



Skyline eBike

Installation and Owner's Manual

(For Aftermarket Applications)

Part #	Description
2021014622	Skyline eBike

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Introduction

Spend less time charging and more time riding with the advanced lithium-ion battery of Lippert Li-Series ebikes. This electric Skyline city bike is perfect for added mobility and sightseeing, featuring a range of up to 45 miles per charge and Bluetooth-ready, smartphone compatibility.

Additional information about this product can be obtained from [lci1.com/support](https://support.lci1.com) or by using the LippertNOW app. Replacement kits can be ordered from <https://store.lci1.com/> or by using the LippertNOW app.

The LippertNOW app is available for free on Apple App Store® for iPhone® and iPad® and also on Google Play™ for Android™ users.

App Store® and iPad® are registered trademarks of Apple Inc.

Google Play™ and Android™ are trademarks of Google Inc.

For information on the assembly or individual components of this product, please visit:

<https://support.lci1.com/convenience-and-leisure/>

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.

Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels.

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited warranty.

⚠ WARNING

THE "WARNING" SYMBOL ABOVE IS A SIGN THAT A PROCEDURE HAS A SAFETY RISK INVOLVED AND MAY CAUSE DEATH OR SERIOUS PERSONAL INJURY IF NOT PERFORMED SAFELY AND WITHIN THE PARAMETERS SET FORTH IN THIS MANUAL.

⚠ WARNING

FAILURE TO FOLLOW INSTRUCTIONS PROVIDED IN THIS MANUAL MAY RESULT IN DEATH, SERIOUS PERSONAL INJURY AND/OR SEVERE PRODUCT AND PROPERTY DAMAGE, INCLUDING VOIDING OF THE COMPONENT WARRANTY.

⚠ CAUTION

THE "CAUTION" SYMBOL ABOVE IS A SIGN THAT A SAFETY RISK IS INVOLVED AND MAY CAUSE PERSONAL INJURY AND/OR PRODUCT OR PROPERTY DAMAGE IF NOT SAFELY ADHERED TO AND WITHIN THE PARAMETERS SET FORTH IN THIS MANUAL.

⚠ CAUTION

ALWAYS WEAR EYE PROTECTION WHEN PERFORMING SERVICE, MAINTENANCE OR INSTALLATION PROCEDURES. OTHER SAFETY EQUIPMENT TO CONSIDER WOULD BE HEARING PROTECTION, GLOVES AND POSSIBLY A FULL FACE SHIELD, DEPENDING ON THE NATURE OF THE TASK.

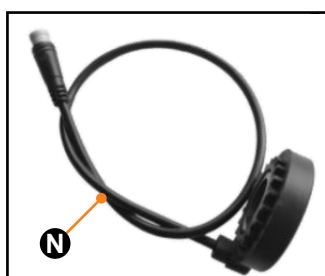
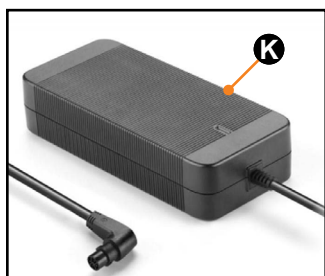


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Parts List



NOTE: Part numbers are shown for identification purposes only. Not all parts are available for individual sale. All parts with a link to the Lippert Store can be purchased.

NOTE: Consult the **Getting to Know the Electronics Package** section for more information about the Battery Charger (K), Battery and Controller (L), LED Display (M), and Sensor (N).

Skyline eBike (2021014622)			
Letter	PN	Description	Qty
A	2022075471	Front Brake Assembly	1
	2022075472	Rear Brake Assembly	1
B	2022075485	Front Chainwheel	1
C	2022075487	Fork	1
D	2022075489	Front Wheel	1
E	2022075491	Grips	1
F	2022075494	Pedals	1
G	2022076596	Rear Wheel	1
H	2022077483	Saddle	1
I	2022078172	Front Tire	1
J	2022078501	Rear Tire	1
K	2022084003	Battery Charger	1
L	2022085005	Battery Pack	1
	2022086007	DT Motor Controller	1
M	2022086987	LED Display Touch Pad	1
N	2022088011	Pedal Assist Sensor	1



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Resources Required

- 1 to 2 people
- Access to an electrical outlet
- Box cutter
- Bicycle grease
- Scissors
- 15mm box wrench
- 4mm hex key
- Sidecuts
- Lubricating bike grease
- Ratchet
- 15mm spanner wrench
- Socket Wrench, various sizes
- Screwdriver
- Smart device
- Mobile Application

Preparation

Unpack eBike from Box

1. Find an open space where the eBike assembly can safely be completed, such as a personal garage or workshop area.
2. Carefully unpack eBike from packaging. Lift the bike upwards out of the box, place it safely on the floor. Take out the saddle and small parts.

NOTE: eBike may be received with the neck packed backwards. Double check so the handlebars are not assembled backwards. If necessary, loosen the neck and rotate 180 degrees.



Fig.1

3. Keys (Fig. 2) are zip-tied to the Crank arm where the pedals will be installed. Cut the zip ties, put keys in safe place.



Fig.2

NOTE: Keep battery keys in a safe place. Battery keys do not start eBike, but lock and unlock battery from eBike so it can be removed for charging purposes.

Charge Battery

The battery must be charged before riding. The battery included with the eBike will be in a sleep state when received; partially charge but not enough to immediately operate the eBike. the battery should be set aside to charge while assembling eBike and ideally given 24-48 hours to charge.

1. Find a safe, dry place to charge battery. Only use the charger in indoor areas and do not leave a charging battery unattended.

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Fig.3

2. Remove the battery from frame by inserting the key into the lock on the front left side of battery rack (Fig. 3A). Turn key and pull the battery to slide it off (Fig. 4) and out of the back of the rack.



Fig.4

3. Plug charger into wall (Fig. 5).



Fig.5

4. Plug battery into charger to start charging (Fig. 6).



Fig.6

NOTE: Only charge the battery with the charger provided. Using the wrong charger risks the life of the battery and presents a potential fire hazard.

5. When battery is without a charge, the battery will display a red light. When the battery is charged and ready to use, the display light will be green.

6. When the battery is fully charged, disconnect the charger from the battery and wall socket.

NOTE: For more information about the battery and battery charger, please read "Battery Pack" and "Battery Charger" sub-sections of Electronics Package section.



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Download eBike Application, "Lippert Ebikes"

It is highly recommended to download the eBike app during the preparation and assembly of the eBike. Downloading the app and pairing the eBike with the app ensures the latest updates are applied for maximum eBike use.

Regardless of using the app or not when operating, it is essential from time-to-time to check for firmware updates to make sure eBike assembly and equipment are current and operating to manufacturer standards.

1. Make sure the smart device being pairing to the eBike is connected to the Internet and Bluetooth settings are turned on.
2. Download the eBike app from the appropriate app store.

NOTE: To install, search for "Lippert Ebikes" in the App Store for iPhone (or other Apple smart devices) or the Google Play Market for Android smart devices. The QR Code can also be scanned to access the download link of the application.



NOTE: Lippert Ebikes application can be installed on smartphone with Android Version greater than Android 8.0 or IOS 12.1.



Fig.7

3. Using the smart devices' camera app or QR code reader, scan the QR Code underneath the frame of the eBike (Fig. 7A).
4. Walk through the app/pairing setup process as prompted by the Lippert Ebikes app.

For more information about using the app, see the [Using the eBike Application](#) section of this manual.

NOTE: Lippert Ebikes application can only be used for the eBikes: Lippert Gladiator and Skyline City with ACTIA products. The application connects the ACTIA controller of the eBike via Bluetooth to a smart device; this allows access to diagnostic and infotainment functions.

Assembly

Install Handlebars

1. Insert handlebar neck into front stem (Fig. 8).
2. Adjust to desired height and center (Fig. 8A) with front fork.



Fig.8

NOTE: Do not raise above max height marking on neck.

3. Tighten with 6mm hex (Fig. 9).



Tighten

Fig.9

4. Loosen handlebars and pivot (rotate up) to desired riding position. Tighten with 6mm hex.

Install Seat

1. Flip quick lock open (Fig. 10A) to allow the seat post to be inserted into the frame.



Fig.10

2. Insert seat into the seat post (Fig. 11A) and flip quick lock to secure seat.



Fig.11

NOTE: As seat is positioned, do not adjust outside of the range of the alignment marks.

NOTE: For the next steps, it will be necessary to carefully maneuver eBike so the handlebars and seat are on the ground supporting the bike.

Install Mudguard

NOTE: Nuts and bolts are installed in the frame for the mudguard.

1. Use two (2) 10mm wrenches (Fig. 12A) to loosen nut from bolt. Remove nut, leaving the bolt and front reflector in place.

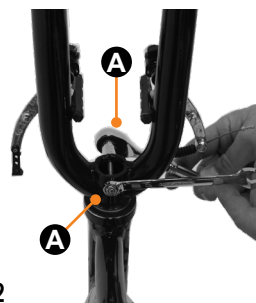


Fig.12

- Place top tab of the mudguard (Fig 13A) onto the bolt and reinstall the nut removed in Step A. Tighten using two (2) 10mm wrenches.

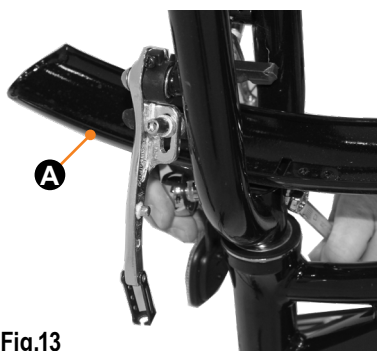


Fig.13

- One at a time, remove the screws in the front fork (Fig. 14A) and place through the mudguard support arm (Fig. 14B).

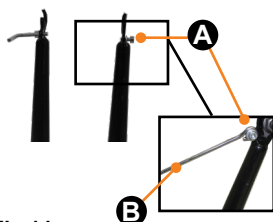


Fig.14

- Secure into fork using 4mm hex key.

Install Front Wheel

- Place front wheel into fork, paying close attention to the position of the security washers into the designated retaining holes (Fig. 15).
- Verify front wheel security washers are in proper position (Fig. 15A).

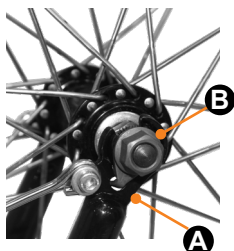


Fig.15

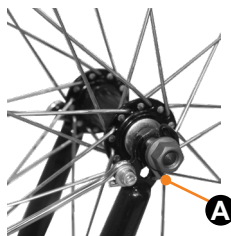


Fig.16

NOTE: Figure 16A shows the front wheel security washer out of place for reference.

- Tighten nuts using 15mm wrench (Fig. 15B).

Install pedals.

- Insert pedals into crank arm (Fig. 17).



Fig.17



Fig.18

- Left (L) pedal is REVERSE THREADED.
- Pedals are labeled right and left and must be put on the appropriate side (Fig. 18).

Install front brake.

- Squeeze the right and left brake arms together (Fig. 19). Brake pads should be contacting the rim.



Fig.19



Fig.20

- Insert the brake cable into quick-release lever (Fig. 20A).
- Test brake function.



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Place Phone Holder on Handlebars.

1. Find phone holder and unpack.

NOTE: Do not immediately discard plastic tube filling in Phone Holder clamp. This may be necessary to ensure Phone Holder can tightly grip the handlebars.

2. Eyeball where it will be easy to look down at phone and still be as safe as possible while riding/looking at the road.

3. Loosen handlebar clamp and clasp to the handlebar.

4. Re-tighten to secure in place.

5. On the back of the Phone Holder, loosen knob on the back to release the frame.

6. Pull open the frame to smart device's size, and then snugly cradle the smart device within the Phone Holder's frame.

7. Re-tighten knob on back, to secure smart device in place.

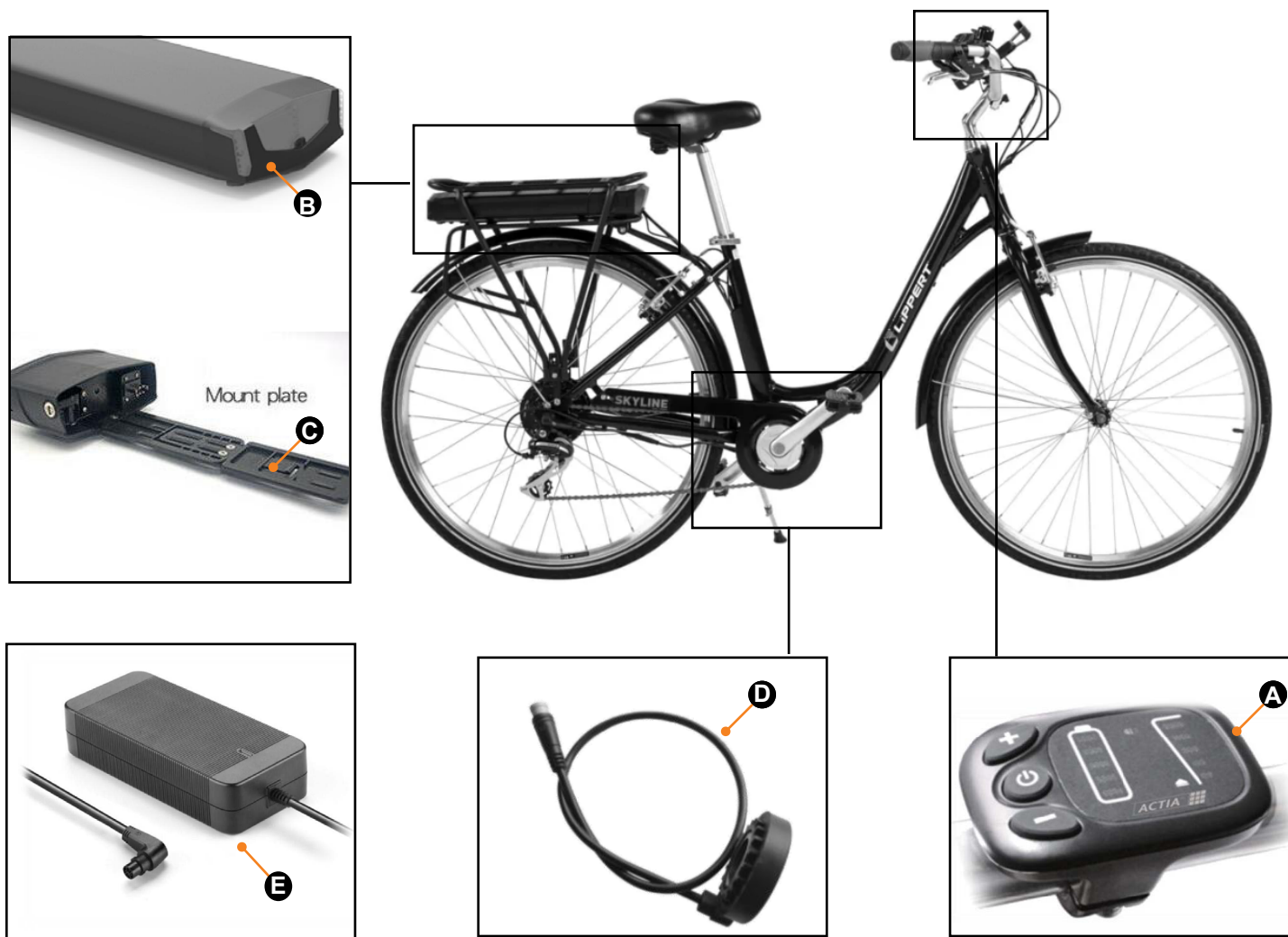
Post Assembly Verification

After eBike has been successfully assembled (and before every ride), check the eBike for the following:

- Tires are aired up and not flat.
- Wheels spin freely of guards.
- Axles are tight and secure so wheel will not fall out.
- There is no play in the wheel bearings
- The spokes are correctly tensioned
- The chain is lubricated
- The pedals are tight.
- Check all key bolts are tight: stem bolts, seat clamp bolts etc. Vibrations occur when riding eBike that can lead to bolts loosening (Even bolts with thread-lock on)
- Make sure the saddle is at the correct riding height and position. Check it is not beyond the minimum insertion mark.
- Check brake functionality; pull the levers and ensure the pads engage with the rim or disc and spring back so they are not touching when the bike is moving.
- Check for signs of material fatigue. Deformations, fractures, cracks, signs of impact, etc.

NOTE: DO NOT ride eBike even if just one of the defects is present and consult preferred bicycle service technician.

Getting to Know the Electronics Package



Letter	PN	Description	Qty
A	2022086987	LED Display Touch Pad	1
B	2022085005	Battery Pack	1
C	2022086007	DT Motor Controller	1
D	2022088011	Pedal Assist Sensor	1
E	2022084003	Battery Charger	1

It is also advisable to become familiar with the Electronics Package of the Skyline eBike to ensure safe riding and to get the most out of the eBike ride.

NOTE: Part numbers are shown for identification purposes only. Not all parts are available for individual sale. All parts with a link to the Lippert Store can be purchased.

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LED Display Touch Pad

The LED Display Touch Pad (Fig. 21) provides riders with the following information:

- Smart battery indicator
- Assistance-level indicator
- The walk-assistance function
- Error indication

Switching the eBike System On/Off

- To switch ON the eBike system, hold the MODE button for 2 seconds.
- In the same way, hold the MODE button for 2 seconds again and the eBike system will be switched off.

NOTE: When parking the eBike for more than 10 minutes, the eBike system will switch off automatically.

Switching walk-assistance mode On/Off

To access the walk-assistance mode, press and hold the DOWN button.

NOTE: eBike will move at a uniform speed of 3.7 mph (6 kph). The walk-assistance function switches off as soon as the DOWN button is released.

NOTE: Do not block the eBike after activation of the walking assistant. The motor can get damaged that way.

UP Button
Increase assist level

Mode Button
ON/OFF Display

DOWN Button
Reduce assist level
Walk assistance

Battery Indicator

The five lamps are lighting when the battery is in high voltage. When the battery is in low voltage, the under lamps will light flash to notice that the battery needs to be recharged immediately.

Assist Mode

Assist level 5 : 15 mph (25 kph)
Assist level 4 : 13 mph (22 kph)
Assist level 3 : 11 mph (19 kph)
Assist level 2 : 10 mph (16 kph)
Assist level 1 : 8 mph (13 kph)
Assist level 0 : No assist

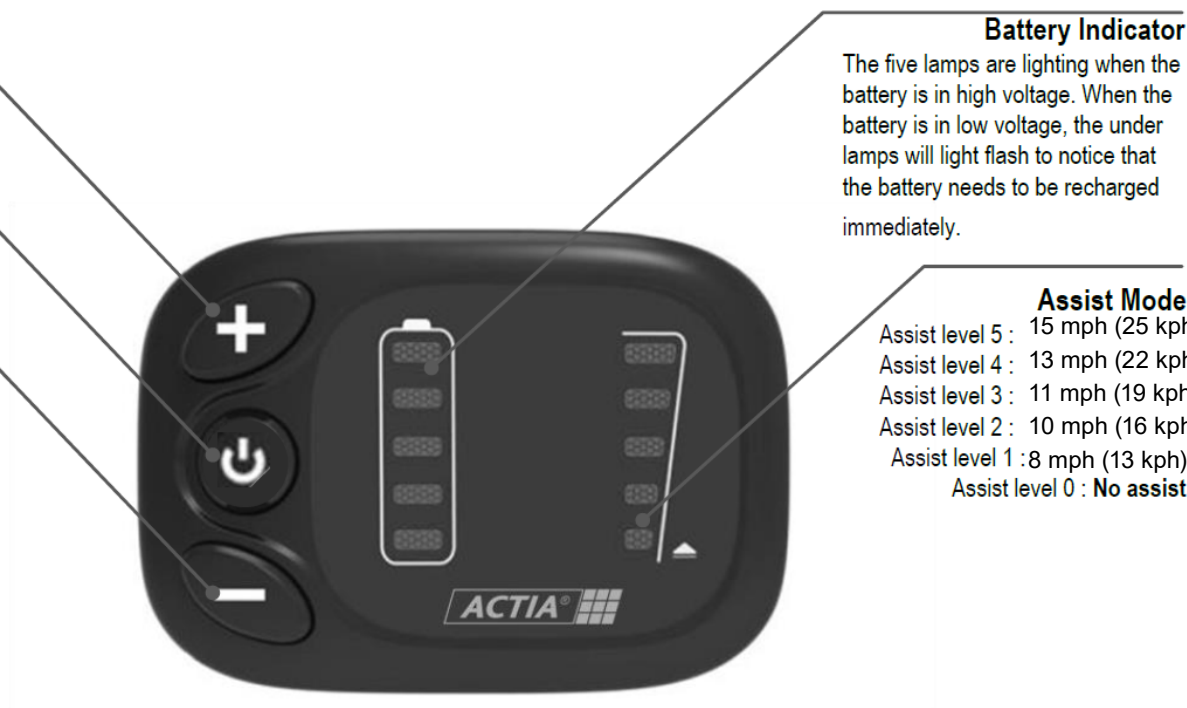


Fig.21

Assistance level selection

Assistance level indicates the output power of the motor. The default value is level "1".

Press the UP/DOWN button to select assistant level from level "0" (no light) to level "5".

Error Indication

If there is something wrong with the electronic control system, the lights will toggle.

- Experience and concentration of the rider
- State of maintenance of the eBike
- Type, condition, and air pressure in the tires
- Nature of the route
- Speed, average speed, and changes in speed
- Traffic flow, for example, stop and go
- Wind direction and wind speed

RANGE ESTIMATION

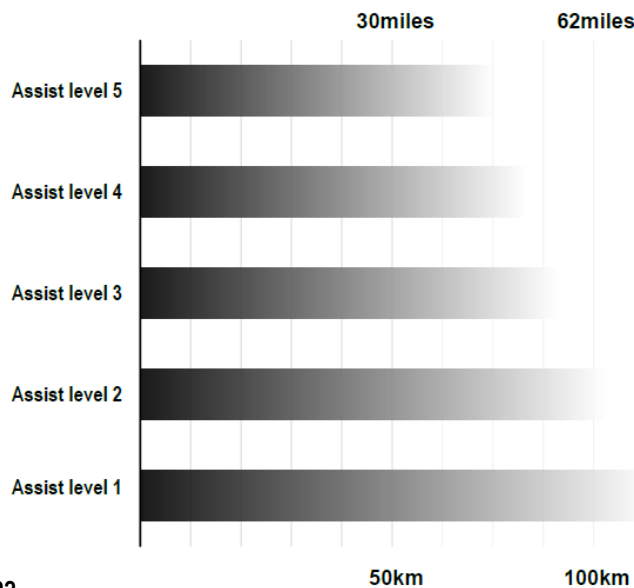


Fig.22

The range is influenced by many factors:

- Battery capacity
- Weight of the rider
- Weight of the luggage
- Selection of path

Understanding Pedal Assistance

The eBike system can only be activated when the following requirements are met:

- A sufficiently charged battery pack is inserted.
- The display module is properly inserted in the holder.
- The speed sensor is connected properly.

The assistance is activated when start pedaling. The assistance is disabled when:

- The rider stops pedaling
- The configured speed limit is exceeded

NOTE: Walk-assistance does not need pedaling.

The eBike can also be ridden without assistance by switching off the eBike system, or by setting the assistance level to "0".

When the battery pack is empty the assistance can be limited when the battery in low state-of-charge as follows:

- If state-of-charge is less than 30% the allowed max assistance level is 4.
- If state-of-charge is less than 25% the allowed max assistance level is 3.
- If state-of-charge is less than 20% the allowed max assistance level is 2.
- If state-of-charge is less than 15% the allowed max assistance level is 1.

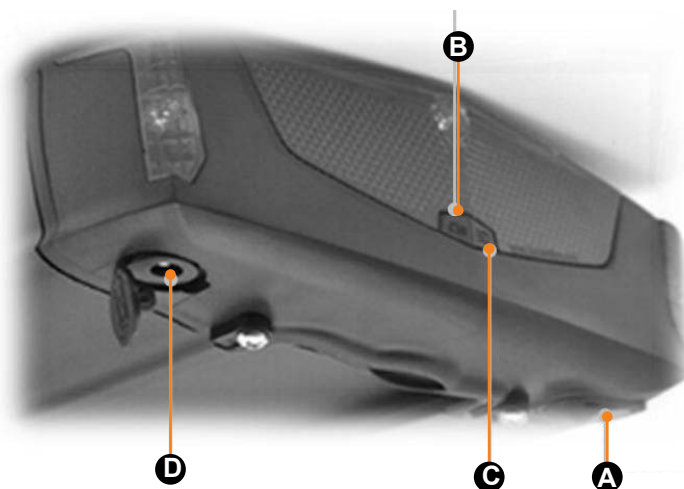


Fig.23

Battery Pack

Switching the battery pack ON/OFF

- To switch on the battery pack, toggle ON/OFF Button (Fig. 23A) to I position.
- In the same way toggle ON/OFF Button to O, the eBike system will be switched off.

Light Flashing Function

To activate this function, click on the state-of-change indicator button (Fig. 23B) then two clicks on the flashing button.

Battery Indicator

- To activate this function, click on the state-of-change indicator button.
- The three lights (Fig. 23C) are lighting when the battery is in high voltage. When the battery is in low voltage, the under lights will light to notice that the battery needs to be recharged immediately.

NOTE: Every three months, allow the battery to completely lose it's charge and then recharge.

NOTE: Figure 23D is where the charger plugs into the battery.

For safety, the Battery Pack ensure continuous monitoring of current, voltage and temperature. If one of these parameters gets out of functional range, the Battery Pack will shut down.

If the battery shuts down, it can be reset by:

- Switch On/Off
- Plug the charger. (Must be used also if no activity of the Battery for a period of 4 days / Ship Mode)

If the eBike is not in use, remove the battery and store it at a temperature between 32°F (0°C) and 104°F (40°C) in a dry environment.

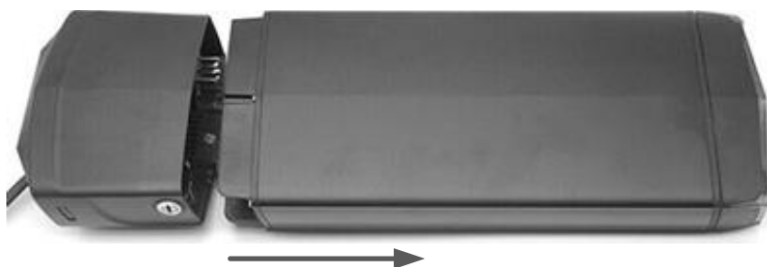


Fig.24

Battery Storage

For storage, the battery should have a capacity of at least 40%. It is recommended to always discharge the battery completely and then fully charge. It is highly recommended to Switch OFF the Battery after using the eBike.

Inserting the battery (Fig. 24)

- Connect the battery by sliding it across the mount plate.
- When the battery is mounted. Turn the key to the right to lock the battery in.

NOTE: The key can now be removed.

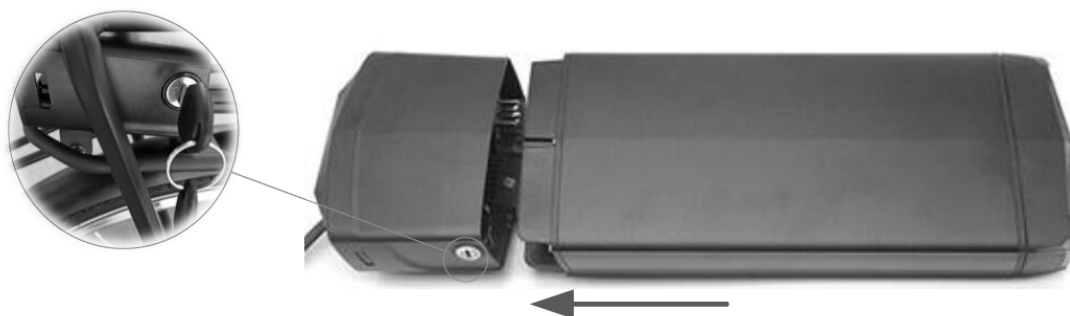


Fig.25

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Battery Charger

Use only batteries and chargers supplied by the manufacturer. Use of other battery packs can cause injury and increase the risk of fire. The charger is designed for indoor use only. Do not expose to rain or snow. Do not incinerate, disassemble, or short circuit batteries. If the performance of the batteries decreases substantially, it is time to replace the batteries. Store the charger in a cool and dry place when not in use. Disconnect the supply before making or breaking the connections to the battery. During charging, the battery must be placed in a well-ventilated area.

Charging Instructions

1. Connect the charger three pin circular jack into the recharge battery pack charging connector (Fig. 26A).



Fig.26

2. Plug the charger (Fig. 27A) into the socket (Fig. 27B).

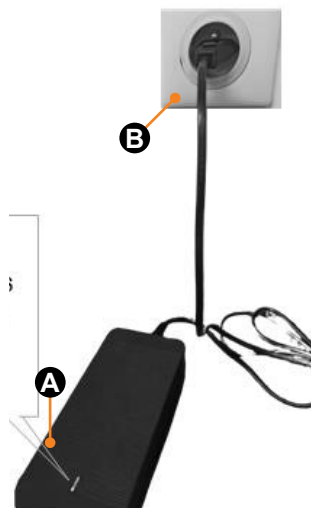


Fig.27

Understanding Battery Discharge Issues

The eBike battery, when received, has a charge but not enough to have a successful first ride. As mentioned, the battery should be set aside to charge while assembling eBike and ideally given 24-48 hours to charge.

As with all electronics dependent on a battery for power, the battery will discharge as used making it vital to charge the battery from use to use.

However, if the eBike is not used and the battery is not connected to the charger, the battery will gradually discharge and become less powerful. If aware that the eBike will not be used for an extended period of time, take battery off of the eBike and attach to the charger to maintain the battery's health.

Additional Battery Safety

The following tips will help keep the eBike's battery safe and full functional, as well as protect users and property from harm and injury.

- Do not throw the battery pack into a fire.
- Do not use the battery for any other purpose.

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- Avoid contact with metal objects (paper clips, coins, keys, nails, screws, or other small metal objects, as this may cause a short circuit. Shorts caused in this way will invalidate any warranty claims.
- Do not open the battery pack. This could cause a short circuit. Opening of the battery package will invalidate any warranty claims.
- Ensure that the power plug is fully inserted into the wall outlet.
- Pull on the plug instead of the cable to unplug the power cord from a wall outlet.
- Always keep the battery charging set away from flammable gases when charging.
- The charger can be hot. Do not wrap the charger.
- The charger can be hot. Do not place the charger on floor coverings such as carpets, rugs, etc.
- The charger can be hot. Avoid long skin contact with the charger.
- Do not immerse the battery or the charger. Do not use in rain.
- Do not charge the battery for more than 24 hours continuously.
- The charger can be used with an input voltage in the range of 90V to 264VAC 50/60Hz.
- Avoid leaving the battery exposed to direct sunlight for a long time.

Operation

First Use of Bike

1. Make sure battery is fully charged
2. Insert the battery then turn the key to lock (Fig. 28).



Fig.28

3. Push ON/OFF switch to I position (Fig. 29A).



Fig.29

4. Turn ON the TouchPad (Fig. 30A).

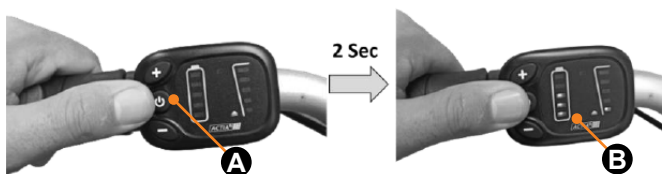


Fig.30

5. Select assistance level (Fig. 30B).
6. Pedal and ride.



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Best Safety Practices

NOTE: Riding an eBike is more different than a regular pedal bicycle than most riders think. Read this section and the rest of the manual thoroughly to ensure a safe and enjoyable ride.

How Safe Riding is Ensured

- Start on the lowest assist setting and learn the feeling of pedal assistance.
- eBikes are heavier than normal bikes, and move faster; more power, more speed, and more weight. Start slowing down sooner on eBike than on a normal bike. Start braking with a lighter hand and a gradual pull of the brake levers.

NOTE: Never just grab the front brake lever — brake with both front and rear evenly.

- eBikes can withstand light rain and small splashes, but is not designed to be subjected to inclement weather, extremely heavy showers, or submersion in water.
- Always wear a helmet when riding. Ensure that the helmet fits head and is securely tightened down. Before riding, read local laws and comply with all rules relating to cycling and eBiking in local area.
- While riding, do not focus too much attention on the screen, as this can lead to accidents.

- Ensure that the wheels are securely attached to the bike before riding. If the wheels are not securely attached, the bike may fall over, causing severe damage.
- Remove the battery pack from the eBike before working on it (e.g., assembly work, maintenance, etc.), before transporting it by car or plane, or before storing it. There is a risk of injury in case of accidental activation of the eBike system.
- After having carefully read the user manual, store it in a safe place for later reference.
- Use only batteries and chargers from Lippert the eBike. Use of other battery packs can cause injury and involve a risk of fire. Lippert will assume no liability or warranties for damage or injuries when using other battery packs.
- Examine the battery charger regularly for damage, especially the cable, plug and housing. If the battery charger is damaged, it must only be used after it has been repaired.
- This product must not be used by persons (including children) with reduced physical, sensory, or mental capabilities, or who lack experience and knowledge, unless they are supervised by a person responsible for their safety or instructed in the use of the product.
- Do not let children play near the product.



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Using the eBike Application

Using the Touchpad OR the eBike Application

The Skyline eBike can be controlled by the Touchpad OR the application, but not both.

If the desired riding experience is to just ride, use the Touchpad and refer to the Touchpad sub-section.

if the desired riding experience is to also collect data on the ride and utilize GPS, then installing the application and pairing the eBike and smart device via bluetooth is advisable.

While riding, if the eBike application is open, the application will override other functions of the phone, such as calls and text messages. In case of emergency, the rider should familiarize themselves with how to override applications using smart device.

Download eBike Application, "Lippert Ebikes"

Lippert Ebikes by ACTIA application allows an interconnected and interactive experience with the Skyline eBike.

1. Make sure the smart device being paired to the eBike is connected to the Internet and Bluetooth settings are turned on.
2. Download the eBike app from the appropriate app store.

NOTE: To install, search for "Lippert Ebikes" in the App Store for iPhone (or other Apple smart devices) or the Google Play Market for Android smart devices. The QR Code can also be scanned to access the download link of the application.



NOTE: Lippert Ebikes application can be installed on smartphone with Android Version greater than Android 8.0 or IOS 12.1.



Fig.31

3. Using the smart devices' camera app or QR code reader, scan the QR Code underneath the frame of the eBike (Fig. 31A).
4. Walk through the app/pairing setup process as prompted by the Lippert Ebikes app.

NOTE: Lippert Ebikes application can only be used for the eBikes: Lippert Gladiator and Skyline City with ACTIA products. The application connects the ACTIA controller of the eBike via Bluetooth to a smart device; this allows access to diagnostic and infotainment functions.



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NOTE: Screens may vary slightly from smart device interface to another.

User App Access

Launch Lippert eBike App

1. Start the app to land on the login screen (Fig. 32).
2. Create an account if a new **Lippert eBike** user (Fig. 32A).
If the rider previously registered as a **Lippert eBike** user, login to user account (Fig. 32B).

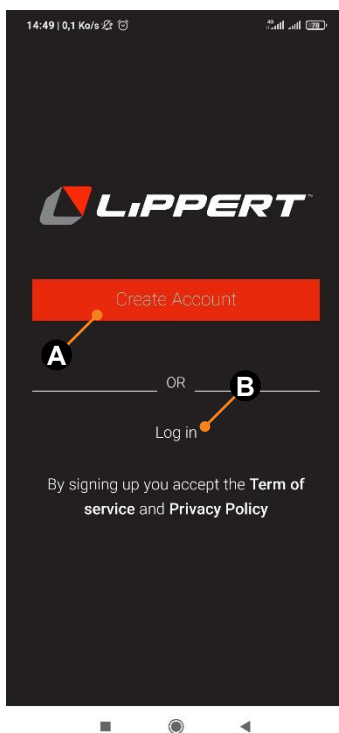


Fig.32

Register as a new Lippert eBike user

1. Press Create Account (Fig. 32A)
2. Fill in the required information (Fig. 33)
3. Press Sign Up (Fig. 33A)
4. The Lippert Server will send an email with a link. Click on the link to activate account.
5. The Lippert Server will confirm that the registration process has been completed.
6. From now on, this will be the USERNAME and PASSWORD to login into the app.

NOTE: If an email notification is not received, make sure to check Spam and/or Junk folders as the email may have been routed there. Also, double check that the email entered is correct.

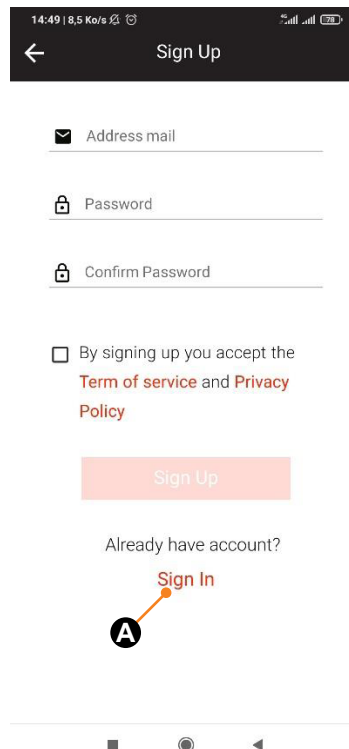


Fig.33



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eBike Pairing and Connection (Fig. 40)

1. Press Add Bike (Fig. 34A).
2. Remove battery and scan QR code on the eBike frame as referenced earlier (Fig. 31A) (as referenced earlier).
3. Reconnect the battery
4. Turn ON the bike
5. Press finish
6. Enter PIN code
 - A. To get started, the PIN code will default to: 000000
 - B. The user/rider will be asked to setup a unique 6 digit PIN code.
 - C. This 6 digit PIN code will be necessary to keep the eBike and App and Controller connected.
7. Press OK

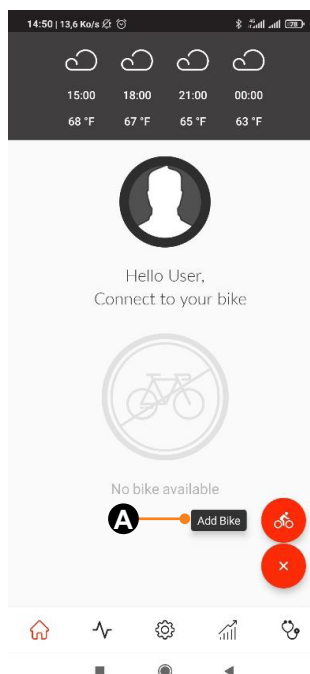


Fig.34

User App Agreements

User will be prompted for the app to access things such as: making phone calls, camera usage, location, etc. These all MUST be agreed to for the user to utilize the app.

Riding the eBike (Fig. 35)

1. For the eBike statistic menu, click the orange paperclip (Fig. 35A)
2. Press Go Ride (Fig. 35B).

Callout	Description
A	Paperclip
C	Home
D	Check diagnostic information
E	Edit settings
F	Check statistics
G	To see ride history
H	To connect to bike

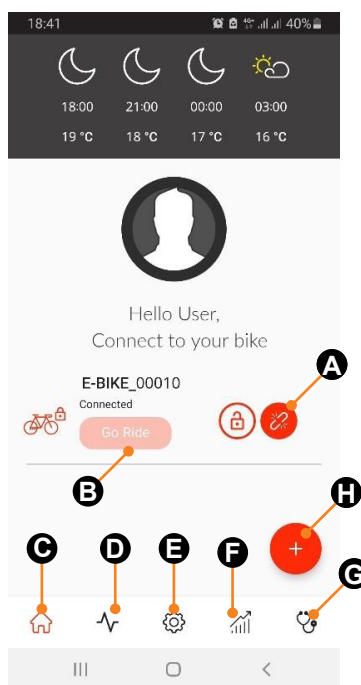


Fig.35



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Maintenance

General Care

The Skyline eBike, like non-electric bicycles, will need typical maintenance from time to time due to riding.

Install accessories carefully. Consult with a certified eBike technician before installing accessories. Using the wrong bolt in the wrong place could cause a short circuit in the electrical system and/or damage the battery which might lead to over-heating. A battery that has been severely impacted could catch fire.

If damage to battery is suspected, visit a bike shop professional to immediately have the battery inspected.

Transport eBike safely when traveling. Remove the battery from the eBike and put it in the passenger cabin for safe and secure transport. A battery left on the bike could loosen during transport and become a hazard.

Do not leave the battery in a car at any time, but use extra caution when the temperature inside a car could exceed 140 °F (60 °C). Extreme heat could damage battery or cause it to catch fire.

Store the battery properly when not riding. If eBike will not be ridden for 3 or more months, remove the battery from the bike, and take the following steps to properly store it. Store the eBike battery in a dry, ventilated location that is away from moisture, heat sources, and combustible or easily flammable objects. Store the battery at the recommended temperature. Storing the battery outside of this range could damage the battery, affect its performance or cause the battery to catch fire.

Wash the eBike gently. Do not submerge eBike or its components in water or wash them with a high-pressure hose. Water could contact the electrical system and damage it. Further, store the eBike in a clean dry place to avoid rust.

Repair and maintain the eBike safely. Always remove the battery before beginning any maintenance work on the eBike. Never attempt to open any parts of the electrical system. Always contact a local bike shop to service any parts of the electrical system.

Setting Up Suspension

Air sprung suspension

If the eBike has air sprung suspension, adjust the "sag" by changing the air pressure in the fork or the rear shock. Do this to ensure the eBike rides correctly.

NOTE: Sag is how much the eBike settles into its suspension when the rider gets on the eBike and feet are taken off the ground.

Suspension is designed to work best with around 20-25% sag for forks and 25-30% sag with a rear shock. For example, on a 100mm travel bike, aim to have 20mm of sagged travel when on the eBike.

Forks

Slide the O-ring travel marker down to the seal on the forks. If the eBike does not have an O-ring, a small zip tie can be used to do the same job.

Stand up on the pedals while leaning lightly against a wall, try not to bounce up and down or make any erratic movements when stepping off the eBike.

Use a tape measure to measure the distance in mm that the O ring moved from the seal or check the guide if the fork has the % marking on the stanchions.

How far the O-ring has moved in mm can be worked out as a percentage of the fork's overall travel. Aim to have about 20% sag in the forks.

Adjust the air in the shock by using a shock pump.

NOTE: A standard bike pump will not work. It should connect to the fork via a valve on top of the fork crown.

Wheel Truing

Wheel truing is the process of using a spoke wrench to change the spoke tension to improve the runout or spinning straightness of the wheel. As a nipple is tightened, it pulls on the spoke. Because the spoke material is somewhat elastic, it will flex slightly and pull against the rim and hub, creating tension.

From time to time, wheels will need truing maintenance to tighten the spoke tension. Truing tools are available, but it is recommended visit preferred bike dealer and work with a professional bicycle technician.

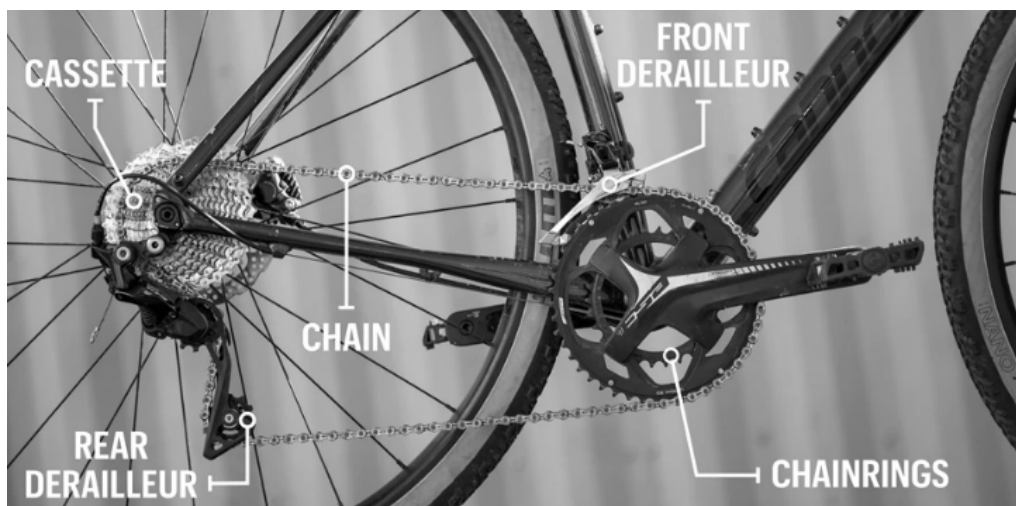


Fig.36

Rear Derailleur Set Up

Turn the pedals forwards and shift the right hand gear shifter to the highest gear (smallest cog)

Look at the rear derailleur from the rear as shown in the image. The derailleur and small cog should be in line. If they are not then adjust the "L" screw with a Phillips screwdriver a quarter of a turn at a time.

Shift the right hand shifter by one position, turn the crank and check that the chain only moves up by one cog. If it does not move or moves two spaces then turn the Barrel adjuster half a turn at a time to change the cable tension and tune the shifting.

Now change the shifter to the lowest gear (largest cog)

Check if the chain and derailleur are in line. If it is not in line or if the chain has jumped over the cassette then put the chain back on and adjust the "H" screw until they are in line.

Front Derailleur Set Up

Turn the pedals and shift the left hand gear shifter to the lowest gear (smallest cog at the front) and the right hand shifter to the highest gear (smallest cog at the back)

Check that the chain is running through the cage on the Front derailleur freely. If it's not, move the cage by adjusting the "L" screw.

Leave the left shifter where it is and move the right shifter to the lowest gear (largest cog on the back) and repeat step 2.

Change the left hand shifter up one gear. If the gear doesn't change smoothly onto the next cog, adjust the barrel adjuster. For the front derailleur this is found either on the gear shifter, or on certain road bikes it can be found on the downtube of the frame, just above the gear cable guide. Turn slightly and keep testing until the desired result are achieved. This will apply tension to the gear cable

Once the gears are shifting correctly move the left shifter to the highest gear (biggest cog) and check that the chain can not jump over the cog. If it can, adjust the "H" screw to limit the movement of the cage.



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Brakes Adjustment and Replacements

Disc brakes

Disc brakes work by squeezing two pads against a disc rotor. Disc brakes will either be mechanical which means they are cable operated or Hydraulic which means that they use fluid in a hose to push the pads against the rotor. The pads should sit close to the rotor but allow it to spin freely.

Disc brakes are powerful and riders need to get used to them. The first few rides they will need to bed-in so take it easy, after this they should provide a sharp, reliable stopping power.

Tires, Tubes and Valves

Changing an inner-tube

Fully deflate the tire. Starting opposite the valve, prise the tire away from the rim and put a tire lever under the edge of the tire and lever it against the rim. Put another tire lever under the rim 100mm further along.

Use both levers at the same time to lever the tire off. Slide one of the levers round the tire whilst leaving the other one where it is. The tire should pop off the edge of the rim.

Once one side of the tire is fully off the rim, push the valve through the valve hole and pull the inner-tube out. Check the tube to identify the cause of the puncture.

Check round the inside of the tire and make sure there is no sharp objects. Check the rim tape is covering all the spoke holes on the inside of the rim.

Very slightly inflate the new inner-tube. Just enough to give it some shape. Line up the valve hole and slide it under the tire. Seat it on the rim.

Use tire levers to lever the tire back on to the rim. It should pop back into place.

Connect the pump and pump the tire up to 10-15 psi. Check that the tire is seated correctly all the way around the rim.

Inflate the tire to the full pressure and insert the wheel back into the frame or forks. Take care to note the direction of rotation marked on the tire.

Lubrication

It is important in order to keep the eBike in good and safe working order to make user it is clean and lubricated. Always wash off any excess dirt and dry well, before lubricating moving parts. Do not over lubricate and ALWAYS wipe off any excess lubrication, especially if on the brakes, brake pads or rims. This may decrease brake functionality and increase stopping distance. If there are any doubts about any of these parts, please consult a qualified bicycle mechanic.

Rear Hub Motor

The hub motor is installed on the rear wheel (20" to 28") of the eBike.

NOTE: Remove the rear wheel to repair a tire puncture or replace the eBike's motor components.

Cut the cable ties holding the waterproof motor cable connector under the non-drive side chain stay.

- Separate the two halves of the connector this requires some 'wiggling' of the connector to overcome the sealing.
- Loosen the wheel nuts using a spanner wrench and remove the wheel.
- When refitting the wheel, ensure that the anti-rotation washers fitted to the motor axle are aligned and slide up within the rear dropouts.
- Tighten both wheel nuts to 40 Nm.
- Reconnect the two halves of the motor connector making sure that the arrows are aligned, before pushing them firmly together.

Troubleshooting

What is Happening	What Should Be Done?
Battery NOK error	• If temperature has increased, switch OFF the eBike and let the battery cool down. • If temperature is too cold, allow the battery to warm up before trying again. • Otherwise, remove the battery and reconnect to charger.
Charger Indicator Green LED while Battery not fully charged	Check if the battery is discharged using the LEDs. If yes, unplug the charger from the battery pack. Allow the battery pack to cool. Check connections and contacts then reconnect and retry again.
Battery discharges quickly	Check quality of the battery; if too low replace the Battery.
Charger indicator light doesn't illuminate	If the charger is plugged into the wall and it does not illuminate, then replace the charger.
Battery shutdown while in assistance	Restart the Battery (switch OFF then ON) and retry.
Display communication error (light toggle)	Check if there is a smartphone connected to the eBike. Else, press the Display/ Controller connectors to ensure a correct connection then try again.
Pedals NOK error	Press the PAS/Controller connectors to ensure a correct connection, then try again.
Motor NOK error	Disconnect the motor cable, check connections and contacts then reconnect and retry again.
Motor is powerless or works intermittently	Check if state-of-charge correspond to the assistance limitation. If yes, Charge the battery and retry.
Motor Stops after a ride (Temperature increased)	Restart the Battery pack and retry. If problem not resolved, Switch OFF the eBike and let the Motor cool down.
Update firmware failure	Make sure that the state-of-charge is more than 25% and ensure the connectivity is stable. Retry as necessary.
Smart device connection failure	• Make sure that the eBike is not connected to another smart device. • Check if the eBike is detected by the smart device. • If yes, follow the instruction of Application user Manual to scan QR Code. • If the problem persists, unpair eBike device from Bluetooth list and retry.
Forgotten PIN code and/ or use of new smart devise	Reset the PIN Code by following the instructions detailed in the eBike Application , " Lippert Ebikes " in the Operation section of this manual.

Troubleshooting - Understanding Flashes from Display		
Flashes	Error	Solution
2	Motor Error	Check the plug. If still erring, change the motor.
3	Controller Error	Check the plug. If still erring, change the controller.
4	Display Error	Check the plug. If still erring, change the display.
8	Low battery voltage	Charge battery



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Specifications Tables

The following tables are to provide easier insight into eBike specifications details.

General Specifications of the Skyline eBike

Skyline eBike, like other electric or non-electric bicycles, has standard specifics that are helpful to have readily accessible to ensure safe riding, effective repairs, or troubleshooting concerns.

Specification	Detail
Rear Tire Size	27.5" x 2.10"
Front Tire Size	27.5" x 2.35"
Weight	53 lbs.
Mile Range	45-mile range
Chain Length	116 links (standard)
Preferred Lubricant	Lubes specifically created for bicycle chains is recommended
Pedal Size	9/16" x 20 tpi threads
Frame dimensions	• Saddle to handle bar: 18" • Maximum height: 41" • Minimum height: 36" • Total length of eBike: 74" • Wheel center to wheel center: 46" • Ground to Handle bar height: 40.5"
Seat	Standard
Weight limit	265 lbs.
Operating Temperatures	14°F ~ 131°F (-10°C ~ +55°C)
Storage Temperatures	-22°F ~ 158°F (-30°C ~ +70°C)



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DT Motor Controller

Key Data	Description
Product P/N	AR101400104
Bike Model	Lippert Skyline
Nominal Voltage	36V
Cut-Off Voltage	28V
Power Rating	250W (up to 500W)
Communication	UART
Support Modes	0-5
Speed Control	YES
Torque Control	NO
Speed Sensor	YES
Pedal Sensor	YES
Torque Sensor	NO
Speed Limit	15.53 mph (25 kph)
Walk Assist	YES
Connectivity	BLE 5.0
Accelerometer	YES
Operating Temperatures	14°F ~ 131°F (-10°C ~ +55°C)
Storage Temperatures	-22°F ~ 158°F (-30°C ~ +70°C)

Battery Pack

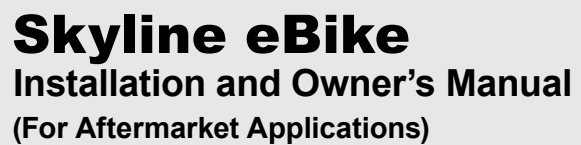
Key Data	Description
Product P/N	AR101200218
Bike Model	Lippert Skyline
Battery Model	DT 3
Rated Voltage	36V
Rated Capacity	12.8Ah
Energy	460h
Operating Temperatures	14°F ~ 131°F (-10°C ~ +55°C)
Storage Temperatures	-22°F ~ 158°F (-30°C ~ +70°C)
Allowable charging temperature charging	32°F ~ 113°F (0°C ~ +45°C)
Recommended charging current	4A

Battery Charger

Key Data	Description
Product P/N	AR101400224
Bike Model	Lippert Skyline
Input voltage	90-264V AC 50/60Hz
Output voltage	42V
Output current	3A

Rear Hub

Key Data	Description
Product P/N	AR101300202
Bike Model	Lippert Skyline
Nominal voltage	36V
Rated power	250W
Inside speed sensor	YES
Inside temperature sensor	YES



What	When	How
Pedals	Every six (6) months	Put four drops of oil where the axles go into the pedals.
Chains		Put one drop of oil on each roller of the chain. Wipe all excess oil off the chain.
Derailleurs		Put one drop of oil on each pivot point of the derailleurs.
Brake Levers		Put one drop of oil on the pivot point of each brake lever.
Wheel Brakes		Put one drop of oil on the pivot point of each cantilever brake.
Rear Sprocket Cluster		Lay the bicycle on its left side. Slowly turn the rear wheel clockwise. Put four drops of oil in the crack between the rear sprockets (which are stationary) and the freewheel body (which is turning clockwise).
Shock Fork		Lift up the rubber fork boot and dab a small amount of grease on the fork leg just above the plastic bushing.

NOTE: The following settings are just guides.

Notes

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be a standard notebook or worksheet page.



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