TIGER

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OWNERS MANUAL

Owner Details

Please fill in this part of the manual as soon as possible for security and maintenance reasons:

Model Name: .....

Frame Number: .....

Purchase Date: .....

Dealer Name: .....

Dealer Address: .....

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Contents

IMPORTANT ASSEMBLY GUIDE

To ensure your bike is fit for the road, please follow the instructions below.

1 To Position Handlebars

Insert stem into frame. Align and tighten Bolt A. Slacken Bolt B to rotate handlebar to preferred position and tighten with 6mm Allen Key, after securing firmly press plastic covering cap into stem top (Bulge stem only).

2 To Adjust Brakes

Adjustment is affected by turning the lever mounted adjusters marked C, after having fitted cable as instructed in service manual.

4 Tyres

Inflate to pressure as instructed on side wall of tyre with a manual inflater. DO NOT use compressed air from filling station.

6 Reflectors

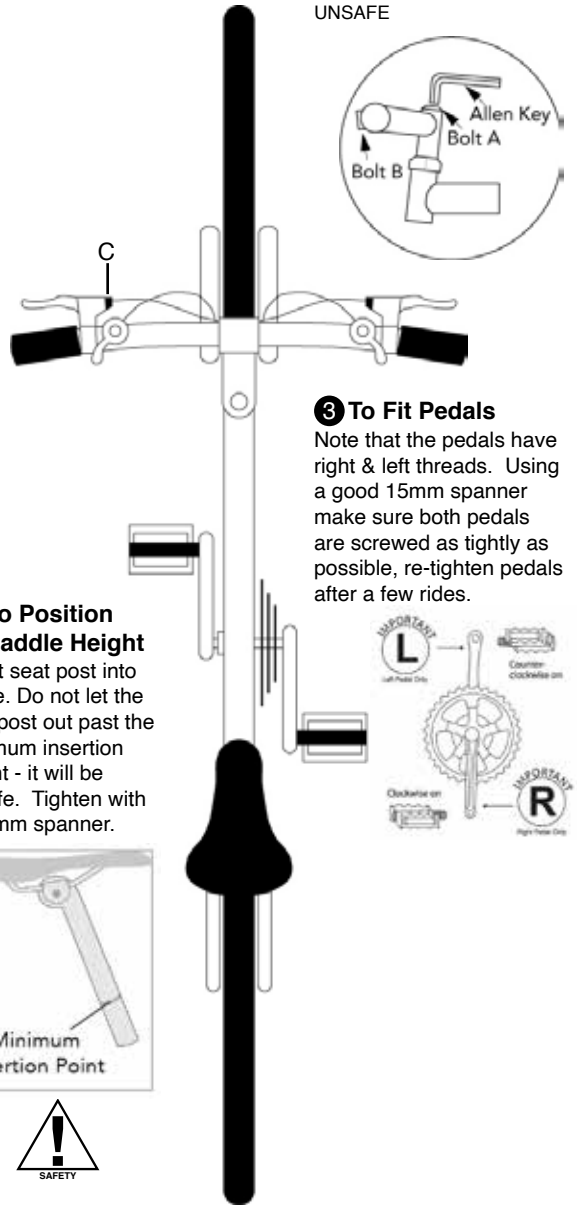
Slide RED reflector over Rear bracket until peg “A” engages in hole “B”. Slide CLEAR reflector over Front bracket until peg “A” engages in hole “B”.

7 Remember

1. Check and re-tighten all bolts after the first few weeks of cycling.
2. Your bike is a machine which you take on the road. Please keep it in good order and be safe.
3. Always oil all moving parts sparingly, but regularly, particularly - Chain and Front and Rear Gear mechanisms.
4. Do not ride with your tyres under inflated or you may crack the tyre wall and/or damage the wheel rim.

SAFETY

DO NOT RAISE THE HANDLEBAR STEM PAST THE MAXIMUM EXTENSION POINT CLEARLY MARKED ON THE STEM - IT WILL BE UNSAFE



3 To Fit Pedals

Note that the pedals have right & left threads. Using a good 15mm spanner make sure both pedals are screwed as tightly as possible, re-tighten pedals after a few rides.

5 To Position Saddle Height

Insert seat post into frame. Do not let the seat post out past the minimum insertion height - it will be unsafe. Tighten with a 13mm spanner.

SAFETY

IMPORTANT ASSEMBLY GUIDE

To ensure your bike is fit for the road, please follow the instructions below.

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Turn the bars through 90°. Align and tighten Bolt A

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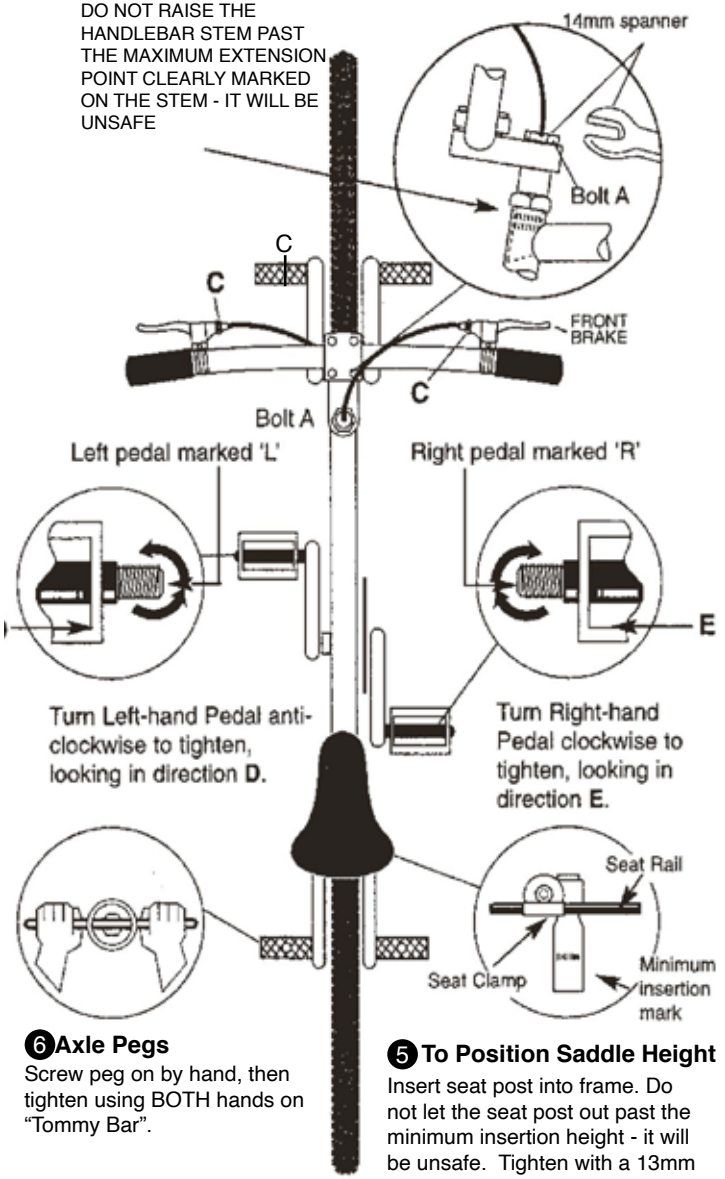


6 Axle Pegs

Screw peg on by hand, then tighten using BOTH hands on “Tommy Bar”.

5 To Position Saddle Height

Insert seat post into frame. Do not let the seat post out past the minimum insertion height - it will be unsafe. Tighten with a 13mm spanner.

About This Manual

This instruction manual has been produced in a manner that will enable you to obtain maximum pleasure from riding your bicycle, in a safe and comfortable way. The manual advises on safety tips, explains technical points, and gives clear instructions for the maintenance and adjustment of the carious parts and systems. The rapid advances in bicycle technology are sophisticated, but these advances are designed in a user friendly manner, simplifying adjustment and maintenance. It is highly probable that since your last bicycle purchase, changes will have been introduced in the various control systems and will be new to you, so it si strongly recommended that time is taken to read through this manual in order to minimise problems in your first ride.

Keep this manual in a safe place and be sure to complete the back page with frame number details, dat of purchase and the name of you supplier.

Safety

Your bicycle has been designed to comply with the requirements of British Standard 6102 part 1. The standard covers all points of safety for bicycles designed for use as a leisure mode of transport on road and cycle track. For your bicycle to continue to comply with this safety standard, it is essential that it is regularly lubricated, maintained and adjusted. The bicycle has not been designed to competition, stunt or trick riding in any way, neither does the standard cover such use. It must be repeated that using the bicycle in such a manner will invalidate the manufacturers guarantee.

Bicycle Safety Tips

A thorough weekly check on the following points is essential, and in addition the points should be checked prior to each time the bicycle is used.

(1) Wheels are to be secured in the forks and rear drop-outs.
(2) Wheels are true with teh hubs correctly adjusted free from side play.
(3) Both brakes operate correctlt.
(4) Steering is free with no excess play (when pushed forward and back with the front brake applied).
(5) Tyre are in good condition, and inflated to the pressure shown on the tyre wall.
(6) Gears are correctly adjusted.
(7) Pedals and pedal cranks are securely tightened.
(8) All nuts and bolts are tight(Torque settings, a measure of tightness, are given in the manual. Your dealer will give you practical advice on these settings).
(9) Your riding position in comfotable.
(10) Practice braking, gently first, then more fiercely in order to understand the braking systems capabilities.

It is your responsibility to ensure that the bicycle is in a safe working condition before riding.

Safe Riding Tips

(1) Always wear a protective cycling helmet.
(2) Always select a gear which enables you to pedal at about seventy revolutions a minute (similar to your resting heart beat). This will give you better control of your bicycle and make it easier to accelerate as you cycle along. Remember, with the correct use of the grearing system, cycling is five times more efficient than walking.
(3)Familiarise yoursekf with, and observe the cycling regulations and advice given in the Highway Code.
(4) Make sure that none of your clothing can be caught in the wheels or chain drive.
(5) Always ride defensively, be on your guard, and continually be expective problems and hazards to occur.
(6) Obey all traffic regulations and local bylaws and rules.
(7) Use cycle lanes whenever possible.
(8) Regularly glance over your shoulder to observe traffic approaching you from the rear, and always do so before giving a hand signal.
(9) Give other road users clear hand signals in good time, to advise them of your intended action.
(10) Be alert to cars pulling out into your path, and doors on parked cars being opened in your path.
(11) Observe the orad surface ahead avoiding potholes and drains.
(12) Never carry a passenger.
(13) Never hold onto a moving vehicle, or a stationary vehicle when stopped in traffic.
(14) Always ride in single file.
(15) Don't ride too close to another vehicle (bikes included).
(16) Never hang bags or clothing on the handlebars. They will affect your steering.

Riding Conditions

Extra caution is required when riding in wet or icy conditions. Your braking performance will be affected by water on the braking surfaces and between the tyres and road surface. Stopping distances may well be doubled or even trebled, so a greater anticipation of stopping or slowing is required.

Minimise the time spent cycling in the dark, should you have the need to do so the law requires that your bicycle is fitted with the front and rear reflectors and two wheel reflectors supplied, and in addition front and rear lights which comply with BS6102 part 2.

It is recommended that light coloured, preferable reflective garments are worn when riding in the dark.

Maintenance

As the bicycle is sometimes thought of as “just a bike”, its maintenance is often forgotten or entrusted to a young child by its parents without a second thought. However, to keep cycle properly maintained requires some time and skill. The effort will be worthwhile, as a well looked after cycle will last longer and be easier to ride. Cycle maintenance often entails jobs that require specialised skills and equipment, and for this reason we recommend your cycle is fully serviced by your Cycle Dealer at least once a year or more often if subjected to heavy use.

Regular Cleaning

To keep your cycle running smoothly, all moving parts must be free from dirt. Use warm soapy water on alloy, chrome and enamel parts. Always rinse with clean water and dry with a cloth, then wipe with a lightly oiled cloth. Keep the chain, derailleurs and rear sprockets clean by wiping down regularly with a rag. You may find an old stiff toothbrush usefull to remove stubborn grit and grime.

Lubrication

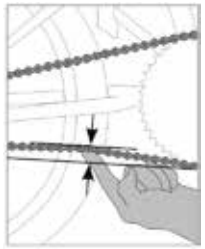
Keep your cycle in good condition by oiling and greasing regularly. As the greasing of bearings requires dis-assembly and the use of special tools, we recommend that you leave this task to your Dealer. Have all bearings greased once a year.

Note: Avoid vegetable based oils and over lubricating, as this will collect dirt and grit.

Warning: Keep all oil and grease off the rims, brake block and tyres.

Chain Adjustment

Always keep your chain well lubricated. If your chain does not run smoothly, it may be due to a stiff link. If this is so, identify the link and flex the chain back and forth to loosen the link.



Check the chain tension once a month. When grasped in the middle of the chain run between the chainwheel and freewheel, there should be from 6mm to 12mm vertical movement. To adjust tension, slacken wheelnuts, pull back wheel, them retighten nuts to recommended torque checking that the wheel is central between the chainstays.

Security

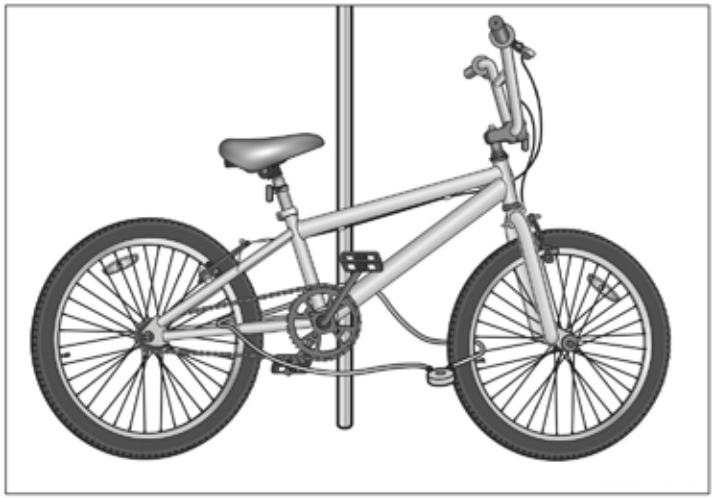
Beware! Your bicycle may be stolen if lever left unattended and unsecured.

Each year thousands of bicycles are stolen and most are never recovered, and insurance may well be invalid if your cycle is not securely locked.

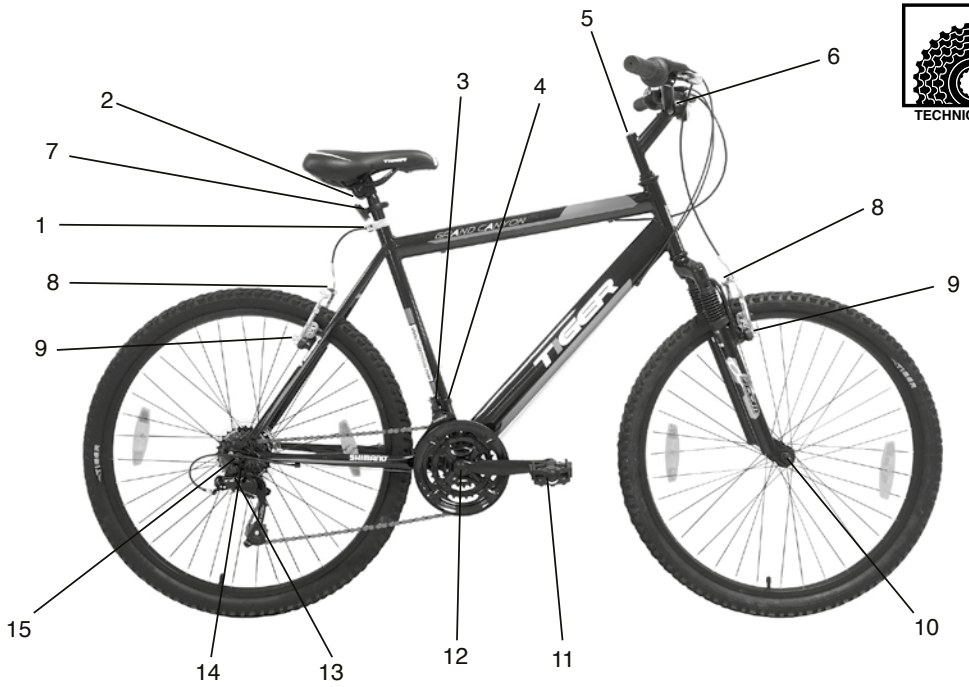
Always use a heavy duty chain or purpose made lock, and whenever possible secure your bicycle to a post or fixed object. Thread your chain through as many parts of the bicycle as possible and before leaving it , remove all removable parts. You cycle dealer will be able to offer a wide range of locks and clamps.

Every cycle has its own individual Frame Number. Your dealer will indicate where this can be found.

It is also recommended that you have your bicycle marked with your home Post-Code. Ask you Dealer or local Police station for details. If stolen the code will assist the Police in returning your bicycle should they recover it, and in addition will assist the police by giving them possible leads in the movement of stolen bicycles.



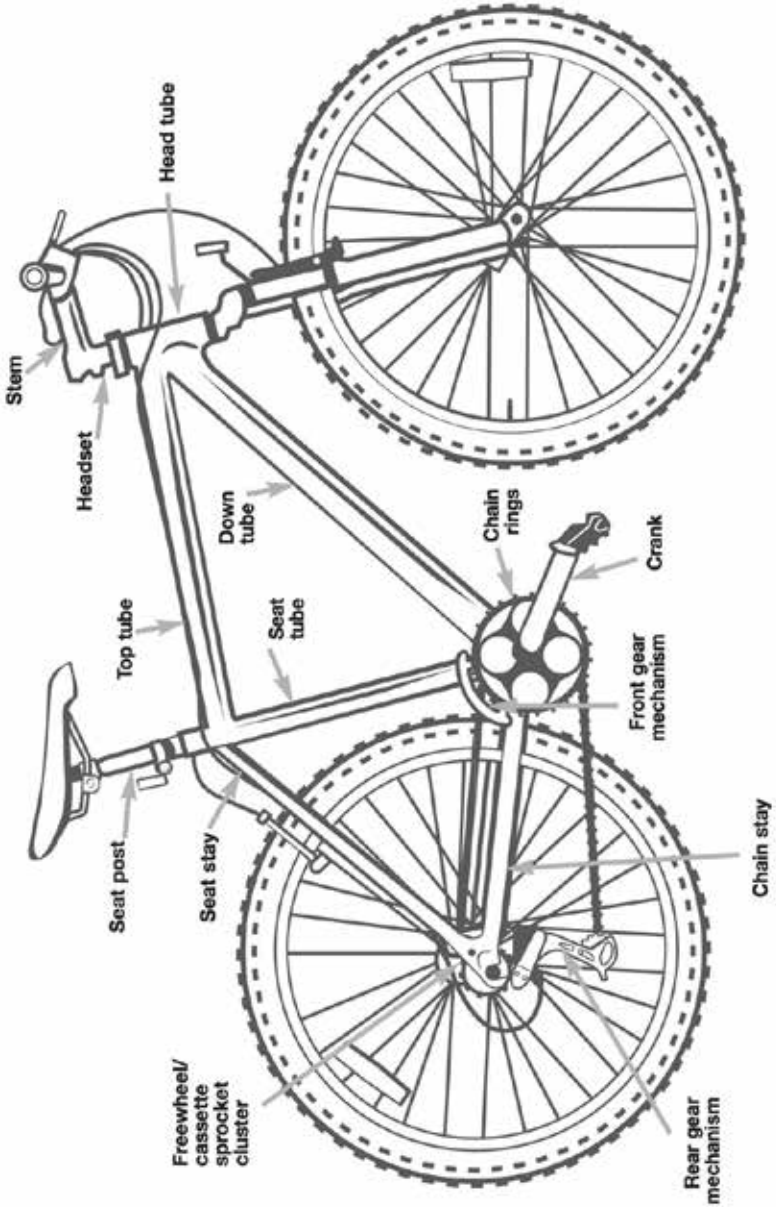
Recommended Torque Measurements



	DESCRIPTION	TORQUE
1	Seat Pin (Domed Nut)	17 Nm
2	Saddle Clamp Bolt	20 Nm
3	Front Derailleur Cable Fixing Bolt	5 -7 Nm
4	Front Deraillur Clamp Bolt	5 -7 Nm
5	Stem Expander Bolt	20 Nm
6	Stem Binder Bolt	25 Nm
7	Front & Rear Reflector Mounting Bracket	3 Nm
8	Front & Rear Brake Cable Fixing Bolt	6 -8 Nm
9	Front & Rear Brake Fixing Bolt	5- 7 Nm
10	Front Axle Nut / QR Axle	30 Nm / 5 Nm
11	Pedal	40 Nm
12	Front Chainwheel Fixing Bolt	35 - 50 Nm
13	Rear Derailleur Cable Fixing Bolt	5 -7 Nm
14	Rear Derailleur Fixing Bolt	8 -10 Nm
15	Rear Axle Nut / QR Axle	30 Nm / 5 Nm

Know Your Bicycle

Typical "Diamond" Frame



Basic Adjustments

This section gives instructions in the way that the various systems built into the bicycle can be adjusted and reset. They should be used in conjunction with any additional technical instructions supplied along with this manual. Should these instructions by inadequate for your needs, then please consult your Dealer.

With the exception of the period of the original setting up of the handlebars and saddle height, it is recommended that the bicycle is supported on a mechanics stand or suspended by the saddle and handlebars to facilitate adjustment and maintenance.

Saddle

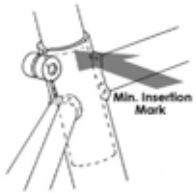
It is important both from a safety and comfort aspect to ensure that the saddle if set to the correct position. The saddle should be level, and with the height set at such a level that when seated and with the pedal at its lowest position with the ball of your foot on it, your leg is not quite straight and is able to move forward and backwards.

Two styles of seat post are used:

Traditional Clamp Type The clamp attached to the saddle wraps around the seat post and clamped by a bolt and a 13mm nut. Slackening the bolt allows the saddle to be adjusted in all plains.
Re-tighten when the required position is established.

Mirco Adjust The seat post holds the saddle by the frame using a 6mm Allen bolt. This type allows a more accurate level position to be obtained and is a neater design than the traditional type. Adjustment is achieved by slackening the 6mm Allen bolt swinging the saddle to the correct position, then re-tighten the clamping bolt.

The seat must not be raised above the level of the “Minimum Insertion” mark, which is marked on the seat post.

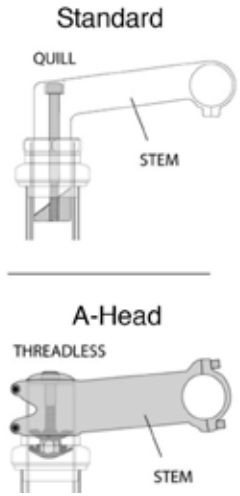


The “Minimum Insertion” mark must not be visible. It identifies the highest level to which the saddle can be safely raised.

A slight alteration to your reach is possible by slackening the saddle clamp, and sliding the saddle to a more suitable position.

Handlebar Assembly (Handlebars and Stem)

Two styles of handlebar stems are used:



Standard Held in place with a centre bolt, and whose height can be adjusted up to the level of the “Minimum Insertion” mark on the vertical tube of the stem. Its only function is to secure the handlebars to the fork steerer tube.

“A-Head” type whose height cannot be adjusted. It has a centre bolt and either one or two bolts on the side adjacent to the centre bolt. It is lighter by design than the standard type, and combines the functions of setting the headset (steering) bearing tightness, and clamping the handlebars to the forks.

Standard Assembly

To adjust the height or radial position of the handlebars, slacken off the bolt in the centre of the stem with an allen key. If necessary, tap the bolt gently and it will slide into the stem, slackening the assembly. The handlebar height can then be adjusted up to the “Minimum Insertion” mark on the stem.

The “Minimum Insertion” mark must never be visible. The mark indicates the highest safe position to which the stem may be raised.
Re-tighten the stem, ensuring that the handlebars are set at 90o to the front wheel.

“A-Head” Type Assembly

On no account should an attempt be made to alter the height of this type of handlebar stem. Any attempt to raise the handlebars will loosen the steering bearings and render the cycle unsafe.

To adjust the radial position of the handlebars, slacken off the one/two bolts on the side of the stem, adjust the position then re-tighten.

Handlebar Position

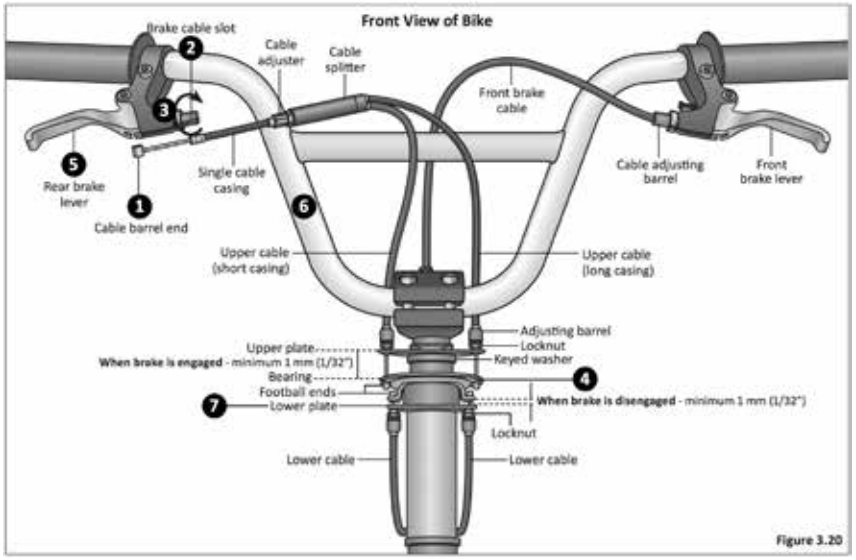
As a general guide, the top surface of the brake levers should follow the line from your shoulder to your hand.

With either system, in order to rotate the handlebars to obtain a more comfortable riding position, slacken off the one/two bolts which clamp the handlebars to the stem, and re-position. Re-tighten the clamping bolts ensuring that with the two bolt clamp, the two bolts are tightened equally.

Rotor Cable Installation and Adjustment

Some BMX bicycles are equipped with a Gyro for the rear brake. If the upper cable is not already assembled perform the following steps.

1. Insert the cable barrel end into the right (rear) brake lever.
2. Adjust the brake lever adjustment barrel so that the slots line up with the brake lever and insert the upper cable through the brake barrel slots.
3. Rotate the barrel so that the slots are no longer in line. Note: One of the upper cable casings is shorter than the other. The shorter side should be on the right. This is the shorter distance between the brake lever and the upper detangler plate.
4. Thread the adjusting barrels in on both sides and hook the cable end into the bearing unit. Note: The lower cable should already be hooked into the lower tabs of the bearing unit.
5. Next try squeezing the brake lever several times to be sure all the cables are seated in the adjustment barrels. If there is excess play before the brake cable starts to move, this can be adjusted by unscrewing one or more of the adjustment barrels.
   a. First adjust the barrel adjuster at the mid point of the upper cable until the brake lever does not have any free play.
   b. Next squeeze the brake lever and allow it to return.
   c. Check to see if the bearing unit bottoms out on the lower Gyro plate. If so, unscrew the adjustment barrel further until the bearing unit sits about 1mm above the lower plate. This is the correct position for the bearing unit.
6. Rotate the handlebars back and forth and then turn them completely around 60 degrees. Note if the bearing unit spins quietly, or if it "flops" back and forth. If it has any flop, this can be fine-tuned with the four adjustment barrels in the upper and lower detangler plates. The goal is to reduce or eliminate as much of the flop as possible, while keeping the brake function consistent.
7. Turn the handlebars 60 degrees and note whether the plate flops forward and back, or if it flops the same way. If it flops forward and back, adjust the upper cable barrel adjusters until the flop is reduced. If the flop is the same way, then adjust the lower cables until the flop is reduced. Sometimes both need to be adjusted. The best thing to do is to adjust the lower cables first until the bearing unit has an equal gap on the left and right sides, then adjust the upper barrel adjusters until the flop is minimal or none at all.
8. Follow the brake adjustments for the type of brake the bike is equipped with (linear pull or caliper brakes).



Cable installation and adjustment should only be done by a qualified mechanic

NOTE: Check to make sure all 11 cable casing ends on the upper and lower cables are seated correctly, and that the spring tension of the rear brake is pulling the Gyro bearing down.

Adjustment

1. Screw the cable adjuster on the brake lever and the cable adjuster located in the cable splitter of the supper cable all the way in.
2. Set the bearing position for the maximum travel with the adjusting barrels in the upper plate. Screw them in (or out) until the bearing is as far down as it can go without resting on the lower plate or the adjusting barrels screwed into the lower plate.
3. Use the adjusting barrels that are screwed into the upper plate to make the bearing parallel to the upper plate. Use a wrench to tighten the locknut on the left adjusting barrel of the upper cable. Leave the right one loose.
4. Screw the adjusting barrels on the lower cable into (or out of) the lower plate until they are close to the bearing as they can get without touching the bearing.
5. Screw the cable adjuster located on the cable's splitter of the upper cable out until all the slack is removed from the cupper cable. Now screw the adjusting barrel out one more turn to raise the bearing and additional 1mm (1/32") away from the lower plate.

CAUTION: Don't screw the cable adjuster located on the cable splitter of the upper cable out more than 8mm. if more adjustment is needed, use the cable adjuster that is screwed into the rear brake lever.

6. Check that the bearing flop by placing the handlebars in the normal riding position, then quickly rotating the handlebars back and forth (about 1/8th turn)> Perform the following steps to eliminate bearing flop.

NOTE:

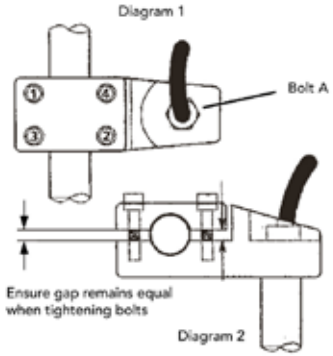
The Gyro bearing should never be allowed to rest on the lower plate or the adjusting barrels screwed into the lower plate.

a) Screw the adjusting barrels on the lower cable out (or into) the lower plate until the bearing flop is eliminated (checking bearing flop as described in step 6).
b) Tighten the locknut on the left adjusting barrel on the lower cable.
c) Rotate the handlebars 180 degrees and recheck for bearing flop. If there is any bearing flop, use the loose adjusting barrels on the upper cables to remove it.
d) Repeat steps 6a and 6c until the handlebars can be rotated 360 degrees without any bearing flop.
e) Tighten the loose locknuts and recheck for bearing flop by rotating the handlebars 360 degrees.

7. Finish adjusting the rear brakes.

BMX Handlebar Assembly Instructions

1. Slacken bolt A, whilst supporting the handlebar stem to permit the stem to be turned to the correct forward pointing position without damaging the rear brake cables.
2. When in the correct forward pointing position, set the stem below the minimum insertion mark.



Retighten bolt "A" firmly with the spanner supplied.

3. Slacken the four clamping bolts to permit the handlebars to be rotated upwards to the desire riding position.
4. The handlebars are secured onto the stem using four allen bolts. It is important that all four bolts are tightened by the same amount (diagram 1.) shows the stem and the four bolts looking from the top and indicate the order in which they should be tightened.
5. The bolts should be tightened one full turn at a time so that the gap between the top plate and the stem body is equal all the way around the stem (see diagram 2). The bolts should all be tightened securely using the allen key supplied to the tightening torque given in the manual.

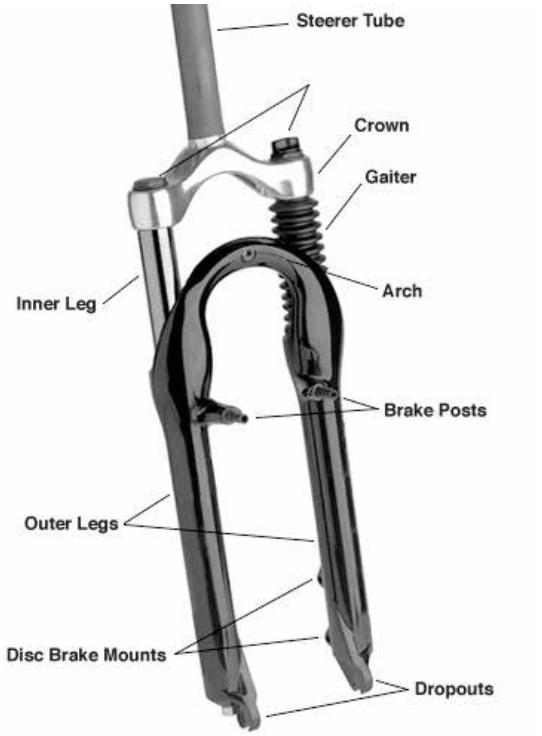
Frame and Forks

The most obvious visual changes to bicycles over the last few years are in the frame and fork design. While the traditional rigid “Diamond” design is still popular, it is now available with telescopic suspension forks. The forks may be standard mounting, that is with a single tube fitting through the head tube of the frame similar to rigid forks, or “Triple Mount”. This type are based on motor cycle forks with the fork blades continuing through the fork crown to be secured at a second location at the top of the frame head-tube. This type has a greater compression range than the standard.

Suspension Fork Care

Neither type of suspension forks can be adjusted, but for a long reliable life, ensure that the foam or bellow type gaiter at the top of the forks (if present) remains in good condition, with the chrome tube regularly wiped with an oily cloth. The purpose or the gaiter is to prevent the ingress of grit and dirt into sliding tubes of the suspension units.

Standard Mount Suspension Fork



Headset (Steering) Bearings

Standard Stem To adjust the headset bearings, use two spanners, one to hold the top bearing track whilst the second spanner is used to slacken off the top locking nut. Re-adjust the bearing housing then secure by tightening the locking nut until no movement can be felt in the head bearing when the bicycle is pushed forward and backwards with the front brake applied. Check the tightness of the bearing by turning the handlebars from side to side through its full riding range. Re-adjust if required. Finally, lift the front wheel about two inches off the ground and drop it to the floor. If the bearing is too slack, a slight knock will be heard, if so re-adjust.

“A-Head Type” To reset the stem radial position, when re-setting the steering bearings or adjusting the handlebar radial position, first slacken off the one/two bolts on the side of the stem, then the centre bolt on the top of the stem. Re-tighten the centre bolt until no movement can be felt in the head bearing. Re-tighten the bolts on the side of the stem ensuring that the handlebars are set at 90o to the front wheel. Check the tightness as for the standard stem.

Bottom Bracket Spindle Bearing and Chainwheel

Most bottom bracket bearings are adjustable. Cartridge type bearings are not. Usually an adjustable bearing has a chrome locking ring on the left-hand side bearing cup. To adjust an adjustable bearing, slacken off the chrome locking ring using a “C” spanner. Adjust the left-hand cup until all movement is removed, then re-tighten the locking ring.

The chainwheel and pedal cranks are held in place with either a bolt or nut screwed onto, or into, the spindle. Tighten the nut/bolt using a torque wrench to a torque of 45Nm.

N.B. Having re-fitted or adjusted the retaining bolts, check the torque (tightness) after the first ride to ensure that the assembly has not bedded in, and slackened off the retaining torque. This operation should be repeated monthly.

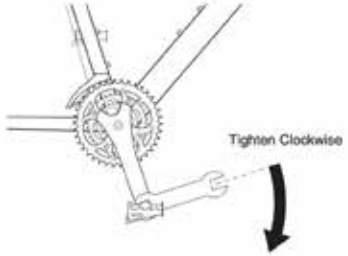
Should a complete overhaul of the bearing assembly be carried out to replace or grease the bearings, note that a special extractor tool will be required to remove the crank and chainwheel. In addition be aware that the right-hand bearing cup has a left-hand thread. This means that to un-fasten the cup it must be turned in a clockwise direction, as opposed to the left-hand cup which has a normal right-hand thread, and unscrews in an anti-clockwise direction.

Pedals

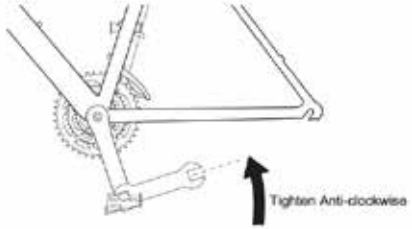
MAINTAINANCE

Regular checks on the tightness of the pedal fit into the cranks should be carried out. It will be noted that the right-hand pedal is marked with a letter “R” on the spindle end, indicating that it has a right-hand thread and must be screwed in and tightened to a torque of 30Nm in a clockwise direction. The left-hand pedal is marked with an “L” and should be tightened in an anti-clockwise direction to the same torque setting.

Right Pedal



Left Pedal

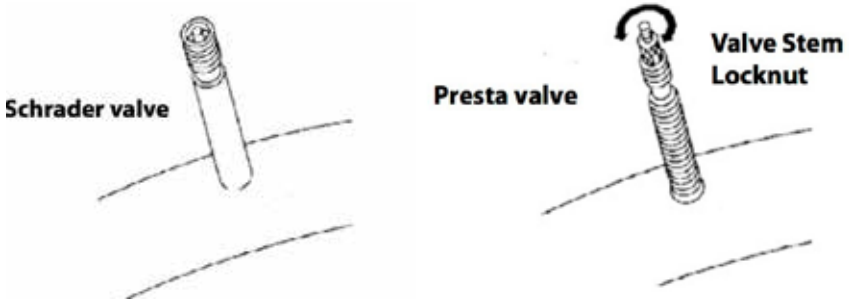


Wheels

MAINTAINANCE

Safe cycling depends a lot on the condition of the bicycle wheels. Tyres should be inspected to check that no damage has been caused to the tread, or side wall, and the tyre pressure should be checked weekly to keep the pressure at the value given on the tyre wall. Should the tyre require inflating, it must be done using either a hand or foot pump to a pressure no greater than that shown on the side wall.

Under no circumstances should the tyres be inflated using a garage forecout pump or compressor.



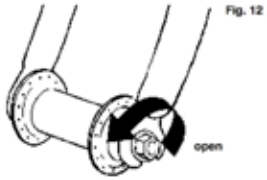
Front Wheel Removal

MAINTAINANCE

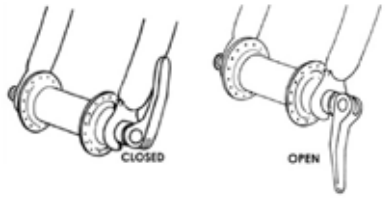
Disengage the brake cable guide tube from its yoke, to allow the brake blocks to move clear of the rims and tyre. Loosen off the two wheel nuts sufficient to clear the safety nut retainers in the fork-end. Allow the wheel to fall clear of the forks. If your bicycle is fitted with “Quick Release” wheels, pull the QR lever away from the forks to display the word “Open”, slacken off the knurled nut on the opposite end of the quick-release fitting until the wheel falls clear of the forks.

To replace the wheel reverse the above procedure, and with the QR fitting on the left side of the forks when looking to the front, tighten the knurled nut until the lever can only be moved to a position 30° above the horizontal. Check that the wheel is central in the forks. Push the lever upwards to a position in front of, and next to the fork blade, and the word “Closed” is visible. Re-engage the brake guide tube in its yoke and check that the brake functions correctly.

Standard Hex Nut



Quick Release



Rear Wheel Removal

TECHNICAL

Rotate the chainwheel and the rear gear so that the chain is on the smallest sprocket. Disengage the brake, as described in front wheel removal, then slacken off the two wheel nuts, and allow the wheel to fall free from the dropout.
To re-fit the wheel, place the chain onto the smallest sprocket, re-locate the wheel in the dropout and tighten the wheel nuts ensuring that the wheel is central to the seat and chainstays. Re-engage the brake guide tube in the yoke checking that the brake operates correctly.

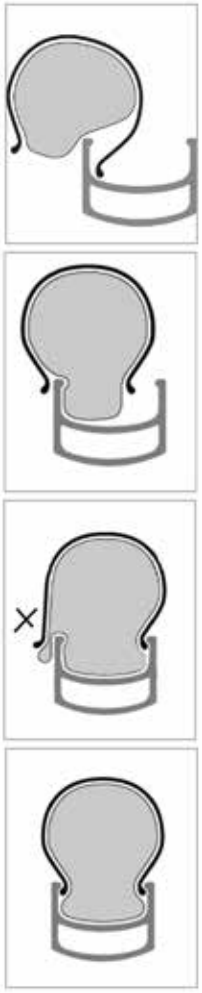
Rear Wheel Replacement

Check that the wheel adjusters, if fitted will align the wheel correctly as shown when the wheel axle is pushed fully home against them.
Ensure that the quick release mechanism is open. Take up all the tension in the derailleur spring by holding the derailleur fully back.
Place the top part of the chain on the small rear sprocket and ease the wheel into the frame.
Make sure that the wheel is centred in the frame, if the rim is equidistant from the chainstays, and the axle is located securely in the chainstay ends (against the wheel adjusters if fitted).
Replace the derailleur protector, if fitted. Close the quick release lever as detailed below, or tighten the axle nuts to the recommended torque, making sure the curved washers are fitted as shown previously on front wheel replacement.

Tyre Removal and Re-fitting

TECHNICAL

If the tyre is not fully deflated, remove the valve dust cap and push the valve centre to release any remaining air (schraeder valve). With presta valves, first unscrew the small locking nut, then press the centre. Holding ht ewheel on the ground with the valve at the top, squeeze the tyre into the well in the centre of the rim, and starting from the top, squeeze and push the tyre down each side off the rim. In most cases it will now be possible to flick the tyre off the rim by hand without using a tyre lever. Should you be unable to do this, using a tyre lever pushed between the tyre and the rim, lever off the tyre taking care not to trap the inner-tube between the lever and the rim.



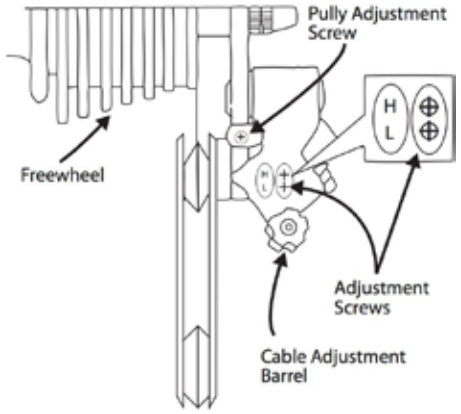
Prior to re-fitting the tyre, or replacing the tyre, it is recommended that you run your hand slowly and carefully around the inside of the tyre to check that there are no objects preotuding through the tyre casing.
To re-fit the tyre, insert one side of the rim into the tyre and push that one side onto the rim around its full circumference. Pump two or three times into the deflated inner-tube, then insert the valve through the valve hole in the rim ensuringthat the rim tape does not prevent the valve from being pushed fully through the valve hole. Push the inner-tube fully into the tyre right around the rim, then with the valve positioned at ground level, start pushing the second side of the tyre onto the rim from the top. When the tyre starts to tighten across the rim, return to the starting point at the top, directly opposite the valve, and repeat the removal operation of squeezing, and at the same time pushing the tyre to the bottom. The effect will be to slacken the tyre at the bottom and in most cases will enable the tyre to be fully fitted without the use of tyre levers. Should this not be possible, again use a tyre lever, taking care not to trap the inner-tube between the rim and the lever.
When fully fitted, run both hands around the tyre to centralise it on the rim. Inflate to one third hard, then again run your hands around the tyre, squeezing it away from the rim, to ensure that the inner-tube has not been trapped between the rim and the tyre. If it is not trapped complete its inflation to no greater than the pressure recommended on the tyre wall.

Note: When removing and re-fitting the rear tyre, do so from the side opposite the sprockets to prevent oil from coming into contact with the tyre or tube.

Derailleur Gearing System

TECHNICAL

As the name suggests, the gears fitted are operated by ”De-railling” the chain from one chailwheel or sprocket to another. The gears may only be changed when the chainwheel is rotating. Setting the gears involves making sure that the front and rear gear mechanisms are vertically in line with each of the sprockets or chainwheel when that gear is selected, and that it is not possible for the chain to be moved past either of the outside sprockets or chainwheels. When seated on the bicycle, the rear mechanism is operated by the right-hand lever, a dual control lever, or a twist control, and the front mechanism is operated by the left-hand lever or twist control.



SAFETY

Note: Should your bicycle fall over onto the gear side, check that the rear gear mechanism has not been bent inward before riding. Should this have happened, then it is highly probable that the gear will come into contact with the spokes the next tume the largest rear sprocket is selected, resulting in an accident and serious mechanical damage.

Rear Mechanism

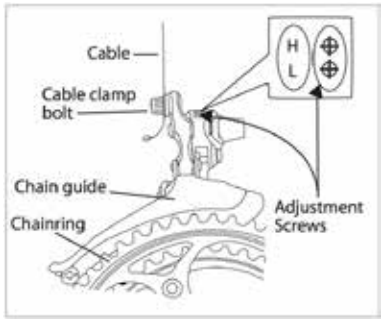
MAINTAINANCE

Rotate the chainwheel and at the same time push the right-hand level or twist controll fully forward. This should place the chain onto the smallest sprocket. To achieve this with the dual control lever press repeatedly the small lever mounted on the inside face of the lever. To ensure that the cable is fully bedded into the cable stops, grasp the bare gear cable next to either te top tube or down tube and strongly pull away from the frame. Should any slackness develop. slacken the pinch bolt which clamps the gear cable on the gear mechanism and pull through the slack cable. Re-tighten the pinch bolt. Rotate the chainwheel again and check that the chain runs freely and smoothly on the smallest sprocket. If it does, observe the gear from the rear to see which way the gear is out of alaignment either inward or outward. Should the gearbe to far inward, turn the small screw on the gear marked “H”, in an anticlockwise direction. If it is too far out turn the screw ni a clockwise direction until the gear is aligned. This operation has set the top gear limit. In a similar way, after turning the twist control backwards or pulling the lever fully backwards, set the lower gear stop by adjusting the small screw marked “L”.

To set the precise settings for the individual gears, rotate the chainwheel and change the chain onto the smallest sprocket, then turn the twist control, or move the lever to select the next to smallest sprocket. Continue to turn the chainwheel and at the same time, turn the knurled sleeve into which the gear cable fits on the gear mechanism in a clockwise direction until the chain can be heard to start rubbing on the third sprocket. Turn the sleeve slightly in a clockwise direction untilt the noise stops. The rear mechanism isnow set and each gear on the sprocket can be selected by movement of the twist control or the lever. To effect this setting with the dual control lever note that the small inner lever will move the chain onto smaller sprockets whilst pushing the “brake” lever inward will move the chain onto the larger sprockets.

Front Mechanism

To set, first check that the side plates of the cage, which surrounds the chain, is parallel with the chain wheels. If not, slacken the clamp on the seat tube and move to give the correct position, then re-tighten taking care not to allow the clamp to slide down the tube.
Note: The correct position of the cage is for the outer side of the cage to be 3mm above the largest chainwheel.



In a similar manner to the rear mechanism, the top and lower limit stops must first be set.
Whilst rotating the chainwheel, move the rear mechanism to select the largest sprocket, then move the front mechanism to select the smallest chainwheel. The chain should be just clear od the inside face of the inner plate of the chain cage. If not, turn the screw marked “L” in the required direction to give the correct chain position. Bed in the cable as descibed for the rear mechainsm.
Note: The dual lever control operates the same way as the rear lever, small lever to move onto the small chainwheel and the large lever to move onto the large chainwheel.

Whilst rotating the chainwheel, turn the twist control rearward to move the chain onto the centre chainwheel.
Note: On some models the twist control or lever moves move to one of three positions, on others, the control operates as a ratchet. Move the control again to move the chain onto the largest chainwheel. Should the chain be touching the shifting cage, twist the afjuster on the control through which the cable enters the control to move the chain cage clear of the chain. Move the control fully forward to return the chain to the small chainwheel. Repeat the provedure with the chain on the smallest rear sprocket.

Braking Systems

This section gives advice on the use of brakes, and instructions on their maintenance.

Braking on a bicycle is similar to braking in a car, but in a car the braking system ensure that most braking is carried out by the front brakes. During Braking, weight is transferred off the rear and onto the front of the bike or car. If hard braking is carried out equally on both brakes or more on the rear brakes, then this transfer of weight will allow the rear wheel to lock up and skid. , placing the machine in an out of control condition. On your bicycle, initially both brakes should be applied smoothly and equally, and as harder braking is required the emphasis should be placed on the front wheel braking with attention to the feel of the effect of the rear wheel braking. But at the same time this increase inwiehgt on the fron twheel will allow the brake to slow the wheel without skidding.

Like all skills, braking rquires practice to enable you to lear the braking capabilities of hte brake system.

Bicycle braking systems have improved in leaps and bouds, with the traditional calliper being replace by the more effiecient dual pivot calipr, and even the cantilever brake being superseded in most ranges by the superior “V” type linear brake, and on the top level bike, the ultimate, the disc brakes.

On all bicycles in the UK, the right-hand brake lever operates the front brake and the left-hand lever operates the rear brake.

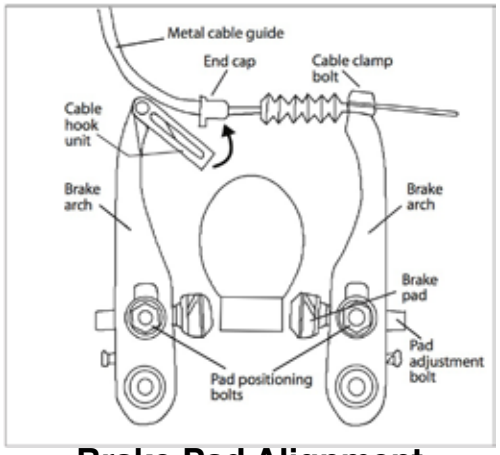
The braking system requires regular maintenance with a periodic complete strip down. The instructions given cover the re-assembling of the brakes.

When the brakes have been set correctly and considered correct for riding, the following points should all have been addressed and applied.

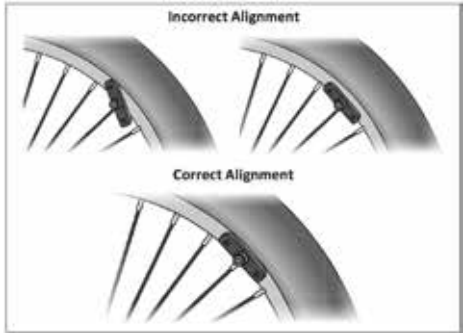
(1) All nuts and bolts are tight to the correct torque setting.
(2) The brake blocks are not worn too low or damaged.
(3) The brake cables are free of kinks, are not rusty, are free to move, and are correctly located in the cable stops, levers and brake fittings, and are fitted with a sfety end cap.
(4) The brake blocks and rims are free from dirt and oil, and should be set within 2mm from the rim.
(5) The brakes should move freely when a gentle pressure is applied to the brake lever.
(6) The brake block should make full contact with the rim with the top edge being no closer than 1mm from the tyre, they should be in line with the rim when viewed from the side, and the fron tend of the block shoud be 1mm closer to the rim than the rear end. This last setting will eliminate “squealing” when the brakes are applied.
(7) When fully applied, the brake lever should not touch the handlebar grip.

“V” Type Brakes

1. Clean and grease the forks and seat stay pivots, and install the spring, brake arm, washer and mounting bolt onto each pivot, insetting the protruding spring tail into the middle hole in the brake pivot. Tighten the mounting bolt to a torque of 10Nm.
2. Turn the adjusters on the brake levers so that two threads are visible between the lever and adjuster. Insert the cable through the cable guide tube, cable protector and anchor bolt. Tighten the anchor bolt to gently hold the cable in position with dimension “X” set to 60mm.
3. Set the brake blocks to the positions given in (f) above, by sliding the brake block grooved single through the pinch bolts, or by exchanging the positions of the thin and thick washers on the brake threaded spindle, depending on model of brake.
4. If necessary, shaken off the anchor bolt and reset the brake blocks so that “A” + “B” = 3mm. Re-tighten the bolt to a torque of 8NM.
5. Balance the brake arms of that the brake blocks are equidistant from the rim faces by adjusting the spring tension adjusters.



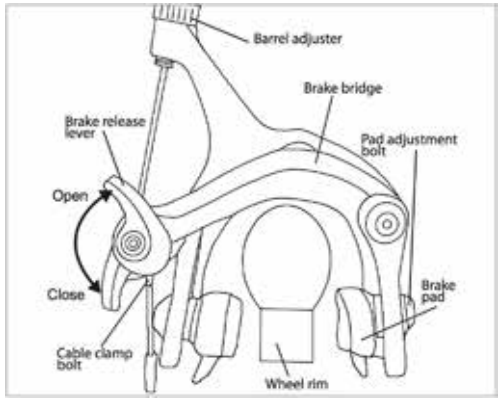
Brake Pad Alignment



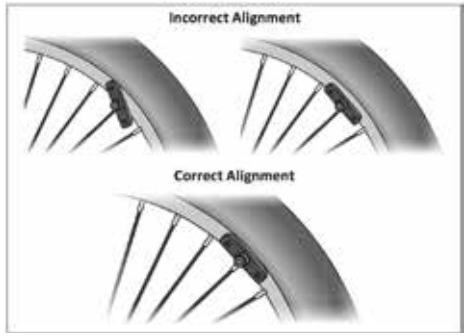
Dual Pivot Calliper Brakes

1. Secure the calliper on the forks/frame the the gap between each brake block and the rim equal. Tighten the recessed securing bolt to a torque of 10Nm.
2. Using a 5mm allen key. Adjust the position of the brake blocks so that they make full contact with the rim and that the top edge of the block is 1mm from the rim edge.
3. Set the adjuster in its mid position, then with the quick release lever in the closed position pull, the cable through the pinch bolt, and using a 10mm spanner, secure the cable in the pinch bolt tightened to 10Nm.
4. Apply the brake lever twice, then spin the wheel to check that the brake allows free rotation.
5. Should both blocks be catching on the rim slacken off the brake using the adjust until there is a total of 3mm gap (see picture).
6. Should only one block be catching adjust the centre adjusting screw to centralise the blocks. Turn in direction 1 to move in direction 1, and direction 2 to move in direction 2.

Note: When removing the wheel, the quick release lever should be moved to the open position. Care should be taken to ensure that the lever is returned to the close position following the wheel replacement.



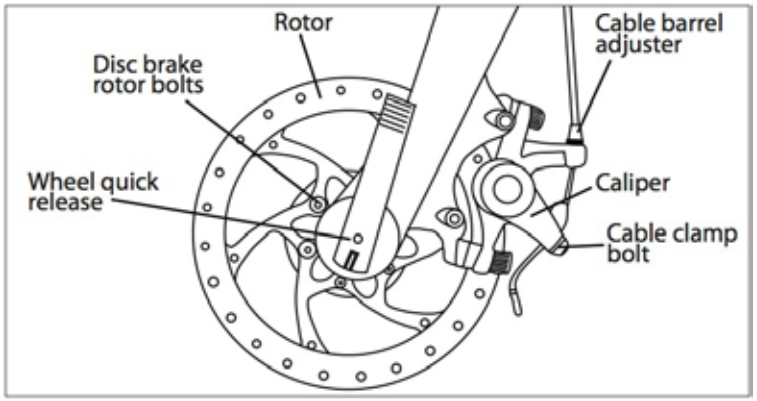
Brake Pad Alignment



Disc Brakes

MAINTAINANCE

Disc brake are similar to those on cars or motorbikes. The fork or seat stay mounted disc calliper is operated by a cable, causing to clamp onto the wheel-hub mounted disc. The disc brake can be adjusted at the lever, or for major adjustment at the pinch-bolt at the disc end of the cable.
Maintenance of this type of brake should be carried out by your dealer.



Folding Bike Instructions

TECHNICAL

Release quick relese lever an seat tube and lower saddle. Lock Quick Release Lever.


Fold pedals.

Release Quick Release lever in middle of handlebar stem and lower handlebars. Lock Quick Release Lever.


Release and unlock QR bolt at base of handlebar stem and fold handlebars down.


Release and unlock QR bolt at centre of frame, it is then possible to fold the frame back.


To unfold simply reverse this process.

Ask your dealer for a demonstration of this process.

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