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COTIC

ROCKET

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ROCKET OWNERS MANUAL

WARNING

The Cotic Rocket is a bicycle frame designed for general off road XC, Trail and All Mountain use only. It is not a Freeride or Downhill bike. Performing large drops and jumps may cause damage to or failure of the frame which could result in injury to the rider. Cotic Ltd does not take responsibility for any of these events. This frame exceeds the requirements of BS EN 14766:2005.

Whilst Cotic endeavours to ensure that all items assembled at the factory are correctly and safely installed, it is the responsibility of the owner to check all fasteners and components to satisfy themselves that the bicycle is safe to use. If you do not feel qualified to make these assessments, you must ensure they are carried out prior to use of the bicycle by a qualified bicycle shop mechanic.

All fasteners, component installations and components should be checked and maintained regularly to ensure the continued safe operation of your bicycle. It is particularly recommended to check pivot bolts for tightness before and after the first two rides to ensure safe operation.

Your Cotic Rocket

The Cotic Rocket is a full suspension mountain bike for technical trail use. It uses high strength Reynolds and True Temper steel for maximum strength and durability in hard riding situations. Its slack, low geometry ensures confident handling and fun.

Your Cotic Rocket is equipped with Cotic Droplink suspension. This is a linkage driven design which combines the strength and stiffness of a single swingarm with a finely controlled progressive shock rate. This keeps the back of your bike tied firmly to the front and the shock rate gives you a positive platform to work from.

Overall Parameters

The Cotic Rocket is designed to work optimally within certain limits of component size, shape and performance. The frame handles better within these parameters. It's more fun as well as safer. The frame is not designed to perform safely outside these limits. Using components which do not conform to the below requirements could result in unsafe handling traits or frame damage or failure which could result in rider injury.

Cotic Ltd does not take responsibility for any damage or injuries caused as a result of fitting an incorrect component outside of the boundaries specified below.

Forks

The Cotic Rocket should always be used with suspension forks, as follows:

Minimum: 140mm travel/510mm static length.
Maximum: 160mm travel/545mm static length.

The optimum specification for the frame is a 150mm travel fork.

The bike is approved for use with dual crown forks but only up to a maximum 160mm travel. Longer travel dual crown forks are specifically not approved even if they have a similar (or shorter) static length than the maximum approved single crown fork length of 545mm.

Shock

The rear shock on the Cotic Rocket is a 200mm eye-to-eye length and 57mm stroke. Piggyback shocks can be used, with the piggyback reservoir installed at the down tube end, on the top of the main barrel of the shock. If installed the other way around the piggyback could hit the frame before full travel is achieved. Coil shocks can also be used if desired.

It is possible to fit a 200mm eye-to-eye by 50mm stroke shock, but this will result in the travel being limited to 132mm.

Note that all setup suggestions made in this document are based upon the 57mm stroke shock.

Tyres

The maximum allowable tyre diameter is 690mm (27.1"). The maximum recommended tyre size (which still allows mud clearance for maximum off road performance) is 2.5" or 64mm across the widest part of the tread. Tyres larger than stated above could contact the frame whilst the bicycle is in use causing frame and/or tyre damage which could lead to rider injury.

Brakes

The Cotic Rocket frame is equipped with International Standard rear disc mountings. In order to maximise suspension performance under braking the disc mount is positioned forward of the top centre of the disc rotor. The placement distributes the forces in a neutral direction. In order to achieve the best position for the brake caliper the top bolt of the disc mount also forms the shaft of the left side seatstay/swingarm pivot. The bike must therefore never be ridden without a brake installed as the seatstay pivot will not be fastened.

Minimum rear rotor size: 160mm.
Maximum rear rotor size: 203mm.

Front brake rotor size should be no larger than the maximum recommended by the fork manufacturer and should not exceed 203mm diameter.

Headset

The Cotic Rocket uses a 44mm internal diameter head tube which uses a zero stack (ZS) top cup and a 44mm external bottom cup (EC44). This enables maximum steerer compatiblity and future-proofing.

The bike is designed to use an external type bottom cup (regardless of steerer size) to maintain the geometry of the bike. Installing a 1 1/8" fork using a zero stack bottom cup will steepen the geometry and drop the BB height. It will also result in fork crown adjusters not having sufficient clearance from the down tube, thus allowing potential damage the frame and fork if the bars are over-rotated. It is therefore not recommended.

Specifically it is not safe to install a longer travel than recommended fork (eg 170mm travel or more) with a 1 1/8" steerer and ZS44 bottom cup thinking that because the overall length of the system is similar to the approved EC44 bottom cup/545mm max fork length set up it will be okay. It won't. No matter what the headset-steerer combination, forks longer than 160mm travel are not certified.

What headset will you need?

1 1/8" steerer: EC34/28.6 top, EC44/30 bottom
1 1/8"-1.5" taper (also known as E2) steerer: EC34/28.6 top, EC44/40 bottom
1.5" steerer: EC44/38.1 top, EC44/40 bottom

Seatpost

The seatpost size is 31.6mm, using a 34.9mm clamp. Hose routing is provided under the down tube for dropper seatpost remote cables/hoses.

To prevent frame damage, the seatpost should have a minimum of 110mm of insertion into the frame below the top of the seat tube with the saddle set at the maximum height required by the rider. Regardless of any minimum insertion marker on the seatpost. Failure to observe this minimum insertion of 110mm will result in premature frame failure and invalidation of your warranty.

Rear Axle

The rear axle on the Cotic Rocket is a 142mm width screw-through Syntace X-12 type. The axle is supplied with the frame and requires a 5mm Allen key to install and remove. The derailleur hanger is also Syntace X-12.

The 142mm axle standard uses standard 135mm frame spacing with two 3.5mm interface pockets for maximum ease of wheel installation. A lot of high end hubs can be converted from standard 135mm QR type to 142x12 (eg. Hope, DT Swiss). Contact us for information about converting your hub if you're at all unsure.

Pivot Bearings

All the pivots on the Cotic Rocket use standard 'deep groove' ball bearing cartridges or standard shock size bushings. If noticeable rattle or play develops in the suspension system, yet all the pivot axle fasteners are tightened correctly, then it is highly probable that the bearings require replacement.

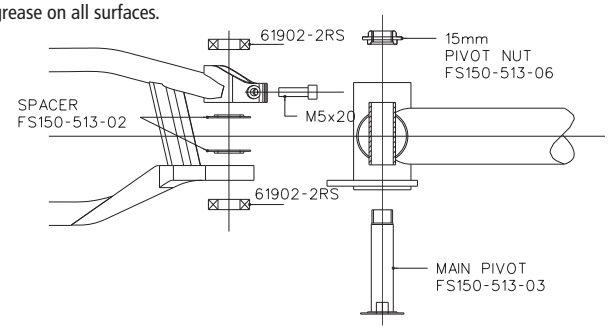
The pivot bearings are as follows:

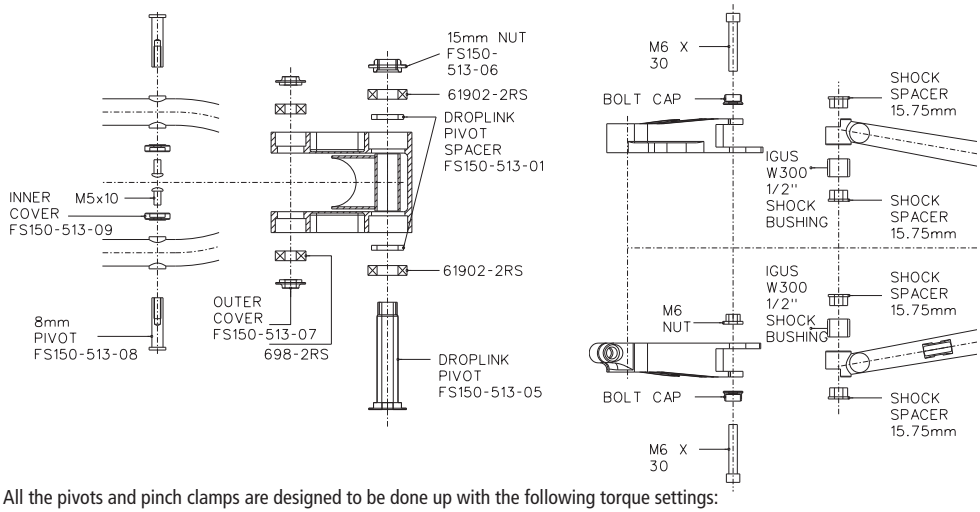
Pivot	Axle Size	Housing Size	Bearing Number	Quantity per Frame
Main and Droplink Seat Tube End	15mm	28mm	61902-2RS	4
Droplink Seatstay End	8mm	22mm	608-2RS	2
Seatstay/Swingarm	12.7mm(1/2") Shock Mounting M6 15.75mm wide	15.08mm(19/32") x 12.7mm(1/2")	IGUS INGLIDUR W300	2

It is important to quote the '2RS' addendum as this specifies the seal type. To ensure your Cotic Rocket performs at its best we recommended that you buy the highest quality bearings from a reputable manufacturer (eg. SKF, NSK, etc).

The bearings and bushings are press fitted into the frame housings. Old bearings should be knocked out carefully using a drift and a hammer. New bearings should be pressed in square using a large vice with soft jaws into the housings to prevent frame damage and ensure accurate alignment. If you do not have the equipment to press the bearings in DO NOT attempt to install them using a hammer or similar as you run the risk of damaging the frame.

When re-installing the pivot axles after changing the bearings, it is imperative that all the spacers and axles are installed again correctly. When disassembling take note of the order in which assemblies came apart. Make sure they go back together the same way. Use high quality grease on all surfaces.





All the pivots and pinch clamps are designed to be done up with the following torque settings:

BB Pivot and Droplink Frame End Pivot	8mm allen key/17mm spanner	17Nm
Shock mountings	4mm allen key	8Nm
Seatstay Pivot	5mm allen key/10mm spanner	10Nm
Swingarm left side bearing pinch clamp	4mm allen key	6Nm

This ensures safe operation of the frame. Failure to install the spacers and pivots correctly, or to tighten the bolts sufficiently will lead to premature frame failure. If you're at all unsure, get your local Cotic Dealer or Independent Mountain Bike Specialist to do the job for you.

Feel free to contact Cotic for answers to any specific questions or to return the frame to us for service.

Other General Specifications

Component	Size/Spec
Headset	44mm standard, external bottom cup for all steerers
Seat Clamp (supplied)	34.9mm
Seatpost	31.6mm
Front Derailleur	34.9mm conventional (bottom swing), bottom pull
Bottom Bracket Shell	Standard 73mm threaded
Rear Axle	Syntace X-12 142mm x 12
Mech Hanger	Syntace X-12 Breakaway
Top Shock Mounting	8mm/15.75mm wide
Bottom Shock Mounting	8mm/15.75mm wide
Chainguide Mounting	ISCG05
Cable/Hose Routing	Down tube routed full outer for gears and rear brake. Top tube route for dropper seatpost remote.

Warranty

Your Cotic Rocket frame (not including shock) is covered by a 4 year warranty which covers workmanship and materials defects only. If your frame fails due to a workmanship or material defect within 2 years of purchase, we will replace your frame for free. If your frame fails due to a workmanship or material defect with 3-4 years of purchase, we will replace it for half the recommended retail price at the time of purchase. Your statutory rights are not affected by this warranty.

If you break your frame by using parts falling outside the specifications above, or by simply using it for riding which it was not designed for (i.e. Freeride, Downhill or wanton abuse). This kind of failure is explicitly not covered by the warranty.

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Setup Suggestions

The suspension on your Cotic Rocket is designed to work at it's best when the suspension 'sags' with the rider on board the bike. 'Sag' is the amount the shock compresses compresses with a rider on board. The Cotic Rocket's suspension works at its best when set with between 25% and 30% of the available travel as sag.

You should be looking to set up your bike between the following:

25% Sag: 14mm Shock stroke with rider on board.
30% Sag: 17mm Shock stroke with rider on board.

How To Set Your Sag

Using a shock pump, set your shock to the following pressures depending on shock type:

Fox - 170psi Marzocchi - 110psi BOS - 230psi

Leave your forks as they are (if you've already set them up) or put in the recommended spring weight/pressure for your weight from the manufacturers manual.

Adjust the rear shock's rebound and compression damping adjusters to their minimum setting. This allows the shock to compress unhindered and ensures a more accurate sag measurement.

Put your riding kit on. Or at least a fully loaded backpack if you usually ride with one. Set the saddle to your correct pedaling height.

Mount the bike and go for a quick ride in a suitably quiet area. Whilst riding, bounce on the saddle a couple of times to get the rear shock compressing as much as you can.

Then, whilst seated, pull the rubber o-ring up against the shock body and very gently roll to a halt, preferably without using the brakes. We find rolling to a stop alongside a kerb helps as you won't easily accidentally compress the suspension when dismounting the bike.

Once off the bike, measure the distance between the o-ring and the shock body. Adjust the air pressure in the shock accordingly to get the desired amount of sag. Note that the BOS Vip'r shock requires higher pressures than you may be used to, the Marzocchi Roco Air LO is lower pressure than you might expect. For example, for Cy (who weighs 85kg), the Fox shocks run around 190psi. The BOS is set around 250psi, the Marzocchi around 120psi.

It's worth noting that as the weight distribution of all bikes is different, being dependent on saddle position, stem length and bar width amongst many other things. It's quite possible that with the correct sag at the rear of the bike, your forks may end up with too much or too little sag because there's more or less weight on them compared to your previous bike. This is why we don't recommend any particular pressures, because even quite subtle differences in your saddle/cockpit set up compared to anything we measure will result in different pressures being required for a given level of sag. This is why we always recommend setting up using sag as your guide, not a generic shock pressure.

Once you've set the rear sag, check the front fork sag. If the fork sag requires alteration, alter it, then check the rear sag again. Keep doing this procedure until both front and rear sag is set as desired by the rider, within the manufacturer recommendations for the frame and fork.

The Rocket is a bike for hard riding. As such, we recommend running a firmly sprung fork setup with 20-25% sag coupled with 30% sag at the rear for general riding. The firmer forks keep your weight centred on downhill sections. The progressive nature of the Droplink rear suspension means running 30% sag gives lots of grip and fluidity whilst still having great support when moving the bike around.

How To Set Damping

Once the front and rear sags are set, adjust the rebound and compression damping to your preference.

Rebound

It is recommended to start with the rebound halfway across its range. If you feel like you're being bounced out of the saddle on big compressions, or springing back too hard off drops, or the bike feels like it's bouncing back at you at high speed on rocky sections, then add more rebound damping until this sensation is eliminated.

At Cotic, our general preference is for the most (ie. slowest) rebound damping we can sensibly use without the suspension packing down on repeated hits. This stops the suspension 'pogo-ing' up and down through every trail feature and thus gives more precision to the bike's handling. This is just a preference though, and you may prefer the rebound faster.

Compression / Pedal Platform

It is recommended to start with the compression damping/pedal platform switched off (or set to minimum). The Cotic Droplink suspension is designed not to require the assistance of a compression damping circuit to give good pedaling performance. Using the minimum setting allows the suspension to move under bump forces more easily and track the ground better.

Suck It And See

We recommend starting at 30%/17mm shock sag and going for a couple of rides to see how this feels. This is a good middle ground for tackling the trails with an active, plush feel combined with a low bottom bracket height for confident handling.

If you feel that you're catching your pedals too often, or the steering isn't as fast as you'd like, or you're not getting the climbing position you want, then add more air to the shock and reduce the sag to 25%/14mm shock sag, or maybe drop the sag on your fork a few extra millimetres to move your weight forward.

Take Some Notes Before Tweaking

With all the adjustments available on modern suspension it's quite possible to get lost chasing a set up and ending up with a bike that doesn't handle too well. So, if you've twiddled and tweaked and the handling just seems to be getting worse, go back to your base setup. We've provided a section over the page for you to fill in with your basic settings and experiments.

Don't be afraid to experiment with your suspension settings and general bike setup (stem length, bar height, etc), but always have a base set up written down that you can go back to. This should include a fork travel (if the fork is adjustable) with air pressures for front suspension units. Note down how many clicks of rebound you're running. Same goes for compression damping if its adjustable on your fork.

As your experience grows, you'll begin to know what certain adjustments do and how to undo them, but it's a learning curve so keep your head and don't be afraid to start from scratch.

Let's face it, it's our job to know about this and we're still learning, still making the odd mistake. We really think you could get more out of your bike by playing around with things a little. We're always happy to help if you want advice. Just drop us a line at info@cotic.co.uk

Our service doesn't stop when you order a frame. We want to help you enjoy your new bike to its full potential.

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SET UP NOTES

Shock Pressure (psi)	Shock Sag (mm)	Shock Rebound (clicks)	Fork Pressure (psi)	Fork Sag (mm)	Fork Travel (mm)	Fork Rebound (clicks)	Bar/Stem Width/Length

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