EB POWER

AC KIT INSTALL GUIDE

LATE YAMAHA DRIVE

www.ecobattery.com

BEFORE YOU BEGIN

Your AC Motor and Controller **must be registered within 60 days of purchase** to activate the 2 year limited warranty. Products not registered within 60 days of purchase will carry a 1 year limited warranty.

Tip: The serial numbers on the components are easier to read when not installed.

www.ecobattery.com/register

INTRODUCTION



Late Version:
This installation guide is for late Yamaha models from 2011 and newer. There may be some overlap in production years, so this guide applies specifically to models with a stock battery configuration of six 8V batteries. If your cart came equipped with four 12V batteries, please refer to the early model Yamaha installation guide.



Early Yamaha Battery Bay

WARNING!



• Remove all batteries before you begin installation.

• Working with batteries can be dangerous. Safety gear such as protective eyewear, insulated gloves, and insulated tools are required for safe installation.

• We recommend using glasses and other personal protective equipment during the install. When working with lead acid batteries, it is highly recommended to use rubber gloves to prevent contact with acid and other harmful chemicals.

• This guide is not meant to give an untrained person enough knowledge to competently work with lithium batteries or electric vehicle systems. If you do not fully understand this guide, please stop and seek professional installation.

• Damage to the battery, system components, or property due to incorrect or improper installation is not covered by the warranty. Do not short circuit or connect with reverse polarity, damage from improper connections is not covered by warranty.

• When working with electrical components take extra care to avoid contact between tools, battery terminals and other electrical components that would lead to damage or injury.

Important: Inspect your new products for any damage that may have occurred during shipping. If there are any visible signs of damage, **DO NOT CONTINUE** and contact your dealer or Eco Battery.

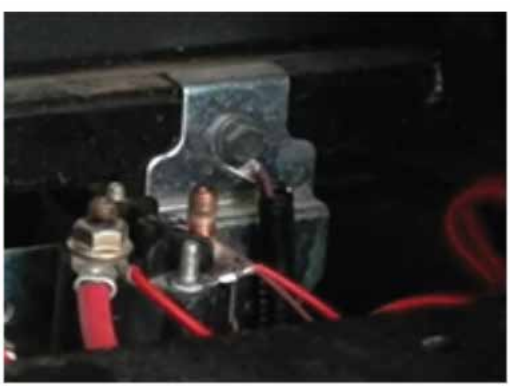
Eco Battery

INSTALLATION

Step 1: Remove the plastic bagwell panel.




Step 2: Remove all cables from the factory controller and solenoid.

Step 3: Remove the factory controller.




Eco Battery

INSTALLATION



Step 4:

Remove the solenoid.



Step 5:

Remove cables from the motor.



Step 6:

Remove the cable hanger from the rear support.

INSTALLATION



Step 7:

Remove the motor cables from the cart.



Step 8:

Unplug the motor speed sensor.



Step 9:

Remove the motor hardware.

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INSTALLATION



Step 10:

Jack the cart up. Support the cart with jack stands located under the frame.



Step 11:

Remove the factory motor.



Step 12:

Grease the input shaft splines.

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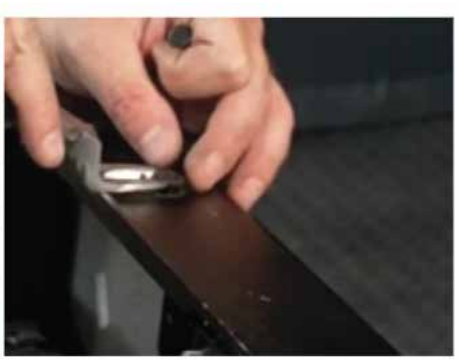
Step 13:
Install the EB motor using the supplied hardware.
Torque the motor to 15 foot pounds or 180 inch pounds.



Step 14:
Lower the cart back down to the ground.

Step 15:
Remove the plastic push pins from the seat front body panel. Remove the panel.









Step 16:

Remove the clips securing the floor mat.

Remove the floor mat.



Step 17:

Remove the pedal cover.

Step 18:

Using a 3mm Allen socket, remove the screw securing the cup holder. Remove the cup holder.



INSTALLATION



Step 19:

Cut all of the zip ties securing the harness in the battery compartment.



Step 20:

Disconnect the tow/run switch.





Step 21:

Disconnect the foot switch connector.

Disconnect the throttle connector.

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Step 22:
Unplug the key switch connector.
Unplug the FNR connector.
Remove the FNR switch.



Step 23:
Disconnect the reverse buzzer.

Step 24: Cut any zip ties securing the harness in the dash.



Step 25:

Pull the harness from the dash towards the floorboard.



Step 26:

Remove the factory harness from the cart.

Step 27: Locate the EB Power Yamaha Drive MCU Plate Drill Guide. Place it in the driver's side of the battery compartment as shown. Drill the two five-sixteenth holes marked "DRIVER." Drill the two three-eighths holes marked "DRIVER."





Step 28: Locate the MCU plate and install the two M6 studs as shown.




Step 29: Install the MCU plate in the cart. Install the two M6x25 bolts and nuts.
HAND TIGHTEN ONLY. DO NOT USE AN IMPACT TOOL.




Step 30: If using the EB 12-Volt Reducer, take the opportunity to install it in one of the two locations on the MCU plate as shown.




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Step 31:

Locate the EB harness. Connect the main harness connector to the controller. Make sure that the connector snaps in completely.



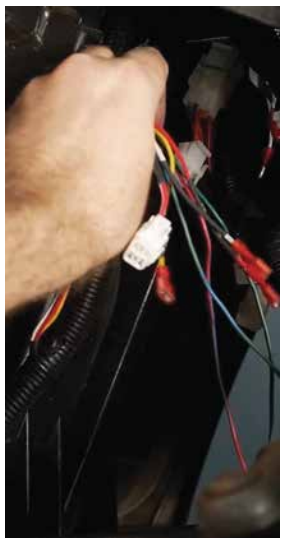
Step 32:

Route the harness through the body and into the throttle box.



Step 33:

Route the harness through the hole in the floor.



Step 34:

Route the harness up towards the dash.



Step 35:

Plug in the reverse buzzer connector.

Step 36: Locate the EB switch plate. Using the switch plate as a template, mark the switch cutouts and holes. Drill the holes to 3/16" or 5mm. DO NOT DRILL LARGER OR THE PLASTIC PUSH PINS WILL NOT FIT CORRECTLY. Using a Dremel tool or preferred cutting tool, remove the necessary material as shown. Install the switch plate using the four plastic push pins. Install the FNR and mode switches in the plate.









Step 37:

Connect the key switch harness.

Step 38: Install the Forward, Neutral, and Reverse spade connectors on the FNR switch. Note the P1, P2, and P3 labels on the harness correspond with the 1, 2, and 3 positions molded on the side of the switch housing, as highlighted in the diagram. Install the mode switch spade connectors on the mode switch. Note the P1, P2, and P3 labels on the harness correspond with the 1, 2, and 3 positions molded on the side of the switch housing, as highlighted in the diagram.







Step 39: Locate the Yamaha YDRE throttle adapter and connect it to the harness. Connect the adapter to the throttle. Connect the foot switch connector.







Step 40:
Secure the throttle adapter to the main harness using a zip-tie.



Step 41:
Install the provided high-current motor cables on the corresponding color-coded motor terminals. Torque terminal hardware to 8 foot pounds or 96 inch pounds.

Step 42: Drill two quarter-inch holes in the plastic battery tray. Loosely secure the motor cables. These will be fully tightened in a later step.





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Step 43:
Connect the motor cables to the corresponding color-coded controller terminals.
Torque terminal hardware to 8 foot pounds or 96 inch pounds.

Step 44: Route the motor temp sensor and motor speed sensor through the previously installed zip-ties. Plug in the motor temp sensor and speed sensor connectors.







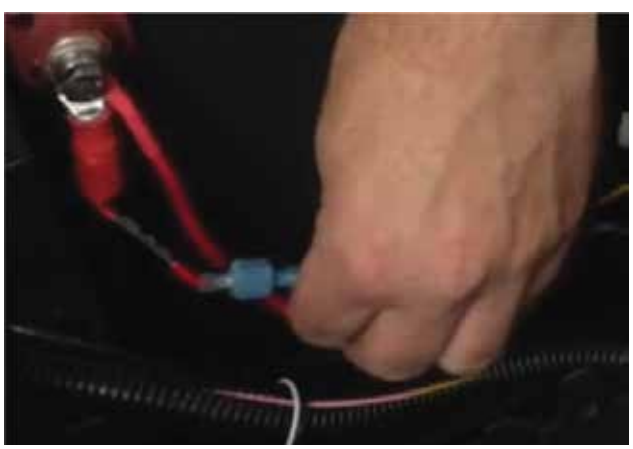

Step 45:
Connect the tow/run switch wires.
It does not matter which wire is installed on either spade terminal.



Step 46:
Install the positive battery cable labeled
"TO SOLENOID" on the solenoid.
Torque terminal hardware to 8 foot pounds
or 96 inch pounds.



Step 47:
Install the negative battery cable labeled
"TO CONTROLLER B negative" on the controller.
Torque terminal hardware to 8 foot pounds or 96 inch pounds.



Step 48:
Plug in the TOW/RUN power spade connector
into the spade connector on the positive
battery cable.

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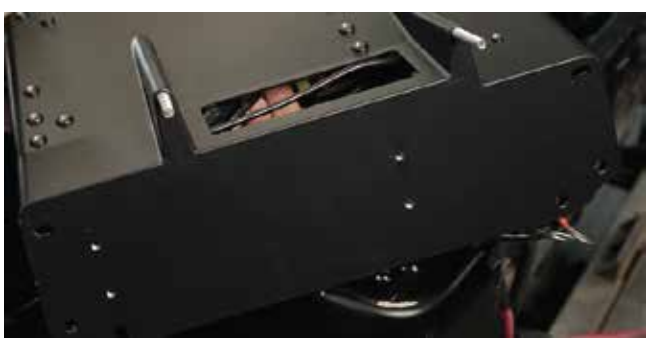
Step 49:

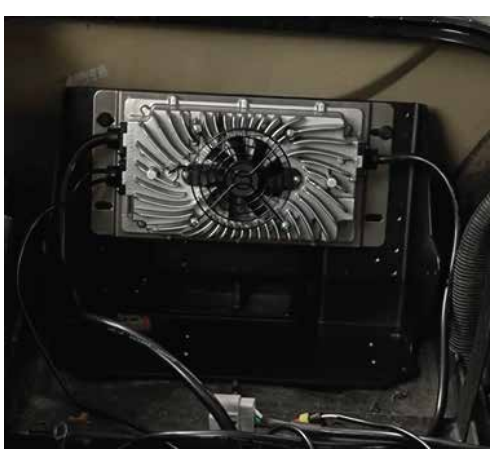
Plug in the solenoid harness labeled "TO SOLENOID."

Step 50: If installing the optional charger mounting plate, locate the EB Power Yamaha Drive MCU Plate Drill Guide previously used on the driver's side. Place it in the passenger side of the battery compartment as shown. Drill the two five-sixteenth holes marked "PASSENGER." Drill the two three-eighths holes marked "PASSENGER."









Step 51:

Install the charger on the mounting plate.

Step 52: Locate the MCU plate and install the two M6 studs as shown. Install the MCU plate in the cart. Install the two M6x25 bolts and nuts. HAND TIGHTEN ONLY. DO NOT USE AN IMPACT TOOL.







Step 53:
Install the positive battery cable and any associated cables on the positive battery terminal. Install the negative battery cable and any associated cables on the negative battery terminal. Torque to 8 foot pounds or 96 inch pounds.

Step 54: Connect the CAN harness labeled "CAN TO BATTERY" to the battery meter cable.





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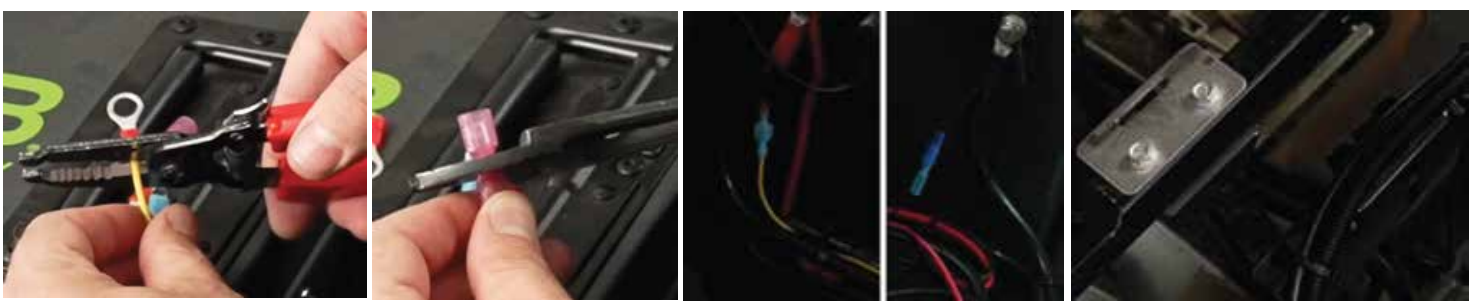
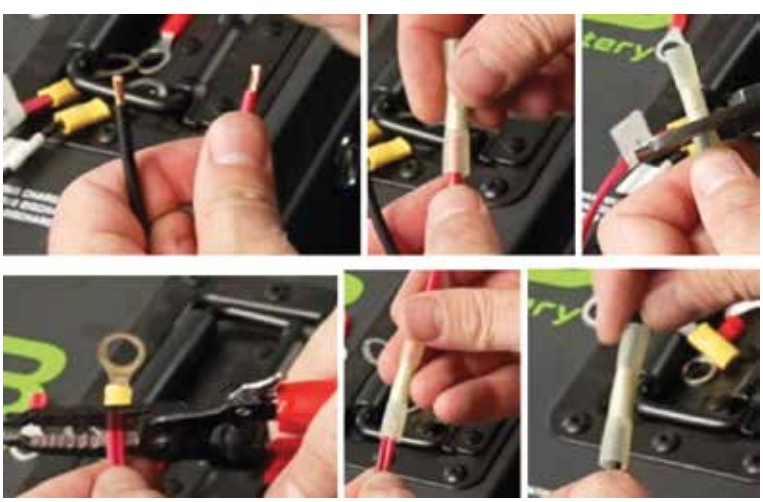
Step 55: If using an Eco Battery 12-Volt Reducer, locate the 12-Volt Reducer harness. Cut the orange wire as shown. Install the provided 4mm male bullet connector. Plug the previously installed 4mm male bullet connector into the 4mm female bullet connector on the harness labeled "KSI/DC to DC TRIGGER."



Step 56: Install the provided 5mm bullet connector on the black 16-gauge wire. Install the provided one-quarter female spade connector on the yellow 16-gauge wire. Connect the black and yellow 16-gauge wires to the pigtails on the battery cables labeled "DC-DC positive" and "DC-DC negative," respectively.





Step 57: Connect the red (positive) and black (negative) 12-gauge wires to the input side of your cart's 12-volt system.

Step 58: Reinstall the pedal cover. Reinstall the floor mat and hardware.




Step 59: Reinstall the cup holder and hardware.



Step 60: Reinstall the seat front body panel and hardware.




INSTALLATION



Step 61:

Reinstall the bagwell cover and hardware.

Final Step:

Connect to the EB Power App and tune your cart.

Step-by-step App instructions can be found by scanning the first QR code below, and selecting Product Resources, then Install Help and AC Controller App Programming.

NEED MORE HELP?

877-326-2288

support@ecobattery.com

For additional product info, user manuals, user guides, and warranty information visit **https://ecobattery.com/pages/quickstart**

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EB Eco Battery