

INSTRUCTION GUIDE



LEVO



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SPECIALIZED BICYCLE COMPONENTS

15130 Concord Circle, Morgan Hill, CA 95037 (408) 779-6229
0000061814_OM_EN_R2_05/16

EN 15194

Please note all instructions and notices are subject to change and updates without notice.

Please visit www.specialized.com for periodic tech updates.

Feedback: techdocs@specialized.com

1. INTRODUCTION

IMPORTANT:








This instruction guide contains important safety, performance and service information. Read it before you take the first ride on your new Levo bicycle, and keep it for reference. This instruction guide applies to all Levo bicycles.

This instruction guide only contains information specific to your Specialized Levo bicycle, and should be used in conjunction with the [Specialized Bicycle Owner's Manual](#) ("Owner's Manual"). Please read the Owner's Manual in its entirety before you proceed. If you do not have a copy of the Owner's Manual, you can download it at no cost at www.specialized.com, or obtain it from your nearest Authorized Specialized Retailer or Specialized Rider Care.

Additional safety, performance and service information for specific components such as suspension or pedals on your bicycle, or for accessories such as helmets or lights, may also be available. Make sure that your Authorized Specialized Retailer has given you all the manufacturers' literature that was included with your bicycle or accessories. In case of a conflict between the information in this instruction guide and information provided by a component manufacturer, please contact your nearest Authorized Specialized Retailer.

ADDITIONAL LANGUAGES ARE AVAILABLE FOR DOWNLOAD AT www.specialized.com/manuals.

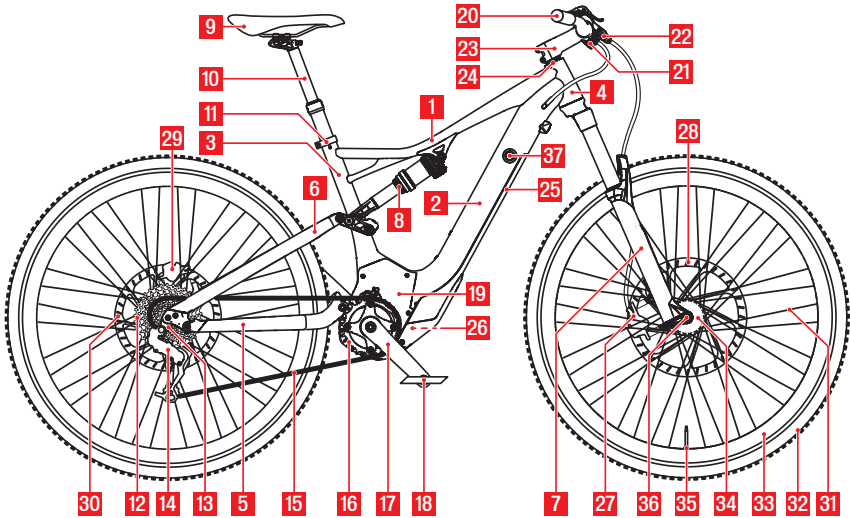
When reading this instruction guide, you will note various important symbols and warnings, which are explained below:

	WARNING! The combination of this symbol and word indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death. Many of the Warnings say "you may lose control and fall." Because any fall can result in serious injury or even death, we do not always repeat the warning of possible injury or death.
	CAUTION: The combination of the safety alert symbol and the word CAUTION indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury, or is an alert against unsafe practices. The word CAUTION used without the safety alert symbol indicates a situation which, if not avoided, could result in serious damage to the bicycle or the voiding of your warranty.
	INFO: This symbol alerts the reader to information which is particularly important.
	TECH TIP: Tech Tips are useful tips and tricks regarding installation and use.
	GREASE: This symbol means that high quality grease should be applied as illustrated.
	CARBON FRICTION PASTE: This symbol means that carbon friction paste should be applied as illustrated to increase friction.
	TORQUE: This symbol highlights the correct torque value for a specific bolt. In order to achieve the specified torque value, a quality torque wrench must be used.

WARRANTY

A copy of the Specialized Limited Warranty Policy For Bicycles is provided with your bicycle, and is available from your Authorized Specialized Retailer. It is also available for download at www.specialized.com.

2. SPECIALIZED LEVO COMPONENTS



1. Top tube
2. Down tube
3. Seat tube
4. Head tube
5. Chain stay
6. Seat stay
7. Fork
8. Rear shock (FSR models only)
9. Seat
10. Seatpost
11. Seatpost clamp
12. Cassette
13. Dropout
14. Rear derailleur
15. Chain
16. Chainring
17. Crank arm
18. Pedal
19. Motor

20. Handlebar with grip
21. Shifter
22. Brake lever
23. Stem
24. Headset
25. Rechargeable Battery
26. Charging socket
27. Front brake caliper
28. Front brake rotor
29. Rear brake caliper
30. Rear brake rotor
31. Spoke
32. Tire
33. Rim
34. Hub
35. Valve
36. Quick-release
37. Battery axle

3. GENERAL NOTES ABOUT ASSEMBLY

Due to the high degree of complexity of the Levo bicycle, proper assembly requires a high degree of mechanical expertise, skill, training and specialty tools. Therefore, it is essential for your safety that the assembly, maintenance and troubleshooting be performed by an Authorized Specialized Retailer.



WARNING! This instruction guide is not intended as a comprehensive use, service, repair or maintenance guide. Please see your Authorized Specialized Retailer for all service, repairs or maintenance. Your Authorized Specialized Retailer may also be able to refer you to classes, clinics or books on bicycle use, service, repair, and maintenance.



WARNING! Do not sand, drill, file or remove parts from your bicycle. Do not install incompatible components or hardware. Failure to follow this warning may result in serious personal injury or death.

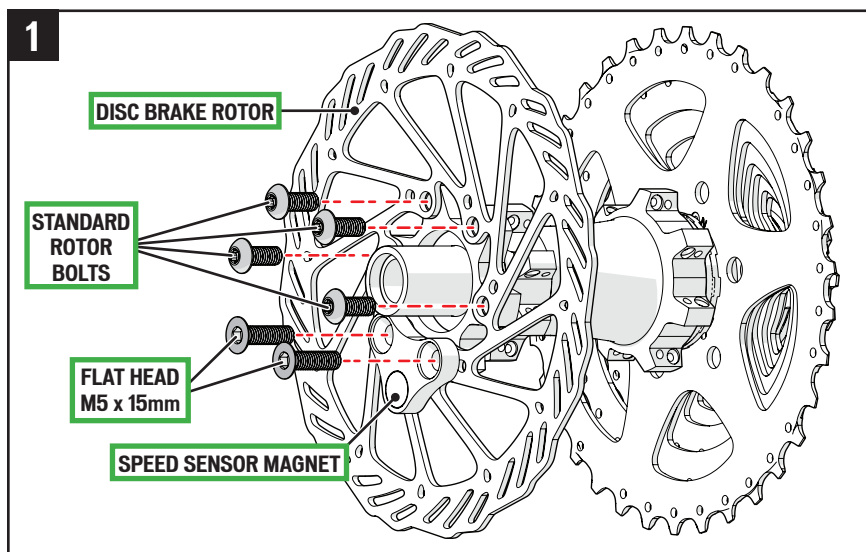


WARNING! When placing the frame and/or bicycle in a repair stand, clamp the stand to the seatpost and not the frame. Clamping the frame can cause damage to the frame that may or may not be visible, and you may lose control and fall.

Your Specialized Levo frame does not require any bottom bracket or head tube pre-installation preparation. All surfaces are already prepared from the factory.

Specialized Levo frames use a 1 1/8" (41.8mm x 8mm x 45°) Campagnolo Standard compatible top and 1.5" (52mm x 7mm x 45°) bottom bearing. Ensure that replacement bearings are compatible with the Specialized headset specification. No tools are needed for installation or removal of both bearings. **Grease bearing surfaces before installation.**

When assembling the rear brake disc, the Speed Sensor Magnet must be installed on the rotor (**fig.1**). Four of the six bolts are standard rotor bolts. The remaining two bolts (M5 x 0.8 pitch x 15mm length, with countersunk flat head) attach the Speed Sensor Magnet to the rotor.



SEATPOST

When inserting the seatpost into the seat tube, the seatpost must not extend out of the seat tube beyond the minimum insertion line on the seatpost. Do NOT cut the seat post short!

If the frame has a seat tube that extends above the topside of the top tube, Specialized recommends inserting the seatpost into the seat tube so that the seatpost extends at least below the underside of the top tube (**fig.2**).

If the seat post is at the minimum insertion line and the saddle is not high enough, the seat post must be replaced with a longer seat post.

Specialized Levo frames have a 30.9mm seatpost diameter and require that the seatpost have a tolerance of 30.78mm to 30.95mm.



WARNING! The seatpost and frame BOTH require a minimum amount of insertion into the frame in order to maintain structural integrity (fig.2). If the minimum insertion depth required for the seatpost and frame are different, always go with the deeper insertion depth. If you have any questions, refer to your Authorized Specialized Retailer.



FSR MODELS ONLY: When running a saddle in a low position, it's important to fully compress the rear end of the bicycle to ensure that the tire does not contact the saddle.

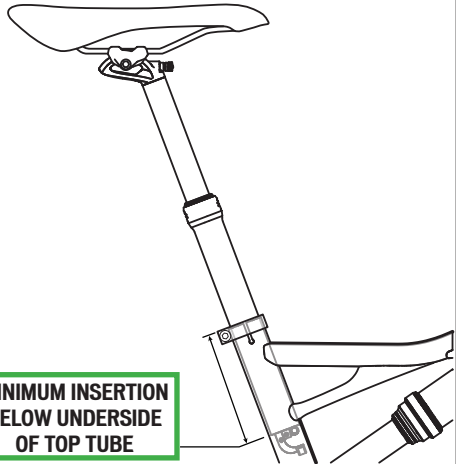


If using a carbon seatpost, do not apply grease to the interface between a carbon seatpost and the seat tube. Grease can reduce the friction, which can prevent the seatpost from staying at the desired height. Specialized recommends the application of carbon friction paste (or assembly compound) to increase friction. See your Authorized Specialized Retailer for additional information.

COMMAND POST IRcc: When adjusting the position of the Command Post IRcc inside the seat tube, remove the battery to gain access to the internal housing, in order to guide the housing when moving the seatpost. Please refer to the Command Post IRcc instruction guide for additional information.

For further instructions regarding the installation of the seatpost, refer to the appropriate section in the Owner's Manual.

2



ACCESSORIES

Specialized offers replacement parts for Levo bicycles, available through your Authorized Specialized Retailer. Below are a few of the more common parts.

PART #	DESCRIPTION
S160600004	BRG MY16 LEVO BEARING KIT
S160500007	BLT MY16 LEVO BOLT KIT
S166900002	CSP MY16 LEVO CHAINSTAY PROTECTOR FAT
S166900003	CSP MY16 LEVO CHAINSTAY PROTECTOR FSR
S166900004	CSP MY16 LEVO CHAINSTAY PROTECTOR HARDTAIL
S166800004	ELE MY16 LEVO BATTERY MOUNTING THRU AXLE
S092500001	HDS LOWER INTEGRATED HEADSET BEARING, 52X40X7MM THICK ACB 45X45
S092500002	HDS BRG 1-1/8 IN UPPER INTEGRATED HEADSET BEARING ONLY, CAMPY STYLE, 41.8 X 30.5 X 8MM THICK ACB 45X45

4. GENERAL NOTES ABOUT MAINTENANCE

The Levo is a high performance bicycle. As such, Specialized recommends that all regular maintenance, troubleshooting, repair and parts replacement be performed by your Authorized Specialized Retailer. For general information regarding maintenance of your bicycle, please refer to section 5 of the Owner's Manual. In addition, routinely perform the Mechanical Safety Check described in section 1.C of the Owner's Manual before each ride.



WARNING! Component wear is affected primarily by distance covered, not by time ridden. Since the Levo is a motor power-supported bicycle more distance is covered in the same amount of time. This means components may be subject to increased wear and at different rates, depending on the component. While riding, listen for any creaks, as a creak can be a sign of a problem with one or more components. Periodically examine all surfaces in bright sunlight to check for any small hairline cracks or fatigue at stress points, such as welds, seams, holes, and points of contact with other parts. If you hear any creaks or discover any cracks, no matter how small, or any damage to components, immediately stop riding the part and have it inspected by your Authorized Specialized Retailer.



Electrical components can be exposed when opening covers or changing components. Do not touch any part of the electrical system while under electric charge. All service work or repairs on any electrical component should only be carried out by your Authorized Specialized Retailer.



CAUTION: Do not open the motor assembly. The motor assembly is a sealed maintenance-free system. Any work on the motor assembly must be performed by a Specialized Service Center.

Your bicycle should be inspected and serviced by your Authorized Specialized Retailer on a regular basis, depending on use. The first inspection should be performed within 200 km / 120 miles. See detailed service schedule on [page 21](#).

5. GENERAL NOTES ABOUT RIDING

The motor provides pedal assistance so long as force is applied to the pedals and the bicycle is in motion. The amount of pedal assistance will be higher or lower depending on the amount of force applied to the pedals. If no force is applied to the pedals, the motor will not provide any assistance.

The Levo bicycle can also be ridden as a normal bicycle without motor assistance by simply turning off the battery. The same applies if the battery charge drops below 1%.

The Levo bicycles were designed with a specific intended use. This can be different depending on the model of Levo bicycle. Refer to the Owner's Manual for general information about your bicycle, and refer to the Appendix A supplement (available at www.specialized.com) for information about structural weight limits and intended use. Any use other than the intended use may subject the bicycle to unexpected stresses and failures, and will void the warranty.



WARNING! Understand and recognize that the stresses imposed on your bicycle by riding at speed, jumping or stunt riding may break or damage parts of the bicycle, which may result in loss of control, serious injury or death.

As a battery operated motor-supported bicycle, the Levo bicycle has a limited range. Below are tips on how to extend the range:

- Use your momentum efficiently and look ahead. Any time braking force is applied, more pedal force is needed to get the bicycle back up to speed.
- Downshift before coming to a stop, so you are ready to start riding again in a low gear.
- Shift gears regularly to stay in an optimal cadence range.
- Check tire pressure regularly. Low pressure can cause the tires to roll inefficiently.
- If your bicycle is exposed to cooler weather, keep the battery stored indoors until just before riding.
- Do not expose your bicycle to prolonged excessive heat (e.g. direct sunlight).
- Only carry the cargo you need. More cargo weight requires more energy to move.



WARNING! The acceleration of an electric bicycle can be faster than anticipated and may feel unusual at first. Before your first ride, Specialized recommends using the lowest power ECO mode and becoming familiar with the operation of the electric bicycle in a safe environment away from other bicycles, pedestrians and/or vehicles. Please note that the system always launches in TURBO mode as a default.



WARNING! The motor support is activated as soon as you step onto the pedals and the bicycle is in motion. Specialized recommends being seated on the bicycle before applying force to the pedals. Do not put one foot on a pedal and throw a leg over the bicycle, as it could accelerate unexpectedly. Failure to follow this warning may result in serious personal injury or even death.



WARNING! The brakes on Levo bicycles are more powerful than the motor. If you encounter any problems while riding due to the acceleration and speed of the bicycle, use your brakes to overcome the motor support and slow down the bicycle.

CAUTION: Specialized recommends changing gears regularly, as one would do with a non-motor supported bicycle. Always reduce the pedal force before initiating a gear shift in order to reduce wear on the drivetrain.



WARNING! Since the motor support allows for greater speeds and acceleration, Specialized recommends paying particular attention to the terrain conditions when riding.

6. GENERAL INFORMATION ABOUT YOUR LEVO

Pedal assist bicycles or EPACs (Electrically Power Assisted Cycles) are bicycles with an auxiliary motor that only provides support when force is applied to the pedals. When you stop pedaling, the motor switches off. On pedal assist bicycles where the motor support switches off automatically at a speed of 25 km/h (15 mph) a driver's license or insurance is typically not required. Depending on the country of sale, the motor support on your Levo bicycle will switch off automatically at a speed of 25 km/h (15 mph) or 32 km/h (20 mph) (USA and Canada only).



Before using your Levo bicycle, please inform yourself of all applicable legal requirements and regulations in your country or state. There may be restrictions on riding your Levo bicycles on public roads, cycling paths, and/or trails. There may also be applicable age restrictions or license or insurance requirements. Specialized does not, and will not, make any promise, representation, or warranty regarding the use of your Levo bicycle. As laws and regulations regarding electric bicycles vary by country and/or state and are constantly changing, please make sure to obtain the latest information. You should also regularly see your Authorized Specialized Retailer for updated information.



WARNING! The Levo bicycle is only approved for use by one person at a time. Do not use a child carrier or trailer.

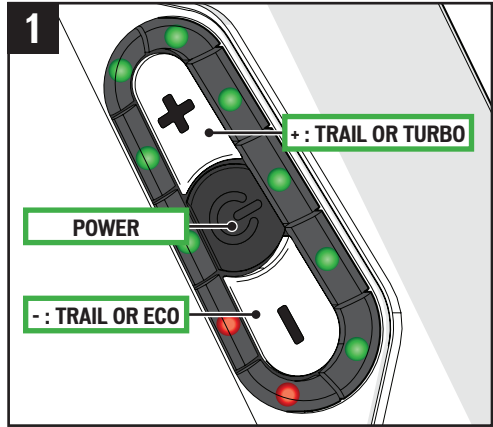
7. SYSTEM INTERFACE

SUPPORT MODES

The Levo motor support is available in three different drive settings - TURBO, TRAIL and ECO.

- **TURBO MODE:** The motor, while pedaling, provides maximum (100%) support.
- **TRAIL MODE:** The motor, while pedaling, provides 50% support (default).
- **ECO MODE:** The motor, while pedaling, provides 20% (default).

The various modes (TURBO, TRAIL and ECO) are managed using the +/- buttons on the Trail Display, located on the side of the battery (fig.1). In addition, the drive system can be controlled through a variety of devices (Mission Control App or select LEV-supported computers) by being able to access additional control features.



To switch into a different support mode, press the + or - button on the battery, app or computer. After reaching the strongest or weakest mode, the system will not continue to switch. To reduce from TURBO to TRAIL to ECO, you have to press the - button. To increase from ECO to TRAIL to TURBO, you have to press the + button.



The support modes affect how much support the motor delivers based on your pedaling input. Generally, more support provides faster acceleration and easier climbing at the expense of shorter range and greater chance of wheelspin. Lower power modes that provide less support result in longer battery run times, longer range, and more control in situations where traction is limited. Specialized recommends experimenting with the power settings that work best for your riding style and conditions.

The level of motor support in TURBO, TRAIL and ECO modes can be customized for your individual needs. Using the Mission Control App or with help from your local Authorized Specialized Retailer, you can adjust the ECO and TRAIL modes to provide between 10% and 70% of motor support.

CONNECTIVITY OPTIONS

The motor support system provides a high degree of interface flexibility, through Bluetooth and/or ANT+ connectivity. Depending on the device and the connectivity option, a variety of features can be accessed.

BLUETOOTH LE:

The Mission Control App (iOS or Android) provides an enhanced ride experience by recording rides while syncing with Strava, eliminating "range anxiety" with the Smart Control function, GPS-based navigation, and system diagnostics. Android and iOS devices can sync to all Levo bicycles via Bluetooth LE. Visit Google Play or the Apple App Store for the latest version of the free Mission Control App. All Mission Control functionality instructions can be found within the App itself.

ANT+:

The ANT+ Protocol offers a range of devices that sync with the Levo bicycles.

- The LEV (Light Electric Vehicle) profile allows visibility of additional types of data, including cadence, rider power output, motor temperature, battery temperature, battery State of Charge, and speed while also allowing some support mode control. For an up-to-date list of LEV compatible ANT+ devices go to <https://www.thisisant.com/directory/filter/-/-/200/>.
- The "Fake Channel" option displays the battery State of Charge on any ANT+ cycling device that has an unused Power, Heart rate, or Cadence channel. The Mission Control App must be used to select this option.

STARTING THE SYSTEM

On start-up, the system always launches in TURBO mode.

- To start the system, press and hold the power button (**fig.1**) located on the non-drive-side of the battery, until the LEDs come on. When the system is switched on, the LEDs will glow green. The number of LEDs that glow green will depend on the level of charge in the battery.
- To switch the support off again, press and hold the power button until the LEDs turn off.

8. BATTERY / CHARGER

Always adhere to the following instructions when handling or charging the battery or when using the Levo bicycle:

- Only use the Levo battery with the Levo bicycle. Do not use the Levo battery with any other bicycle or any other battery with the Levo bicycle, even if it fits.
- Always turn the battery off before connecting or disconnecting the wiring harness or charger to or from the battery.
- Turn off the battery, unplug the charger from the battery and remove the battery from the Levo bicycle before performing work of any kind, such as installation, maintenance, cleaning, repair and/or transportation.
- Before riding the bicycle, make sure the battery is properly secured in the frame.
- When transporting or handling the battery separately from the Levo bicycle, ensure the battery is OFF. Touching the contacts when the battery is ON can result in electric shock and/or injury.

WHEN CHARGING THE BATTERY:

- Regularly inspect the battery and charger for damage. Never charge a battery which you suspect is damaged or know is broken, and do not use it.
- Make sure the charging socket and plug are dry before connecting and charging the battery.
- Only use the Specialized charger supplied with the bicycle or other chargers approved by Specialized. Inspect the charger before every use for possible damage to the charger itself, the cable or the charging plug. Never use a charger which you suspect is damaged or know is broken.

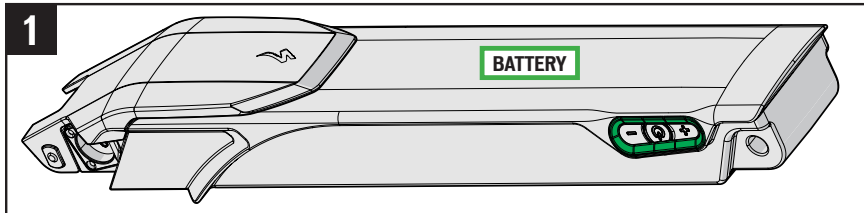
OBSERVE AND OBEY:

- Do not modify, open or disassemble the battery or charger. Modification or disassembly may result in a short circuit, fire or malfunction.
- The battery is very heavy. Be careful when handling it and do not drop it.
- Do not allow any nails, screws or other small, sharp and/or metallic objects to come in contact with the battery or the battery's charging socket.
- Do not allow the battery to overheat. Protect the battery from excessive sun exposure.
- Do not expose the battery to an open fire or radiator heat.
- Do not submerge the battery in water.
- Do not allow the battery to short-circuit. Keep the battery away from metal objects that can cause a short-circuit.
- Do not use a battery that shows any signs of damage to the casing or charging port, or is leaking any fluids. Battery liquid can cause skin irritation and burns. In the event of damage that results in skin or eye contact with any liquid from the battery, immediately flush with water and seek medical assistance.



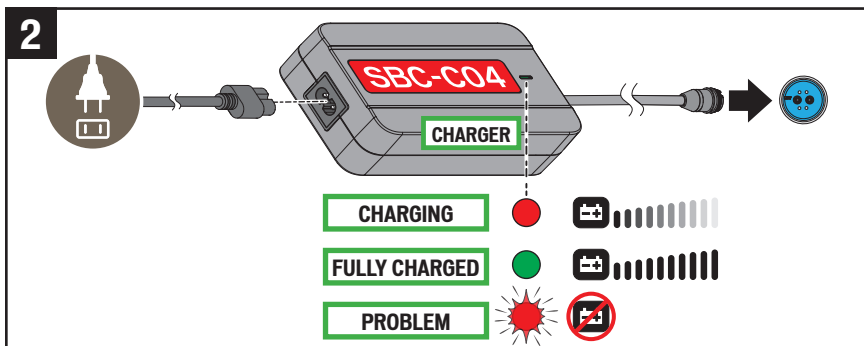
WARNING! Failure to follow the instructions in this section may result in damage to electrical components on your bicycle and will void your warranty, but, most importantly, may result in serious personal injury or death. If your battery or charger exhibits any signs of damage, do not use it and immediately bring it to your Authorized Specialized Retailer for inspection.

CHARGING AND USING THE BATTERY



Your bicycle is powered by a modern lithium ion (Li-ion) battery (fig.1). Li-ion batteries offer a large capacity (range) at low weight, and do not suffer from memory effect.

- **Charge:** The battery can be charged whether installed in the bicycle or not. Charge the battery only within the temperature range of 0° C (+32° F) to +50° C (+122° F). For safety reasons, if the battery is too hot, it will not charge.
- **Operation:** Only operate the battery between the temperature range of -20° C (-4° F) and +70° C (+158° F).



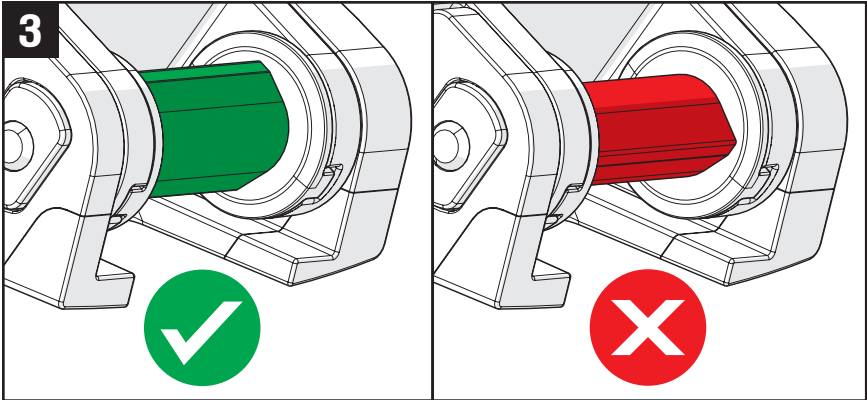
During the charging process, the diode on the charger will glow red (fig.2). When the battery is fully charged, the diode on the charger will turn green.

CAUTION: If the red LED flashes during the charging process, a charging error has occurred. In that case, immediately remove the charger from the socket, discontinue use of the motor support and contact your Authorized Specialized Retailer.

i The Battery Management System (BMS) is designed to protect a fully discharged battery from damage for a period of time. However, in order to maintain the best possible battery performance and lifespan, Specialized recommends regularly recharging the battery to at least ¾ full (7 LEDs).

i Please note that Li-ion batteries gradually lose capacity depending on age and use. Strongly reduced operating time after charging can be a sign that the battery is reaching the end of its useful life and has to be replaced. Provided the bicycle has been used properly, approximately 75% of the battery's original capacity should remain after 300 charging cycles or two years. Replacement batteries can be purchased from your Authorized Specialized Retailer.

INSTALLING THE BATTERY

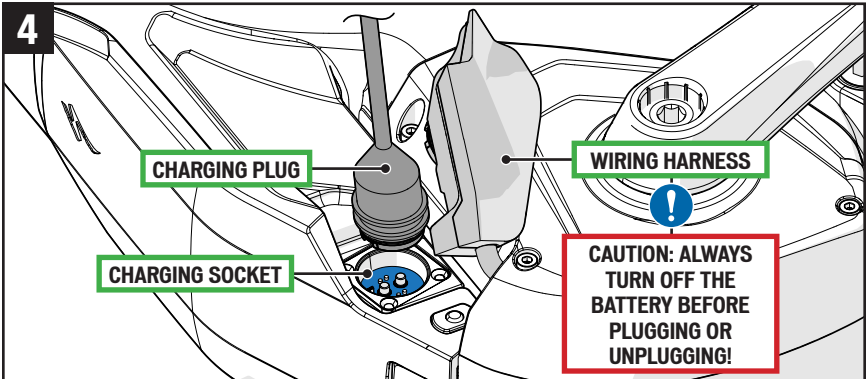


- Fig.3: Ensure that the rubber double-lobe cam is facing the right direction.
- Fig.6: Slide the battery down into the frame anchor.
- Fig.5: Rotate the battery up into the down tube, then insert the battery axle. Torque the axle to 88.5 in-lbf (10 Nm).

CHARGING THE BATTERY IN THE FRAME



WARNING! Place the charger on a stable, level surface unaffected by heat. You should charge the battery in a dry, well ventilated area and make sure the charger is uncovered during the charging process. Ensure that the battery and charger are not exposed to any flammable or dangerous substances. Plug the charger's plug into an outlet (100 - 240V), using the appropriate plug for the country's standards, then connect the charging plug with the charging socket on the battery. Specialized recommends charging the battery in an area with a smoke detector.

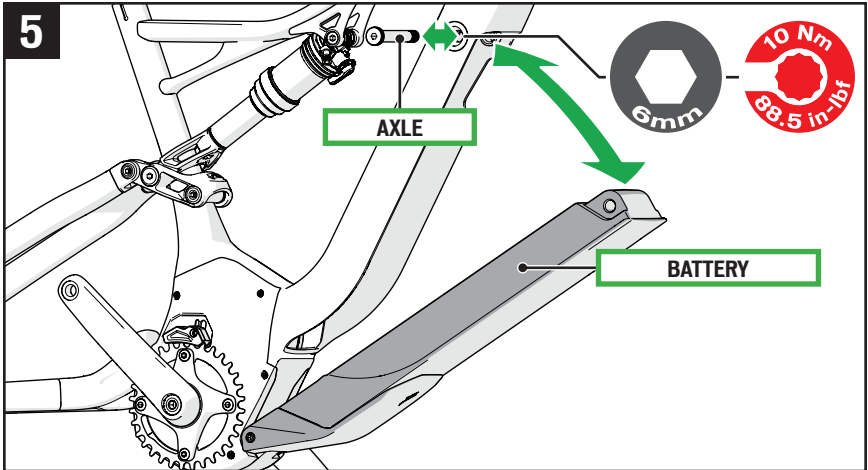


- Fig.4: Locate the charging socket on the non-drive-side of the battery, near the bottom bracket.

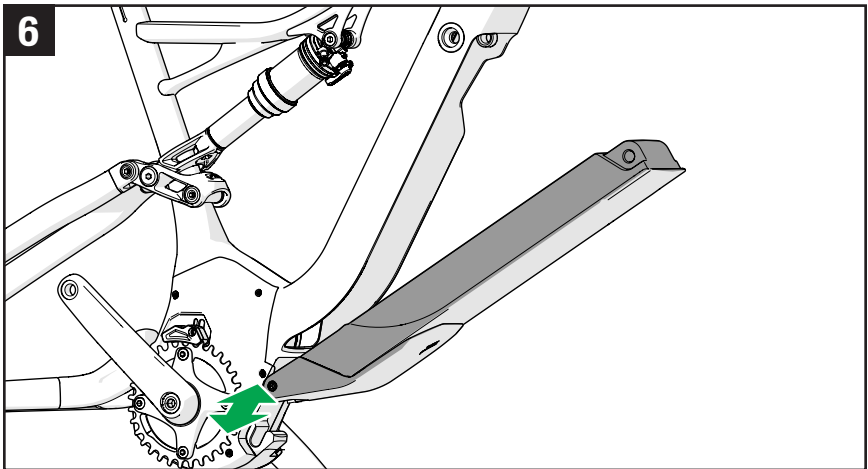
CHARGING THE BATTERY OUT OF THE FRAME



WARNING! Place the charger and the battery on a stable, level surface unaffected by heat. You should charge the battery in a dry, well ventilated area and make sure the battery and charger are uncovered during the charging process. Ensure that the battery and charger are not exposed to any flammable or dangerous substances. Plug the charger's plug into an outlet (100 - 240V), using the appropriate plug for the country's standards, then connect the charging plug with the charging socket on the battery. Specialized recommends charging the battery in an area with a smoke detector.



- Fig.5: Turn off the battery and unplug the wiring harness before removing the battery from the frame!
- Fig.5: While holding the battery, unthread the axle using a 6mm Allen key.
- Fig.5: Allow the front of the battery to drop out of the frame, pivoting at the base.



- Fig.6: Pull the battery up from the anchor at the base, then pull the battery completely from the frame.

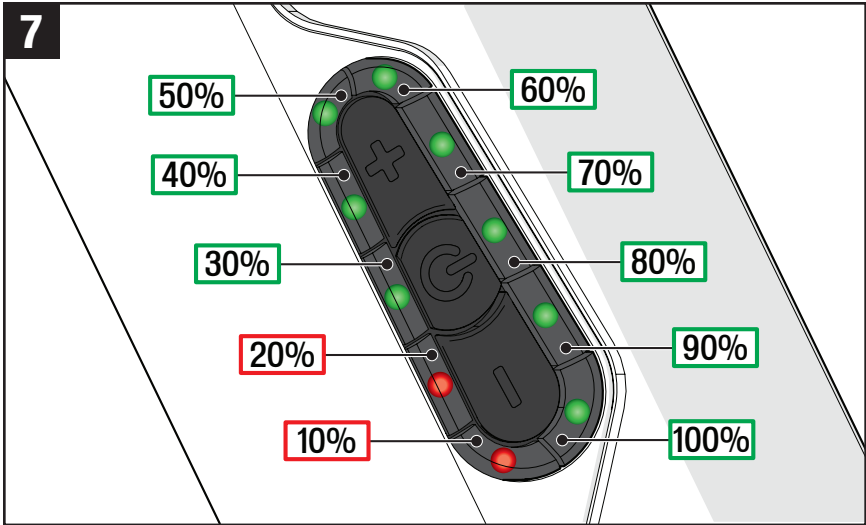
CHARGE LEVEL DISPLAY

The charge level of the battery is permanently displayed during your ride. The number of LEDs glowing will indicate the remaining battery charge. When the battery charge reaches 20%, the last two LEDs will glow red (fig.7).

At 10% battery charge remaining, the system will start to reduce the amount of support. At 1%, the system switches off the motor support.

If your bicycle is at a standstill for at least 10 minutes, the BMS will switch the system off. In order to continue riding with support, you have to switch the system on again.

7



CLEANING

Always turn the battery off and remove the charger from the battery before cleaning the bicycle. Remove the battery from the bicycle before cleaning the battery.



CAUTION: Never use a high-pressure cleaner when cleaning your Levo bicycle. Instead, use a dry or slightly damp cloth. Please ensure no water comes into contact with the electrical components while washing. Ask your Authorized Specialized Retailer for additional information about cleaning your bicycle.

STORAGE



CAUTION: If the battery is not being used for an extended period of time, remove the battery from the frame and store it in a dry, well ventilated area and leave it uncovered. Only store the battery in a cool location, below +35° C (+95° F).



If the battery is stored and not in use for extended periods of time, be sure to charge the battery at least every three months. If the battery is not charged over a period longer than three months, it can cause damage to the battery.



We do not recommend leaving the battery connected to the charger for extended periods after the battery is charged.

TRANSPORT



Transporting and/or shipping your Levo battery may be subject to certain restrictions and may require special handling, labelling, and/or packaging. Be sure to inform yourself beforehand of all applicable legal requirements and regulations in your country or state. Your Authorized Specialized Retailer may also have helpful information available. When carrying the battery outside the frame, Specialized recommends using an approved battery transport box.



CAUTION: Be aware that your Levo bicycle is significantly heavier than a bicycle without motor support. Use caution when handling, carrying or lifting your Levo bicycle.

DISPOSAL



Batteries and chargers must not be disposed of in your household trash! All batteries and chargers must be disposed of in an environmentally friendly manner, in accordance with the battery disposal regulations in your country or state. Ask your Authorized Specialized Retailer for information about how to dispose of a battery or charger and any applicable take-back program.

BATTERY TECHNICAL DATA

DESCRIPTION	UNIT	SPECIFICATION		
OPERATING VOLTAGE	VOLT	36		
CHARGING TEMPERATURE	°C	0 – +50		
	°F	+32 – +122		
DISCHARGING TEMPERATURE	°C	-20 – +70		
	°F	-4 – +158		
STORAGE TEMPERATURE	°C	< +35		
	°F	< +95		
DEGREE OF PROTECTION		IP67		
WEIGHT (WITHOUT ROCKGUARD)	KG	2.8		
	LB	6.2		
BATTERY		SBC-B06	SBC-B07	SBC-B08
RATED CAPACITY		11.5AH	12.5AH	14AH
ENERGY		420WH	460WH	504WH
CHARGER		SBC-C04		
CHARGE TIME		3:15H	3:30H	3:50H

The range of the battery can vary considerably depending on the model/capacity of the battery and riding conditions, such as the gradient of your route and the support mode. See “GENERAL NOTES ABOUT RIDING” on page 6 for additional information about battery range and tips on maximizing range.



WARNING! Please read the label on the battery (sample label below) supplied with your bicycle before first use.

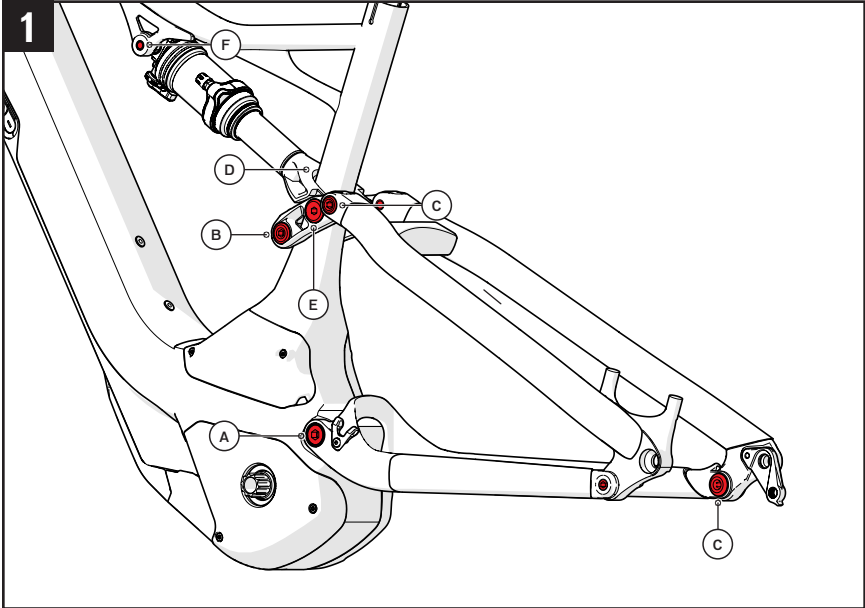
ATTENTION		DO NOT						TEMPERATURE RANGE			DANGER		
													<p>NOT FOLLOWING THESE INSTRUCTIONS CAN CAUSE FIRES AND/OR EXPLOSIONS AND CAN RESULT IN SERIOUS INJURY OR DEATH.</p> <p>Recycling symbol, CE, FCC, RoHS, and other regulatory marks.</p> <p>Li-Ion Battery Specialized for use in e-bikes</p>

9. LEVO FSR

FRAME LINKAGE ASSEMBLY



Specialized recommends following a specific order when assembling the rear triangle pivot locations of FSR suspension bicycle models (fig.1). Assembling the upper or lower pivots of the seatstay as a last step before installing the rear shock makes it easier to align the parts and hold the washers in place.



- A. Main (BB) Pivot
- B. S-Link @ Frame
- C. Horst link or S-Link @ seatstay pivot
- D. Lower shock @ shock extension
- E. Shock extension pivot
- F. Upper shock eye

AUTOSAG AIR SHOCK SETUP

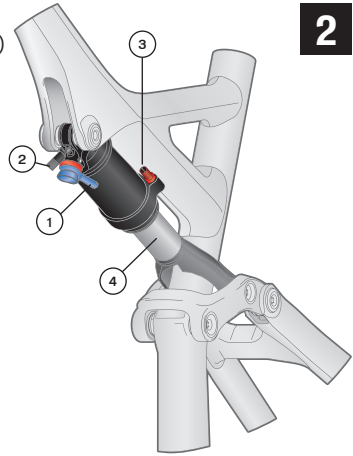
Levo FSR bicycles are equipped with AUTOSAG, a unique new feature designed to simplify and speed up the adjustment of air pressure. The AUTOSAG feature automatically determines the correct amount of sag, and eliminates the need to refer to an air chart to determine the correct pressure based on rider weight. However, the shock still requires compression and rebound adjustment based on type of terrain and rider weight. Once the air pressure is set, please refer to the compression settings (page 16) and the rebound chart (page 17).



Air pressures, rebound and compression settings are suggested starting point recommendations only. They should be adjusted according to the rider's needs for each type of terrain to achieve optimal performance. Shock air pressure can be set up manually to rider preference instead of using AUTOSAG if desired.

SETTING AUTOSAG

1. Position the shock compression lever or knob (blue) to the full open or off position (1). Remove the positive air valve cap (black) and the AUTOSAG valve cap (red).
2. Attach a high-pressure shock pump to the positive air valve (2), then inflate to 300 PSI.
3. Make sure you are wearing all gear that would normally be worn on a ride (shoes, helmet, hydration pack if used, etc.). Mount the bicycle, prop up against a wall, and sit in the saddle in a normal riding position. Do not set sag while riding.
4. Press the AUTOSAG valve (3). Air will release as the suspension settles into its pre-adjusted sag point. Make sure all the air is out and release the valve.
5. Cycle the shock a few times (4), then dismount the bicycle.
6. Do not depress the AUTOSAG valve again, otherwise the proper sag setting will be lost, and will require this procedure to be repeated from step #2.
7. Put the positive air and AUTOSAG valve caps back on.



2



Do not exceed 350psi before activating the AUTOSAG valve (this is a starting pressure only). After the AUTOSAG is activated, Fox recommends a maximum working pressure of 300psi when riding. If the pre-sag air pressure is too low, the AUTOSAG button may let air out of the negative chamber, which would result in incorrect sag.



Sag is measured as the distance between the o-ring and the shock body's seal, after the rider's weight has been applied to the bicycle, with no bounce. When AUTOSAG is correctly set, sag should measure approximately 20-30% of stroke, depending on riding/terrain experience. If the rider is approaching 300lbs, AUTOSAG may not function, and sag may exceed the bicycle's prescribed amount.

ADJUSTING COMPRESSION

Fox DPS shocks are equipped with a 3-position lever for on-the-fly adjustments of the shock performance under significant changes in terrain, and is intended to be adjusted throughout the ride.

- **OPEN:** Optimized for the perfect balance of control and plushness for steep, aggressive descents.
 - Factory Series shocks are equipped with the "OPEN MODE ADJUST" feature, with 3 additional fine tuning adjustments.
 - "Open mode adjust" is useful to control shock performance during rider weight shifts, G-outs, and slow inputs.
 - Lift the adjuster, rotate it to the 1, 2, or 3 position, and press it in to lock the position. Fox recommends making these adjustments with the 3-position lever in the Medium or Firm mode.
 - Setting 1 will have a more plush feel and setting 3 will have a firmer feel.
- **MEDIUM:** Moderate for an optimal blend of pedaling efficiency and bicycle control on variable terrain.
- **FIRM:** The firmest setting for maximum pedaling efficiency.

ADJUSTING REBOUND

The rebound adjustment (red knob) is dependent on rider weight. For example, a higher rider weight requires a slower rebound setting. Refer to the rebound chart below to find your rebound setting.

Turn your rebound knob to the closed position (full clockwise) until it stops. Then back it out (counter-clockwise) to the number of clicks shown in the table below.

Rebound controls the rate of speed at which the shock extends after compressing.

- Clockwise for slower rebound (slow speed, bigger hits).
- Counter-clockwise for faster rebound (higher speeds, small bumps, more traction).

RIDER WEIGHT		LEVO FSR 6FATTIE	LEVO FSR WMN 6FATTIE
LB	KG	CLICKS	
90	41	8 - 12	11 - 15
100	45		
110	50		
120	54		
130	60		
140	64	5 - 8	7 - 11
150	68		
160	73		
170	77		
180	82		
190	86	3 - 5	4 - 7
200	91		
210	95		
220	10		
230	104		
240	109	1 - 3	2 - 4
250	113		
260	118		
270	123		
280	127		

SETUP DATA

DATE					
RIDER WEIGHT					
FORK PSI					
FORK REBOUND (# of clicks from full slow)					
FORK COMPRESSION (# of clicks from full firm)					
SHOCK PSI					
SHOCK REBOUND (# of clicks from full slow)					
SHOCK COMPRESSION (# of clicks from full firm)					

10. SPECIFICATIONS

FORK TRAVEL



WARNING! Specialized frames are compatible **ONLY** with forks that have a specific maximum amount of travel (see table below). Use of different styled forks or forks with longer travel may result in catastrophic failure of the frame which may result in serious personal injury or death.

MODEL	WHEEL SIZE	FORK TRAVEL	MODEL	WHEEL SIZE	FORK TRAVEL
FSR 6FATTIE	650B	140MM	HARDTAIL 29 (SM)	29"	100MM
HARDTAIL 6FATTIE (SM)	650B	100MM	HARDTAIL 29 (MD/LG/XL)	29"	120MM
HARDTAIL 6FATTIE (MD/LG/XL)	650B	120MM	FAT	26"	100MM

BOLT SIZE / TORQUE SPECS



WARNING! Correct tightening force on fasteners (nuts, bolts, screws) on your bicycle is important for your safety. If too little force is applied, the fastener may not hold securely. If too much force is applied, the fastener can strip threads, stretch, deform or break. Either way, incorrect tightening force can result in component failure, which can cause you to lose control and fall.

Where indicated, ensure that each bolt is torqued to specification. After your first ride, and consistently thereafter, recheck the tightness of each bolt to ensure secure attachment of the components. The following is a summary of torque specifications in this guide:

TORQUE SPECS (FSR PIVOTS):

PIVOT LOCATION	IN-LBF	Nm	PIVOT LOCATION	IN-LBF	Nm
MAIN (BOTTOM BRACKET)	182	20.5	S-LINK @ SHOCK EXTENSION	148	16.7
DROPOUT	113	12.8	LOWER SHOCK MOUNT	175	19.8
S-LINK @ FRAME	96	10.8	UPPER SHOCK EYE	113	12.8
S-LINK @ SEATSTAY	130	14.7			

TORQUE SPECS (GENERAL LOCATIONS):

LOCATION	IN-LBF	Nm	LOCATION	IN-LBF	Nm
SEAT COLLAR	45	5.1	DERAILLEUR HANGER	35	4
SEATPOST @ SADDLE	120	13.5	WATER BOTTLE BOLTS	25	2.8
STEM @ STEERER TUBE	45	5.1	REAR DERAILLEUR	70	7.9
STEM @ HANDLEBAR	45	5.1	SHIFTERS	25	2.8
CRANK BOLTS	443	50	BRAKE LEVERS	22	2.5
CHAINRING BOLTS	89	10*	REAR BRAKE GUIDES	6	0.7
SPIDER LOCKRING	443	50	BATTERY AXLE	88.5	10



CAUTION: Ensure all contact surfaces are clean and bolt threads are greased or have a threadlocking compound (refer to the instructions for each bolt) prior to installation.

* Apply blue loctite to chainring bolts.

FRAME SPECIFICATIONS

ITEM	SPECIFICATION
HEADSET	1 1/8" UPPER / 1.5" LOWER
SEAT COLLAR DIAMETER	34.9MM
SEATPOST DIAMETER	30.9MM
DERAILLEUR HANGER	S162600002
REAR HUB (6FATTIE, HARDTAIL)	148MM X 12MM
REAR HUB (FAT)	197MM X 12MM
FRONT HUB (6FATTIE, HARDTAIL)	110MM X 15MM
FRONT HUB (FAT)	150MM X 15MM

RECOMMENDED TIRE PRESSURES

Proper tire pressure is critical for optimal performance. Tires with higher pressure will typically roll faster and provide less rolling resistance, but provide less traction. Tires with lower pressure will typically provide increased traction and control at the expense of rolling resistance. Too little pressure will increase the risk of rim damage and potential for "burped" tires (releasing air when used as tubeless).

Experiment with different tire pressures in different conditions to find what works best for you when riding your preferred terrain.

With the increased volume of 6Fattie tires it is much more difficult to determine pressure by squeezing the tire. Use a quality pressure gauge instead and refer to the tire pressure recommendations written on the side of the tires.



Because of the extra weight of the Levo bicycle, tire pressure should generally be higher compared to a regular bicycle with 6Fattie tires, such as a Stumpjumper or Rhyme 6Fattie FSR.

11. EC - DECLARATION OF CONFORMITY



The manufacturer:

Specialized Bicycle Components Inc.
15130 Concord Circle
Morgan Hill, CA 95037, USA
Tel: +1 408 779-6229

hereby confirms for the following products:

Product description:

Specialized Levo Pedal Assist

Model designation:

- | | | |
|----------------------------|-----------------------------|---------------------------|
| ■ Levo HT Comp 6Fattie | ■ S-Works Levo FSR 6Fattie | ■ Levo FSR ST Comp 29 |
| ■ Levo HT Comp Wmn 6Fattie | ■ Levo FSR Expert 6Fattie | ■ Levo FSR ST Wmn 6Fattie |
| ■ Levo HT Comp Fat | ■ Levo FSR Comp 6Fattie | ■ Levo FSR ST 29 |
| ■ Levo HT 29 | ■ Levo FSR Wmn Comp 6Fattie | |
| ■ Levo HT Wmn 29 | ■ Levo FSR 6Fattie | |

Year of construction:

2016

The conformity with all applicable directives from the guideline:

Machines (2006/42/EC).

The machine also conforms to all the directives in the guideline:

Electromagnetic compatibility (2004/108/EC).

The following harmonizing norms were applied to the product:

DIN EN 15194: Bicycles - electrically power assisted cycles - EPAC bicycles.

DIN EN 14766: Mountain-bicycles - Safety requirements and test methods.

Technical documentation by:

Specialized Europe GmbH
Lorzenparkstrasse 10
6330 Cham, Switzerland

Signature:

Jan Talavasek (European Engineering Manager)

Specialized Europe GmbH
6330 Cham, Switzerland
Jan 1st, 2015

NOTE: This declaration of conformity applies only to countries following the CE marking directives.

12. RETAILER SERVICE SCHEDULE

<p>1st Inspection: After approx. 200 kilometers (120 miles)</p> <p>Work done:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Materials used:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Date: _____</p> <p>Signature: _____</p> <p>Retailer Stamp:</p>	<p>2nd Inspection: After approx. 1000 kilometers (600 miles)</p> <p>Work done:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Materials used:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Date: _____</p> <p>Signature: _____</p> <p>Retailer Stamp:</p>	<p>3rd Inspection: After approx. 2000 kilometers (1200 miles)</p> <p>Work done:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Materials used:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Date: _____</p> <p>Signature: _____</p> <p>Retailer Stamp:</p>
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<p>4th Inspection:</p> <p>Work done:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Materials used:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Date: _____</p> <p>Signature: _____</p> <p>Retailer Stamp:</p>	<p>5th Inspection:</p> <p>Work done:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Materials used:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Date: _____</p> <p>Signature: _____</p> <p>Retailer Stamp:</p>	<p>6th Inspection:</p> <p>Work done:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Materials used:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Date: _____</p> <p>Signature: _____</p> <p>Retailer Stamp:</p>
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MISSION CONTROL APP

Unleash your Levo, get full control over your Turbo!



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SPECIALIZED BICYCLE COMPONENTS
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