Circe Cycles

Owner's Manual

Helios / Helios STEPS / Triplet

V2.03

INTRODUCTION

Congratulations on becoming a new Circe Helios owner. The Helios is an innovative, functional, fun product that works well at many levels. We are confident that it will give you many years of good and enjoyable service.

This manual is written to enable you to get the best from your bike. It includes sections on riding, maintenance, and safety, and we have included some tips learnt from many years of riding and maintaining tandems. The latest version of the manual is always available as a downloadable PDF document on our website - please make sure you read it thoroughly.

Finally, we get great pleasure every time we ride our tandem and we hope that you will join us in getting many years of enjoyment from this wonderful bike.

CONTENTS

INTENDED USE

Please be aware of how your tandem should be used. No Circe tandem is suitable for jumping or tricks. Misuse of your Circe tandem, or triplet, may lead to mechanical or structural failure, will invalidate your warranty, and could result in serious injury or death. Our tandems are designed for riding on smooth roads and paths, and on improved trails, though to what extent is dictated by tyre choice and rider confidence, ability and experience.

SAFETY

This section provides some guidance on ways to cycle safely on your new tandem.

CYCLING LAWS AND REGULATIONS

Most countries have special laws and regulations for bicycles and cyclists, and these may apply to you as a tandem rider. Know the local cycling laws and obey them.

PINCH POINT AND MOVING PARTS

Some parts of your tandem can injure you if mishandled. For example, the chainring teeth are sharp and brakes get hot during use. Moving parts, including brake levers and the fold mechanism, can pinch, cut or, crush.

CHECK LIST FOR EVERY RIDE

Before you ride your tandem, make sure it is in a safe operating condition. If any part of your tandem does not function correctly, do not ride it until it is fixed. Refer to the maintenance schedule on page…..to see what you should check and when.

WEAR A HELMET

It is good practice to wear a cycling helmet that complies with the latest safety standards. Choose a helmet that is comfortable and fits well. Follow the manufacturer's instructions to ensure it fits correctly.

VISIBILITY

Make sure other road users and pedestrians can see you. Ensure your reflectors and lights are clean, correctly positioned, and not obstructed by clothing or accessories. Check that your lights are working correctly before you ride, even if you don't anticipate using them. Wear bright coloured clothing with reflective areas.

SUITABLE CLOTHING

Wear clothing that is suitable for conditions you will ride in. Wear glasses to protect your eyes from dust, dirt, and bugs. Wear appropriate shoes that will stay on your feet and can grip the pedals. Use pedal straps or "clipless" pedals to prevent your shoes slipping off the pedals while cycling.

CYCLING WITH CARE

You can help prevent accidents by using common sense, cycling with care, and thinking about your safety. You need to think about what other cyclists, vehicles, and pedestrians may do, and react accordingly. Anticipate potential hazards, such as car doors opening or children running in front of you. Cycle at an appropriate speed, stay back from other cyclists and vehicles, and avoid cycling on the inside of traffic queues. A rear view mirror is helpful to see what is happening behind you. Help other road users understand what you are going to do next by staying visible, maintaining a clear position on the road and using clear hand signals. Using a horn or bell will help other people know that you are near.

CYCLING IN BAD WEATHER

Take extra care when the weather is wet, foggy, windy, or icy. Ride with extra care and brake early, as your tandem will take longer to stop. Sudden braking could lead to skidding and loss of control.

CYCLING IN POOR VISIBILITY

Take extra care when riding in the dark, dawn and dusk, or when visibility is poor. If you have to ride in these conditions, make sure you can be seen. Use a headlight (white) and tail-light (red) in addition to the reflectors that are fitted. Wear light-coloured reflective clothing and reflective accessories.

BIKE COMPONENTS OVERVIEW

1. Stem
2. Handlebar
3. Steerer extender
4. Headset
5. Brompton block mounting (Optional extra)
6. Mudguard (Optional extra)
7. Fork
8. Disc brake
9. Steering stabiliser (Optional extra)
10. Battery (STEPS model only)
11. Drive unit (STEPS model only)
12. Timing chain
13. Tensioner
14. Chainset
15. Hub gear
16. Rack
17. Stoker saddle and seatpost
18. Stoker stem assembly
19. Captain saddle and seatpost
20. Frame

RIDING AND ADJUSTING YOUR TANDEM

To ensure that riding your bike is the pleasurable experience it should be, it is essential that attention be paid to correct fit. Ideally this should be done in conjunction with an accredited dealer, but the following points should be observed.

WEIGHT DISTRIBUTION

A tandem generally works better with the heavier rider on the front. This is because the front rider, or 'Captain', is responsible for stabilising the tandem when starting and stopping, for steering, and for braking which particularly on long descents can be very demanding.

SADDLE HEIGHT

This dimension is very important for bio-mechanical efficiency and for protecting joints from injury. As a working rule, with the pedal at the furthest position from saddle and the rider's heel on the pedal, the leg should be straight to very slightly bent. This means that when the foot is in the correct position with the ball of the foot on the pedal axle, the knee will be slightly bent at full extension. The degree of bend is personal, but it is important that, at full extension during the pedalling cycle, the knee is neither overstretched nor too bent.

'!' Certainly for children we advise the use of adjustable crank shorteners, and anyone outside typical average leg lengths should consider such shorteners or appropriate length cranks.

SADDLE ANGLE AND POSITION

Ideally the saddle should be adjusted fore/aft so that the centre of the knee joint is vertically above the pedal axle. The saddle top should be approximately horizontal, but care should be taken with the angle of the s addle, particularly so that the nose does not obstruct forward rotation of the pelvis.

FORWARD EXTENSION AND BAR ADJUSTMENT

For comfortable riding, the amount of stretch of the back, torso and arms are crucial. An experienced rider should use the positions with which they are normally comfortable, but for first time riders, a good starting position should not be too stretched or bent over. With familiarisation this position can be gradually adjusted. Both front and back positions of the Helios offer considerable adjustment for different rider sizes and riding styles.

CONTROLS AND RIDING TECHNIQUE

Traditionally the front rider is known as the 'Captain' and the rear rider, the 'Stoker'. The Captain steers, has control of the brakes and gears and is responsible for stabilising the tandem when starting and stopping. The Stoker pedals and should otherwise relax and not attempt to steer! For some applications, the Stoker may have an auxiliary drag brake. The Captain should also give some feedback to the stoker as to road conditions, for example, 'bump' and, often, certainly with inexperienced couples, forewarning of gear changes and sudden turns.

STARTING AND STOPPING

At start, the Captain will mount the tandem, keeping it stable so that the Stoker can sit on the rear saddle with feet on pedals ready to go. The Captain will then sit, and, keeping the tandem upright with one leg, will, with the stoker, start pedalling. It is important to start in a low gear and for both riders to give a good hard push to get the tandem underway!

To stop, the Captain should warn the Stoker and then, as on a single bike, put one leg down to stabilize the bike. The Stoker usually remains seated with feet on the pedals but must keep still so as not to unbalance the tandem. If the tandem is at rest for a longer period, one or both riders should be prepared to place both feet on the ground.

BRAKES AND BRAKING TECHNIQUE

The Circe Helios is fitted with excellent brakes that are able to stop the tandem quickly and safely. However, it is important to remember that a tandem is heavy and, consequently, with braking distances being greater than on a single, it is very important to be aware of traffic conditions and not rely on last-minute-panic-braking. In use, both brakes should be used, but the front brake is the much more effective brake and does the majority of the stopping. Consequently, a lot of heat can be generated in the front wheel braking surfaces and, if long descents in mountainous areas are anticipated, some form of auxiliary braking should be considered. If the tandem is fitted with disc brakes, then rim brakes can be added and vice versa if rim brakes are fitted. This enables the different braking surfaces to be alternated and any heat build up to be controlled better.

GEAR USAGE

Your Helios is fitted with a good range of gears, each model having an appropriate gear range for its intended use. It is important to use the gears to find a cadence (leg spin speed) that is comfortable for both riders and, by being aware of road conditions, to use the gears to try and keep within this range. Although mutual comfort is the most important requirement, a cadence of 80-100 is generally considered to give a good bio-mechanical balance, though, obviously this may vary depending on a variety of physical factors, both personal and terrain.

SHIMANO STEPS OPERATION

To turn on and off:

1. Switch the system on using either the power button on the battery or the display.
2. Make sure your feet are not on the pedals while turning the system on to allow the torque sensor to calibrate.

Left switch (Assist):
The grey buttons adjust the level of assist; down arrow for a lower assist level or no assist, and the up arrow for a higher assist level. The black button changes the displayed data.

Right switch (Gears):
The grey buttons adjusts the gear you are in, the black button switches between manual and automatic shifting. We recommend using manual mode, as this is more suitable for tandem use.

For more detailed user instructions see Shimano's online resource https://si.shimano.com

WEIGHT DISTRIBUTION AND WEIGHT LIMITS

As previously stated, because the steering is at the front, it is better for the heavier rider to be the captain. If luggage is to be carried it is advisable to try and maintain as even a weight balance as possible, possibly using a front rack and panniers to achieve this. ***The permissible maximum combined rider weight is 170kg (same for the Triplet).*** Please see the charts below for specific rider position limits.

CARRYING CHILDREN

The Helios is particularly suited to carrying children, but great care must be taken to ensure their safety. It is essential that they wear approved cycling helmets and that they are securely fastened into any child carrying seats. If the Cargo Rack is used, it is essential that the dedicated fittings are correctly attached, and the seat/s securely installed. The tandem should then be safely supported either on its stand or against something solid before the child is placed in the seat. In this configuration, the Helios can take one adult and one or two small children. With the Triplet module is is possible to take one adult and three children (one in a childseat)
The Helios also features a remarkably low rear stand-over height and very configurable stoker bar, so that, with the addition of crank shorteners, a very small child can start riding. With a child or an adult as stoker, it is still possible to have a child seat attached to the seat post or rear rack.

TANDEM						
POSITION	**STAND-OVER HEIGHT**	**APPROX AGE**	**MIN SEAT HEIGHT (FROM BB CENTRE)**	**MAX SEAT HEIGHT (FROM BB CENTRE)**	**APPROX HEIGHT RANGE**	**APPROX WEIGHT RANGE**
BACK	51cm	3.5 +	35cm	80cm	105-190cm	80kg
FRONT	66cm		55cm	85cm	150-195cm	100kg

TRIPLET						
POSITION	**STAND-OVER HEIGHT**	**APPROX AGE**	**MIN SEAT HEIGHT (FROM BB CENTRE)**	**MAX SEAT HEIGHT (FROM BB CENTRE)**	**APPROX HEIGHT RANGE**	**APPROX WEIGHT RANGE (170kg Max Total)**
BACK	51cm	3.5 - 10yrs	35cm	80cm	105-190cm	Up to 50kg
MIDDLE	53cm	5 +	50cm	75cm (telescopic post)	115-160cm	Up to 60kg
FRONT	66cm		55cm	85cm	150-195cm	Up to 100kg

TOURING WITH THE HELIOS

Tandems make great machines for touring. Two riders of unequal strength can ride together and share the joys of cycle travel. The Helios can be equipped with a full touring complement of panniers and bags and with suitable gearing is capable of going anywhere. Remember, it is low gears that are essential for loaded touring; one can always freewheel downhill or with the wind behind you, but you have to pedal up hills and against the wind.
If you are thinking of a full camping tour, we would advise three brakes (two discs and one rim brakes). It is also important to ensure that the luggage weight is well distributed, possibly using both front and rear panniers.
The Helios, fitted with its dedicated rear rack, also makes a wonderful single touring bike. The rack can take multiple panniers and is stiff and stable whatever the weight, and with the large profile tyres, immensely strong wheels, and wide gear range, you are truly able to go anywhere!

LOAD CARRYING

The Helios is a great load carrier, both for two people touring or shopping, but also as a single bike with the Cargo rack. When loading the Helios, it is important that all bags and luggage are attached securely and that straps are tight and not able to snag on anything. If used as a solo freight carrier it is vital the load be secured carefully.

INSPECTION AND MAINTENANCE

This section covers the ongoing checks and maintenace which are essential to ensure the performace and safety of your tandem or triplet.

Service Schedule

The service schedule, which can be found in the appendix, gives a you a guide to which checks should be carried out and how often. Please note that these are a guide based on average usage (30 miles/week in good weather). If you use your tandem more oftern, or in poor weather, you will need to do more frequent maintenance.

Brakes

Depending on what model of bike you have, it will either have disc brakes, rim brakes or a combination of both. With rim brakes you should check that the brake pads have not worn below their minimum wear line and are correctly aligned to the rim and not touching the tyre. If the brake ever pulls all the way to the bar before engaging, then you should refer to the cable adjustment section or, consult a professional mechanic. Disc brakes should also have their pads checked regularly, and if embarking on a long ride, it may be worth replacing the pads even before they reach their minimum wear line. The disc also needs regularly checking for damage, alignment, and thickness (the minimum thickness is normally specified by the disc brake manufacturer).

NOTE: Brakes on a tandem have to work doubly as hard as on a solo bike, so ensuring they are functioning effectively is critical!

Cables

Cables don't normally need a lot of adjustment. When they are new, they will stretch slightly, and that stretch needs to be adjusted out of the system. Check all cables regularly for signs of damage.

Brake cables

To adjust the brake cables, loosen the locking nut on the barrel adjuster at the lever. Screw the barrel adjuster out a little and check the brakes. When squeezing the lever, it shouldn't come too close to the handlebar grips. When the lever is released, the wheel should turn freely and not drag on the brakes.

Gear cables

Gear cable tension can be adjusted at the handlebar shifter for Shimano internal hubs and derailleur gears. The Rohloff hub cable tenison is adjusted at the clickbox. Refer to the manufacturer's manuals for a more detailed explanation of adjustment.

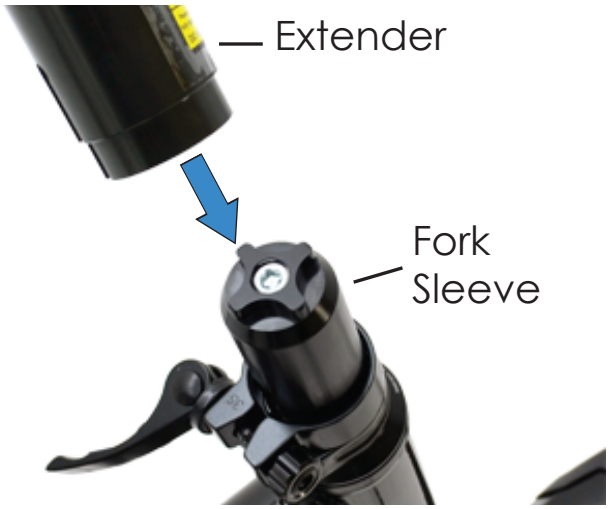
Drive train

Check that the cranks are tight after the first 50 miles of riding. These should be fastened firmly to the bottom brackets, with no play. Even a small amount of movement will cause the joint between the spindle and the hole in the crank to wear, resulting eventually in damage to the chain set.

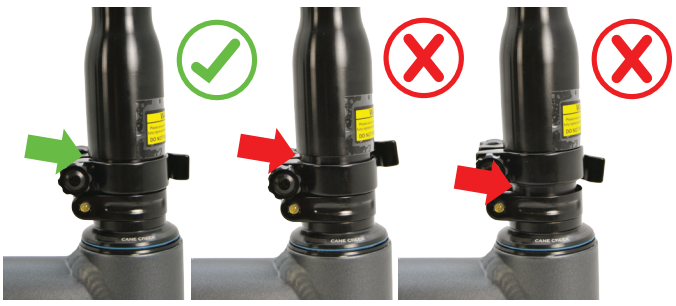
The rear derailleur idlers tend to collect oil and dirt. Clean them with a dry rag. If they squeak, they can be disassembled and greased. When you lubricate your chain, put a drop of light oil on the moving pivots of the derailleur; they will last much longer. The more you ride your bike, the more used you become to the sounds it makes. If you notice any change in the sound your bike makes, check it carefully; it may be a sign of something needing attention.

Handlebars/stem

Both stoker and captain handlebar arrangements, which include the stem and quick release steerer extender, should be checked before every ride. The careful operation of the quick release steerer extender is critical in ensuring that it continues to function correctly.



The steerer extender fits to the top of the fork and locates on the 4-pointed star, the slot at the back of the extender should align with the vertical slot on the side of the top cap when the handlebars are pointing forward. Ensure the steerer is fully pushed down before tightening the Q/R.

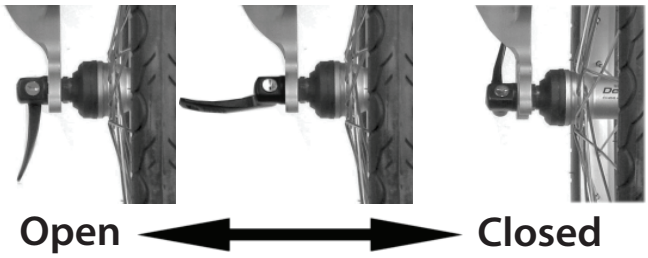


Headset

The headset is the bearing which allows the fork to rotate in the frame. It plays a major part in the handling of the bike and should be checked regularly (as per table); that it's both tight (not rocking front and back when front brake is applied and bike rocked backward and forward), and turning smoothly. If you are unsure about adjusting your headset, consult a qualified mechanic.

Quick release and thru axle

Quick-releases are used in a number of places on your bike; it is important that they are tightened correctly. To locate a quick release properly, adjust the quick-release by opening it, holding both ends and turning one clockwise until, when you close the lever, you feel some resistance. At this point, try to close the lever fully. The adjustment is correct when you can fully close the lever, but with some effort (the lever should leave its impression in the palm of your hand). If you can only close the lever part way, open it, unscrew the adjusting nut slightly and try again. If it closes too easily, tighten it up a tiny bit and try again.



The front wheel is held in place using a thru axle, which can be installed/removed using a 6mm Allen key, from the left side (disc brake side) of the fork.

Tyres

Quality tyres are vital for good traction and control while accelerating, turning, and braking. Each brand of tyre has its own individual mix of puncture protection, rolling resistance, pressure rating, and durability. Finding the one that suits your riding style best is the challenge. Tyres should always be inflated according to the range marked on the sidewall, never above the maximum recommended, and they should be checked regularly. Worn tyres should be replaced. Lower pressure results in a more comfortable ride, but at the expense of higher rolling resistance. Balloon tyres are now available that combine relatively low rolling resistance, puncture protection, and a smooth ride; they are well worth considering. With two adults on the tandem we recommend having the tyres inflated to the upper limit of the marked pressure range.

NOTE: It is important that both tyres on your tandem are inflated to the correct pressure.

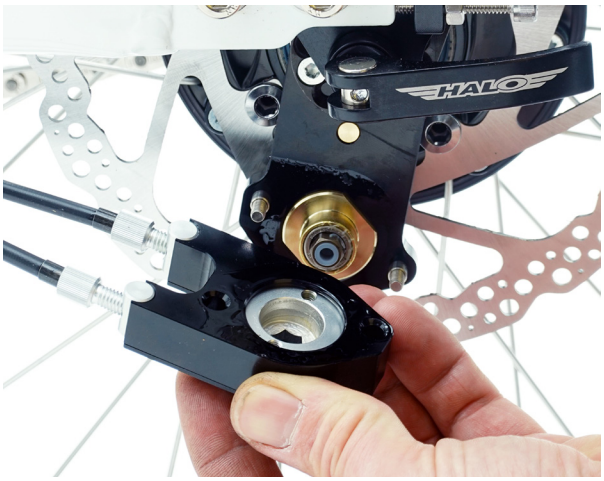
Wheels and removal

The wheels on your tandem are made up of three components; the rim which holds the tyre on, and provides a braking surface, the spokes which support the hub in the middle of the rim, and the hub around which the wheel rotates, providing a means to driver, with disc brakes, a means of braking. All three parts should be checked regularly (as per maintenance table), rims should be checked for wear and straightness, spokes that they are all at correct tension and none of them are broken, hub for play in bearings and signs of damage to flange.

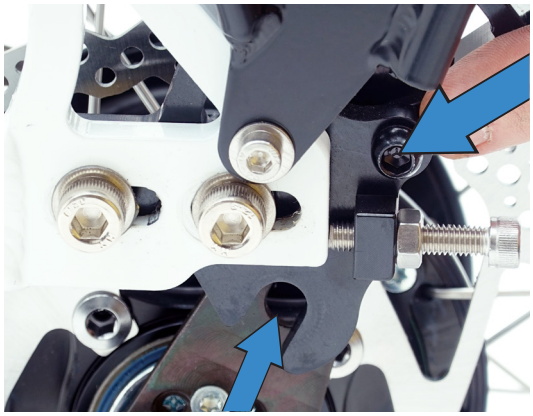
Rear wheel removal

Rohloff

Remove the clickbox from the left side of the hub. It is recommended that you shift to the 14th gear before doing this to help with reassembly.



When reinstalling the Rohloff you must orienatate the torque arm such that it aligns with the lower disc brake mounting bolt.

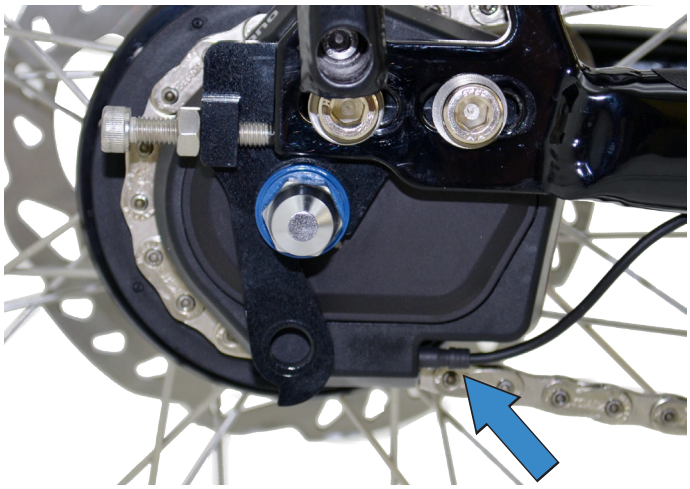


Alfine mechanical

Remove the shifter cable form the cassette joint by shifting to the highest gear (8 or11 depending on the hub). Once the cable is removed, undo the wheel nuts with a 15mm spanner, and the wheel should slide out. When reinstalling, ensure the wheel is fully seated in the drop outs and the disc brake (if fitted) is aligned with the caliper. Tighten the bolts to the recommended torque (Appendix A).

Alfine Di2

Before removing the wheel, it is essential that the Di2 cable to the hub motor unit is disconnected using the Di2 tool supplied with your bike. Then follow the same instructions as per the mechanical Alfine hub.



ACCESSORIES

There are a number of recommended accessories for your Helios:-

General:

- Lights - even if you don't plan on riding in the dark, there is always the chance of getting caught out late, and it is essential, and in many countries the law, to have working lights.
- A good pump, spare tube, and puncture repair kit and tool kit. With a tandem, because of the extra weights involved it is essential to have a pump that can reach the necessary high pressures.
- A good quality stand for parking and loading your tandem. The Helios front stand is perfect for stabilizing the tandem when loading children or freight.
- Mudguards.
- Speedometer/GPS.
- Carrying bags add to the versatility of any bike. The Helios comes with attachment points for racks and bags at the front and back of the bike. Best to discuss with your supplier what works best for your needs.

Dedicated:

- Front light bracket
- Front stand (STEPS)
- Front stand (Non STEPS)
- Freewheel crankset
- Crank shorteners
- Junior cranks 125mm
- Thule stand off (to transport the tandem on the roof of your car using a Thule 591 or 598 rack)
- Separable kit (allows your Helios to break down into a two suitcases, two bags or, the Traveller case)
- Triplet module

The Helios is an incredibly versatile bike and, with our range of accessories, you can make full use of this versatility. If you would like to purchase any of these accessories, please contact your local dealer or call us on +44 (0)1954 782020.

WARRANTY AND OTHER INFORMATION

Cyclecentric warrants, to the original owner of each new Circe tandem, that the frame is free of defective materials and workmanship for two (2) years from original date of purchase. Component parts are limited to one (1) year from original date of purchase. Warranty is conditional upon the bike being operated under normal conditions and being properly maintained. Warranty is offered to the original owner only, and is not transferable.

This warranty does not apply to:

- Damage through normal wear and tear
- Neglect (inadequate care and maintenance)
- Damage from crashes or jumping
- Overloading through excess weight
- Incorrect assembly
- Modifications to the bike (additional or changed components)
- Theft
- Use as a power driven vehicle
- Failure to follow instructions or warnings in the owner's manual
- Activities for which the bike was not designed.

Bending of frames, forks, handlebars, seat posts or wheel rims can be a sign of misuse or abuse. Cyclecentric reserves the right to make sole determination of whether any failure or damage claimed under warranty was caused by material or manufacturing defect, and reserves the sole discretion to repair or replace any parts covered by this warranty. The owner shall be responsible for all labour, shipping, and travel costs connected with the repair or replacement of warranted parts. Cyclecentric will, at our sole discretion, normally consider compensation for reasonable labour, shipping, and travel costs associated with warranty claims. Cyclecentric shall in no event be liable for incidental or consequential losses, damages, or expenses in connection with its bicycle products.

Liability waiver

Taking part in any sporting activity can result in injury or death. Cycling is no different in this regard. The rider (that's you) is expressly assuming the risk for any injury and/or property damage that may result from using our product, as well as for any and all injuries and/or property damages caused by someone riding your bike. We have no control over how the bike is used or maintained. It's your bike; it is up to you to be responsible for yourself. You need to ensure that the bike is safe each time before you ride it. You need to ensure that it is maintained to a proper standard. Read and understand this manual; it has warnings and suggestions that will help you to use the bike safely. If you are in any doubt about any of the advice or procedures in this manual, please contact your dealer or Cyclecentric. It is up to you to know and obey traffic laws

of the country or state where you will be riding your bike. Pedal cycles are regarded in most countries as vehicles when on the road and are subject to the same rules as motor vehicles. If you are not comfortable on the road, or have little experience riding in traffic, try practising riding on quieter streets, at least until you develop the necessary skills and road awareness. Many bike shops can offer instruction on advanced riding techniques.

Legal requirements

Legal requirements vary from country to country and you should always comply with them. The important areas you need to consider are lighting and helmet use. Consult your local bike dealer for information about what is required in your area. Please also remember that even if not required by law, some equipment (such as helmets and lights) can increase your personal safety and should be carefully considered.

Frame number location

The frame number is located under the stoker bottom bracket shell. To read it you may need to turn the bike over.

Contact information

Cyclecentric Ltd
37 High Street
Longstanton
Cambridge
CB24 3BP
UK

tel. +44 (0) 1954 782020
email. info@circecycles.com
web: www.circecycles.com

Online

Facebook

Find 'CirceCycles' on facebook and 'Like' our page to keep updated on what's new. You may also want ot join our customer group at 'I love my Circe'.

YouTube

There are a number of useful instructional videos on our YouTube channel and we intend to keep adding to this resoucrce over time.

www.youtube.com/circecycles

APPENDIX A

Tightening Torques Table

Fastener	Allen key size (mm)	Nm	In-lbf	Loctite
Extender clamp top bolt	5	8	71	
Extender clamp bolt	5	8	71	
Stem bolts	4	6	53	
Alfine hub nut	15 spanner	30-45	265-398	
V brake mounting bolt	5	6-8	53-71	Y
Front derailleur clamp bolt	5	3-5	27-44	
Front derailleur cable clamp bolt	5	5-7	44-62	
Pedals (Allen key)	8	35	310	
Pedals (spanner)	15 spanner	35	310	
Thru axle M15 x 1.5	6	17	150	
Brake lever clamp bolt	4-5	6-8	53-71	
Adjustable drop out M8 bolt	6	15-17	130 -150	
Mechanical caliper mounting bolt	5	9-10	80-89	Y
Rohloff disc rotor bolt	5	7	62	Y
Rohloff M4x25 retaining plate	T-20	3	27	
Rear derailleur mounting bolt	5	10	89	
Rear derailleur cable clamp bolt	5	4-5	38-44	
Disc rotor bolt	T-25	2-4	18-35	Y
Separable coupling bolt	6	14	124	
Separable drainpipe bolt	6	14	124	
Shimano hollowtech crank bolt	5	10-14	88-132	
Square taper crank bolt	8	34-44	305-391	
Shimano C/L disc fitting	HG tool	40-50	350-435	
All other M4 bolts	3	5-6	44-53	

APPENDIX B

Service and maintenance schedule

Component	Before every ride	Monthly	Annually	Other
Brakes	X			
Cables		X		
Drive train		X		
Handlebar stem			X	
Headset			X	
Frame/fork			X	
Quick releases	X			
Tyres	X			
Wheels			X	

EU Declaration of conformity

Cyclecentric Ltd
37 High Street
Longstanton
Cambridge
CB24 3BP
UK

As a manufacturer we hereby declare that the following product:

Product: Tandem with electric pedal assistance
Model: Circe Cycles Helios STEPS
Serial number:

Is in compliance with the essential requirements of the following Directives:

- Directive 2006/42/EC (Machinery)
- Directive 2014/30/EU (EMC)

And with the following harmonised standards:

- EN 15194:2017

EU technical file contact name and address:

Alastair Langdon (Director), Cyclecentric Ltd, 37 High Street, Longstanton, Cambridge, CB24 3BP UK

Authorised signatory on behalf of Cyclecentric Ltd:

Signed:

Name and role: Alastair Langdon, Director

Date: 15/12/2020

www.circecycles.com