NOVEMBER 05

BIKE 06

WORKSHOP TECH SERVICES

SCOTT

INDEX WORKSHOP 06

RANSOM

1

Ransom is the result of 2 years of research and development not only looking for a lightweight but also a durable frame for an innovative suspension technology in combination with an optimized kinematics of the rear swingarm.

RANSOM LTD

RANSOM 30

The combination of an optimized kinematics with a revolutionary suspension technology closes the gap between dual suspension marathon bikes (e.g. Genius MC) and the new generation of hardcore freeride bikes (e.g. Nitrous 06).

Ransom was designed for riders looking for a “non-bobbing” long travel all mountain bike with a maximum travel of 165 mm.

The Ransom Concept is based on a new designed multi-pivot technology.
In combination with the linear shock characteristics the chain tension will be reduced and doing so the pedalling will not influence function or movement of the rear swingarm.

Some details of the new Ransom frames:

> frame weight of Ransom LTD/10 frame incl. Equalizer TC Shock 3080 grams at size M. Frame weight without shock is 2650 grams.

> frame weight of Ransom 20 incl. Equalizer TC Shock 2770 grams at size M, but with same stiffness and durability as LTD frame

> frame weight of Ransom 30/40 frame incl. Equalizer TC Shock 3880 grams at size M. Frame weight without shock is 3450 grams

> both versions passed the new EFBe test standard Top Performance for Freeride bikes which is a higher test standard than the regular Top Performance test.

GEOMETRY/TECHNICAL DATA RANSOM

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
S	68°.	110	560	73.5°	440	430	+ 16
M	68°.	110	585	73.5°	460	430	+ 16
L	68°.	120	610	73.5°	480	430	+ 16
XL	68°.	130	635	73.5°	510	430	+ 16

Travel	165/100/0 mm
Suspension ratio	3.30
Shock (eye to eye)	190 mm
Hardware mainframe	18.0 mm x 6 mm,
Hardware link	22.2 mm x 6 mm,
Seatpost diameter	34,9 mm
Headset	1 1/8" semi integr. with 44.0 mm cups
Fork travel	145 mm – 160 mm
Fork length	540 mm
BB housing	73 mm
Front derailleur	Topswing 31,8 mm downpull
Chainguard	ISCG Standard
Bearings	4 x 61900 (22x10xT6), 4 x 63800 (19x10xT7), 2 x 605 (14x5xT5)

IMPORTANT

Please note that theoretically it might be possible to use another rear shock on the Ransom frame, as we use the standard eye-to-eye length of 190 mm, but we strongly do not recommend doing so for 2 reasons:

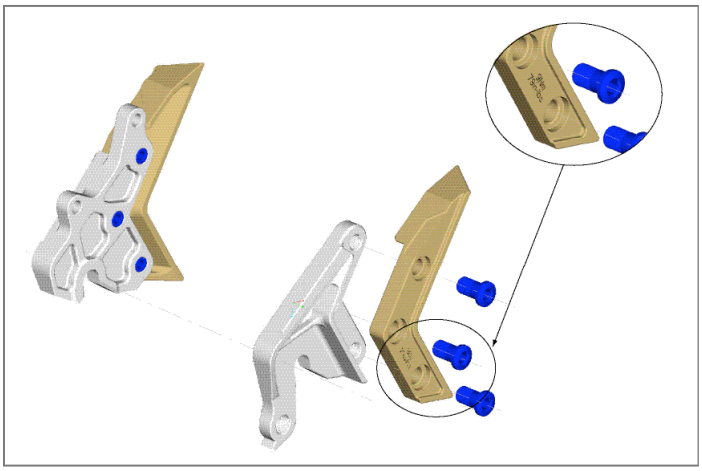
a. the alternative shock might touch the frame during suspension and cause damage to frame and shock itself

b. the linkage system of the Ransom was created in a digressive way to grant in combination with the Equalizer TC Shock a linear suspension reaction with optiumum performance for the rider

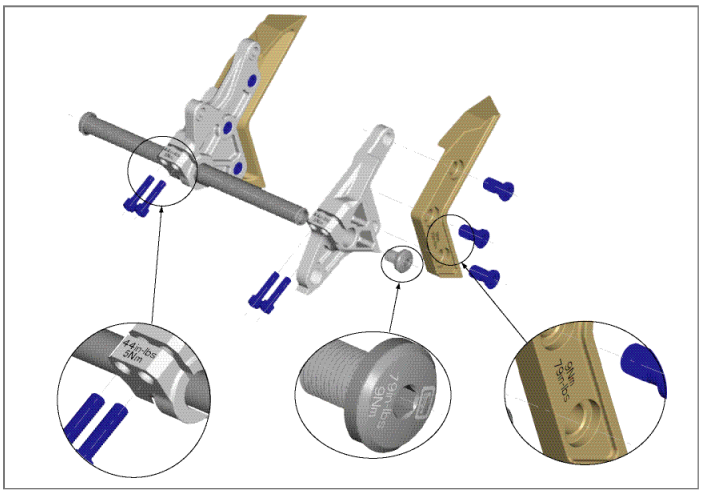
IDS: INTERCHANGEABLE DROPOUT SYSTEM

2 possibilities for dropouts are available in prepack at Scott:

> **dropout for standard QR rear axle**: new designed dropouts for standard QR rear axle with a new fixation to ensure optimum shifting performance and stability in comparison to standard replaceable dropouts systems



> **dropout for 12mm–through-axle-system**: new designed dropouts for 12mm-through-axle system combining optimum shifting performance with the benefits of a trough-axle-systems which grants more stability and torsion resistance



For service and after sales use we will also offer only the right side dropout with following parts numbers:

right dropout for standard axle > 202779
right dropout for 12 mm through axle > 202780
12 mm axle for 135 mm swingarm width > 202781

Headset is semi integrated version with 44.00 mm cups in the frame, available with article number 1518222040000.

In case you need single bearings (2 pcs per set) they are available with 1558225010000 (not for Ransom LTD).

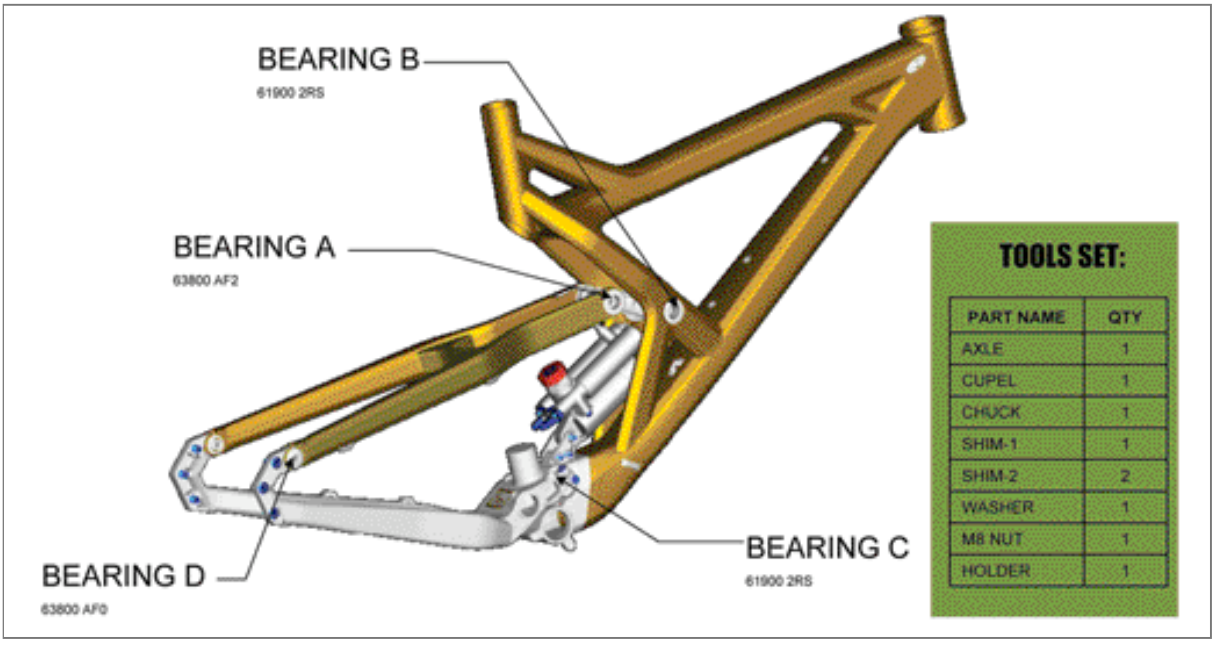
RANSOM TOOL SET FOR PIVOT REPAIR

2

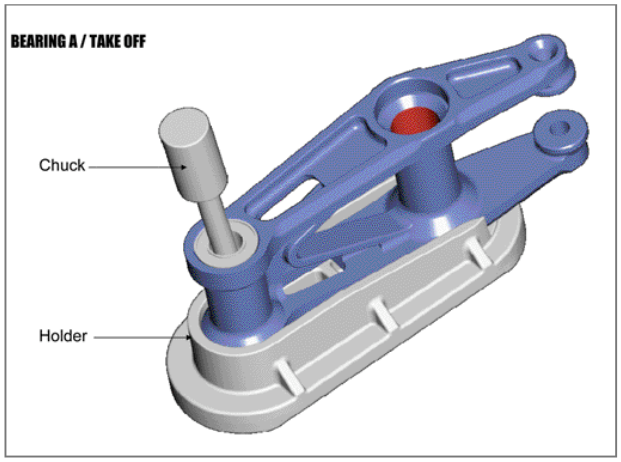
The industrial bearings of Ransom normally need no special service or maintenance beside a regular drip of oil/silicon oil on the outer surface for perfect function.
In case some of them need service or to be replaced Scott offers a tool set to disassemble the old bearings and assemble the new ones without tapping them with a hammer or other not recommended tools.

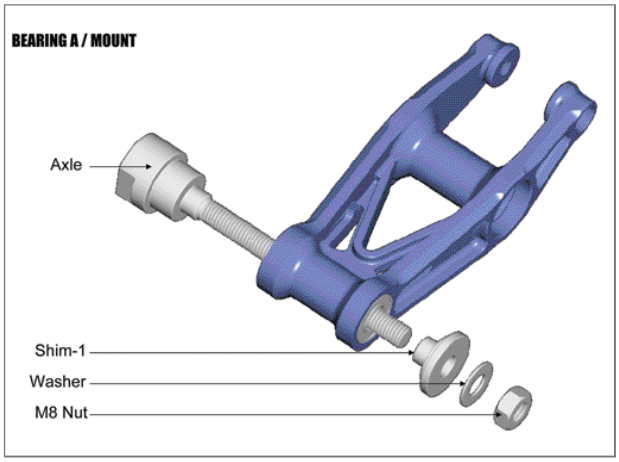
A complete set including all parts of the Ransom linkage system is available with article number 200767.

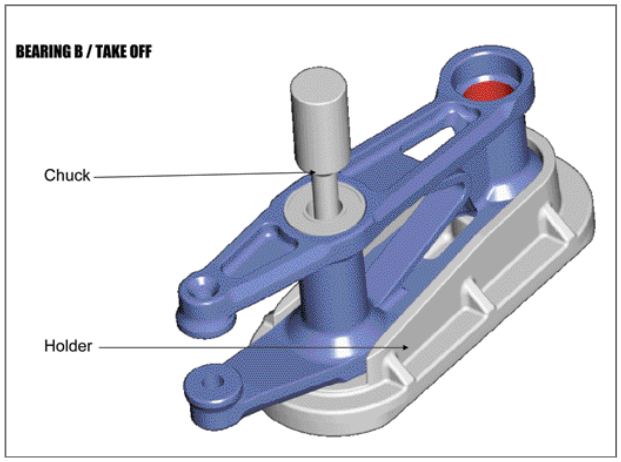
The Ransom Tool Set will be available with article number xxxxxx and includes a CD with a manual in E/D/F language and also a printed version of these 3 languages.

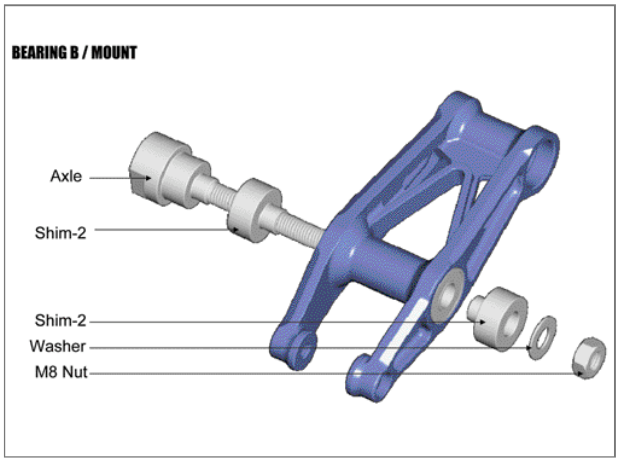


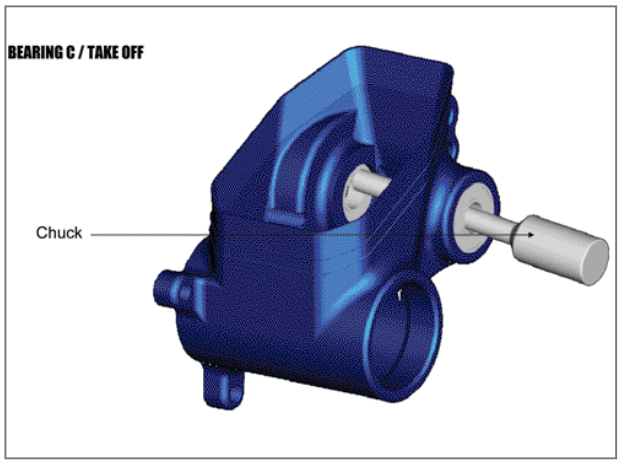
To disassemble and assemble the bearings pls follow the instructions shown below:

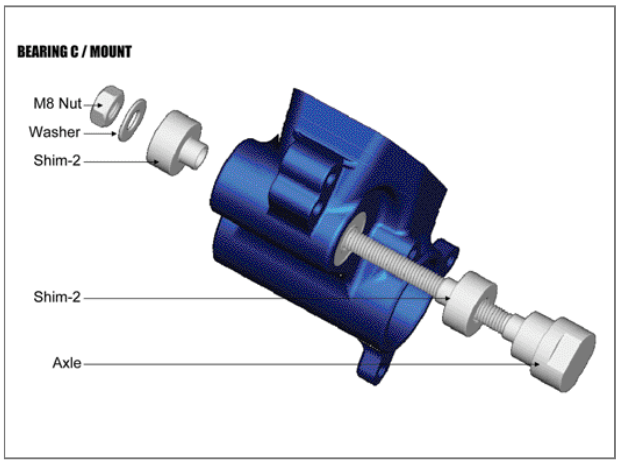


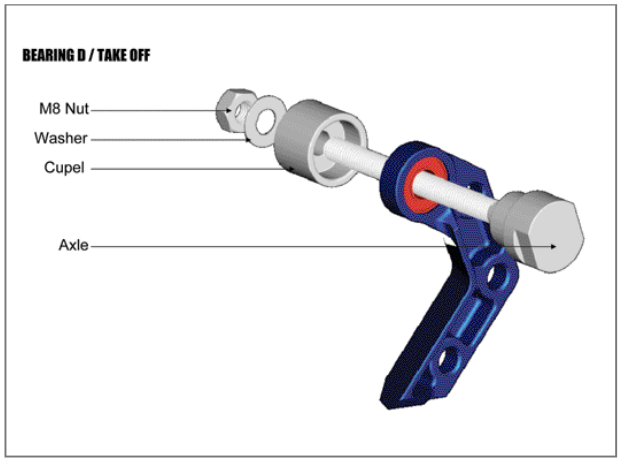


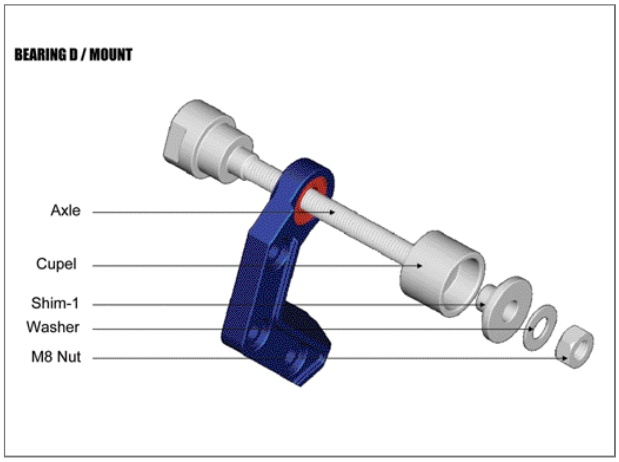









BEARING D / TAKE OFF
M8 Nut
Washer
Cupel
Axle


BEARING D / MOUNT
Axle
Cupel
Shim-1
Washer
M8 Nut

EQUALIZER TC SHOCK

3

TRACTION CONTROL-FUNCTIONS

The heart of the TC-System is the newly developed and innovative Scott Equalizer TC Shock, offering three functions which make this system possible.

By using the remote lever you can choose between following functions:

ALL TRAVEL MODE > full travel of 165 mm

TRACTION MODE > by reducing the chamber volume inside the shock the travel of the shock will be reduced to around 50% (approx. 90mm), the characteristic of the air spring gets harder. This results in climbing without "bobbing" and offers still optimum traction of the rear wheel.

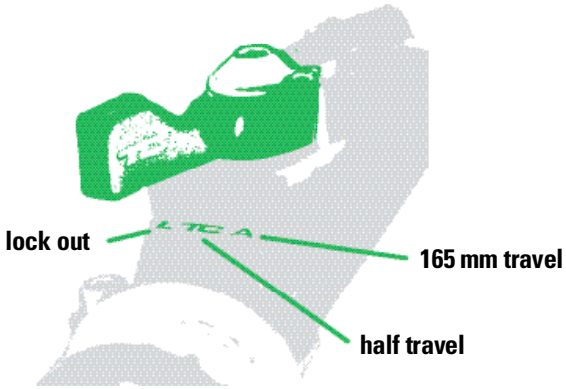
LOCK OUT MODE > the shock is locked, climbing on asphalt roads is now possible without any power loss. Simultaneously a blow-off-system prevents the shock being damaged in case the rider did not open the system while crossing obstacles.

You will find following positions on the remote lever:

3 positions

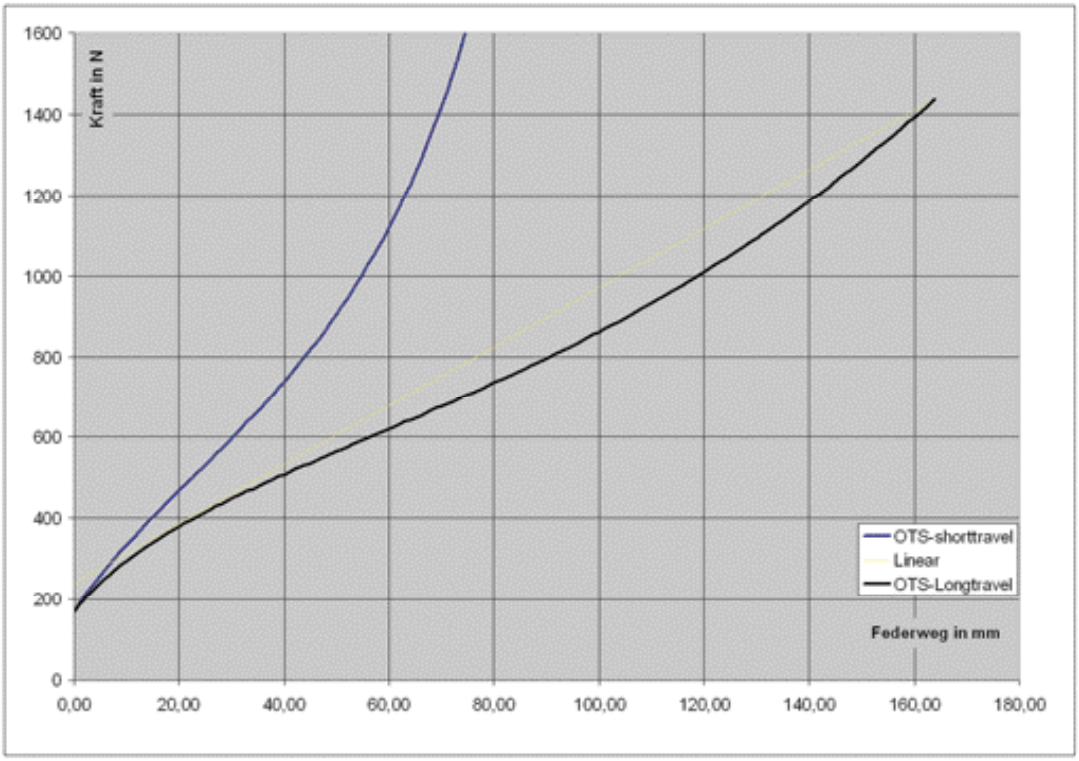
Choose either

> all travel mode (165 mm of travel)
> traction mode (half travel)
> lock out mode

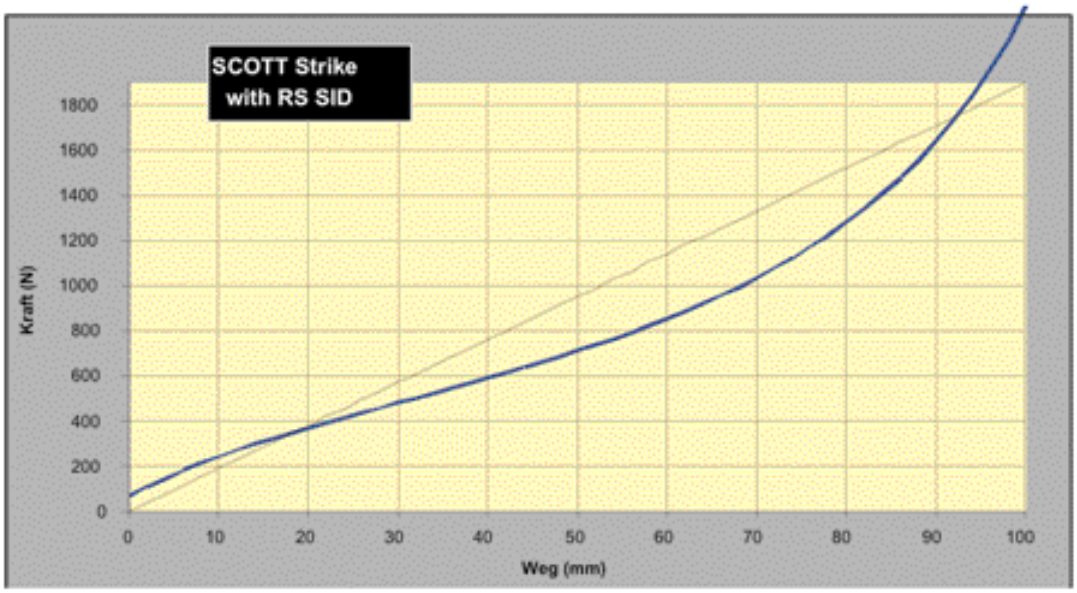


COMPARISON OF EQUALIZER TC TO SID SHOCK

Equalizer TC



SID shock



POWER STABILIZER

The Power Stabilizer is a option to ride with or without Pedal Platform by just tapping one button on the shock.

By pulling the rebound adjuster knob upward you switch off the pedal platform for a supple break away.

By pushing the rebound adjuster knob downward you switch on the pedal platform for a better climbing without bobbing when standing on the pedals.

TWIST
controllable rebound

1 **power stabilizer on**
engages platform providing bob free pedaling efficiency

2 **power stabilizer off**
keeps the shock fully active and sensitive

INTELLIGENT REBOUND VALVE

Scott found a revolutionary way to design a valve that adjusts itself by the speed of impact on the rebound motion.

In contrary to conventional systems our new designed Intelligent Rebound Valve system can distinguish if the shock should rebound fast or slow.

On small impacts the system stays fully active and reacts with a fast rebound.

After a jump or big impacts/grooves the rebound is slowed down automatically. Doing so, the kick back of the saddle that results from too fast rebound, is eliminated.

OIL TRANSFER SHOCK

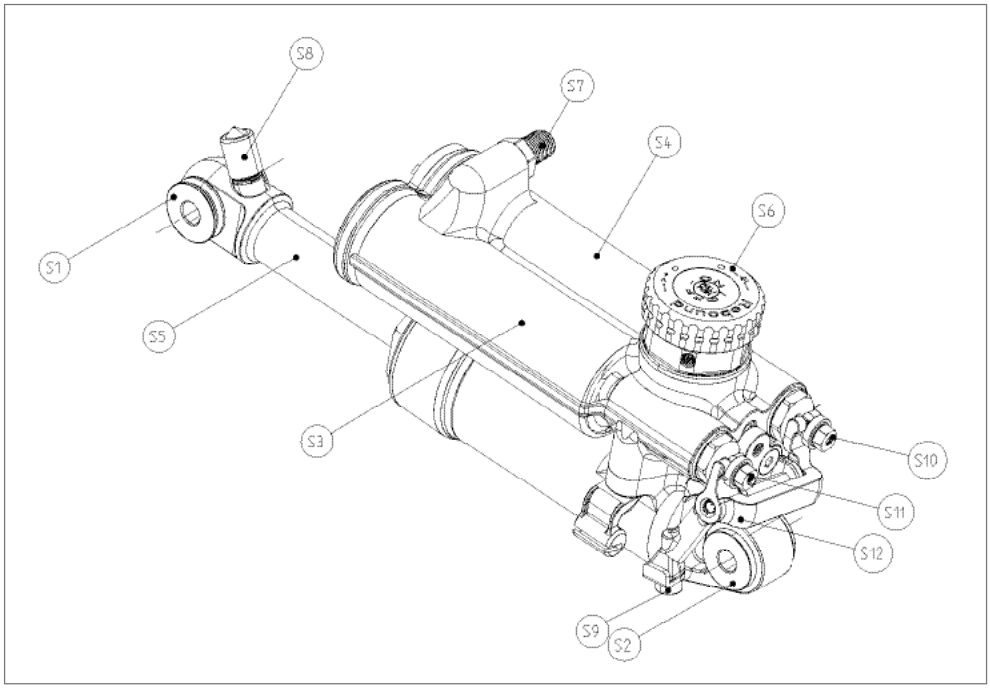
In contrary to conventional systems which have the piston with compression and rebound shim stack moving in an oil bath, our new developed OTS-system pushes the oil through a fixed piston from one oil chamber to another.

By using this fixed piston Scott was able to integrate more functions (e.g. Power Stabilizer, Intelligent Rebound Valve) beside the standard compression/rebound adjustment devices.

In addition the shock works with a bigger volume of oil which results in a bigger heat resistance and a reduced wear and tear of the oil.

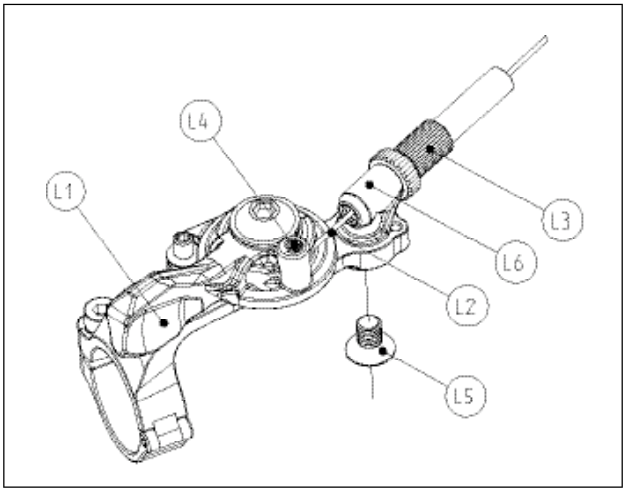
EQUALIZER TC SHOCK AND REMOTE CONTROL LEVER

In the drawing of the shock and remote lever, shown below, you will see the parts indicated with numbers which will be used in the manual for the adjustment and set-up.



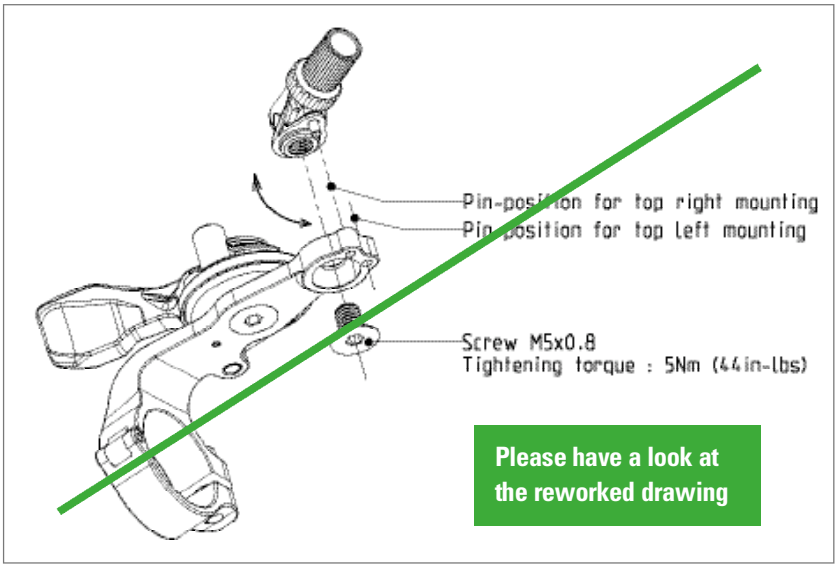
Parts list:

S1	Upper Shock Bolt	S10	Lock Out Pin
S2	Lower Shock Bolt	S11	Traction Mode Pin
S3	Left Piggy Pack	S12	Mode Lever
S4	Right Piggy Pack	L1	Remote Lever
S5	Shock Piston	L2	Remote Control Cable
S6	Rebound Adjuster/Power Stabilizer Knob	L3	Tension Screw
S7	Positive Chamber Valve	L4	Allen Screw
S8	Negative Chamber Valve	L5	Allen Screw
S9	Remote Cable Fixation Screw	L6	Cable Guide Hanger



BASIC SET-UP OF THE REMOTE CONTROL OF EQUALIZER TC SHOCK

1. put the remote lever (L1) to position “lock-out”
2. fix the remote control cable (L2) with the cable fixation screw (S9) using a 3mm allen key (tightening torque: 3 Nm) on the Mode Lever (S12)
3. put the remote lever now to position “Traction Mode”. The Lock Out Pin (S10) should be pulled out approx. 1mm.
4. when putting now the remote lever to position “All Travel” the cable will pull the Mode Lever (S12) including the Traction Mode Pin (S11) and the shock will offer now the full travel.
5. check now the set-up for perfect function of remote lever and shock
6. in case you want to fine-tune the brake-away power of the remote lever, you can do this by using a 2 mm allen key and by turning the allen screw (L4). In case you want to readjust the tension of the remote control cable you can do this by using the tension screw (L3).
7. in case you want to switch the complete remote lever from the left to the right side on your bar or vice versa, you can adjust the cable guide hanger (L6) by unscrewing the allen screw (L5), readjusting the cable guide hanger to the second position and retighten the allen screw (L5) with a tightening torque of 5Nm/44in lbs.



RECOMMENDED TOOLS FOR THE SHOCK SET-UP

For the set-up of the shock we recommend to use the tools listed below:

> a shock pump with a scale up to 30 bars/435 psi with a special air valve connector preventing from air getting away while removing the pump from the shock valve, this will result in an exact air pressure. Therefore we strongly recommend the use of the Scott Shock Pump which is attached to your bike

> the SAG-Boy on the back of this manual

SET-UP OF POSITIVE AIR CHAMBER EQUALIZER TC SHOCK

The positive air chamber contains the air-spring you "sit-on" while riding.

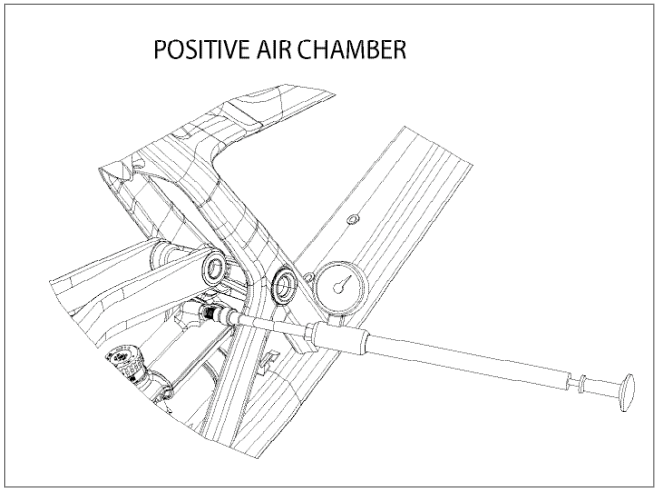
Important: for all adjustments of the air spring the remote lever has to be in the "all travel" position.

To adjust the air pressure of the positive chamber of the Scott Equalizer TC Shock please refer to the following instruction:

1. remove the valve cap of the black valve (S7) located on the Left Piggy-Back (S3).
2. mount the shock pump with its adaptor on the valve
3. pump the recommended pressure into the shock. On the inner side of the seatstays you will find a table showing in the black colored areas the recommended air pressure of the positive chamber according to the rider's weight.

rider weight kg	rider weight lb	− air setting bar	− air setting psi	+ air setting bar	+ air setting psi
xx	xx	xx	xx	80	120
xx	xx	xx	xx	80	120
xx	xx	xx	xx	80	120
xx	xx	xx	xx	80	120
xx	xx	xx	xx	80	120
xx	xx	xx	xx	80	120
xx	xx	xx	xx	80	120

4. when you reached the needed pressure remove the pump and put the valve cap on the valve



SET-UP OF NEGATIVE AIR CHAMBER EQUALIZER TC SHOCK

The negative air chamber contains the air-spring influencing the brake-away and characteristic while absorbing shocks. A too high brake-away can cause a non-secure and uncomfortable ride.

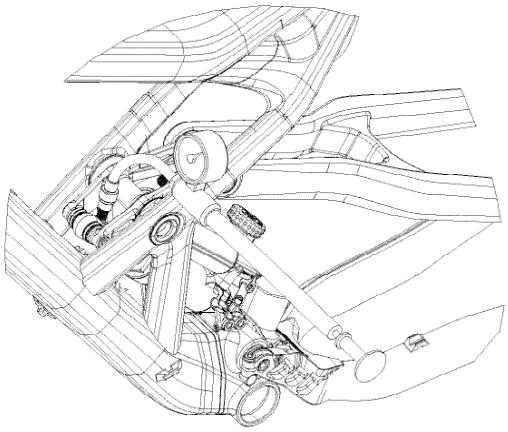
To adjust the air pressure of the negative chamber of the Scott Equalizer TC Shock, please refer to the following instruction:

1. remove the cap of the red valve (S8) located on the Shock Piston (S5)
2. mount the shock pump with its adaptor on the valve
3. pump the same pressure you have used for the positive chamber into the negative chamber.
4. when you reached the needed pressure remove the pump and put the valve cap on the valve.

We recommend making sure that the pressure balance between positive and negative chamber follows this manual.

Not doing so may cause a loss in performance or comfort or may result in damage of the shock.

NEGATIVE AIR CHAMBER



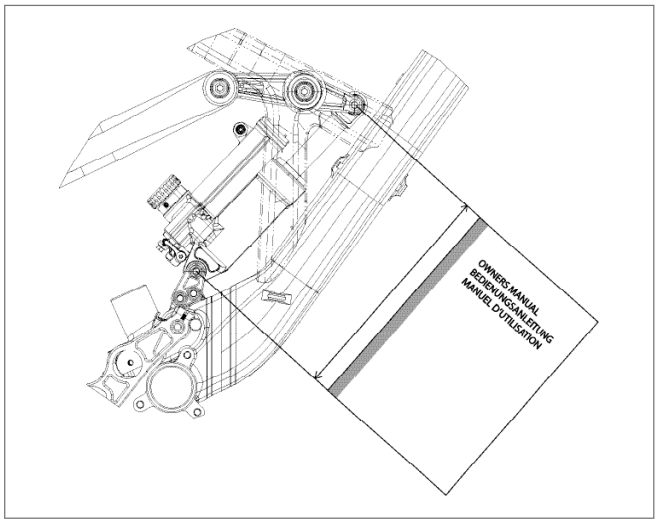
After adjusting positive and negative chamber according to the rider's weight you can double check by using the SAG-Boy, which is on the back of the manual, if the SAG (negative travel) is well adjusted.

The negative travel is important when crossing grooves or holes on the trail.

If the bike is well adjusted the rear wheel and the swingarm will roll through the groove without the mainframe moving.

The SAG should be 15-20% of the travel for race oriented riders and 20-25% of the travel for comfort oriented riders.

The SAG-Boy indicates the recommended eye-to-eye distance of the shock bolts of the Ransom models.



To check the adjustment, please follow as shown below:

1. sit on the bike, put your feet on the pedal
2. ask a second person, to put the color beam of the SAG-Boy, recommended for your bike model, aside the eye-to-eye distance of the shock bolts.
   > if the distance between the bolts is corresponding to the length of the color beam, the air pressure is matching to your weight
   > if the distance between the bolts is longer than the length of the color beam, the air pressure of the positive chamber is too high and should be carefully reduced by using the bleed knob of the shock pump until the measures are corresponding
   > if the distance between the bolts is shorter than the length of the color beam, the air pressure of the positive chamber is too low and should be increased by using the shock pump until the measures are the same.

SET-UP OF REBOUND EQUALIZER TC SHOCK

"Rebound" describes the speed the shock comes back to its original length after absorbing an obstacle.

By using the red rebound screw (S6) you can adjust the rebound step by step.

Please refer to the following instruction:

ride your bike off a pavement (remain in the saddle) and check how many times it bounces.

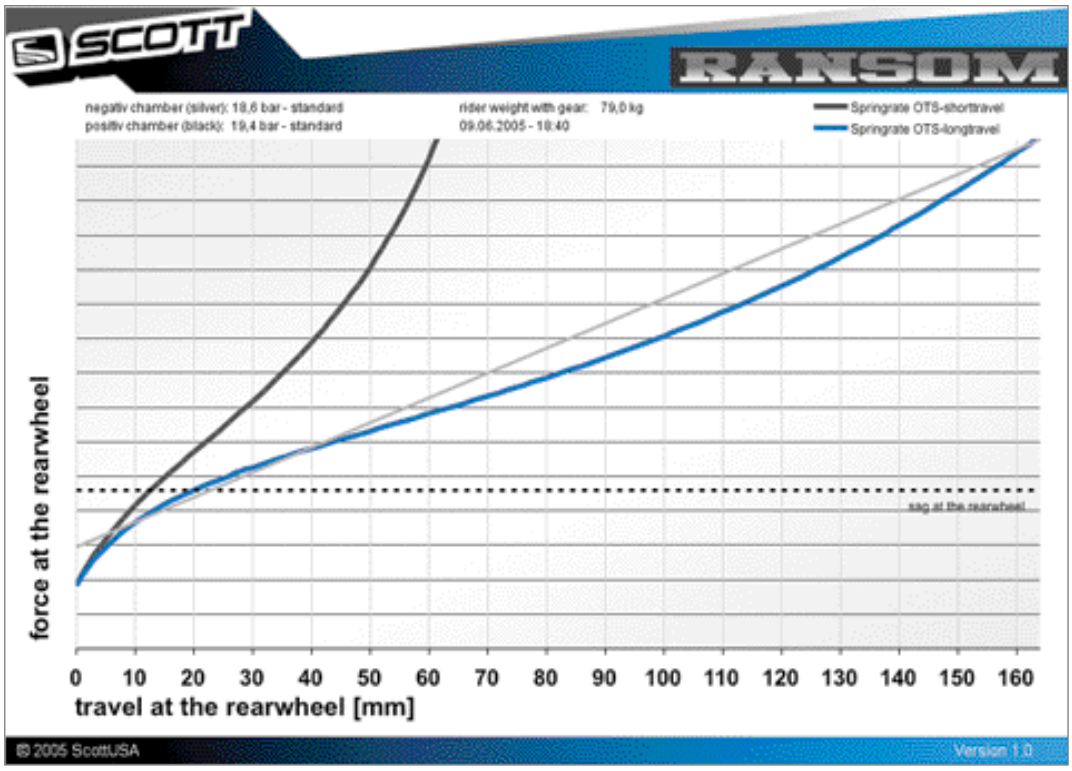
> if it bounces 1-2 times, the set up is good
> if it bounces more than 3 times the rebound is too fast. Turn the screw 1-2 "clicks" clockwise
> if it does not bounce the rebound is too slow. Turn the screw 1-2 "clicks" counter clockwise

MORE DETAILS ABOUT EQUALIZER TC SHOCK SET-UP

In case you want more exact numbers of the shock air pressure than shown on the decal on the frame or you're looking for tuning hints including different shock characteristics of the Equalizer TC Shock, please have a look at

www.scott.usa.com

In addition you can download this tuning program on your pc.



SERVICE EQUALIZER TC SHOCK

4

The Equalizer TC Shock will have the same maintenance intervals and warranty periods as already known from Genius TC Shock.

Concerning the international Service Centers it is our target to offer you the same partners as we have on the Genius TC Shock.

Detailed information with all actual addresses will be available soon on our website www.scottusa.com in the support area with headline “Equalizer TC Shock Service”.

MAINTENANCE / SERVICE GUIDE

Please clean regularly after riding off-road the shock piston and all other parts in motion of the shock with a soft and wet cloth or if needed with mild soap to prevent from excessive wear and tear.

For maintenance and service please refer to the following table

Maintenance period	New	Every ride	Every 8 hours	Every 40 hours	Every 1000 hours / min. 1 x year
Check of air pressure	X	X			
Check of rebound	X	X			
Clean shock bushings, check for tear and wear, grease				X	
Change of oil/inspection at Scott Shock Service					X
Clean shock housing		X			
Clean Lockout mechanism		X			

IMPORTANT

The Scott Equalizer TC Shock is pressurised. Never open, disassemble or rework the shock. Only a qualified and authorized Scott service staff/shock service center should do this.

To open a shock which is under pressure can be dangerous and may cause injuries!

The Scott Equalizer TC Shock always must be adjusted to the rider’s weight to warrant perfect function.

Therefore check before every ride the shock for fitting air pressure.

Riding a defective or not properly working shock can result in the loss of control over the bike and may cause severe or dangerous injuries!

In case you want to disassemble the shock from the bike for service or other reasons please note the recommended tightening torque of **5Nm** for the shock bolts.

Scott recommends strongly the use of a torque key to prevent from damages on shock, shock bushings or frame.

In addition the shock bolts should be fixed with Loctite medium (blue) to prevent the bolts from getting unscrewed.

Damages caused by improper assembly or bad maintenance as mentioned above, are not covered by warranty.

Once the recommended check up is made by Scott or a shock service authorized by Scott, it is reported in the maintenance schedule at the end of the manual, which will then enable you to claim for warranty within the warranty period.

The owner of the shock is responsible for the costs of the service.

WARRANTY

Scott warrants its Equalizer TC Shock for two years for defects in material and/or workmanship.
The warranty period starts with the day of purchase.
It is obligatory to give a copy of the bill of purchase together with the shock to Scott.
In case the bill can not be shown Scott is free to reject the warranty claim.

Following damages are not covered by warranty:

> improper use
> damages on the piston seals caused by high pressure washers
> damages in the surface of the shock or piston caused by cable housings, stones or crashes
> any attempts to disassemble the rear shock
> changes in technical specifications
> oil changes not made at Scott or Shock Service Centers authorized by Scott
> neglecting the service and maintenance periods mentioned in the maintenance schedule (please refer to the maintenance schedule listed above in this manual)

In addition following parts are not covered by warranty:

> all seals and mud scrapers
> all piston bushings and sliders
> the surface of the piston

CARBON, DURABILITY OF SCOTT CARBON BIKES

5

We're often asked about the impact resistance of our carbon frames and the durability concerning material fatigue/stress.

Beside our own tests in the factories and our tests at EFBe test lab we got support also from independent parties.

In the past months 2 German bike magazines made independent tests, we have them in the original lay out below and also added an English translation.

Both tests point out that carbon might have some risks, but Scott obviously is able to handle this material in a perfect way.

MOUNTAINBIKE-MAGAZIN.DE, AUGUST 05

1 CARBON FRAMES TESTED

Carbon frames are ultra light, absolutely beautiful and the dream of the majority of mountain bikers. But what happens when these bikes get older? This fatigue test gives the answer.

When you think of buying a carbon bike, you don't only pay attention to the price of those machines but also to the durability as well. Even if the aesthetic and the ultra light weight are very attractive, a lot of people still give up purchasing carbon because of doubts concerning durability. Even at the editorial office, no one would have bet on carbon frames.

Together with the famous EFBE Institute, MountainBike Magazine set up a big carbon frame test, based on the most advanced research methods. It consisted of three phases: the simulation of the pedaling out of saddle, the riding on bumps and finally jumps. Additionally, an impact test had been done in order to check the effects of stone impacts and falls. The rigidity of the frames was measured before and after the tests. "This is the only way to control the eventual internal damages of a carbon frame", states Manfred Otto, EFBE Institute Director. Three carbon frames had been selected for the test: Storck, Simplon and Scott (Scale). Those three have been compared to the Rocky Mountain Blizzard steel frame and to the Red Bull Scandium frame.

Unfortunately it was impossible to get more than three carbon frames because of the current delivery problems. The production of a carbon frame takes 25 hours and a lot of handwork. An aluminum frame takes four times less time to be produced. In addition, the expenses for security and quality controls are very high. "Due to those facts, carbon frames will always remain a high end products even if the delivery problem will be solved one day", explains Peter Denk, Scott Engineer.

With all these problems - is it worth to make such an expense for a bike? Looking at the results of this test, the answer is definitely YES – it's more than worth it! At least for those three brands tested.

Then while keeping the same stiffness, a carbon frame is much lighter than an aluminum frame: the Scott frame weighs only 1000gr, in comparison to the Red Bull Scandium frame which weighs 1410gr and to the rocky Mountain steal frame with a weight of 2330gr. Therefore it's not a big surprise to see the carbon frames on the top ranks of the stiffness-to-weight ranking. What about the resistance of these ultra light frames? That's often where carbon frames fail. The three tested models were performing as well as their non-carbon ones well, especially the Scott and Storck frames.

Something very interesting happened during the fatigue test, a small crack appeared in between the top tube and the head tube of the Rocky Mountain steel frame. For Manfred Otto, this is not a drama but important information:

"It's crazy how resistant carbon frames are today!" and regarding the impacts or falls: "it is still possible to ride an aluminum bike after an impact". What about carbon? The Scott Scale shows his capacities: even if this bike is extremely light, it resists to all impacts. The Storck and the Simplon gave up earlier.

In conclusion, there are no reasons for not getting a carbon frame! Especially when looking at the test results of the Scott Scale, a aluminum frame should definitely not be a choice over a carbon frame.. Let us hope that these frames become a bit less rare!

A It shows the incredible lightweight of the carbon. The Scale at the top position weighs only 1000gr while the Rocky Mountain Blizzard frame is the heaviest with 2330gr.

B Most of the tested frames are very stiff and this allows a precise ride, also for heavier bikers. On top of that, the Storck frame has very good stiffness result.

C The stiffness-to-weight ratio shows that carbon is much more efficient than steel or aluminum.

D

SCOTT SCALE 10

The Scott Scale convinced with its excellent piloting capacities, the precision, the comfort and the ultra light weight. But did this frame resist the fatigue test? YES. The Scale reacted perfectly; it seems that this frame simply never get older! It was only 2% softer after the whole fatigue test. But the biggest surprise happened at the impact test: small impacts had almost no effect on the finish layer and big impacts created only small scratches. There is no doubt; the Scott Scale is close to the perfection of a bike. Ultra light, resistant, comfortable and stiff: the absolute dream bike for all marathon fans.

TEST

E **Stiffness control**

Before the start of the fatigue test, weight and stiffness of the frame are measured; this enables you later to check how the frames would react throughout the years.

F **Torsion test (power-pedaling simulation)**

The machine simulates 100'000 times with 1100 Newton the power- pedaling effect. All frames should survive this test because it represents only a few years of usage. The area of the BB and the chainstays are especially under pressure.

G **Pressure test**

The machine puts a lot of pressure on the seat tube (creating the weight that a rider would cause when sitting on the saddle) and simulates the riding on bumps.

H **Jump test**

The last stage of the test simulates 100'000 jumps (700 Newton) and brakes (350 Newton) with the help of a dummy fork. This allows checking the durability of the head tube.

I **Fatigue of material**

Finally, the frame goes to the torsion test again to determine if it got any "older". This shows that the aluminum and steel frames "soften up" a little, while the carbon frames remain stiff.

J **Impact test**

At this point, the machine simulates impacts (of stones/rocks for example) and falls, stressing especially the diagonal tube. Measured in the end are the damages on the frame, which can be anything from a small scratch to a major hole.

K **MANFRED OTTO**

"The test we did with MountainBike Magazine set milestones. In particular the stiffness control; done before and after the tests; is the proof that the carbon frames are really resistant."

TOUR DAS RENNRAD-MAGAZIN, AUGUST 2005

RESISTANCE

Sometimes, carbon frames are incredibly resistant even after an impact but this is not a generality.

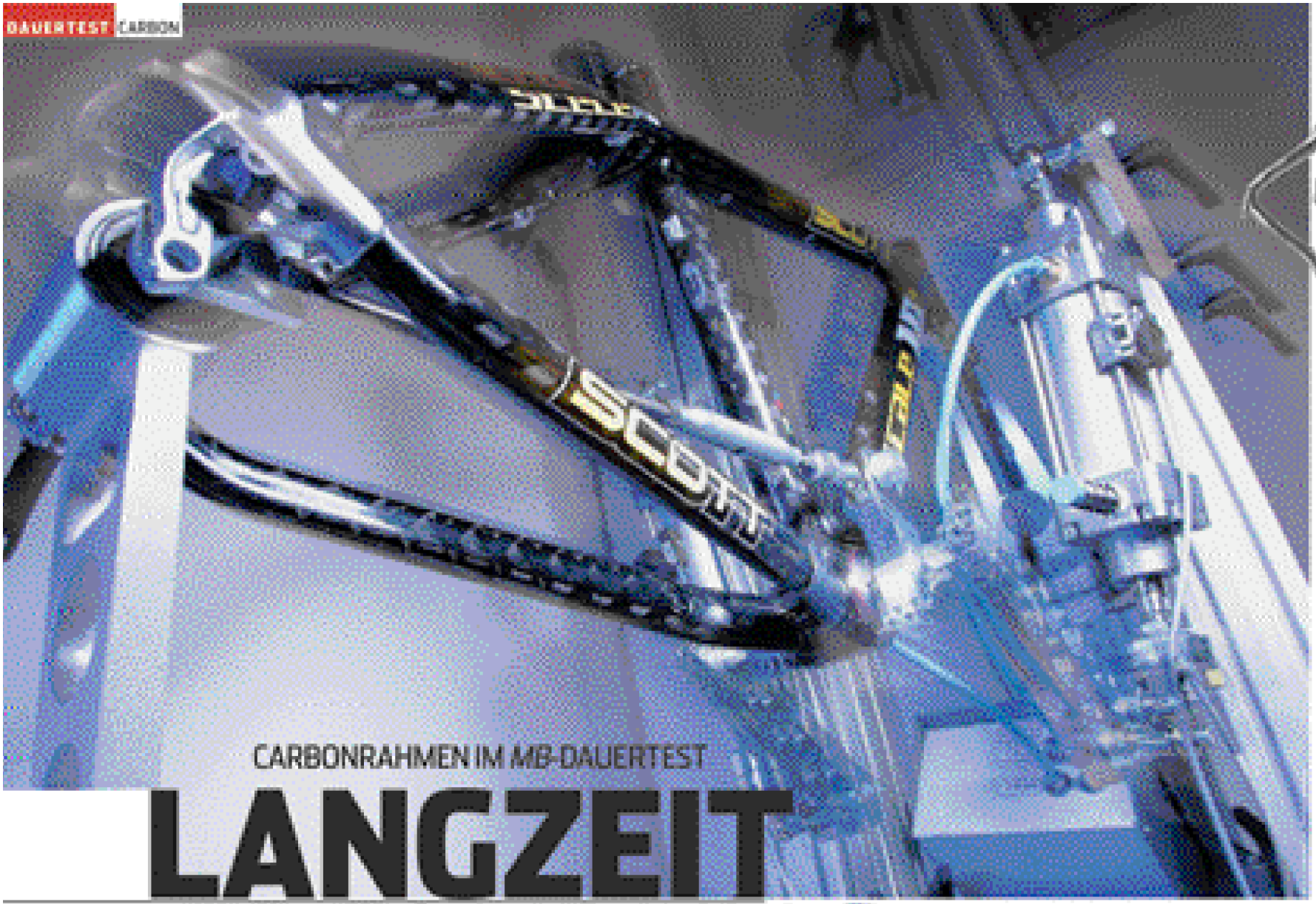
What a nightmare: you get off your bike, you lean it against a fence and while you turn you hit it – the bike starts to slide and the top tube hits a post. Result: a small impact in the middle of your top tube. Definitely not pretty, but for most aluminum or steel bike not a very serious problem. Different for carbon bikes. More and more we hear of harmless crashes that cause micro-cracks in the carbon tubes. Are those cracks as harmless as the ones on the aluminium and steel frames or do they cause serious problems on carbon frames? Is it safe to keep on riding or will those small scratches become bigger until the frame collapses? In the lingo, this is called a "Sudden Death". It's definitely a difficult question – and no studies have been completed to give a serious answer.

The German Tour Magazine wanted a serious answer and selected a SCOTT CR1 frame with a scratch on the top tube (caused by a fall) for a durability text at the EFBE. The frame suffered from 100'000 charges (pedaling out of the saddle simulation) of 1.300 Newton, plus another machine has inflicted 100'000 rebounds of more than 400 and 800 Newton to the fork; and finally, 100'000 pressures of 1.100 Newton were charged on the seat tube. Result: the frame resisted the torture excellently and passes therefore the complete EFBe frame test on the highest level.

Conclusion: The assumption that generally all carbon frames are wrecked after a certain impact on the tubes is wrong. A strong construction made of long carbon fibers can resist. Frames made of synthetics, mixed with short carbon fibers and are often also called carbon frames, may react completely different though. Not seldom do such frames collapse with a "big bang". All in all - the characteristics and the features of the carbon vary a lot and the quality of such a frame depends strongly on the fabrication processes and the carbon know-how of the engineers and the producers.

Photo Is this only a small esthetical problem or a serious damage - hard to say by only looking at the surface of the tube. If you want to be sure – have it checked…

Aus TOUR DAS RENNRAD-MAGAZIN www.tour-magazin.de "Die Masche mit der Faser"
Text: Dirk Zedler www.zedler.de, Foto: Daniel Simon www.daniel-simon.de

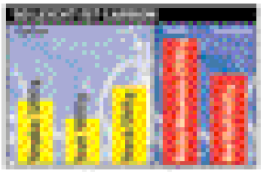


CARBONRAHMEN IM *MB*-DAUERTEST

LANGZEIT ERFAHRUNG

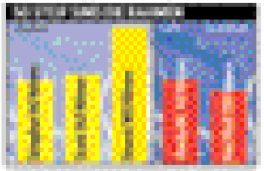
Leicht, edel und für immer mehr Mountainbiker eine Sünde wert – Carbonrahmen. Doch wie sieht es aus, wenn die Edelstücke in die Jahre kommen? Der Dauertest verrät es.

Lewis Dean (Scott) schafft mit dem Scale-Hardtail den Vogel ab – Gesamtgewicht unter 10 kg.



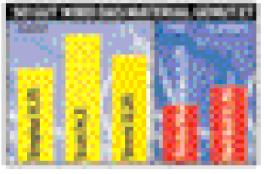
Carbon ist leicht, das zeigt der Vergleich mit Aluminium. Alle großen Hersteller bieten mittlerweile Carbon-Rahmen an. Scott, Simplon und Storck machen den Anfang. Das andere Ende markiert der klassische Starrahmen-Stahlrenner.

A



Die Modelle liegen eher auf der steifen Seite. Trotzdem sollten schwere Fahrer auf Rahmen mit mehr Steifigkeit achten. Der Vergleich zeigt auch, dass der Storck Rebel Carbon ab. Testen ist nur Zeit wert! Kaum ein anderer Hersteller bietet so viele Varianten.

B



Der STW- oder „Stiffness to weight"-Index gibt Steifigkeit und Gewicht ins Verhältnis. Je höher der Wert, desto besser. Auffällig: Der Simplon Gravity ist trotz seiner Masse steifer als der Scale und der Storck. Das liegt vor allem an der Verbindung von Carbon und Aluminium. Der Storck Rebel Carbon ist dagegen ein Leichtgewicht, aber nicht besonders steif. Der Scott Scale liegt genau dazwischen.

C

Leichtbauwettbewerben vor und nach dem Dauertest. „Das ist die einzige Möglichkeit, um einen Carbonrahmen auf seine Schwächen prüfen zu können", erklärt Manfred Otto, DIMB-Geschäftsführer über den Aufwand der Testläufe. Die beiden schwächsten Testprobanden, denen nicht nahezu drei Carbonrahmen von Simplon, Storck und Scott zum Vergleich auch noch ein Rocky Mountain Blizzard Hobbyfahrern sowie ein Scandium-Hardtail von Red Bull stellen.

Warum so wenig Carbon? Der Grund liegt in den derzeitigen Carbonstrukturen von Carbonrahmen. Während manche Modelle wie etwa der junge Starrbike-Hardtails gerade jetzt und mit deutlicher Steigerung in den deutschen Handel kommen, wurden andere Modelle wie zum Beispiel von Orange nur in kleinstgefertigten Stückzahlen ausgeliefert. Die Ursache sind Produktionsengpässe in Fernost. Denn nur wenige Firmen – wie beispielsweise Giant – besitzen eine eigene Fertigung. Der Rest der Weltproduktion kommt aus ungefähr vier großen Produktionsstätten, die das entsprechende Know-how und die Fachpersonal haben.

Zusätzlich reduzieren die langen Durchlaufzeiten von bis zu 25 Stunden pro Carbonrahmen und der hohe Anteil an Handarbeit das Angebot. Ein Aluminiumrahmen entsteht in einem Viertel der Zeit. Dazu kommt noch ein hoher Aufwand zur Qualitätssicherung. „Carbonrahmen werden deshalb immer vergleichsweise teuer. Highend-Produkte sind heute noch die Einstiegsklasse sich in naher Zukunft entsprechen werden", prognostiziert Scott-Entwickler Peter Denk. Doch bleibt sich der Aufwand überhaupt? Wenn man nun die Ergebnisse der Mountain BIKE Rahmentests betrachtet, gibt es nur eine Antwort: auf jeden Fall – zumindest bei den getesteten Hardtail-Modellen. Denn bei vergleichbarer Steifigkeit sind die Carbonrahmen durch die Bank deutlich leichter als die Aluversionen. So wiegt der Scott Scale mogen zum Cosmos, während der Red Bull Scandium Pro mit 1400 Gramm zu Buche schlägt. Der Rocky Mountain Stahlrahmen bringt sogar satte 1750 Gramm auf die Waage.

Kein Wunder, dass die Carbonrahmen beim STW-(Stiffness to weight-)Faktor, der leichten und gleichzeitig steifen Rahmen belohnt, alt lassen die New-wave-Rahmen. Doch ein guter STW-Faktor sagt noch lange nichts über die Haltbarkeit aus. Oft sind es gerade die leich-

CARBONRAHMEN Was Scott, Simplon und Storck im Dauertest leisten.

STORCK REBEL CARBON

Gewicht	Steifigkeit	Dauertest	Gesamt
Preis	Geometrie	Verarbeitung	Abfederung
Lenker	Sattelstütze	Handhabung	Umbau

Was schon auf dem Testwiegen, zeigt sich auch im Verhalt der Dauerbelastungen: Der Storck Rebel Carbon ist prädestiniert, besonders im Trailbegleitschwere, kraftvolle Fahrer sind dafür zum Vorteil. Bei schwachen Hardtail-Bolzen begeistert und schon auch weich sein – für Carbonverhältnisse – wenig gleichmäßige Rahmen. Gewichte. Dafür ist der Storck auch in den drei Dauerbelastungen eine solide Sache und zeigt keine Schwächen. Wie gut der Rahmen das Prüfstands-Dauerlauf verkraftet hat, bewiest auch die Überprüfung der Rahmenausrichtung. Gerade mal ein einzi ges Prozent ist der Rebel Carbon nach dem gewandert. Im Schlagtest liegt der Rahmen in guten Mittelfeld. Kleine Schläge wie zum Beispiel durch aufgewendete Steine steckt er locker weg. Nur bei massiven Krafteinwirkung, wie sie bei Stürzen auf Steine auftreten können, zeigt das Unterrohr größere Deformierungen. Storck empfiehlt deshalb Rahmenschutzfolien. Insgesamt ist der Rebel Carbon ein Topmodell mit excellenter Verarbeitungsqualität, besonders für sportlich aggressive Fahrer.

SCOTT SCALE 10

Gewicht	Steifigkeit	Dauertest	Gesamt
Preis	Geometrie	Verarbeitung	Abfederung
Lenker	Sattelstütze	Handhabung	Umbau

D

Im Preisvergleich überzeugt das Scott Scale mit überragenden Fahreigenschaften. Besonders der hohe Carbonanteil im Hinterbau sorgt für eine hervorragende Dämpfung. Bergabtest immer wieder Lob. Einziger Kritikpunkt: Das Gewicht – was übrigens auch das niedrige Rahmengewicht von rund 1500 Gramm. Allerdings kann es sich durchaus um den Dauertest (Rahmenbruch?) kann. Wie auch der Storck Rahmen gibt sich das Scale keine Blöße. Auch Alterungserscheinungen lassen sich nicht feststellen. Nur einen Prozent weniger präsentiert sich der Scott-Carbon-Rahmen nach dem Dauerlauf. Die große Überraschung folgt beim Schlagtest. Kleine Schläge verkraften gerade mal den Klassiker des Steinschlages. Bei massiven Einwirkungen – und selbst große Steine verursachen nur kleine Schäden. Es geht kaum Weg dass weiter! Im Carbonvergleich ist der getestete Scott Scale ein nahezu perfekter Carbonrahmen. Robust, aber dennoch mit großen Ausdauerreserven. Dazu kommt exzellente konstruktive Steifigkeit. Mountain-Verhältnis. Ein Traum für Marathonisti.

SIMPLON GRAVITY

Gewicht	Steifigkeit	Dauertest	Gesamt
Preis	Geometrie	Verarbeitung	Abfederung
Lenker	Sattelstütze	Handhabung	Umbau

In Rekordhöhe thronen nicht der Simplon Gravity in den Rahmentests Größen. Trotz leichte und vortrefflich hat er eine hohe Zuladung. Das unterscheidet auch den Vorschuh. Der Steifigkeit liegt auf Augenhöhe mit dem Scott Scale – obwohl er nicht in der Praxis einen Hänger aufweist. Das Gewicht gemäß sich bei 1200 Gramm ein. Im Dauertest gibt es ebenfalls keine Hänger. Ähnlich schwingen. Nach dem Ausdauerschock hält der Steifigkeit den Testwiegen gleich um sechs Prozent gegenüber der Ausgangsmessung. Ab – für Carbonverhältnisse überraschend hoher Wert – auf dem Niveau von Alurahmen –, die prinzipiell nicht unbedingt Sicherheits-reserven aufweisen. Im Schlagtest gibt sich der Simplon zunächst Carbon-typisch. Typisch: Kleine Schläge wie Steinschlag prallen an ihm einfach ab. Bei großen Faltbahn durchschlägt der Testkandidat jedoch die Unterrohr – hier könnte die Kanten anderen Carbonrahmen größeren Widerstand. Dafür punktet der Simplon mit dem günstigsten Preis.

DER NEUE MB RAHMEN-DAUERTEST

Sechs Prüfstationen absolvieren die Rahmen während des Dauertests – vom Steifigkeitscheck bis zum Schlagtest.

STEIFIGKEITSCHECK

E

WIEGETRITT-TEST

F

FAHRBAHN-TEST

G

SPRUNG-TEST

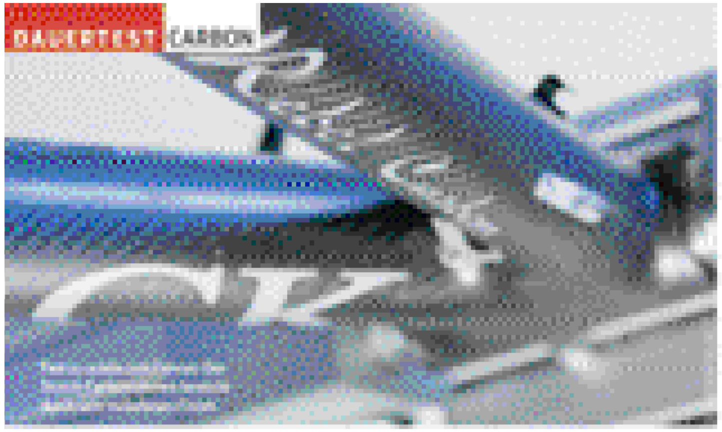
H

RAHMENALTERUNG

I

SCHLAGTEST

J



„Der Rahmentest, den wir zusammen mit Mountain BIKE entwickelt haben, setzt Maßstäbe. Besonders die Steifigkeitsmessung vor und nach dem Dauertests ist optimal, um Carbonrahmen auf innere Schäden zu überprüfen." Manfred Otto, ETSc Profitrainer

[illegible]

DIE ALU- UND STAHL-ALTERNATIVEN *Sind sie besser als Carbon?*

RED BULL SCANDIUM PRO

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ROCKY MOUNTAIN BLIZZARD

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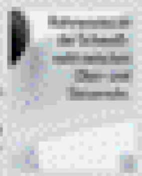


10 FRAGEN: SIND SIE EIN CARBON-TYP?

Damit die Liebe zum Carbon nicht scheitert, gibt's hier die Partnerberatung. Und nur wer oft ja sagt, findet sein Glück.

1 LEICHTES LEBEN [illegible] ☐ JA ☐ NEIN

2 SCHWUNGVOLL [illegible] ☐ JA ☐ NEIN

3 AUTOBAHN BEVORZUGT [illegible] ☐ JA ☐ NEIN

4 SAFER BIKEN [illegible] ☐ JA ☐ NEIN

5 TRAUMMASSE [illegible] ☐ JA ☐ NEIN

6 BIG BOY [illegible] ☐ JA ☐ NEIN

7 NETTER PARTNER [illegible] ☐ JA ☐ NEIN

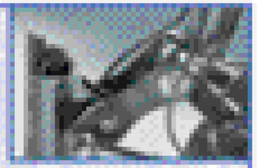
8 BODENSTÄNDIG [illegible] ☐ JA ☐ NEIN

9 ANSCHAUGEN [illegible] ☐ JA ☐ NEIN

10 DAGOBERT GRÜSST [illegible] ☐ JA ☐ NEIN

CARBON IM ERNSTFALL

Was passiert, wenn es doch einmal kracht?



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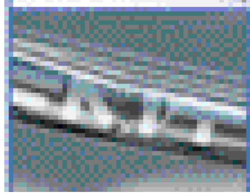


DAUERLÄUFER

Seriös konstruierte Carbonteile bieten bei Stürzen mitunter erstaunliche Sicherheitsreserven. Doch die Ungewissheit fährt fortan mit

Schrecken des Alltags: Man steigt ab, lehnt das Rad an, dreht sich um, stößt dagegen – schon kippt es um und knallt mit dem Oberrohr gegen den Pfosten eines Geländers oder auf die Gehsteigkante. Resultat: Eine kleine Delle mitten im Oberrohr. Hässlich zwar, aber für einen Stahl- oder Alurahmen in den meisten Fällen technisch unbedeutend. Oft genug wird nicht einmal die Rahmenbeschichtung verletzt.

Anders bei Carbonrahmen. Mit zunehmender Verbreitung werden erste Fälle bekannt, bei denen harmlose Rempler kleine Risse im Faser-Rohr hinterließen. Sind auch das nur – wie bei Rahmen aus Metall – optische Mängel oder drohen ernste Folgen? Kann man bedenkenlos weiterfahren, oder pflanzen sich diese Risse unmerklich fort, bis der Rahmen kollabiert – im Fachjargon „sudden death" genannt? Schwierige Frage. Gesicherte Erkenntnisse dazu gibt es bisher kaum.

TOUR wollte es genau wissen und hat einen Scott-Rahmen vom Typ CR 1 Pro mit eingerissenem Oberrohr (das Rad war umgefallen) auf die Prüfmaschinen des Waltroper Prüfinstituts EFBe spannen lassen. In den Rahmen wurden 100.000mal die Belastungen des Wiegetritts in Höhe von 1.300 Newton eingeleitet, eine zweite Maschine malträtierte die Gabel mit Kräften, wie sie bei Sprüngen und Bremsvorgängen im Steuerkopfbereich einwirken (100.000mal mit +400 und -800 Newton); in einem dritten Test wurde die Sattelstütze mit 1.100 Newton erneut 100.000mal belastet. Das Ergebnis: Der Rahmen hielt stand und hat damit die vollständige EFBe-Rahmenprüfung auf höchstem Niveau bestanden.

Fazit: Die Annahme, dass grundsätzlich jedes Carbon-Bauteil nach einer Überlast schlagartig versagt, ist so nicht haltbar. Eine solide Konstruktion aus langen Fasern hat Reserven. Kunststoffe, die sich nach der Beimengung kurzer Faserschnipsel ebenfalls „Carbon" nennen, können sich aber ganz anders verhalten. Nicht selten kollabieren solche Teile mit lautem Knall. Die Momentaufnahme zeigt eindeutig die spezielle Eigenheit von Carbon: Es kommt darauf an, was man daraus macht...

SIMON

Schönheitsfehler oder Totalschaden? Bei Bauteilen aus Carbon ist das von außen oft nicht zu entscheiden. Im Zweifel: Besser ausrangieren...

Aus TOUR DAS RENNRAD-MAGAZIN www.tour-magazin.de "Die Masche mit der Faser"
Text: Dirk Zedler www.zedler.de, Foto: Daniel Simon www.daniel-simon.de

REFLEX FX
FEATURES, MEASUREMENTS

6

The Reflex FX is new in our line for 06 with 3 models, two of them with disc only version.

REFLEX FX 15

The Reflex Concept is based on the Genius MC bikes, having no fixed swingarm pivot but moving on a virtual pivot line.

The more the weight of the rider gets on the rear wheel (going uphill) and with this the SAG (negative travel) getting bigger, the more the pivot is moving towards the small chain ring.

In combination with the linear and at the end of stroke progressive shock characteristics the chain tension will be reduced and doing so the pedalling will not influence function or movement of the rear swingarm.

Scott Intelligent Linkage System (ILS) eliminates the troublesome bobbing.

No power will be lost and an optimum power transfer is guaranteed as the swingarm, in contrary to locked or automatic-locking systems, can follow the trail surface and will offer perfect traction and higher speed.

GEOMETRY/TECHNICAL DATA REFLEX FX

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
S	69°	100	555	74°	430	428	0
M	69.2°	120	572	73.7°	460	428	0
L	69.4°	125	594	73.3°	500	428	0
XL	69.6°	150	616	73°	540	428	0

Travel	0/110 mm
Shock (Eye to Eye)	220 mm
Hardware Mainframe	15.1.817.403.0.000
Hardware Swingarm**alloy**	15.1.817.403.0.000
Seatpost diameter	31.6mm
Headset	1,1/8"
Fork travel	100 mm
Fork length	476 mm
BB housing	73 mm
Front derailleur	Topswing E-Type downpull
Bearings	L-1910 RS 8 St.

The hardware kit for the Reflex FX is identically to the hardware kit of Genius MC 05 bikes, so all parts and the special tools for the swingarm pivot maintenance can be used from the Genius MC bikes.

Hardware kit available with Scott article number 1558605030000, the tool set with article number 1518524010000.

Headset is semi integrated version with 44.00mm cups in the frame, available with article number 1518222040000.

SCOTT LC SHOCK

7

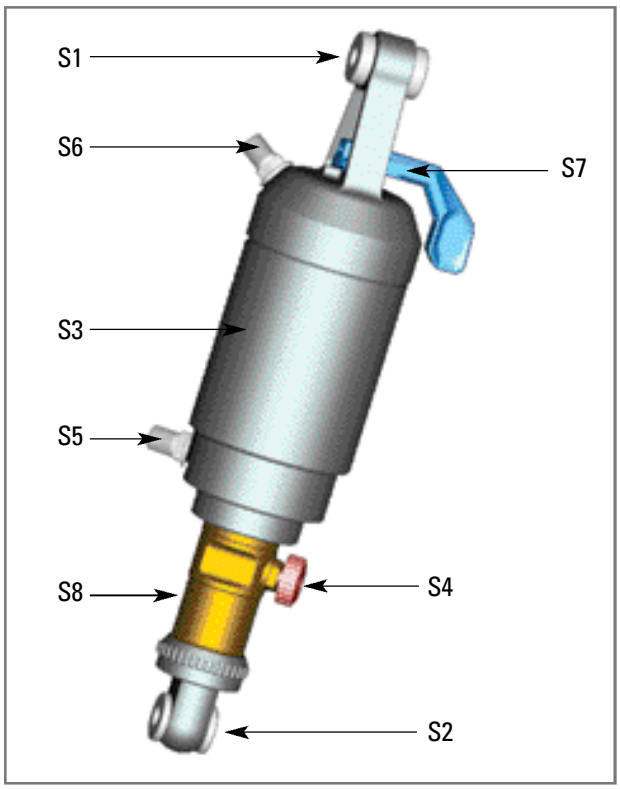
The heart of the LC-System is the newly developed and innovative Scott LC Shock, offering two functions.
By using the lock out lever on top of the shock body you can choose between following functions:

ALL TRAVEL MODE > full travel of 110mm on Reflex FX models.
The Lock Out Lever is in backward position on the shock.

LOCK OUT MODE > the shock is locked; climbing on asphalt roads is now possible without any power loss. Simultaneously a blow-off-system prevents the shock being damaged in case the rider did not open the system while crossing obstacles.
The Lock Out Lever is in frontward position on the shock.

By increasing the volume of the positive chamber of the Genius LC Shock we were able to ensure also on this shock a linear spring rate which becomes only progressive in the last 20% of the travel

Genius Shock LC



Parts list:

S1	Upper Shock Bolt	S5	Positive Chamber Valve
S2	Lower Shock Bolt	S6	Negative Chamber Valve
S3	Shock Housing	S7	Lock Out Lever
S4	Rebound-Screw	S8	Shock Piston

SET-UP OF POSITIVE AIR CHAMBER SCOTT LC SHOCK

The positive air chamber contains the air-spring you "sit-on" while riding.

Important: For all adjustments of the air spring the lock out lever has to be in position "all travel"/open

To adjust the air pressure of the positive chamber of the Scott LC Shock please refer to the following instruction:

1. remove the valve cap of the black valve (S5) located on the lower end of shock housing (S3)
2. mount the shock pump with its adaptor on the valve
3. pump the recommended pressure into the positive chamber. On the housing of the shock you will find a table showing in the black colored areas the recommended air pressure of the positive chamber according to the rider's weight. Sketch of shock housing decal
4. when you reached the needed pressure remove the pump and put the valve cap on the valve

SET-UP OF NEGATIVE AIR CHAMBER SCOTT LC SHOCK

The negative air chamber contains the air-spring influencing the brake-away and characteristic while absorbing shocks. A too high brake-away can cause an non-secure and uncomfortable ride.

To adjust the air pressure of the negative chamber of the Scott Genius LC Shock please refer to the following instruction:

1. remove the cap of the silver valve (S6) located on the upper end of the shock housing (S3)
2. mount the shock pump with its adaptor on the valve
3. pump the recommended pressure into the shock housing. On the housing of the shock you will find a table showing in the silver colored areas the recommended air pressure of the negative chamber according to the rider's weight. Sketch of shock housing decal
4. when you reached the needed pressure remove the pump and put the valve cap on the valve.

We recommend to make sure that the pressure balance between positive and negative chamber follows the recommendations shown on the shock housing.

Not doing so may cause a loss in performance or comfort or may result in damage of the shock.

After adjusting positive and negative chamber according to the rider's weight you can double check by using the SAG-Boy, which is on the back of the manual, if the SAG (negative travel) is well adjusted.

The negative travel is important when crossing grooves or holes on the trail.
If the bike is well adjusted the rear wheel and the swingarm will roll through the groove without the mainframe moving.
The SAG should be 15-20% of the travel for race oriented riders and 20-25% of the travel for comfort oriented riders.
The SAG-Boy indicates the recommended eye-to-eye distance of the shock bolts of the different Genius models.

To check the adjustment, please follow as shown below:

1. sit on the bike, put your feet on the pedal
2. ask a second person, to put the color beam of the SAG-Boy, recommended for your bike model, aside the eye-to-eye distance of the shock bolts.
   > if the distance between the bolts is corresponding to the length of the color beam, the air pressure is matching to your weight
   > if the distance between the bolts is shorter than the length of the color beam, the air pressure of the positive chamber is too high and should be carefully reduced by using the bleed knob of the shock pump until the measures are corresponding
   > if the distance between the bolts is longer than the length of the color beam, the air pressure of the positive chamber is too low and should be increased by using the shock pump until the measures are corresponding.

SET-UP OF REBOUND SCOTT LC SHOCK

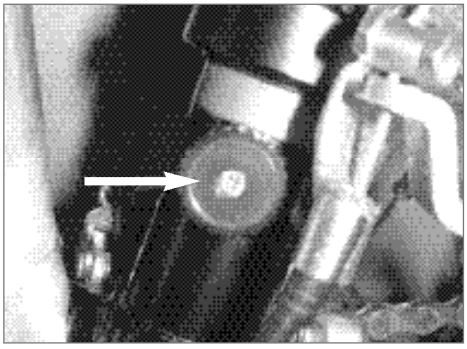
"Rebound" describes the speed the shock comes back to its original length after absorbing an obstacle.

By using the red rebound screw (S4) you can adjust the rebound step by step.

Please refer to the following instruction:
ride your bike off a sidewalk (remain in the saddle) and check how many times it bounces:

> if it bounces 1-2 times, the set up is good.
> if it bounces more than 3 times the rebound is too fast. Turn the screw 1-2 "clicks" clockwise
> if it does not bounce the rebound is too slow. Turn the screw 1-2 "clicks" counter clockwise.

Rebound knob



SERVICE SCOTT LC SHOCK

8

The Scott LC Shock will have the same maintenance intervals and warranty periods as already known from Genius TC Shock.

Concerning the international Service Centers it is our target to offer you the same partners as we have on the Genius TC Shock.

Detailed information with all actual addresses will be available soon on our website wwww.scottusa.com in the support area with headline "Scott LC Shock Service".

Pls have a look at following info which is exactly the same way with each.

MAINTENANCE / SERVICE GUIDE

Please clean regularly after riding off-road the shock piston and all other parts in motion of the shock with a soft and wet cloth or if needed with mild soap to prevent from excessive wear and tear.

For maintenance and service please refer to the following table:

Maintenance period	New	Every ride	Every 8 hours	Every 40 hours	Every 1000 hours / min. 1 x year
Check of air pressure	X	X			
Check of rebound	X	X			
Clean shock bushings, check for tear and wear, grease				X	
Change of oil/inspection at Scott Shock Service					X
Clean shock housing		X			
Clean Lockout mechanism		X			

IMPORTANT

The Scott LC Shock is pressurised. Never open, disassemble or rework the shock. Only a qualified and authorized Scott service staff/shock service center should do this.

To open a shock which is under pressure can be dangerous and may cause injuries!

The Scott LC Shock**always** must be adjusted to the rider's weight to warrant perfect function.
Therefore check before every ride the shock for fitting air pressure.

Riding a defective or not properly working shock can result in the loss of control over the bike and may cause severe or dangerous injuries!

In case you want to disassemble the shock from the bike for service or other reasons please note the recommended tightening torque of **10Nm** for the shock bolts.

Scott recommends strongly the use of a torque key to prevent from damages on shock, shock bushings or frame.

In addition the shock bolts should be fixed with Loctite medium (blue) to prevent the bolts from getting unscrewed.

Damages caused by improper assembly or bad maintenance as mentioned above, are not covered by warranty.

Once the recommended check up is made by Scott or a shock service authorized by Scott, it is reported in the maintenance schedule at the end of the manual, which will then enable you to claim for warranty within the warranty period.

The owner of the shock is responsible for the costs of the service.

SCALE 06

9

GEOMETRY/TECHNICAL DATA SCALE

Scale remains same for MY 06 from the frame specs.

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
S	70.5°	105	555	73.5°	390	420	-30
M	71°	115	580	73.5°	440	420	-30
L	71°	130	600	73°	480	420	-30
XL	71.5°	150	620	73°	530	420	-30
XXL	71.5°	160	640	73°	580	420	-30

XXL only for alloy frame

Headset	1 1/8“ semi integr. with 44.0 mm cups
Seatpost diameter carbon frame	34.9 mm
Seatpost diameter alloy frame	31.6 mm
BB housing	73 mm
Front derailleur carbon frame	E-type, top route
Front derailleur alloy frame	34.9 mm clamp, dual pull
Fork travel	80 mm
Fork length	451 mm

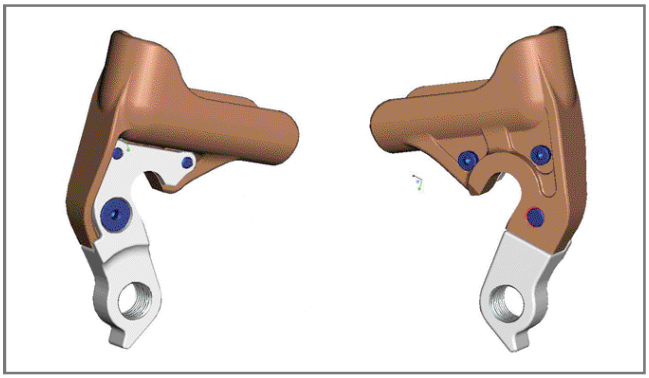
Scale alloy bikes will get by running change the cable fixation of the carbon frames on the downside of the top tubes.

In the past months the demand of a repair set for the drop outs of Scale increased.
Therefore we will offer approx. March 06 a set that will help to cut and repair the defective drop out of the Scale frames.

To do so, we will offer also a jig that will help to cut the defective/bent part and shows the locations to drill.

Price and article number will be announced asap.

Scale drop out



For 07 Scale will also get new drop out with a replaceable hanger. The design of this replaceable hanger will be different from the one we can offer for a repair of an already damaged frame.

NITROUS 06

10

GEOMETRY/TECHNICAL DATA NITROUS

Apart from the name Nitrous changed completely from MY 05 to MY 06.
Nitrous 06 is made for extreme freeride, so uphill by pedalling is getting really hard.
On the front you'll find a Marzocchi 66 VF2 LT with 190mm travel which is custom made for Scott.
Using the 200mm rear shock of Fox (eye to eye 200 mm, stroke 57mm) will result in 195mm rear travel at a suspension ratio of 3,42.

Following changes were made on the Nitrous 06:

> new downtube with new positioned shock fixing point for 200 eye-to-eye shox
> longer top tube with new gusset
> front triangle adapted for 190mm travel forks
> rear triangle with new IDS

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
S	67°.	110	560	73.5°	450	432	+ 25
M	67°.	115	585	73.5°	470	432	+ 25
L	67°.	120	610	73.5°	490	432	+ 25

Travel	195 mm
Shock (Eye to Eye)	200 mm
Hardware Mainframe	22,2 mm x 6 mm, screw length 40 mm
Hardware Swingarm	22,2 mm x 6 mm, screw length 36 mm
Seatpost diameter	34,9 mm
Headset	1,5"
Fork travel	200 mm / 170 mm
Fork length	575 mm
BB housing	73 mm
Front derailleur	Topswing 31,8 mm Toppull
Chainguard	ISCG Standard
Bearings	61803 2RS 17x26x5 4 St.

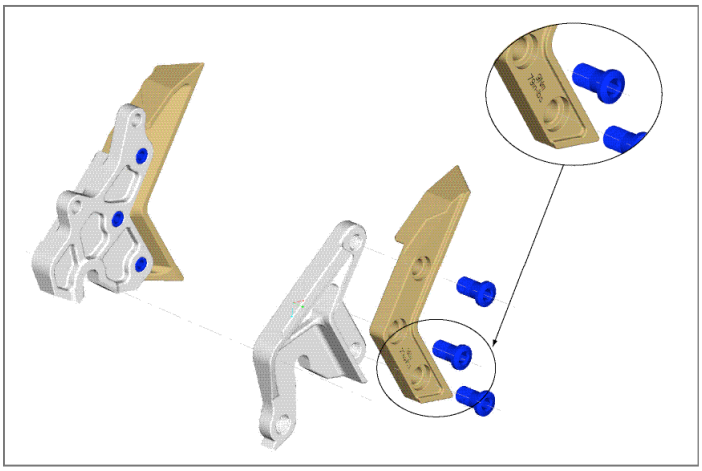
Please note that we do not recommend using e.g. a MY 06 rear triangle in combination with front triangles of MY 04 or 05 Nitrous.

It might be possible technically wise, but it depends on specs of shox and cranks used.

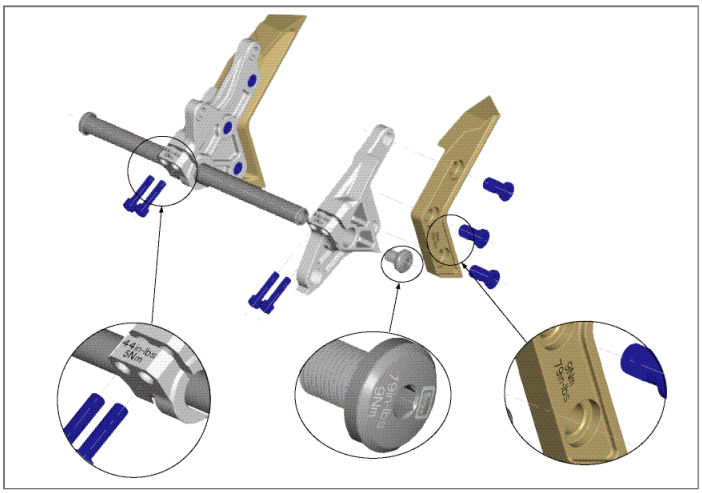
IDS: INTERCHANGEABLE DROPOUT SYSTEM

2 possibilities for dropouts are available in prepack at Scott:

> **dropout for standard QR rear axle**: new designed dropouts for standard QR rear axle with a new fixation to ensure optimum shifting performance and stability in comparison to standard replaceable dropouts systems



> **dropout for 12mm–through-axle-system**: new designed dropouts for 12mm-through-axle system combining optimum shifting performance with the benefits of a trough-axle-systems which grants more stability and torsion resistance



For service and after sales use we will also offer only the right side dropout with following parts numbers:

right dropout for standard axle > 202779
right dropout for 12mm through axle > 202780
12mm axle for 135mm swingarm width > 202781

For the headset we offer reducer cups from 1.5" to 1 1/8" with article number 200721 in case consumers do not want to use reducer headsets.

HIGH OCTANE 06

11

GEOMETRY/TECHNICAL DATA HIGH OCTANE

High Octane 06 was completely rebuilt and all tubes were changed in comparison to MY 05.

Using the 222mm rear shock of Fox (eye to eye 222 mm, stroke 70mm) will result in 180-240mm rear travel at a suspension ratio between 2.57 and 3.43.

HIGH OCTANE

Following changes were made on the High Octane 06:

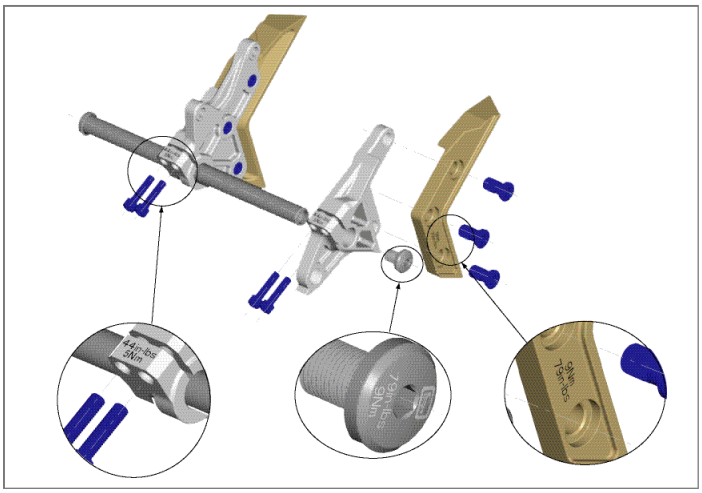
> new toptube and downtube for increased stiffness
> new chainstays
> rear triangle with new IDS and 150mm through axle system

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
S/M	65-68°	116	555	67-73°	475	437	+ 40
L/XL	67°	116	580	67-73°	475	437	+ 40

Travel	180-240 mm
Shock (Eye to Eye)	222 mm
Hardware Mainframe	22,2 mm x 6 mm
Hardware Swingarm	22,2 mm x 6 mm
Seatpost diameter	31.6 mm
Headset	1 1/8“ or 1,5" (insert)
Fork travel	200 mm
Fork length	579 mm
BB housing	73 mm
Front derailleur	nil
Chainguard	ISCG Standard
Bearings	61803 2RS 17x26x5 4 St.

IDS: INTERCHANGEABLE DROPOUT SYSTEM

> **dropout for 12mm–through-axle-system**: new designed dropouts for 12mm-through-axle system combining optimum shifting performance with the benefits of a trough-axle-systems which grants more stability and torsion resistance



For service and after sales use we will also offer only the right side dropout with following parts number:

right dropout for 12mm through axle: 202780
12mm axle for 150mm swingarm width: 202782

Please note that we do not recommend using e.g. a MY 06 rear triangle in combination with front triangles of MY 04 or 05 High Octane.

It might be possible technically wise, but it depends on specs of shox and cranks used.

PLASMA

12

GEOMETRY/TECHNICAL DATA PLASMA

Plasma is Scott's entry into the Triathlon sector with a frame based on the well-known and approved CR1 technology.

PLASMA

Some details of the new Plasma frames:

> frame weight of Plasma LTD frame incl. Alloy Aero Seatclamp 1280 grams at size L. Frame weight without seatclamp is 980 grams, seatclamp incl. true aero seatpost 300 grams.
> frame weight of Plasma Pro and Team incl. Alloy Aero Seatclamp 1390 grams at size L, but with same stiffness and durability as LTD frame
> Plasma LTD passed the EFBe test standard Top Performance for Road bikes bikes.

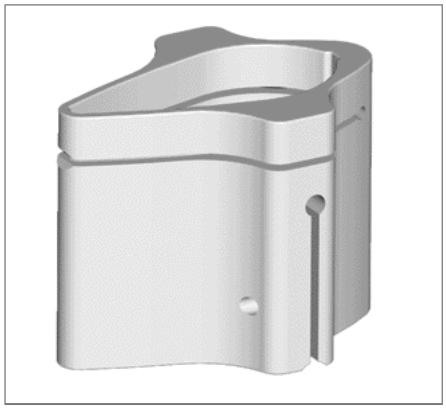
Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
XS/49	71°	100	505	76°	660	395	-67
S/52	71.5°	110	520	76°	700	395	-67
M/54	72°	120	535	76°	740	395	-67
L/56	72.5°	140	552	76°	780	395	-67
XL/58	72.5°	175	572	76°	820	395	-67

Headset	1 1/8" semi integr. with 44.0 mm cups
BB housing	68 mm
Front derailleur	Braze on, downroute

The seatpost on Plasma needs to be adjusted by the dealer or consumer.

We will offer a tool to do so. With parts number 202777 you can order for your workshop "Cutting Tool Plasma"
which is also included in every bike box of Plasma.

With the help of this tool you can cut the seattube to the perfect length to adjust the saddle height to the rider.



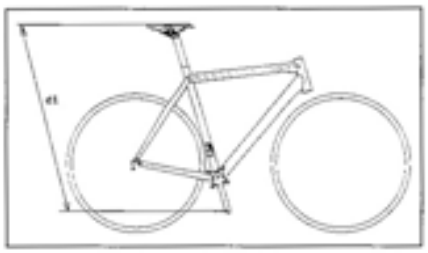
Pls have a look at the instructions below:

The seatpost of the Scott Plasma needs to be cut and adjusted to the personal seat height of the rider.

The tool to do so is added to your Plasma and will help to cut properly without any risk of damaging your seat tube.

To do so, pls follow the instructions given below:

1. Take the exact measure of the distance (d1) from the mid of axle of your pedal to the upper side of the saddle you use already on your "old" bike which is exactly adjusted to your seat position. **[1]**



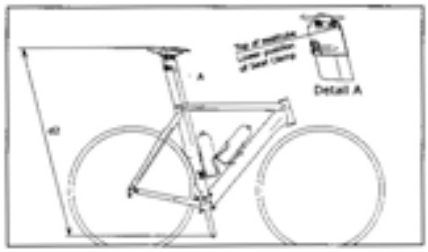
1

Important: pls note that the change to another saddle or pedal model might influence a lot the length of the seat tube!

2. Mount your pedals and saddle on the Plasma bike. Fix the saddle with the M5 screws (4mm Allen key) by using a tightening torque of 5 Nm (44 in-lbs). Your Plasma seat clamp allows you to vary the seat height for fine adjustment of +/- 15mm. For the cutting, position your seat clamp as low as possible and measure the distance (d2) **[2]** from the mid of the pedal axle to the upper side of the saddle. Remove the seat clamp and measure the distance (l) **[3]** from the top of the seat tube: **l = d2 – d1 + 15mm.** **All measures in mm**

3. Indicate the length (l) you want to cut on the seat tube with a marker pen.

4. Slide the Plasma Cutting Tool on the seat tube of Plasma until the line of the marker is visible in the slot on the tool that will guide your saw blade. **[4]**



2

3

4

5. Fix the two 5mm bolts with a 4mm Allen key with a tightening torque of 6 Nm (53 in-lbs).

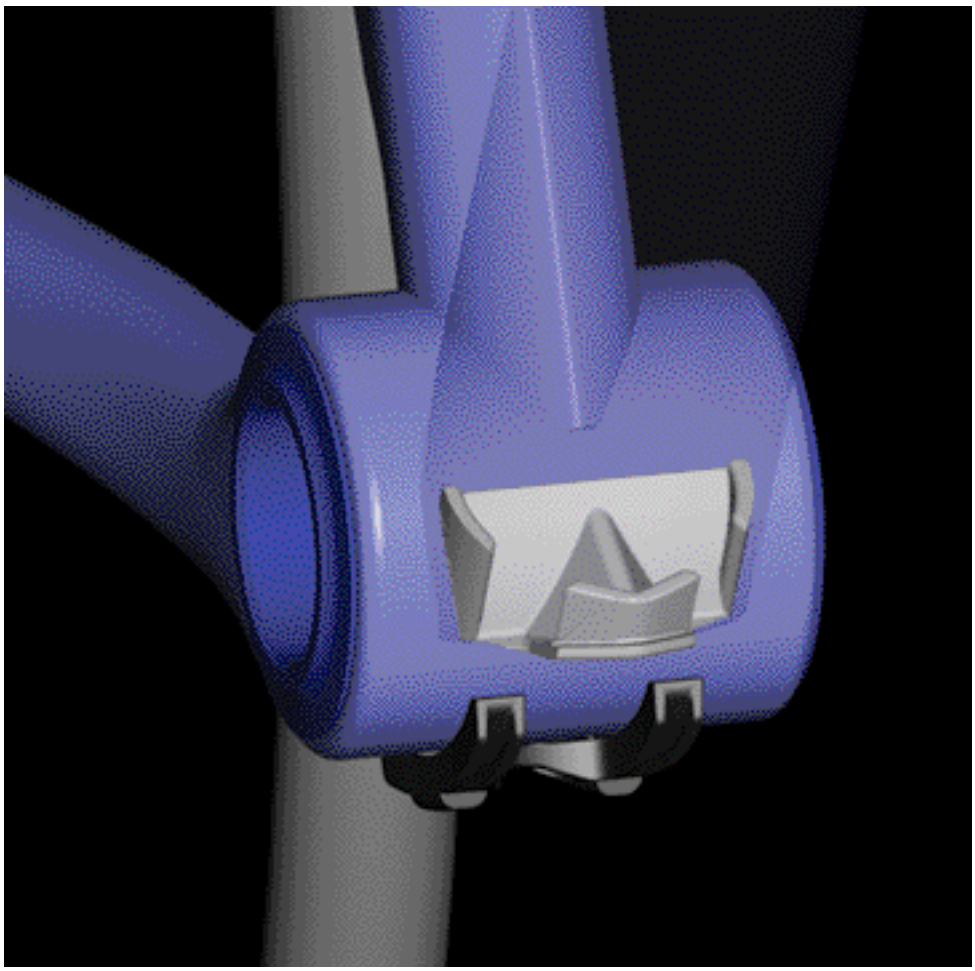
6. Take a saw with a blade for cutting metal. **Please only use a 10D/24T teeth blade to make sure not to damage the carbon tube warning logo**

7. Cut the tube, remove the tool and take sandpaper to smoothen the edges of the cutting area.

8. Remount the seat clamp in its middle adjustment position (15mm over the top of the seat tube), fix the 2 M5 screws of the seat clamp (4mm Allen key) with a tightening torque of 5 Nm (44 in-lbs).

Headset is semi integrated version with 44.00 mm cups in the frame, available with article number 1518222040000.
In case you need single bearings (2 pcs per set) they are available with 1558225010000.

The shifting cables inside the frames are not guided by internal tubes but on the bottom end of the downtube we have in front of the BB shell internally 2 conical areas
that guide the cables to the outside of the BB area.



CONTESSA ROAD

13

GEOMETRY/TECHNICAL DATA CONTESSA ROAD

CONTESSA ROAD

Contessa Road bikes are woman specific bikes with following features:

> smallest frame size 47 cm/XXS
> shorter stems
> more narrow bars
> special saddles
> special Shimano ST 700 Lady shifters with short reach

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
XXS/47	70.5°	105	505	75°	470	405	-67
XS/49	71°	110	515	75°	490	405	-67
S/52	72.5°	130	530	74.5°	520	405	-67
M/54	73°	150	545	74°	540	405	-67
L/56	73°	170	560	73.5°	560	405	-67

Headset	1 1/8“ semi integr. with 44.0 mm cups
BB housing	68 mm
Seatpost diameter	31.6 mm
Front derailleur	Braze on, downroute

Headset is semi integrated version with 44.00mm cups in the frame, available with article number 1518222040000.

VOLTAGE

14

The Voltage line has 3 different frames in MY 06:

> Voltage YZ4 and YZ3 are equipped with a new gusset on the downside on the front end of the downtube for increased stability.
> Voltage YZ2, YZ1and YZ0 got a new toptube which is more oversized and a new long gusset on the downside of the front end of the downtube for increased stability and stiffness.
> Voltage YZ 0.5 and YZ LTD got a new toptube which is more oversized and a new long gusset on the downside of the front end of the downtube for increased stability and stiffness. In addition these two models are equipped with the new IDS. YZ0.5 for standard QR axle and YZ LTD for 12mm through axle system.

Please note that we have 3 different geometries on the Voltage line bikes:

GEOMETRY/TECHNICAL DATA VOLTAGE YZ4, YZ1

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
XS	68.5°	100	540	74°	330	430	-32
S	69°	110	550	73.5°	370	430	-32
M	69°	120	560	73°	410	430	-32
L	69.5°	135	570	73°	460	430	-32
XL	69.5°	150	585	73°	510	430	-32

Headset	1 1/8“ standard ahd
BB housing	68 mm
Seatpost diameter	26.8 mm

GEOMETRY/TECHNICAL DATA VOLTAGE YZ0

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
S	69°	110	550	73.5°	370	430	-32
M	69°	120	560	73°	410	430	-32

Headset 1 1/8“ standard ahd
BB housing 68 mm
Seatpost diameter 26.8 mm

GEOMETRY/TECHNICAL DATA VOLTAGE YZ0.5, YZ LTD

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
S	68.5°	115	570	71°	350	425	-15
L	68.5°	125	595	71°	380	425	-15

Headset 1 1/8“ standard ahd
BB housing 68 mm
Chainguard ISCG Standard
Seatpost diameter 26.8 mm

IDS: INTERCHANGEABLE DROPOUT SYSTEM

2 possibilities for dropouts are available in prepack at Scott:

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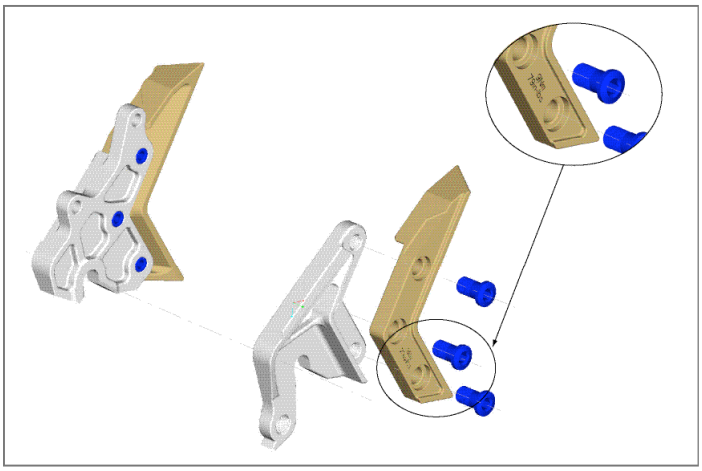
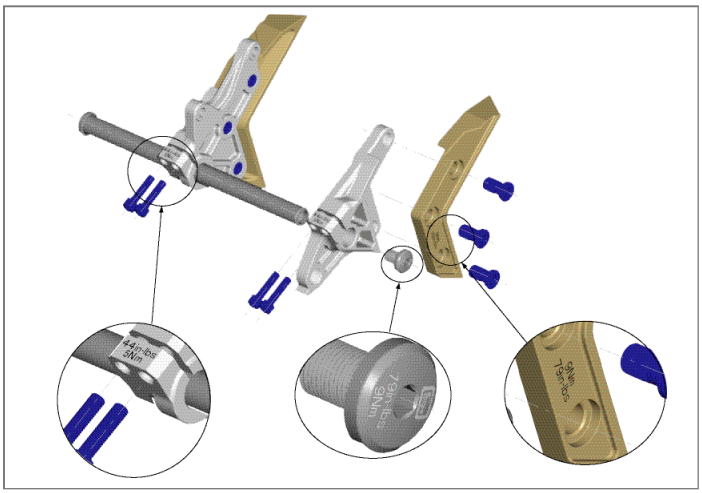


> **dropout for 12mm–through-axle-system**: new designed dropouts for 12mm-through-axle system combining optimum shifting performance with the benefits of a trough-axle-systems which grants more stability and torsion resistance



For service and after sales use we will also offer only the right side dropout with following parts numbers:

right dropout for standard axle: 202779
right dropout for 12mm through axle: 202780
12mm axle for 135mm swingarm width: 202781

SPEEDSTER

15

GEOMETRY/TECHNICAL DATA SPEEDSTER

On the Speedster line we have on S10 and S20 new carbon seatstays made in CR1 technology.

Weight and stiffness is same as on alloy bikes, but the demand was to get a new carbon look on these bikes.

Size	Headangle	HT Length	TT Horizon	Seatangle	Top ST	CST Length	BB OS
XS/49	71°	110	515	75°	490	405	-67
S/52	72.5°	130	530	74.5°	520	405	-67
M/54	73°	150	545	74°	540	405	-67
L/56	73°	170	560	73.5°	560	405	-67
XL/58	73.3°	190	575	73.3°	580	405	-67
XXL/61	73.3°	210	595	73.3	610	405	-67

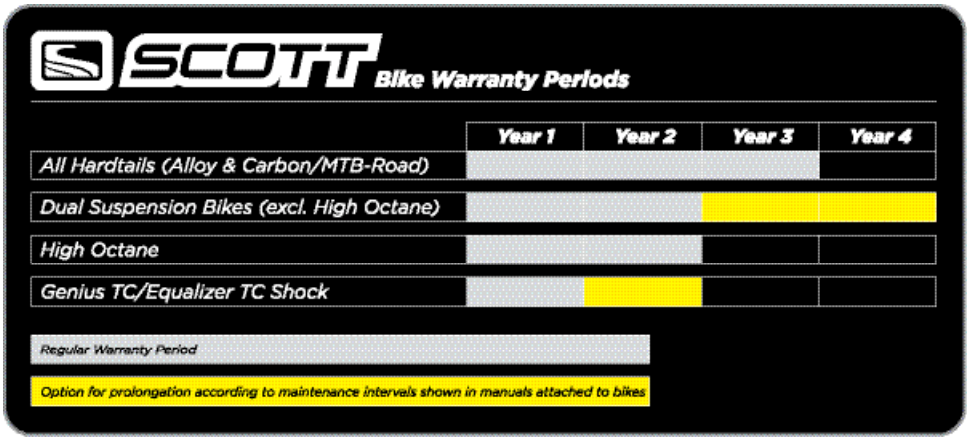
Headset	1 1/8“ semi integr. with 44.0 mm cups
BB housing	68 mm
Seatpost diameter	31.6 mm
Front derailleur	Braze on, downroute

Headset is semi integrated version with 44.00 mm cups in the frame, available with article number 1518222040000.
As we do not offer anymore Roadster Bikes, pls note that we have S60 Flatbar in the MY 06 line-up.
The geometry was adapted to the use of fenders on the bike, so the fork blades and chain stays are 10mm longer.

GENERAL WARRANTY CLAIMS 06

16

We have the chart shown below already in our consumer catalogues and will also put this info on the web in the support area.



Beside this, we kindly ask you to use for future claims only the attached forms.

Pls fill in all needed and demanded data, otherwise we will reject the claim, as also our suppliers demand a certain information to accept these claims and to improve the quality to avoid same faults again in production.

WARRANTY CLAIMS OF BIKES OF MODEL YEAR 2001 OR OLDER

Please note that we will not replace frames/bikes older than model year 2002, as the warranty period of these bikes is over, at least for one year.

In case you want to claim bikes older than model year 2002 it is obligatory to give a copy of the consumer's bill of purchase to Scott together with the claim form to Scott to verify your claim.

Without this bill of purchase of the consumer we will reject the claim.

AGREEMENT WITH SUPPLIERS ABOUT DIRECT WARRANTY SUPPORT TO DEALERS/NATIONAL SCOTT DISTRIBUTORS

Please note that we have an agreement with companies/brands named below for worldwide support on warranties of OE parts speced by Scott:

- Shimano
- Campagnolo
- DT-Swiss
- Ritchey
- Mavic
- Continental Tires
- SR/SunTour
- Rock Shox (SRAM)
- Manitou-Answer
- Fox Racing Shox
- Marzocchi
- Sun Rims
- Hayes
- Race Face
- E-13
- Syncros

The national distributor of the defective product will help you or your dealer to get warranty support in your country.

Therefore please contact him directly and add to the cleaned defective part the bill of purchase of the bike the part was mounted to help him to work efficient on your claim.

In case you get no help please do not hesitate to contact Scott to get help from our side.

We will try to push from our side then the producer directly to get help for you soon. To push we need detailed information about the part, a digital picture and name of the contact person at the distributor who refused to support you.

REPLACEMENT PARTS (SAP ARTICLE NUMBERS)

17

TECHNICAL DATA/GEOMETRY

18

CAMPAGNOLO

19

DT SWISS

20

FOX RACING SHOX

21

MARZOCCHI

22

ROCKSHOX/SRAM

23

SHIMANO

24