 80mm	0.8" – 20mm
NUNU	Marzocchi EXR Comp	3.1" - 80mm	0.8" – 20mm
CINDER	Marzocchi EXR Air	3.1" - 80mm	0.8" – 20mm
CALDERA	Marzocchi EXR Air	3.1" - 80mm	0.8" – 20mm
KULA	Marzocchi MX Comp Air	3.1" - 80mm	0.8" – 20mm
EXPLOSIF	Marzocchi MX Pro Coil	3.1" - 80mm	0.8" – 20mm
KULA DELUXE	Fox Float F80RLT	3.1" - 80mm	0.8" – 20mm
KAHUNA	Marzocchi EXR Comp	3.1" - 80mm	0.8" – 20mm
KAHUNA DELUXE	Marzocchi EXR Air	3.1" - 80mm	0.8" – 20mm
KIKAPU	Marzocchi MX Comp Air	3.1" - 80mm	0.8" – 20mm
KIKAPU DELUXE	Marzocchi MX Pro Air	3.1" - 80mm	0.8" – 20mm
KING KIKAPU	Fox Float F80RLT	3.1" - 80mm	0.8" – 20mm
DAWG	Marzocchi EXR Air	3.9" - 100mm	1" – 25mm
DAWG DEE-LUX	Fox Float R Air	3.9" - 100mm	1" – 25mm
DAWG PRIMO	Fox F100RL Air	3.9" - 100mm	1" – 25mm
SCRAP	Marzocchi EXR Comp	3.9" - 100mm	1" – 25mm
STUFF	Marzocchi EXR Coil	3.9" - 100mm	1" – 25mm
ROAST	Marzocchi EXR Coil	3.9" - 100mm	1" – 25mm
STINKY JR	Marzocchi EXR Coil	3.9" - 100mm	1" – 25mm
STINKY	Marzocchi Junior T	6" – 152mm	1.5" – 38mm
STINKY	Marzocchi Dirt Jumper 3	5" - 130mm	1.3" – 33mm
STINKY DEE-LUX	Marzocchi Junior T QR20	7" - 178mm	1.8" – 45mm
STINKY PRIMO	Marzocchi Super T Pro QR20	7" - 178mm	1.8" – 45mm
STINKY NINE	Marzocchi Monster Triple	7.9" – 200mm	2" – 50mm
STAB	Marzocchi Junior T QR20	7" - 178mm	1.8" – 45mm
STAB PRIMO	Marzocchi Shiver DC Inverted	7.5" – 190mm	1.9" – 48mm
A	Marzocchi MX Comp Coil	3.1" - 80mm	0.8" – 20mm
ALOHA	Suntour T870	1.6" – 40mm	0.4" – 10mm
ALOHA DELUXE	Rock Shox Metro GPS	2.4" – 60mm	0.6" – 15mm

KONA CROSS-COUNTRY HARDTAIL DESIGN FEATURES

1) SLOPING TOP TUBE:
* Long top tube provides more room for correct positioning and free body movement
* Allows for more stand-over clearance, critical on dual suspension due to higher bottom bracket
* Vertically more compliant main frame absorbs more shock than frames with horizontal top tubes
* Puts rider in secure position for downhill sections

2) COMPACT REAR TRIANGLE:
* 16.75" chain stays provide perfect balance of stability and power transfer when out of the saddle
* Shorter seat stays have less deflection during braking and accelerate quicker than longer stays
* Kona custom butted stays make a rear triangle for the most efficient rear power transfer feasible

3) EXTENDED SEAT TUBE:
* Lower attachment of top tube has more stand-over, more compliant frame and compact rear triangle. Custom external butting provides additional material to strengthen extended portion.
* Kona uses seat clamps that provide worry free locking power. Clamps are easy to replace if ever damaged, and eliminate the welded seat clamps, which can distort the seat tube during fabrication

4) LONG HEADTUBE:
* Provides stronger support at top tube and down tube intersection for suspension forks
* Distributes shock better and prolongs headset bearing life
* Stronger steering position improves balance and gives more control in rough terrain

FRAME SPECIFICATIONS - CROSS-COUNTRY HARDTAILS

CROSS COUNTRY – Makena, Hula, Lana'i, Hahanna, Fire Mountain, Blast, Nunu, Cinder Cone, Caldera, Kula, Kula Deluxe

All Kona hardtails share the same race proven geometry. Regardless of the price, ride quality is not compromised. Short chainstays offer excellent power transfer to the rear wheel. Sloping top tube and generous top tube lengths offer a perfect fit for both men and women.

***KULA** (Pahoehoe in 2002) / **KULA DELUXE** (Kula in 2002) – MTB Lightweight Cross-Country Race Bikes*

TOP TUBE	∅35 x 1.6/0.9/1.5t	Easton Ultralite 7005
DOWN TUBE	∅44.5 x 2.4/1.0/1.3t	Easton Ultralite 7005
SEAT TUBE	∅31.8 x 2.35/1.8t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged&- machined 7005
SEAT STAYS	∅19 x 1.4/1.75/1.3/1.4t	Round Quad butted 7005
CHAIN STAYS	∅25.4 x 1.8 (left) ∅25.4 x 1.7/0.9/1.4 (right)	7005 (left) Triple butted 7005 (right)

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	27.0mm	68 x 113mm - splined	1-1/8"

* Down tube gusset
* Forged bottom bracket, forged and machined head tube
* Forged dropouts with replaceable derailleur hanger
* Complete bike weights: Kula 17" – 23.9 lbs, Kula Deluxe 17" – 22.9 lbs

***KULA PRIMO** – MTB Lightweight Cross-Country Race Frame (new model)*

TOP TUBE	∅38 x 1.5/0.65/1.2t	Scandium round
DOWN TUBE	∅50 x 1.3/0.8/1.0t	Scandium bi-oval
SEAT TUBE	∅30.6-31.8 x1.7/0.9/1.535t	Round Scandium
HEAD TUBE	∅41.4 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅20.5 x 1.6/1.2t	Round Scandium
CHAIN STAYS	∅25.4 x 1.5/0.8/1.1t	Square - Oval Scandium

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	27.2mm	N/A	1-1/8"

* 19" frame weighs 2.9lbs

EXPLOSIF *– Premium Lightweight Cromoly Race Bike*

TOP TUBE	∅31.8 x 0.7/0.4/0.7t	True Temper OX Platinum
DOWN TUBE	∅34.9 x 0.7/0.4/0.7t	True Temper OX Platinum
SEAT TUBE	∅29.8-28.6 x 1.3/0.7/0.9t	Kona Custom 4130 cromoly
HEAD TUBE	∅36.4 * ∅34	4130 cromoly
SEAT STAYS	∅19 x 0.6/0.9/0.6t	Triple Butted 4130 cromoly
CHAIN STAYS	∅22.2 x 0.9/0.6t	Double Butted 4130 cromoly

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
N/A	N/A	27.0mm	68 x 113mm - splined	1-1/8”

* Ritchey investment cast rear dropouts
* Complete 19” bike weighs 25.9lbs

CINDER CONE / CALDERA *– Midweight Cross-Country Hardtails with Disc Brakes*

TOP TUBE	∅34.9 x 1.85t	Round 7005
DOWN TUBE	∅44 x 1.8/1.3/1.6t	Round 7005
SEAT TUBE	∅31.8 x 2.3t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged 7005
SEAT STAYS	∅22.2 x 1.8t	Round 7005
CHAIN STAYS	∅22.2 x 1.8t	Round 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
“H style”	International Standard	27.0mm	68 x 113mm - splined	1-1/8”

* Down tube gusset. Forged bottom bracket and head tube
* Forged dropouts with replaceable derailleur hanger
* Complete bike weights: Cinder Cone 17” – 27.9 lbs, Caldera 17” – 26.9 lbs

BLAST / NUNU *– Midweight Cross-Country Hardtails (NuNu with disc brakes, Blast 100% disc-ready)*

TOP TUBE	∅35 x 1.85t	Round 7005
DOWN TUBE	∅44 x 1.8/1.3/1.6t	Round 7005
SEAT TUBE	∅31.8 x 2.3t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged 7005
SEAT STAYS	∅19 x 1.8t	Round 7005
CHAIN STAYS	∅22.2 x 1.8t	Round 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
“H style”	International Standard	27.0mm	68 x 110mm	1-1/8”

* Down tube gusset
* Forged bottom bracket and head tube
* Forged dropouts with replaceable derailleur hanger
* Complete bike weights: Blast 15” – 26.9 lbs, Nunu 17” – 28.9 lbs

LAVA DOME *– Durable Cromoly Cross-Country Hardtail. Great long-distance touring bike.*

TOP TUBE	∅31.8 x 0.9/0.6/0.9t	Round 4130 cromoly
DOWN TUBE	∅31.8 x 0.9/0.6/0.9t	Round 4130 cromoly
SEAT TUBE	∅29.8-28.6 x 1.3/0.7/0.9t	Round 4130 cromoly
HEAD TUBE	∅37 * ∅34	4130 cromoly
SEAT STAYS	∅19 x 0.6/0.9/0.6t	Round – tapered 4130 cromoly
CHAIN STAYS	∅22.2 x 0.9/0.6t	Round - tapered 4130 cromoly

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
N/A	N/A	27.0mm	68 x 110mm	1-1/8”

* Complete 17” bike weighs 28.9lbs

LANA'I / HAHANNA / FIRE MOUNTAIN – *Entry-level MTB trail bikes*

TOP TUBE	∅34.9 x 1.85t	Round 7005
DOWN TUBE	∅44 x 1.8/1.2/1.8t	Round 7005
SEAT TUBE	∅31.8 x 2.3t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged 7005
SEAT STAYS	∅19 x 1.8t	Round 7005
CHAIN STAYS	∅22.2 x 1.8t	Round 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	N/A	27.0mm	68 x 110mm	1-1/8"

* Downtube gusset
* Forged bottom bracket and head tube
* Forged dropouts with replaceable derailleur hanger
* Complete bike weights: Lana'i 17" – 28.9 lbs, Hahanna 17" – 28.9 lbs, Fire Mountain 27.9 lbs

UNIT – *Lightweight cromoly single speed MTB*

TOP TUBE	∅31.8 x 0.7/0.4/0.7t	True Temper OX Platinum
DOWN TUBE	∅34.9 x 0.7/0.4/0.7t	True Temper OX Platinum
SEAT TUBE	∅29.8-28.6 x 1.3/0.7/0.9t	Kona Custom 4130 cromoly
HEAD TUBE	∅36.4 * ∅34	4130 cromoly
SEAT STAYS	∅19 x 0.9t	4130 cromoly
CHAIN STAYS	∅22.2 x 0.9t	4130 cromoly

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
N/A	N/A	27.0mm	68 x 113mm - splined	1-1/8"

* Complete 19" bike weighs 22lbs

HULA – *24" wheel cross-country MTB*

TOP TUBE	∅31.8 x 2.2t	Round 7005
DOWN TUBE	∅38 x 1.8t	Round 7005
SEAT TUBE	∅31.8 x 2.35/1.6t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged 7005
SEAT STAYS	∅19 x 1.8t	Round 7005
CHAIN STAYS	∅22.2 x 2.0t	Round 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	N/A	27.0mm	68 x 110mm	1-1/8"

* Forged bottom bracket and head tube
* Forged dropouts with replaceable derailleur hanger
* Complete bike weighs 26.9lbs

MAKENA – *20" wheel cross-country MTB (new model)*

TOP TUBE	∅31.8 x 1.8t	Round 7005
DOWN TUBE	∅38 x 1.8t	Round 7005
SEAT TUBE	∅31.8 x 2.35/1.6t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged 7005
SEAT STAYS	∅19 x 1.8t	Round 7005
CHAIN STAYS	∅22.2 x 1.8t	Round 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	N/A	27.0mm	68 x 110mm	1-1/8"

* Forged bottom bracket and head tube
* Forged dropouts with replaceable derailleur hanger
* Complete bike weighs 25.9lbs

"OUT OF BOUNDS" – Scrap, Scab, Stuff, Roast

Kona OB hardtails are designed for dirt jumping, technical single track, dual slalom or trials riding. Heavier construction allows the use of 4" and 5" double clamp forks. 2003 geometry offers even more stand-over clearance.

ROAST

TOP TUBE	∅55 x 1.8/0.95/1.2t	Kona Clump Light 7005
DOWN TUBE	∅62.5 x 2.2/0.8/1.5t	Kona Clump Light 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅23/17 x 1.8t	Rectangular 7005
CHAIN STAYS	∅32/18 x 1.8t	Rectangular 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	30.0mm	68 x 113mm - splined	1-1/8"

* Forged chainstay yoke, bottom bracket. Forged and machined head tube
* Forged dropouts with replaceable derailleur hanger. Double clamp compatible for 100 – 130mm travel
* Complete 17" bike weighs 32.2lbs

STUFF

TOP TUBE	∅55 x 1.8/0.95/1.2t	Kona Clump Light 7005
DOWN TUBE	∅62.5 x 2.2/0.8/1.5t	Kona Clump Light 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged - machined 7005
SEAT STAYS	∅23/17 x 1.8t	Rectangular 7005
CHAIN STAYS	∅32/18 x 1.8t	Round – tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	30.0mm	68 x 113mm - splined	1-1/8"

* Forged chainstay yoke, bottom bracket. Forged and machined head tube
* Forged dropouts with replaceable derailleur hanger. Double clamp compatible for 100 – 130mm travel
* Complete 15" bike weighs 32.4lbs

SCRAP *(new model)*

TOP TUBE	∅55 x 2.2/1.15/1.5t	Kona Clump 7005
DOWN TUBE	∅62.5 x 1.8/1.4/1.2/1.5t	Kona Clump 7005
SEAT TUBE	∅34.9 x 2.4t	Round 7005
HEAD TUBE	∅44 * ∅33.95	Forged - machined 7005
SEAT STAYS	∅23/17 x 1.8t	Rectangular 7005
CHAIN STAYS	∅25.4 x 1.8t	Round - tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	30.0mm	68 x 113mm - splined	1-1/8"

* Forged chainstay yoke, bottom bracket. Forged and machined head tube
* Forged dropouts with replaceable derailleur hanger. Double clamp compatible for 100 – 130mm travel
* Complete bike weighs: Scrap 17" – 32.4lbs

SCAB *– Urban Out of Bounds 26" wheel Cromoly Jump Bike*

TOP TUBE	∅38.1 x 0.9t	4130 Cromoly
DOWN TUBE	∅44 x 0.9t	4130 Cromoly
SEAT TUBE	∅29.8-28.6 x 1.3/0.7/0.9t	4130 Cromoly
HEAD TUBE	∅44 * ∅33.95	4130 Cromoly
SEAT STAYS	∅22.2 x 0.9t	4130 Cromoly
CHAIN STAYS	∅25.4 x 0.9t	4130 Cromoly

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
N/A	International Standard	30.0mm	68 x 113mm - splined	1-1/8"

* Double clamp compatible for 100 – 130mm travel. Super beefy head tube
* DT, HT and wrap gusset. Complete 14" bike weighs 32.4lbs

COMFORT – Aloha, Aloha Deluxe

Recreational 26" wheel bikes with many comfort features. Also good transport machines.

ALOHA / ALOHA DELUXE *(Tiki in 2002)*

TOP TUBE	∅35 x 1.8t	Round 7005
DOWN TUBE	∅44 x 2.0t	Round 7005
SEAT TUBE	∅31.8 x 2.35t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged 7005
SEAT STAYS	∅19 x 1.8t	Round - tapered 7005
CHAIN STAYS	∅25.4 x 1.8t	Round - tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	N/A	27.0mm	68 x 110mm	1-1/8"

* Forged bottom bracket and head tube. Forged dropouts with replaceable derailleur hanger
* Complete bike weights: Aloha 15" – 28.5lbs, Aloha Deluxe 17" – 29.3lbs

ROAD – Tiki, Tiki Deluxe, Dr. Dew, Jake the Snake, Kona, Kona Deluxe

A full range of 700C bikes for road racing, transportation and cyclo-cross

KONA DELUXE *– Sloping top tube road racer (Kapu in 2002)*

TOP TUBE	∅35 x 1.3/0.8/1.4t	Columbus Custom 7005
DOWN TUBE	∅50 x 1.3/0.9/1.4t	Columbus Custom 7005
SEAT TUBE	∅31.7 x 2.25/1.0/1.7t	Columbus Custom 7005
HEAD TUBE	∅41 * ∅33.95	Forged & Machined 7005
SEAT STAYS	∅19-16 x 1.4/1.6/1.35t	Triple butted 7005
CHAIN STAYS	∅25-16 x 1.8t	Columbus Custom 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"L" style	N/A	27.0mm	68 x 113mm - splined	1-1/8"

* Forged light bottom bracket & head tube. Forged dropouts with replaceable derailleur hanger
* Complete 54cm bike weighs 19.4lbs

KONA *Sloping top tube road racer (Haole in 2002)*

TOP TUBE	∅34.9 x 1.6/1.2/1.6t	Round 7005
DOWN TUBE	∅40 x 1.6/1.3/1.6t	Round 7005
SEAT TUBE	∅31.8 x 2.35/1.6t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅19-16 x 1.8t	Round - tapered 7005
CHAIN STAYS	∅22-19 x 1.8t	Round - tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"L" style	N/A	27.0mm	68 x 113mm	1-1/8"

* Forged light bottom bracket. Forged light head tube. Forged dropouts with replaceable derailleur hanger
* Complete 52cm bike weighs 20.9lbs

JAKE THE SNAKE *– Cyclo-cross specific, also good commuter and touring machine*

TOP TUBE	∅35 x 1.6/0.8/1.3t	Easton Ultralite 7005
DOWN TUBE	∅40 x 2.1/0.9/1.3t	Easton Ultralite 7005
SEAT TUBE	∅31.8 x 2.5/1.0/1.6t	Easton Ultralite 7005
HEAD TUBE	∅41 * ∅33.95	Forged & machined 7005
SEAT STAYS	∅19-16 x 1.6/1.4/1.6t	Round - tapered 7005
CHAIN STAYS	∅22-19 x 1.8t	Round - tapered 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"L" style	N/A	27.0mm	68 x 113mm - splined	1-1/8"

* Forged light bottom bracket. Forged and machined head tube
* Forged dropouts with replaceable derailleur hanger
* Complete 54cm bike weighs 22.4lbs

DR. DEW *– Lightweight "speed bike" commuter with disc brakes*

TOP TUBE	∅34.9 x 1.6/1.2/1.6t	Round 7005
DOWN TUBE	∅40 x 1.6/1.3/1.6t	Round 7005
SEAT TUBE	∅31.8 x 2.35/1.6t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged & Machined 7005
SEAT STAYS	∅19 x 1.8t	Round 7005
CHAIN STAYS	∅22.2 x 1.8t	Round 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H" style	International Standard	27.0mm	68 x 113mm - splined	1-1/8"

* Forged bottom bracket and head tube. Forged dropouts with replaceable derailleur hanger
* Complete 56cm bike weighs 24.9lbs

TIKI *(Yee-Ha in 2002) /* ***TIKI DELUXE*** *(Hoo-Ha in 2002)– Transport/Recreational road machines*

TOP TUBE	∅34.9 x 1.6t	Round 7005
DOWN TUBE	∅44 x 2.0/1.1/2.0t	Round 7005
SEAT TUBE	∅31.8 x 2.35t	Round 7005
HEAD TUBE	∅41 * ∅33.95	Forged 7005
SEAT STAYS	∅19 x 1.8t	Round 7005
CHAIN STAYS	∅22.2 x 1.8t	Round 7005

Derailleur hanger	Disc Mounts	Seat Post	Bottom Bracket	Head Set
"H style"	International Standard	27.0mm	68 x 110mm	1-1/8"

* Forged bottom bracket and head tube. Forged dropouts with replaceable derailleur hanger
* Complete bike weights: Tiki 16" – 25.9 lbs, Tiki Deluxe 18" – 26.9 lbs

FRAME WARRANTY

Kona frame warranty is outlined in detail in the Kona Owner's Manual. It does not cover failure due to accidents, stunt riding, racing, use of double clamp forks (except for DH & OB models), or commercial use. It covers the original owner's use for 4 years from the date of purchase (1 year for DH & OB models). Ownership must be registered with Kona to validate the warranty. Sympathy pricing in the USA & Canada in case of accidents and other failures is available to the original owner.

KONA COMPONENTS

Cromoly Bulge ISIS Crank
* 38.mm OD D-shaped B/B section for incredible strength
* 22mm OD O-shaped pedal section to resist twisting
* Thickwall 2.2mm cromoly tubing for awesome strength
* Kona Ring of Fire rockguard with 32/22T chainrings
* ISIS bottom bracket ready

Cromoly Bulge DH Crank
* 38.mm OD D-shaped B/B section for incredible strength
* 22mm OD O-shaped pedal section to resist twisting
* Thickwall 2.2mm cromoly tubing for awesome strength
* 5mm adaptor for 5-bolt, 110mm single chainring
* 4 Cartridge bottom bracket with fully adjustable chainline

JackShit Pedal
* Extra large 14mm cromoly axle for strength & durability
* Double concave shape to promote cupped feel
* Replaceable stainless steel screw-in pins
* Fully serviceable & replaceable cartridge bearings & bushings
* Extra large aluminum body with wide outside section

Ring of Fire Rockguard
* 5mm cold-forged Aluminum chainring guard
* Black anodized & CNC finish
* Fits up to 34T 4-bolt, 110mm chainrings
* 135 grams

DH Primo Handlebar
* 2014 PG Aluminum
* 680mm width, 38mm rise, 31.8mm clamp area
* 9 degree bend, 5 degree upsweep
* At 330 grams, our strongest handlebar

DH Handlebar
* T6-6061 Double-Butted Aluminum
* 660mm width, 38mm rise, 25.4mm clamp area
* 9 degree bend, 5 degree upsweep
* Proven & solid 365 grams

Control Stem
* 175 grams
* Cold-forged Aluminum for Kona Cross-Country
* 8 or 17 degree rise
* Lengths from 75 - 120mm

JackShit Grip
* Durable Kraton rubber
* 125 grams/pair
* KUS rated BH-32

Mooseknuckle Grip
* Durable Kraton rubber
* 90 grams/pair
* KUS rated BH-34

Cross-Country Saddle
* SDG Satellite design
* 277 grams with cromoly rails
* 270mm x 135mm
* Nailhead skid patches

Out of Bounds Saddle
* SDG Gordo design
* 465 grams with 8mm steel rails
* 290mm x 150mm
* Nailhead skid patches

Project Two Fork
*Triple-butted 1 1/8 inch cromoly blades & steer column
* 795 grams
* Investment cast dropouts

Jump Fork
* Straight guage cromoly blades & steer column
* 5mm thick leading-edge dropouts
* Solid 1.3 kgs

For service, safety & maintenance information, please refer to the Kona Owner's Manual, which is provided with each bicycle.

If you have further technical questions, contact us by e-mail at: **tech@konaworld.com**. For general & sales questions, contact: **joe@konaworld.com**. The Kona web site is located at: **http://www.konaworld.com**