Boomerbuggy Covered

User Manual

DAYMAK

About Daymak

Daymak is one of Canada's largest Alternative Vehicle providers. We design, engineer, manufacture, import and repair everything from recreational dirt scooters, go-karts and electric golf cars to alternative transportation solutions such as e-scooters and gas scooters.

Our electric scooters represent an energy-efficient and eco-friendly alternative for people who need to get around the city. They greatly increase the practicality of scooter transportation in urban centres. Costing only a few cents to charge, an e-scooter can make city life more convenient and much less expensive.

While there are many new Green technologies that are still in their infancy, electric scooters have been developing over the last 40 years or more. E-scooter technology has been dramatically refined since the introduction of the first custom-conversion scooters. Today, electric scooters are a supremely reliable and affordable means of transportation.

Daymak is constantly developing new eco-friendly alternative transportation strategies, led by its own Research and Development department in Toronto, Canada. We are always improving our products. Our innovative in-house engineering and quality testing provide customers with many new kinds of reliable, eco-friendly vehicles, designed to help change the lives of our customers and the world.

Daymak warranties, services, and stocks parts for everything it sells. We support our products.

Please feel free to visit our website. You'll find the latest in cool transportation solutions, support for the products you've purchased and contact information.

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Introduction

Thank you for purchasing Daymak's Boomerbuggy Mobility Scooter. We thank you for choosing a Daymak scooter, especially one that has been designed to provide you with years of trouble-free, comfortable, quiet, and eco-friendly service. Your scooter has been equipped with the latest technologies that assist in providing you with the most efficient and comfortable ride you've ever felt. We at Daymak Inc. recognize the importance of your comfort when it comes to mobility, and our Boomerbuggy Mobility Scooters provide just that; with our direct drive transaxles and electromagnetic brakes, you will glide effortlessly whereever you choose to go. Another amazing feature of our Boomerbuggy Mobility Scooters is the fact that they are easily transportable and can be easily disassembled for storage.

Please be sure to take time reading this manual thoroughly before operating your new scooter. As the operator, you are solely responsible for the manner in which you operate and maintain your scooter. Daymak Inc. is not responsible for any damage or personal injury incurred through improper or unsafe usage of the Boomerbuggy Mobility Scooter.

For more information about our products, warranty, or services, or if you are having trouble understanding the instructions presented in this manual, please contact your nearest Daymak dealer, or call Daymak headquarters at 1-866-379-7779, or visit our website at www.daymak.com.

Scooter Part Diagrams

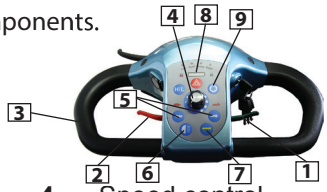
Diagram 1: The Boomerbuggy Covered Electric Scooter

This diagram illustrates the various parts of your scooter. Please note that many of these parts are not user-serviceable and should be repaired only by trained professionals. This is especially true of the electrical systems and the mechanical components.

1. Seat
2. Rear Lights / Indicators
3. Anti-tip wheels
4. Rear Wheel(s)
5. Foot Rest
6. Front Wheel(s)
7. Headlights
8. Turn Signals
9. Windshield Wiper
10. Control Panel
11. Mirrors
12. Door handle

Diagram 2: The Handlebars and Controls

This diagram illustrates the various parts of your scooter. Please note that many of these parts are not user-serviceable and should be repaired only by trained professionals. This is especially true of the electrical systems and the mechanical components.



1. Accelarator
2. Reverse
3. Steering wheel
4. Speed control
5. Turn signals
6. Headlight switch
7. Horn
8. Battery indicator
9. FreeWheel switch

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Riding Instructions

This guide assumes that you already know how to ride a standard scooter. Before you try to ride an electric scooter, you should be very familiar with controlling and balancing a normal scooter.

Caution

If you do not have cycling experience, an e-scooter is too dangerous to ride. Do not begin learning to ride a scooter using an e-scooter.

Important Notes

- Escooters are Fast! E-scooters are capable of traveling at higher speeds than many scooter riders are accustomed to. Use caution at all times, especially when travelling in mixed traffic. Always take into account driving and traveling condi tions.

- Obey the Law. Be sure to follow all provincial and city traffic laws. This includes obeying stop signs, checking carefully when turning, and riding defensively. An escooter is a motorized vehicle, even though it is classed as a scooter. You must follow the law.

- Stay Sober. Never ride your scooter while intoxicated. An e-scooter is capable of traveling faster than a normal scooter, and you should always be in control of it.

- Share the Road. Be careful in mixed traffic. When on scooter paths, traveling near pedestrians, or on recreational trails, try to be polite and courteous to those using the paths with you. E-scooters are new in most cities, so other users of the roads and recreational paths may not know how to deal with e-scooter riders. Bear in mind that, in a sense, e-scooter riders are “ambassadors” for this new method of transportation.

Inspecting your Electric Scooter

Always inspect your e-scooter before you ride it, to make sure its safety features are operating properly. Many accidents can be avoided with routine inspections. Once you are comfortable with your e-scooter, you will be able to detect small changes in the way it feels. If anything changes between uses, make sure to have it properly examined. Also, be sure to listen for changes in the sounds your e-scooter makes over time. Any mechanical or power issues may have effects on the sounds the scooter makes.

Holding the Handlebars

As with a normal scooter or gas scooter, place your fingers over the brake levers, using the palms of your hand and your thumbs to wrap around and under the handlegrips. Doing this allows you to activate the brakes easily, by squeezing your hand, in case you have to stop quickly. This is the safe way to control your electric scooter.

Turning your E-scooter On and Off

To turn on your e-scooter, insert the key into the "ignition", located just below the dash board, and turn the key to the right. When your e-scooter is activated, the power indicator will light and the battery charge indicator will jump, showing you how much power your e-scooter has. To turn off the e-scooter, simply turn the key to the left, and remove the key.

Warning

When you activate the e-scooter, the electrical system becomes live. Do not try to affect changes to the E-scooter (such as removing the battery or repairing electrical components) while the E-scooter is activated. Turn the E-scooter off and remove the key before you attempt to access any of the electrical components. Also, the battery carries a significant electric charge and can injure people if not treated properly and with respect.

Accelerating, Decelerating, and Coming to a Full Stop.

The throttle is found on the steering wheel. Apply pressure on the green lever (right) to go forward. To decelerate, release the right lever and press the red (left) lever. The emergency brake is located on the top left of the steering wheel. Use this if you need to stop abruptly.

Warning

Do not activate the accelerator until you are seated on the scooter and are ready to accelerate. The e-scooter can easily escape from your control, possibly injuring you or others, and the e-scooter may be damaged by being dropped.

Safety Tips

Please keep the following in mind to prevent any unwanted injury or damage.

- **DO NOT** carry passengers
- **DO NOT** drives across a slope
- **DO NOT** drink and drive
- **DO NOT** tow a trailer
- **DO NOT** use a distracting device such as a cell phone while driving
- **DO NOT** exceed inclines over 8 degrees
- **DO NOT** turn on steep inclines
- **DO NOT** turn suddenly at high speeds
- **DO NOT** get on or off the scooter unless the brakes are on and the scooter is off
- **DO NOT** switch the scooter off while in motion
- **DO NOT** drive the scooter where you cannot safely walk (roads, streets, etc.)
- **DO NOT** attempt to drive over curbs greater than 2" in height
- **DO NOT** exceed the suggested user weight limit
- **DO NOT** use an escalator; please opt for the elevator
- **DO NOT** drive on an incline with oil, water, or ice on it
- **DO NOT** use parts or accessories that are not authorized by Daymak Inc.
- **DO NOT** connect any medical devices to the scooter battery

On the Road

Please adhere to the following recommendations to ensure your safety.

- **DO NOT** drive in the rain
- **DO NOT** drive in or on snow
- **DO NOT** drive off-road or on any uneven surfaces
- **DO NOT** drive in traffic
- **DO NOT** reverse unless you are certain there are no obstacles behind you
- **DO NOT** make sudden stops, weave erratically, or make sharp turns
- **DO NOT** extend your arms or legs outside of the scooter while in operation
- **DO NOT** attempt to climb curbs greater than 2"
- **DO NOT** attempt to cross a gap greater than 3"
- **DO NOT** attempt to climb a hill greater than 10"
- **DO NOT** attempt to drive across a sloping surface greater than 8"
- **DO NOT** drive at full speed on a decline
- **DO NOT** get on or off the scooter when on a hill

Turning Signal Lights

Your e-scooter has turn signal lights. The turn signal activator is on the left handlebar. Push it left or right to activate it to indicate that you are turning in the appropriate direction, and press the middle of the button to turn it off. The turn signals also emit a noise, to ensure that everyone knows you are turning. This turn signal cannot be disabled without also disabling the visual signal.

Lights

The headlight and taillight are useful features when you are riding at night or in dark areas. They radically improve your safety in mixed traffic. The switch is located on the left handlebar. The lights on your e-scooter consume some electricity. Keeping them on may reduce the maximum distance you can travel on one charge by about 5 %.

Riding in Wet Weather

Your e-scooter is designed to function in wet conditions, such as when it is raining. However, because the motor is on the rear wheel, it is easy to slip when moving at high speeds. If it is very wet, be sure to avoid high speeds.

When you are traveling in wet weather, water may cause your brakes to function less efficiently because it reduces friction between the brake pads and the wheels. Take care to slow down and give yourself more room to stop or slow if necessary.

Riding in Cold Weather

Your e-scooter is designed to operate year-round. However, in very cold conditions or when there is a lot of snow or slush on the ground, it is possible for the motor in the e-scooter to get wet or for the brakes to function less efficiently, just as can happen in wet weather. Below
10 degrees Celsius, the battery will not work as well as it would in warmer temperatures. While Lithium-Ion batteries perform better than Lead-Acid batteries in temperature extremes, both will experience reduced performance in cold temperatures.

Also, riding the e-scooter in cold temperatures may require you to replace the battery sooner rather than later.

Operating Instructions

Getting Started

Before the first use, you must charge your scooter completely. This should take approximately 8 to 12 hours.

Getting On/Off

Before getting on or off your scooter, always make sure that the keys are not in the ignition and that the scooter is off. This is a safety measure to prevent any unwanted injury due to accidental engaging of levers. Make sure the door is completely closed before moving.

Parking and Locking your E-scooter

When you want to park your e-scooter for a short time, either when you have reached your destination or are at home, follow these steps:

1. Stop the e-scooter and position it as you want it.
2. Get off the e-scooter, making sure to keep it balanced.
3. Close the door, and use the key to lock it.

Forward and Reverse

First, make sure you are seated comfortably. Put the key into the ignition and turn the scooter on. You will know that the scooter is active when the LEDs light up on the control panel. Set your scooter to the lowest speed possible. You may adjust the speed once you are comfortable with operating the scooter.

Start by gently squeezing the right lever. Gradually apply more pressure to the lever and the scooter will begin to pick up speed. If you have set your speed to the lowest, your top speed will be restricted.

Once you are in motion, gently release the lever and the scooter will smoothly come to a stop. Repeat moving forward and braking a few times to get used to the motion.

Next is to practice reversing. To reverse, gradually squeeze the left lever. Same as before, the more pressure applied to the lever, the faster the scooter will move. Practice reversing and stopping a few times to used to the motion.

Steering

Steering the scooter is effortless and simple. Before you begin your practice, ensure that there are no obstacles in the way.

To steer, simply rotate the tiller (handlebars) to the desired direction; the more you rotate, the more sharp the turn. Begin by slowly moving forward and steering the tiller at small angles; gradually increase the angle for your turn to familiarize yourself with the maximum turning radius.

Practice by making gentle "S" patterns in both forward and reverse as much as necessary.

When steering through limited spaces (such as a doorwar or hallway), make sure to mind the width of your scooter. When approaching doorways, take your time and proceed slowly to prevent injury to yourself or others or damage to the scooter.

When turning around corners, always keep a safe distance from the wall you are turning towards. Most importantly, you want to ensure that your rear tires will clear the corner without getting caught.

Never turn sharply while the scooter is at top speed! Always exercise caution when taking corners. Failure to do so can cause injury and damage.

Turning off FreeWheel mode

When you first turn on your e-scooter, you may notice the battery indicator flash. This means the scooter is on FreeWheel mode and it will not allow for drive functions. FreeWheel mode puts the scooter in a neutral mode so it can be pushed while parked.

To turn off FreeWheel mode, locate the lever located in the rear, next to the rear shocks. Place it in the down position. Doing so will lock the wheels when parked, and this will allow the scooter to accelerate normally.

Long-Term Storage of your E-scooter

If you are storing your scooter for a long period, disconnect the circuit breaker. This is a safer way to store the electric scooter, as it prevents accidental activation of the e-scooter and makes it impossible to activate it even with the key.

Please see the section titled "Your Battery" for instructions on battery maintenance while your e-scooter is being stored.

The Battery

The Boomerbuggy series utilizes two maintenance free, sealed lead acid batteries. Battery performance is affected by various factors including: temperature, terrain, the weight of the user, and overall usage for the batteries. The battery level indicator is only a guide for judging the amount of charge in the batteries. The true charge of the batteries will display once the scooter is in drive.

To optimize the battery life, only charge the scooter once the batteries are at approximately 20%

When storing your unit, be sure to charge the scooter at least once every two weeks to optimize the battery's life. Leaving the batteries completely discharged can cause irreversible damage to the batteries and may need to be replaced.

Charger and Charging

To charge your scooter, first make sure that the bike is off. Plug the charger into the charging port amd then plug the charger into the outlet. Once connected, a red light should appear on the charger; this indicates the scooter is being charged. When the scooter is completely charged, the charger will automatically terminate the charge and the light will turn green.

The charger requires a minimum feedback voltage signal from the batteries in order to begin the charging cycle. If your batteries are severely discharged for a long period of time, the charge may not receive the necessary feedback and therefore the batteries will not charge. If this occurs, contact your nearest Daymak dealer for assistance.

Always insert the charger into your scooter before the outlet. Failure to do so has a possibility of short- circuiting the scooter.

Never let your batteries completely discharge. Doing so can result in irreversible damage to the batteries.

Charging your E-scooter

Charging your e-scooter is a simple process. You require the following:

- The charger that came with your e-scooter.
- A 115V household electrical outlet.

Charger Warning

Only use the chargers that were supplied with your e-scooter. Using chargers that do not have specifications identical to those which came with the e-scooter could irreparably damage your e-scooter's battery and electrical systems, and may cause injury.

To charge your e-scooter, follow these steps:

1. Turn off the e-scooter and remove the key from the "ignition."
2. Plug the female end of the charger cable into the charging slot on the e-scooter. This is found on the side of the steering wheel on the left side.
3. Plug the male end of the charger power cable into your wall socket. This should be a115v household electricity supply. You can also use a portable generator, if necessary, but make sure it provides 115V current.
4. Allow the e-scooter's battery to charge for the appropriate amount of time (6-12 hours).
5. Disconnect the charger when the LED light on the charger is green. The batteries have been fully charged.

If your charger's LED status light does not change from red to green over an extended period of time, for perhaps more than 14 hours, and the battery is very hot, the battery or charger may need replacing. Stop charging and bring both to your Daymak dealer immediately. Do not charge the battery.

Battery Care

Follow these suggestions to maintain your battery's optimal performance. If you do not follow these suggestions, your battery may lose its ability to maintain a charge and might have to be replaced sooner than would otherwise be necessary.

- Charge it: Charge your battery immediately after riding it.
- Full Charge: Do not allow the battery to run down completely and lie in storage without a charge. This significantly reduces the battery's lifespan and may cause damage.
- Keep it Charged: When being stored, charge the battery occasionally to make sure its power supply does not run down. Charging it once every 21 days should be sufficient.
- Storage Conditions: Store the battery on a flat, cool, dry surface. Do not allow the battery temperature to drop below 10 degrees Celsius for extended periods of time.

Warning

DO NOT place your Lead-Acid battery on concrete. Concrete drains the battery's power and will neutralize the lead-acid. Placing the battery on concrete for any length of time will likely result in the battery being drained of power and possibly losing its ability to store electricity.

Cold Weather and your Battery

Below 10 degrees Celsius, the battery will not work as well as it would in warmer temperatures. While Lithium-Ion batteries perform better than Lead-Acid batteries in temperature extremes, both will experience reduced performance in cold temperatures.

Also, repeatedly riding the e-scooter in cold temperatures may cause your battery to have to be replaced sooner.

Handling the Battery

The battery contains large amounts of electrical power. You must use caution and respect when handling it. Not following these instructions can result in serious injury.

Warning

Follow these instructions closely. Use care when handling your battery.

- Always lift the battery with both hands, and carry it with care. Never drop the battery. If the case is damaged, the contents may leak out.
- Never puncture or open the battery case. The contents are dangerous and may cause injury. Do not touch the contents of a leaking battery. Seek help immediately.
- Do not touch the two metal poles on the battery box at the same time. This can cause a short-circuit. It could injure you or others and cause serious damage to the electrical systems in the e-scooter. Your battery contains significant amounts of electrical power.
- Do not handle your battery if either you or the battery are wet. Water is an excellent conductor of electricity. You may experience an electrical shock, and you may be injured.

Replacement and Disposal

After approximately 300 charges, a lead-acid battery will need to be replaced. A lithium-ion battery will last approximately 1500 charges. When the battery has to be replaced, you will notice that your battery cannot carry as much of a charge as it could initially.

Contact your local Daymak dealer to purchase a new battery.

When replacing your battery, dispose of it at a proper municipal battery recycling facility. If none is available, please contact your local Daymak dealer.

Warning

Be absolutely sure that you replace the battery with an identical or very similar battery. While it is possible to change the battery format or power levels, this requires advanced knowledge of electrical systems. If improperly done, this can result in immediate and irreparable damage to the electronic controller and electrical systems. Be absolutely certain of what you are doing before you replace the battery with a different type of battery.

Using the wrong type of battery will also void your warranty.

Technical Data

This section provides you with the technical specifications for your e-scooter.

The Motor and Wheel Assembly

The Smart Scooter has a 1200 Watt magnetic motor on the rear wheel hub. This type of motor has excellent low-end torque and high efficiency when working within its range. Note that while the motor is very quiet, it does produce some noise. Also attached to the rear hub are speed reduction gear and the speed free clutch.

The Freewheel

The wheels have freewheels, so the e-scooter's drive train is not fixedly geared. This means that when coasting or traveling downhill, you can turn off the engine and your e-scooter will continue to move without slowing. This feature will allow you to achieve faster speeds when coasting, moving downhill or moving with the wind. It will also allow you to conserve electrical power, because you will be able to let to the motor rest while moving.

The Controller

Daymak pioneered the development of intelligent component control in e-scooters. The "D- Drive" technology developed by Daymak is the brain of your e-scooter. It allows your e-scooter to achieve faster acceleration, to climb steeper hills, and to save energy. In future, it will allow for other ways of recharging your e-scooter's batteries, such as by using solar or wind power.

The electronic controller is located under the seat assembly. This controller efficiently regulates the speed and electronic functions of the scooter. It allows for stepless speed adjustment, shuts off the motor when the brakes are activated, has low voltage protection and has fuses to prevent excess current from damaging the e-scooter's systems.

The Governor

A key component of the controller is the Governor. The Governor regulates the speed of the e-scooter. It prevents the motor from assisting riders when the e-scooter's speed surpasses
32 km per hour.

The governor's primary function is to make sure that the motor functions efficiently. If the governor is not functioning, the mileage of the e-scooter will be dramatically reduced, and its performance will suffer.

Disabling the governor voids the warranty, and may damage your controller.

This speed limitation to 32 km per hour is required by government regulations. Traveling faster than 32 km per hour through motor power alone is illegal in Canada and could result in serious fines or penalties, unless your vehicle is insured for liability, is registered and you are licensed to drive.

Basic Statistics

Dimensions

Wheel Size: 4.0"x13.5"
Body Size: 171x82x170cm
Seat Height 75cm (29")

Weight

210 kg without battery
222 kg with battery

Loading Capacity

Standard: 150 kg
Maximum: 205 kg

Speed and Mileage

Max. Speed: 15 km/h
Max. Mileage: 40 km

Electrical System Statistics

Motor Statistics

Rated Power: 1200W
Max. Climbing Angle: 12 degrees

Charger Statistics

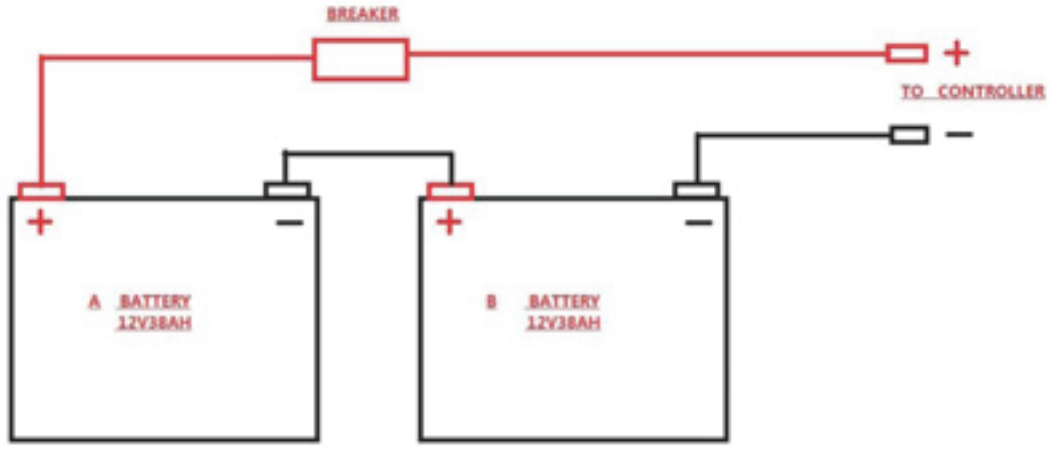
Charger type: 24V-5AH
Charger Input: AC 100 – 240V
Standard Input voltage: 110V
+/- 10%

Power Rated: 80W
Voltage Charge: 43.2 – 44.2V
Charge Current: 2.5A +/- 0.02A
Charge Time: 4-5 hours

Battery Statistics

Type: Sealed Lead Acid
Voltage: 24V110AH
Battery Life: 300 charges

Wiring Diagram



Maintenance and Troubleshooting

This section outlines problems you may have and solutions you may be able to use.

Many of the parts in this product are not user-serviceable and should be repaired by trained professionals. This is especially true of the electrical systems and the mechanical components. Alteration of these components voids the warranty.

Lubrication

In six-month intervals, you should lubricate the following parts with multipurpose grease or similar lubricant: seat pivot post and seat release lever.

Do not lubricate the transaxle gears.

Wheels and Tires

The wheels have split rims, which allows easy puncture repair. To change the wheel, remove the center 13mm bolt and slide the wheel off its axle. When refitting the wheel, be sure to use a locking washer and use locktite or a similar adhesive. When changing a tire, the inner tube must be deflated. Remove the four bolts from the wheel and split the rim.

It may be easier – and safer - to have the tubes replaced by your Daymak dealer.

General Maintenance

Every six months, you may need to tighted certain nuts and bolts. The reason for this is due to the fact that operating the scooter will cause a lot of vibrations, which can gradually loosen the nuts and bolts on the scooter. The following are some areas that require attention: tiller base bolts, wheel axle bolts, wheel-to-axle bolts, etc.

Troubleshooting Checklist

If you are having trouble operating your scooter, please check the following:

- The unit is switched on
- All plugs and connectors are firmly fixed
- Battery is fully charged
- Free wheel lever is engaged
- Fuses are not blown
- Check Fault Codes
- Call Daymak Service 1-866-379-7779

Maintaining your Ebike

The frequency of maintenance depends on how much you ride and under which conditions. Recreational riders needs for less maintenance then off-road riders. The harder you ride, the more you have to take care of your bike if you want it to last. There are various time intervals for proper maintenance. Quick maintenance should be done before & after every ride.

Time after purchase	Action Suggested	
Everytime before you ride The 60 second check	Check tire pressure, check brakes that they work, check lights, check bolts (make sure everything is tight), check battery gauge. Do not ride the ebike unless everything is functional and proper.	
30 days (every month)	**Completely clean the bike, including the dust on the motor and under the seat. Check for any abnormal wear and tear or alignment problems.**	
90 days (every 3 months)	Inspect frame and fork for paint cracks or bulges that may indicate frame or part damage; pay particular attention to all frame joints. Check wear and tear on tires. Check range of battery.	
180 days (every 6 months)	**Inspect all components of the ebike. Check that connections are nice and tight. Look inside where you controller is and clean in detail. Check that all plugs. Go over every bolt and nut in your ebike.**	
360 days (every 12 months)	Bring ebike for complete tune-up. Varying on the ebike the ebike shop should complete a battery discharge, tires should be changed depending on wear and tear. All connections should be checked for rust and looseness. All components should be checked including charger, ignition and gauges.