



TEEKON™

AC GOLF CAR SPEED & RANGE ENHANCEMENT KIT

INSTALLATION AND SERVICE MANUAL

FITS:

Curtis Controller 1510/1515

ClubCar® Precedent® Onward®

2004 TO PRESENT



*Smartphone
not included



Part # PK-000012-CC

* Sold Separately

*2 Ga AC Power Cables - Required
for speeds greater than 19 MPH



www.silverwolfmotors.com



Get the SilverWolf™ App at;



PART # 05-000100 V2.0CC

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SILVERWOLF™ AC-PM MOTOR & CONTROLLER KIT

The owner, and all vehicle operators MUST Read and Understand All Warnings and Instructions in this manual and in the Vehicle Owner/Operator's Manual. The owner of this vehicle assumes all liability for accidents, injuries or damages if the warnings and instructions are not followed.

SilverWolf™ Vehicles Inc. assumes no responsibility for errors or omissions in this manual, in regards to liability or damages resulting from the use of information contained in the manual. If it is lost or damaged please contact your local dealer or SilverWolf™ Vehicles Inc..

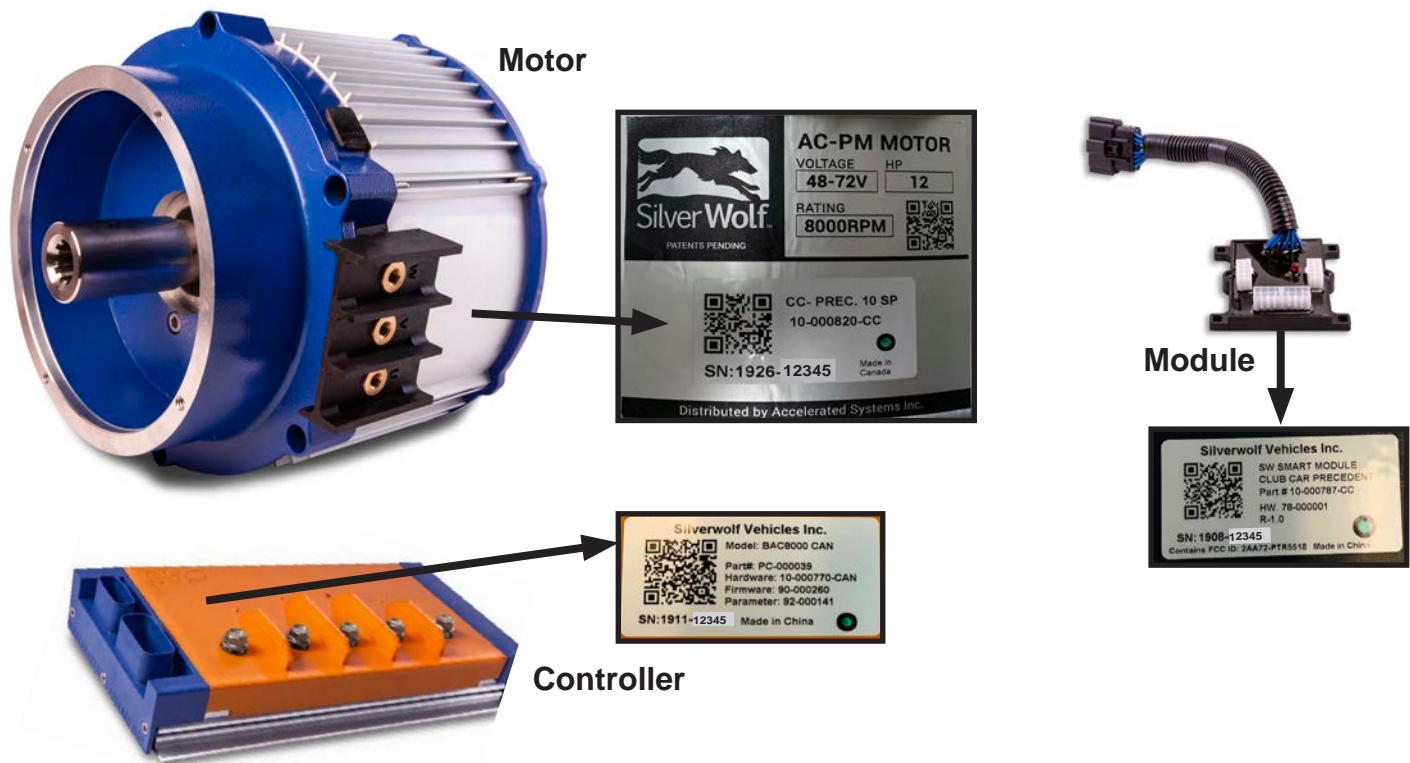
SilverWolf™ reserves the right to make changes to the controller, parts of the controller, accessories, labeling or instructions without obligation to make these changes on units previously sold.

Product and specifications are subject to change without notice or obligation.

ATTENTION:

Before installing this Kit, record or take a photo of the Serial # on all 3 of the Main Components.

SERIAL # LOCATION



PART	MODEL	SERIAL #
SILVERWOLF™ AC MOTOR CONTROLLER	BAC8000	
SILVERWOLF™ AC-PM MOTOR	12HP	
SILVERWOLF™ SMART MODULE	By Model	

Club Car®, Precedent®, and Onward® are registered trademarks of Ingersoll Rand, Inc., References to Club Car® on our web site or any associated electronic or printed publication are solely for purposes of identifying golf carts.



WARNING!

FAILURE TO FOLLOW THE WARNINGS BELOW CAN DAMAGE THE VEHICLE AND/OR CAUSE SERIOUS INJURY OR DEATH!

MAKE SURE TO READ and UNDERSTAND the OWNER'S INSTALLATION and SERVICE MANUAL and ALL WARNING LABELS with this Motor & Controller Kit.

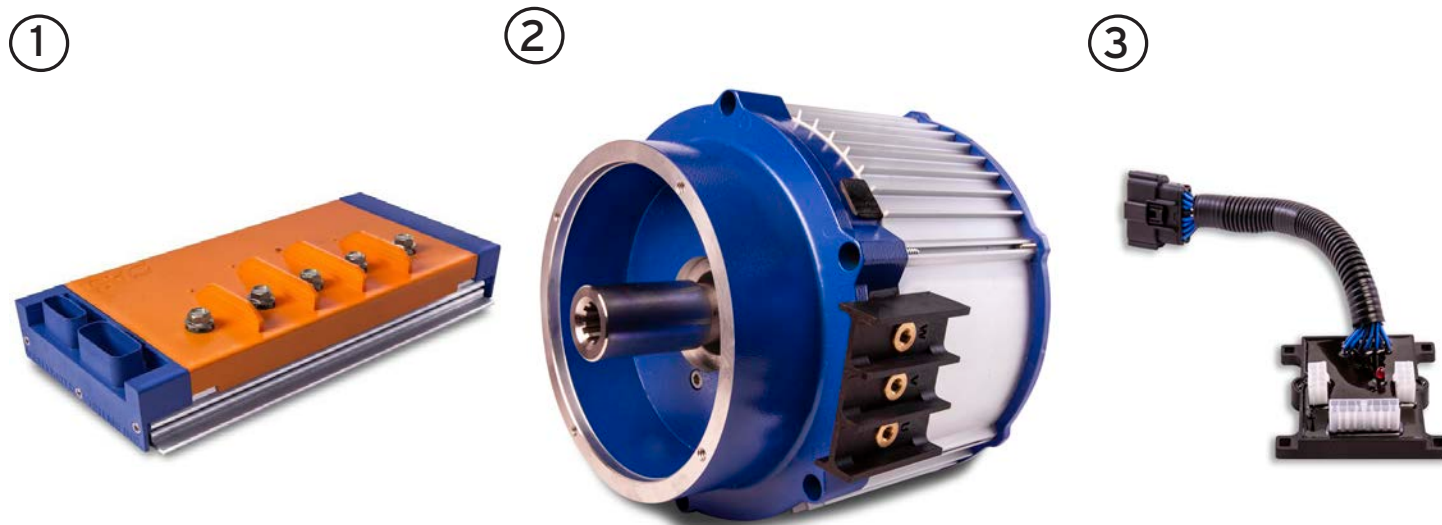
Installation must be done by a trained Golf Cart Technician.

- Any modifications or changes made to the Motor, Controller or Wiring Harness will void the manufacturers warranty. Contact your dealer if the vehicle is not operating correctly.
- Always proceed with caution. Keep speed low and do not drive faster than conditions permit. The terrain, conditions and the operator's skill will determine a safe speed.
- Avoid sharp turns and do not accelerate quickly when turning; this can cause the vehicle to slide sideways or skid out of control. Abrupt maneuvers or aggressive driving can cause a rollover even on flat open areas.
- This Motor & Controller will increase torque, but Does Not increase the GVWR (Gross Vehicle Weight Rating), Cargo capacity or Towing capacity of the Vehicle. Always follow the Vehicle's towing capacity rating as specified by the vehicle manufacturer.
- Do not leave children or pets unattended in or near the vehicle.
- Drive at a reduced speed and use extra caution when carrying passengers or cargo.
- Always look behind you before and while backing up.
- Reduce speed when towing and allow more room for stopping and turning.
- Drive with wheels straight when going up and down hills.
- Slow down and use brakes when going down hills.
- Never drive on hills with a slope greater than 15 degrees.
- Do not drive through fast flowing water or water above the floor of the vehicle.
- If you must cross shallow water, make sure to stop and inspect the area for sudden drop-offs, large rocks or slippery surfaces. Always proceed with caution or choose a safer route.
- When towing this vehicle make sure the key is turned off, the Run/Tow switch is in Tow, and batteries main power is disconnected.
- Keep electrical components dry and DO NOT wash with direct stream or power washer.
- Keep the controller and the area around it clean and free of debris.
- Do Not submerge the Controller or it's Parts.
- Vehicle and all parts must be serviced by qualified service personnel. For an authorized service location call 1-888-398-7078 or email support@silverwolfmotors.com call

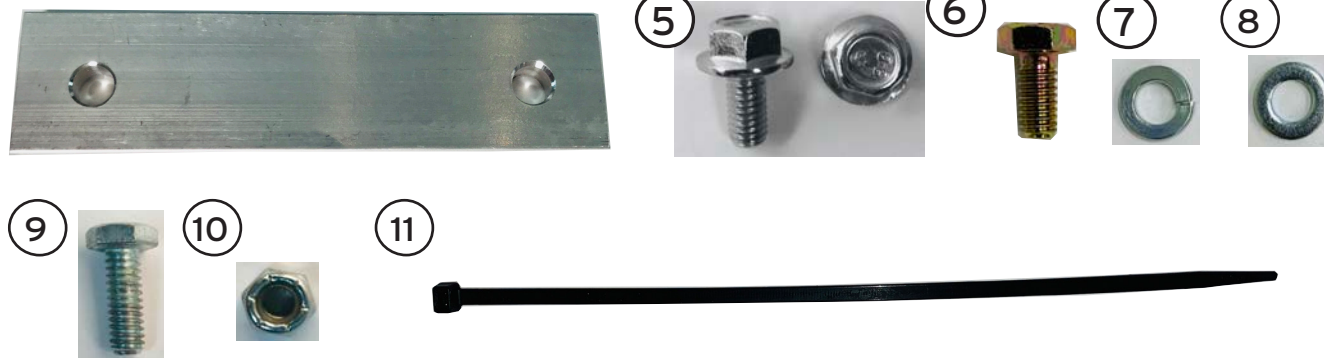
Confirm that all parts listed below are with your kit before starting installation.

If you are missing parts please contact your local dealer or SilverWolf™ Vehicles Inc.

	PART DESCRIPTION	PART #	QTY
1	Model BAC8000 840A Motor Controller	PC-000052-X	1
2	12 HP AC-PM Motor -10 Spline (Club Car®)	PM-000002-CC	1
3	SW Vehicle Smart Module w/BLE Connectivity fits: Club Car® Precedent/Onward w/ Curtis® 1510/1515 (16 Pin Connector)	10-000787	1
4	Controller Locking Plate 4" x 1"	20-001355	2
5	M6 x 12mm High-Strength Steel Flanged Hex Head Bolt (*Installed on Motor)	80-000585	3
6	M6 x 14mm Hex Head Bolt (*Installed on Controller)	80-000621	5
7	M6 Lock Washer (*Installed on Controller)	80-000622	5
8	M6 Flat Washer (*Installed on Controller)	80-000618	5
9	1/4" x 3/4" Hex Bolt	80-000586	4
10	1/4" Nylon Lock Nut	80-000588	4
11	11" Black Zip Ties	80-000590	8



④ Hardware

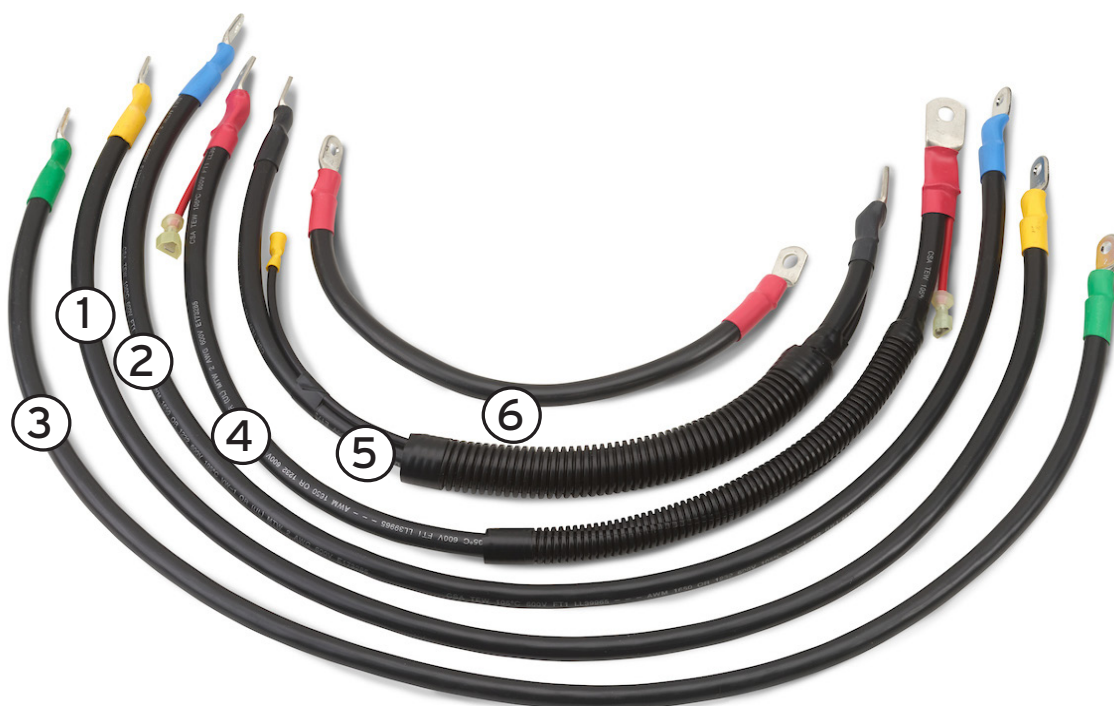




HEAVY DUTY 2GA AC POWER CABLES

Part # PK-000012

(Sold Separately)



	INCLUDED IN THE HEAVY DUTY 2GA POWER CABLE KIT PART # PK-000012-CC	PART #	QTY
1	2ga Motor Phase Cable for Club Car® Precedent -Yellow (36")	40-000533-YL	1
2	2ga Motor Phase Cable for Club Car® Precedent -Blue (36")	40-000533-BL	1
3	2ga Motor Phase Cable for Club Car® Precedent -Green (36")	40-000533-GN	1
4	Main Positive Cable (from Battery + to Solenoid)- Red (30")	40-000531	1
5	Main Negative Cable (from Battery - to Controller) - Black (24")	40-000532	1
6	Positive Power Cable (from Solenoid to + on Controller)- Red (16")	40-000534	1






WARNING!

FAILURE TO FOLLOW THE WARNINGS BELOW CAN DAMAGE THE VEHICLE AND/OR CAUSE SERIOUS INJURY OR DEATH!

Installation or Servicing of the SilverWolf™ TEEKON Systems Must be done by a Trained Golf Car Technician.

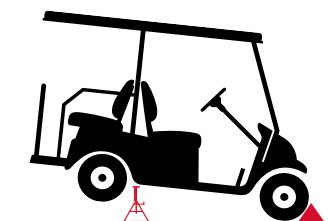
Before installing or servicing READ THE FOLLOWING:

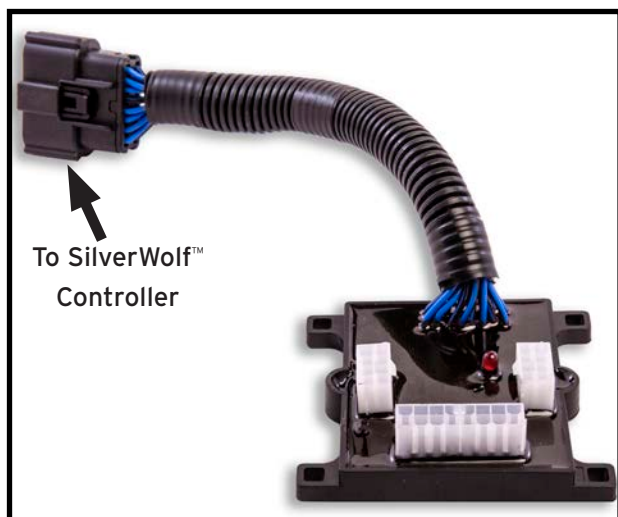
- Make Sure that the Vehicle's Electrical System is working properly and all components such as the Run/Tow Switch, FWD/REV Switch, Brakes, Throttle and all Wiring are in good condition and operating to Manufacturers Standards. If not they Must be repaired or replaced before installing the SilverWolf™ TEEKON Kit.
- The Vehicle Solenoid Must have a Pre-Charge Resistor on it. 
- The Batteries Must be in Good Condition and each Battery Must hold a Full Charge! 
- Make sure the Run/Tow Switch is in the Tow position
- The Key is turned OFF and removed from the Ignition
- The Parking Brake is Engaged
- Disconnect the Main (+) Positive and (-) Negative Cable on the Vehicle's Battery System.
- Before testing the Vehicle make sure the Rear Wheels are off the ground and supported with Automotive Jack Stands. The Front Wheels must be Chocked. 
- The area around the vehicle must be clear. Keep all People, Children and Pets away from the vehicle when installing, servicing or testing the vehicle.
- Read the **SilverWolf™ TEEKON** Installation /Service Manual and All Warning Labels before servicing or troubleshooting this Vehicle.
- The Motor, Controller and Module are sealed and can not be opened for service. To replace these parts call your local dealer. Opening these parts will Void the Warranty.
- Wear Safety Glasses and Gloves when installing this Controller.
- Wear a Safety Shield when working in or near the Vehicle Battery Compartment.
- Use Insulated Tools to protect from electric shock.
- Never lay or drop tools on the Batteries or in the Vehicle Battery Compartment.



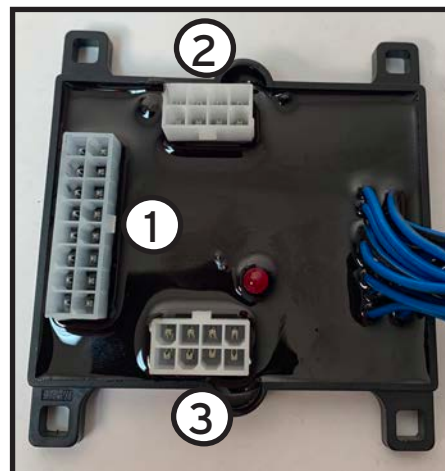
Tools Required

- | | |
|------------------------|-----------------------------|
| • Safety Glasses | • Torque Wrench |
| • Gloves | • Drill |
| • Standard Ratchet Set | • 1/4" Drill Bit |
| • Standard Wrench Set | • 2 Automotive Jack Stands |
| • 10mm Socket | • Lift Jack (2 ton or more) |
| • 10mm Wrench | • Wheel Chocks |



CONTROLLER & MODULE OVERVIEW
Vehicle Smart Module

Connector Plug Location

1	Vehicle	16 Pin	Vehicle Harness Connector
2-3	4WD	8 Pin	SilverWolf™ 4WD System (optional)


Controller Wiring Locations




ORIGINAL CONTROLLER & CABLE REMOVAL

The installation of the SilverWolf™ TEEKON Kit is done from the Battery Compartment; with the 2 middle Batteries removed to allow access to the Controller Panel.

The Cover at the rear of the Cart will also need to be removed to access the Motor. DO NOT remove the Rear black plastic Controller Cover located in front off the Motor.



WARNING!

- Make sure the RUN/TOW Switch is in the TOW position.
- Make sure to Disconnect the Main Positive + and — Negative Cables on the Vehicle's Battery System.

A

Before removing the original Controller & Cables take a photo or make a note of how the Cables run through the Controller Panel into the Battery Compartment. Also note where the other smaller Cables on the Vehicle Harness and Controller connect ,they will need to be connected to the New Harness and Controller in the same locations. **Note:** These connections will be shown in future steps in this manual.

1. Remove the 2 middle Batteries to allow access to the Controller Panel.



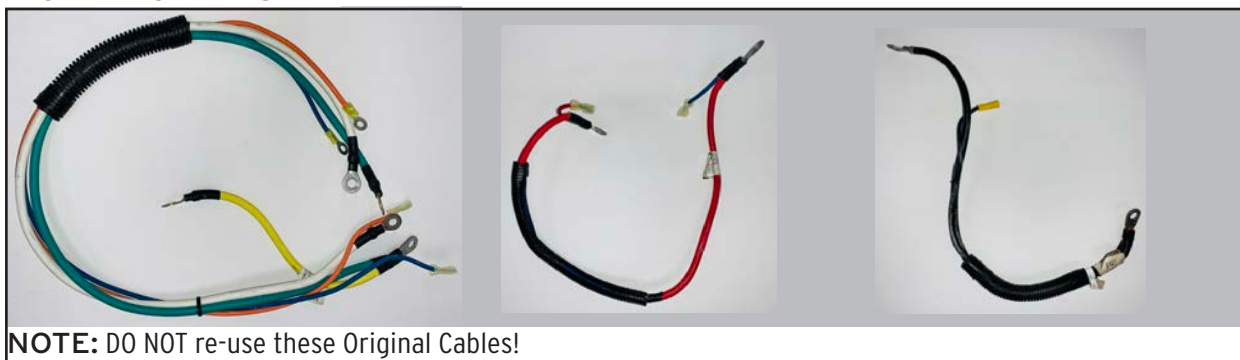
WARNING!

DO NOT leave any loose Cables connected to the Batteries.

2. Remove the Torx Head Bolt on the Controller Panel and gently pull the Panel back in to the open area in Battery Compartment.
3. Remove the Cables going to the Controller, Motor and Solenoid, these will need to be replaced with the Heavy Duty 2ga Cable Kit

Part # PK000012-CC - Sold Separately

ORIGINAL CABLES



NOTE: DO NOT re-use these Original Cables!

B

CONTROLLER INSTALLATION PART 1

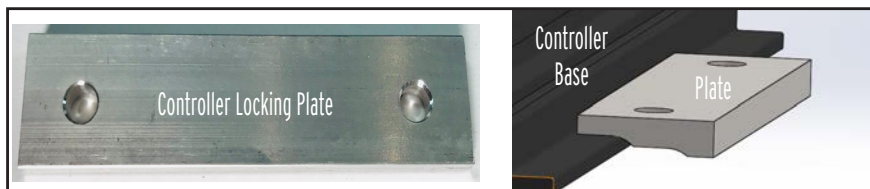
To complete the next steps see the photos on the next page.

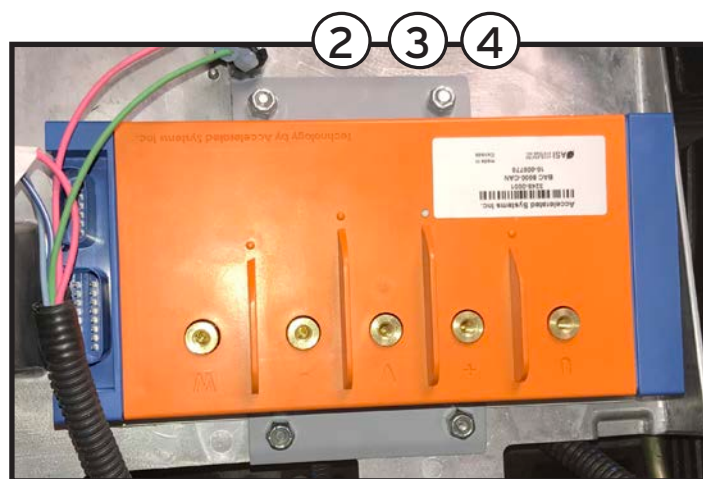
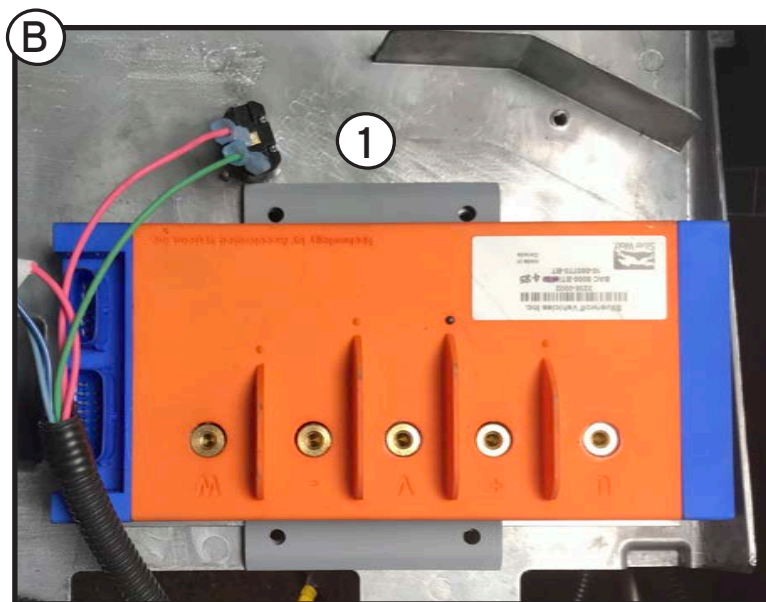
1. Align the Controller into place as shown in the photo on the next page. Then mark the 4 holes on the Controller Locking Plates. Remove the Controller and Plates and drill four 1/4" holes.

CAUTION: Be careful not to get too close to the RUN/TOW Switch.

Note: Some older model Club Car® Precedents may require the OBC to be moved slightly to allow the controller to fit in place.

2. Loosely install one of the Controller Locking Plates with 2 of the 1/4" x 3/4" Hex Bolts and 1/4" Lock Nuts.
3. Insert the Controller as shown on the following page and loosely install the second Controller Locking Plate. Make sure both plates are flat against the base of the Controller.
4. Tighten the four 1/4" Hex Bolts and Nuts.



CONTROLLER INSTALLATION PART 1

MOTOR INSTALLATION PART 1

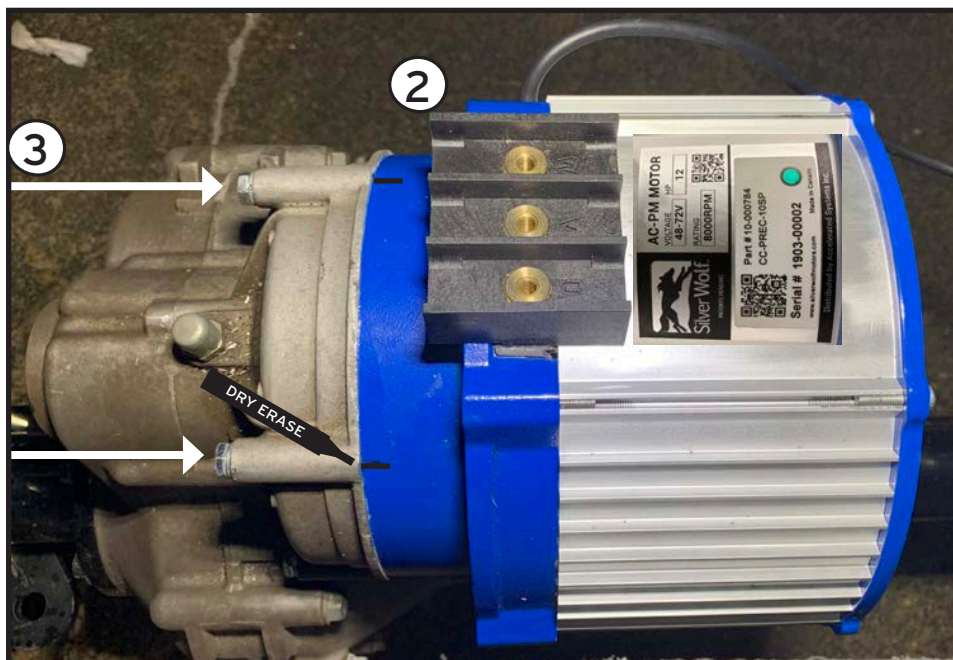
(C) Before continuing to install the Controller & Motor Cables, first install the Motor.

1. Remove the 3 bolts that hold on the Original DC Motor. Carefully slide the Motor off the shaft and out from under the Vehicle.

! CAUTION: The Motor is very heavy and can cause injury if not removed correctly. A second person is recommended for this step.

2. Note: Before Sliding the Motor into place mark 2 of the bolt holes with a Dry Erase Marker. This will help align the Motor Bolt Holes. Slide the SilverWolf™ High Power Club Car Motor (10 Spline) on to the Shaft of the Transaxle and align it as shown in the photo below.

3. Loosely install the 3 Original 1/4" Hex Bolts, and Lock Washers. Once they are aligned and in place tighten all 3 bolts at the same time to pull the motor in evenly. **Note:** See Vehicle Manufacturers Service Manual for Bolt Torque Rating.





CLUB CAR® PRECEDENT®/ONWARD® CONTROLLER INSTALLATION PART 2

D

This kit requires the 2GA AC Power Cables (Sold Separately); it replaces the Original Power Cables.

Use all 6 of the New Heavy Duty 2ga Cables going from the Motor to the Controller and from the Controller to the main positive + and negative - on the Battery.

To help identify each Cable in the steps below see the “**Cable ID & Location**” Diagram on the following page.

Note: Some Vehicles will use the Terminal Connectors on the smaller Cables on the Positive and Negative Cables. Make sure they are installed in the correct direction before completing the assembly.

1. Install the shorter Red Cable to the Positive Post on the Controller using a M6 Hex Bolt, Lock Washer & Flat Washer. Install the other end of the Cable to the Post on the Solenoid as shown below using the existing hardware.

2. Install the 3 Phase Cables to the **U,V** and **W** on the Controller using three M6 Hex Bolts, Lock Washers & Flat Washers. Use the color code below to make sure each Cable is attached to the matching post on the Motor.

3. Slide the 3 Phase Cables through the hole in the bottom of the Plastic Controller Cover for installation on the Motor. This will be done in the next section.

4. Connect the Black Battery Cable (the end without the smaller Cable) and the smaller Charger Cable with the Ring Terminal (This Cable is part of the Vehicle Harness) to the Negative Post on the Controller.

Slide the other end down through the bottom of the Controller Cover and into the Battery Compartment. Make sure the new Cable reaches the Negative on the Battery. (see photo page 14- Point F)

5. Connect the longer Red Battery Cable and the Ring Terminal from the Vehicle Harness to the other Post on the Solenoid. Then Connect the Small Female Terminal to the Male Terminal on the Vehicle Harness.

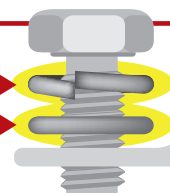
Slide the other end down through the bottom of the Controller Plate and into the Battery Compartment. Make sure the new Cable reaches the Positive on the Battery. (see photo page 14- Point F)



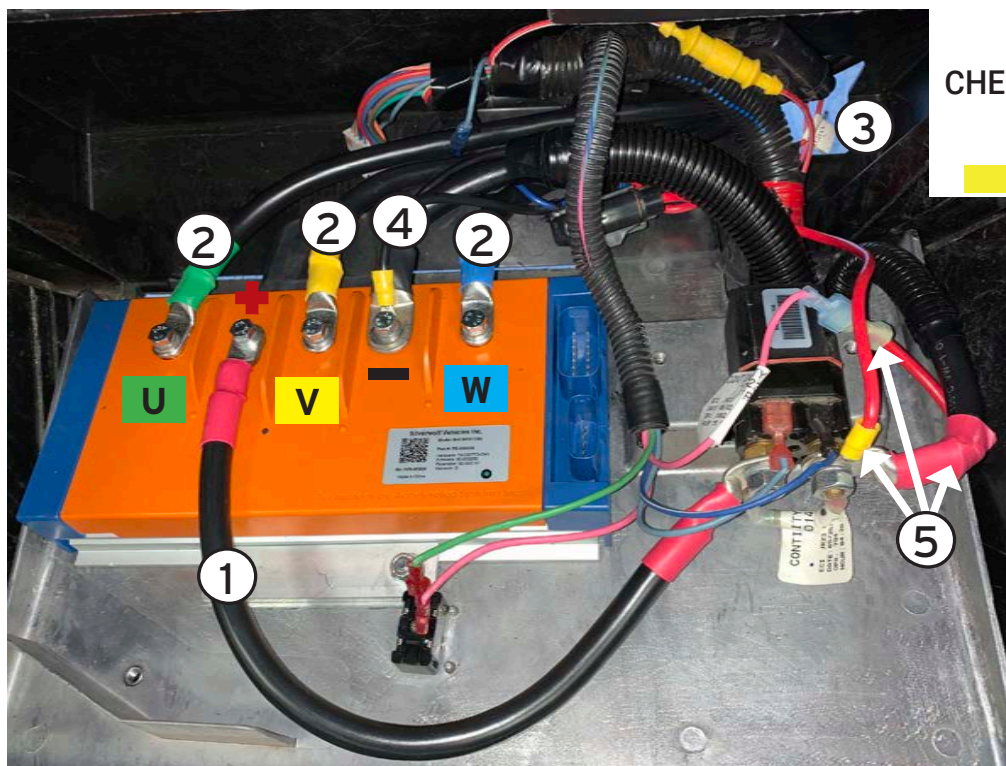
WARNING!

THE CONTROLLER HARDWARE MUST BE INSTALLED
IN THE ORDER SHOWN!

1 LOCK
WASHER
2 FLAT
WASHER



Wire
Terminal
Must Always
be on the
Bottom!



CHECK

+ Cable is on the
Positive Controller Post
- Cable is on the
Negative Controller Post

DO NOT SWITCH THESE CABLES!

Tighten the 5 Controller Bolts
with a Torque Wrench to
70in-lbs/8 Nm

DO NOT OVER TIGHTEN!

**PHASE CABLE
COLOR CODE**

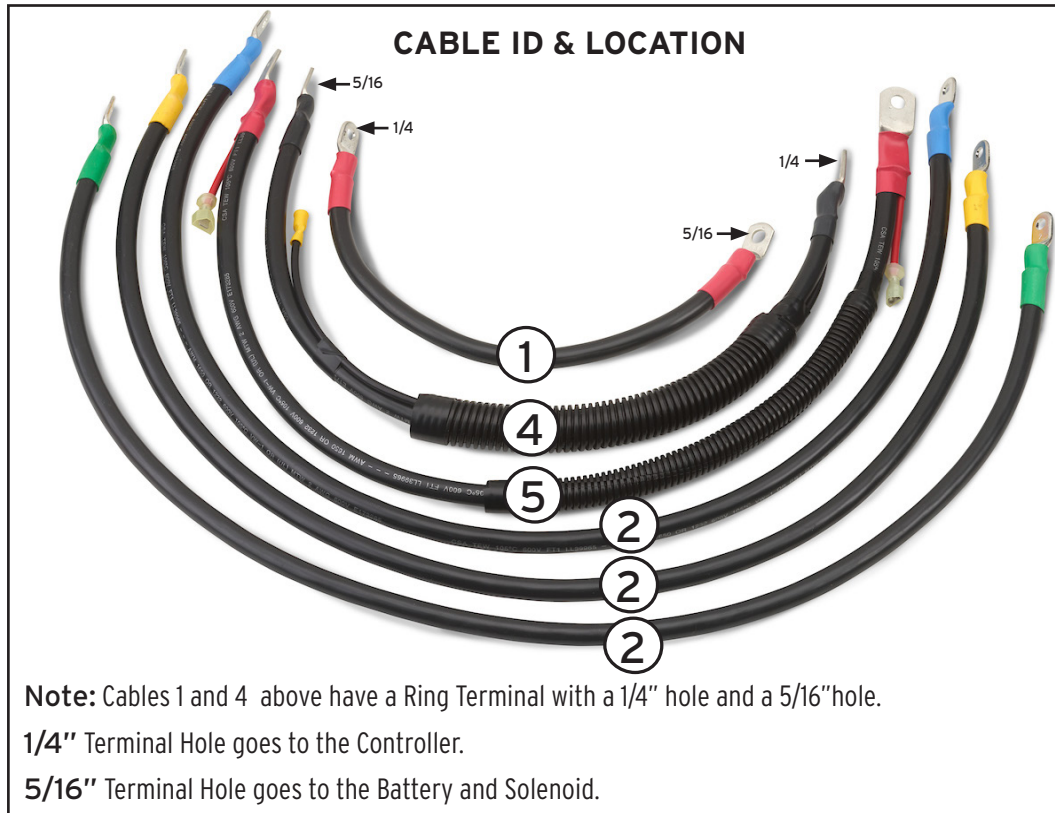
U = GREEN

V = YELLOW

W = BLUE


D

CLUB CAR® PRECEDENT®/ONWARD® CONTROLLER INSTALLATION PART 2



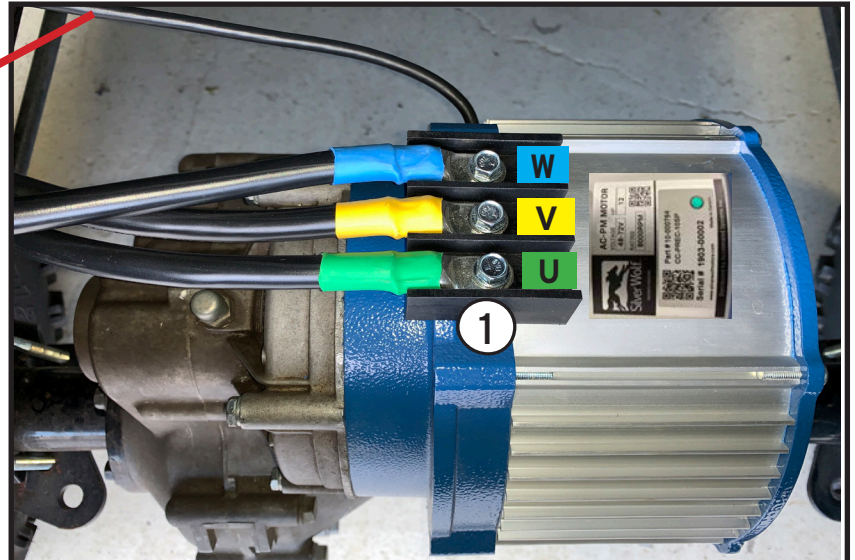
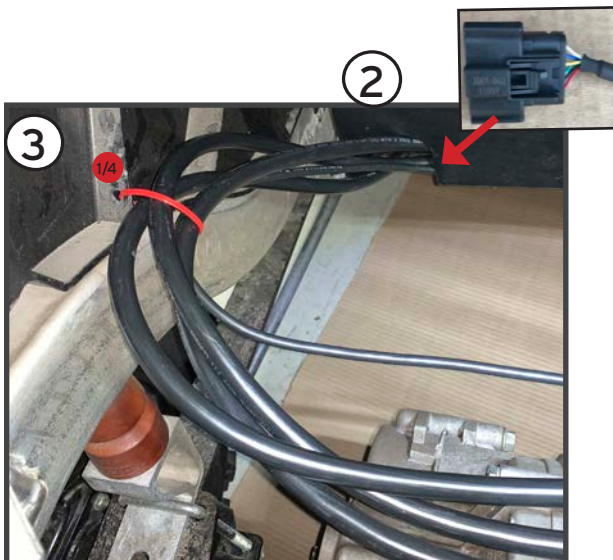
MOTOR INSTALLATION PART 2

E

1. Remove and re-use the three M6 Truss Head Bolts to secure the 3 Phase Cables. Make sure to match the Cable Colors between the Motor and the Controller.

WARNING! Tighten the 3 Motor Bolts with a Torque Wrench to **70in-lbs/8 Nm** Do not Overtighten!

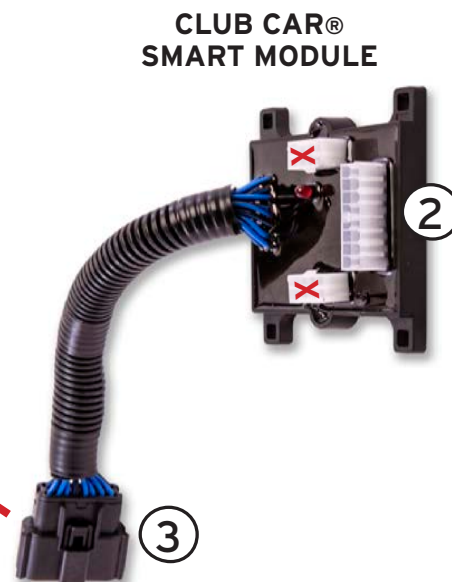
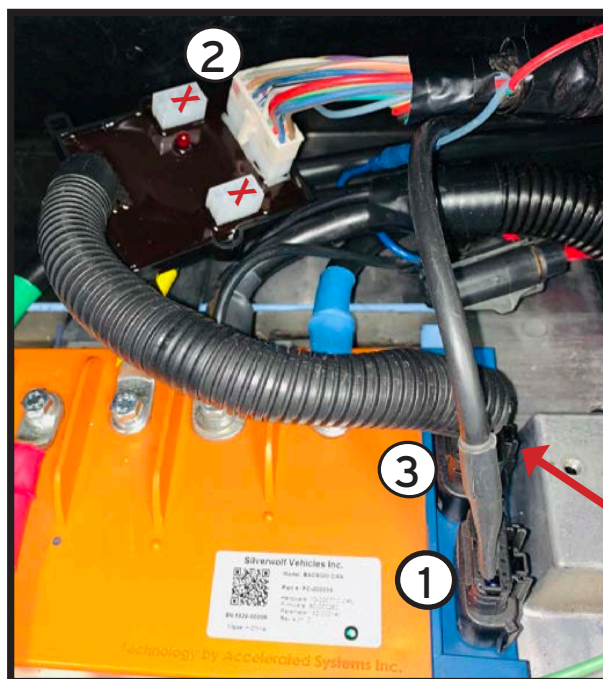
2. Feed the 6 pin Connector Wire from the Motor back into the Controller area through the hole in the Plastic Controller Cover.
 3. Drill a 1/4" hole in the lip on the plastic area above the Frame. Use the Zip Ties provided to secure the 3 Motor Phase Cables and the smaller 6 pin Connector Wire.
- Note:** Leave the Zip Ties loose to allow the Cables to be adjusted in the next step. Once assembly is complete the Zip Ties can be tightened further; leave them slightly loose so there is space between the Cables to allow air flow and for some movement.





CLUB CAR® PRECEDENT®/ONWARD® CONTROLLER INSTALLATION PART 3

- F**
1. Gently connect the 6 Pin Connector from the Motor on to the 6 Pin Receptacle on the Controller. Make sure it is aligned before pushing it in to place. See the "Connector Alignment" diagram below before installing.
 2. Gently connect the 16 Pin Connector from the Vehicle to the 16 Pin Connector on the Module.
 3. Align and gently connect the 16 Pin connector from the Module into the 16 Pin Connector on the Controller.

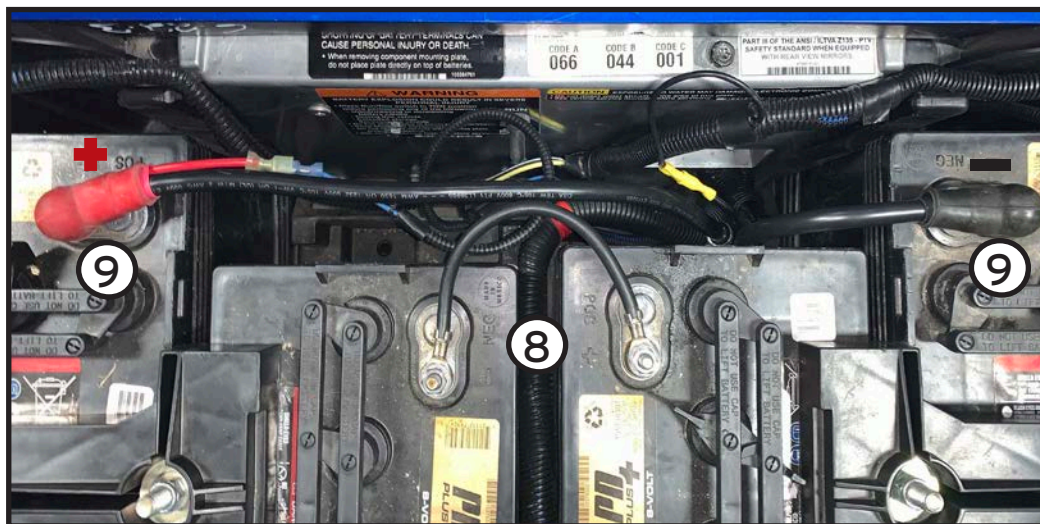
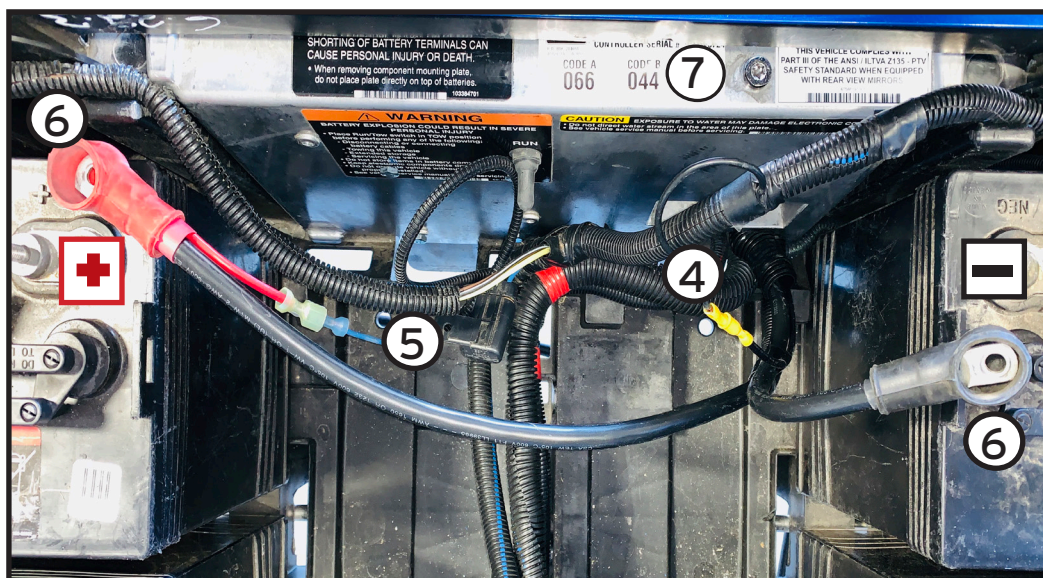


For the next steps see the photos on the following page.

4. Connect the Terminal from the smaller Wire on the Main Negative Cable to the Connector on the Vehicle Harness.
 5. Connect the Terminal from the smaller Wire on the Main Positive Cable to the Connector on the Vehicle Harness
 6. Before re-installing the Controller Cover double check that the Cables and Connectors are secure and in the correct location. Make sure the Positive and Negative Cables from the Controller come far enough into the Battery Compartment to reach the Batteries.
- Note:** With the New Heavier Cables the cover will fit tighter; make sure that all extra cable slack is pushed back out to the Motor or into the Battery Compartment. The Smart Module should lay flat against the Controller as shown above (#2).
7. Re-install the Controller Plate with the original Torx Screw.
 8. Re-install the 2 middle Batteries.
 9. Reconnect the Main Positive Cable to the Positive on the Battery and the Main Negative Cable to the Negative on the Battery.

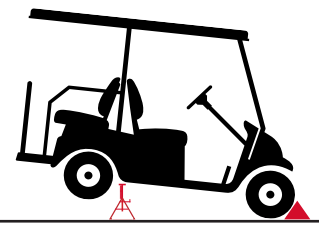
Note: Before replacing the Outer Plastic Cover at the back of the Cart check that the Cables going from the Motor into the Controller Area are secured against the side of the Vehicle. Leave the Zip Ties slightly loose so there is space between the Cables to allow air flow and for some movement.




CONTROLLER INSTALLATION PART 3 cont'd
F

Assembly is Complete!

WARNING!

Before testing the Vehicle make sure the Rear Wheels are off the ground and safely supported with Automotive Jack Stands. The Front Wheels must be Chocked!



Move the RUN/TOW to RUN and turn ON the Key The Vehicle is ready to test!

If the Vehicle does not operate check the Red light on the Controller and on the Module; they should both be on and not flashing.

CAUTION: To see the Red Status Lights on the Controller and Module gently lift the bottom of the Rear Plastic Cover up and back to expose the Controller Area.

DO NOT Remove this cover; Gently pull it back just enough to see the Light on the Controller and Module.

If the Red Light is Flashing or is not ON see the "Troubleshooting" section in this Manual or connect to the Cart by setting up the SilverWolf™ Smart Phone APP to identify any Warnings or Faults.

Note: After the initial test the Vehicle can be taken off the Jack Stands for a final test and to set up the SilverWolf™ Smart Phone App.

To set up the SilverWolf™ App See the "APP Set Up" Section on following pages.

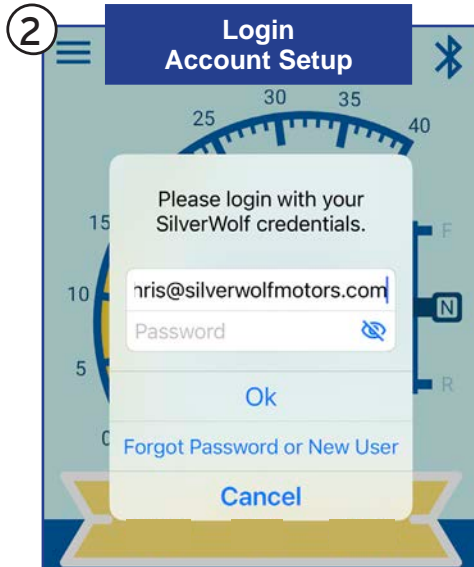


SETUP

1. Go to the Apple™ App Store or the Google™ Play Store. To download the SilverWolf™ Smartphone App.



2. Select "New User to setup your User Credentials and register the TEEKON kit for easy updates and warranty.



3. Check that the Phone/Device's bluetooth is ON

4. Open the Menu in the top left corner of the Home Screen.

5. Select "bluetooth Connections" and push to locate the Vehicle ID. **IE. "SW CC/EZ Rev 0.1.1"**

6. Select the Vehicle ID to connect to the Vehicle. When selected, the Vehicle ID will be highlighted and the Back up Buzzer will beep.

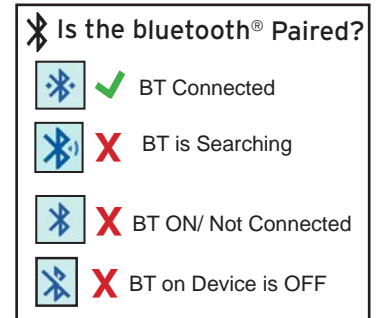
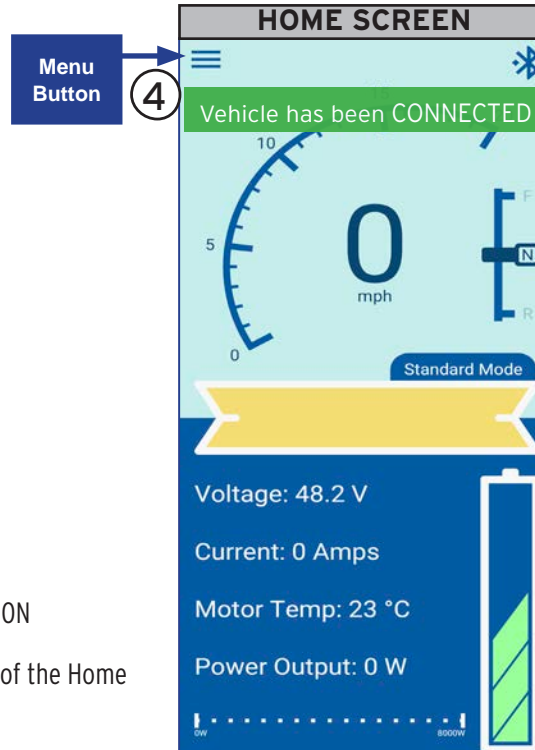
The App will perform a Pairing Sequence the first time it is connected. Follow the on screen instructions to complete the process.

7. When complete select "Check for Updates" to make sure the cart it up to date.

Note: The bluetooth® ID description can be changed and given a specific ID. Such as "BlueCart 1"

Selecting the Edit Button (Android™) or Swipe Left (Apple™) to allow editing.

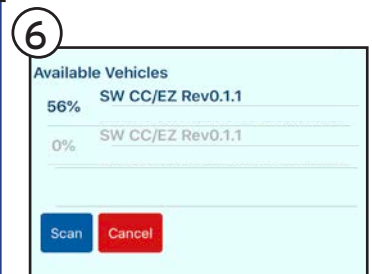
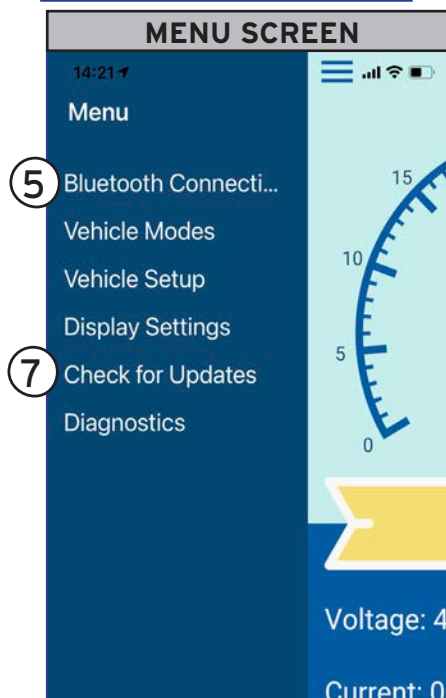
This ID is specific to the Device it is setup on and will not show on another paired device.



Vehicle has been DISCONNECTED

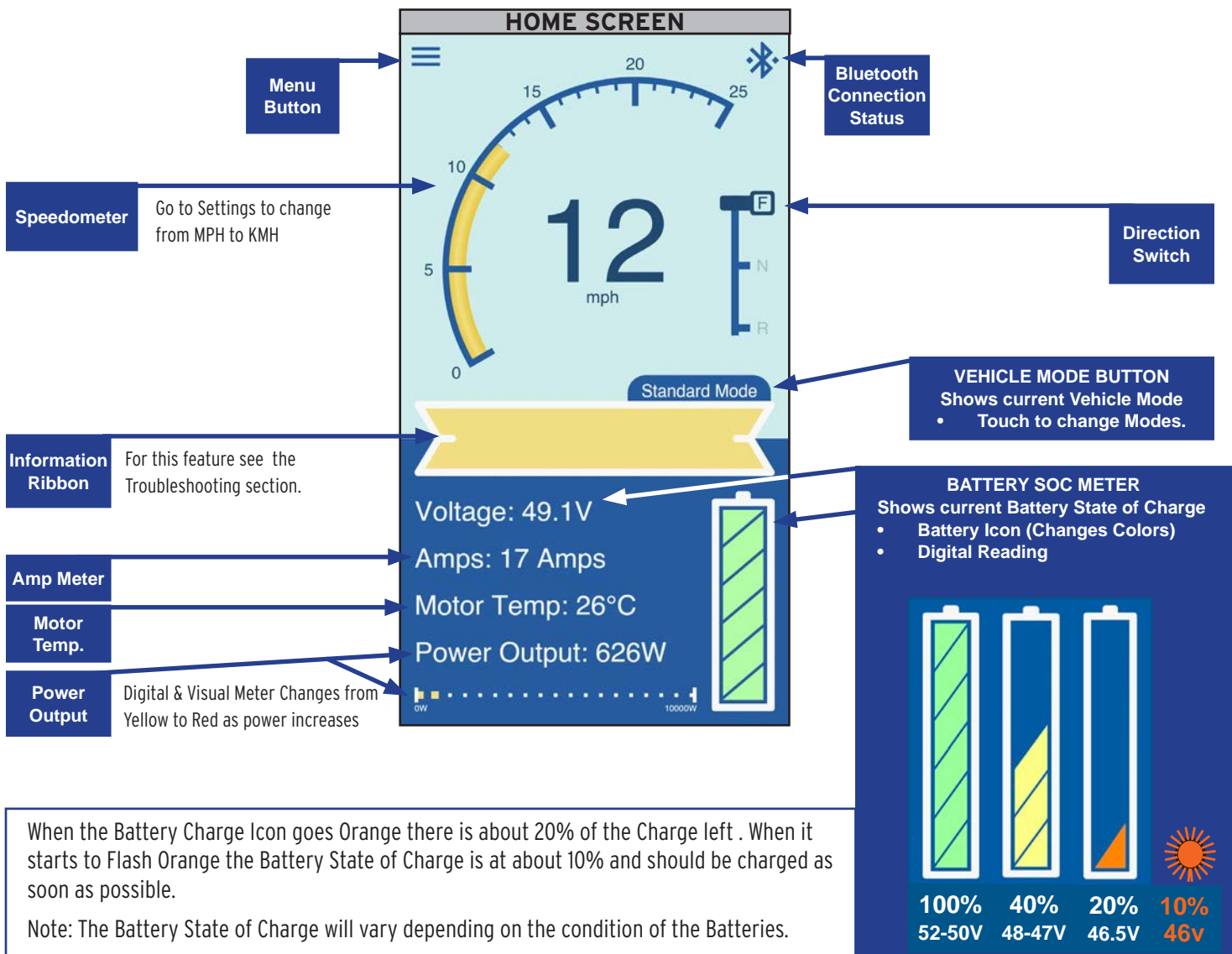
Vehicle has been CONNECTED

Note: this will display for 3-5 secs after the Key is turned Off or On.





HOME SCREEN FEATURES



Autoconnect: The Vehicle will automatically reconnect or disconnect when the Key is turned ON or OFF. This feature will only work with the paired Device and when it is in range.

The Backup Buzzer will also engage: 2 Beeps = **Connected** and 1 Long Beep = **Disconnected**

Simulation Mode: This is a demonstrations tool to show how the SilverWolf™ Smart Phone App works. Changes made are not live and do not affect the vehicle.

Note: When in this mode the Vehicle is disconnected and will not re-connect until Simulation Mode is stopped.



IN THE MENU

VEHICLE SETUP



WARNING!

Before using the Vehicle make sure to accurately set the Vehicle specification as shown below!

Selecting the incorrect settings can damage the Vehicle and/or cause serious injury!

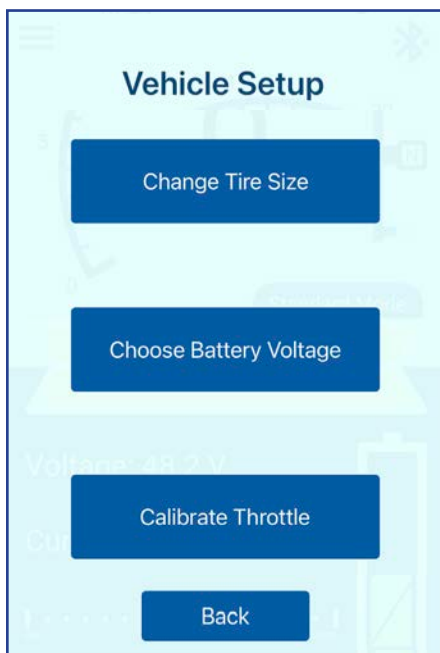
Menu

Bluetooth Connecti...

Vehicle Modes

Vehicle Setup

In the Vehicle Setup screen choose from the options shown below:



Change Tire Size : Select the tire size to for an accurate speedometer reading.

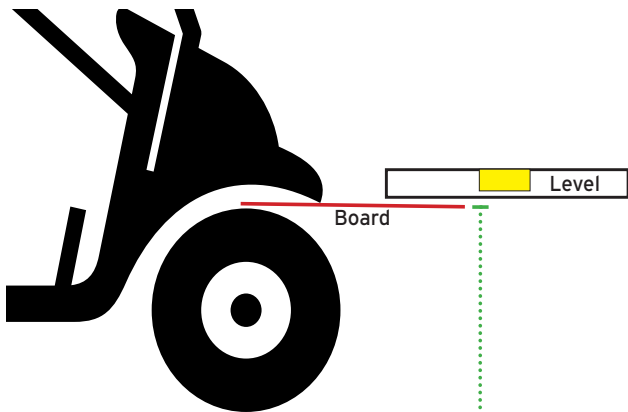
Change Battery Pack Voltage : Select the Battery Pack Voltage 36v -48v- 72v

Calibrate the Throttle: Matches the Vehicle Throttle range to the Controller for smoother performance.



WARNING!

Make sure to select the correct Wheel Size. Selecting the incorrect size will give an inaccurate speed reading. Verify the Vehicle speed with an independent GPS Device.



For the most accurate Speed reading first make sure the tires are filled to the manufacturer specified PSI rating on the tire.

Then measure the height of the Wheel with a Tape Measure, Flat Board and a Level. Select the closest size.

IN THE MENU

PRE-SET VEHICLE MODES



WARNING!

When using the SilverWolf™ App make sure the Device (Phone or Tablet) is mounted in the Vehicle!

DO NOT pickup or hold on to the Phone/Device while operating the Vehicle.

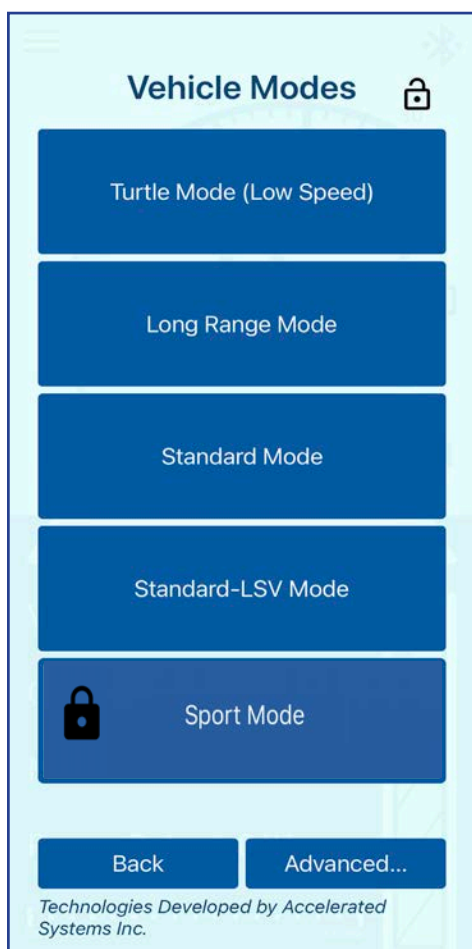
Menu

Bluetooth Connecti...

Vehicle Modes

Vehicle Setup

In the Vehicle Modes Screen there are 5 pre-programmed driving modes. 4 modes are included with the App. The 5th mode-Sport Mode can be unlocked by contacting SilverWolf by email at support@silverwolfmotors.com. In order to access Sport Mode SilverWolf requires you to sign a Liability Waiver. Once it is received and confirmed by SilverWolf an update will be sent to your device that will allow you to unlock Sport Mode. Simply select "Check for Updates" Note: this can take up 2 business days.



Turtle Mode (Low Speed):

Limit speed and acceleration. These setting are good for new drivers or indoor use.

Long Range Mode:

Speed, acceleration and regen braking are set to maximize the range of the Batteries.

Standard Mode:

Speed, acceleration and regen braking are set to match a Standard Golf Cart. Speed will top out at 19 mph. (with Standard 18" Tires)

Standard-LSV Mode:

Speed, acceleration and regen braking are set to that of a standard Low Speed Vehicle (LSV). Speed will top out at 25 mph. (with 23" Tires)

Sport Mode: (Requires unlocking by SilverWolf)

Settings are adjusted to give maximum speed and acceleration. This Mode will reduce Battery run time.

Advanced Mode:

Press the Advanced Button on the bottom right corner of the Settings Screen to show the adjustable Sliders. See the "Advanced Settings" section on the following page for a detail description and instructions on how to use this feature.

Note: The maximum Speed and Acceleration is limited to the unlocked Mode.

Lock Mode :

Select the Lock Icon at the top right corner of the Vehicle Modes Screen to lock the Vehicle in the current mode. To unlock simply touch the Lock Icon again.

Note: When the Vehicle is locked in one of the modes it can only be unlocked using the same device that locked it or by contacting SilverWolf at support@silverwolfmotors.com



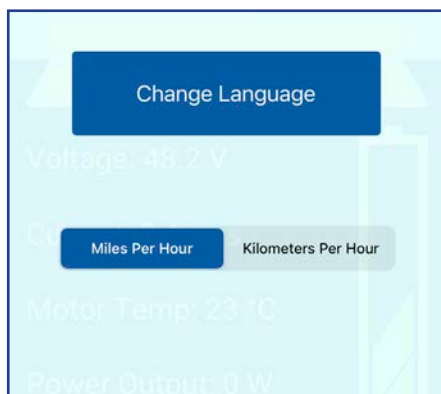
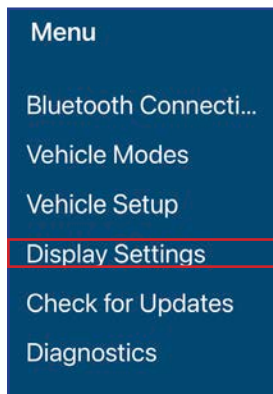
Unlocked



Locked

IN THE MENU

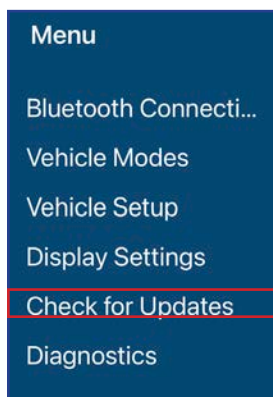
DISPLAY SETTINGS



Change Language

Speedometer Reading : Select MPH or KPH

CHECK FOR UPDATES



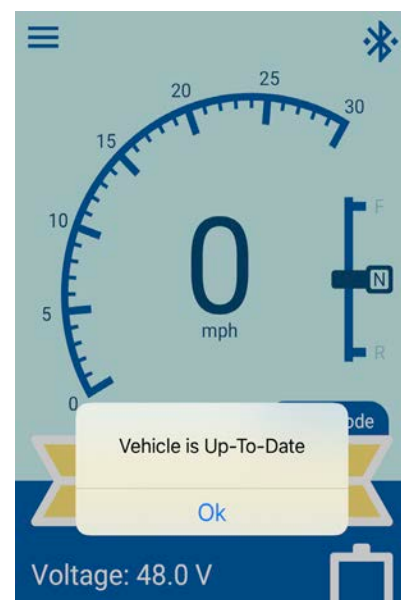
Online Updates to keep the firmware and configuration up to date.

Select "Check for Updates"

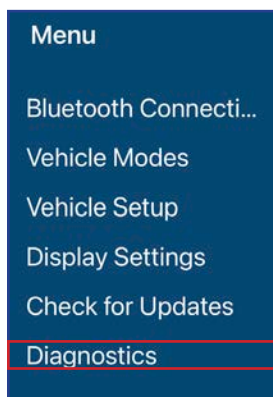
NOTE: In order to receive the updates, you will need to be connected to wifi or use your smartphone's data.

You do NOT need to be connected to the cart.

When connected to the cart select "Check for Updates" to complete the update.



DIAGNOSTICS



See "Troubleshooting" section



ADVANCED SETTINGS

WARNING!

FAILURE to follow the WARNINGS below can damage the Vehicle and/or cause SERIOUS INJURY OR DEATH!

MAKE SURE TO READ and UNDERSTAND the OWNER'S INSTALLATION and SERVICE MANUAL and ALL WARNING LABELS with this Motor/Controller Kit.

- Making changes or adjustments in the Advance Settings can significantly change how the Vehicle operates. When making changes or adjustments make sure to test the Vehicle in a flat open area away from people, pets, obstacles or any thing that could come in contact with the Vehicle.
- Always proceed with caution. Keep speed low and do not drive faster than conditions permit. The terrain, conditions and the operator's skill will determine a safe speed. Avoid sharp turns and do not accelerate quickly when turning; this can cause the vehicle to slide sideways or skid out of control. Abrupt maneuvers or aggressive driving can cause a rollover even on flat open areas.
- Maximum settings will affect how the vehicle handles and reduce its range. It is recommended to keep settings in the low to mid range for best overall performance and Safety.

Along with the pre-set Vehicle Modes there is an Advanced Setting Mode Button at the bottom of Vehicle Modes Screen.

Advanced...

In this Mode there are 6 sliders that can be adjusted to change the performance of the Vehicle.

The new settings can then be saved as a New Mode with a new name ie: "Street Mode".

Note: The new settings must be saved as a new Mode or the Vehicle will revert back to the last Pre-Set Mode it was in when the Key is turned OFF & ON.

Advanced Settings Sliders

1. Maximum Speed:

This setting limits the Vehicle's Maximum speed from 4 mph to 25 mph.

Additional Speed is available with the Sport Mode.

Recommended Setting = 19 mph or lower depending on terrain and location.

2. Power Output:

This setting allows the Vehicle's Power to be adjusted, giving more power to the Motor when needed; such as on hilly terrain.

Note: The higher the Power Output the quicker the battery will discharge.

Recommended Setting = 6000-10000 Watts

3. Acceleration:

This setting will allow the Acceleration (throttle) to be changed, which will affect how fast the Vehicle will reach maximum speed.

Note: The higher the Acceleration the quicker the battery will discharge.

Recommended Setting = 20% -50% depending on the location and terrain.

4. Braking Aggressiveness:

This setting will increase how quickly the Regen Braking reaches the Maximum Limit

Note: The Maximum Limit is set in the Regen Braking Setting.

Recommended Setting = 20% -50% depending on the location and terrain.

ADVANCE SETTINGS SCREEN

Vehicle Modes 🔒

Maximum Speed: 25 mph
1

25

Power Output: 10000 Watts
2

10000

Acceleration: 49 %
3

100

Braking Aggressiveness: 0 %
4

100

Throttle Sensitivity: 1 out of 7
5

Aggressive

Regenerative Braking: 20 %
6

100

Back

Save N...Setting

Technologies Developed by Accelerated Systems Inc.

ADVANCED SETTINGS CONT'D

Advanced Settings Sliders

5. Throttle Sensitivity:

This Setting controls the response time of the throttle; a low setting will make the Throttle less responsive and require it to be depressed further. This will be more noticeable when driving the Vehicle at more than 10 mph and when the Throttle is released and then pressed again.

Recommended Setting = 3-4

6. Regenerative (Motor) Braking:

This setting also known as "Regen Braking" adjusts the maximum electric Braking Force. The higher the setting the harder the Vehicle will come to a stop.

Recommended Setting = 20% -50% depending on the location and terrain.



WARNING!

Regenerative Braking does not replace the Vehicles Original Mechanical Brakes! Always make sure the Mechanical Brakes are working properly and to the manufacturers specifications!

On-The-Fly Regenerative Braking:

This feature is found on the Main Screen by swiping Left.

The Regen Electric Braking can be adjusted while the Vehicle is moving to help slow it down or bring it to a stop; such as when going down hill where extra braking may be required.

WARNING: When using the SilverWolf™ App make sure the Device (Phone or Tablet) is mounted in the Vehicle.

Do Not pickup or hold on to the device while operating the Vehicle.

Recommended Setting = 20% -50% depending on the terrain?

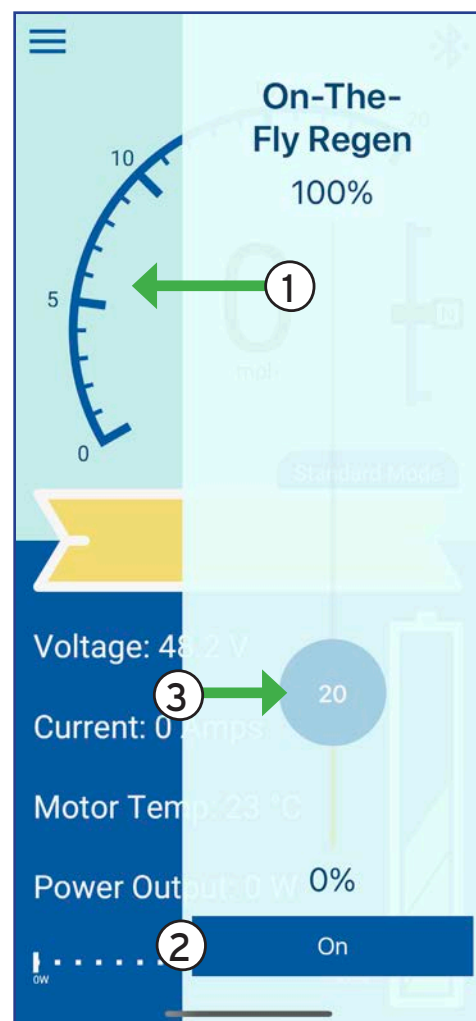
How to use:

1. Swipe left from the Main Screen to bring up the On-The-Fly Regen Braking Slider.
2. Select On to turn on this feature.
3. Then slowly slide the adjustment circle up to increase the Regen Braking or down to decrease the Regen Braking. This can be done while the Vehicle is moving and the Throttle /Accelerator Pedal is off.

The setting will show in percentage of 100 in the middle of the adjustment circle.

Note: to go back to the Original or Default Regen Braking setting touch the "Off" Button at the bottom of the screen.

The Regen Braking will revert back to the setting of the last Pre-set Driving Mode the Vehicle was in. i.e. "Standard Mode" This will also happen when the Key Is turned OFF and ON.



NOTE: Tire Size: The Controller is pre-programmed for 23" Tires; the Speedometer may give an inaccurate reading if the Vehicles Tire Size is not 23".



The SilverWolf™ App includes basic troubleshooting Icons as well as a more detailed diagnostics page.

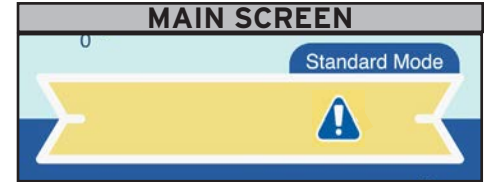


On the Main Screen a **Warning Icon** will appear in the yellow Info Ribbon when there is a potential problem.

Touching the Icon will show a description of the fault and what steps should be taken.



Temperature Icon: This Icon will appear in the Info Ribbon when the Motor or Controller is getting too Hot.



For a more detailed diagnostic go to the “ Vehicle Diagnostics” section in the Menu in the top left corner of the Main Screen.

Select the Diagnostics Page and scroll down to see Vehicle Faults, Warnings and the status of the Main Components of the Vehicle.



DIAGNOSTICS

Menu

Bluetooth Connecti...

Vehicle Modes

Vehicle Setup

Display Settings

Check for Updates

Diagnostics

The diagnostics page shows the current Status of the Vehicle and it's Main Components.

For help with troubleshooting select “**Upload Snapshot**” at the bottom of the Diagnostics page; this will send the current Vehicle Diagnostics to SilverWolf for further analysis.



VEHICLE DIAGNOSTICS

<
Vehicle Diagnostics

Faults & Warnings

Faults: (none)
 Faults2: (none)
 Warnings: (none)

Battery Status

Battery State Of Charge: 85 %
 Battery Voltage: 48.094 Volts
 Battery Power: 0 Watts
 Battery Current: 0 Amps

Motor Status

Motor Current: 118.156 Amps
 Motor Input Power: 1174 W
 Motor Temperature: 50 deg C

Controller Status

Controller Temperature: 0 deg C

Throttle Status

Throttle Voltage: 0 Volts
 Throttle Off Voltage: 0 Volts
 Throttle Full Voltage: 0 Volts
 Throttle Deadband Threshold: 0 Volts
 Throttle Fault Range: 0 Volts

Input Voltages

Digital Switch Voltage: 0 Volts
 Temperature Sensor Voltage: 0 Volts
 Charger Circuit Voltage: 0 Volts

Flags & Vectors

Vehicle Flags: (none)
 Vehicle Flags2: (none)
 Digital Inputs: (0x8)
 Bit 3: forward input

Controller Information

Software Revision Level: 6.019
 Wheel Diameter: 19.685 inches
 Gear Ratio: 0 N:1
 Rated System Voltage: 0 Volts

Shows the current Faults and Warnings
 Beside each Fault and Warning there will be a numerical reading, which will provide a more specific reading when determining the Fault.

Shows the status and a numerical reading of the Main Components.

The Input Voltages & Flags/Vectors section provides additional Status on the Cart.

Current Controller Settings

Current Mode Settings

<
Vehicle Diagnostics Cont'd

User Settings

Vehicle Maximum Speed: 19.884 mph
 Rated Motor Power: 8000 Watts
 Speed Mode Positive Acceleration Ramp: 40
 Speed Mode Regen Ramp: 48 rpm/s in pu
 Throttle Filter Speed Control: 13
 Maximum Braking Torque: 19.995 % of rated motor current

Connection Status: **CONNECTED**
 Polling Error Count: 0
 Firmware: 6019
 Serial: 0-0

Upload Snapshot



TROUBLESHOOTING without the SilverWolf™ SMART PHONE APP

If the SilverWolf™ App is not being used or it does not connect, there is a Red Light on the Controller and the Smart Module which will indicate the status of the cart.

Note: Before contacting the dealer or SilverWolf™ for support, make sure that the Batteries have a full charge.

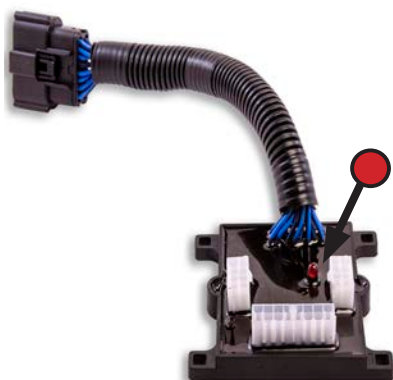
For SilverWolf™ Support contact support@silverwolfmotors.com.

CONTROLLER STATUS LIGHT



LIGHT STATUS		STATUS DESCRIPTION	NEXT STEP
	SOLID RED	Controller is ready.	<ul style="list-style-type: none"> Check that the Smart Module Status Light is ON. Check all Connections, Cables and the status of the Batteries. Contact Dealer or Silverwolf™ if issue can not be determined.
	FLASHING RED	Count Flash Code Note: the Code will be a 2 digit code. i.e. 2-4	<ul style="list-style-type: none"> Call the Dealer or Silverwolf™ for further troubleshooting.
	NO LIGHT	<ul style="list-style-type: none"> Check all Connections, Cables and Batteries. Check that there is 48-50V across the Positive and Negative Posts on the Controller 	<ul style="list-style-type: none"> Check all Connections, Cables and Batteries. Check that there is 48-50V across the Positive and Negative Posts on the Controller

SMART MODULE



	SOLID RED	OK
	NO LIGHT	CHECK WIRING & BATTERIES



SilverWolf™ Vehicles Inc. warranty obligations are limited to the terms set forth below:

SilverWolf™ Vehicles Inc. hereby warrants to the original purchaser of a new motor kit and/or accessories that they shall be free from defects in material and workmanship, under normal use and service, subject to the exclusions and limitations set forth below, for a period of one (1) year from date of original retail purchase to customer or End-User.

The purchaser must provide proof of the date of purchase with any warranty claim. If a defect exists, at its option, SilverWolf™ Vehicles Inc. will;

1. Repair the Product at no charge, at a place and location of its choosing,
2. Exchange the Product with a Product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original Product.
3. Refund the purchase price of the Product.

A replacement product/part assumes the remaining warranty of the original Product or ninety (90) days from the date of replacement or repair whichever provides longer coverage for you. When a Product or part is exchanged, any replacement item becomes your property and the replaced items become SilverWolf™ Vehicles Inc.'s property. When a refund is given, your Product becomes the property of SilverWolf™ Vehicles Inc.

Exclusions and Limitations

SilverWolf™ Vehicles Inc.'s Limited Warranty does not cover the following items:

1. Products lost or damaged during shipment;
2. Abnormal strain, neglect or abuse
3. Installation and use of parts or accessories that are not genuine SilverWolf™ parts (unless approved by the SilverWolf™ Vehicles Inc. in writing)
4. Accident or collision damage
5. Damage to product due to misuse, accident, theft or fire
6. Modification or disassembly of motor, controller and/or any other original parts and components This limited warranty covers material & workmanship for the above-specified period.

Voiding of Warranty:

This warranty shall be void if the motors or accessories are abused or used in any unintended manner or if they show indications that they been altered in any way to cause them to perform outside of SilverWolf's™ specifications.

Motors kits which are installed on vehicles used for rentals or free public use are not covered under warranty.

Any modifications or alterations leading to changes in the stability or speed of the vehicle, can cause serious personal injury or death.

**Disclaimer**

This limited warranty is exclusive. SilverWolf™ makes no other warranty of any kind, expressed or implied. Any implied warranties of merchantability or fitness for a particular purpose which exceed the obligations or time limits stated in this warranty are hereby disclaimed by SilverWolf™ Vehicles Inc. and excluded from this warranty. The purchaser and SilverWolf™ Vehicles Inc. expressly agree that the remedy of the replacement or repair or the defective component thereof is the sole remedy of the purchaser. SilverWolf™ Vehicles Inc. makes no other representation or warranty of any kind.

No SilverWolf™ Vehicles Inc. Dealer, Distributor, Reseller, Agent or Employee is authorized to make any modification, extension or addition to this warranty.

No Consequential Damages

SilverWolf™ Vehicles is not responsible for direct, special, incidental, or consequential damages including, but not limited to, loss related to property, loss of use, loss of time, inconvenience, or any other economic loss.

How to Make a Warranty Claim:

To make a warranty claim under this limited warranty, you must present defective component to an authorized SilverWolf™ dealer. SilverWolf™ Vehicles Inc. will return the replacement item to the end user.

How to Contact SilverWolf™ Vehicles Inc;

60 Northland Dr. Unit 6
Waterloo, ON Canada N2V 2B8

Tel: 1-888-398-7078

E-mail: support@silverwolfmotors.com

For parts and repair contact your local dealer. or support@silverwolfmotors.com



Silver WolfTM

***Performance Runs
in the Family***

