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# NABCO ENTRANCES TECHNICAL BULLETIN

S82 W18717 Gemini Drive Muskego, WI, 53150

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www.NabcoEntrances.com

Date: August 23, 2012

Who is the technical contact?
Mike Buckley

## **Changes to the Magnum Control**

Following an ongoing product improvement program, we have made changes to the Magnum 4 control to improve reliability and performance. The new control has been labeled "Magnum 4A".

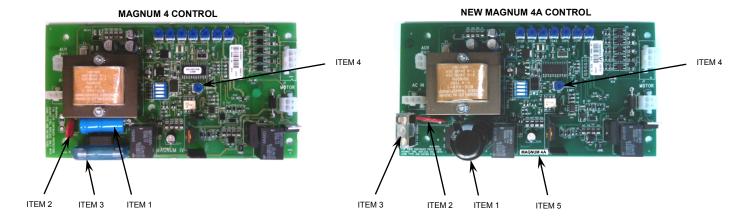
The part number (P/N) is as follows:

- GT710 Swing Operator: P/N 24-9800-04A Magnum 4A, Magnum Control Board-04 Rev-A, without brake module
- GT300/400/500 Swing Operator: P/N 12-10292-04A, Magnum Control Board-04 Rev-A, with brake module

Following are the major differences between Magnum 4 and Magnum 4A:

#### Hardware Changes:

- 1. Refer to Item 1. The capacitor used to filter power to the motor has been replaced with one that is significantly larger. This will reduce capacitor failures as well as reduce motor "hum".
- Refer to Item 2. The value of the MOV (Metal Oxide Varistor) has been increased to be more resistant to failure caused by power surges.
- The signal input circuits have been modified to be more immune to electrical noise that can cause false triggering.
- 4. Refer to Item 3. The fuse and fuse holder have been changed from a 1-1/4" x 1/4" to a 5 x 20mm type more commonly found worldwide. The holder also includes a snap-on cover. The fuse is still rated for 5 amps.
- 5. Refer to Item 4. The current limit adjustment range has been increased to accommodate a wider range of door opening speeds.
- 6. The new control is identified by the name "Magnum 4A" located at the edge of the board as shown in Item 5 below.



### Software Changes:

- 1. NEW FEATURE The "STOP" adjustment potentiometer now serves two purposes:
  - As before, it determines whether the door stops or creeps if a door mounted sensor on the swing side
    detects a person while opening.
  - Now, it also adjusts the power to the motor when the door is held open for extended periods of time. The
    motor power is reduced from "back-check" power to "Stop" power (assuming "stop" power is lower than
    "back-check" power) This reduces the risk of the motor overheating at hold open allowing the door to close
    as well as reducing stress on mechanical and electrical components.

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To adjust the power applied to the door at hold open:

- a. Turn STOP potentiometer fully counterclockwise
- b. Place the "on-off-hold open" switch to hold open
- c. After the door has been in the back-check area for 8 seconds, motor power will be reduced according to the "STOP" setting. If the door begins to slowly drift close turn the "STOP" potentiometer slightly clockwise to increase power.
- d. Turn "On/Off/Hold Open" switch off and allow the door to time out and fully close.
- e. Turn the "On/Off/Hold Open" switch to hold open again and observe door at the full open position. Door should hold open and not drift close.
- If door still drifts close, continue increasing STOP power until the door holds open against the door stop.
- g. Each time an adjustment is made, the door must be allowed to close, and then reactivated for the change to take place.
- "Current limit" is now more sensitive to obstructions when the door is initially activated from the closed position. This change ensures that the current limit will reliably trip if the door is activated while it is closed and locked.

The changeover to Magnum 4A will begin immediately and will continue over time as our supplier gears up with the new version and old stock is depleted.

Look for this new control coming soon!

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