



Switch from C5 (not supplied)

(W2)

FAN RETAINING RING

(W1)

BATTERY 1

BATTERY 2

(W4)

(W5)

(W3)

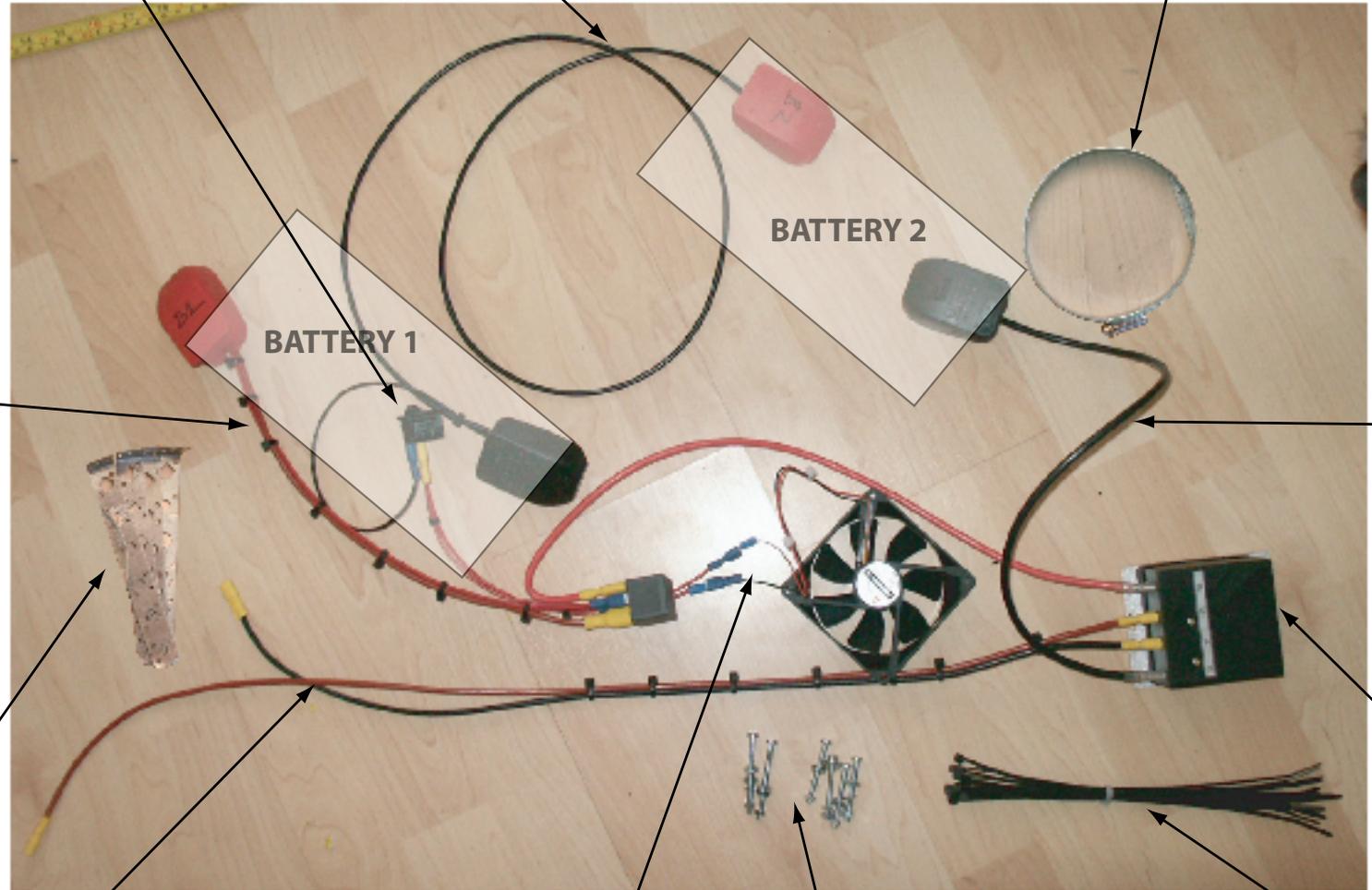
CONTROLLER AND FAN
NUTS, BOLTS & WASHERS

(W6)

CABLE TIES

FAN MOUNTING PLATES X4

Separate pages are shown for wiring diagrams (W1) - (W6)





(W1) Battery1 Positive to Switch Relay Fan & onward to +B controller

001 Plugs in to light switch



002 Cooling fan +



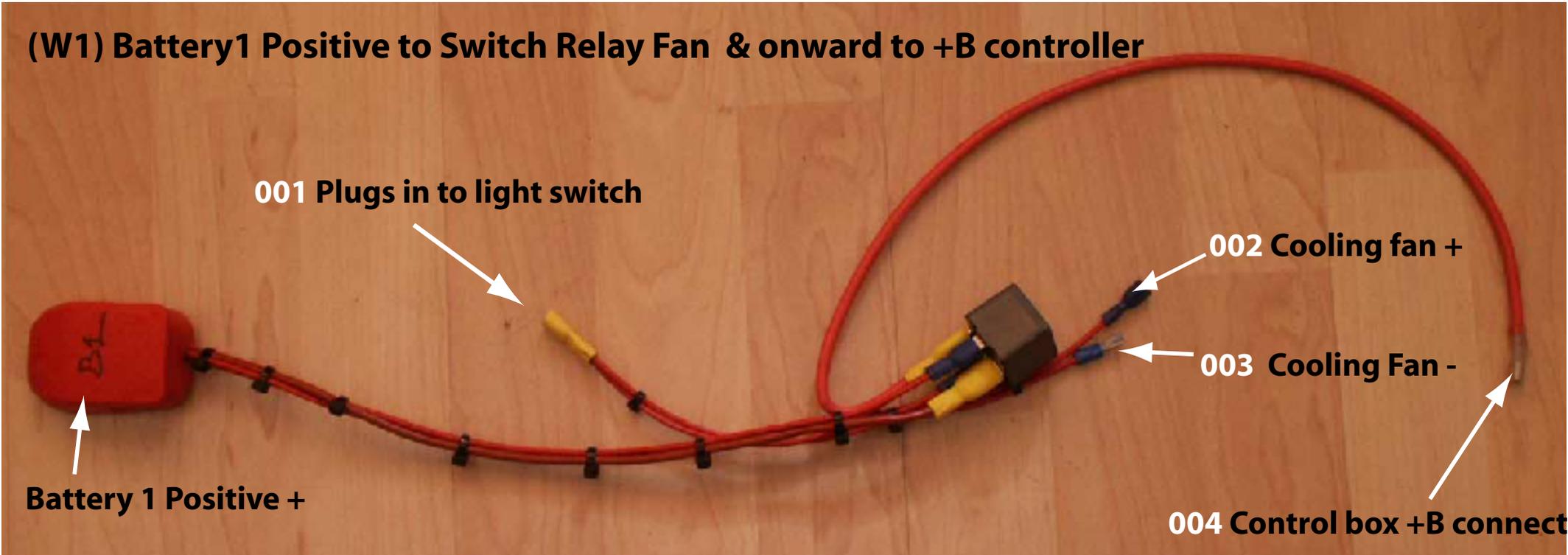
003 Cooling Fan -



Battery 1 Positive +



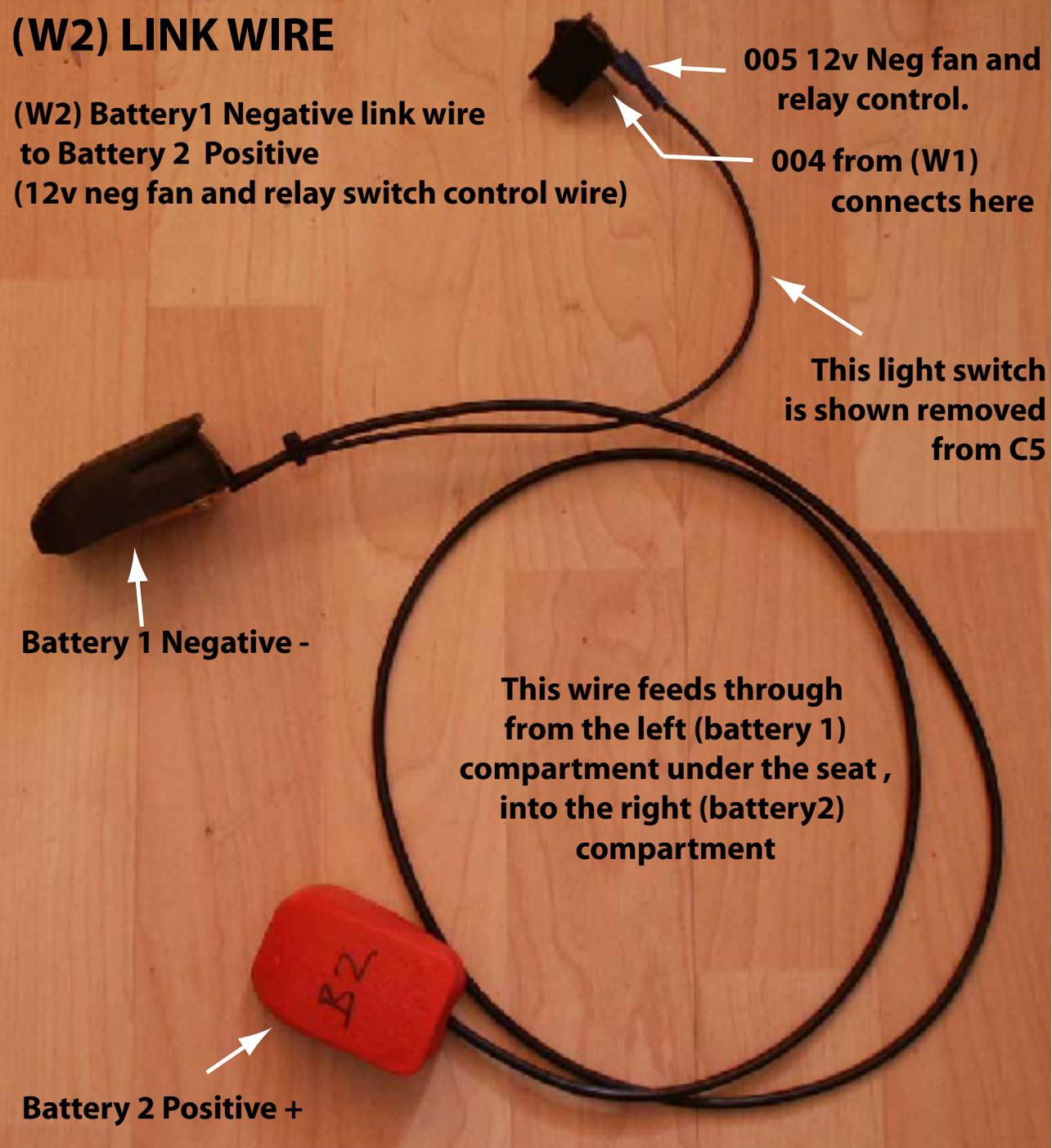
004 Control box +B connector





(W2) LINK WIRE

(W2) Battery1 Negative link wire to Battery 2 Positive (12v neg fan and relay switch control wire)



005 12v Neg fan and relay control.

004 from (W1) connects here

This light switch is shown removed from C5

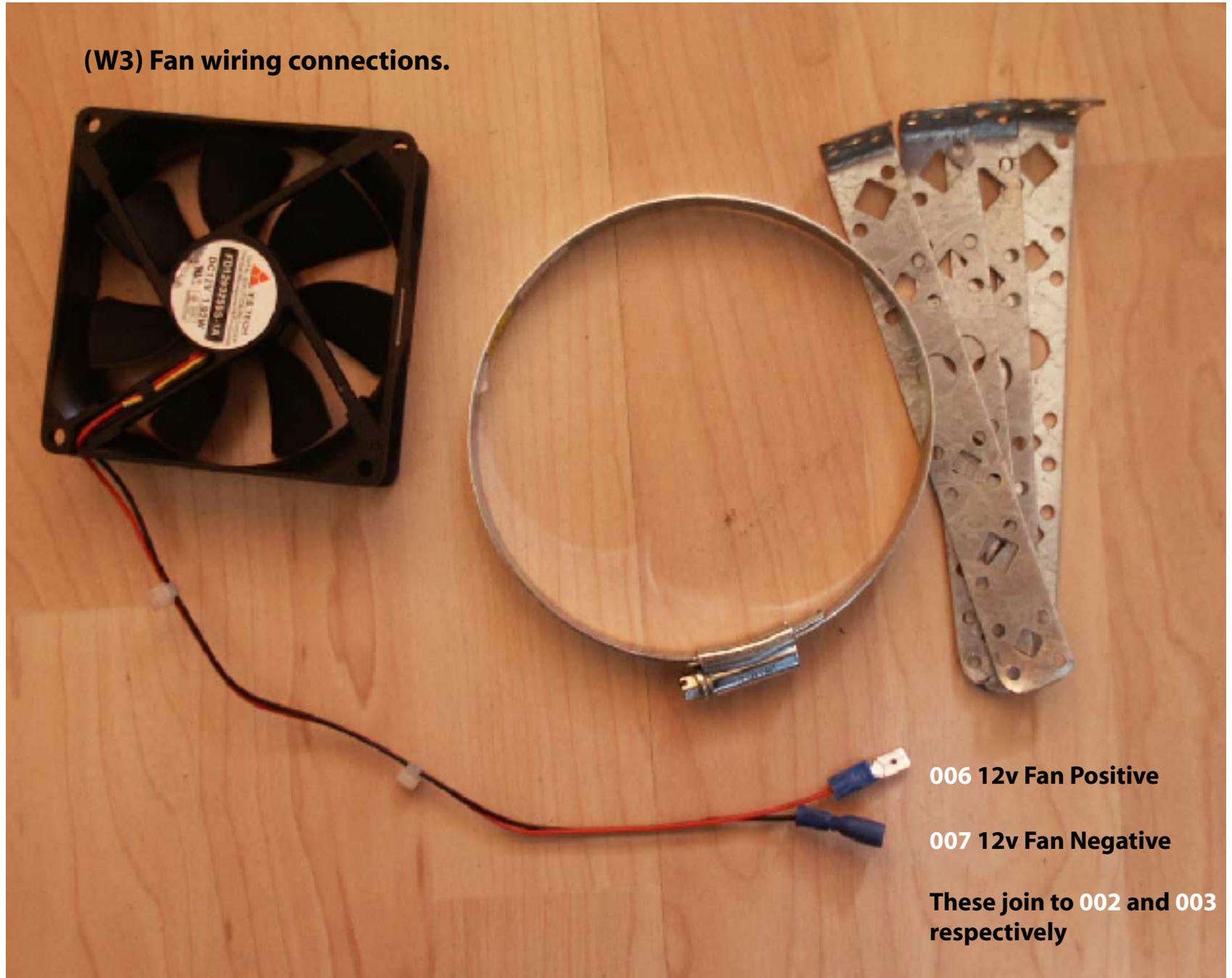
Battery 1 Negative -

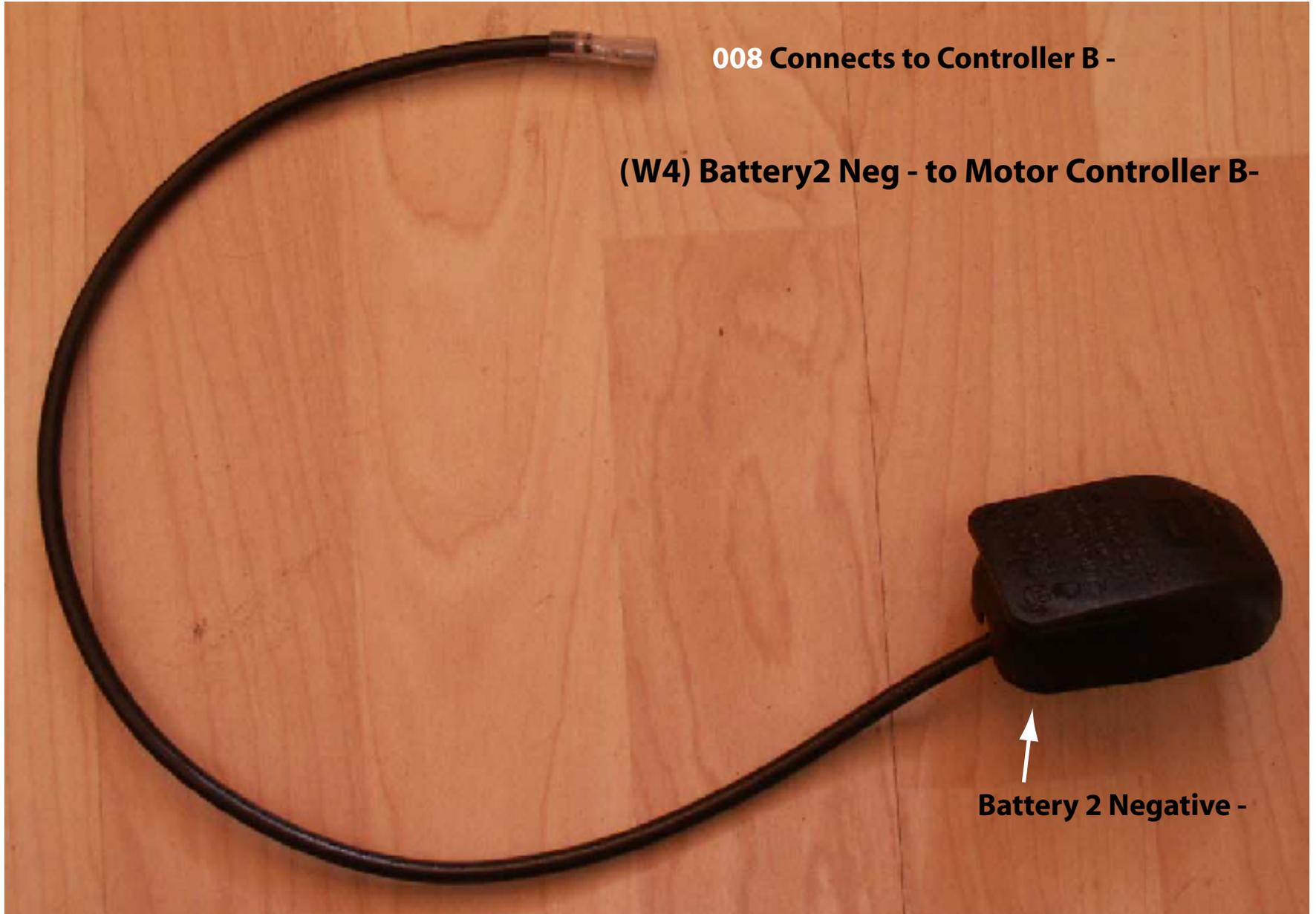
Battery 2 Positive +

This wire feeds through from the left (battery 1) compartment under the seat, into the right (battery2) compartment



(W3) Fan wiring connections.





008 Connects to Controller B -

(W4) Battery2 Neg - to Motor Controller B-

Battery 2 Negative -



(W5) CONTROLLER TO MOTOR WIRING

MOTOR BRUSH END

011 To motor brush (A)

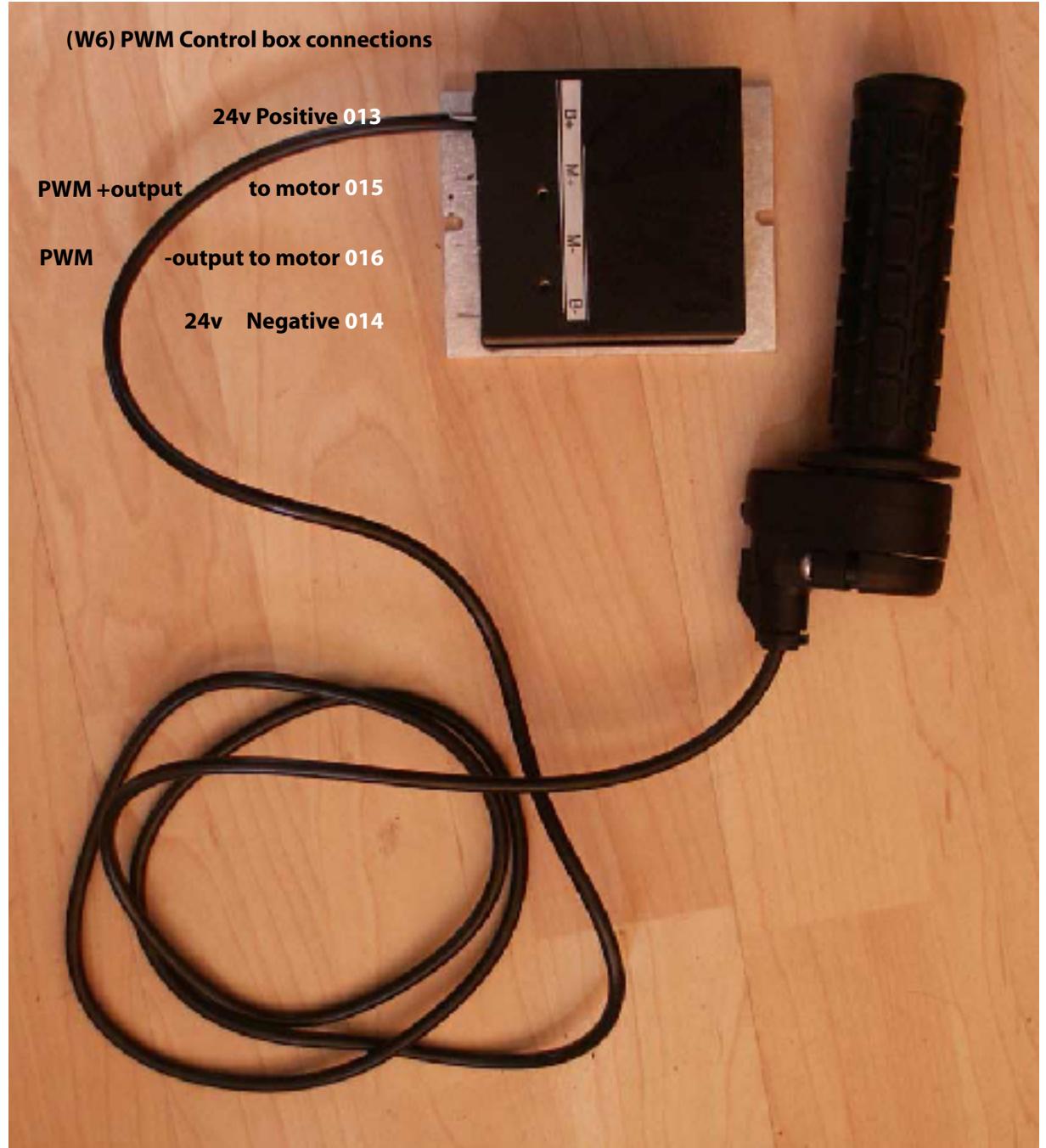
009 From control box M+

010 From control box M-

To motor brush(B) 012

CONTROLLER END





24v KIT INSTRUCTIONS

Step by Step (S1) v2 06-02-06



Undo retaining screws and remove control box cover.



Use a 7mm and 8mm long reach socket to undo the power wiring retaining nuts.

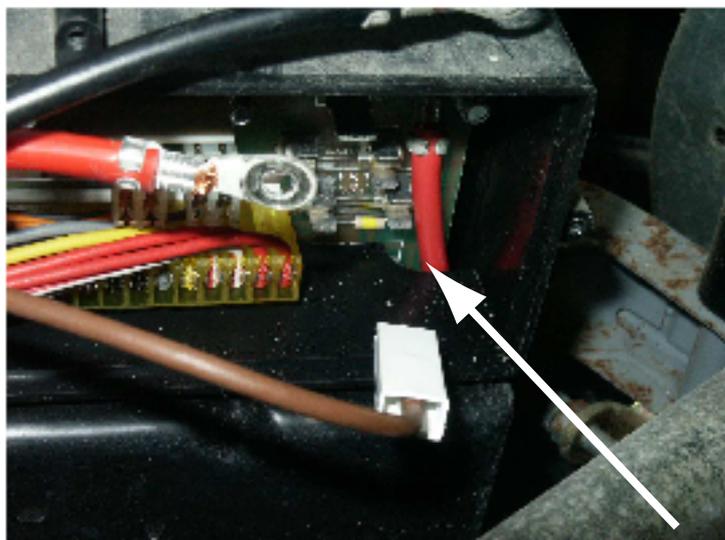
There are 2x 7mm nuts and 2x 8mm nuts



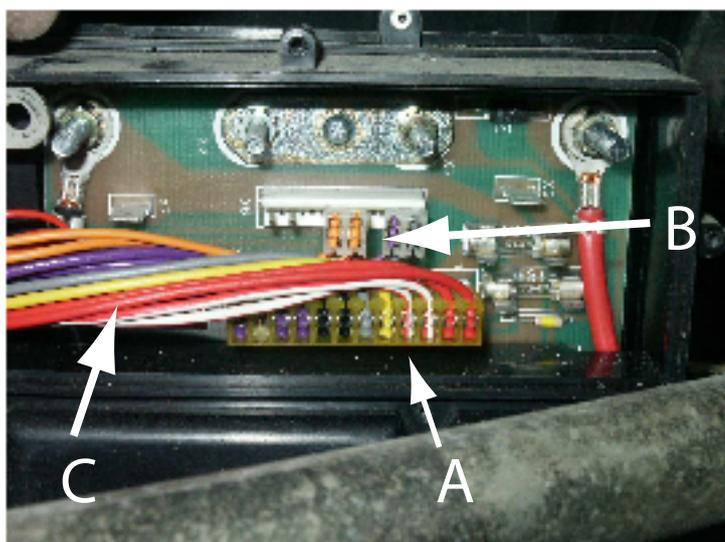
You need to also disconnect the brown +12v connector attached to X5 (shown disconnected here)

24v KIT INSTRUCTIONS

Step by Step (S2) v2 06-02-06



BE VERY CAREFUL NOT TO DROP THE LOOSE NUTS OR SHAKEPROOF WASHERS DOWN THESE HOLES. IF YOU DO; YOU MAY BE ABLE TO SHAKE THEM OUT WHEN REMOVED OTHERWISE YOU WILL **HAVE TO DISMANTLE THE CONTROL BOX**



For ease, disconnect the cables in the following order.

- A. Main lights wiring
- B. Thermistor and Temp Lockout
- C.(hidden) Red Instrument pod wiring loom

This will allow for easiest removal. If you need to refit; do so in reverse order.

All these connections are a push fit.



To remove the control box undo these two marked bolts. When removed the control box will slide to the right slightly to allow it to slip out of the retaining large cable tie.

24v KIT INSTRUCTIONS

Step by Step (S3) v2 06-02-06



Once the control box is removed you may wish to cable tie the original wiring to the chassis. This way, should you wish to return the machine to standard specification, all that is required is the refitting of the control box.



Position the 24v PWM control box in place and mark the position of the retaining bolt holes.

These need to be drilled using a 4mm drill.

You may find this easier from underneath with the machine turned on its side and/or with the non driven wheel removed.



Shown here in white is the position of the moulding where the original 2 battery machines had a section removed. It is identical to the righthand side. You will need to make at least a small hole in this area for some wiring from battery 2 to enter this area. For originality I would recommend removing the entire square and then hunting down the original style rubber grommet on ebay.

24v KIT INSTRUCTIONS

Step by Step (S4) v2 06-02-06



Here the thermistor temp sensor (purple and grey wires) and temperature lockout switch (orange wires) has been cable tied below the motor to the chassis. This is to allow for fitting the fan to allow cooling air to the motor.

These parts are redundant with the 24v kit as the Instrumentation Pod is not utilised.



Slide off the original rubber handlebar grip.

If it feels stuck use a little warm water with fairy liquid - however ensure that the handlebars are ENTIRELY dry before moving on to the next step.



As std the throttle assm. will overhang the side of the machine. You can loosen the brake lever and move it more toward the centre of the machine to make the handle bars less asymmetrical if you wish.

There are two methods for this step.

1. is shown here where the throttle cable is routed in a similar fashion to the original power button wiring, down the centre of the steering column.

2. The less awkward way but functional all the same is to simply feed it through along with the battery connections.

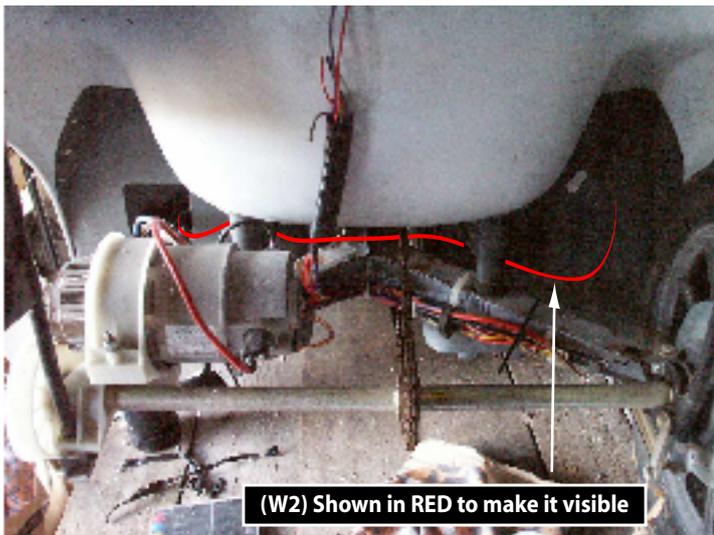
24v KIT INSTRUCTIONS

Step by Step (S5) v2 06-02-06



You may find it beneficial to be working with one or both wheels removed.

In this position you would want to feed wiring loom (W1) into the square hole from the rear into the foot well. It only needs to be fed half through leaving the RELAY on the outside (the side showing in the photo). The yellow connector 001 connects to the light switch. **Remember that after fitting this 24v kit you will NOT have use of the lighting circuit.** Connectors 002 and 003 can be left till later. Connector 004 needs to be routed along the Y piece of the chassis to the PWM control unit and cable tied down to prevent possible abrasion from the chain.

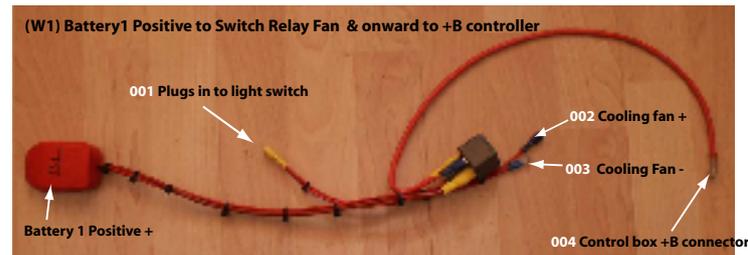


(W2) Shown in RED to make it visible

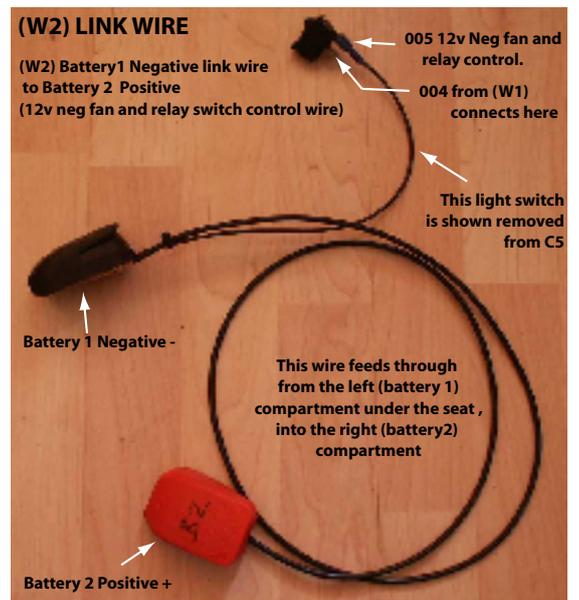
Typical wire routing for cabling to PWM controller and for 24v battery to battery LINK cable

This picture above shows the sort of route that the Link wire (W2) needs to take from the LEFTHAND battery (B1) around the seat struts, along Y chassis member cable tying it down to avoid the chain etc so eventually it reaches the Righthand footwell B2 side.

The connector 005 on the diagram (w2) needs to be connected to the lightswitch (remember the original lightswitch connections can be disconnected)



(W1) Battery1 Positive to Switch Relay Fan & onward to +B controller

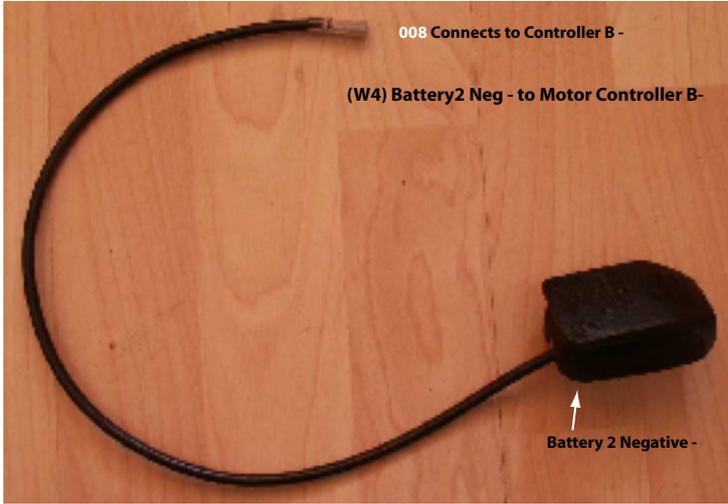


(W2) LINK WIRE

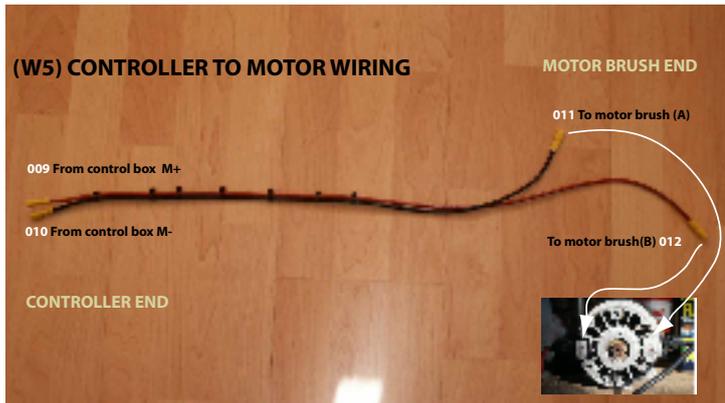
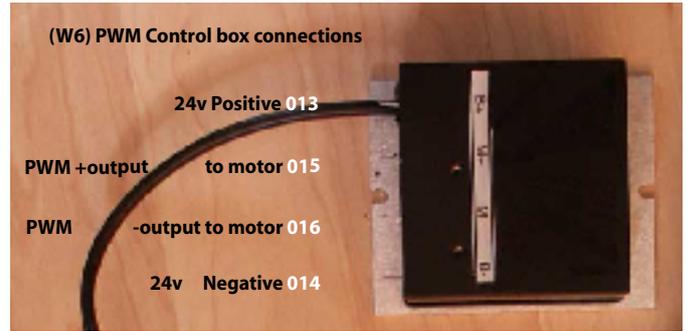
(W2) Battery1 Negative link wire to Battery 2 Positive (12v neg fan and relay switch control wire)

24v KIT INSTRUCTIONS

Step by Step (S6) v2 06-02-06

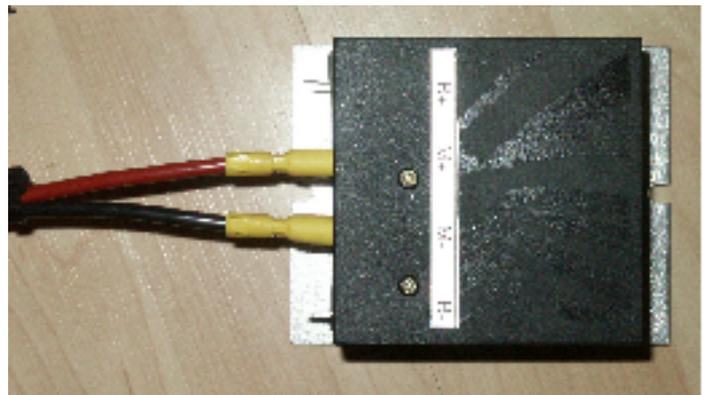


W4 wire needs to be fed through from the front right footwell into the rear compartment and attached 008 (W4) to 014 (W6) shown below



W5 wiring is simply from the controller to the motor. The wiring shown is to plug directly into replacement brushes. Yours may differ slightly with ring ends as opposed to spade connectors. As shown:-
 (W5)009 plugs into (W6)015
 (W5)010 plugs into (W6) 016

Make careful note of the locations of A and B brushes and the connections to them as shown in W5



24v KIT INSTRUCTIONS

Step by Step (S7) v2 06-02-06



Control box/throttle connections



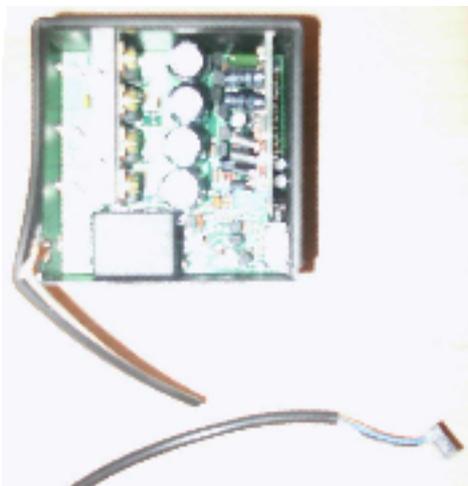
To remove or attach the throttle cable to the control unit.



Turn the control unit over and remove 2 countersunk screws in the base.



Locate the Throttle cable plug release the retaining tangs. and pull the connector up and off the board.



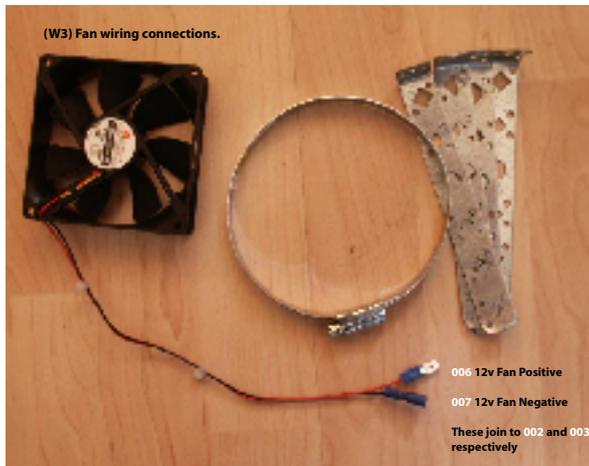
Lift off the rubber seal and the cable will pull free.
Re-fitting is the reverse sequence.

24v KIT INSTRUCTIONS

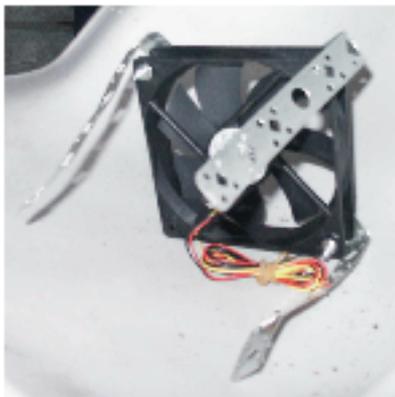
Step by Step (S8) v2 06-02-06



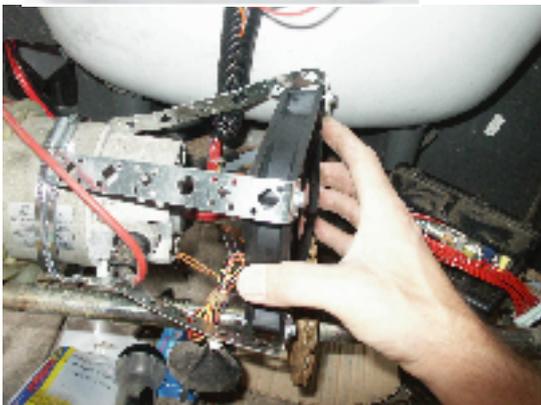
Cooling Fan



This part of the assembly can be done at any time in the process, although you may find it easier to do last



Fit 3 or 4 of the brackets to the motor in the fashion shown here. We found that 3 worked perfectly well and was easier to fit - but 4 have been supplied.



Next - wrap the jubilee clip around the motor circumference and attach until there is just a few millimeters slack all round.

Offer up the cooling fan - sliding all the bracket tangs into place - you may find that the fan needs to be in a diagonal presentation to sit comfortably with the seat.



Finally - simply tighten the jubilee clip until the tangs are held firm and check that the fan mounting screws are also tight and then lastly connect the fan power connectors 006 and 007 to (W1)002 and 003.