

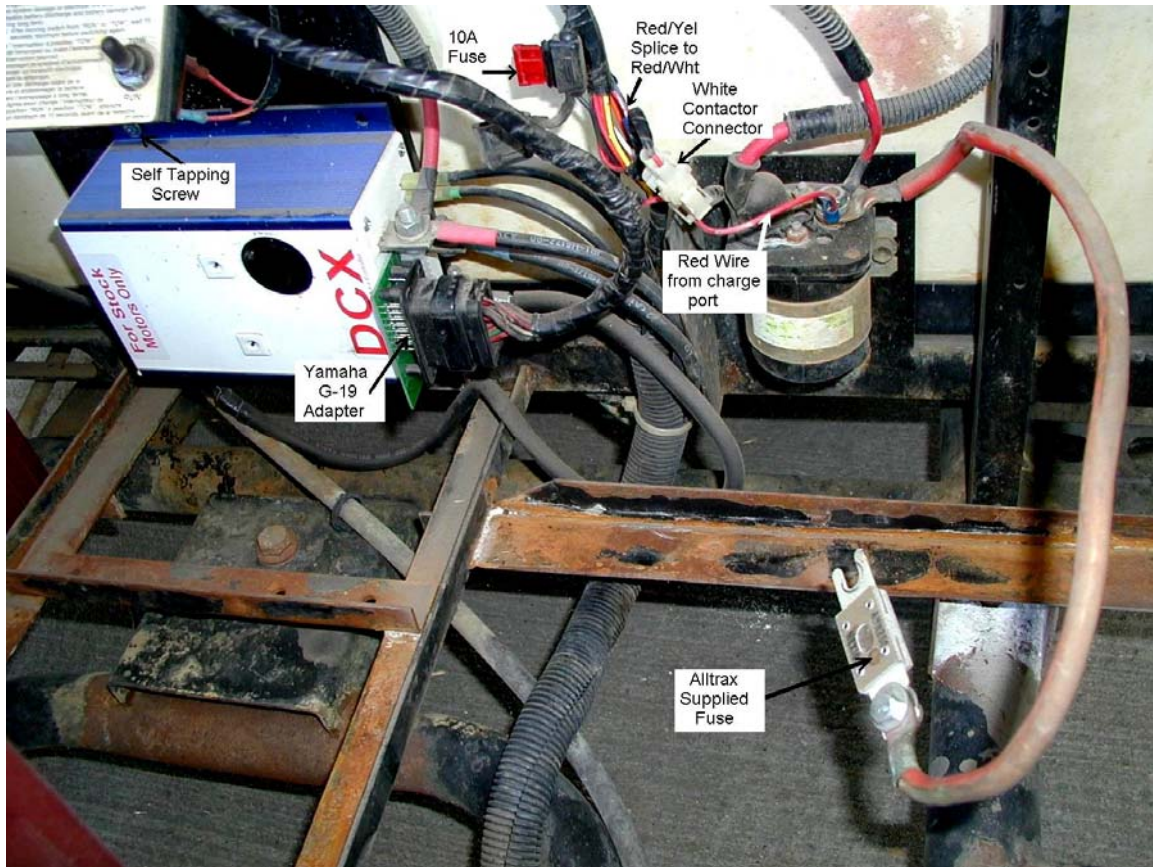
D&D Motor Systems, Inc.

"Yamaha G-19 Conversion to D&D Regen Controller"

The following steps describe the installation of the D&D Motor Systems, Inc. Regen controller in a Yamaha G-19 golf car. Refer to the Yamaha schematic and the picture supplied with these instructions during installation.

- 1- Remove the two center and the two passenger side batteries from the car.
- 2- Remove the old controller.
- 3- Cut off the Ring terminals from the Green and Black **Field** wires and replace with Female Blade connectors.
- 4- Cut the **Small** 18AWG Red wire connected to the charge port. Leave this wire as long as possible from the wiring harness. Relocate the wiring harness toward the passenger side of the car.
- 5- Attach a 5/16 ring terminal to the red wire coming from the wiring harness that was cut in step 4 and attach it to B+ terminal of the contactor coming from the battery pack .
- 6- Replace the ATC 3A fuse located in the Black Rubber fuse holder with an ATC 10A fuse that is supplied.
- 7- Remove approximately two inches of tape from the wiring harness below the Black Rubber fuse holder and locate the Red/Yellow wire going to the white connector from the Contactor Coil and cut it. Leave as much of the wire as possible connected to the white connector. Tape up the end of the Red/Yellow wire left in the wiring harness. Locate the Red/White wire, also in the wiring harness, and splice the Red/Yellow coming from the White Contactor connector into it without cutting the Red/White wire. Tape the wiring harness back up to protect the wires.
- 8- Mount the controller with the bus bars facing the passenger side using two self tapping screws; one in the lower right hand (looking from top of controller) mounting hole and the other in the upper left side mounting hole.

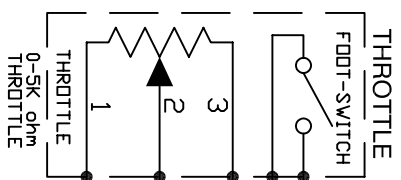
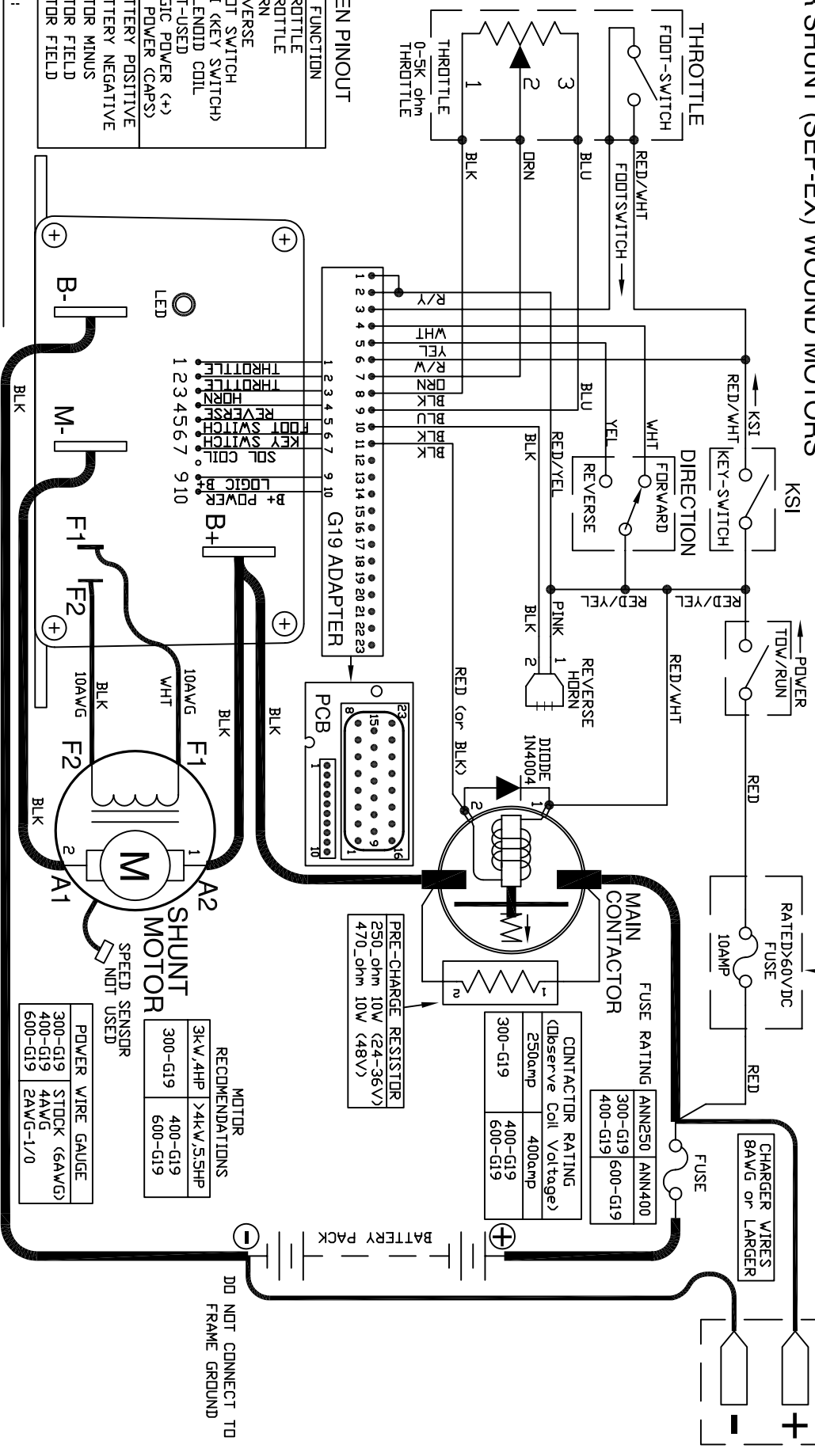
- 9- Connect the two field wires; Green to F1 and Black to F2.
- 10- Connect the B+ cable from Output Side of the contactor and the Motor A2 cable to the controllers B+ bus bar.
- 11- Connect the Motor's A1 cable to the controller's M- bus bar.
- 12- Plug the G-19 adapter onto the controller and secure with the screw provided. Plug the cable harness plug into the G-19 adapter.
- 13- Replace the old battery cable from the Battery Pack Negative terminal to the controller's B- bus bar with the longer one supplied.
- 14- Replace the batteries and install the Fuse provided with the controller between the Battery Pack Positive terminal and the Cable going to the contactor Input.
- 15- Double check all your wiring. Position Tow/Run switch in the "Run" position.



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10/27/05

Regen to YAMAHA G19 FOR SHUNT (SEP-EX) WOUND MOTORS

PART NO.	Doc100-052
	1/19/2007



REGEN PINOUT

TAB	FUNCTION
1	THROTTLE
2	THROTTLE
3	HORN
4	REVERSE
5	FOOT SWITCH
6	KSI (KEY SWITCH)
7	SOLENOID COIL
8	NOT-USED
9	LOGIC POWER (+)
10	B+ POWER (CAPS)
B+	BATTERY POSITIVE
B-	BATTERY NEGATIVE
M-	MOTOR FIELD
F1	MOTOR FIELD
F2	MOTOR FIELD

NOTES:

- * FUSES REQUIRED FOR ALL INSTALLATIONS
- * DIDDE REQUIRED ACROSS COILS / RELAYS
- * TDW/RUN SWITCH PREVENTS REGEN WHILE TDWING
- > ASSUMES FDOTSWITCH IS OPEN WHEN THROTTLE OFF
- > D&D RESERVES THE RIGHT TO CHANGE DOCUMENTATION WITHOUT NOTICE
- > D&D MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY, OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED
- > SEE OPERATORS MANUAL FOR MORE INFORMATION

THIS FUSE MUST BE CHANGED FROM 3AMP TO 10AMP

<table border="1"> <tr><td>ANN250</td><td>ANN400</td></tr> <tr><td>300-G19</td><td>600-G19</td></tr> <tr><td>400-G19</td><td></td></tr> </table>	ANN250	ANN400	300-G19	600-G19	400-G19		<table border="1"> <tr><td>CONTRACTOR RATING (Observer Coil Voltage)</td></tr> <tr><td>250amp</td></tr> <tr><td>400amp</td></tr> <tr><td>400-G19</td></tr> <tr><td>600-G19</td></tr> </table>	CONTRACTOR RATING (Observer Coil Voltage)	250amp	400amp	400-G19	600-G19	<table border="1"> <tr><td>PRE-CHARGE RESISTOR</td></tr> <tr><td>250 ohm 10W (24-36V)</td></tr> <tr><td>470 ohm 10W (48V)</td></tr> </table>	PRE-CHARGE RESISTOR	250 ohm 10W (24-36V)	470 ohm 10W (48V)
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DO NOT SCALE DRAWING

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