TITAN RACING

OWNER'S MANUAL

TITAN RACING

Congratulations on purchasing your new TITAN RACING bicycle! We are confident that your bicycle will exceed your expectations for value and ride quality, providing you with endless hours of cycling enjoyment. Each frame and component has been custom specified and designed to enhance your riding experience.

We strongly encourage you to read the owner's manual first to enjoy your new bicycle and familiarise yourself with your bicycle for safety reasons too.

Please use the bicycle only for the intended purpose it was made for. If you have questions or problems regarding your new TITAN RACING bicycle, please contact your authorised dealer.

⚠ IMPORTANT

Please ensure that your TITAN RACING bicycle is completely assembled and working when purchasing from your authorized TITAN RACING dealer. This is very important for the optimum performance and safety while riding your bicycle.

It is important to understand the basics of riding a bicycle and to always obey the laws and regulations when riding your bicycle on public roads. It is equally important to exercise common sense when cycling.

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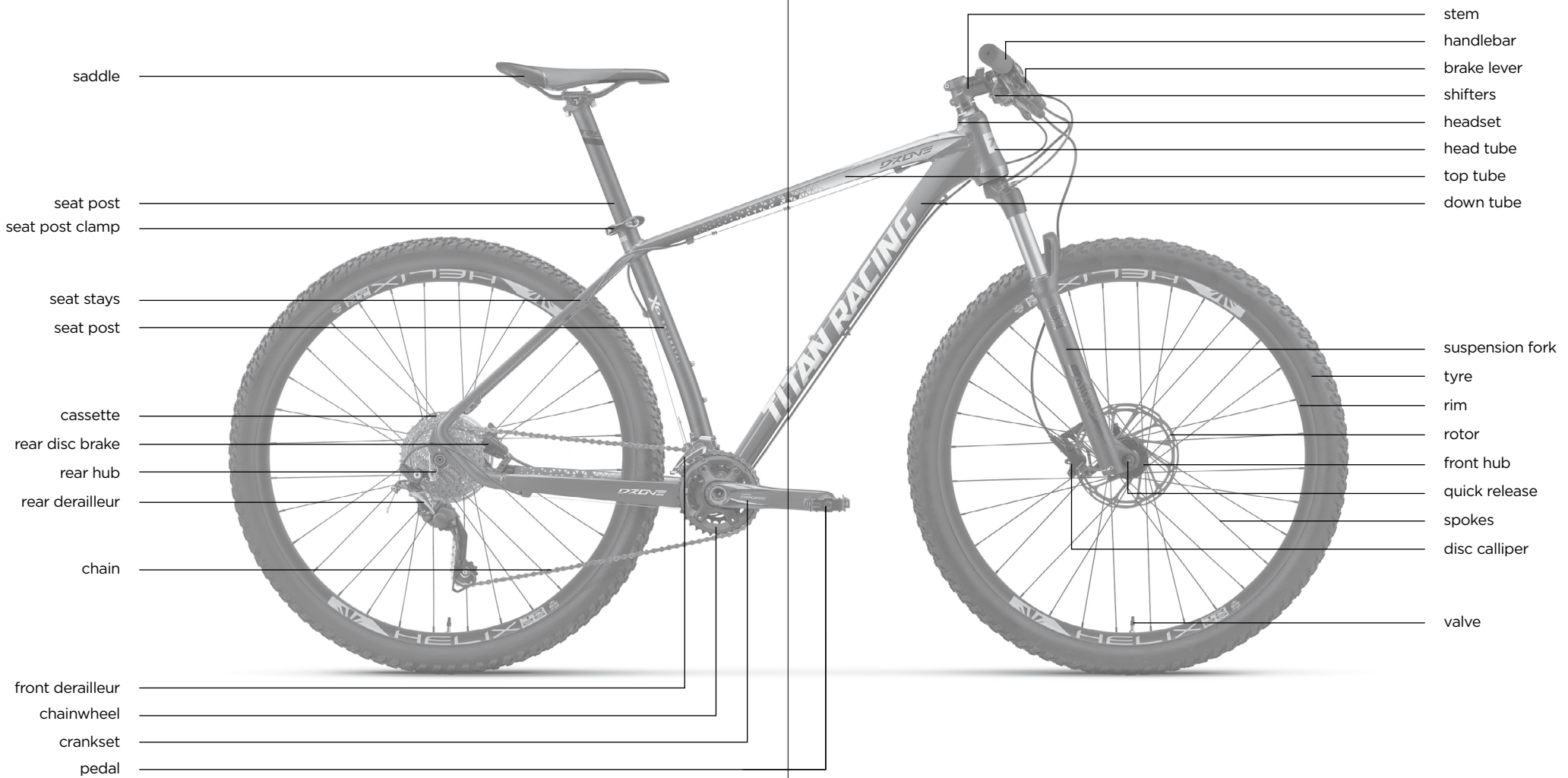
BICYCLE PARTS



BEFORE YOUR FIRST RIDE

This information should be read by anyone before their first ride of this bicycle.

MAKE SURE YOUR BICYCLE IS THE CORRECT SIZE

Your dealer will help you find a bicycle that has the correct dimensions for your body. There should be at least 2" - 3" (50 - 75 mm) clearance between the top tube and you when you stand over your bicycle. You can adjust the saddle and handlebar to offer the best comfort and performance. Refer to the Bike Setup Section (pg. 8), for making these adjustments.

LEARN THE POWER OF YOUR BRAKES

Your braking performance will vary when used in different conditions. Many models of today's brakes are very powerful; they are made to stop a bicycle in both dry and clear conditions as well as wet or muddy conditions. If your brakes are too weak or too powerful, take your bicycle to your dealer for a check and adjustment.

KNOW HOW YOUR BICYCLE OPERATES

If your bicycle is not used correctly, it can decrease your control of the bicycle. Before riding fast or in technical conditions, make yourself familiar with the operation and performance of all the mechanisms of your bicycle, especially brakes and steering components. Practice the use of your bicycle at slower speeds in a flat, empty parking area. Practice again after any change to your bicycle.

If your bicycle does not operate as necessary, or if different parts are necessary for the safe operation of your bicycle, consult your dealer.

PREVENT 'TOE OVERLAP'

Please note that on smaller frame sizes, a shorter wheelbase design is used which results in the front wheel being closer to the pedals. When the handlebar is turned during very slow speeds your foot could overlap or touch the front wheel. At average speeds, the handlebar does not turn sufficiently for contact to occur however when riding slowly with the handlebar turned, do not pedal as your foot could make contact with the front wheel.

This overlap is affected by the size of your feet, the length of the crank arms, the size of the tires, and the pedals you choose. If you change any of these components, the distance of the overlap could change.

⚠ IMPORTANT

Only use your bicycle according to its intended purpose as it may otherwise not stand up to the stress and fail. If used other than for its intended purpose, the warranty will become void.

IF YOUR FRAME OR FORK HAS A PROBLEM, STOP YOUR BICYCLE

Frame problems are not common, but can occur. If you get a frame or fork problem or any other problem, decrease your speed immediately and do not ride the bicycle. Take your bicycle to a dealer for inspection and service. After any impact, inspect the entire bicycle. Always inspect the bicycle thoroughly before riding the bicycle again. If your bicycle behaves in an unusual manner or you hear a noise, immediately stop the bicycle and identify the problem. Repair the problem or take the bicycle to your dealer for service.

AVOID SHARP POINTS, MOVING PARTS, HOT SPOTS AND PINCH POINTS

Some parts of your bicycle can seriously injure you if mishandled. Sharp points include parts such as the teeth of the chainrings and edging of your pedals. Brakes and their parts get hot. Clamps and pivoting parts such as brake levers can pinch, as can the chain where it runs on to sprocket teeth. Please take care to avoid serious injury.

LIFE SPAN OF YOUR BICYCLE AND IT'S PARTS

Bicycles are not indestructible, and their parts will not last forever. If your use of a bicycle increases the forces on it through hard riding, difficult conditions, or increased mileage, you should replace your bicycle or its parts more frequently than riders who ride less or ride smoothly and carefully. The lifetime of a part is determined by its construction, materials, use, maintenance, rider weight, speed, terrain, and environment (humidity, salinity, temperature, etc.)— So it is not possible to give an accurate timetable for replacement. If you are not sure if you should replace a part, consult your dealer. In some cases, a lighter frame or part has a longer life than a heavier one. But better maintenance, more frequent inspections, and more frequent replacement are necessary for light-weight, high performance bicycles and parts.

⚠ WARNING

As with all mechanical components, the bicycle 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 the rider.

⚠ IMPORTANT

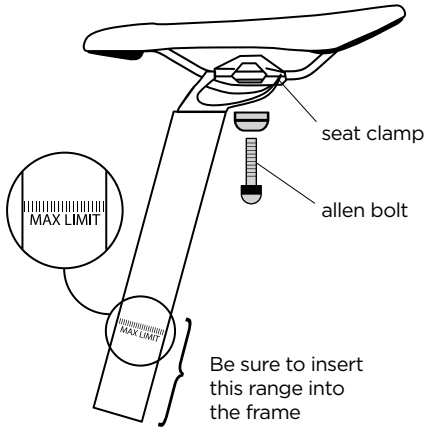
You should always wear a helmet when ever riding your bicycle.

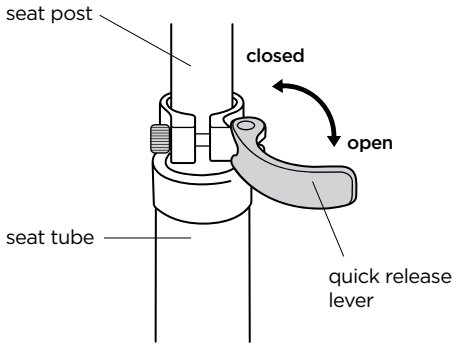
SADDLE HEIGHT ADJUSTMENT

Sit on the bicycle. Place the ball of your foot on the pedal nearest to the ground. Make sure the cranks are vertical. Leg must be stretched and slightly bent in the knee for reaching the correct height of the saddle.

ADJUSTING SADDLE POSITION AND TILT

The recommended angle of tilt for the saddle is when the saddle is parallel with the ground. Adjust the position of the saddle until it is most comfortable for you. It is possible to move the saddle forward or backward from the handlebar. Loosen the saddle bolts to move the saddle into the desired position and to set the angle of tilt and then tighten the bolt again to secure the saddle safely in the desired position.



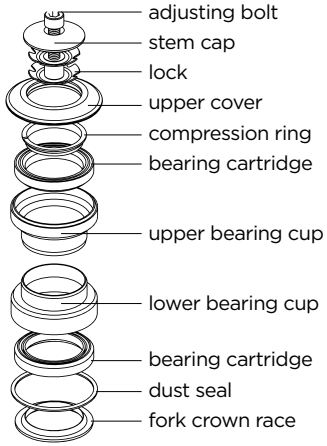


⚠ WARNING

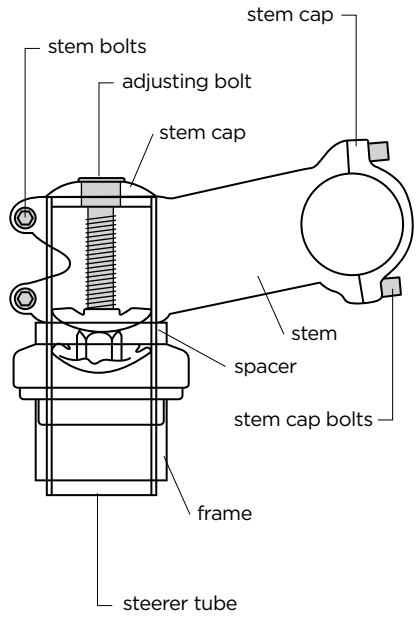
There is the minimum insertion mark on the seat post which marks minimal required insertion depth of the seat post into bike frame. This minimal insertion mark of the seat post must be invisible. Make sure that the minimum insertion mark of the seat post is not visible above the bike frame after the seat post is inserted into the frame. The seat post clamp screw or seat post quick-release must be securely tightened so the seat post is not turnable inside the frame. Move the lever of the quick-release to the sides only, to positions OPEN or CLOSE. Do not turn the locked quick-release lever, it could get damaged!

STEM

The a-head type of stem is secured to the fork's steerer tube and is fixed by 2 Allen bolts. The Height of the stem and handlebars is set by the spacer rings which are placed between the stem and headset or eventually by changing the stem for another stem with a different angle. Loosen the 2 Allen bolts which lock the stem to the fork and release the bolt located on top the headset. Then set the headset allowance by loosening or tightening the headset bolt to allow the fork to rotate with ease. Do not let the headset have its own allowance to rotate. When the stem is at the correct height, tighten the headset bolt again. Now set the stem direction and tighten the 2 Allen bolts to secure it.

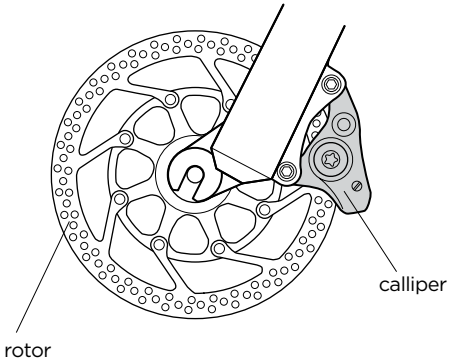


A-HEAD STEM SYSTEM:

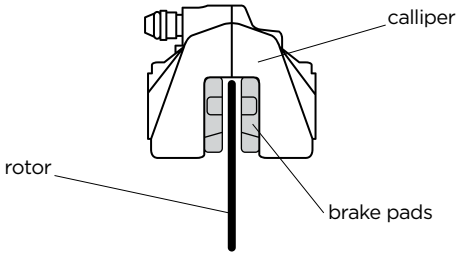


HANDLEBAR

Loosen the Allen bolts on the stem front cap to rotate the angle of the handler bar. When satisfied with the desire angle of the handlebar, retighten the Allen bolts on the stem front cap. Make sure to tighten the all the Allen bolts equally.



> **⚠ WARNING**
>
> Rotors can reach high temperatures under heavy braking. Hot rotors could cause severe skin burns!



Rotors must always be centred between the brake pads with a 1 mm gap of space between the pad and rotor.

SET UP OF BRAKE LEVER POSITION

There is a regulation screw inside of the brake lever for distance set up between brake lever and handlebar. Adjust the distance between the brake lever and the handle bar according to the model of the braking system:

- by Allen screw which is inside of brake lever, or
- by regulating screw which is integrated in brake lever (configuration depends on brakes model and their manufacturer).

DISC BRAKES MAINTENANCE

It is strongly recommended to visit professional service if you do not have needed experiences and special tools. Please note: Non-professional manipulation with disc brake systems could cause reduced braking effect or total brake failure!

DISC BRAKE CLEANING

Disc brake rotors, pads and calipers must be kept clean. Rotors covered by oil or by other lubricants must be cleaned immediately. When disc brake pads are impure by brake fluid it is necessary to replace them with new pads.

DISC BRAKE PADS

Brake pads will wear out by braking overtime. Possible signs that the brake pads are worn out can be: brakes are making noise while braking or braking ability is less efficient. Worn out brake pads must be replaced by new one.

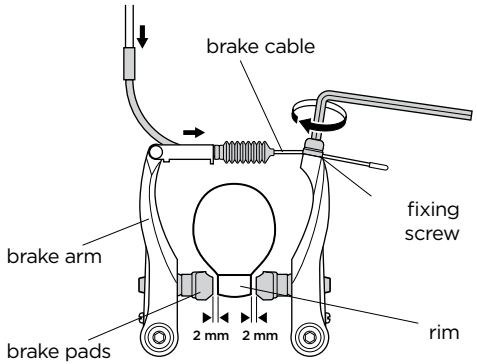
DISC BRAKE ROTOR

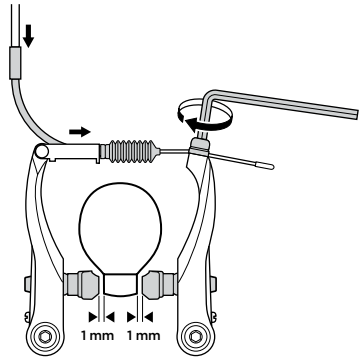
Rotor status must be checked regularly. Rotors will become worn out overtime by braking which results in scratches on the rotors. Replace damaged rotors.

DISC BRAKE FLUID CHANGE

Air in the disc brake system could cause reduced braking efficiency or disc brake failure. It is necessary to bleed the air from the disc brake system and replenish fluid. Best to consult your dealer.

> **⚠ WARNING**
>
> Disc brake hydraulic systems are filled with standard brake fluid or mineral oil. These two brake fluids can not be mixed with each other. Use only recommended brake fluid by the manufacturer.





SETTING V-BRAKES

- While holding the shoe against the rim, tighten the shoe fixing nut.
- Pass the inner cable through the inner cable lead, and after setting so that the total of the clearances between the left and right shoes and the rim is 2 mm tighten the cable fixing bolt.
- Adjust the distance with the spring tension adjustment screws until the brake pads surface are 1 mm away from the rim.

> **⚠ WARNING**
>
> Brake shoes may not touch the tire, otherwise this could cause an overheating of the tire! Check the wear, and if it is necessary, change them. Replace worn out brake shoes with new brake shoes matching your brake type.

SUSPENSION SETUP

1. SPRING FORK

Suspension forks have a compression setup unit located in the upper part of the right fork leg. Forks with suspension lock out (Lockout) have the compression setup unit placed on the left fork leg. Rotate the compression setup unit clockwise to set up a higher rigidity of the fork or counter clockwise to decrease the rigidity of the fork.

2. AIR SUSPENSION FORK

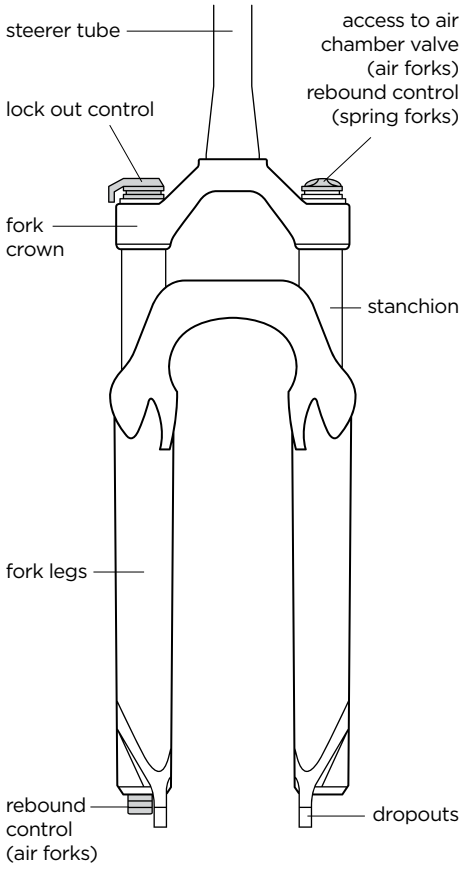
Air suspension forks compression is setup by inflating air into the fork air chamber. The inflation air valve is located in the upper part of the left fork leg.

FORK SUSPENSION LOCK OUT

Fork lock out enables reduced fork teetering which results in increased pedaling efficiency when riding uphill or sprinting. The fork's lock out control unit is placed in the upper part of the right fork leg. Turn the lever clockwise for lock out or counter clockwise to unblock the suspension and the fork will work in normal mode.

FORK SUSPENSION LOCK OUT REMOTE CONTROL

Suspension forks with remote lock out control, have a control lever which is placed on the handle bars. Follow these steps: press the lever or button (depends on fork model) towards handle bars to lock out the fork, push down the button to unblock the suspension and the fork will operate in normal mode.



⚠ WARNING

Fork suspension lock out is intended for use when riding in less difficult terrain. It is necessary to unblock the fork when Riding in rough or technical terrain otherwise the fork lock out system could be damaged!

REBOUND DAMPING

Rebound damping setup unit, controls the speed at which the fork returns to the original position after compression.

The setup unit is located on the bottom part of the right fork leg. To slow the fork return speed (marked by "+") turn the control unit clockwise (when looking at the fork from the bottom). To increase the fork return speed (marked by "-") turn the control unit counterclockwise. Rebound damping that is too slow can cause the fork to not be able to cope with the terrain surface. A Too fast rebound set-up causes fork "kicking".

FORK MAINTENANCE

CLEANING / LUBRICATION

Regular maintenance is crucial for proper fork operation, mainly maintenance of friction areas between outer and inner fork legs. Dust seals and gaskets which keep friction areas from contamination must not be damaged and must protect entire perimeter of the friction area.

Clean mud, dust or moisture off the fork stanchions with a soft cloth after each ride and then lubricate the stanchions. Use a detergent solution and soft brush for outer fork legs cleaning. When cleaning take extra care to prevent water getting in between stanchions and outer fork legs. Never use high pressure cleaning devices. Moisture and dirt inside the fork have a negative impact on the fork's operation.

⚠ WARNING

Use high quality lubricants which contain Teflon for fork lubrication. Do not use lubrications which contain lithium. Such lubricants could damage inner fork parts.

Dirt inside the fork will cause higher friction between bushings and stanchions which may lead to fork components life span shortening.

Keep following these instructions to retain perfect fork operation:

- After each ride clean the fork stanchions, dust seals and gaskets from dirt, dust or moisture with a soft cloth.

- After each 25 hours of operation (or after each ride in extreme conditions like mud or wet sand):
  1. Lubricate dust seals and gaskets with oil containing Teflon.
  2. Make sure all fork screws are tight.
  3. Check any fork parts for damages.

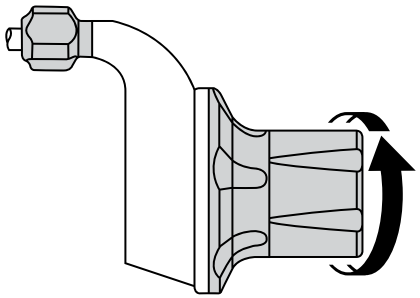
If you find any damaged or worn out fork parts replace them with new original parts. Never ride your bicycle with a damaged fork!

It is strongly recommended to have your suspension fork serviced regularly by an authorized dealer!

GEAR SYSTEM

The gearing system consists of shifting levers (shifting grips), shifting cables, front and rear derailleurs, chainwheels, freewheel (cassette sprockets) and the chain. The system is set up by your authorized dealer so do not make any gearing system adjustments until necessary. Shift gears only when pedaling forward. Never shift using force!

Functionality of the system depends mainly on an easy movement of the cables in outer casing and the gear system (sprockets, chainwheels and chain). Keep gearing system clean! Lubricate the cables with Teflon oil which protects the cables against corrosion and keeps them running smoothly, prolonging their life span.

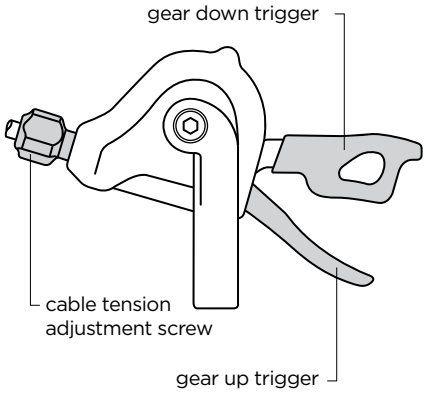


GRIP SHIFT

Twist the grip section of the shifter towards and away from you to change gears.

TRIGGER AND RAPIDFIRE SHIFTERS

Use the triggers on the shifter to change gears up or down.

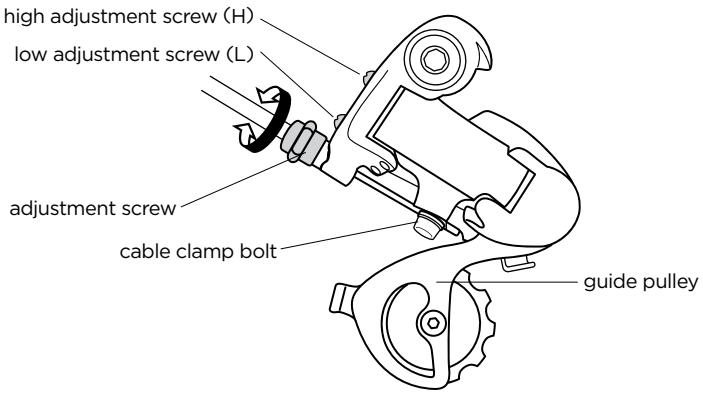


REAR DERAILLEUR

The rear derailleur shifts the chain on the rear sprockets and by doing so changes the transmission ratio between the front chainwheel and the rear sprockets. The rear derailleur is controlled by the right gear shift lever.

REAR DERAILLEUR TUNING

Hold the rear wheel above the ground and turn with the crank arms. Turn the adjustment bolt (an outer casing with an inner cable crosses through this screw) on the guide pulley until shifting is smooth without disturbing sounds.

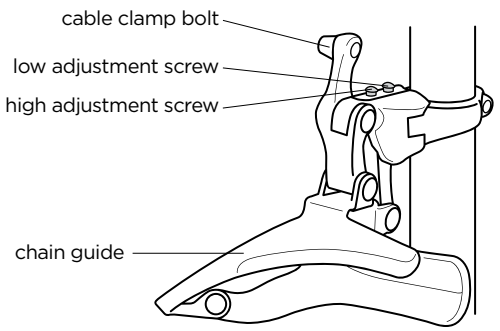


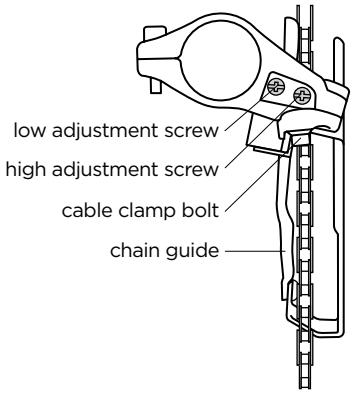
TO ADJUST THE SMALL-COG POSITION

1. Move the chain to the smallest rear cog and the largest front chain ring.
2. Loosen the cable-clamp bolt until the cable is free.
3. Move behind the bicycle to see that the smallest rear cog, the chain, and both derailleur pulleys are in alignment.
4. If they are not in alignment, turn the high-gear limit-screw (H) until they are in alignment.
5. While you pull on the cable, move the gear shift lever to the small-cog position.
6. On the gear shift lever turn the barrel adjuster fully clockwise. On the rear derailleur, turn the barrel-adjuster fully clockwise, then turn it one turn counterclockwise.
7. Put the cable into the clamp-bolt on the rear derailleur, pull the derailleur cable tight, and tighten the cable-clamp bolt.

TO ADJUST THE LARGE-COG POSITION

1. Turn the low-gear limit-screw on the rear derailleur (L) counterclockwise until the derailleur can move freely.
2. Carefully move the chain to the smallest front chain ring and the largest rear cog. Do not move the rear derailleur too far. The chain can be caught between the large cog and the spokes.
3. Move the rear derailleur pulleys in alignment with the largest cog.
4. Turn the low-gear limit-screw clockwise until it does not turn easily. If you have turned the screw too far, the derailleur will move to the outside of the bicycle.





FRONT DERAILLEUR

The front derailleur changes the transmission ratio by shifting the chain on the chainwheels. The chain guide must be parallel to the chainwheels to operate properly. The front derailleur is controlled by the left gear shift lever. The control cable must be stretched.

FRONT DERAILLEUR TUNING

Any slack in the control cable should be eliminated by loosening the fixing screw of the cable and stretching the cable (with pliers). Tighten the fixing screw and check the functionality.

TO ADJUST THE SMALL-CHAIN RING POSITION

1. Move the chain to the smallest front chain ring and the largest rear cog.
2. Loosen the cable-clamp bolt until the cable is free.
3. Turn the low-gear limit-screw (L) until the inner chain-guide of the derailleur is approximately 0.5mm from the chain.
4. If there is a barrel-adjuster on the gear shifter lever or the down tube of the frame, turn the barrel adjuster fully clockwise.
5. Pull on the cable end, and move the left gear shift lever to the small-chain ring position.
6. Put the cable through the cable-clamp bolt, pull the cable tight, and tighten the clamp bolt.

TO ADJUST THE LARGE-CHAIN RING POSITION

1. Move the rear derailleur to the smallest rear cog.
2. Turn the high-gear limit-screw (H) counterclockwise until it can not stop the movement of the derailleur.
3. Turn the crank arms with your hand. Use the gear shift lever to carefully move the chain to the outside chain ring.
4. Move the outer chain-guide approximately 0.5mm from the chain.
5. Tighten the high-gear limit-screw until it resists. If you have turned the screw too far, the front derailleur will rub on the chain or move the chain to a smaller chain ring.

TO ADJUST THE MIDDLE-GEAR POSITION WITH THREE CHAIN RINGS

1. Move the chain to the largest front chain ring and the smallest rear cog.
2. Turn the cable barrel-adjuster (on the down tube, the cable housing, or on the lever) to change the cable tension and align the inner cage of the derailleur until it touches the chain.

⚠ WARNING

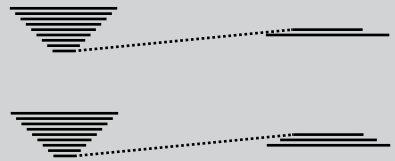
Lubricate your bicycle chain on a regular basis. Clean the chain after riding in wet muddy conditions, before lubricating the chain. Regular cleaning and lubricating of the chain will prolong its life span and other working parts of the gear system.

⚠ WARNING

To avoid excessive wear and damage of the chain, sprockets and chain wheels, we advise against the following combinations of gear ratios (see illustrations):

Largest chain wheel — largest sprocket

Smallest chain wheel — smallest sprocket



⚠ WARNING

Never shift a derailleur onto the largest or the smallest sprocket if the derailleur is not shifting smoothly. The derailleur may be out of adjustment and the chain could jam, causing you to lose control and fall.

CHAIN

The chain transmits power from the pedals to the rear bicycle wheel. It is one of the most stressed parts of a bicycle. Therefore its maintenance requires higher attention. The rear derailleur provides the correct chain tension.

The life of the chain can be prolonged by periodical chain cleaning from mechanical dirt (e.g. dust, mud). Oiling the chain with a Teflon oil is recommended for chain lubrication - your retailer will recommend an appropriate lubricant. The chain links will stretch overtime with riding. Worn and damaged chains can cause damage to the cassette sprockets and chainwheels. If the bicycle is used in hard terrain regularly (e.g. wet and muddy), the chain should be replaced with a new one every 1000 km. Replace the worn out chain with a new one, that is of the same type and has the same amount of links like the worn out chain has.

CABLES

On a bicycle with gear shifters, a cable connects the control lever to the derailleur. Each month check the cables for problems: kinks, rust, broken strands, or a frayed ends. Also check the cable-housing for loose wire strands, bent ends, cuts, and worn areas. If there is a problem with a cable or housing, do not ride your bicycle. Take your bicycle to your bike mechanic to be serviced.

BOTTOM BRACKET AND CRANKSET

After the first 20 km of riding on your new bicycle, you need to retighten the crank set bolts and also tighten the pedals to the crank arms.

Check if all the crank bolts are properly tightened. Check whether left crank arm Allen bolts are tightened firmly when the bottom bracket axle is integrated with right crank arm.

Both bearing cups of the bottom bracket parts must be firmly tightened in the frame. Check them periodically, mainly after riding in wet and muddy conditions. The bottom bracket parts must rotate without any friction.

TO CHECK THE BOTTOM BRACKET

1. Lift the chain from the chain rings.
2. Turn the crank arms so that they are parallel to the seat tube.
3. Put one hand on the crank arm and one hand on the seat tube. Try to move the crank arm towards and away from the seat tube.
4. Turn the crank arms.

If the crank feels or sounds loose, the movement stops suddenly, or you hear a grinding noise, do not ride your bicycle. The adjustment of the bottom bracket requires special tools and training. We advise that you take your bicycle to your local bike authorized dealer for servicing.

Overtime with riding the chain rings will become worn. Worn chain rings must be replaced with new ones. Please consult your local authorsized dealer on having the worn chain rings replaced.

⚠ WARNING

Not checking if the crank arms are securely fastened to the bottom bracket axle may result in the crank arms becoming loose, which will cause irreparable damage to the crank arms. Such damaged crank arms must be replaced with new crank arms. Please contact your authorized dealer to service and replace the crank arms. Pedals must be firmly fastened into the crank arms. Check that the pedals are securely fastened on a regular basis. Otherwise the pedals may become loose and the thread inside of the crank arm will be damaged. Above mentioned damages are not covered by warranty.

PEDALS

The pedals hold your feet so that you can rotate the crankarms. Check the pedals each month.

TO CHECK THE PEDAL BEARING ADJUSTMENT

1. While holding the crankarm with one hand, try to move the pedal up and down.
2. Turn the pedal.

If the pedals move on the crankarms or do not turn smoothly, do not ride your bicycle. The adjustment of the pedal bearings requires special tools and training. Take your bicycle to your authorized dealer for service because only your dealer should adjust bearings.

TO TIGHTEN PEDALS

The right pedal is threaded into the crankarm in the usual direction, but the left pedal is left-hand threaded. Tighten pedals into the crankarms to 40.2-42.9 Nm.

CLIPLESS PEDALS

Clipless pedals are intended for use with shoes specifically made to fit them and are designed to firmly keep the foot engaged with the pedal. Do not use shoes which do not engage the pedals correctly.

To adjust the release force on clipless pedals. Refer to the manual that came with your pedals or consult your dealer.

⚠ WARNING

Practice is required to learn to engage and disengage your feet safely. The technique requires concentration which can distract your attention and cause you to lose control and fall. Until engaging and disengaging your feet becomes a reflex action, practice engaging and disengaging clipless pedals in a place where there are no obstacles, hazards or traffic.

WHEELS

Bicycle wheels are designed to be removable for easier transportation and repairing of tyre punctures. In most cases, the wheel axles are inserted into slots, called “dropouts” in the fork or frame. Some mountain bike frames and suspension forks use a system called “thru-axle”.

Whenever you change a tyre or tube, make sure a rim strip is in the correct location and it fully covers all spoke holes or nipples so that it protects the inner tube from puncture. Always make sure that the wheel is inserted properly into the dropouts and is secure.

Each month, check tyres for a worn area or damage. Make sure there are no loose spokes or spokes with damage so that the wheel remains straight and strong.

Make sure the wheel (hub) bearings are correctly adjusted. To check the adjustment of the hub bearings:

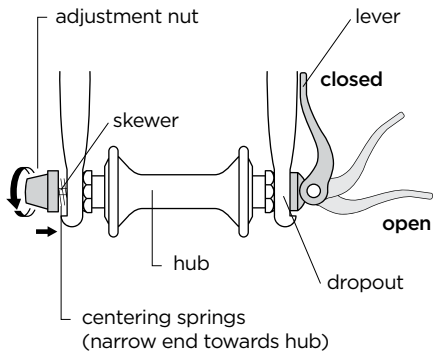
1. Lift the end of the bicycle off the ground with one hand and try to move the rim from the left to the right. Look, feel, and listen for a movement in the bearings.
2. Turn the wheel and listen for a grinding noise or other noises that are not usual.
3. Repeat these procedures for the other wheel.

If the hub feels loose or makes a grinding noise, servicing is required. The adjustment of the wheel bearings requires special tools and training. Only your Authorized dealer should adjust bearings.

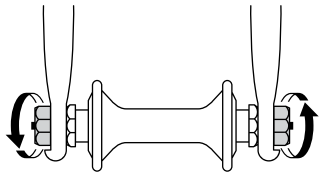
⚠ WARNING

A quick-release or other wheel attachment device that is not correctly adjusted and closed can cause the wheel to be loose or come off, decrease your control, and cause you to fall. Make sure the wheels are correctly attached before you ride your bicycle.

QUICK RELEASE AXLE



THREADED AXLE



WHEEL INSTALLATION

The method for installing a wheel varies according to the attachment type. It also is slightly different for a front or rear wheel.

These instructions discuss a front wheel. Choose the instructions for your wheel attachment type. For each type, the wheel (or the disc) must pass by the brake, and a rear wheel must engage the chain.

TO INSTALL A WHEEL WITH A TRADITIONAL QUICK-RELEASE

1. Move the lever of the quick-release to the OPEN position and set the wheel so it fully touches the inner surfaces of the fork ends.
2. With the lever in the adjustment position, tighten the adjustment-nut until it is slightly tight.
3. Lock the quick-release; with the lever in the palm of your hand, move the lever to the CLOSE position. When you move the lever to the adjustment position, you should feel some resistance. Do not turn the lever like a wing-nut to tighten it, this will not make sufficient force to hold the wheel.
4. If you can close the lever with little or no resistance, the clamp-force is not sufficient. Go back to Step 2 and tighten the adjustment nut.
5. Align the levers so they do not touch a part of the bicycle and so obstacles in the path of the bicycle can not catch the levers.
6. Do these tests to make sure you have correctly adjusted and locked the quick release. If the quick-release does not pass a test, adjust the quick-release again or take your bicycle to your dealer for service. Do the tests again before you ride.
   - Make sure the locked quick-release lever can not be turned.
   - Lift your bicycle and hit the top of the tyre with a solid blow. The wheel should not come off, be loose, or move from side to side.
   - Make sure the resistance is correct as you move the lever to the CLOSE position.

TO REMOVE A WHEEL WITH A TRADITIONAL QUICK-RELEASE

1. Release the quick-release lever; move it to the OPEN position.
2. Loosen the adjustment-nut a few turns.
3. Move the wheel out of the fork or the frame.

⚠ WARNING

If your bike is equipped with a rear coaster brake or roller brake; or if it has an internal gear rear hub, do not attempt to remove the wheel. The removal and re-installation of most hub brakes and internal gear hubs requires special knowledge. Incorrect removal or assembly can result in brake or gear failure, which can cause you to lose control and fall. CAUTION: If your bike has a disc brake, exercise care in touching the rotor or caliper. Disc rotors have sharp edges, and both rotor and caliper can get very hot during use.

TYRES

There are two main types of tyres:

- Standard or clincher tyre: the air inside the tyre is contained in an inner tube, and the tyre is on a standard rim.
- Tubeless or Tubeless ready tyre: there is no inner tube, and the tyre is on a special tubeless rim or a conversion kit has been used.

These instructions are written for standard clincher tyres. For instructions for another type of tyre, please consult your dealer.

USE THE CORRECT SIZE

When purchasing spare tyres, tubes, rim strips, or other replacements, use the size written on the side of the tire or consult your dealer.

TO REPAIR A TUBE PUNCTURE

Apply a patch to the puncture on the tube, or replace the tube.

⚠ WARNING

If your bike is equipped with a front disk brake, be careful not to damage the disk, caliper or brake pads when reinserting the disk into the caliper. Never activate a disk brake's control lever unless the disk is correctly inserted in the caliper.

TO REMOVE THE TYRE FROM THE RIM

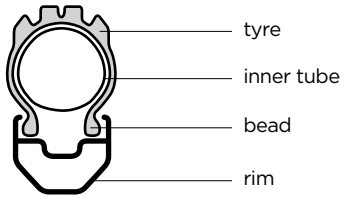
Remove the tyre from the rim with your hands or tyre levers. Do not use sharp objects such as a screwdriver to remove the tyre.

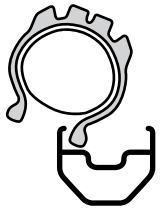
1. Deflate the inner tube completely.
2. Squeeze the tyre beads into the bottom of the rim well. Do this all the way around the wheel.
3. With a tyre lever, lift one tyre bead up and out of the rim. Start opposite the valve.
4. Continue around the wheel to lift the bead out until one bead is completely free.
5. Reach up into the tyre and remove the inner tube.
6. Remove the second tyre bead from the rim.

TO INSTALL A TYRE ON THE RIM

If you replace the tube or tyre, make sure the new tube or tyre is the same size as the old one, or consult your dealer for compatibility of different sizes. The size can be found on the side of the tyre.

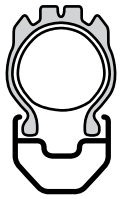
1. Place the first tyre bead onto the rim.
2. Inflate the tube until it begins to take shape.
3. Place the tube in the tyre.
4. Insert the valve stem through the hole in the rim.
5. With only your hands, push the second bead into the rim. Start at the valve stem. Do not to pinch the tube between the rim and the tyre.
6. Push the base of the valve stem up into the tyre so that it is not caught between a tyre bead and the rim.
7. Inflate the tyre to about half pressure and then check that the tire bead is properly seated in the rim.
8. Inflate the tyre to the pressure indicated on the side of the tire. Do not over-inflate.



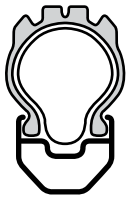


One tyre bead and tube out of the rim.

One tyre bead out of the rim, with other bead and tube in the rim.



Tyre beads seated in the rim hooks, with inner tube inside the rim.



Inflate the inner tube. Do not pinch the tube between the bead and rim.

⚠ WARNING

We highly recommend that you carry a spare tube when riding. Patching a tube is an emergency repair. If you do not apply the patch correctly or apply several patches, the tube can fail, resulting in possible tube failure, which could cause you to loose control and fall. Replace a patched tube as soon as possible.

TYRE PRESSURES

Tyre pressure is given either as maximum pressure or as a pressure range. How a tyre performs under different terrain or weather conditions depends largely on tyre pressure.

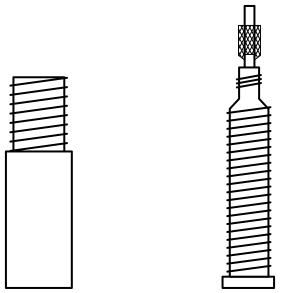
Inflating the tyre to near its maximum recommended pressure gives the lowest rolling resistance; but also produces the harshest ride. High pressures work best on smooth, dry pavement.

Very low pressures, at the bottom of the recommended pressure range, give the best performance on smooth, slick terrain such as hard-packed clay, and on deep, loose surfaces such as deep, dry sand.

Tire pressure that is too low for your weight and the riding conditions can cause a puncture of the tube by allowing the tyre to deform sufficiently to pinch the inner tube between the rim and the riding surface.

⚠ WARNING

For your safety and to prevent possible damage to your bicycle. Ensure that your bicycle tyres are always inflated to correct air pressure of the tyres according to the recommendation of the tyre manufacturer. The recommended tyre pressures are located on the side wall of the tyres. Over inflated air pressure will cause a harsh ride and may cause the tyre to burst. Under inflated air pressure can cause an unstable ride and can cause pinch flats, which may result in damage to the tyre and bicycle rim.



Schrader valve

Presta valve

VALVES

There are primarily two kinds of bicycle tube valves: The Schrader Valve and the Presta Valve. The bicycle pump you use must have the fitting appropriate to the valve stems on your bicycle.

These instructions are written for standard clincher tyres. For instructions for another type of tyre, please consult your dealer.

SCHRADER VALVE

The Schrader valve is like the valve on a car tyre. To inflate a Schrader valve tube, remove the valve cap and clamp the pump fitting onto the end of the valve stem. To let air out of a Schrader valve, depress the pin in the end of the valve stem with the end of a key or other appropriate object.

PRESTA VALVE

The Presta valve has a narrower diameter and is only found on bicycle tyres. To inflate a Presta valve tube using a Presta headed bicycle pump, remove the valve cap; unscrew (counterclockwise) the valve stem lock nut; and push down on the valve stem to free it up. Then push the pump head on to the valve head, and inflate.

To inflate a Presta valve with a Schrader pump fitting, you'll need a Presta adapter (available at your bike shop) which screws on to the valve stem once you've freed up the valve. Close the valve after inflation. To let air out of a Presta valve, open up the valve stem lock nut and depress the valve stem.

LUBRICATION

This section indicates the parts that you should lubricate, the frequency of service, and brief instructions. See your dealer for Recommended grease or oil. To service bearings, special tools and training are necessary, so only your dealer should do this. Some bearings are permanently sealed and do not require new grease each year.

SEATPOST

Each year apply new grease. Use the procedure for your frame and seatpost materials:

For a metal seatpost in a metal frame

1. Loosen the seatpost binder bolt, or release the quick-release, and remove the seatpost from the frame.
2. Clean the used grease off the seatpost.
3. Apply a thin layer of grease to the section of the seatpost that will be in the frame.
4. Put the seatpost into the frame.
5. Adjust the saddle to the correct height and align it. Tighten the seatpost binder-bolt or lock the quick-release.

For a carbon fiber seatpost, or any seatpost in a carbon fiber frame

1. Loosen the seatpost binder-bolt, or release the quick-release, and remove the seatpost from the frame.
2. Clean the seatpost and the inner surface of the seat tube with a soft cloth and clean water.
3. Let the seatpost dry. Apply new carbon grease and then put it into the frame.
4. Adjust the saddle to the correct height and align it. Tighten the seatpost binder bolt.

BOTTOM BRACKET

Each year, replace the grease in the bottom bracket bearings. To service bearings, special tools and training are necessary, so only your dealer should do this.

CHAIN

Each month apply lubricant to the chain. Always place a rag behind the chain to prevent lubricant on other parts of the bicycle. After you apply lubricant, wipe off the excess with a rag.

PEDALS

Each year, replace the grease in the pedal bearings. To service bearings, special tools and training are necessary, so only your dealer should do this.

Each year replace the grease on the pedal axles where they thread into the crank arms. There are right and left pedals, usually identified with a letter on the end of the pedal axle or on the wrench flats.

1. Remove the pedal-axles from the crankarms; turn the right pedal-axle counterclockwise, but turn the left pedal-axle clockwise.
2. Apply a thin layer of grease on the threads.
3. Install the pedals on the correct side; put the right pedal on the right crankarm and the left pedal on the left crankarm.
4. Tighten the pedal-axles.

MAINTENANCE

Please be aware of the fact that you have to follow the list of maximum tightening torques for screws/bolts at the end of this manual.

PLEASE CHECK BEFORE EVERY RIDE

- All bolts, nuts and screws, especially the quick releases of the wheels for proper fit.
- Stem and handlebar for visible damages. Please make sure that the bolts are tightened evenly when closing the front cap, according to the tightening torque recommendations.
- Braking systems
- Air pressure of the tires according to the recommendation of the producer.
- Handlebar grips to be securely fixed to the handlebar.
- The front suspension fork for play in the bushings and that it functions properly.

PLEASE CHECK ADDITIONALLY MONTHLY

- Chain wear and tension. Re-adjust if necessary, clean and grease the chain.
- Bottom bracket cartridge for play, if necessary replace it.
- Pedal bearings for play, if necessary replace them.
- Front and rear derailleurs for perfect function and grease them. If necessary re-adjust the gear system and clean it.
- The play movement of the headset. If necessary re-adjust it.
- Brake and shifting cables for wear and leakage on hydraulic systems. If necessary grease the cables. For damaged hydraulic cables, take your bicycle to a qualified bike mechanic for repairs and maintenance. Replace worn out or defective parts. Replace leaking hydraulic pipelines at once.
- Rims and tension of spokes. If necessary true them.
- Overall condition of the tyres.
- Frame for cracks or any damage.

BICYCLE CARE

We recommend periodical care of your bicycle in order to maintain the best functioning and aesthetics of your bicycle.

Regularly doing the simple steps below will maintain the value of your bike and help to prevent corrosion and other damages:

- Clean with a soft brush, water and soft towel. Do not use high pressure cleaners, otherwise bearings, colour or decals may become damaged.
- Do not use aggressive cleaning substances or chemicals.
- Repair any damage to the paint immediately.
- Grease or oil all metal parts especially during use in winter and muddy or dusty conditions.
- Regularly clean and lubricate the chain.

Please use biodegradable bicycle cleaners and degreasers which are available from your local dealer.

TROUBLESHOOTING

TROUBLE	REASON	SOLUTION
Fork shakes	- headset loose	- tighten and lock
Chain pops out	- derailleurs not adjusted	- adjust acc. to manual
	- chainwheel bent	- fix or change
Bearings squeak or crack	- bottom bracket	- replacement
	- pedals need grease	- dismount, clean, grease
	- hubs need grease	- dismount, clean, grease
Bearings are loose	- bottom bracket	- replacement
	- pedals	- tighten and lock
	- hubs	- tighten and lock
Handlebar cracks, shakes	- stem or handlebar bolts are loose or turns	- tighten all bolts and nuts
Seat post turns or slides	- quick release is loose	- retighten and lock
	- seat post diameter too thin	- check diameter
Front derailleur rattles	- bottom bracket loose	- tighten bottom bracket
	- not adjusted	- adjust
	- chainwheel bent	- fix or change
Suspension fork is loose		- contact your local dealer

RECOMMENDED TORQUE VALUES

The correct tightening torque of threaded fasteners is very important to your safety. Always tighten fasteners to the correct torque. In case of a conflict between the instructions in this manual and information provided by a component manufacturer, consult with your local bicycle dealer or the manufacturer's customer service representative for clarification.

Bolts that are too tight can stretch and deform. Bolts that are too loose can move and fatigue. Either mistake can lead to a sudden failure of the bolt.

Always use a correctly calibrated torque wrench to tighten critical fasteners on your bicycle. Carefully follow the torque wrench manufacturer's instructions on the correct way to set and use the torque wrench for accurate results.

SEATOST	Nm
Fixing Bolt	20 - 25
SEATPOST-SEATCLAMP	**Nm**
M4	3 - 4
M5	5 - 7
M6	6 - 9
STEM	**Nm**
M5 Mounting Bolt	6 - 8
M6 Mounting Bolt	10 - 13
FSA K-Force	8
REAR DERAILLEUR	**Nm**
Fastening Bolt	8 - 10
Cable Fixing Bolt	5 - 7
Pulley Fixing Bolt	3 - 4
FRONT DERAILLEUR	**Nm**
Clamp Bolt	5 - 7
Cable Fixing Bolt	5 - 7
HUBS	**Nm**
QR Lever	9 - 12
Lock Nut for QR Type Axle	10 - 25
Thru-axle Rear	15
15mm Thru-axle Front	11.9
Lock Nut Axle	23

CHAINWHEEL	Nm
Chainring Fixing Bolt	8 - 11
SRAM Crank Arm Fixing Bolt	48 - 54
Shimano Crank Arm Fixing Bolt	35 - 50
(For Hollowtech® Crank And Bottom Bracket)	
Shimano Front Chain Wheel Crank Arm Fixing Bolt (8mm Allen Key)	45-55
Shimano Crank Arm Fixing Bolt	45 -55
Cromo Chainring Bolts	12
Aluminium Chainring Bolts	10
BOTTOM BRACKET	**Nm**
Shimano	49 - 69
SRAM	34 -41
Bottom Brcket Alloy Cups	39 -49
DISC BRAKES	**Nm**
Caliper Bolt (Fixation to frame) - Front Wheel	9 - 10
Caliper Bolt (Fixation to frame) - Rear Wheel	5 - 7
Disc (rotor) Fixing Bolts	4
Brake Lever Clamp Bolt	4 - 5
BRAKES	**Nm**
Fasterning Bolt (V-brake)	5 - 9
Fasterning Bolt (Road-brake)	8 - 10
Cable Fixing bolt	6 - 8
Brake Pad Fixing Bolt	5 - 7
Brake Lever Clamp Bolt	4 - 5
Shifter / Brake lever (Road-brake)	7.9
BOTTLE CAGE	**Nm**
Bolts (Aluminium Frame)	5
Bolts (Carbon Frame)	3
PEDAL	**Nm**
Pedal Axle	34

INTRODUCTION

Your TITAN RACING bike was manufactured with care and delivered to you by your TITAN RACING dealer fully mounted.

To smoothly handle your claim, it is necessary that you present your receipt when doing a claim. Therefore, please keep this document in a safe place.

To ensure a long service life and good durability of your bike, use its intended purpose. Make sure to also observe the specifications as to the allowable loads. Please ensure the use of a certified helmet at all times while riding your bicycle.

A NOTE ON WEAR

Some components of your bike are subjected to wear due to their function. The rate of wear depends on care and maintenance as well as on the way in which you use your bike (kilometers travelled, rides in the rain, dirt, salt etc.). Bikes that are often left standing in the open may also be subject to increased wear through influence of weather.

These components require regular care and maintenance. Nevertheless, sooner or later they will reach the end of their service life, depending on the conditions and intensity of use. Parts that have reached their limit of wear must be replaced.

This concerns:
- The chain
- The brake cables
- The handlebar grips/tape
- The chainwheels
- The paint
- The sprockets
- The chain rollers
- The gear cables
- The tires
- The saddle covering
- The lubricants
- The brake pads

CHAIN

Due to its use the chain is subject to wear and tear. This depends on maintenance and conditions of use of the bike (amount of kilometers, rain, dirt, etc.). Cleaning and greasing will help to prolong its life but you will have to replace the chain when reaching the wear limit.

BRAKEPADS

All brake pads, no matter if rim-brake, disc-brake or internal brake are inherently subject to wear. If you use your bike for competitive cycling or in hilly terrain, they may have to be replaced quite frequently. Check your brake pads regularly and have them replaced by your TITAN RACING dealer, if necessary.

RIMS OF BIKES WITH V-BRAKES OR HYDRAULIC CALIPER BRAKES

Braking causes wear not only to the brake pads but also the rims. Therefore check your rims regularly. Some rims have wear indicators, such as rings, colored makes or grooves, which become visible when the rim has reached its limit of wear. Take note of the specifications given on the rim. Ask your TITAN RACING dealer to examine the rims at the latest when you are through your second set of brake pads. Signs of deformation or fine cracks that appear in the sides of a rim indicate that the rim has reached the end of its service life. In this case, the rim must be replaced.

BEARINGS AND SEALS OF SUSPENSION FORKS

Seals and bearings are constantly in motion when the frame is subject to changing loads. These moving components are inherently subject to wear through the influence of weather (rain, dirt) and must therefore be cleaned and serviced regularly by your TITAN RACING dealer. However, depending on the intensity of use, these parts may wear down to a point where they have to be replaced, e.g. when bearings become slack.

SPROCKETS, CHAINRINGS AND PULLEYS

Due to its use sprockets, chainrings and pulleys are subject to wear and tear. This depends on maintenance and conditions of use of the bike (amount of kilometers, rain, dirt, etc.). Cleaning and greasing will help to prolong its life but you will have to replace the chain when reaching the wear limit.

TYRES

Due to their frequent use of tires, they are subject to wear and tear. This depends on the use of the bike and is influenced by the riding style. Aggressive braking will reduce the lifetime of the tire dramatically. In addition check the air pressure regularly and inflate the tire according to the pressure recommended by the producer of the tire which is imprinted on the sidewall of the tire.

SHIFTING AND BRAKE CABLES

All cables must be checked regularly and changed if necessary. This can happen especially when the bike is often standing outside or exposed to weather.

HANDLEBAR GRIPS

Due to their use handlebar grips are subject to wear and tear, and should be replaced immediately in case they do not fit anymore to the handlebar or get loosen.

HANDLEBAR, STEM AND SEAT POST

Handlebar, stem and seat post are under high stress forces while riding. Please check these parts regularly for visible cracks or damages and replace them if necessary.

SUSPENSION FORK

Due to its use the suspension fork is subject to wear and tear. This depends on maintenance and conditions of use of the bike (amount of kilometers, rain, dirt, etc.). Cleaning regularly will help to prolong its life but note parts will have to be replaced when reaching the wear limit.

WARRANTY AND GUARANTEE

GUARANTEE ON TITAN RACING BIKES

Your TITAN RACING BIKE carries a 5-Year Multi-User Warranty from the purchase date of the original owner. This warranty is transferable to all subsequent owners within its 5-year lifespan. In order to take advantage of Titan Racing's unique 5-year multi-user warranty, the original owner must:

- Register the bike online within 30 days of purchase. To register your bike visit: www.titanracingbikes.com/register-your-bike/
- Keep the original proof of purchase.
- Pass on the proof of purchase to subsequent owner(s).

In the event that a warranty claim arises, the current owner will need to substantiate the claim by providing the proof of purchase along with the affected product being claimed. If the bike is not registered, the multi-user warranty is not applicable and the standard 5-year warranty remains valid to the original owner only.

Warranty claims will only be accepted if:

- The bicycle has been used ONLY for its intended purpose.
- Had an inspection during its first 500km or the first six months after purchase.
- The original spec has not been changed/adapted.
- The bicycle has had its suspension system serviced required service intervals.

In a warranty-activating event, TITAN RACING BIKES reserves the right to provide a frame of the current successor model in an available colour or, if no such frame is available, a higher grade model.

Warranty claims for suspension forks, Shimano components or other branded accessories will not be processed by TITAN RACING BIKES, but by the component manufacturer's national distributor. Your direct contact in any case should be your TITAN RACING dealer, who will assist in this regard.

The warranty does not cover labour and transport cost, nor does it cover follow-up costs resulting from defects.

The warranty does not apply to bikes that have been used for jumps or have been subjected to any other kind of overstress.

The warranty does not cover damage resulting from:
- Wear and neglect (insufficient care and maintenance).
- Accidents or overstress caused by overloading, incorrect mounting or improper treatment.
- Damage resulting from changes to the bicycle (e.g. mounting or alteration of additional components).

Diligent compliance with the manufacturers' mounting instructions and the prescribed maintenance intervals is crucial for your bike to enjoy a long service life and good durability of the bicycle's components.

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