

OWNERS MANUAL

Shawick-Falcon CYCLES LTD

Routine Maintenance Checks and Lubrication

Lighting

When applicable check both front and rear lamps are showing bright light.

Seat and Stem Nuts

Be sure seat and stem nuts are tight.

Gears

Front and Rear - Lightly oil moving parts. Maintain adjustment of front and rear derailleurs.

Half Yearly

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

Bottom Bracket

Clean, regrease yearly, checking for wear.

Chain

Keep lightly oiled weekly, clean and lubricate half yearly.

Wheels

Check that axles are sealed and secured properly. Rims should be kept free from wax, oil, grease and glue. Check for loose or missing spokes.

Pedals

Lightly oil bearings monthly.

Cranks

Grease bearings monthly. Check that axle bolts or cotterpin bolts are tight. Check for free play in bottom bracket. Yearly, remove, clean and regrease hub axles, bottom bracket set and headset.

Headset

Remove, clean and regrease bearings yearly, checking if replacements required.

Stem Nut

Ensure stem bolt is tight.

Reflectors

Check all fittings are secure.

Handlebars

Check handlebar bolt is tight. Check brake levers securely mounted to bars and brakes stop smoothly and efficiently.

Brakes

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

Tyres

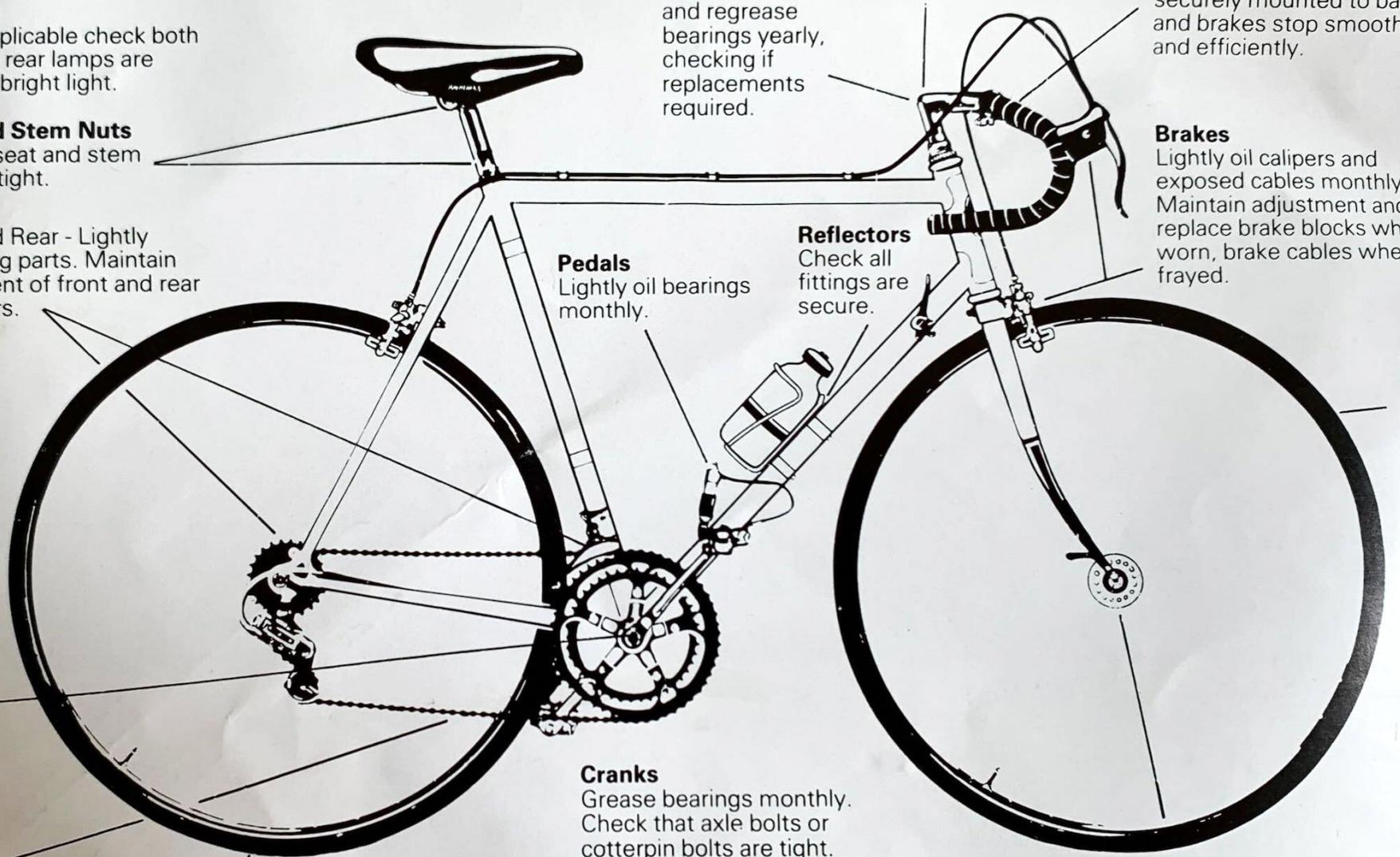
Check for cuts and wear. Maintain pressure indicated on tyre wall for maximum efficiency.

Wheel Hubs

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

N.B.

Wash cycle weekly with warm soapy water and polish dry with a soft cloth.



TAKING CARE OF YOUR CYCLE

Saddle

Height

To adjust the height of the saddle, loosen nut (A) (Fig 1.) until the seat pin revolves freely in the frame. Raise or lower as required but avoid strenuous twisting which may mark the seat pin. Ensure that the saddle is facing directly forward and then re-tighten.

Caution

At least 2½" of the seat pin must remain with the frame, as indicated by limit mark.

Rake

To adjust the rake of the saddle loosen nut (B) (Fig 1.) and move saddle to suit. Avoid exaggerated positions. The ideal position is when the saddle is horizontal.

Brakes

Adjustments

Adjustments apply to both front and rear calipers of side-pull and centre-pull brakes.

Before adjusting the brakes check and replace any worn blocks and ensure that the wheel rims are true and seated centrally between the forks.

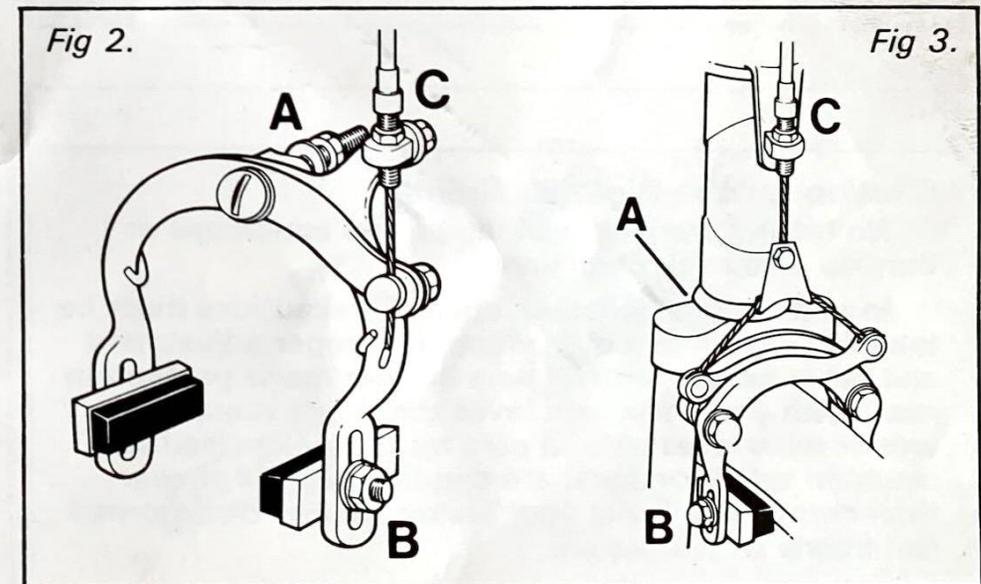
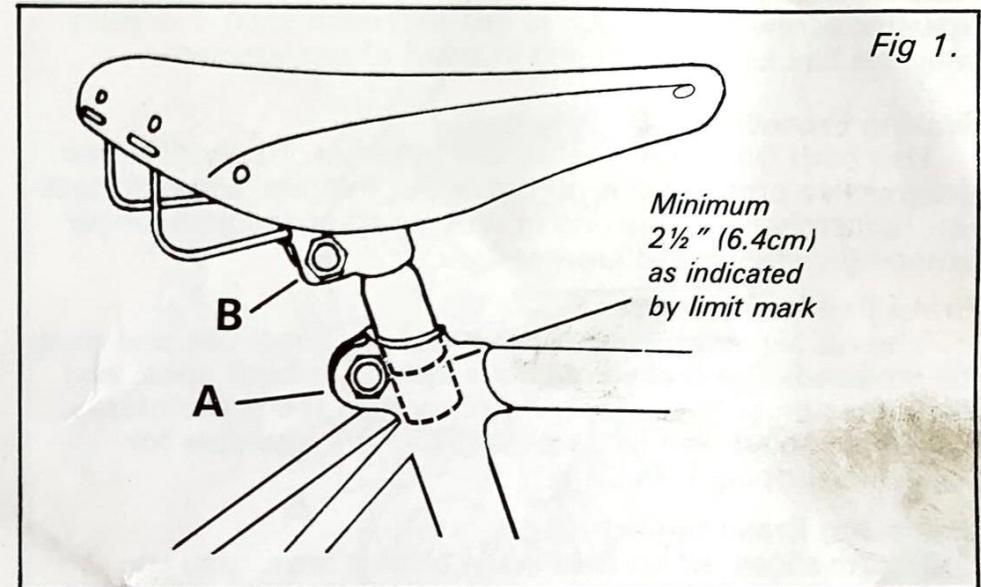
Alignment

Brake blocks should be equi-distant from the rim. To adjust loosen rear nut (A) (Fig 2.) and move complete brake unit until the blocks are centred. Re-tighten nut (A) (Fig 2.)

Ensure that the blocks meet the rim squarely and without touching the tyre. To adjust loosen nut (B) (Fig 2.) and realign blocks. Check both sides. Re-tighten.

Clearance Adjustment

Brakes should be adjusted so that the blocks are approximately 1/10" from the rims in the 'off' position. Operation of the levers should bring immediate and solid contact with the rim. Use fine adjustment screw (C) (Fig 2/3.) to achieve correct gap between blocks and rim. If use of



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adjuster screw (C) (Fig 3.) is not sufficient then it is likely that the blocks are worn and in need of replacement.

Braking Procedure

Use both front and rear brakes together. Apply firm and progressive pressure but do not allow the rear wheel to lock up. Remember that braking in wet weather requires longer stopping distance and greater care.

Brake Pad Maintenance

The rubber brake blocks will wear in normal use and must be replaced. The brake shoes are closed at both ends, and the shoes must not be opened to replace the brake blocks. Complete shoes and block assemblies are available for replacement purposes.

Replacing Brake Blocks

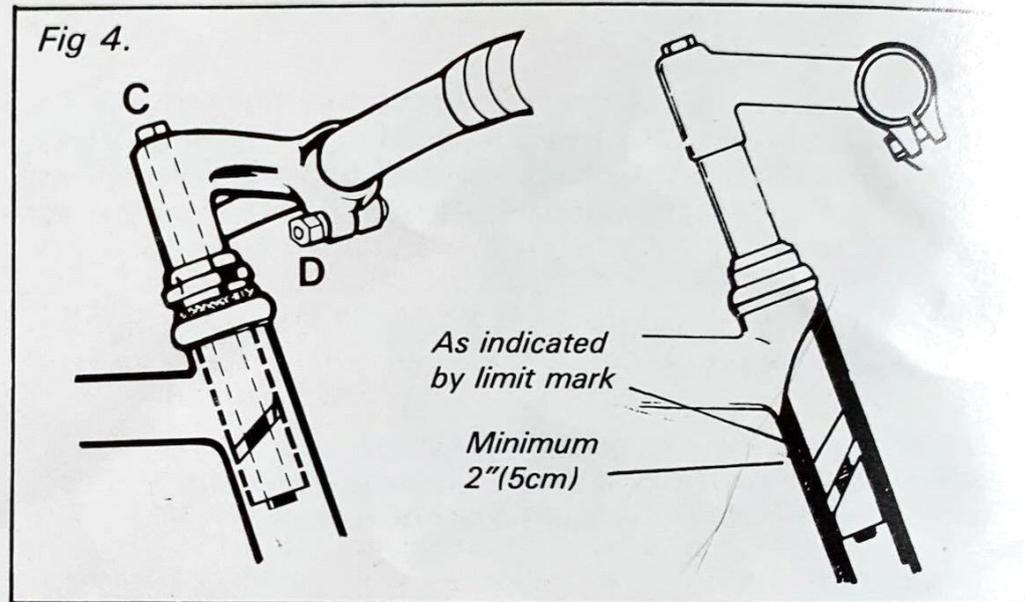
If brake shoes (which hold brake blocks) have open end (most are fully enclosed), the closed end must always face to the front of the cycle. For replacement of brake shoes closed at both ends, see above.

Caution In Wet Weather Riding

No brakes work as well under wet conditions as they do under dry conditions.

In rainy or wet weather, special precautions must be taken to ensure safety in stopping. Proper adjustment and cable lubrication will help but the major precaution rests with you. Increased lever forces are required in wet or rainy weather and care must be exercised to maintain safety under these conditions. Ride slower than normal and apply your brakes sooner than normal conditions would require.

Fig 4.



Handlebars

Height

To adjust the height of the handlebars loosen expander bolt (C) (Fig 4.) then tap the bolt lightly on the head with a wooden or rubber hammer until the stem becomes loose in the frame.

Recessed allen key bolts should be released with a correct size allen key and loosened as above.

Adjust bars to height required, avoiding marking the stem, align the bars exactly with the front wheel and re-tighten.

Caution

At least 2" of the stem must remain within the frame. Avoid overtightening of the expander bolt (C). To adjust the rake of the handlebars to position required, ensure they are centred within the eye of the stem and re-tighten bolt (D).

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Gears

Derailleur Front and Rear Changers

Derailleur gears are intricate and precisely machined components and will give years of service if treated with care. Repair should be left to a qualified mechanic. However, periodic adjustment of the extent of travel of the gears may be required to prevent damage. If the gears are not adjusted properly it may result in the chain leaving the sprockets of the chain rings and causing damage and a possible accident.

Although Elswick Falcon Cycles use a variety of makes of derailleur, most are basically similar in operation and adjustment.

Derailleur Rear Mechanism

Adjustment is correct when the chain engages smoothly on to the smallest sprocket when the gear shift lever is at its most forward position. The roller cage of the mechanism should be directly in line with the small sprocket. If the chain is out of line adjust screw (B) (Fig 5.) in or out until the chain and sprocket are in line. Now change gear on to the largest sprocket, closest to the wheel. Again the chain should engage smoothly and run in perfect line.

Take care that the roller cage does not touch the spokes of the wheel. By adjustment of screw (A) (Fig 5.) perfect alignment can be obtained.

Derailleur Front Mechanism - (10 and 12 gear cycles)

The movement of the front changer should be just sufficient to move the chain from one chainwheel to the other and back when the rear mechanism is on any sprocket. Excessive movement is dangerous and could result in the chain leaving the chain rings. Adjustment screws (C) and (D) (Fig 6.) control travel movement.

Derailleur Maintenance

All derailleur parts and controls should be lubricated frequently. Aluminium derailleur parts can corrode and prevent free, easy movement. Steel will, of course, rust if not

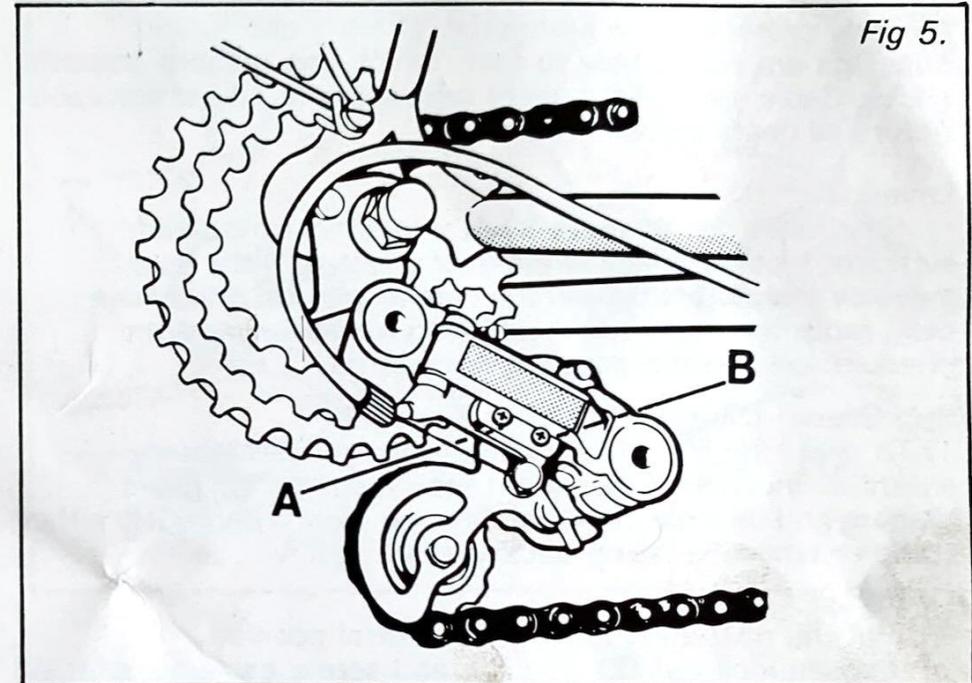


Fig 5.

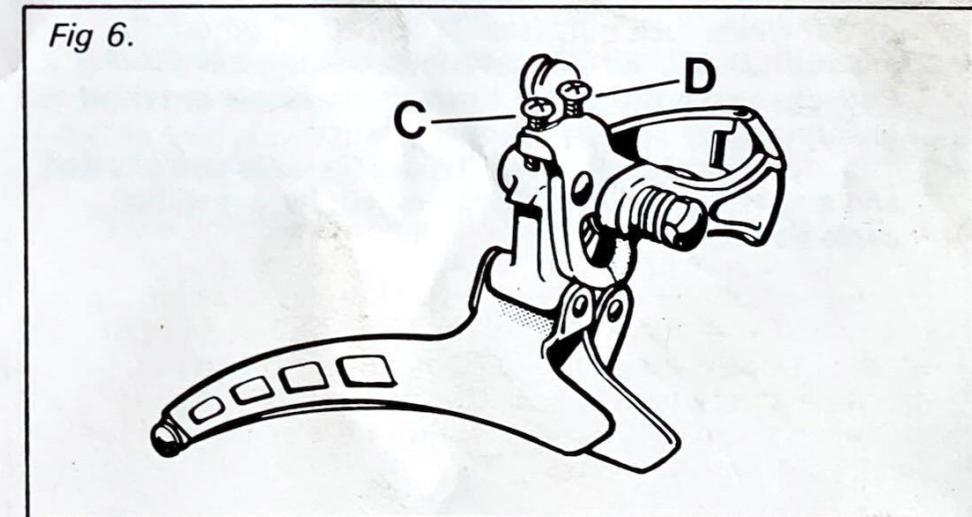


Fig 6.

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properly protected and lubricated. Control cables and housings are susceptible to rust, which can prevent smooth shifts. Cable wear can make it necessary to adjust the cable before all gears can be engaged.

Levers

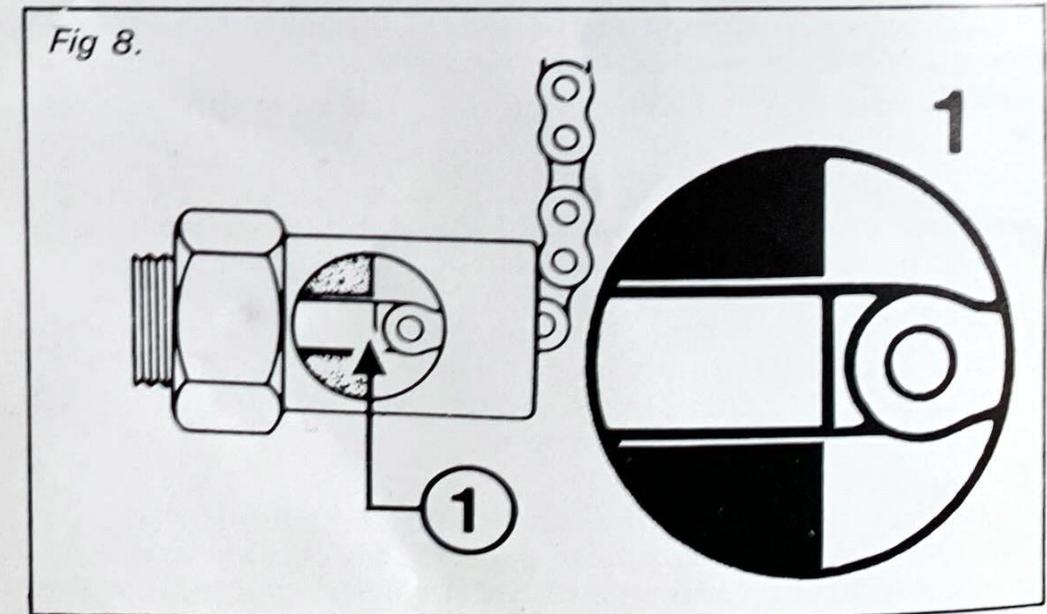
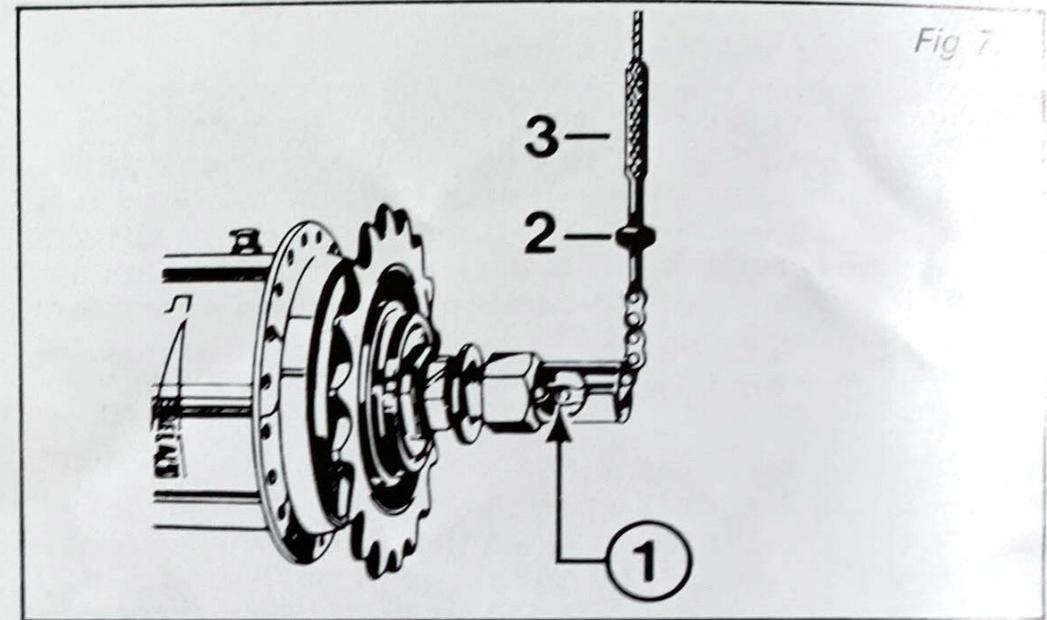
Gear levers should move freely when moved but with sufficient friction to stay in the gear selected. If the levers move by themselves tighten the tension screws. To change gear, move the levers whilst pedalling forward, with light pressure; never whilst pedalling backwards.

Hub Gears - (Sturmey - Archer 3 speed)

To give long life and service correct adjustment is essential. Incorrect adjustment may result in the gears slipping and internal damage. Change gear with pedals either static or whilst pedalling backwards.

To Adjust

- Put the gear lever in No.2 or neutral position.
- Loosen lock nut (2) (Fig 7.) and screw cable adjuster (3) (Fig 7.) until end of the indicator rod is level with the end of the axle. This can be seen through the 'window' drilling of the wheel lock nut, (see 1) (Fig 8.) Tighten the locknut (2) (Fig 7.) against the cable adjuster (3) (Fig 7.) Periodic oiling of the hub through the nipple provided will ensure smooth and silent operation.
- The internal mechanism of the hub is quite complicated and any repairs should be carried out by a qualified cycle dealer.



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Crank and Chainwheel

Cotterless Chainsets

Usually made of light alloy these cranks and rings are easily damaged and require careful handling. Removal and fitting requires a specialised extractor tool and is best left to your dealer.

Cottered Chainset

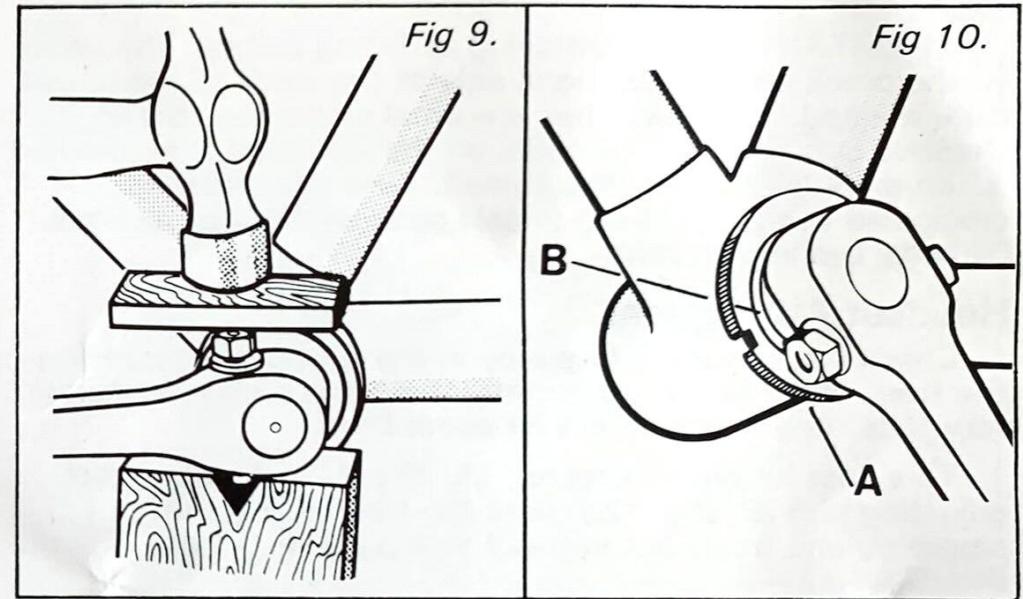
To remove, loosen the cotter nut. Support the axle with a block of wood placing another block of wood on the cotter pin thread side (as shown), lightly tap with a hammer until the cotter pin falls out. The crank can now be removed.

To re-fit, crank must be facing rear of cycle, push the cotter into position from top of crank after turning flat of axle to meet hole in crank. (Flat surface of cotter towards axle). Seat cotter with light tap with hammer. Locate retaining nut and tighten with spanner (take care not to overtighten and damage threads). Repeat operation with other crank, making sure that both cranks are in a straight line.

Chain

On cycles with a single gear or hub gears there should be $\frac{1}{2}$ " of vertical movement at a point halfway between the sprocket and the chainwheel. Adjustment of the tension can be made by loosening the rear wheel axle nuts and moving the wheel backwards in the frame ends. Ensure that the wheel is centred in the frame and re-tighten wheel axle nuts.

Derailleur gears have an inbuilt chain tensioning mechanism and adjustment as above is not necessary. If chain rides up on sprockets, this means that either the chain or teeth of sprockets are worn.



Bottom Bracket Axle

Check for free play in the axle bearings by holding the crank and moving it sideways to the line of the cycle.

To adjust for free play loosen the locking ring (A) (Fig 10.)

Turn the bearing cup (B) (Fig 10.) clockwise to tighten and take up free play. Do not overtighten the bearing cup, ensure that the axle rotates freely but without play.

Re-tighten locking ring (A) (Fig 10.)

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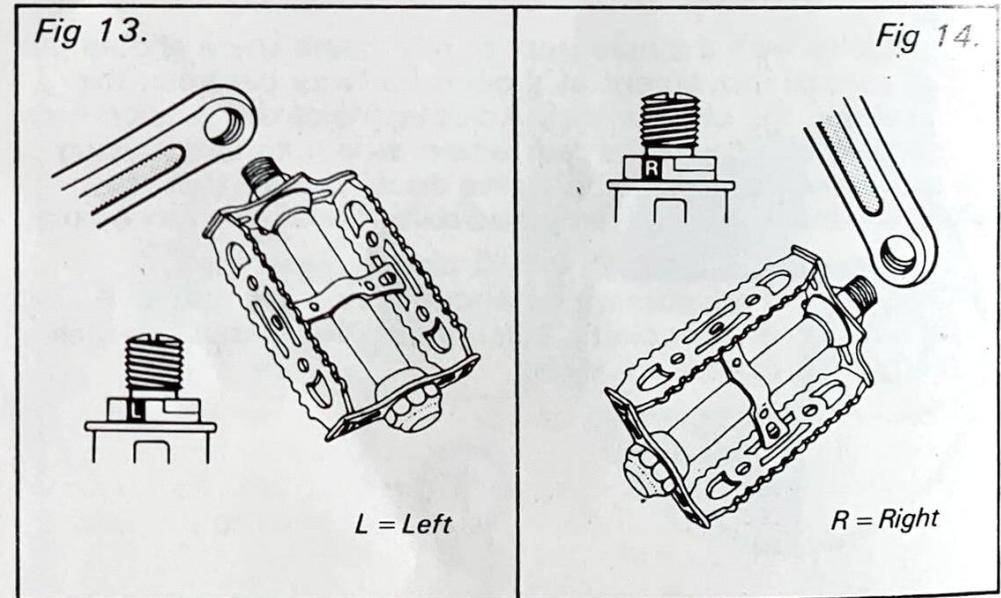
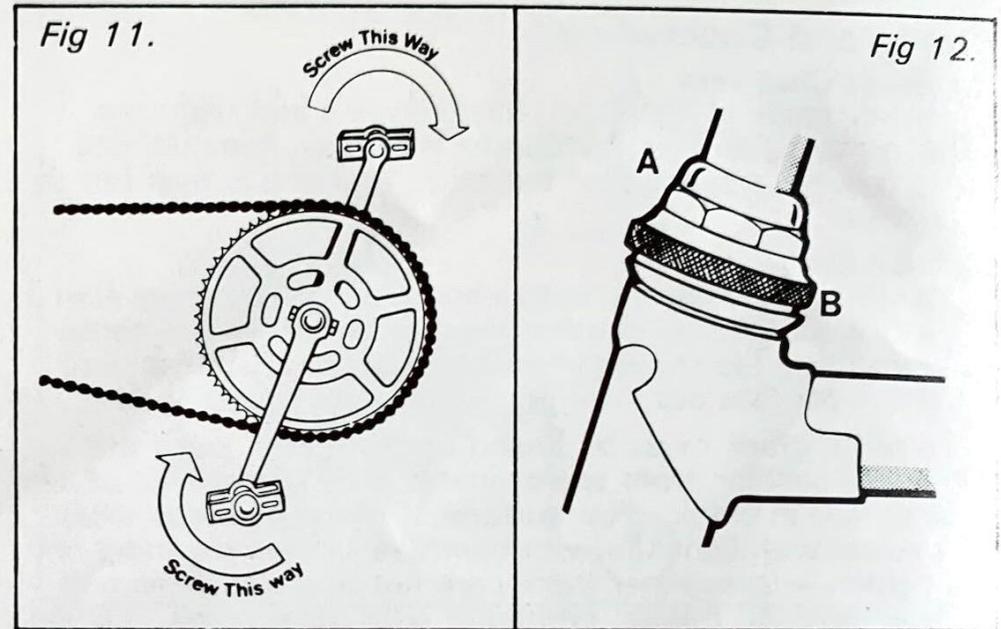
Pedals

IMPORTANT - When removing or fitting pedals. The pedal on the crank on the right hand side of the cycle (Chainwheel side) marked 'R' on axle, has a normal clockwise thread. Turn clockwise to tighten. The pedal on the left hand side, marked 'L' on axle, has an opposite thread. Turn this pedal anti-clockwise to tighten. Keep pedals spanner-tight at all times. Oil pedal bearings monthly.

Headset Adjustment

Check for unwanted free play in the headset by applying the front brake firmly and rocking the cycle backwards and forwards. Any free play will be apparent.

To adjust loosen locking nut (A) (Fig 12.) Finger tighten adjusting ring (B) (Fig 12.) until the forks will rotate smoothly and freely but without free play, re-tighten lock nut (A) (Fig 12.)



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Wheels

General Care

Avoid riding up and down kerbs and watch out for pot holes and sunken grates in the road surface. Broken spokes should be removed instantly and replaced as soon as possible by your dealer. Rims running out of line can be trued quite cheaply.

Removal and Replacement

Loosen wheel axle nuts with spanner or the quick release lever if fitted. It may be necessary to deflate the tyre to allow complete removal.

When removing the rear wheel of a cycle fitted with derailleurs, make sure that the chain is on the bottom (smallest) sprocket.

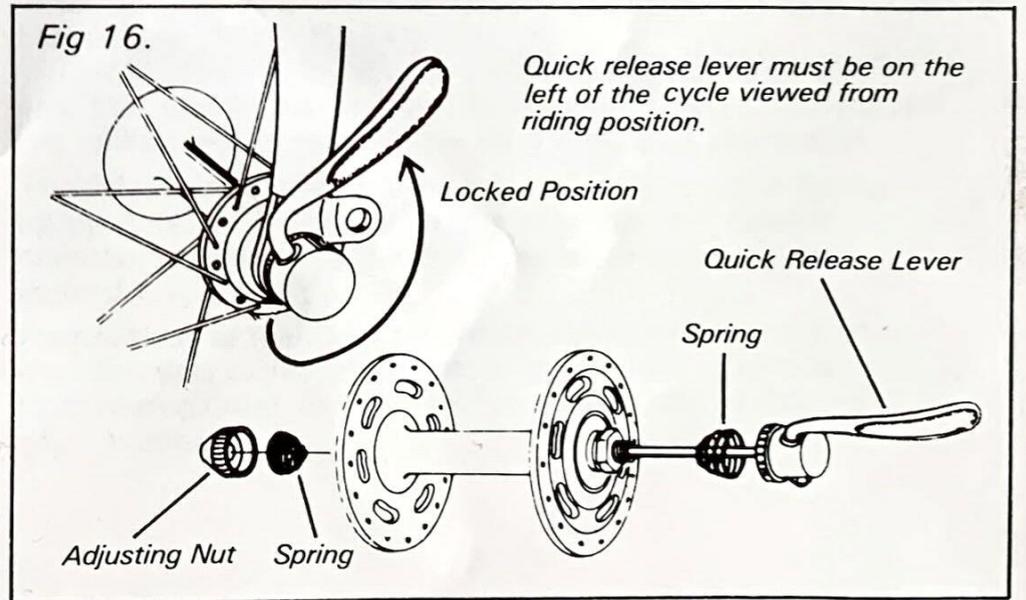
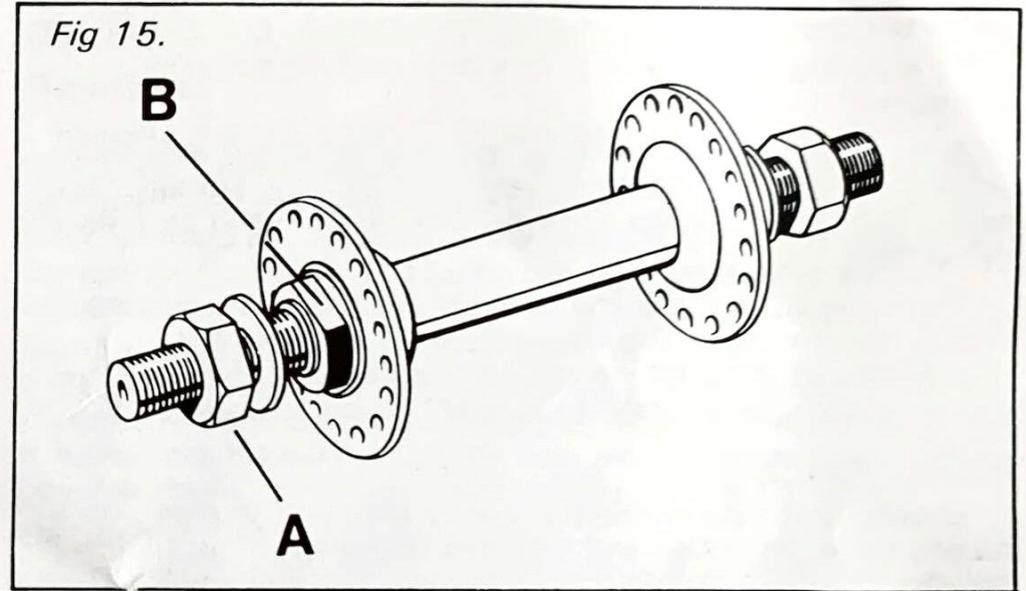
When refitting wheels ensure that the wheel is correctly seated centrally in the fork ends and between the body of the forks.

Quick Release Wheel Hub

Great care should be taken when locking wheel into the frame using the Quick Release System in order to ensure safe operation of your bicycle. First tighten the adjusting nut (see illustration) (Fig 16.) in a clockwise direction while the quick release lever remains in an upright horizontal forward position. Next, move quick release lever 180° to upright horizontal rear position.

Wheel Axle Adjustment

Test for free play in the bearings by rocking the rim sideways to its line of travel. To adjust, remove the wheel from the frame. Loosen lock nut (A) (Fig 15.) away from adjusting cone (B) (Fig 15.) (you will need a special cone spanner for this operation). Tighten cone (B) (Fig 15.) until the axle revolves smoothly and freely but without free play. Tighten locknut (A) (Fig 15.) back up against cone (B) (Fig 15.) but ensure that in doing this you do not alter the adjustment of cone (B) (Fig 15.) .



PRE-RIDE PROCEDURES

Before Cycling

Be sure that your cycle is in a safe and roadworthy condition.

A properly adjusted cycle is not only safer but also more efficient to ride. To help maintain your Elswick Falcon cycle follow our list of checks after two weeks use and periodically thereafter.

For full guidance see the relevant maintenance section inside. Most checks and adjustments are within the capabilities of the average cyclist, however, major repairs should always be referred to a qualified cycle dealer.

Riding Position

Ensure that your cycle is properly adjusted to give you a comfortable, balanced and efficient riding position, that will allow you to look forward at all times. You will have chosen a frame to suit your overall size, however, further adjustments of saddle and handlebars can be made to meet your own individual requirements (see inside for method of adjustments).

Again your dealer will be happy to advise and assist.

On The Road

Cycling can be fun and beneficial to health, but please make sure you are also riding safely. Follow these simple guidelines and you will feel confident on the road and in traffic.

- Ensure that your cycle is in a roadworthy condition. Pay particular attention to the brakes and tyres.
- Always obey traffic signs and regulations. Be familiar with the Highway Code.
- When cycling at night wear something reflective or white. Make sure your lights are working and comply with the law.
- Maintain control of your machine, keep your hands on the handlebars and feet on the pedals.
- Do not carry passengers or any item liable to affect the control and balance of your machine.
- Always ride as close to the kerb as possible, but keep a sharp look out for grates and pot holes.
- Always give clear hand signals in plenty of time to inform other road users.
- Remember that in wet weather brake efficiency is reduced and stopping distances can be greater, so make allowances.
- Do not hold on to other cyclists or moving vehicles.

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If your wheel has an adjustment cone at each side you only need to adjust one. When refitting wheels with a single adjustment cone this should be at the left hand side of the cycle.

Tyres

Inspect your tyres often and remove any flints, thorns or glass splinters that may have become embedded in the rubber.

Maintain the correct pressure which should be shown on the side wall of the tyre. Correctly inflated tyres are more resistant to punctures and more efficient to ride.

Avoid spilling oil or any petroleum based liquids on to the rubber as this can cause damage.

Tyre Care and Wheel Adjustment

- Use hand or foot pump to inflate the tyre.
- Never ride a bicycle with under inflated tyres.
- Improper tyre pressure will cause excessive wear, causing premature replacement.
- Blowouts of the tyre are the result of over inflation, or also may be caused by the tyre not being properly on the rim when inflated.
- In case of any minor loosening of spokes you may repair by yourself by tightening the nipples, but we recommend you take the bicycle to a bicycle mechanic.
- Wheels should be checked regularly for spoke tightness and true alignment. Perform this check more frequently if the cycle is used on rough roads.

INDIVIDUAL ADJUSTMENTS

Position

Having chosen a frame to suit your overall size the following further adjustments are necessary to ensure a balanced and efficient riding position which allows you to look forward at all times. After making these adjustments, do ensure that nuts and bolts are tightened after every adjustment.

Saddle Height (*Page 1, Fig 1*)

Place pedal at bottom of its stroke with heel of foot (flat shoes) comfortably on the pedal, without stretch. (N.B. It is essential for safety that the seat pin maximum mark is never exposed - if this occurs, then the cycle is too small.)

Handlebar Height (*Page 2, Fig 4*)

Start with the handlebar stem approximately level with the saddle height and adjust according to personal preference and performance. (N.B. As with saddle pin, the maximum mark on the stem should never be exceeded.)

Handlebar Reach (*Page 1, Fig 1*)

This is obtained by sliding the saddle in its cradle on the seat pin. Ideally you should just be able to touch the handlebar whilst resting your elbow on the nose of the saddle.

The information above gives a good starting point for setting up your cycle. However, during your first few rides it may be necessary to slightly alter the position to suit your own desired riding posture.

Remember to maintain a comfortable position and also one enabling you to see ahead easily at all times. Remember also, to tighten all nuts and bolts after making the necessary adjustments.

BMX

Routine Maintenance Checks and Lubrication

Lighting

When applicable check both front and rear lamps are showing bright light.

Seat and Stem Nuts

Be sure seat and stem nuts are tight.

Reflectors

Check monthly securely fixed.

Monthly

Oil exposed pedal hub and bottom bracket axles.

Yearly

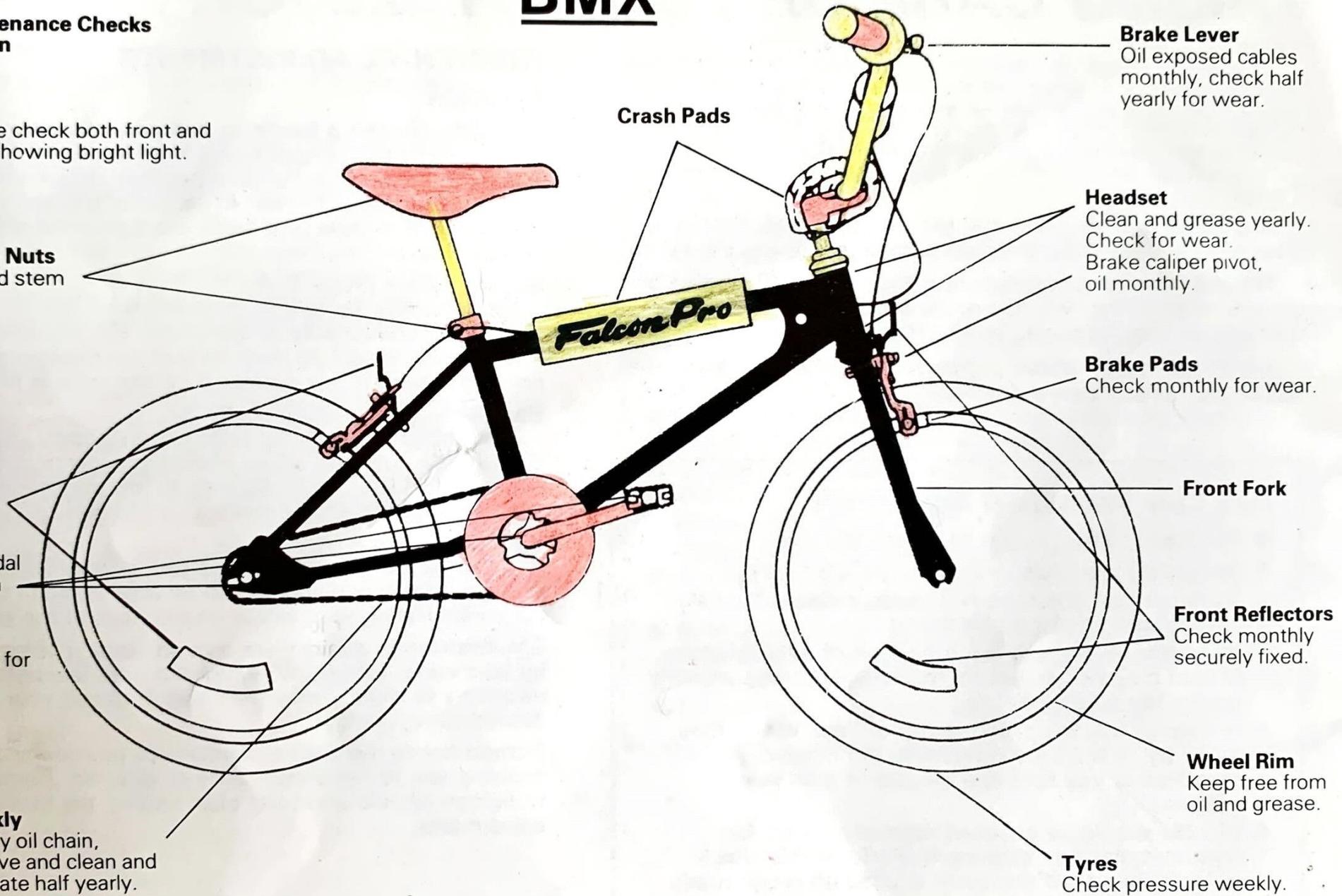
Remove, check for wear, replace.

Weekly

Lightly oil chain, remove and clean and lubricate half yearly.

N.B.

Wash weekly with warm soapy water, polish dry with a soft dry cloth.



Brake Lever

Oil exposed cables monthly, check half yearly for wear.

Crash Pads

Headset

Clean and grease yearly. Check for wear. Brake caliper pivot, oil monthly.

Brake Pads

Check monthly for wear.

Front Fork

Front Reflectors

Check monthly securely fixed.

Wheel Rim

Keep free from oil and grease.

Tyres

Check pressure weekly.

ADDITIONAL INFORMATION FOR TAKING CARE OF YOUR BMX BICYCLE

Saddle

Height

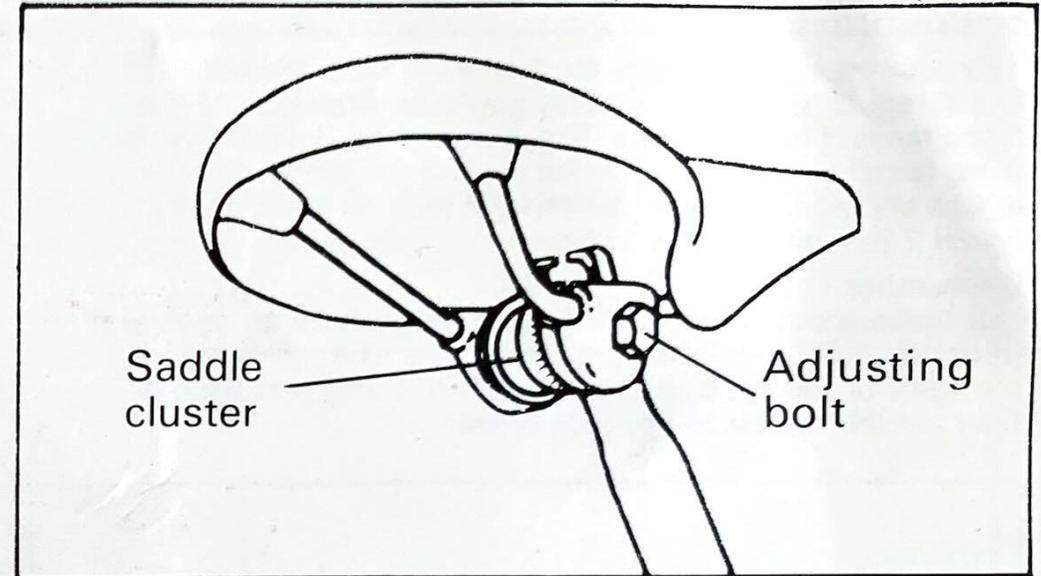
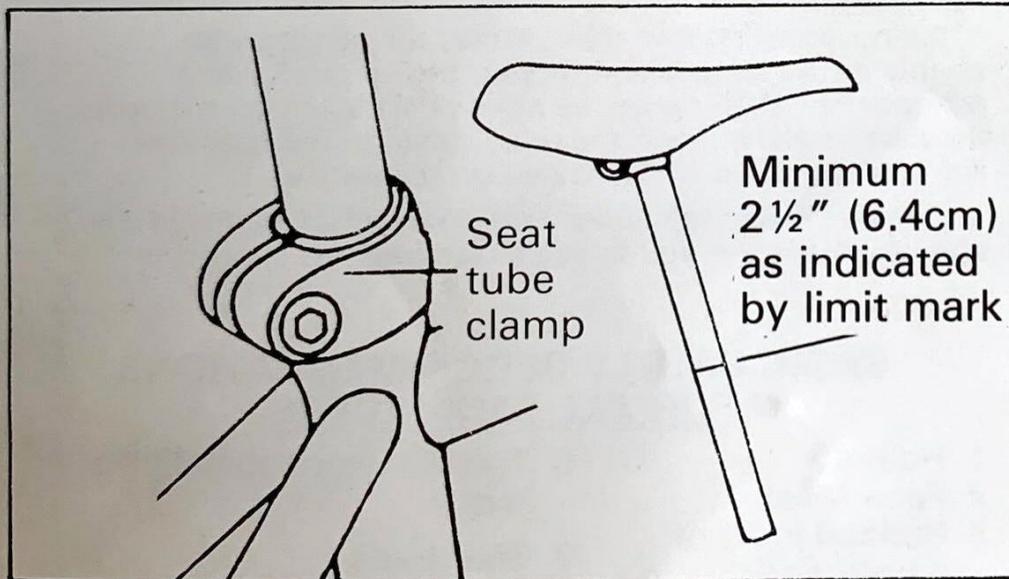
To adjust the height of the saddle, loosen seat tube clamp with either a spanner or allen key as appropriate. Adjust to correct height, avoiding strenuous twisting which may damage the seat pin.

Rake

To adjust the rake of the saddle, loosen bolt at saddle cluster as indicated and move to suit, avoiding exaggerated positions.

Caution

At least 2½" of the seat pin must remain within the frame as indicated by the limit mark. Ensure clips and clamps are firmly tightened.



Brakes

To adjust brakes correctly, ensure that they touch the rim only when the minimum amount of movement is applied to the brake lever.

Adjustments

Minor

Loosen adjuster locknut, if fitted, turn adjuster whilst holding blocks against rim, and adjust so the brakes are set just clear of the rim. Retighten locknut, if fitted, after setting.

Major

Once all the adjustment has been taken up, further adjustment is made by lengthening the cable. To do this, reduce tension in the cable by screwing the adjuster half way in and tying the blocks against the rim. Undo the cable pinch bolt, pull the cable through to the required length using a pair of pliers and tighten the pinch bolt firmly. Then, make the minor adjustment with the adjuster as above.

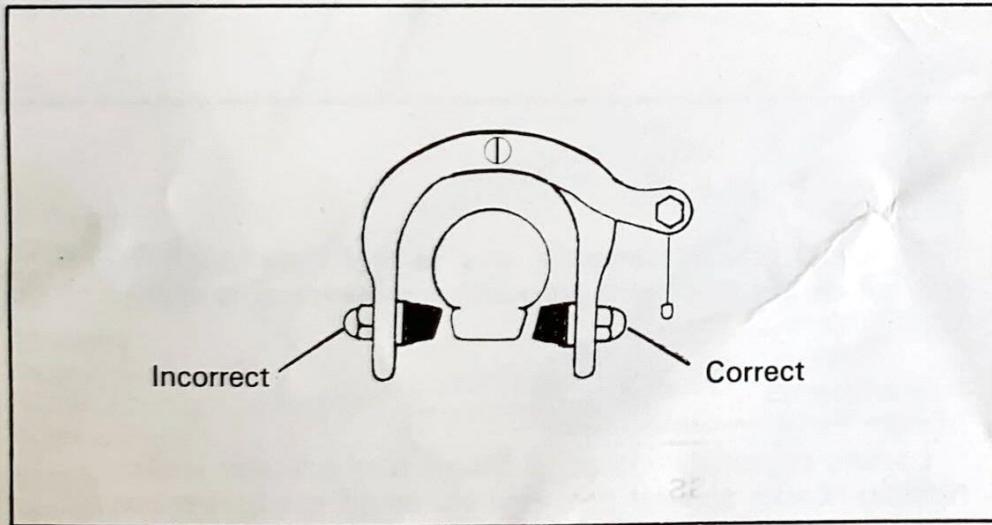
Should one brake block be closer to the rim than the other, tap caliper spring on the side.

Brake blocks

Ensure your brake blocks are free from oil or grease, check regularly for wear, paying particular attention to the block faces if leather faced. These should be replaced while there is still some leather on the face of the block. Rubber blocks should be replaced before the level of the rubber goes below 2 mm of the metal shoe.

Remember

If brake shoes (which hold brake blocks) have an open end (most are fully enclosed), the closed end must always face to the front of the cycle. Make sure when fitting new brakes they are the right way up. (see below)



Handlebar Height

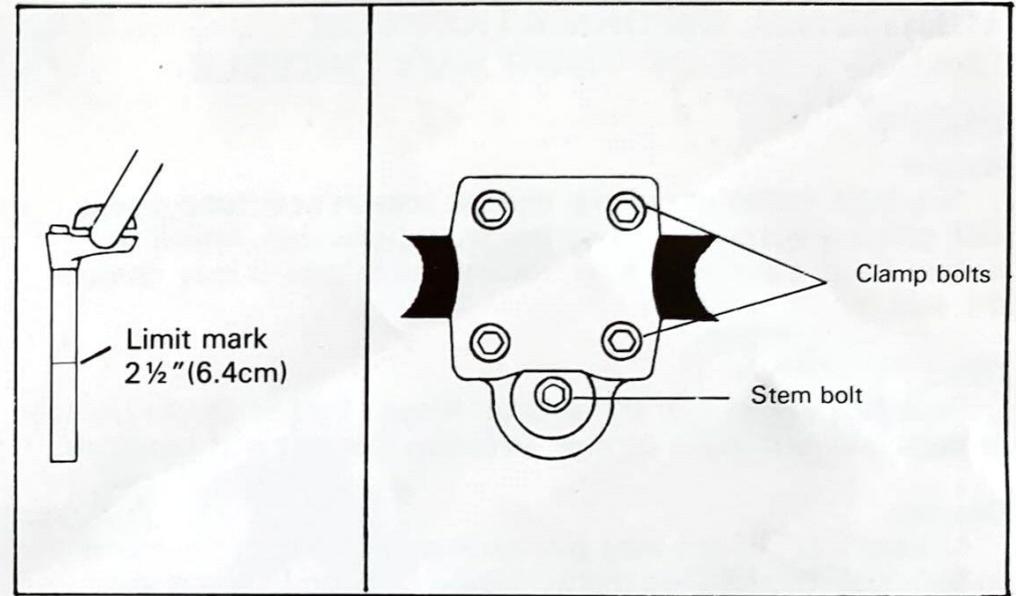
Loosen stem bolt with an allen key, adjust and retighten taking care not to overtighten the expander bolt.

Reach

Loosen each of the stem bolts, adjust as required and tighten firmly afterwards.

Remember

Handlebars should not be raised beyond the limit mark shown. Correctly tightened handlebars should not twist when the front wheel is firmly held between the knees.



Saddle Height

During your first few rides, it may be necessary to slightly adjust the position to your own desired riding posture. For BMX cycles, as most riders stand on the pedals, the best height is when the rider is able to put both feet flat on the ground whilst seated on the saddle.

Remember also, a comfortable riding position should also be one which enables you to see ahead easily at all times.

BASIC SAFETY RECOMMENDATIONS FOR ALL BMX RIDERS

- | | |
|--------------------------------|------------------------------------|
| 1 Helmet | 6 Trainer type shoes (with laces) |
| 2 Face Mask | 7 Bike Pads |
| 3 Padded shirt or elbow pads | 8 Know and apply your Highway Code |
| 4 Gloves | |
| 5 Padded Trousers or knee pads | |

CYCLE LOG BOOK

Complete this cycle model record 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

.....

Cycle Name

Type of Cycle

Serial Number

Frame Size Colour

Extras or special identifying marks

.....

.....

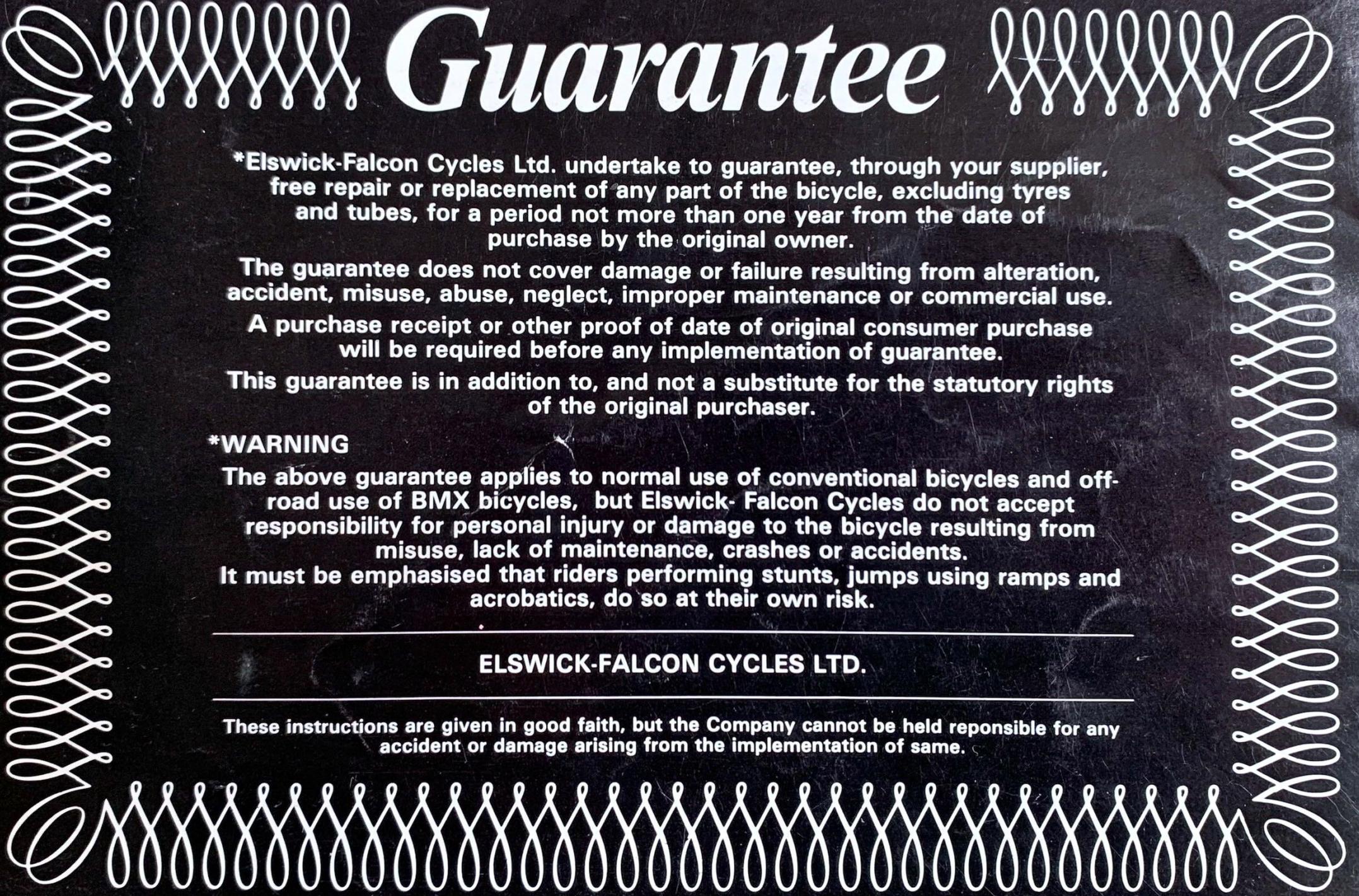
Name and address of local
cycle dealer

.....

Date of purchase

Dealers Address/or Stamp





Guarantee

***Elswick-Falcon Cycles Ltd. undertake to guarantee, through your supplier, free repair or replacement of any part of the bicycle, excluding tyres and tubes, for a period not more than one year from the date of purchase by the original owner.**

The guarantee does not cover damage or failure resulting from alteration, accident, misuse, abuse, neglect, improper maintenance or commercial use.

A purchase receipt or other proof of date of original consumer purchase will be required before any implementation of guarantee.

This guarantee is in addition to, and not a substitute for the statutory rights of the original purchaser.

***WARNING**

The above guarantee applies to normal use of conventional bicycles and off-road use of BMX bicycles, but Elswick-Falcon Cycles do not accept responsibility for personal injury or damage to the bicycle resulting from misuse, lack of maintenance, crashes or accidents.

It must be emphasised that riders performing stunts, jumps using ramps and acrobatics, do so at their own risk.

ELSWICK-FALCON CYCLES LTD.

These instructions are given in good faith, but the Company cannot be held responsible for any accident or damage arising from the implementation of same.