



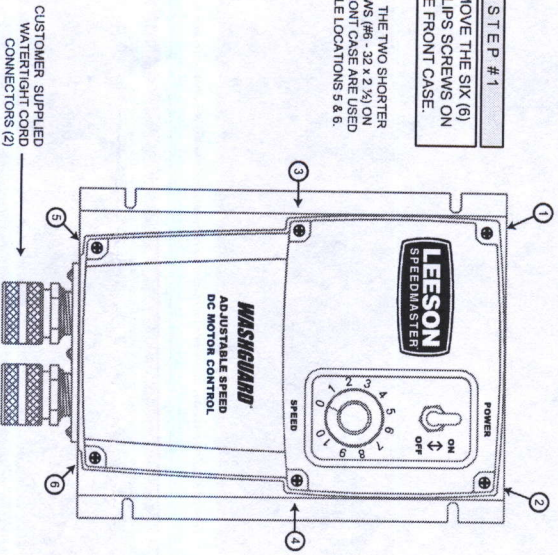
**WASHGUARD®**

**QUICK START GUIDE**

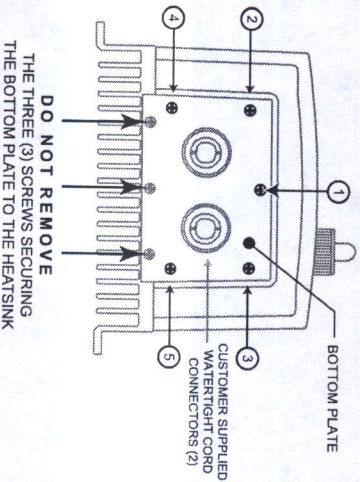
**174102 & 174107 NEMA4X SCR MOTOR CONTROLS**

**STEP #1**  
REMOVE THE SIX (6) PHILLIPS SCREWS ON THE FRONT CASE.

NOTE: THE TWO SHORTER SCREWS (#6 - 32 x 2 1/2) ON THE FRONT CASE ARE USED AT HOLE LOCATIONS 5 & 6.



**STEP #2**  
REMOVE THE FIVE (5) PHILLIPS SCREWS ON THE BOTTOM PLATE.

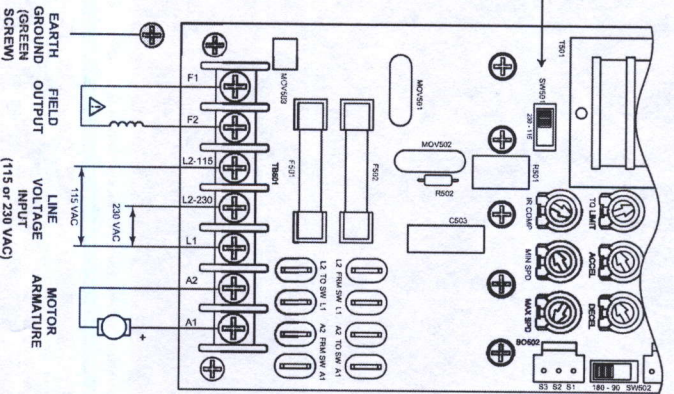


**DO NOT REMOVE THE THREE (3) SCREWS SECURING THE BOTTOM PLATE TO THE HEATSINK**

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Printed in the U.S.A. - August 2002 • Document #: 250-0357, Revision 0

**STEP #3**  
WIREF THE CONTROL AS SHOWN THROUGH THE CONDUIT HOLES IN THE BOTTOM PLATE.

**FIELD OUTPUT CONNECTIONS**  
The field output is for shunt wound motors only. Do not make any connections to F1 and F2 when using a permanent magnet (PM) motor. For field motor connections, see "Field Voltage" in Specifications box below.



**STEP #4**  
ASSURE THAT THE VOLTAGE SWITCH SETTINGS ARE CORRECT (SW501 & SW502)

**STEP #5**  
REPLACE SIX SCREWS ON FRONT CASE & FIVE SCREWS ON BOTTOM PLATE.

**OPERATION**

**SPECIFICATIONS**

- 174102 Non-Reversing Speed Control**
1. Set the speed adjust dial to "0" (full CCW).
  2. Apply AC line voltage.
  3. Set the POWER switch to the ON position.
  4. Slowly advance the speed adjust potentiometer CW. The motor slowly accelerates as the potentiometer is turned CW. Continue until the desired speed is reached.
  5. To coast the motor to a stop, turn the speed adjust potentiometer to "0" or set the POWER switch to the OFF position.

- 174107 Reversing Speed Control**
1. Set the FORWARD/OFF/REVERSE switch to the OFF position.
  2. Set the speed adjust potentiometer to "0" (full CCW).
  3. Apply AC line voltage.
  4. Set the FORWARD/OFF/REVERSE switch to the desired direction of rotation.
  5. Slowly advance the speed adjust potentiometer CW. The motor slowly accelerates as the potentiometer is turned CW. Continue until the desired speed is reached.
  6. To coast the motor to a stop, turn the speed adjust potentiometer to "0" or set the FORWARD/OFF/REVERSE switch to the OFF position.

AC Line Voltage	... 115 VAC or 230 VAC, ±10%, 50/60 Hz, single phase
Horsepower Range with 115 VAC applied	... 1/8 - 1 HP
Horsepower Range with 230 VAC applied	... 1/4 - 2 HP
Maximum Armature Current	... 10 ADC
Maximum Field Current	... 1 ADC
Field Voltage	... 1.37 at base speed
for 115 VAC Input	... 1.00 VDC (F1 to L1); 1.00 VDC (F1 to F2)
for 230 VAC Input	... 2.00 VDC (F1 to L1); 2.00 VDC (F1 to F2)
Form Factor	... 0 - 1.4 VDC
Analog Input Voltage Range (signal must be isolated, S1 to S2):	... 0 - 90 VDC Armature Voltage
for 0 - 180 VDC Armature Voltage	... 0 - 2.8 VDC
Input Impedance (S1 to S2)	... 1% base speed or better
Load Regulation	... 3M ohms
Style	... NEMA 4X

7. To reverse direction:
  - a. Set the FORWARD/OFF/REVERSE switch to the OFF position.
  - b. After the motor comes to a complete stop, set the FORWARD/OFF/REVERSE switch to the desired direction of rotation.

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