

PROGEAR

E-FREE

TRIKE OWNER'S MANUAL



ONLY TO BE ASSEMBLED BY A SKILLED BICYCLE MECHANIC.

Read all instructions carefully before using this product. Retain this owner's manual for future reference. Skilled mechanic assembly is recommended. not only to be assembled by a skilled mechanic.

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I. IMPORTANT SAFETY INSTRUCTIONS

Failure to obey all of the warnings and instructions contained in this manual may result in serious injury, or permanent damage to your bike.

- Always wear a properly fitted and fastened helmet when riding. This is required by law in most states and is an important safety precaution. Failure to wear an approved safety helmet can result in severe injury or death.
- Check your helmet for proper fit and damage before each ride.
- Always obey all traffic laws.
- The purchaser, owner, and/or riders of this cargo bike are directly responsible for knowing and obeying all local, state and federal laws regarding the riding and use of this cargo bike.
- Always ride cautiously, maintaining complete control and a reasonable speed (<20km/h).
- The rider should hold the handlebars and stop before getting on or off.
- Sitting securely when riding.
- Slow down the speed to 10km/h or less before turning the corner, in order to avoid rolling over.
- This bike is not suitable for stunt riding, jumping, competition, or racing.
- Always check that brakes are functioning properly before each ride.
- Only one rider at a time.
- Do not ride at night or in conditions when visibility is impaired, unless you install head lights and tail lights that make you visible to all pedestrians and vehicles.
- Wet weather significantly detracts from brake performance. Always allow a longer distance for safely stopping in the rain, or on a wet or icy road surface.
- This product should not be used by minors without adult supervision.
- Do not modify the trike.
- Do not tow or pull with the trike bike. Do not allow the bike to be towed or pulled.
- Keep fingers away from moving parts and chain.
- Always park in right place.
- Avoid high speed sharp turns, as your trike may tip over.
- Always apply even pressure to both brakes when stopping.
- Some localities require that the owner or rider equip their bike with a horn, bell, or other sound making device to use for warning others of your approach.
- Check handlebar and seat adjustments before riding.
- Check your tires for cuts, exposed casing, casing cords, and proper inflation before each ride.
- Ensure you wear safe footwear and keep loose articles of clothing clear of moving parts on your E-Bike while riding.

YOU SHOULD READ THIS MANUAL

Your bicycle is legally a vehicle. It can be ridden on roads mixing with other traffic. You need to know about certain legal and common sense requirements for the enjoyable, safe and trouble free use of your bicycle.

II. OWNER'S INFORMATION AND RESPONSIBILITY

To reduce the risk of serious personal injury, you should read the instructions in this manual carefully.



There are **warnings** throughout this manual. Follow all warning instructions. Don't risk injury, mechanical failure or damage.

If your bicycle has been supplied in a form not ready for use you must obtain "assembly instructions" from your supplier.

Know how to operate all standard and accessory equipment on the bicycle.

Ensure that anyone who uses the bicycle has been fully instructed in the operation of bicycle functions.

Your bicycle conforms to relevant Australian Standards. Other local regulations may apply. Check with your bicycle retailer.

Many bicycle product manufacturers and suppliers provide additional information on Web sites.

The Bicycle Industry in Australia Web site includes many useful links and other information at: www.bikeoz.com.au

The Cycling Promotion Fund offers helpful hints and links at: www.rideabike.com.au

WHAT KIND OF BICYCLE IS IT?

Bicycles can be broadly categorised into four types:

- Road or Touring
- Mountain or Off Road
- Cross, Hybrid, City or Comfort n BMX
- Freestyle

Bicycles for younger riders use are generally scaled down versions of adult bicycles including the step through design. Other bicycles include tandems, recumbents and folding bicycles. Which type is your new bicycle?

ROAD OR TOURING

Typically has narrow tyres and drop handlebar.

Variations include bicycles suited for touring, commuting, sports, and recreational riding.

MOUNTAIN OR OFF ROAD

The Mountain Bicycle is designed to give the rider maximum control and durability on a wide variety of harsh terrain. Everything about the Mountain Bicycle is more rugged. Its frame geometry provides maximum ground clearance and allows you to quickly and easily shift your weight to change the balance of the bicycle as terrain conditions demand.



WARNING: Not all Mountain type bicycles are intended for off road or competition use. Check specifications and technical advice from your bicycle retailer before use.

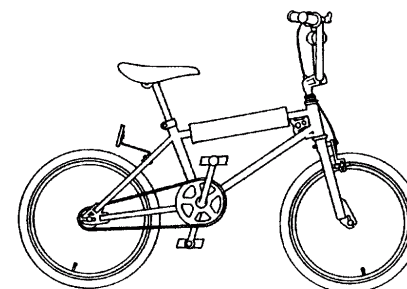
CROSS, HYBRID, CITY OR COMFORT

Usually something of a mixture of characteristics of the Road and Mountain types but may include evolving frame shapes and components. Suited for general purpose riding.

BMX

BMX, are general purpose bicycles for younger riders.

The BMX type Bicycle is a versatile machine usually of 20" (510mm) or less sized wheels with wide section tyres, ideal for general purpose use by younger riders.



WARNING: General purpose Freestyle and BMX bicycles are not designed for stunting, racing or competition use.

FREESTYLE

Modelled on a trick riding style machine, featuring 360 degree revolving handlebar/fork assembly, axle pegs and wide profile tyres. Using a freestyle type bicycle for trick or competition riding may void warranty.

POWER ASSISTED BICYCLES

Have characteristics and equipment which may require special instruction, adjustment, care and maintenance. Read carefully all instruction manuals. Ask your bicycle retailer for advice on maintenance, adjustments and repair.

Unauthorised work may limit or void the warranty.

FOLDING BICYCLES

Designed for easy storage. May require special instruction before use. Ensure that all locking devices are correctly secured before riding a Folding bicycle.

WHAT IS IT CALLED?

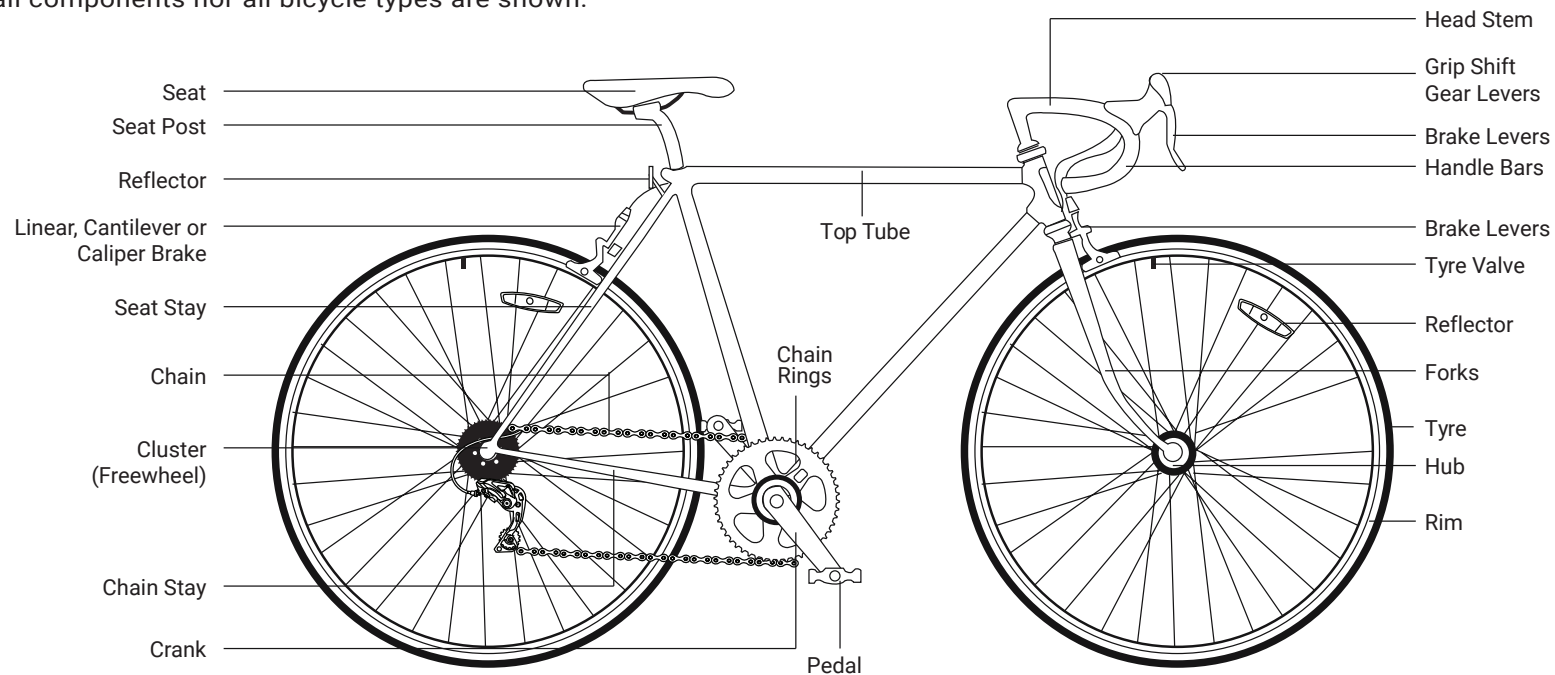
Although bicycle components vary in design, weight and method of use, basically all bicycles are the same.

A bicycle is made up of a frame, wheels, drive train, brakes, stem, handle bars and saddle. Frames must show a makers ID label.

Familiarise yourself with the bicycle's terminology; it will make basic maintenance instructions much easier to follow.

TYPICAL PARTS OF A BICYCLE

NOTE: Not all components nor all bicycle types are shown.

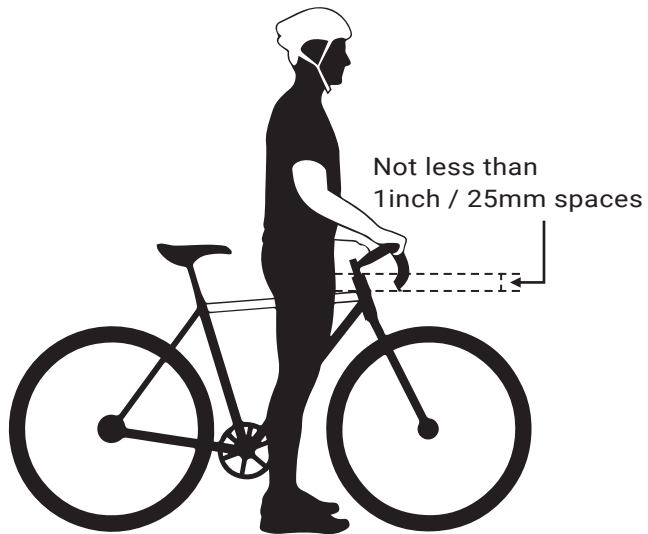




WARNING: Handlebar handgrips or tube-end plugs should be replaced if damaged. Unprotected tube-ends can cause injury. Bicycles used by children should especially be checked to ensure bar end handgrips are in good condition.

FOR ALL TYPES

Where a suspension unit, disk and/or hydraulic brake units, multi-gear hub, electric gear changing system, etc, are fitted, consult manufacturers specification and warranty documents. For correct selection and repair advice, ask your bicycle retailer. Unauthorised work may limit or void a product warranty.



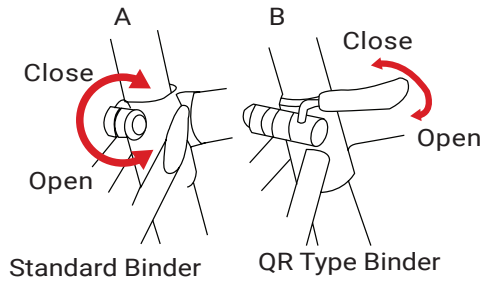
1. SAFETY PRECAUTIONS

1.1 FITTING YOUR BICYCLE FOR A SAFE RIDE

To ride safely and comfortably a bicycle and its equipment must be matched properly to the size and skills of the rider.

MAKE SURE THE BICYCLE FITS

A bicycle that is too big or too small for the rider is hard to control and can be uncomfortable. If your bicycle does not fit properly, you may lose control and fall.



SADDLE HEIGHT

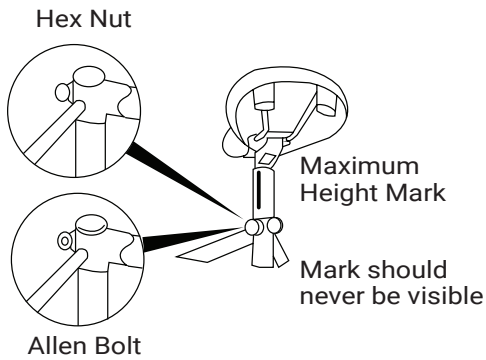
To ride comfortably and pedal efficiently, it's very important to have the saddle at the correct height. Your leg length determines the correct saddle height. The saddle is at the correct height for you when, while seated on the saddle, your knee is slightly bent when the crank is at the maximum down stroke (pedal is closest to the ground).

To adjust the saddle height, loosen the seat binder bolt (A) or the quick release (B) and move the seat post up or down as required. Make sure that the saddle is parallel to the top tube of the bicycle. Retighten the seat post tight enough so that you cannot twist the saddle out of alignment.

A loose seat post will allow the saddle to turn or slip and may cause you to lose control and fall. Therefore:

1. Ask your bicycle retailer to help you make sure you know how to correctly clamp your seat post.
2. Before you ride the bicycle, first check that the seat post is securely clamped.

Under no circumstances should the seat post project from the frame beyond its 'Minimum Insertion' or 'Maximum Extension' mark.



WARNING: do not replace the seat post with a post which is: A) not of the same diameter or B) longer than the original. Either will void the warranty and could lead to seat post failure, loss of rider control and injury.

HANDLEBAR HEIGHT AND ANGLE

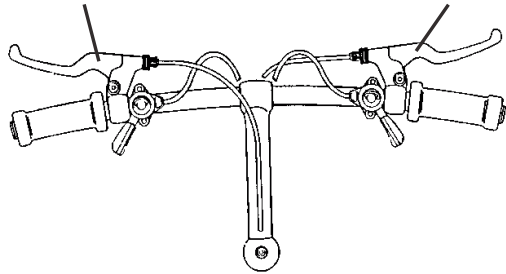
After you have set the saddle height and tilt, adjust the handlebar for a safe and comfortable ride. Ask your bicycle retailer for advice.



WARNING: Under no circumstances should the head stem be retightened with its 'Minimum Insertion' or 'Maximum Extension' mark visible. 'Threadless' headset. DO NOT over tighten the two securing bolts. If unsure, consult your bicycel retailers.

Rear Brake Lever

Front Brake Lever



If the front brake cable is attached to the handlebar stem moving the stem up or down will require a readjustment of the brake. If in doubt, ask your bicycle retailer to make the adjustment.

CONTROLS POSITION ADJUSTMENT

The brake and shifting controls on your bicycle are positioned where they work best for most riders. The angle of the controls and the position on the handlebars can be changed. **Ask your bicycle retailer to make the adjustments for you.**



WARNING: Front wheel brake lever must be mounted on the **right** hand side; rear brake lever on the **left** hand side.

HAND BRAKE LEVER 'REACH'

Many bicycles have brake levers which can be adjusted for 'reach'. If you have small hands and find it difficult to squeeze the brake levers, your bicycle retailer can either adjust the reach or fit shorter reach brake levers.

1.2 SAFETY CHECK BEFORE RIDING YOUR BICYCLE

- Check and tighten any loose nuts, bolts and straps. If you're not sure, ask your bicycle retailer to check.
- Tyres** correctly inflated? Check by pushing down with your thumb on the top of the tyre. The tyre should depress slightly. Compare to how it feels when you know the tyres are correctly inflated.
Replace damaged tyres before they puncture.
- Wheels** true? Spin each wheel and check for brake clearance and side-to-side wobble. If a wheel wobbles or hits the brake pads, take the bicycle to your bicycle retailer.
- Brakes:** Check that the brakes operate effectively.
- Gears:** Ensure gears are adjusted correctly and shifting smooth. Failure to check the bike properly before riding may cause damage to the bike and void any warranty.

QUICK RELEASES

- Are the front wheel, rear wheel and seat post quick releases properly adjusted and in the locked position? Check all quick release mechanisms are correctly and securely closed.

CHECK LIGHTS AND REFLECTORS

- Working
- Correctly aligned

HANDLEBAR AND SADDLE

- Are the handlebar and saddle system: horizontal? tight enough so they won't twist? handlebars secure, good condition? handle bar ends plugged?
- Is a bell fitted and working?

Any broken or worn parts should be replaced before the bicycle is used.

Certain activities may damage your bicycle and result in serious personal injury. Take these precautions:

- avoid jumping kerbs
- avoid potholes and gratings
- avoid stunt riding and jumping



WARNING: Do not remove protective safety equipment fitted to your bicycle, including handlebar end covers or plugs; reflectors fitted to frame, wheels and pedals; reflector mount brackets (where cantilever brakes are fitted); front chain ring guard; rear wheel spoke protector (right hand side); chain guard where fitted; warning stickers affixed to frame.



NOTE: A replacement fork must be the same length and maintain the same rake and trail characteristics as the original. Ask your bicycle retailer for advice.

1.3 SAFETY EQUIPMENT AND SENSIBLE RIDING

As a road user you have responsibility for your own safety and the safety of others.

You need to know:

- the road rules
- how to ride safely

YOUR BICYCLE (CONT)

- Know how to work all bicycle controls.
- For riding in low light and night conditions, fit your bicycle with appropriate front and rear lamps.

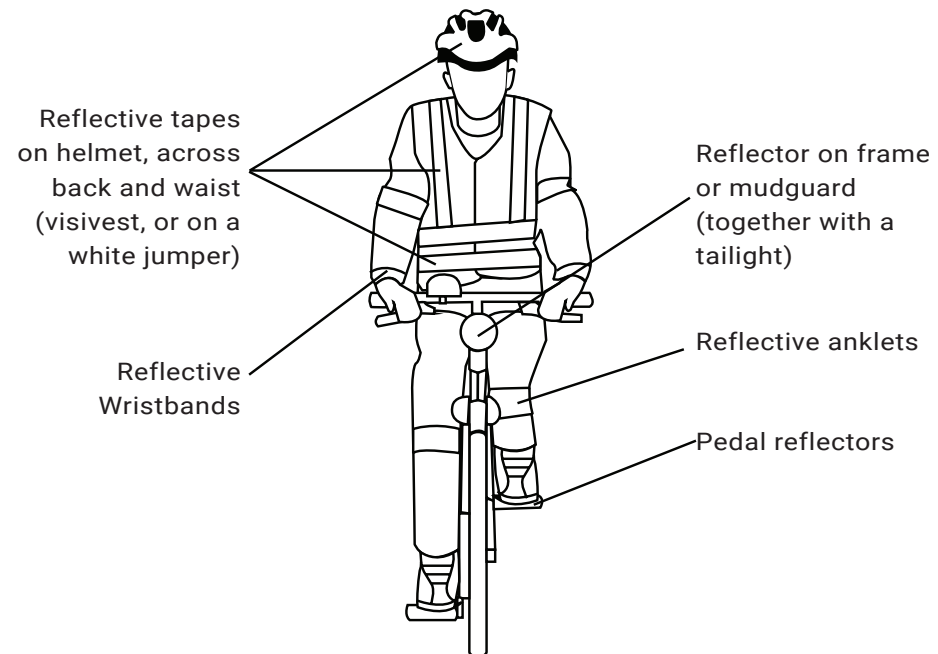


WARNING: Check reflectors and mounting brackets regularly to make sure that they are clean, straight, unbroken and securely mounted. Equip your bicycle with lights: white front and red rear. Riding in low light or at night time without reflectors and lights is extremely dangerous.

The mounting position for reflectors shall be above the level of the back axle, and shall be such that the reflector(s) are not obscured from view eg. By the riders clothing or by the wheel.

YOUR CLOTHING

- Wear a correctly fitted and fastened Approved helmet.
- **Be seen:**
wear brightly coloured clothes - yellow, green and orange are best for day, reflective tape improves the conspicuity of riders at night.
- Wear shoes, not thongs or ride with bare feet.





WARNING: Always wear a correctly fitted and fastened helmet when riding your bicycle.

Correct Fit



Incorrect Fit



BE ALERT

- Obey all road rules
- Watch out for other road and pathway users.
- Adapt your riding to suit the conditions.

HOOK TURN

This manoeuvre can assist in safer right hand at intersection.

There are three steps to the hook turn:

1. Stay on the left, go straight ahead and cross the intersection. Stop on the other side of the intersection.
2. Swing your bike around to face the new direction.
3. Obey any traffic lights and complete your turn when it is safe.

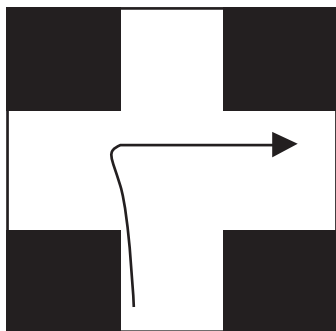
CARRYING LOADS

- Use correctly fitted carriers, racks, panniers or a back intersections. pack for parcels.

RIDING IN THE WET

Wet weather affects visibility for all road users.

It is harder for you, and other vehicles, to stop in the wet. Allow more distance to brake.



RIDING IN LOW LIGHT

Riding when light levels are low:

- use lights and reflectors.
- wear bright reflective clothing.

BE RESPONSIBLE

Follow the road rules. Use common sense. If riding in remote areas:

- go with a friend.
- leave details of route and return time with a responsible person.
- tell them when you get back!

PARENTS

Most cycling incidents involve small children and teenagers.

Make sure:

- The bicycle is in good working order.
- The rider knows:

How to use the controls.

The road rules.

- Clothing, helmet, lighting are appropriate for the bicycle trips undertaken.

QUICK SAFETY SUMMARY

- Obey all traffic laws
- Be predictable
- Be alert
- Use reliable safety equipment
- Use the bicycle for the manufacturer's recommended purpose
- Adjust riding to traffic and weather conditions
- Wear appropriate clothing
- Follow the manufacturer's instructions for any adjustments

2.1 MAINTAINING YOUR BICYCLE

SERVICE AND BASIC MAINTENANCE

Bicycles perform best when they are kept clean, lubricated and serviced regularly.

How much of your bicycle's service and maintenance you can do yourself depends on your level of skill and experience, and whether or not you have the special tools required.



WARNING: Some bicycle service and repair tasks require special knowledge and tools. Do not begin any adjustments or service on your bicycle if you have doubt about your ability. Unauthorised or incorrect service and repairs may void product warranty.

CLEANING

Mud and dust can be highly abrasive. Regular cleaning will help maintain your bicycle in good condition. Always dry and lubricate your bicycle after washing to prevent rust.

LUBRICATION

Keep your bicycle regularly lubricated for good performance and durability. Lubrication reduces friction and helps protect against rust.

All bearings and other moving parts require regular appropriate lubrication:

- Grease type lubrication:- bearings in head stem, wheels, bottom bracket and pedals (requires disassembly refer to your bicycle retailer).
- Oil type lubrication:- Brake and derailleur pivot points and jockey wheels, chain, free wheel.

For advice on appropriate special lubricants, ask your bicycle retailer.

2.2 MONTHLY SERVICE CHART

Monthly servicing of your bicycle is recommended. This consists of lubrication and adjustment of components.

Use the correct type of lubricants and tools, service the bicycle's components in logical groups and clean before you start.

TYRES AND TUBES

- Clean the tyres and inspect treads for wear.
- Remove any debris from tread or walls.
- Check tyre pressure is correct.
- Replace faulty tubes.

WHEELS

- Clean rims and check they are not dented or dimpled.
- Check rims for trueness and spokes for evenness of tension.
- Replace any bent or broken spokes.

CHAIN

- Check chain for excessive wear or stretching.
- Check for any stiff links.
- Use recommended lubricant.

BRAKES

- Check brake block and brake lever mounting bolts.
- Check brake blocks for wear. Replace if necessary.
- Check block toe-in is correct.
- Lubricate brake pivot bolts and adjust where necessary.

GEAR AND BRAKE CABLES

- Inspect all cable housing for damage. Replace if necessary.
- Clean and examine all cable wires for kinks and frayed ends. Replace if necessary.
- Adjust barrel adjusters and/or cable anchor bolts to compensate for cable stretch.

HUBS

- Check front and rear hub bearings for excess play or binding. Have adjustable cup-and-cone bearings, tightened or loosened if necessary.
- Check hubs are correctly lubricated.
- Tighten hub axle nuts and check quick release levers.

FRONT AND REAR DERAILLEURS

- Clean derailleur cages bushings.
- Check the accuracy of the indexing and adjust cable tension at barrel adjusters and/or cable anchor bolts as required.

BRAKES

- Check brake block and brake lever mounting bolts.
- Check brake blocks for wear. Replace if necessary.
- Check block toe-in is correct.
- Lubricate brake pivot bolts and adjust where necessary.

CRANK/CHAINRINGS AND FREEWHEELS

- Clean chainrings; check they are true and have no excessively worn, or broken teeth.
- Check crank arms are tight on bottom bracket spindle.
- Clean and lubricate freewheel and check for wear.
- Check freewheel sprockets for worn or broken teeth.

BOTTOM BRACKET/AXLE

- Test bottom bracket bearings for excess play or binding.
- Check that the locknut is tight.
- Check bottom bracket is correctly lubricated.

HEADSET

- Check headset for excess play or binding.
- Check the locknut is tight.

PEDALS

- Check pedal bodies are not cracked.
- If pedals are loose, tighten the mounting bolts firmly.
- Inspect toe clips/toe straps for damage.

GENERAL

- Check frame alignment and all the tubes for dents or damage.
- Check all bolts and nuts are secure. Tighten bolts with the correct tools.

CAUTION: Alloy bicycle parts can be damaged by overtightening.

STORAGE

The best protection for your bicycle is to store it under cover in a dry environment and away from corrosive materials such as battery acid and swimming pool chemicals. Thoroughly dry off your bicycle after use in wet conditions. Wax or lubricate as required.

Failure to follow this procedure may lead to rust and corrosion of metal work.

3. ADDITIONAL INFORMATION HELPFUL HINTS, SPECIAL INSTRUCTIONS AND WARRANTY

3.1 ABOUT YOUR BICYCLE RETAILER

Your bicycle retailer will help you to select bicycle accessories for the kind of riding you wish to do. Bicycle shop staff have the knowledge, tools and experience to give you reliable advice and provide maintenance services. If you have a problem with your bicycle or your riding, talk to your bicycle retailer.

3.2 TOOLS AND BICYCLE ASSEMBLY

Should you intend to undertake maintenance the following tools are considered to be the basic requirement:

- Adjustable wrench 5-10cm
- Adjustable wrench 32cm
- Flat screw driver 15mm
- Phillips head screw driver 15mm
- Allen Key set 2mm-6mm
- Set of open end spanners 7-17mm
- Set of tyre levers
- Chain link remover
- Wire cutters
- Torque wrench

All nuts and bolts should be checked on a regular basis for tightness. To assist in achieving the correct tension when tightening nuts and bolts the use of a torque wrench is recommended. Apply the following torque for the nominated parts of your bicycle:

Front Wheel Nuts	22-27 Newton Metres
Rear Wheel Nuts	24-29 Newton Metres
Seat Binder Nut	12-17 Newton Metres
Seat Pillar Clamp Nut	4-19 Newton Metres
Brake Anchor Nut	7-11 Newton Metres
Handle Bar Clamp Nut	5-19 Newton Metres
Head Stem Expander Bolt	17-19 Newton Metres
Crank Cotter Pin Nuts	5-10 Newton Metres
Brake Centre Bolt	5-7 Newton Metres
Pedals	35-40 Newton Metres

The following checklist presumes a bicycle which is assembled except for the handlebar & stem, brake and gear levers, saddle and seat stem, pedals, frame reflectors and wheels.

- Fit wheels to frame and align. Secure axle nuts or Quick Release (QR) mechanism.
- Lubricate handlebar stem, slacken wedge bolt and wedge, slide into head set to below minimum insert mark, align square to front wheel, tighten wedge bolt. Tighten wedge bolt. Check head stem lock nut is tight and that the handlebar will not rotate.
- If your bicycle is equipped with a 'threadless' headset, check fitting adjustments with your bicycle retailer. DO NOT OVER TIGHTEN the two securing bolts.
- Slide brake and gear lever assemblies onto handlebar in correct configuration. Tighten locking bolts. Adjust brake assembly cables and align brake blocks for prescribed clearance.
- Fit handlebar tape or handgrips, stop ends to bar if bar is taped, and bell.
- Assemble saddle onto seat stem. Tighten fixing nuts. Lubricate seat stem and insert in seat tube to below minimum insert mark. Tighten seat binder bolt or Quick Release mechanism.

- Fit pedals to crank in correct order; pedal marked R on the right hand side; L on the left.
- Fit frame mounted reflector brackets and reflectors. Align reflectors to vertical. Tighten all bolts. Confirm that wheel reflectors are fitted.
- Recheck that all components are correctly assembled, all bolts, nuts and QR correctly secure. Check that handlebar and saddle cannot be swivelled sideways.
- Check derailleur gears/hub gears for correct operation; adjust to manufacturer's specification. Check both brakes for correct operation.



WARNING: If you are unsure about correct assembly and/or adjustment, seek advice from a qualified bicycle mechanic.

'Threadless' head sets: some bicycles, especially those equipped with a front fork suspension system, are fitted with a 'threadless' head set. Special tools and/or procedures may be required to correctly secure such devices.

3.3 LOCK YOUR BICYCLE

A carbon fibre frame requires special care due to the nature of its construction.

Lock your bicycle to something solid e.g. a tree, a parking meter or a post. Make sure the bicycle cannot be lifted from the post or the post lifted out of the ground or pavement. Use a good quality U-Lock.

A good quality, hardened steel U-lock is your bicycle's best protection from theft. U-locks are more secure than cables or chains with padlocks. Combination locks provide least security.

Make sure the lock or cable is not in a position which makes it easy to be removed or cut.

- A front wheel with Quick Release can be removed and locked to the frame.
- A good quality U-Lock may be the most secure device for locking your bicycle.
- Bicycle parking rails should comply with Australian Standard AS2890.3 (1993).

- Refer to Guide to Traffic Engineering Practice Part 14 - Bicycles (AUSTROADS 1999).
- www.bikeoz.com.au - provides additional information.
- www.cyclingpromotion.com.au - helping you get more out of your riding.

3.4 KEEP A RECORD OF YOUR BICYCLE

Take a colour photograph of your bicycle, write the frame number on the back of the photograph and keep it in a safe place. Less than one in ten stolen bicycles is returned, partly because the owner cannot describe the bicycle. Engraving a registration number on the bicycle will also help. The police, Neighbourhood Watch and service clubs run bicycle registration programs.

If you keep a record of the details of your bicycle it will greatly increase the possibility of getting it back should it be lost or stolen.

Remember the advice about LOCKING YOUR BICYCLE.

A good quality lock is cheap insurance.

See the record chart at end of this manual.

TROUBLESHOOTING CHART

PROBLEM	POSSIBLE CAUSE	REMEDY
Frequent punctures	Inner tube old or faulty	Replace inner tube
	Tyre tread / casing worn	Replace tyre
	Tyre unsuited to rim	Replace with correct tyre
	Tyre not checked after previous puncture	Remove sharp object embedded in tyre
	Tyre pressure too low	Correct tyre pressure
	Spoke protruding into rim	File down spoke

continued over ►

TROUBLESHOOTING CHART (CONTINUED)

PROBLEM	POSSIBLE CAUSE	REMEDY
When applying the brakes they squeal/squeak	Brake blocks worn down	Replace blocks
	Brake block toe-in incorrect	Correct block toe-in
	Brake blocks / rim dirty or wet	Correct block toe-in
	Brake arms loose	Tighten mounting bolts
Brakes not working effectively	Brake blocks worn down	Replace brake blocks
	Brake blocks or rims greasy, wet or dirty	Clean blocks and rims
	Brake cables are binding / stretched / damaged	Clean / adjust / replace cables
	Brake levers are binding	Adjust brake levers
	Brakes out of adjustment	Centre brakes
Steering not accurate	Wheels not aligned	Align wheels correctly
	Headset loose or binding	Adjust / tighten headset
	Front forks or frame bent	Seek advice at a bicycle shop
Knocking or shuddering when applying the brakes	Bulge in the rim or rim out of true	True wheel or take rim to a bicycle shop for repair *
	Brake mounting bolts loose	Tighten bolts
	Brakes out of adjustment	Centre brakes and / or adjust brake block toe-in
	Disk brakes: disk may be bent or blocks not free	Seek advice at a bicycle shop
	Forks loose in head tube	Tighten headset
Wobbling wheel	Axle broken	Replace axle
	Wheel out of true	True wheel
	Hub cones loose	Adjust hub bearings
	Headset binding	Adjust headset
Gear shifts faulty	Derailleur cables sticking stretched / damaged	Lubricate / tighten / replace cables
	Front or rear derailleur not adjusted properly	Adjust derailleurs
	Indexed shifting not adjusted properly	Adjust indexing

* Repair of damaged front wheel rim not recommended. Replace wheel rim.

continued over ►

TROUBLESHOOTING CHART (CONTINUED)

PROBLEM	POSSIBLE CAUSE	REMEDY
Slipping chain	Excessively worn / chipped chainring or freewheel	Replace chainring, sprockets and chain
	Chain worn / stretched	Replace chain
	Stiff link in chain	Lubricate or replace link
	Non compatible chain / chainring / freewheel	Seek advice at a bicycle shop
Chain jumping off	Chainring bent	Replace Chainring
	Chainring loose	Tighten mounting bolts
	Chainring teeth bent or broken	Replace Chainring
	Rear or front derailleur side-to-side travel out of adjustment	Adjust derailleur travel
Constant clicking noises when pedalling	Stiff chain link	Lubricate or replace link
	Loose pedal spindle / bearings	Adjust bearings / spindle nut
	Loose bottom bracket spindle / bearings	Adjust bottom bracket
	Bent bottom bracket / pedal spindle	Replace bottom bracket / spindle
	Loose crank	Tighten crank bolt
Grinding noise when pedalling	Pedal bearings too tight	Adjust bearings
	Bottom bracket bearings too tight	Adjust bearings
	Chain fouling derailleurs	Adjust chain line
	Derailleur jockey wheels dirty / binding	Clean and lubricate jockey wheels
Freewheel does not freewheel	Freewheel internal pawl pins are jammed	Lubricate. If problem persists, replace freewheel

Regular maintenance by your bicycle retailer is recommended

KEEP A RECORD OF YOUR NEW BICYCLE

OWNER:

ADDRESS:

POSTCODE:

TEL:

BRAND & SERIAL NUMBER:

MODEL:

FRAME STYLE:

FRAME SIZE:

FRAME COLOUR(S):

WHEEL SIZE:

TYRE SIZE & TYPE:

BRAKE TYPE & BRAND:

TRANSMISSION BRAND:

SADDLE BRAND:

OTHER ACCESSORIES (LIST & BRAND NAMES):

PURCHASED FROM (SHOP NAME):

SHOP ADDRESS:

TEL:

DATE OF PURCHASE:

/ /

PRICE PAID: \$

Remember the advice about LOCKING YOUR BICYCLE.
A good quality lock is cheap insurance.

KILOPASCAL FROM PSI CONVERSION TABLE

PSI	BAR	KPA	PSI	BAR	KPA
35	2.4	241	100	6.9	689
40	2.8	276	105	7.2	724
45	3.1	310	110	7.6	758
50	3.5	345	115	7.9	793
55	3.8	379	120	8.3	827
60	4.1	414	125	8.6	862
65	4.5	448	130	9.0	896
70	4.8	483	135	9.3	931
75	5.2	517	140	9.7	965
80	5.5	552	145	10.0	1000
85	5.9	586	150	10.3	1034
90	6.2	621	155	10.7	1069
95	6.6	655	160	11.0	1103

NOTES

III. BATTERY CARE AND SAFETY

- Do not disassemble the battery pack and modify the unit or your warranty will be void and you will be responsible for the modification.
- Make sure that the battery pack has been fully charged before first use, and remove the charger after fully charging. Turn the main battery switch off while charging or not using.
- Check that all electrical connections and mechanical parts are securely locked and fastened before use.
- The performance and mileage of the unit will be varied with the battery condition, temperature, terrain, wind speed, tire pressure, rider weight and the maintenance.
- Always handle the battery pack with care and do not drop it.
- Do not connect the terminals of battery pack with any foreign object.

1. BATTERY CHARGING

Battery should be charged timely after riding the power assist vehicle. Lithium battery of the Company should be charged with designated charger. Connect the output plug to the charger and then connect the charger to 240V alternating current power supply. Battery can be used after charging 6-7 hours until the charging indicator light turn from red to green.

2. BATTERY DISCHARGING

Riding process of the power assist vehicle is the process of battery discharging. Users are not permitted to over discharging the battery. Over discharging may cause severe damage to battery life. When instrument displays that the battery is under voltage, the controller will stop power supplying at any time.

3. BATTERY STORAGE & ADDITIONAL CHARGING

Reserve of electricity will somewhat lose when storing or during the transportation process. Battery should be additional charged before use. Charging method is as above.

4. BATTERY USE, MAINTENANCE & ATTENTION

4-1 Never put battery close to heat source of high temperature; 4-2 Charging environment is better to be below 37°C;

4-3 Avoid charging under direct sunlight;

4-4 Resolutely use designated charger to charge the battery; 4-5 Short circuit is not allowed at battery charge port;

4-6 Never put battery in wet places or in water;

4-7 Never randomly dismantle the battery or do any unauthorized modification;

4-8 Never impose external forces on the battery or drop it from high places;

4.9 When battery is not in use, it should be fully charged and stored in a dry and cool place. Places within 1m around the battery should be free of inflammables and is insulating. Battery should be kept away from heavy load and children. Complete additional charging should be conducted every 2 months.

5. SPECIAL WARNING

A. Never clean the vehicle with hydraulic monitor which may cause damage to electrical components due to water intake.

B. If the product smokes or burns when damaged by external forces, put it out with dry-chemical fire extinguisher or sandy soil.

C. Although the lithium battery is environmental friendly product, it also contains various kinds of chemical substances. When it is broken due to aging, it may pollute the environment. Therefore, please discard it as useless within 36 months since the date of purchase, and give it to skilled company for professional treatment.

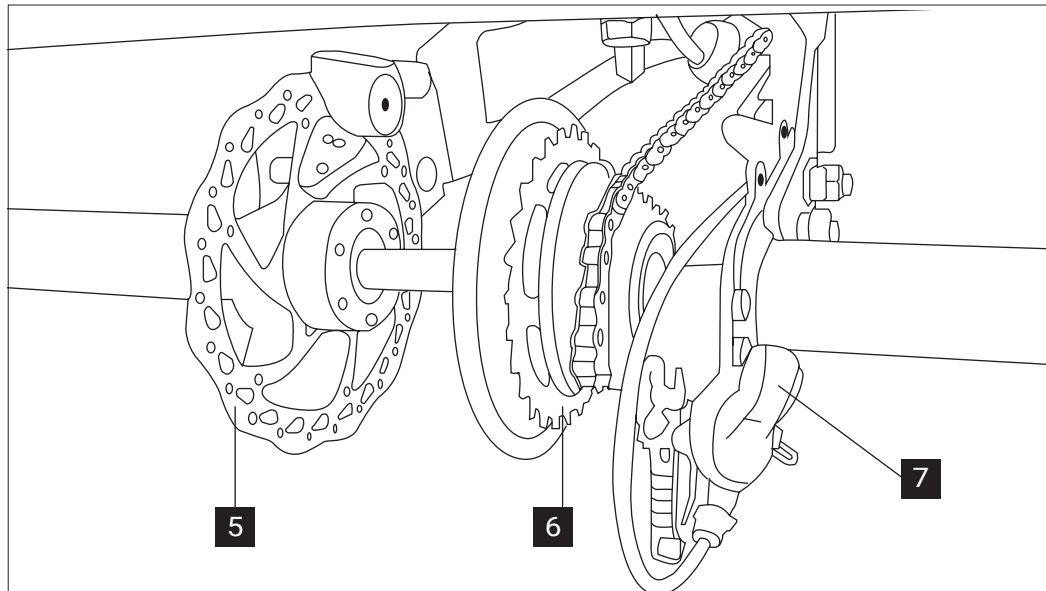
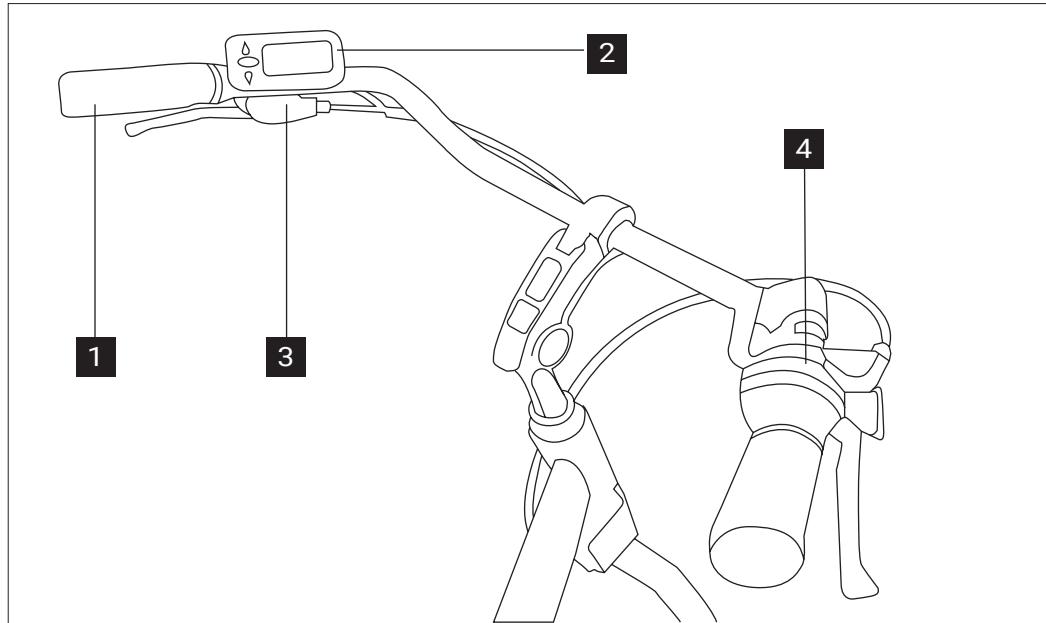
6. DISCLAIMERS

A. No responsibility for any damages caused by nonconforming the requirements in application instruction manual.

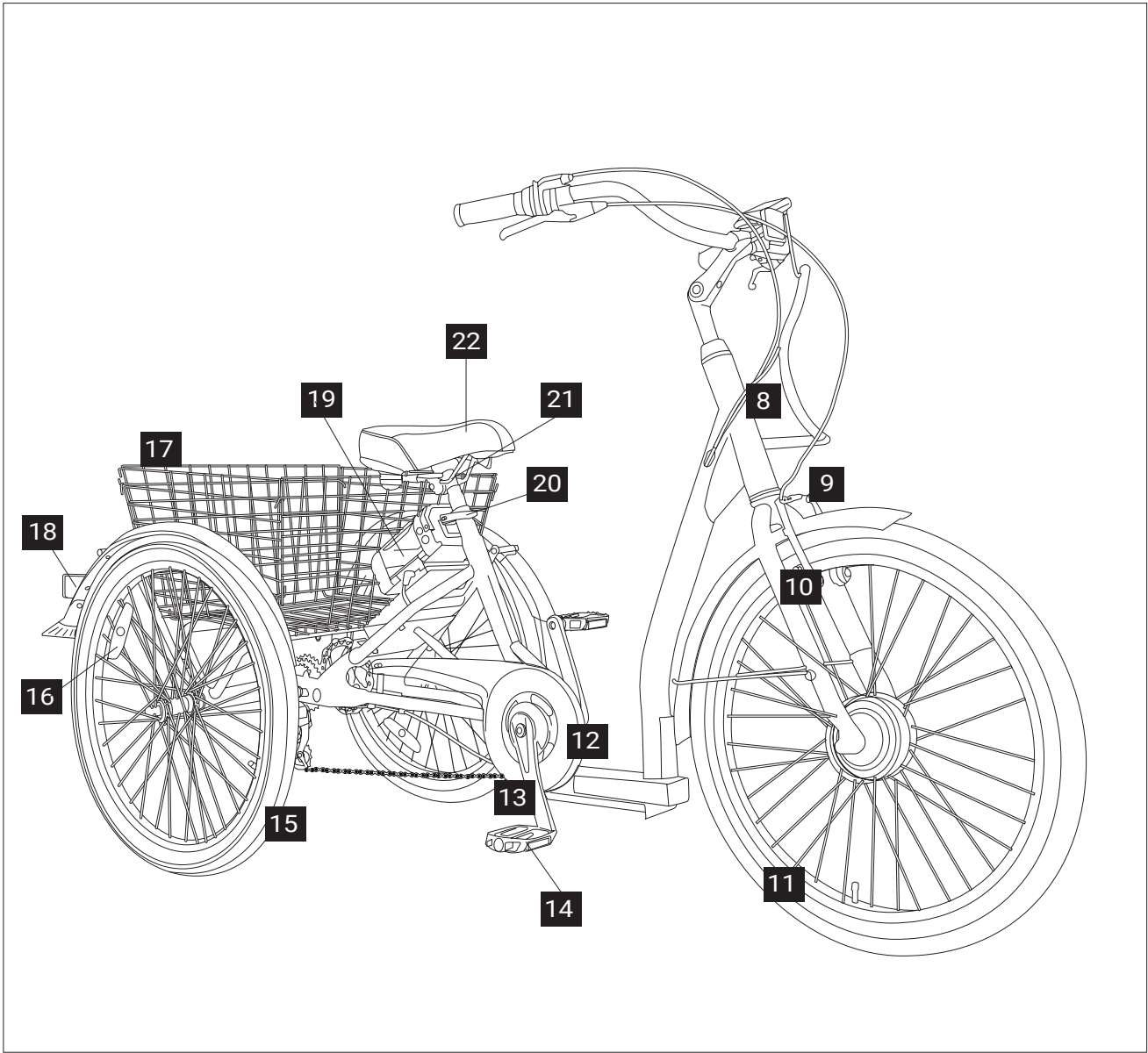
B. No responsibility for any damages caused by any unauthorized modification.

C. No responsibility for any damages caused by force majeure.

III. PARTS LIST



PART	DESCRIPTION
1	Handlebar
2	LCD Display Panel
3	Brake Lever
4	Gear Shift
5	Disc Brake
6	Gear Freewheel
7	Rear Derailleur



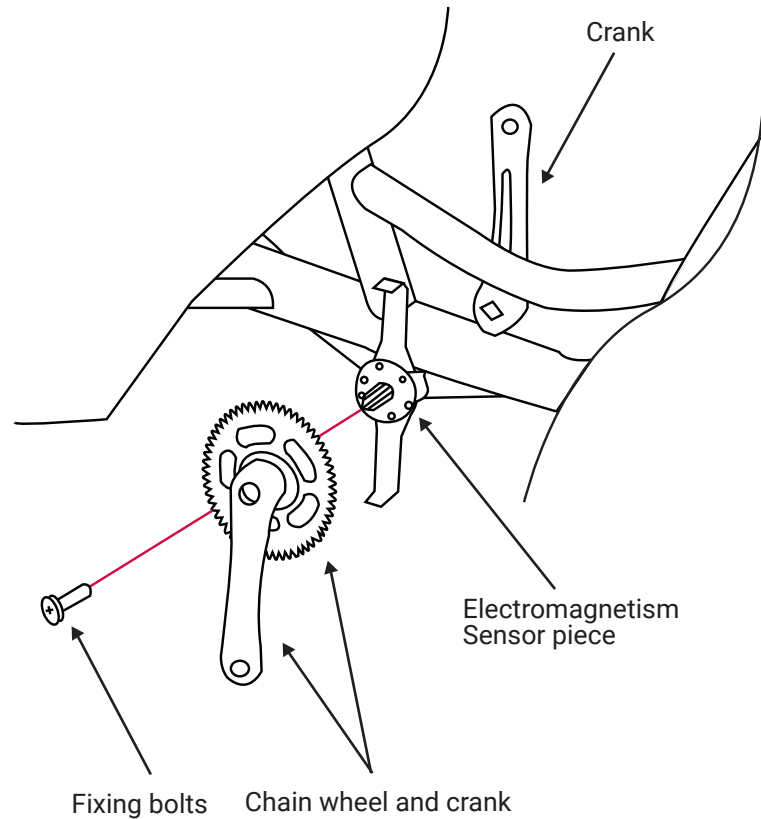
PART	DESCRIPTION
8	Front Frame
9	V-Brake
10	Front Fork
11	Front Wheel Set with Motor
12	Chain Cover & Chain
13	Chain Wheel and Cranks
14	Pedal
15	Rear Wheel Set
16	Wheel Reflector
17	Basket
18	Rear LED Light
19	Battery
20	Seat Clamp
21	Seat Post
22	Saddle

IV. ASSEMBLY INSTRUCTIONS

1 CHAIN WHEEL AND CRANK ASSEMBLY

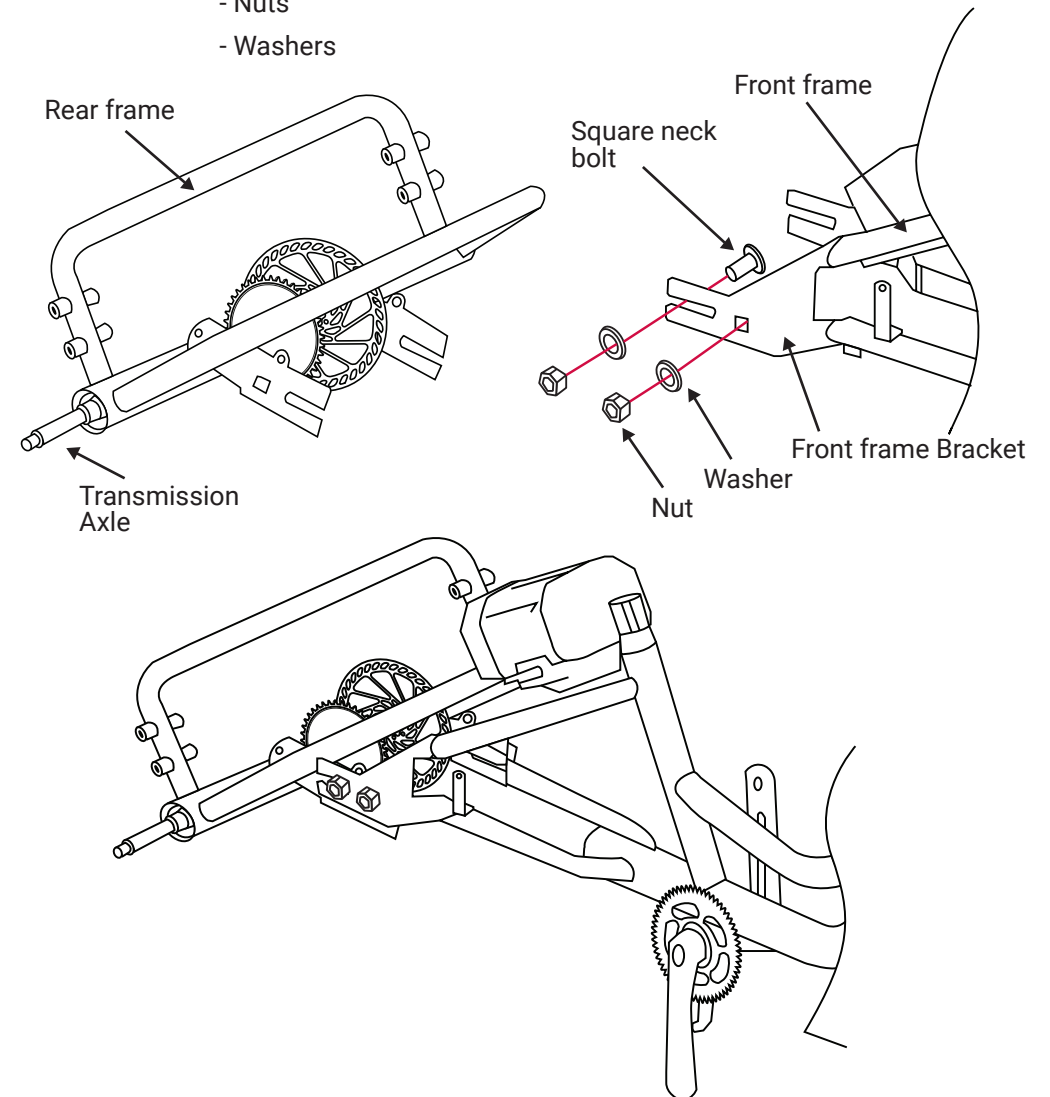
STEP 1.A Attach electromagnetism sensor piece into the middle axle. Ensure the sensor piece is assembled towards the correct riding direction.

STEP 1.B Assemble the chain wheel and crank to middle axle and secure with fixing bolts.

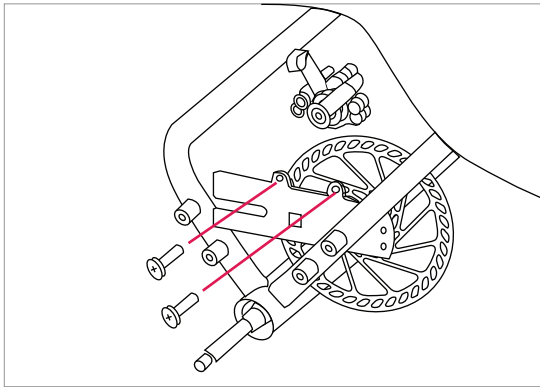


2 CHAIN WHEEL AND CRANK ASSEMBLY

STEP 2.A Connect the front frame and rear frame with:
- Square neck bolts
- Nuts
- Washers

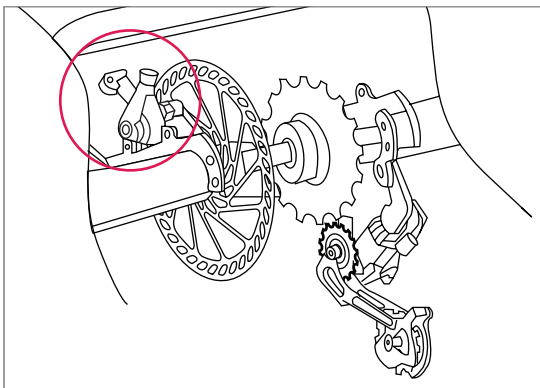


3 DISC BRAKE AND REAR DERAILLEUR ASSEMBLY



STEP 3.A

Assemble the disc brake and rear derailleur onto the rear frame. Assemble disc brake disc on the rear axle first.

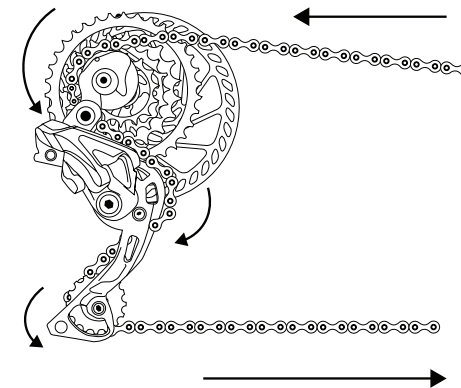
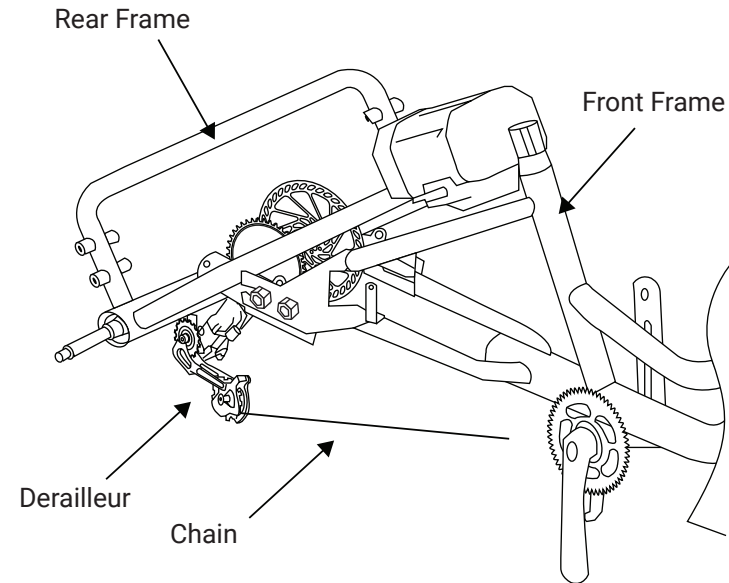


STEP 3.B

When bolting on the disc brake caliper ensure there is even clearance between both sides of the disc pads and the disc.

4 CHAIN AND CHAIN COVER ASSEMBLY

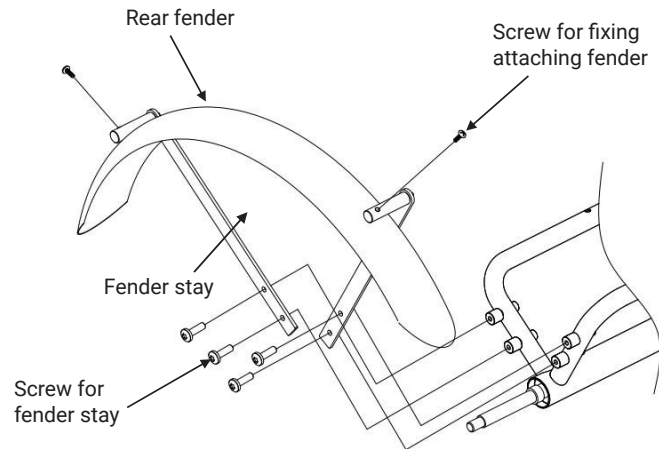
STEP 4.A Assemble the chain by connecting the chain links together with supplied link. (Gear adjustment see Attachment 1 and 2).



5 FENDER AND FRONT CHAIN AND CHAIN COVER ASSEMBLY

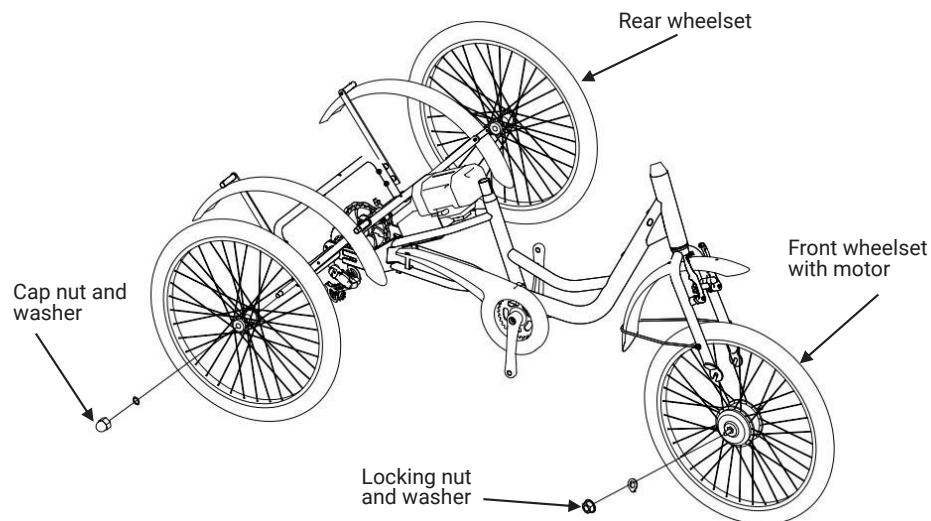
STEP 5.A

Secure the front and rear fenders to the correct position on frame with screws. (Assembly of fender is optional. Faults caused by uninstalled fenders may void warranty).



STEP 5.B

Attach the front and rear wheelset with nuts and washers. (Note: Cable of the front wheel motor should be on left side).



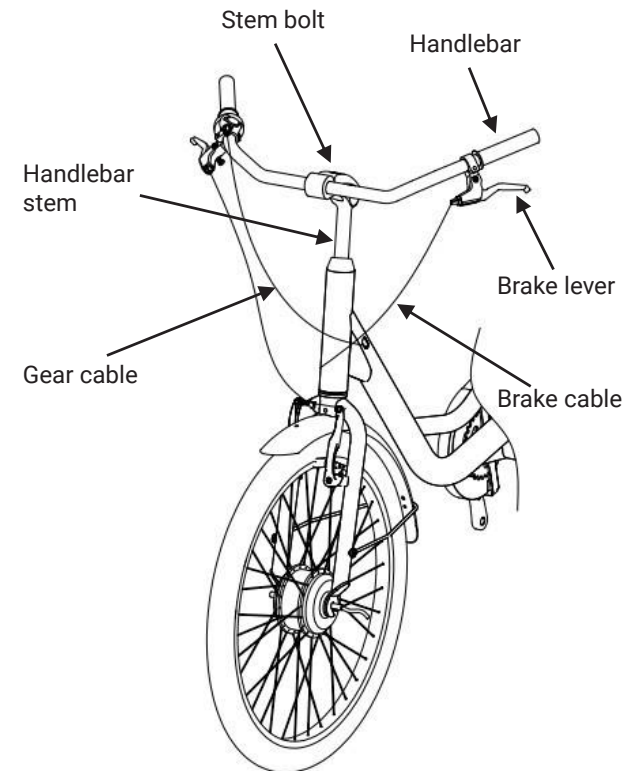
6 HANDLEBAR AND BRAKE CABLE ADJUSTMENT

STEP 6.A Insert the handlebar stem into head tube of front frame.

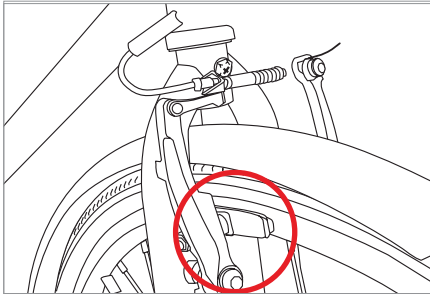
STEP 6.B Adjust head stem height and tighten stem bolt.

STEP 6.C Adjust the handle bar angle and secure into place.

STEP 6.D Adjust the front and rear brake cables to ensure brake cables are fitted correctly. (For gear adjustment see attachment 1 and 2).

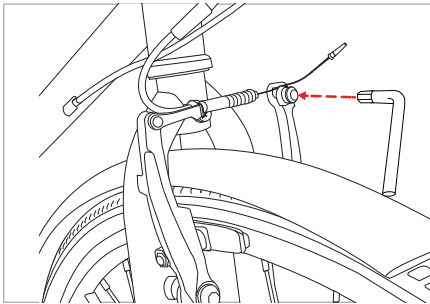


7 BRAKE ADJUSTMENT (FRONT V-BRAKE)



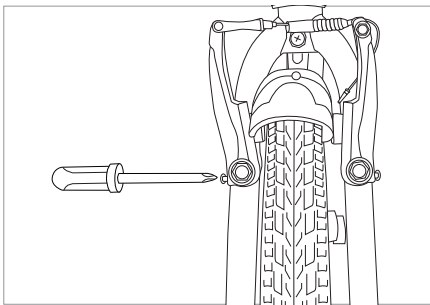
STEP 7.A

Check to see if your brake pads are running centre and parallel to your rim.



STEP 7.B

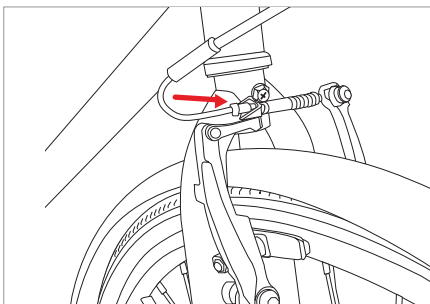
Loosen the brake anchor bolt and adjust the brake cable so that the pads are 1-2mm from the rim on both sides.



STEP 7.C

You might find that your brakes lean to one side and are difficult for you to get an even clearance on both sides of the rim.

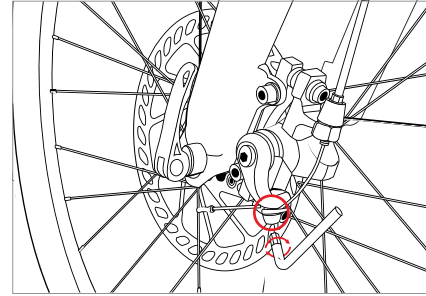
This means that you need to adjust the screw adjustment on the side of each arm until even. The screw adjustment sets spring tension. As a general rule, turning the screw clockwise increases spring tension.



STEP 7.D

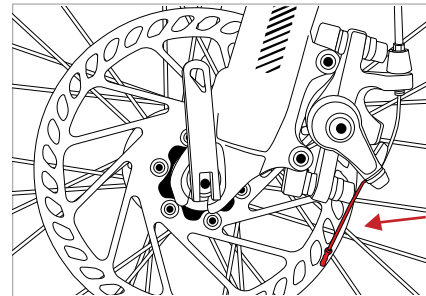
Once your brakes are set, both v-brake arms should move inwards on application of the brake lever.

BRAKE ADJUSTMENT (REAR DISC BRAKE)



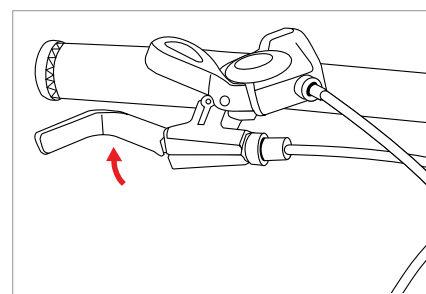
STEP 7.E

Adjust the free play in the brake cable. Do this by loosening the cable anchor bolt until the cable runs free.



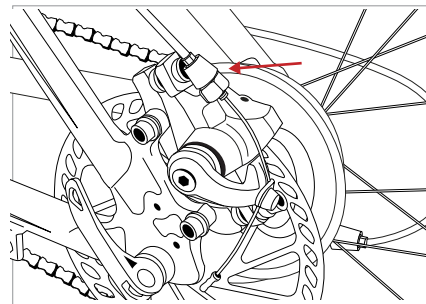
STEP 7.F

Loosen the pinch bolt. Pull the slack out of the cable and tighten.



STEP 7.G

Retighten the anchor bolt and test the brake lever again.



STEP 7.H

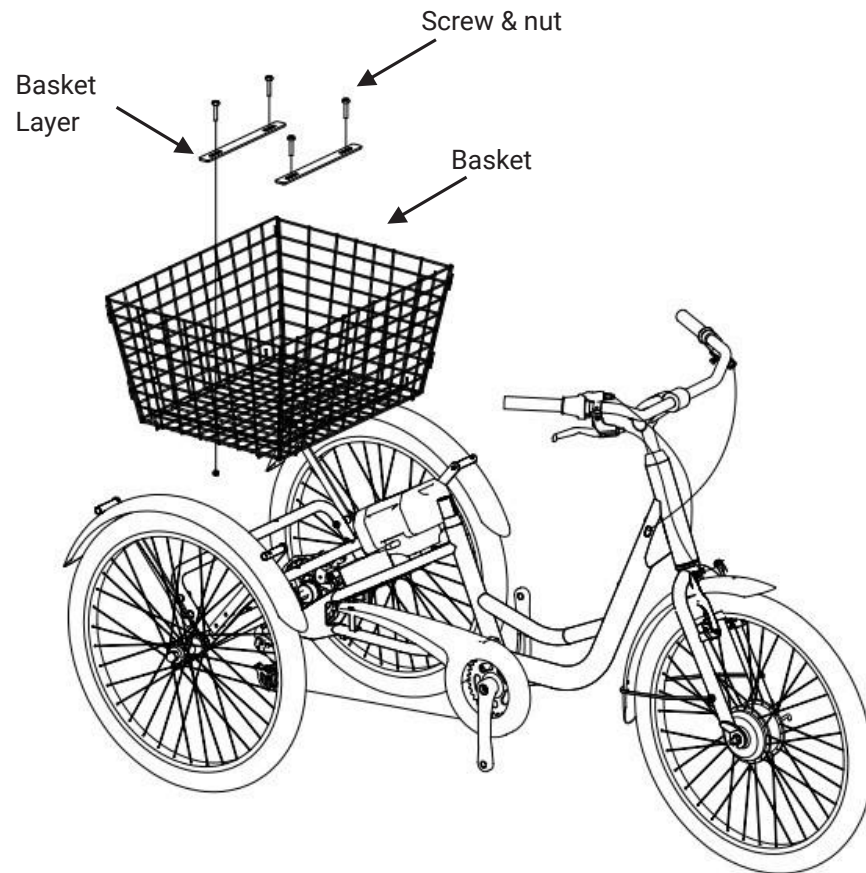
Once correctly tightened, the lever should feel firm after 4-5 millimetres of travel. Further adjustment can be applied through the barrel adjuster on the brake lever or on the calliper.

8 BASKET ASSEMBLY

STEP 8.A

Attach the basket to the rear frame with:

- Basket layer
- Screw
- Nuts

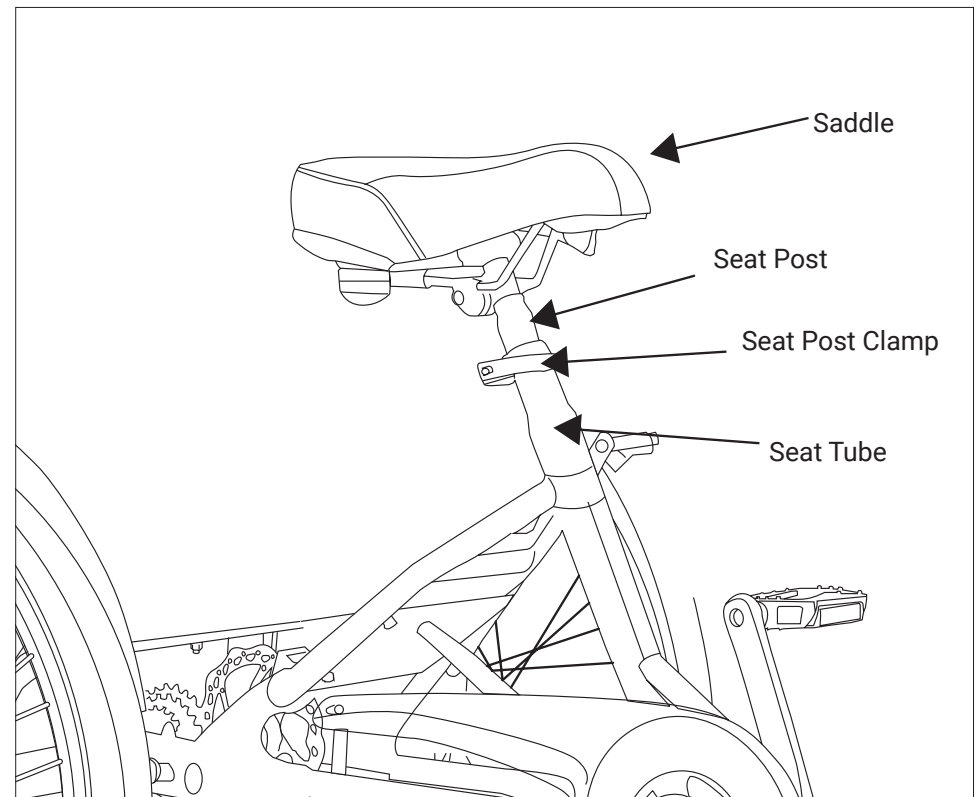


9 SADDLE ASSEMBLY

STEP 9.A Attach saddle to seat post clamp and tighten slightly.

STEP 9.B Insert the seat post into the seat tube and tighten bolts
(Note: Safety line should be covered)

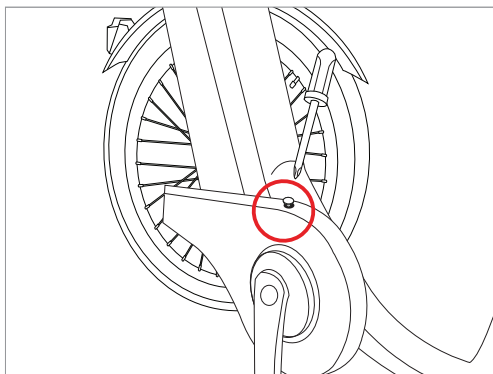
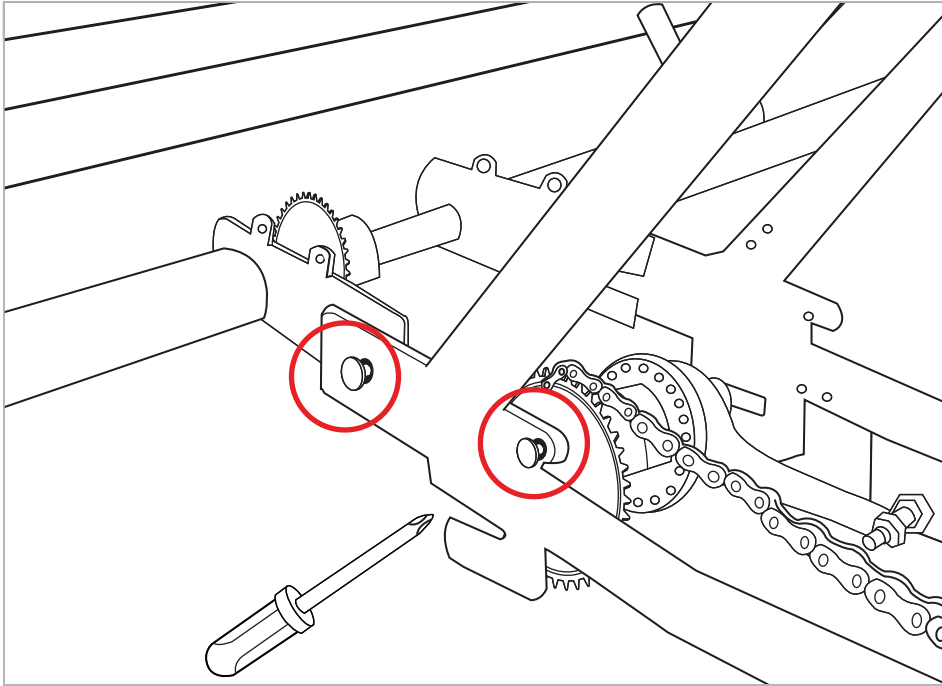
STEP 9.C Adjust seat angle and retighten seat clamp.



10 ASSEMBLE CHAIN COVER & PEDALS

STEP 10.A

Obtain chain cover screw from frame.



STEP 10.B

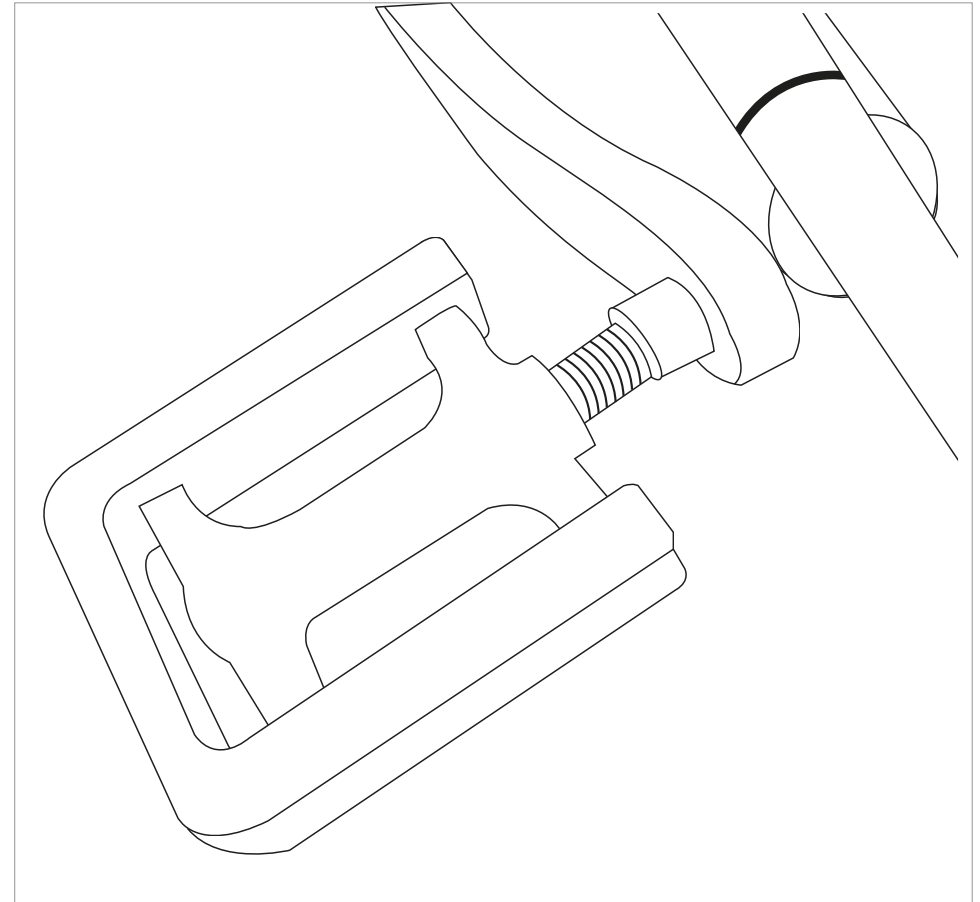
Assemble chain cover on frame.

STEP 10.C

Left pedal and right pedal should be clarified when changing. Pedal spindle is usually engraved with "R" and "L".

Tool: 15mm open end wrench

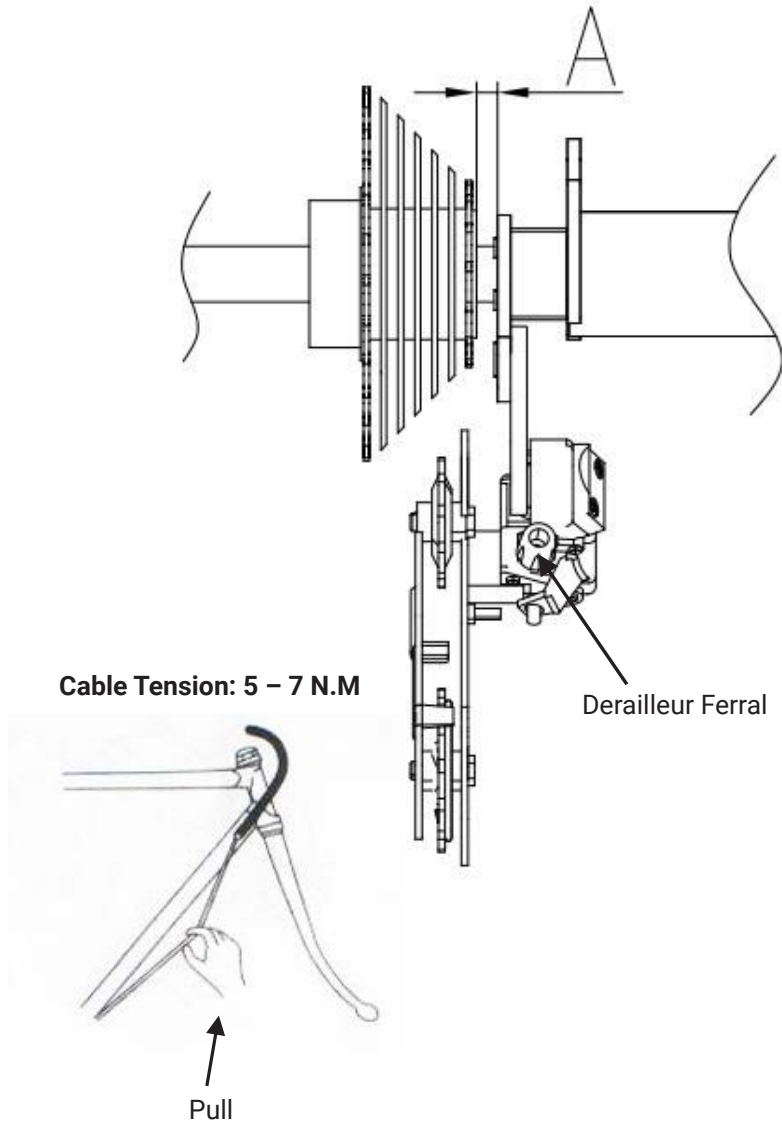
When changing Right side, clockwise rotation is to lock and anticlockwise rotation is to disassemble. When changing Left side, clockwise rotation is to disassemble and anticlockwise rotation is to lock. Tightening torque should be more than 18N.M



ATTACHMENT 1

Adjust the position of freewheel to make sure the distance between gear free-wheel and derailleur is equal to 5~6mm.

Feed the inner gear cable through the derailleur ferral and secure with lock nut.

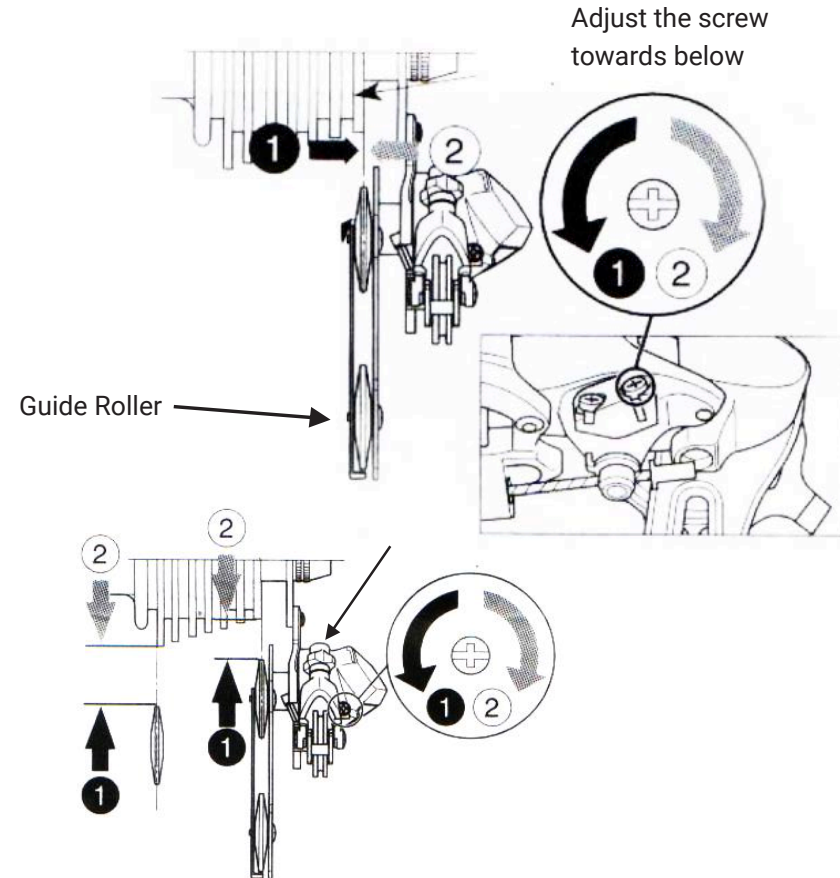


ATTACHMENT 2

A. Turn the top (marked H) adjustment screw to so that the guide roller is below the outer line of the smallest sprocket when looking from the rear.

B. Turn the low (marked L) adjustment screw so that the guide pulley moves to a position directly below the largest sprocket. Ensure it does not over shift.

NOTE: These screws are stop screws only so the derailleur does not over shift.



Adjust the tightness of inner cable to ensure the derailleur shifts smoothly.

If the cable is too loose:

The derailleur will not upshift to the larger sprockets

If the cable is too tight:

The derailleur will not downshift to the smaller sprockets

V. COMPONENTS

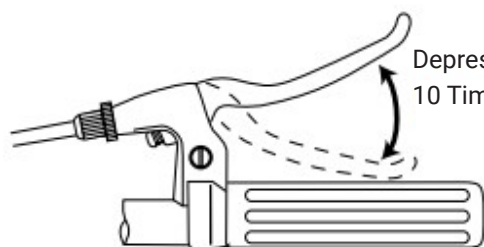
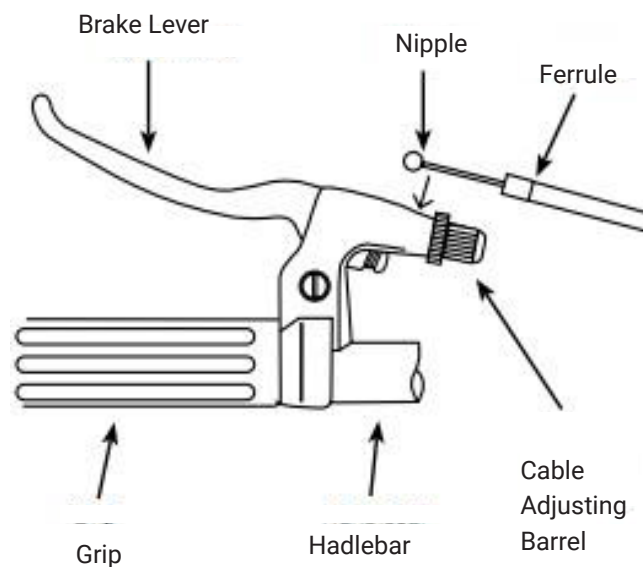
DISC-BRAKE ADJUSTMENT

The city bike uses the Australian style of the brake system. The right brake lever is for the front wheels while the left for rear wheel.

IMPORTANT:

Brake pad wear limit: replace the brake pads before the friction material has been worn down to less than 2.5 mm.

1. Open the brake lever and place the nipple end of the short brake cable into the lever, then close the lever. Secure the ferrule against the lever using the cable adjusting barrel.



2. Depress the brake lever about 10 times as far as the grip to check that everything is operating correctly and that the shoe clearance is correct before riding the bike.

TIRES

Bicycle tires are available in many designs and specifications, ranging from general-purpose designs to tires designed to perform best under very specific weather or terrain conditions. If, once you've gained experience with your new bike, you feel that a different tire might better suit your riding needs, your dealer can help you select the most appropriate design.

The size, pressure rating, and on some high-performance tires the specific recommended use, are marked on the sidewall of the tire. The part of this information which is most important to you is Tire Pressure.

WARNING: Never inflate a tire beyond the maximum pressure marked on the tire's sidewall. Exceeding the recommended maximum pressure may blow the tire off the rim, which could cause damage to the bike and injury to the rider and bystanders.

The best and safest way to inflate a bicycle tire to the correct pressure is with a bicycle pump which has a built-in pressure gauge.

Tire pressure is given either as maximum pressure or as a pressure range. How a tire performs under different terrain or weather conditions depends largely on tire pressure. Inflating the tire to near its maximum recommended pressure gives the lowest rolling resistance; but also produces the harshest ride. High pressures work best on smooth, dry pavement. Very low pressures, at the bottom of the recommended pressure range, give the best performance on smooth, slick terrain such as hard-packed clay, and on deep, loose surfaces such as deep, dry sand.

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

VI. ELECTRONICS

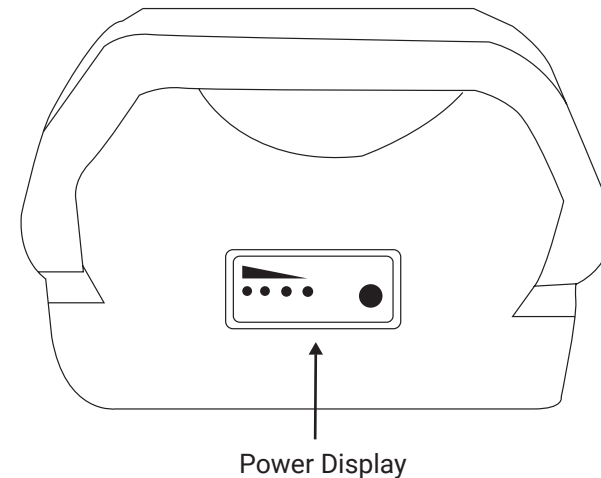
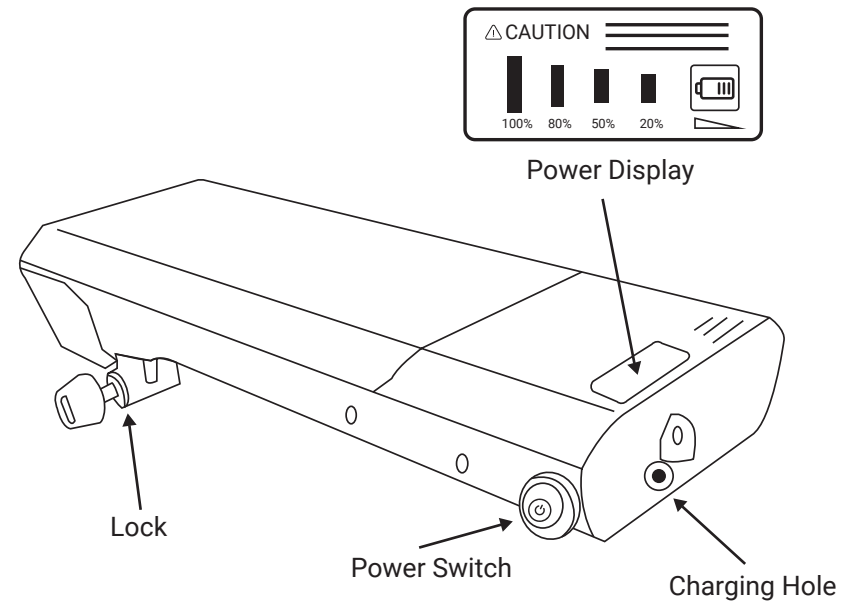
TIRE VALVES

The tire valve allows air to enter the tire's inner tube under pressure, but doesn't let it back out unless you want it to. There are primarily two kinds of bicycle tube valves used in Australia: the Schraeder Valve and the Presta Valve. The bicycle pump you use must have the fitting appropriate to the valve stems on your tire.

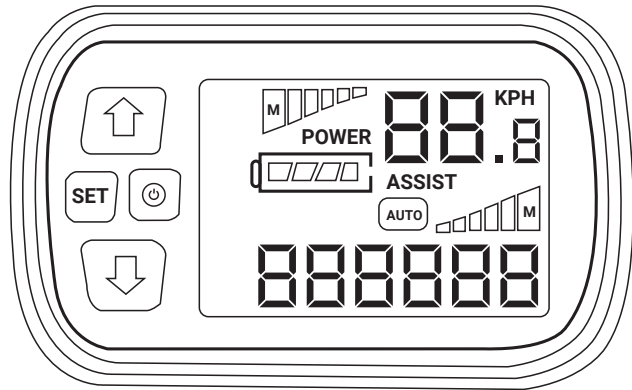
The tires use a Schraeder valve, which is like the valve on a car tire. To inflate a Schraeder valve tube, remove the valve cap and push the air hose or pump fitting onto the end of the valve stem. To let air out of a Schraeder valve, depress the pin in the end of the valve stem with the end of a key or other appropriate object.

1. Check whether rim is deflected or loosened and whether spoke is loosened or broken before riding. If any unusual condition, ask professional technician for adjustment or change.
2. Please change the tyre if cover tyre grain is worn and torn.
3. Please guarantee proper PSI. When inflating, please take nominal value of cover tyre as reference. Never inflate over the pressure or under the pressure.

CAUTION: Please make sure the contact area of tyre and ground should not be less than 10cm while riding.



LCD CONTROL PANEL



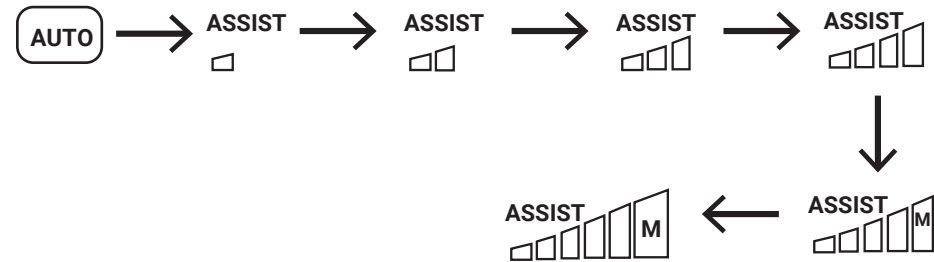
A. On/Off Power Button: When pressing the on/off power switch to turn on, the following will appear in the LCD display panel:

- Total Odometer: **888888**
- Speedometer: **88^{KPH}.8**
- Automatic Function: **AUTO**
- Battery Charge Level:
- Assist Lowest rate: **ASSIST** Assist Highest rate
- Output Power Rate of Battery : **POWER**



B. Increase/Decrease Power Buttons: There are six power levels, which can be scrolled through using the increase and decrease buttons. If the buttons is pressed again after reaching the lowest level, the system will enter the automatic **AUTO** function.

This will display in blue on the LCD screen like the picture below:



C. The Set Button has three functions.

(i) The background lighting of the LCD panel will light up by touching the **SET** button. There are five levels of background lighting which can be adjusted by using

the buttons. It will return to normal status automatically after five seconds.

(ii) The speedometer **88^{KPH}.8** will be lit on the LCD screen by pressing the **SET** button twice. Reset the odometer **888888** back to zero using the button.

(iii) To set the wheel size, press the **SET** button continuously for 10 seconds, until the button is lit on the LCD screen. Set the wheel size as 14" ~ 30". (This should be set by a professional).

D. When there is fault, the button will flash on the LCD screen. The fault indicator will display a code from 02 to 09. Below is a description of the fault codes:

Error Codes:

02: The power semi-conductor inside the controller is damaged and should be checked by the manufacturer. 03: The three-phase wire is shredded and/or loose. Stop work for at least two seconds, and restart.

It is the responsibility of the supplier of your bicycle to include with this Owner Manual all relevant WARRANTY details.

Proof of ownership may be required before warranty provisions can be processed.

YOUR CONSUMER RIGHTS:

White pages telephone directories list State and Territory consumer and fair trading office numbers.

Key Words: CONSUMER AFFAIRS / FAIR TRADING

Government web sites provide extensive information. Check these sources.

Warranty enquiries should be made to the point of sale (the retailer) in the first instance.

**THE INFORMATION CONTAINED IN THIS MANUAL COMPLIES WITH
RELEVANT AUSTRALIAN AND NEW ZEALAND STANDARDS AT THE
TIME OF PRINTING.**

**THIS MANUAL MAY NOT BE REPRODUCED WITHOUT THE WRITTEN
PERMISSION OF BIA LTD.**

VII. WARRANTY

AUSTRALIAN CONSUMER LAW

Many of our products come with a guarantee or warranty from the manufacturer. In addition, they come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage.

You are entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. Full details of your consumer rights may be found at www.consumerlaw.gov.au.

Please visit our website to view our full warranty terms and conditions:

www.progearbikes.com.au/pages/warranty-repairs

WARRANTY AND SUPPORT

Please email us at support@progearbikes.com.au for all warranty or support issues.

For all warranty or support related enquiries, please lodge a support ticket first by sending us an email.

PROGEAR

www.progearbikes.com.au