

NS
BIKES

SYNONYM



**SYNONYM
TECH MANUAL**





| | |
|----|--|
| 4 | WARNINGS AND IMPORTANT INFORMATION |
| 5 | GENERAL RIDING INFORMATION |
| 6 | FRAME INFORMATION |
| 7 | TECHNICAL SHEET / SPECS |
| 7 | FRAME SIZE RECOMMENDATIONS |
| 8 | GEOMETRY METRIC |
| 9 | GEOMETRY IMPERIAL |
| 10 | EXPLODED VIEW |
| 11 | REPLACEMENTS |
| 13 | SPARE PARTS |
| 13 | SUSPENSION SETTINGS |
| 13 | REAR WHEEL MOUNTING |
| 14 | INSTRUCTION: GENERAL INFO |
| 15 | TIGHTENING TORQUE |
| 16 | MAINTENANCE & PERIODICAL SAFETY CHECKS |
| 17 | NS BIKES WARRANTY |
| 18 | PROOF OF PURCHASE - WARRANTY CARD |

WARNINGS AND IMPORTANT INFORMATION

ATTENTION: Please read this manual carefully. It contains important safety information!

WARNING: Extreme riding is a very dangerous sport; it requires an amazing amount of skill. By engaging in this type of activity, you are accepting the risk of possible injury or even death. Even the best bike will not help you land a clean trick if you lack the skills. Even the best protective gear will not guarantee complete safety. Remember that in this kind of riding, you can only trust your own abilities and you must accept the inherent risk. While riding you can reach significant speeds and therefore face significant hazards and risks. Inspect your bicycle and equipment carefully and be sure that it is in perfect condition before each ride. If possible consult with area site personnel, expert riders and race officials on conditions and equipment advisable. Always wear appropriate safety gear, including an approved full face helmet, full finger gloves, body armour, bright, visible clothing that is not so loose that it can be tangled in the bicycle or objects at the side of the road or trail, shoes that will stay on your feet and will grip the pedals (make sure that shoe laces cannot get into moving parts, and never ride barefoot or in sandals). Always use protective eyewear, to protect against dirt, dust and bugs.

WARNING: Some of the service procedures require specialist tools and good mechanical skills. Therefore, to minimize the risk of serious or even fatal accidents, maintenance and assembly work on your bike should be carried out by an authorized bicycle workshop.

IMPORTANT NOTICE: This manual is not intended as a comprehensive use, service, repair or maintenance manual. Please consult your dealer for advice and your dealer may also be able to refer you to classes, clinics or books on bicycle use, service, repair or maintenance.

WARNING: The frame box contains instructions for components made by third parties. You must study these carefully and follow the directions before riding your bike. Make sure you read and follow the suspension set up and service instruction manual provided by the manufacturer. If the instruction manual has not been provided, please contact your dealer or the manufacturer.

WARNING: Failure to maintain, check and properly adjust the suspension system may cause suspension malfunction, in result of which you may lose control and fall.

WARNING: Introducing changes in the suspension adjustment can alter the handling and braking characteristics of your bicycle. It is forbidden to change the suspension adjustment unless you are thoroughly familiar with the suspension system manufacturer's instructions and recommendations; you should always check for changes in the handling and braking characteristics of the bicycle after the suspension has been adjusted by taking a careful test ride in a safe area.

WARNING: As with all mechanical components, the frame is subjected to wear and high stresses. Different materials and components may react to wear or stress fatigue in different ways. If the design life of a component has been exceeded, it may suddenly fail possibly causing injuries to rider. Any form of crack, scratches or change of colour in highly stressed areas indicate that the life of the component has been reached and it should be replaced.

GENERAL RIDING INFORMATION

Riding a bicycle can be dangerous. You must keep this in mind and be cautious at all times.

See and be seen. Use lights and reflective clothing in low light conditions.

Always wear a helmet when riding. It can save your life.

Always conduct a pre-ride check (detailed information can be found further in this manual).

Never ride the bicycle if you observe any technical problems or have any doubts about the proper functioning of any elements in the bicycle.

Keep the bike clean and well maintained.

Carry a pump, spare inner tube, patch kit, and a basic tool kit - you may need this in the case of a flat tire or other common mechanical problem that is usually easy to fix if you have the right tools. Ask your dealer for advice on this issue.

If your bicycle is equipped with gears, you can choose a gear combination that is most comfortable for the riding conditions. Gears will allow you to maintain a constant rate of pedaling. Use lower gears for going uphill and higher gears for going downhill. Ease up on your pedaling pressure when you shift gears. Ask your dealer to give you more advice on this issue.

Be careful with the brakes - they can be powerful and if activated too aggressively, may cause a crash. You should spend some time to get a better feel of the brakes on a side road or empty parking lot before the first ride. Avoid riding too fast, especially downhill. It is easy to lose control of the bicycle and crash at high speeds, and also you will find it very difficult to slow down especially if the hill is steep.

If your bike has been equipped with suspension, the increased speed you may develop will also increase the risk of injury. For example, front of the bike may dive on the suspension fork while hard braking. You can easily lose control and fall if you are not prepared for this. Please, learn how to operate your suspension system safely.

Thanks to the suspension the wheels can follow the terrain better, which improves control and comfort. This improved capacity may provide opportunity for riding faster, but you should be careful not to mistake the enhanced capabilities of the bicycle for your own riding skills. Improving skills takes time and practice.

Protect your bike from theft. Purchase a lock and never leave your bike unlocked while unattended, even if you are planning to be away from it for just a few minutes.

FRAME INFORMATION

Before you say: "wtf?! Is ns making an xc bike??" - stop. This is not just another xc bike. This is something completely different! The geometry of the synonym is miles away from any bike that you can find on the market. The the slack head angle, massive reach and very steep seat tube this bike descends better than any xc bike out there, it climb like a goat and charges like a bull on the flats. We deeply believe that short travel hardcore, lightweight xc / trail bikes are the most fun you can have on two wheels when you don't have a chairlift. This year many companies have launched bikes in this category, but even if they claim to be progressive, they are actually very conservative old school xc bikes with bigger forks. The synonym is different - it's a totally new concept designed from the ground up. Everyone we know who has tried this bike has been simply blown away. This really is a game changer in the xc / lightweight trail segment.

Xc racing is back - big time! With the way the courses have developed it's fun to watch and fun to ride. Despite this almost all bikes on the market in this category have the same old-school geometry that hasn't changed for years. Bikes in all other segments have developed and designers and riders have realized that longer reach, steeper seat angles and slack head angles create a unique combination that makes the bikes faster and easier to control. When we started experimenting with this geometry in prototype xc race bikes, we got results that we expected on the gnarly, downhill sections - these bikes were simply on another planet compared to anything else on the market with this amount of travel. But what we were most surprised to find is that the bikes also climbed better, and were super fast on the flats! The former is mainly due to the fact that the riders is sitting more in front of the rear wheel and the weight distribution is better when the road points uphill. The latter is a result of the possibility to lower the cockpit and place the rider in a more aggressive, aero position without the bike feeling sketchy on the downhills. We have asked many experienced xc racers to test this bike on their favorite courses and there really is no doubt as to how fast this bike really is. They managed to make massive improvements on segments that have been attacked by them hundreds of times on their 'normal' bikes.

RADICAL, UNPRECEDENTED GEOMETRY



■ **SYNONYM**
■ **TRADITIONAL XC**

FLEX STAYS



TECHNICAL SHEET / SPECS

SYNONYM RC

frame material: superlite carbon fibre (RC1)
 carbon fibre (RC2)
rear wheel travel: 100MM
recommended fork travel: 100-120mm
rear shock: 165x37,5mm
mounting hardware: 20mm x 8 mm, trunnion mount
cable routing: internal
head tube: tapered 1.5 IS (IS 42 / IS 52)
headtube length: S size: 95mm, M size: 105mm,
 L: 120mm, XL: 140mm
fits forks with standard 1-1/8" or tapered 1.5 - 1-1/8"
hub spacing 148 x 12mm, NS axle included
post-mount direct 160mm disc brake mount,
max rotor size: up to 180mm
BB: PF92
biggest chainring: : up to ~36t, oval up to 34t
rear derailleur: removable hanger included
seat post/clamp: 31.6mm / 34.9 (clamp included)
 stealth cable route in seat tube for dropper post
maximum tire size recommended: 29" x 2.3" depends
 on tire manufacturer

SYNONYM TR

frame material: carbon fibre
rear wheel travel: 120mm
recommended fork travel: 100-120mm
rear shock: 165x42,5mm
mounting hardware: 20mm x 8 mm, trunnion mount
cable routing: internal
head tube: tapered 1.5 IS (IS 42 / IS 52)
headtube length: S size: 95mm, M size: 105mm,
 L: 120mm, XL: 140mm
fits forks with standard 1-1/8" or tapered 1.5 - 1-1/8"
hub spacing 148 x 12mm, NS axle included
post-mount direct 160mm disc brake mount,
max rotor size: up to 180mm
BB: PF92
biggest chainring: up to ~36t, oval up to 34t
rear derailleur: removable hanger included
seat post/clamp: 31.6mm / 34.9 (clamp included)
 stealth cable route in seat tube for dropper post
maximum tire size recommended: 29" x 2.3" depends
 on tire manufacturer

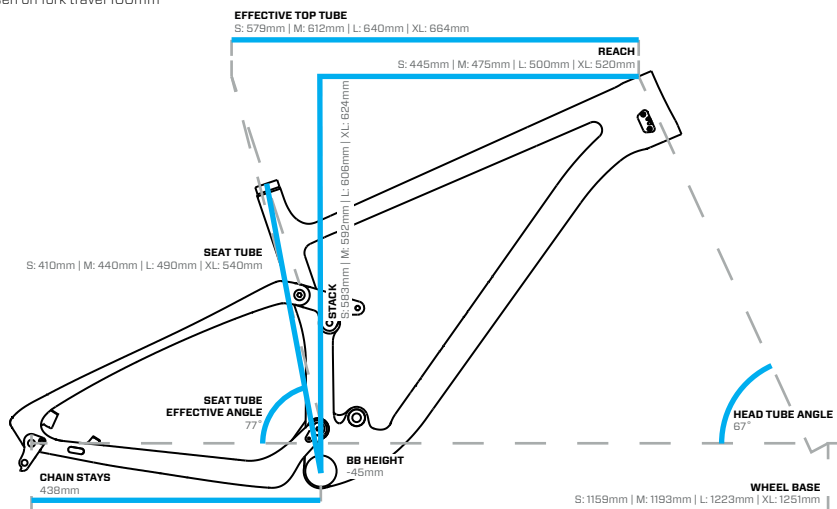
FRAME SIZE RECOMMENDATIONS

note on sizing: we recommend the S size for riders up to 172cm, M size for 170 - 182cm, L size for 180-192 and the XL size for riders over 190cm.

GEOMETRY METRIC

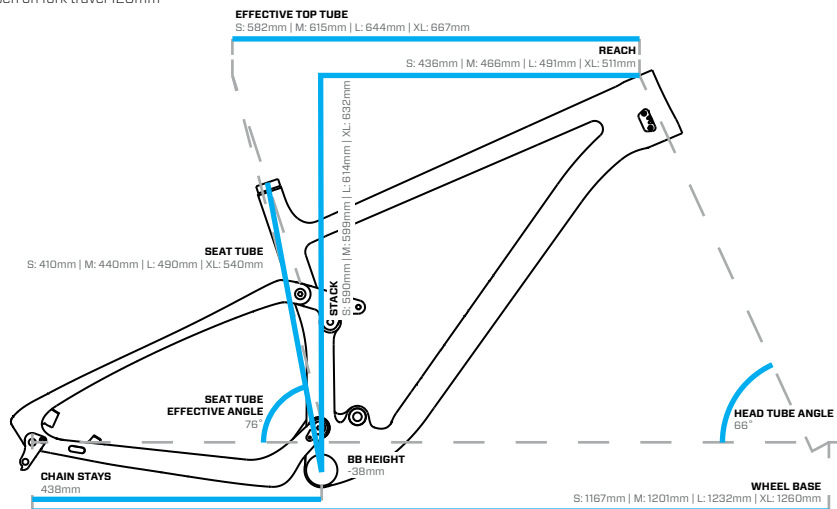
SYNONYM RC

basen on fork travel 100mm



SYNONYM TR

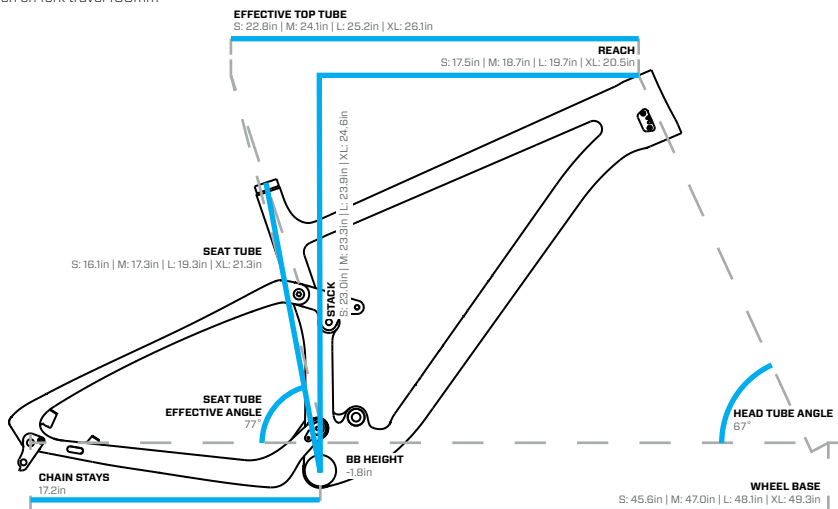
basen on fork travel 120mm



GEOMETRY IMPERIAL

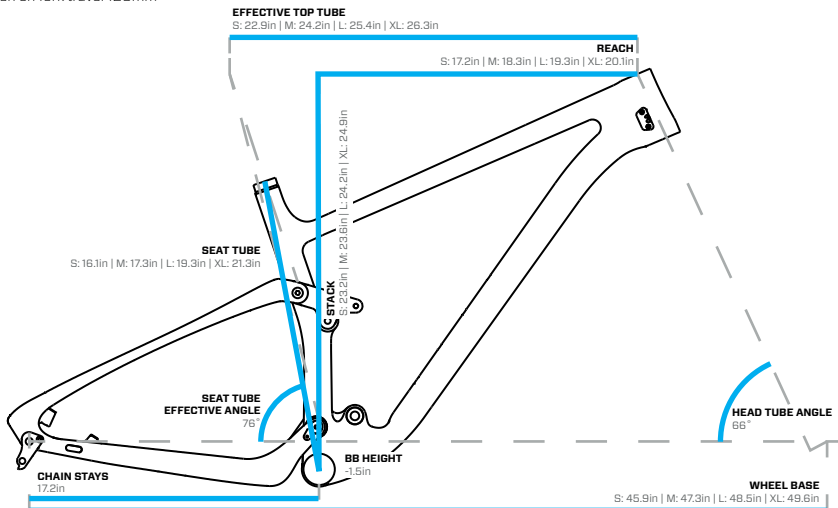
SYNONYM RC

basen on fork travel 100mm

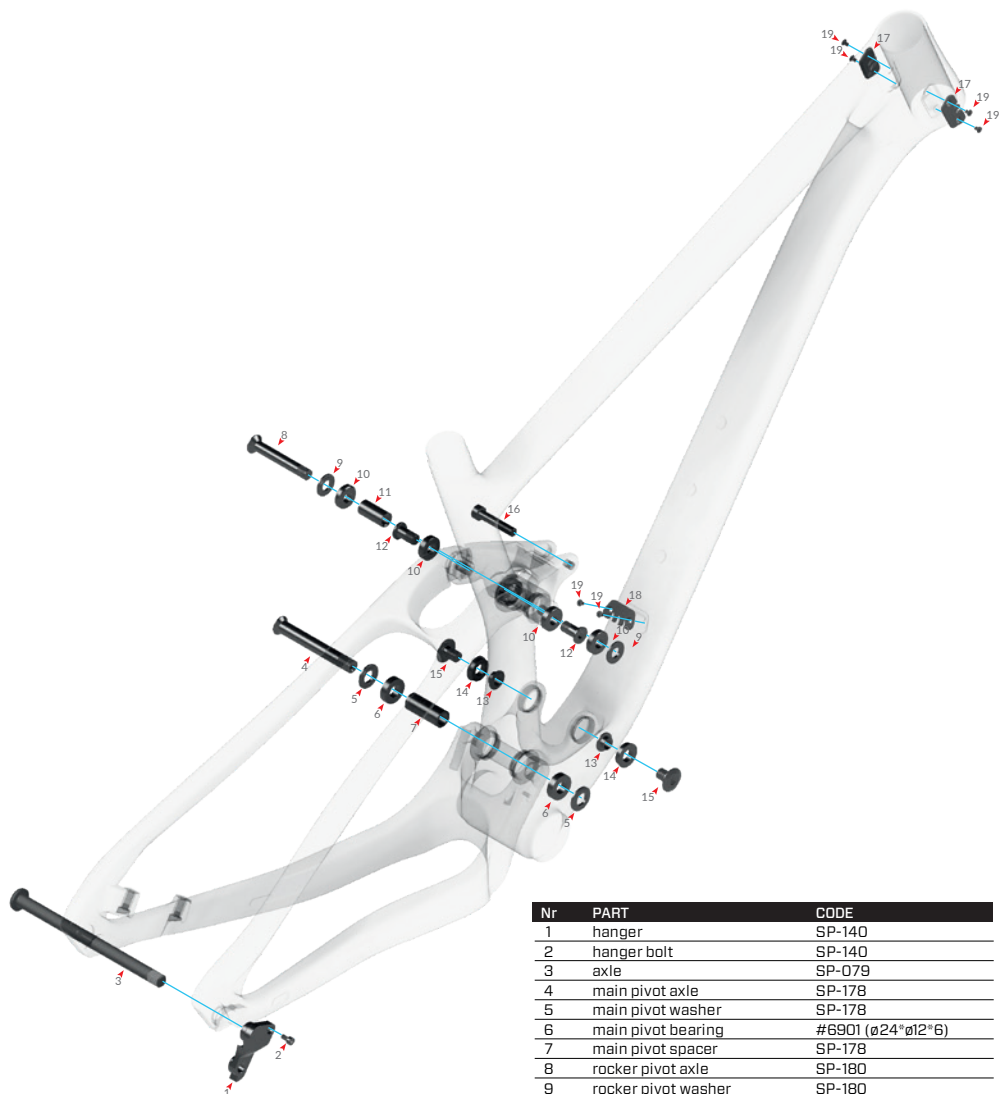


SYNONYM TR

basen on fork travel 120mm

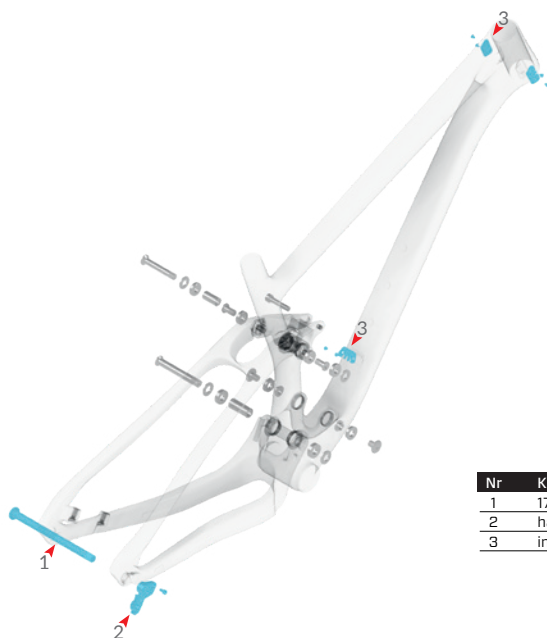


EXPLODED VIEW

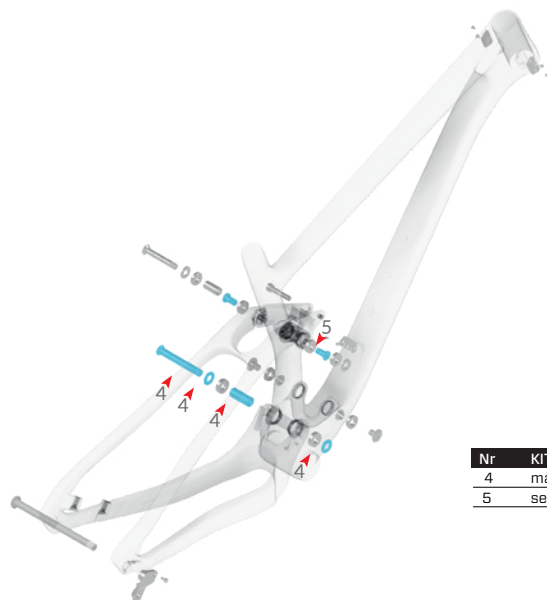


| Nr | PART | CODE |
|----|--------------------------------|-------------------------|
| 1 | hanger | SP-140 |
| 2 | hanger bolt | SP-140 |
| 3 | axle | SP-079 |
| 4 | main pivot axle | SP-178 |
| 5 | main pivot washer | SP-178 |
| 6 | main pivot bearing | #6901 (ø24*ø12*6) |
| 7 | main pivot spacer | SP-178 |
| 8 | rocker pivot axle | SP-180 |
| 9 | rocker pivot washer | SP-180 |
| 10 | rocker pivot / SS yoke bearing | #6900 (ø22*ø10*6) |
| 11 | rocker pivot spacer | SP-180 |
| 12 | seatstay yoke bolt | SP-179 |
| 13 | shock mount washer | SP-177 |
| 14 | shock mount bearing | # 61801 (ø23/ø21*ø12*5) |
| 15 | shock mount bolt | SP-177 |
| 16 | upper shock mount bolt | SP-177 |
| 17 | internal cable routing front | SP-175 |
| 18 | internal cable routing rear | SP-175 |
| 19 | internal cable routing bolt | SP-175 |

REPLACEMENTS

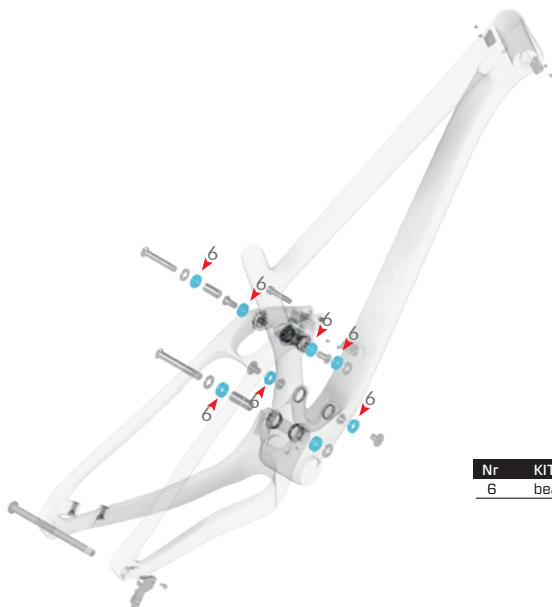


| Nr | KIT | CODE |
|----|------------------|--------|
| 1 | 174L (148x12) | SP-079 |
| 2 | hanger | SP-140 |
| 3 | internal routing | SP-175 |

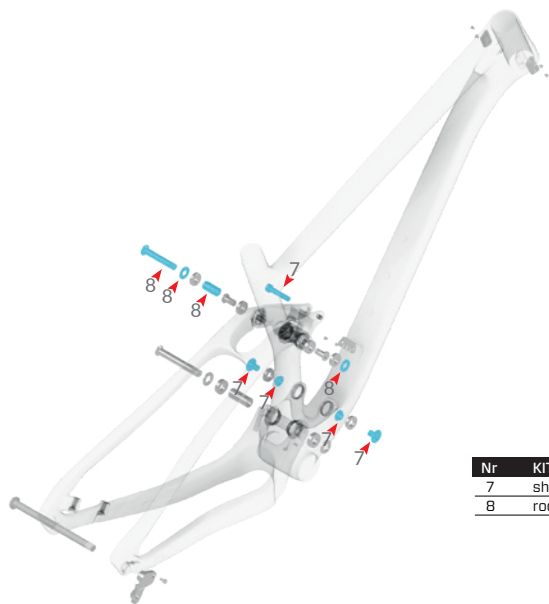


| Nr | KIT | CODE |
|----|------------------------|--------|
| 4 | main pivot axle & bolt | SP-178 |
| 5 | seatstay yoke parts | SP-179 |

REPLACEMENTS



| Nr | KIT | CODE |
|----|-------------|--------|
| 6 | bearing kit | SP-176 |



| Nr | KIT | CODE |
|----|-------------------|--------|
| 7 | shock mount bolts | SP-177 |
| 8 | rocker arm bolts | SP-180 |

SPARE PARTS

PARTS:

- SP-079: NS axle 148x12 174L
- SP-140: Derailleur hanger (w/bolt)
- SP-175: Internal routing
- SP-176: Bearing kit
- SP-177: Shock mount bolts (3pcs)
- SP-178: Main pivot axle & bolt
- SP-179: Seatstay yoke parts
- SP-180: Arm bolts (main side bolts)
- SP-181 Rocker arm (black)
- SP-182 Rocker arm (ORB brown)

ACCESORIES:

- SP-145: ChainStay Slapper protector

SUSPENSION SETTINGS

Suspension settings are a matter of personal preference. Some riders like it plush, some like it firm. However here are some suggestions of shock settings that you can use as basic guidelines. Typically, the SYNONYM should run with about 20% to 30% sag. To measure sag, push the bottom-out bumper up the shock shaft until it meets the body of the shock. Gently stand up on the pedals with all your weight on the bike (fully kitted up with body armour, helmet, hydration pack, etc. – it's important to make the situation as 'real world' as possible to give you the most accurate results) and note how far the bumper displaces

REAR WHEEL MOUNTING INSTRUCTION

The SYNONYM frame is compatible with 148x12 thru-axle hubs. For proper rear wheel installation please follow the instructions:

- make sure the wheel is aligned and the disc sits properly in the brake caliper
- put the wheel into the dropouts with the chain set up correctly on the cassette
- put the 12mm axle through and tighten properly with 6mm allen key

INSTRUCTION: GENERAL INFO

Fork: The SYNONYM is designed to work with a single crown xc/trail forks with up to 120mm of travel. Use of different style of forks or forks with longer travel may result in frame failure, possible injury or even death.

Rear shock: The SYNONYM is designed to work with 165x37,5mm and 165x42,5mm shocks. Use of different style of shocks or shocks with different length may result in frame failure, possible injury or even death.

Headset: The SYNONYM frames come with a fully integrated taper head tube (IS42/IS52) and 95/105/120/140mm stack height. It fits forks with standard 1-1/8" or tapered 1.5 - 1-1/8" steerer tubes. Don't cut your steer-tube too low! The process of mounting headsets in the frame should be done by a qualified mechanic.

BB: The frame is designed to work with 92mm press fit bottom bracket. Before installation make sure that the BB is clean, lightly greased, free of dirt and paint. The installation process should be carried out according to the BB manufacturer's instructions.

Chainring sizes: The frame is designed to work with chainrings up to 36t. For oval chainrings use up to 34t. Max chainring size is only an approximate reference It can vary depending on the manufacturer, model, cranks & BB used.

Biggest tire: The frame will fit tires of maximum 29 x 2.3". Note that these numbers are for reference only as the size and shape of the tire can vary depending on the manufacturer and rim width.

Brake compatibility: The frame is disk brake compatible and it comes with a post-mount type mount and will fit directly 160mm rotor, and up to 180mm maximum rotor with brake caliper adapter.

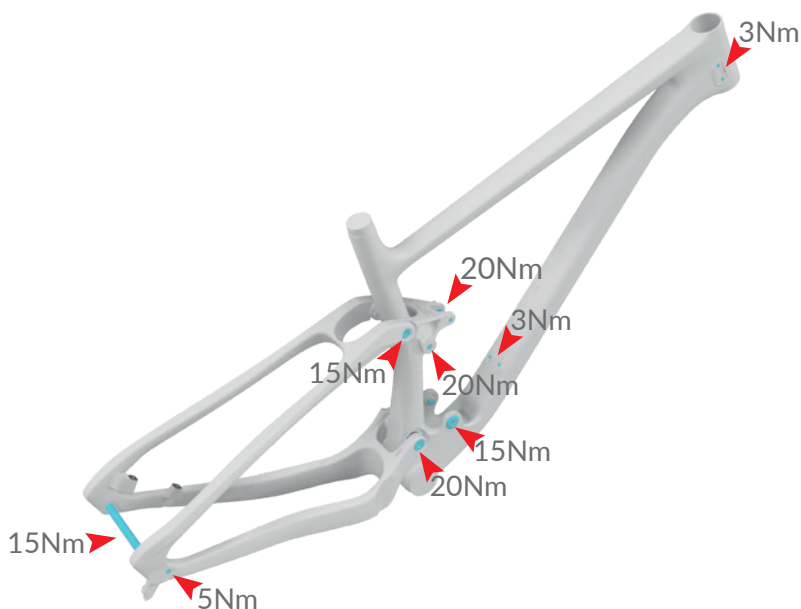
Seatpost & seatclamp: The frame works with 31.6mm seatposts. Cable routing for internal type dropper posts available. Do not extend the seat post above the minimum insertion mark. Maximum seat insertion is 150mm for S, 180mm for M, 230mm for L, and 280mm for XL size. Seatclamp ID must be 34.9mm

WARNING: It is important to make sure that the rear tire won't touch the saddle when suspension reaches it's maximum amount of travel. To check that please compress rear suspension fully without the spring installed onto the rear shock.

TIGHTENING TORQUE

Study the manuals of the suppliers of the suspension fork, rear shock, and other parts that come with this frame. Do not ride the bicycle until all problems have been resolved. Riding a bicycle with any defects can be a hazard to your health and life! Unless you are a very competent bicycle mechanic, do not attempt to execute any of these adjustments yourself. Seek advice at your local bicycle shop. The rear suspension bolts (rear shock and pivots) have been tightened in the factory with specific torque. In case of re-adjustment extreme care should be taken when re-tightening them.

Tightening torque for various bolts on the frame:



For other components please first refer to manufacturer instructions.

MAINTENANCE & PERIODICAL SAFETY CHECKS

DO NOT RIDE THE BICYCLE IF IT YOU SEE ANY DEFECTS.

Take care of your frame and you will enjoy it for a longer time. Before every ride you should always make a pre-ride check. It should include the following points: clean the frame (note that high-pressure washing may cause damage to some components on the bicycle so it should be avoided if possible) and examine it CAREFULLY for any indications of potential failures including cracks, corrosion, dents, paint peeling and any other indications of potential problems, inappropriate use or abuse. If anything suspicious is found, contact your local bike dealer for a proper inspection. These are important safety checks and very important to help prevent accidents, injury and shortened product lifespan.

Things to check before each ride:

- all frame bolts are correctly tightened – refer to # TIGHTENING TORQUE
- wheel to frame & fork connections - this is critical for your safety. If you have axle bolts they should be tightened according to the manufacturer's specification. If you have a quick release make sure that it is set to the CLOSED position, and that there is a reasonable amount of resistance applied.
- steering system. The steering system includes: handle bar, stem, headset and fork. All elements should be connected firmly for riding safety. If you wish to make any adjustments yourself, be warned that incorrect setup can be very dangerous and we always advise you to seek professional advice for this! Check headset looseness, check stem to handlebar connection and stem to steertube connection. Check the connection between the handlebars and stem. Try pushing the handlebars up and down - there should be no movement between these two elements. Check the headset for eventual free play (stand next to the bicycle, apply the front brake and push forwards and backwards. There should be no play between the frame and fork). If any play is found contact your local bike shop. Do not attempt to make any adjustments yourself. If you are confident that you can do this yourself then adjust the steering system according to the headset/stem manufacturer instructions. All parts of the stem should be regularly checked for damage or cracks. If you find anything suspicious, contact an experienced bike mechanic immediately. A defective steering system can cause serious injury or death.
- bottom bracket connection to the frame. There should be no play between the frame and bottom bracket.
- the connection between the cranks and bottom bracket.
- the connection of the pedals to the cranks.
- chain line and chain tension.
- derailleur connection with the frame and make sure the function is proper before every ride.
- brake clamp to frame & fork connection.
- the general condition of rear shock and front fork (take special note of any cracks or deformations).
- shock / fork pressure (for air shocks). Refer to the # SUSPENSION SETTINGS and manufacturers instruction. Make sure the SAG doesn't exceed the reasonable limit. Make sure the air pressure does not exceed limits provided by shock / fork manufacturer
- clean rear shock & forks stanchion tubes.
- brake cables and their housing for kinks, rust, broken strands or frayed ends. If you notice any damage, you should ask a bicycle shop to replace the cables immediately. Damaged cables can seriously impede braking efficiency.

For information about servicing the shock and other parts like the headset mounted on the bike it is necessary to follow manufacturers instructions closely. The user manual for the additional parts are supplied in the frame box.

NS BIKES WARRANTY

1. 7ANNA sp. z o.o. sp. k. (hereinafter on referred to as 7ANNA), manufacturer of NS Bikes, warrants all new full suspension frames for a period of 3 years.
2. If any defects are noticed in the product, the Customer must stop using it immediately and should report this to the dealer that sold it within 14 days. Using a damaged product will void the warranty, lead to more extensive damage and may pose a serious hazard to the rider's health and life.
3. The warranty period starts from the day when the product is purchased. This purchase must be documented with the cash receipt for all products plus a filled in warranty card for frames (which includes the following information: date of purchase, serial number of frame, customers name and name of dealer).
4. The warranty applies only to the original owner and is not transferable.
5. Claims under this warranty should be made through the dealer where the product was purchased.
6. The warranty is valid only if the component is sold by an authorized dealer and assembled by a qualified bicycle mechanic.
7. The warranty does not cover:
 - normal wear and tear
 - bearings
 - labour charges for replacing parts,
 - paint and decals,
 - problems that result from excessive loads occurring during extreme riding or from bad riding technique,
 - problems that result from incorrect assembly or installation.
 - cost of travel or shipment to and from an authorized dealer such cost, if any, shall be borne by the original owner
8. This warranty is void if:
 - the warranty card is filled in incorrectly or incompletely,
 - any modifications have been made to the product by the customer,
 - damage has been caused by external parts that have been incorrectly assembled on the frame,
 - the product had not been used, maintained or repaired according to the manufacturers instructions,
 - the product was transferred to any third party.
9. Directions on how to deal with warranty cases shall be provided by the distributor of the product in the region where it was purchased.
10. The crash replacement warranty covers damage resulting from crashing, or excessive loads generated by things like casing jumps or throwing the bike. Such damage won't be covered by the normal warranty, however 7ANNA offers the possibility to replace the product for 50% of the original suggested retail price under the Crash Replacement policy.
 The conditions for this are:
 - Crash Replacement applies to NS full suspension frames for a period of 3 years from the date of purchase.
 - 7ANNA reserves the right to deny Crash Replacement without further explanations,
 - Crash Replacement does not apply to parts damaged in other situations than in riding (for example Crash Replacement will not cover a part that has been damaged during shipping),
 - Crash Replacement only applies to components made by 7ANNA.
11. This limited warranty does provide the original owner with certain legal rights and recourse and the original owner may possess other rights or recourse, depending on the state, jurisdiction, country, or province. Please be informed that this is a final statement of the 7ANNA and all the remedies available to the original owner are stated herein. 7ANNA does not allow or authorise any entity (including authorised dealers) to extend any other express or implied warranties on its behalf. An original owner agrees that 7ANNA's liability under this warranty under no circumstances shall be greater than the original purchase price. In no event shall 7ANNA be liable for incidental or consequential damages. All other remedies, obligations, liabilities, rights, warranties, express or implied, arising from law or otherwise, including (but not limited to) any claimed implied warranty of merchantability, any claimed implied warranty arising from course of performance, course of dealing or usage of trade, and any claimed implied warranty of fitness, are disclaimed by 7ANNA and waived by the original owner. Some states, jurisdictions, countries, and provinces do not allow some or all of the limitations set forth herein, or the exclusion or limitation of incidental or consequential damages. If any provision is found unenforceable, only that provision shall be stricken and all others shall apply

PROOF OF PRUCHASE - WARRANTY CARD**FRAME MODEL:** _____**FRAME SERIAL NUMBER:** _____**SHOCK SERIAL NUMBER (IF ANY):** _____**PRICE:** _____**DATE OF PURCHASE:** _____

I cetrify that I am acquainted with the actual specification of the bicycle (this can be slightly different that that published by the distributor)

BUYER'S SIGNATURE: _____**DEALER'S SIGNATURE:** _____**DEALER'S STAMP**

manufactured by: 7anna sp. z o.o. sp. k., ul. Potokowa 20d, 80-283 Gdańsk, POLAND

tel +48 520 18 04

*Always wear a helmet when riding. It will not make you deathproof, but will increase your chances to avoid serious injury if you crash (and you WILL crash). A broken leg can be fixed
A broken brain cannot! Even if you see some of our riders without a helmet, it's only because they are complete idiots!*



**THE SYNONYM
OF DOWN-COUNTRY**



www.nsbikes.com
info@nsbikes.com