



claud
BUTLER

INSTRUCTION MANUAL AND GUARANTEE

Should any original component prove defective in terms of workmanship within its warranty period, Falcon Cycles will replace it. Warranty period for Falcon's branded bicycles is as follows.

Claud Butler

Rigid Frames and Forks: - Lifetime

Suspension Frames and Forks: 2 years

All other components: 2 years except for tyres, tubes and any accessory item

This warranty does not include labour and transportation charges. The company cannot accept any responsibility for consequential or special damage. This warranty applies only to the original retail purchaser who must produce proof of purchase in order to validate any claim. This warranty applies only in the case of defective components and does not cover the effects of normal wear, nor damage caused by accident, abuse, excessive loads, neglect, improper assembly, improper maintenance or the addition of any item inconsistent with the original intended use of the bicycle.

No bicycle is indestructible and no claims can be accepted for damage caused by improper use, competition use, stunt riding, ramp jumping and leaping or similar activities. Claims must be submitted through your retailer. Your statutory rights are not affected.

Falcon bicycles conform to one of the following standards

BS EN 14766: 2005 Mountain Bicycles

BS EN 14764: 2005 City & Trekking Bicycles

BS EN 14781: 2005 Racing Bicycles

BS EN 14765: 2005 Bicycles for Young Children (size 435mm - 635mm seat height to ground)

Please refer to the BS EN sticker on the frame for the relevant standard.

The company reserves the right to change or amend any specification without notice. All information and specifications within this brochure are correct at time of printing.

Please refer to our website for the latest information.

<http://www.falconcycles.co.uk>

**FALCON CYCLES LTD, P.O. BOX 3, BRIDGE STREET, BRIGG, NORTH
LINCOLNSHIRE, DN20 8PB**



FALCON CYCLES LTD



This bike has been designed, developed and sourced, by Falcon Cycles Ltd. Brigg, North Lincolnshire. Falcon has carefully selected and developed this product with some of the best suppliers throughout the world. These suppliers have been checked & have satisfied the exacting quality standards developed by Falcon, a company with over a century long reputation for quality and craftsmanship. All our bicycles are built to conform to the latest BS EN safety standards. Suspension frames and forks and rear shock absorbers are covered by a separate guarantee. Included in this manual are details on how to prepare your bicycle for riding, how to maintain your bicycle to keep it roadworthy, and recommendations and tips on how to achieve a safe and comfortable riding position. Please ensure that the Bicycle Log below is completed at the time of purchase. The details will be of value to the police in the unfortunate event should your bicycle ever be lost or stolen. This also acts as a record of your guarantee.

Complete this **Section** and keep it in a safe place. In the event of your machine being lost or stolen this information should be passed on to the police.

Name

Address

.....

Model Name & Type

Serial No.....Frame Size & Colour.....

Extras and Identifying Marks

.....

FRAME NUMBER

The frame number is located on the bottom of the seat tube or stamped on the bottom bracket shell. We strongly recommend that you have your post code stamped on your bicycle.

Attach receipt here	Date and place of purchase
---------------------	----------------------------

Service Record: Highly Recommended for safety & support of warranty claims. At 6-monthly intervals or more frequently if subjected to high mileage or heavy use.

Dealer Stamp:	Dealer Stamp:	Dealer Stamp:	Dealer Stamp:
Date:	Date:	Date:	Date:

Carbon Fibre Components. Important information.

High performance carbon fibre composites have been developed by the aerospace and F1 motor racing industries. They have very high strength low weight characteristics, ideal for high performance bicycles and their components. However, composite materials can fail in a different manner to steel and aluminium and if not treated with extreme care and examined frequently for signs of damage, catastrophic failures can occur. Damaged carbon fibre components do not deform, bend or bulge and it is vitally important for your safety that the following instructions are followed. Examine your bicycle before and after every ride, during your examination look for deep scratches, cracks, surface imperfections such as discolouration or surface roughness. Surface roughness can be assessed by passing a cloth over the surface. Does it snag? If so de-lamination of the carbon fibres may have occurred. Whilst riding, listen for any unusual or abnormal creaking noises from carbon fibre components as well as noting any change to the riding characteristics of your bicycle. If any of the above signs are found or if any carbon fibre components are subjected to an impact, abrasion or crash damage, immediately stop riding your bicycle and take it to be inspected by your local cycle dealer as it could be structurally unsafe and dangerous to ride. Modification to this frame and fork in any way will void the manufacturer's warranty and could render the bicycle unsafe. Do not use solvents or harsh chemicals to clean these components. A mild detergent solution and soft cloth is recommended. Do not clamp anything around the carbon fibre tubes without seeking advice from your dealer as this may diminish the structural integrity of the carbon composition. Do not use mechanical fasteners to attach other parts to the carbon fibre tubes as this may diminish the structural integrity of the carbon composition. All carbon fibre components are limited to twenty four months manufacturer's warranty due to the lightweight high performance specification. This warranty is not transferable and only applies to the original purchaser. All claims must be accompanied by proof of purchase. Due to the high value of these components the company reserves the right to delay the dispatch of free of charge replacements until the failed component has been inspected and the claim has been agreed.

YOUR BICYCLE — OWNER'S RESPONSIBILITY

In this manual we describe and illustrate how to ride safely and keep your bicycle in a safe, trouble free operating condition.

Owner's Responsibility and Important Points

Your new bicycle is clearly marked to indicate that it has been manufactured to conform to one of four new European bicycle safety Standards, these standards have been developed and introduced into Europe and the UK to ensure that bicycles manufactured in compliance with them will be as safe as is practically possible. Please refer to the BS EN sticker on your bicycle frame for the relevant safety standard.

BS EN14766; Mountain Bicycles.

BS EN14764; City and Trekking Bicycles.

BS EN14781; Racing Bicycles.

BS EN14765; Bicycles for young children.

Before you ride your bicycle ensure that you are fully aware as to the type of use and the specific BS EN safety standard that your new bicycle has been designed and manufactured to by understanding the specific usage descriptions given below.

BS EN14766; Mountain Bicycles. (permissible total weight of rider + luggage = 120kg)

These bicycles are intended for use off-road, on rough terrain such as coarse pebble tracks, forest trails, and other general off-road tracks where tree-roots and rocks are likely to be encountered. The use of a bicycle off-road in hazardous conditions such as on changeable and uneven surfaces can put very high unpredictable loads on the bicycle and its components. Lack of rider skill and experience of these conditions can further increase these loads leading to the possibility of serious damage to the bicycle and injury to the rider. Check with your dealer or manufacturer in regard to the suitability of your bicycle for such conditions and carry out more frequent maintenance checks as advised within this manual.

BS EN14764; City and Trekking Bicycles. (permissible total weight of rider + luggage = 120kg)

These bicycles are intended for use on public roads, paths or cycle tracks that are in good condition. Paths and cycle tracks can be gravel or dirt roads with minor undulations and small potholes. Check with your dealer or manufacturer with regard to the suitability of your bicycle for such conditions and carry out maintenance checks as advised within this manual.

BS EN14781; Racing Bicycles. (permissible total weight of rider + luggage = 120kg)

These bicycles are intended for high-speed amateur use on public roads but are not to be considered as specialised racing bicycles for use in sanctioned competitive events. Check with your dealer or manufacturer with regard to the suitability of your bicycle for such conditions and carry out maintenance checks as advised within this manual.

BS EN14765; Bicycles for Young Children. (permissible total weight of rider + luggage = 85kg)

These bicycles are intended for use by children on roads, paths and cycle tracks that are in good condition. Paths and cycle tracks can be gravel or dirt roads with minor undulations. Children must, always ride within their own abilities and should wear a safety helmet at all times.

Check with your dealer or manufacturer with regard to the suitability of your bicycle for such conditions and carry out maintenance checks as advised in this manual.

Note

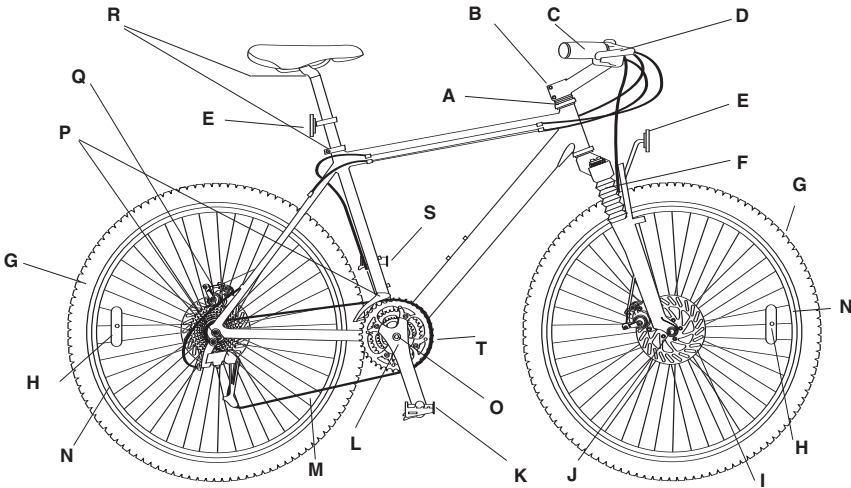
- Carefully and thoroughly read this manual and follow the instructions. Your bicycle also comes with a manual pack that includes component manufacturers supplementary sheets that cover features unique to your bicycle including adjustment and general maintenance. Please ensure that you read and become familiar with their contents.
- Always wear a helmet approved to EN1078 when riding your bike, and follow the helmet manufacturer's instructions for fit, use and care.
- Please read and familiarise yourself with the Highway Code which contains useful information on safe riding on public roads. www.direct.gov.uk
- Any major service or adjustments on your bicycle should be carried out by a professional repairer; however if this service is not available and you wish to make adjustments yourself, this manual contains important tips on how to do it.

CAUTION: Any adjustments you make are entirely at your own risk.

- To use your bicycle for freestyle and stunt riding, competitive events, off-road use or any similar activities can be dangerous and you are warned that you assume the risk for personal injury, damages or losses incurred from such use. The Retailer shall not be liable to the purchaser of the bicycle or to third parties for consequential or special damages.
- Bicycles are built with a variety of equipment and accessories, and you should familiarise yourself with their function and purpose, to make sure you can operate them correctly.
- Do not ride your bicycle when any part is damaged. Take your bicycle to a dealer if anything breaks or bends. If you are unsure as to how to carry out repairs or maintenance on your bicycle it is vital that you consult a local dealer for professional support.

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. Any form of crack, scratches or change of colouring in highly stressed areas indicate that the life of the component has been reached and should be replaced.

LOCATION OF PARTS WITH ROUTINE MAINTENANCE CHECKS AND LUBRICATION



A - Headset

Remove, clean and regrease bearings yearly, checking if replacement is required.

B - Stem Nuts

Ensure stem nuts and bolts are tight.

C - Handlebars

Check handlebar/stem bolt's are tight. Check brake levers are securely mounted to bars and brakes stop smoothly and efficiently

D - Brakes

Lightly oil exposed cables monthly. Maintain adjustment and replace brake blocks when worn, brake cables when frayed.

E - Reflectors (front & rear)

Ensure reflectors are secure and undamaged. Replace if necessary.

F - Front Suspension unit

(Dealer adjustment only)

G - Tyres

Check for cuts and wear. Maintain pressure indicated on tyre wall for maximum efficiency.

H - Wheel Reflectors

Check reflectors are securely fixed, monthly.

I - Disc Brakes - Front

(Routine maintenance by your dealer recommended.)

J - Wheel Hubs

Grease bearings monthly. Adjust cones to avoid free play from side to side.

K - Pedals with Reflectors

Check all fittings are secure.

L - Cranks

Grease bearings monthly. Check that axle bolts or cotterpin bolts are tight. Check for free play in bottom bracket.

M - Chain

Keep lightly oiled weekly, clean and lubricate half yearly.

N - Wheels

Rims should be kept free from wax, oil, grease, glue and checked for rim damage or wear due to brake action. Check rim wear line.

O - Bottom Bracket

Clean, regrease yearly, checking for wear.

P - Gears

Front and Rear — Lightly oil moving parts. Maintain adjustments of front and rear derailleurs.

Q - Disc Brake - Rear

(Routine maintenance by your dealer recommended).

R - Seat and Stem Nuts

Be sure seat and stem nuts are tight. See page 6.

S - Pedals

Lightly oil bearings monthly.

T - Frame Number

Refer to table of Recommended torque values - page 6.

Half Yearly — Remove and clean, lubricate chain, derailleur gears and all cables. Check and replace as required.

Yearly — Remove, clean and regrease hub axles, bottom bracket set and headset.

NB — Wash cycle weekly with warm soapy water and polish dry with a soft cloth. Do not pressure wash.

SAFE CYCLING AND SAFETY TIPS

Before you ride your bicycle at any time make sure it is in a safe operating condition. Particularly check that your:-

- Bicycle's nuts, bolts and parts are tight and not worn or damaged.
- Riding position is comfortable.
- Brakes are operating effectively.
- Steering is free with no excessive play.
- Wheels run true and hub bearings are correctly adjusted.
- Wheels are properly secured and locked to frame/fork.
- Tyres are in good condition and inflated to correct pressure.
- Pedals are securely tightened to pedal cranks.
- Gears are correctly adjusted.
- All reflectors are in position.

After you have made any adjustments to your bicycle, check that all nuts and bolts are securely tightened and cables are free from kinks and fixed securely to the bicycle frame.

Every six months (more frequently if high mileage or subject to heavy use) your bicycle should be professionally checked to ensure that it is in correct and safe working order. A 'Service Record' is provided for your use.

To ensure your safety:

- Do not ride on same side of road as oncoming traffic.
- Do not ride two side by side.
- Do not carry a passenger unless cycle is equipped to do so.
- Do not swerve in and out of traffic.
- Do not hang items over the handlebars to impede steering or catch in the front wheel.
- Do not hold on to another vehicle.
- Do not ride too close behind another vehicle.

CAUTION: Wet Weather Riding No brakes work as well under wet or icy conditions as they do under dry conditions. In wet weather special precautions must be taken to assure safe stopping. Ride slower than normal and apply your brakes well in advance of anticipated stops.

CAUTION: Night Riding We recommend you minimise the time you ride after dark. If you should have to be out on your bicycle at night you must comply with the law, use a headlight (white) and a tail-light (red) on your bicycle in addition to the all-around reflectors that are fitted. For added safety wear light coloured clothing with reflective stripes. Check that the bicycle reflectors are firmly secured in their correct position, clean and not obscured. Damaged reflectors must be replaced immediately.

Riding Position

It is important that you and your bicycle are fitted to each other, not only for comfort and riding ease but for control and safety. Normally your Dealer will custom fit your bicycle to you but the following few pages should help you to find your most comfortable, safe and efficient position.

SEAT

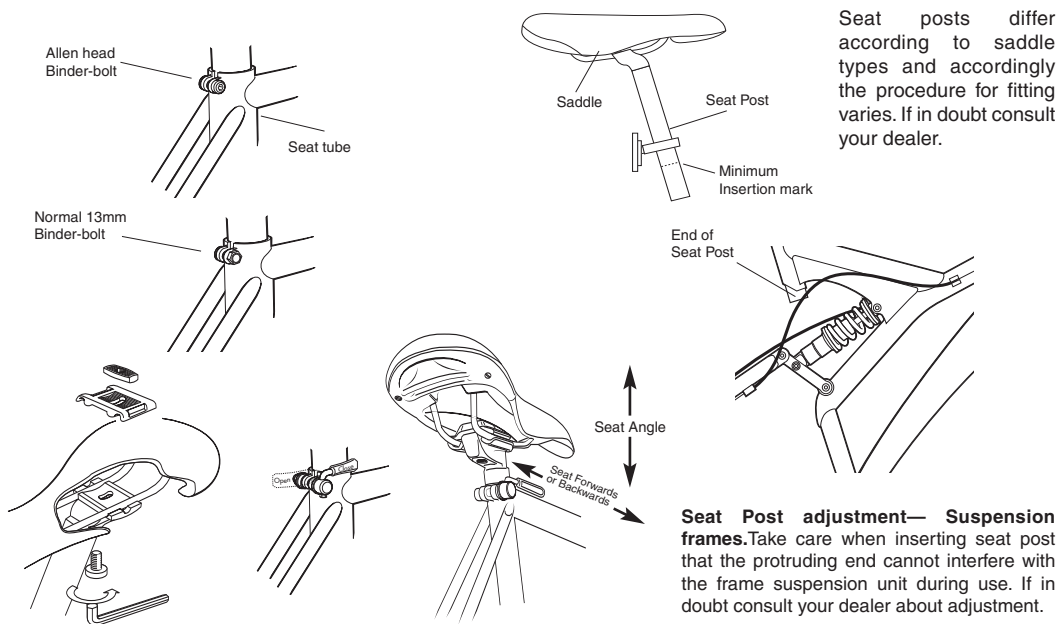
Seat Adjustment

Loosen the nut on the seat-post clamp enough to allow the saddle to move backwards or forwards. The seat can then be aligned and the angle can also be adjusted (it is recommended that the seat be parallel to the ground).

To adjust the seat up and down, loosen the binder-bolt on the seat tube, position the seat and re-tighten the binder-bolt.

CAUTION: Insert the seat-post to a point above the insertion mark. The **MINIMUM INSERTION MARK** should not be visible. Securely tighten the seat-post binder bolt/nut by using an Allen key or a 13 mm spanner. Test by grasping the seat and attempting to turn. Keep tightening until the seat will no longer turn. Refer to table of recommended torque values on page 6

WARNING: Bicycle should not be ridden if seat adjustments are not properly tightened.



CYCLING POSITION — Seat

Saddle Angle

The seat should be horizontal or parallel with the ground. Slight variation around the horizontal may suit individual comfort but if excessive angles are felt necessary check other aspects of your position.

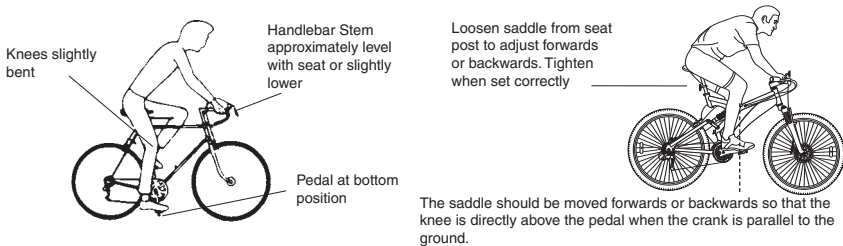
Saddle Height

The correct seat height is determined by sitting on the seat with your leg fully extended. Your heel (in flat shoes) should just touch the pedal when it is positioned at its lowest point. When riding normally with the ball of your foot on the pedal your knee should be slightly flexed at the bottom of the pedal stroke (see diagram following).

Saddle Forwards/Backwards Position

With the ball of one foot on the pedal and the cranks parallel to the ground the saddle should be adjusted backwards or forwards to a position whereby the pedal centre is directly below the knee joint.

Very small changes in saddle position can have a substantial effect on performance and comfort. Consequently, whenever you make a change to your saddle position, make only one directional change at a time and make the changes in small increments, until you have found the point at which you are most comfortable.



CAUTION

When fitting an after market child seat make sure the saddle fitted to this bike is not equipped with springs on the underside. These springs present a trapping hazard for childrens fingers.

The saddle must be replaced.

HANDLEBARS AND STEMS

As your cycle may be fitted with a standard 'quill' stem or an A-Head stem, you must check that all the bolts are tight before cycling. (see page 6 for diagram)

STANDARD STEM: Loosen expander bolt so that expander wedge is not tight in bottom of handlebar stem. Gently tap the top of the expander bolt to further loosen the wedge, if necessary. When the expander wedge is loose, move the handlebars up or down until you find the optimum height at which you can easily reach the brake levers and comfortably grasp the handlebars. Usually this height is level with, or slightly lower than, the top of the saddle. Be sure the stem is in line with the front wheel.

CAUTION: A minimum insertion ring is marked on the handlebar stem and this marking should remain in the head tube. Under no circumstances should the minimum height insertion mark be visible on the handlebar stem. It must be down in the head tube.

When desirable height has been achieved, align the handlebar with the front wheel and securely tighten expander bolt. It is extremely important to tighten the expander bolt sufficiently, so that when the wheel is held between your legs and the handlebars are twisted, the handlebars do not move. Do not over tighten, as it may increase risk of injury to the rider. Position grip portion of handlebars horizontally and securely tighten the binder bolt.

Refer to table of recommended torque values on page 6.

Note: Whenever the handlebar stem is removed from the head tube then the expander bolt should be lightly greased.

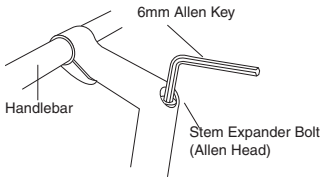
Note: On some bike's raising the stem requires brake cable adjustment. Do not attempt this if low profile brakes are fitted with a stem mounted cable stop.

A-HEAD STEM: Has 2 steerer clamp bolts on the back of the stem, which clamp around the steerer tube. Loosen these bolts to align the stem with the front wheel. Re-tighten the steerer clamp bolts.

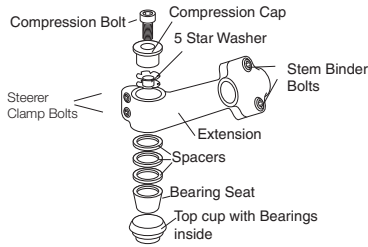
CAUTION: Do not adjust the top compression bolt, this should be pre-set to eliminate bearing play, overtightening will cause premature wear.

Contact your retailer for service.

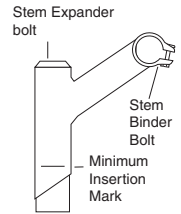
Recessed Type



A-Head Type



Standard Quill Stem



Handlebar Position

The position of the handlebar should be set to allow a comfortable and easy reach of both gear control and brake levers. When riding, your weight should be so balanced that your hands rest lightly on the handlebars. This prevents strain on wrists and forearms when pedalling. If you alter the riding position, remember to tighten all nuts and bolts securely.

Refer to table of recommended torque values.

CAUTION

When fitting aerodynamic extensions to your handle bars you should be aware that the use of such accessories can adversely affect the riders response to steering and braking.

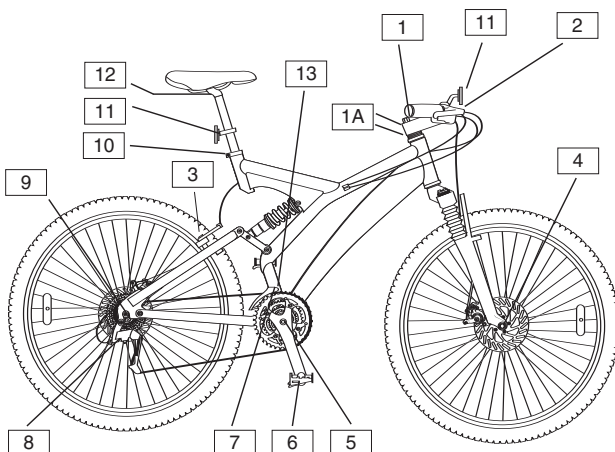
CAUTION:

NEVER EXTEND THE HANDLEBAR STEM OR SEAT POST ABOVE THE MINIMUM INSERTION MARK AS THIS IS DANGEROUS

COTTERLESS CRANKS ADJUSTMENT IMPORTANT

To ensure trouble free operation it is important that the nuts securing the lefthand and righthand chainwheel to the bottom bracket axle are tightened as securely as possible. It is strongly recommended that the tightness of the nuts be **checked after the first two weeks of use** and a maximum of three monthly intervals thereafter.

TABLE OF RECOMMENDED TORQUE VALUES



DESCRIPTION	TORQUE
1 Stem Expander Bolt (where fitted)	20Nm 15lb-ft
1A A-Head Steerer Clamp Bolts (where fitted)	10Nm 8lb-ft
2 Stem Binder Bolt	10Nm 8lb-ft
3 Brake Fixing Bolt (non disc) Applies to both front and rear brake	5Nm 4lb-ft
4 Front Axle Nut	30Nm 22lb-ft
5 Chain Wheel Securing Bolt	38Nm 28lb-ft
6 Pedal	40Nm 30lb-ft
7 F/Derailleur Cable Fixing Bolt	4Nm 3lb-ft
8 R/Derailleur Cable Fixing Bolt	4Nm 3lb-ft
9 Rear Axle Nut	30Nm 22lb-ft
10 Seat Pin (Hexagonal Head) Seat Pin (Allen Head)	20Nm 15lb-ft 15Nm 11lb-ft
11 Front and Rear Reflector Mounting Nut	3Nm 2.5lb-ft
12 Saddle Clamp Bolt (Hexagonal Head) Saddle Clamp Bolt (Allen Head)	20Nm 15lb-ft 10Nm 8lb-ft
13 F/Derailleur Clamp Bolt	5.5Nm 4lb-ft

BRAKES

WARNING

For safe riding it is important to completely understand the operation of your bicycle's brake system. Improper use of your bicycle's brake system may result in a loss of control or an accident, which could lead to severe injury. Because each bicycle may handle differently, be sure to learn the proper braking technique (including brake lever pressure and bicycle control characteristics) and operation of your bicycle. This can be done by consulting your professional bicycle dealer and this owner's manual, and by practicing your riding and braking technique.

It is very important that parent's or carers ensure that their children are properly instructed in the use of this bicycle, paying particular attention to the safe use of the braking system. The bicycle is equipped with two independant brake mechanisms. One on the front wheel and the other on the rear wheel. The brakes are operated by hand levers fastened to the handlebars. The right lever controls the front brake and the left lever controls the rear brake.

To stop with safety:

1. Operate the rear brake (left lever) slightly before the front brake (right lever).
2. Apply firm pressure to both front and rear brake levers.

CAUTION: If the front brake is applied with too much pressure, the rider may be thrown off the bicycle.

3. Never apply the front brake on a turn. This is especially dangerous when cornering or riding on slippery or loose surface roads.

CAUTION: Brakes are less effective in wet weather. Ride slower and allow more distance for stopping.

Note: Do not ride your bicycle if the braking system is not working correctly. If you are in doubt, take your bicycle to your dealer for assessment or repair.

Note: The information provided below is for the adjustment of caliper brakes. For other brake systems please see manufacturer's manuals provided.

BRAKE ADJUSTMENT PROCEDURE — Caliper brakes

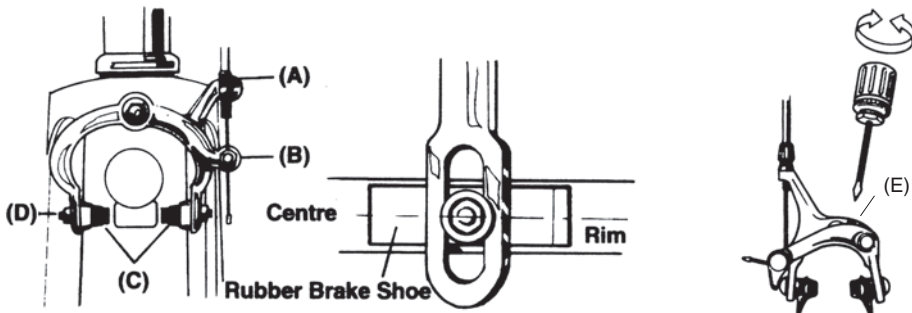
The brakes on your bicycle should have been adjusted correctly by your dealer. However, as cables do stretch, it is important to check the adjustment of your brakes after your first ride. Most brakes will need some adjustments after being used the first few times. Your brakes are correctly adjusted when there is a 1.5 mm gap between the brake blocks and the brake track of the wheel rim.

Do not adjust brakes to allow brake blocks to contact wheel rim when brake levers are in the off position. The fine adjustment of the brakes is made by the following procedure:

1. Turn adjuster (A) to set blocks (C) just clear of rim by 1.5 mm.
2. Ensure that the brake blocks meet the rim parallel and central to the rim brake tracks. Adjust by nuts (D) if necessary, then tighten securely.
3. When all fine adjustment is taken up on adjuster (A), it will be necessary to reset the cables as follows:
 - a. Turn adjuster (A) all the way down as far as it will go into its mounting.
 - b. Loosen cable clamp bolt (B). Press both brake shoes firmly against wheel rim.
 - c. Pull brake cable wire through its clamp bolt.
 - d. Tighten cable clamp bolt (B) securely.

Note: If one brake shoe is closer to the rim than the other first check that the wheel has been centred between the forks then adjust the brakes as necessary.

To adjust brakes that have central Caliper adjuster (E) simply turn screw as shown until brakes centralise.



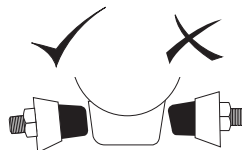
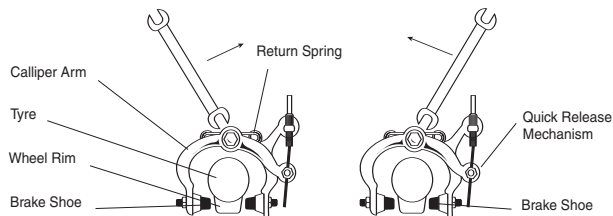
BRAKE MAINTENANCE — Caliper brakes

To maintain cable brakes in efficient working order, regularly check the brake adjustment and lightly lubricate brake pivots and springs. Oil the exposed parts of the innerwire to prevent corrosion. Slow or inefficient braking often indicates that the brake cables themselves require lubrication or replacement. As this job requires the removal of the complete brake cable, we recommend strongly that this service is done professionally.

Note: To assure smooth braking, wheels must run true and be correctly adjusted, with the rim brake tracks free from dents and kinks. The brake blocks should be in correct alignment with the rim brake track. See your dealer if you are in any doubt regarding wheel and brake adjustment.

Protect yourself from frayed cable ends by maintaining the alloy end caps fitted over the inner wire ends.

Brakes should function freely and release fully. If brakes bind, first check for cleanliness and proper lubrication. If brakes still bind, return your bicycle to your dealer for adjustment.

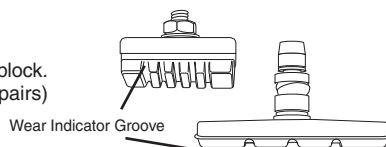


To centre side pull brakes first slacken the retaining nut and then centre the brake using a spanner on the front retaining nut.

CAUTION: Before riding, test your brakes. Make sure that the quick release mechanism is returned to its normal correct position, otherwise your brakes will not operate effectively.

BRAKE BLOCK REPLACEMENT- Caliper and V Brakes

All brake blocks are provided with grooves that indicate the wear on each block. When the grooves are worn down to a flat surface, replace the blocks (in pairs) immediately.



'V' BRAKE SYSTEM

INNER CABLE QUICK RELEASE

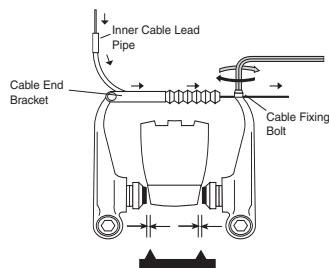
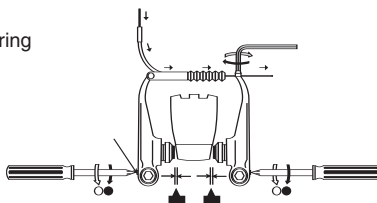
To release the brake inner cable from the V brake, squeeze the two brake arms together until the brake blocks contact the rim and remove the inner cable pipe from the cable end bracket.

To re-connect again squeeze the two brake arms together and relocate the inner cable pipe in the cable end bracket.

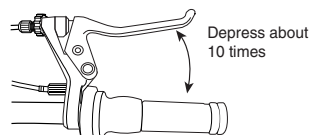
INNER CABLE ADJUSTMENT

1. 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.

2. Adjust the balance with the spring tension adjustment screws.



3. Depress the brake lever about 10 times as in normal brake operation and check that everything is operating correctly and that the shoe clearance is correct before using the brakes.



BRAKE MAINTENANCE — Disc Brakes

Your cycle may arrive with factory fitted disc brakes — the latest technology in cycle braking!

If you have purchased your cycle from a professional cycle shop your brakes should have been set up correctly. You will only have to do routine maintenance as the brake pads wear.

If you purchased your cycle from a mail-order source you may have to set up the brakes before you use your cycle.

Please refer to the disc brake leaflet that accompanies the cycle. If you do not have such a leaflet please take your cycle to a professional cycle shop.

DERAILLEUR GEARS

INTRODUCTION

The derailleur gear is so named because it works on the derailing principle to move the chain from one sprocket to another. The number of gears is determined by multiplying the number of sprockets on the rear freewheel by the number of chainrings on the front crank set.

By using different combinations of sprocket and chainwheel sizes, a wide range of gear ratios are available. The highest gear is when the large chainwheel is coupled with the small sprocket and the lowest gear is when the small chainwheel is combined with the largest rear sprocket.

The wide range of gears allows you to attempt all prevailing conditions while pedalling at the constant and efficient rate of sixty revolutions per minute.

DERAILLEUR GEAR MAINTENANCE

To help ensure that your derailleur gear works efficiently and to prolong its life, it must be kept clean and free from excess dirt build up and should be properly lubricated.

GEAR CHANGING

The rider's left gear lever controls the front derailleur and chain wheels. The function of the front derailleur is to move the chain between the larger and smaller chain rings.

The rider's right gear lever controls the rear derailleur and sprockets.

The function of the rear derailleur is to move the drive chain from one gear sprocket to another.

The large rear sprockets generate low gears for hill climbing. The small rear sprockets develop high gear ratios for speed work and downhill riding.

The small front chainring produces low gear ratios while the larger front chainrings produce higher gear ratios.

To operate your derailleur gear system efficiently and reduce damage, wear and reduce noise to a minimum, avoid using the maximum crossover gear ratios of large chainring/large rear sprocket, small chainring/small rear sprocket.

CAUTION: For positive gear selection, observe these four precautions:

1. Change only when pedals and wheels are moving in a forward motion.
2. Reduce pedal pressure while changing gears.
3. Never back pedal when changing gear.
4. Never force the gear levers.

Gear selection should be made in anticipation of need since forward motion of the bicycle is required when changing gear. It is advisable to change to a low gear before stopping in order to be in the proper gear when you start up. On hills, change gear early while still maintaining forward pedalling speed.

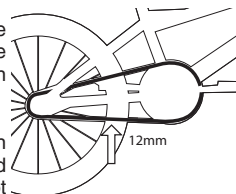
Note. To understand the function and to carry out adjustments and maintenance of the unique gear system fitted on your bicycle please refer to the manufacturer's leaflets provided within your manual pack.

FIXED / HUB GEARS .

If your bike is fitted with a rear hub gear or single speed free wheel the chain tension should be checked monthly to prevent premature wear of the system. Lift the chain at it's mid point of the bottom chain run (as indicated in the diagram). Chain tension is ideal if you can lift the chain vertically by 12mm.

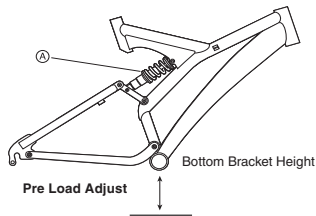
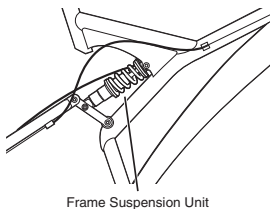
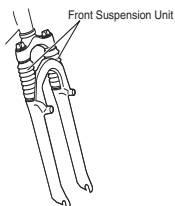
If the chain moves in excess of the 12mm it needs to be re tensioned as follows.

Loosen both of the rear wheel nuts, slide the wheel backwards, make sure the wheel is central in the frame and tighten the wheel nuts to secure the wheel. Recheck the chain tension again and rotate the pedals backward to make sure there are no tight spots in the rotation. A tight spot indicates that the chain is too tight.



SUSPENSION

Your cycle may be fitted with suspension units built into parts of the frame and forks. We recommend these are only serviced by your dealer as required. More details may be found in the suspension manufacturer's handbook.



Pre Load Adjustment

We recommend that for optimum safe riding Pre-Load should be set as follows.

- 1 Pre-Load alters the amount of bottom bracket drop when seated on the saddle. We strongly recommend you set Pre-Load so as to experience no more than 1" (25mm) of sag. Measured as a decrease in bottom bracket height when the riders weight is applied to the bike.
To adjust Pre-Load, grasp knurled adjuster (A) and spring, and either:
 - 2 Increase Pre-Load by turning to compress the spring
 - 3 Decrease Pre-Load by turning to allow spring extension.

TYRE CARE AND WHEEL ADJUSTMENTS

To obtain maximum life and full benefit from your tyres, it is essential to maintain the recommended pressure indicated on the tyre sidewall. Hard braking and skidding greatly reduces tyre life. Make sure your tyres do not come into contact with oil, petrol, paraffin or other rubber solvents. Make sure that your wheels run true and are in correct alignment to avoid chafing the tyre sidewall against the bicycle frame or fork tubes. Tyres should regularly be inspected for wear and cuts. Check that the tyre tread pattern is clearly showing all around the outside edge of the tyre. Check there are not any breaks, cuts or uneven wear in the tyre. Tyres should be replaced if damaged. Tyre punctures can be caused by careless riding over sharp stones, holes in the road, or by hitting curbstones. If you are storing your bicycle for a long period of time, it is advisable to store the machine with the tyres off the ground to prevent them from becoming distorted. To inflate tyres, a foot pump or normal bicycle inflator fitted with a suitable valve connector should be used along with an accurate tyre pressure gauge. Wheels should be checked regularly for spoke tension. Perform this check more frequently if the bicycle is used on rough roads.

The wheels fitted to this bicycle are not suitable for the fitting of Tubeless Tyres. **Please consult your local dealer for this upgrade.**

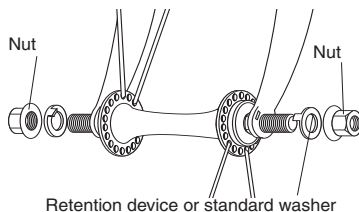
Front wheels

Caution:

Your front wheel comes with a retention device to keep the wheel axle from disengaging from the fork-ends if the wheel nuts or the quick-release are incorrectly assembled. These devices are of two types.

1: Small protrusions machined or formed on the outer face of the fork-ends.

2: Shaped washers that contain a small tab/prong that engages in a hole within the fork-end.

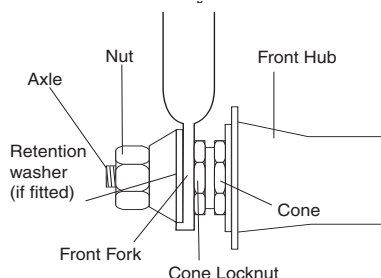


FRONT WHEEL REMOVAL AND REPLACEMENT.

Disengage the brake quick release lever if your bicycle is so equipped. Loosen both axle nuts by turning in a counter clockwise direction. Remove axle nuts, washers, and axle retention device if fitted. Remove the front wheel. The axle cone bearing adjustment should permit smooth rotation of wheel with the cone locknut securely fastened against axle cone to prevent loosening.

Replace the front wheel between the fork blades ensuring that the projecting tab/prong of the retention device are securely fitted into the slot in the fork ends or with standard washers securely in position butting against the protrusions on the fork end. Securely tighten all wheel nuts ensuring that the wheel is central within the forks. Refer to page 6 for recommended torque settings.

Note. Reset brake quick release mechanism and check brake for proper operation.



To Remove Rear Wheel

Move the chain onto the smallest rear sprocket. Disengage the brake quick release lever if your bicycle is so equipped. Loosen both axle nuts by turning in a counter clockwise direction. Pull the derailleur mechanism gear rearwards for additional clearance. Remove the rear wheel by sliding forward or down and out of the frame.

To install wheel, locate the top section of the chain on the small sprocket and replace the wheel into the frame by pushing back and centralising between the chainstays. While holding the wheel in this position, tighten the axle nuts in a clockwise direction securely ensuring that the wheel is central within the chainstays. Refer to page 6 for recommended torque settings.

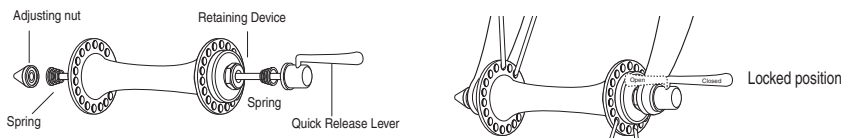
The wheel should turn freely and have no side play.

Reset rear brake quick release mechanism and check brake for proper operation.

ADJUSTMENTS

QUICK RELEASE FRONT WHEEL

1. To remove the front wheel, first release the front wheel brake. Then open the quick release lever on the axle and pull the wheel from the forks.
2. To install, fit wheel into forks with quick release lever on the left side. Close quick-release, and tighten adjuster until snug. Release quick-release lever and further tighten adjuster approximately 3/4 of a turn. Lock and check that the quick-release has engaged the fork ends. It may be necessary to tighten or loosen the adjuster slightly. Note. Reset brake quick release mechanism and check brake for proper operation.
3. Wheel must be clear of frame and fork by at least 1-5mm.
4. The wheel should turn freely and have very little side-play.
5. Check quick release lever is in the correct and fully locked position before each ride.



Quick Release Rear Wheel

Removal and installation of rear wheel fitted with quick release mechanism. Use same procedure as for standard rear wheel, with the exception of loosening axle nuts. Operate the quick release lever by pulling away from the wheel 180° to release the wheel from the frame.

When installing the rear wheel, position the wheel centrally in the frame, folding back the lever, then, when in position fold the lever into its closed position.

Check quick release lever is in the correct and fully locked position before each ride.

Reset rear brake quick release mechanism and check brake for proper operation.

RIM WEAR LINE LIMIT INDICATOR

If your bicycle is fitted with disc brakes to the front and rear the following explanation is not applicable and can be ignored.

Visible Safety Line

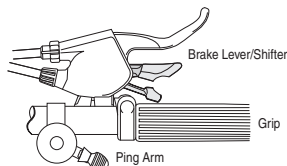
This type of safety line is already machined and is visible in the aluminium braking surface. When the rim has been subjected to extended braking and the rim surface is sufficiently worn to warrant replacement, the safety line will disappear and the rims braking surface will be one continuous smooth surface.

THE RIM MUST BE REPLACED BY A PROFESSIONAL CYCLE MECHANIC BEFORE THE BIKE IS RIDDEN.

! WARNING! Do not attempt to ride the cycle until you are absolutely sure that all quick release levers are fully closed and securely tightened.

FITMENT OF BELL

1. Remove screw from bell clamp.
2. Position in a convenient spot near the left hand or right hand handlebar grip.
3. Replace screw & tighten securely.
4. Rotate the "Ping Arm" to a comfortable position.



Position Bell on left hand or right hand side of the handlebar as required.

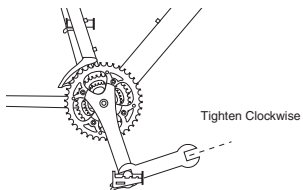
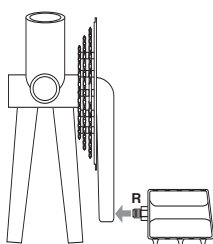
! WARNING

PEDAL IDENTIFICATION



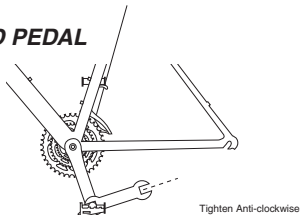
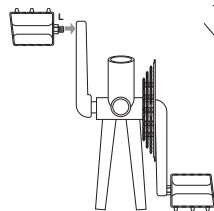
Check for the letters "L" or "R" on the ends of the pedals to show which side the pedal needs to be fitted to.

TO FIT RIGHTHAND PEDAL



1. Fit to chainside of cycle.
2. The pedal tightens in a clockwise direction, towards the front of the bicycle.
3. Locate thread by hand, fit and tighten.
4. Use spanner to finish tightening (be careful)

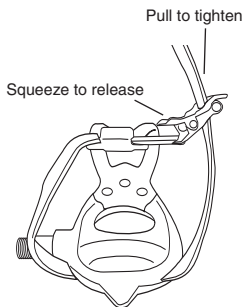
TO FIT LEFTHAND PEDAL



1. Fit to non chainside of cycle.
2. The pedal has a special thread to tighten in an anti-clockwise direction, towards the front of the bicycle.
3. Locate thread by hand, fit and tighten.
4. Use spanner to finish tightening (be careful)

If your bike is fitted with toeclips and straps to the pedals they should always be adjusted to ensure the straps are loose enough to remove your feet quickly in the event of an emergency.

Do not lock your feet into the pedals until you are fully familiar and confident with the release mechanism.



Falcon Cycles recommends your new bike is checked and serviced at regular intervals to ensure its performance, reliability and your safety. Wherever possible we recommend that service, maintenance and repairs are undertaken by your local dealer. If this is not possible please review the following detail as a guide.

A list of appointed & recommended dealers is available at:- www.falconcycles.co.uk

Maintenance Checklist

Before each ride

- Check both wheel axles are secure in the frame & forks.
- Check tyres are within the recommended pressure limits as indicated on the side wall. **It is good practice to carry tyre levers and a puncture repair kit at all times.**
- Check handlebar assembly is tight and rotates freely.
- Check the function of the braking system whilst stationary.
- Check the gear shifters operate correctly.
- Rotate each wheel ensuring it rotates freely.
- Check the saddle and seat post is secure and adjusted.
- Check the pedals are secure and the chainwheel crank arms are free of lateral movement.
- Check lights, reflectors and bell are all in good working order.

Monthly and after long or hard rides, the following additional checks/maintenance should be completed.

- Clean degrease and lubricate your bike.
- Inspect tyres for wear, damage and punctures.
- Check no spokes are loose, broken or missing.
- Hubs run smoothly with no sideways play.

Annual service and inspection

If you have any doubts about completing the following service and inspection you must seek the services of the professional cycle technician at your local dealer. You can find your nearest dealer at www.falconcycles.co.uk (off road riding will require more frequent maintenance.) It is good practice before commencing any service/inspection to thoroughly clean and degrease your bicycle.

Inspect

- Frame and forks for damage, cracks, corrosion and deformation.
- Wheels for damage, balancing, spoke tension and rim wear.
- Brake levers, brake blocks/pads, brake control cables and inner wire.
- Chain for corrosion, stiff links & stretch. **(failure to maintain the chain will considerably reduce the performance and life span of the whole gear system).**
- Chainwheel cranks are securely fastened to the axle at the correct torque.
- Front and rear gears for damage, wear and alignment.
- Disassemble headset, clean, regrease and reassemble making sure to inspect bearings for wear.
- Remove seat post from frame, clean and regrease before refitting.



Suspension and hydraulic brakes must be serviced by your local dealer.

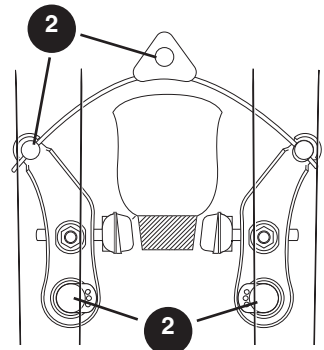
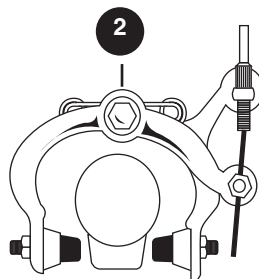
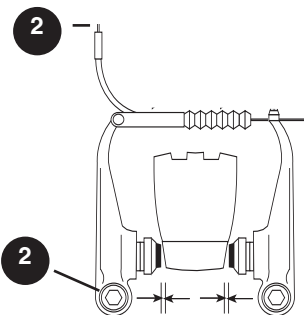
Any component found to be damaged or worn must be inspected by a professional and replaced where necessary with genuine replacement parts.


Falcon Cycles recommends the use of Weldtite cleaners and lubricants. www.weldtite.co.uk

This website is a “short course” in maintenance for all the basic skills & equipment you will need to keep your bike in tip top condition.

Regular washing and lubrication not only keeps your bicycle looking in top condition but will actually assist in maintaining its original performance and prolongs the life expectancy of the mechanical components.

The chain is the most important component to keep clean as it is the part that wears the teeth on the rear sprocket, the rear gear and the chainset. It is also the key part which transfers your effort into forward motion. If it is clean it is efficient and it is not damaging the gear system.



A person wearing a helmet and a light-colored jacket is riding a bicycle away from the camera. The background is a natural, outdoor setting with some dry grass and trees. The image is partially obscured by a semi-transparent grey box containing text.

If your bicycle has reached the end of it's useful life please take a moment to consider the environment before disposal. There are options available other than landfill.

www.recycling.co.uk

If your local recycling centre has a mixed metals recycling facility, firstly remove all other parts like grips, tyres, saddle etc then take it along. Normally you will need a form of identification.

www.re-cycle.org

This is a directory of UK charities who refurbish old bikes and ship to Africa for use by less fortunate people to improve thier daily lives.