



Installation Instructions For the ADA Keypad for the National 670 Series Coffee Machines

*Important Note: Please read all instructions thoroughly before continuing with installation of kit. If you are having problems installing the kit, please call **1-800-321-2311** and **select option 3 for Support**.*

**** TURN OFF THE POWER TO VENDING MACHINE PRIOR TO STARTING INSTALLATION ****

Tools and supplies needed to complete the installation:

- 1/4" Nut Driver
- 11/32" Nut Driver
- 1 1/4" Hole Saw or Step Bit
- 1/4" Drill Bit
- Small Phillips Screwdriver
- Masking Tape

Picture of Items included in Kit



Step 1 - Remove the validator and the cover to the display board. (Figure 1).

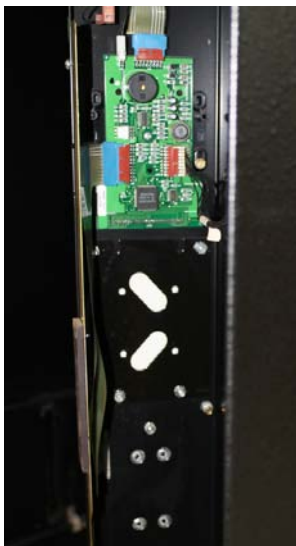
Please Note: You may also need to remove devices installed in the second validator knockout if it restricts you from accessing the display board cover

Step 2 - Carefully unplug the keypad ribbon cable from the display board (Figure 2).

Step 3 - Place masking tape over the keys, 2nd validator knockout plate and the display lens (Figure 3). This will help keep these pieces from falling out of the plastic bezel in future steps.

Step 4 - Remove the plastic bezel that holds the keypad in place by removing the 8 screws and 1 nut that secures it to the inner door. Lay the bezel flat on a table (Figure 4). Be extremely careful when feeding the keypad ribbon cable through the slot in the inner door. Please note that a new keypad membrane **IS NOT** included in your kit.

Please Note: 2 of the screws that you are removing hold the display in place. You will need to adjust your display when reinstalling this piece in a future step to ensure it is centered in the lens.



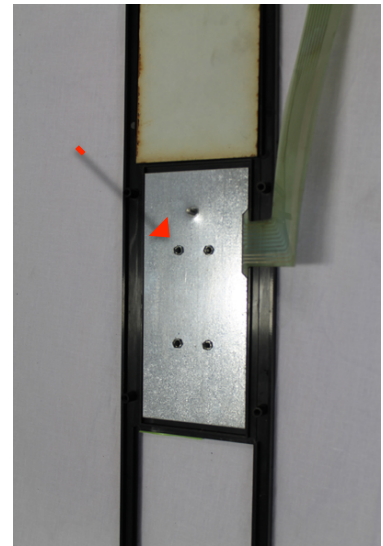
(Figure 1)



(Figure 2)



(Figure 3)



(Figure 4)

Step 5 - Remove the keypad membrane retainer by removing the 4 nuts that hold it in place. The red arrow in Figure 4 shows one of these 4 nuts.

Step 6 - Before removing the keypad membrane, carefully place a small piece of masking tape on the part of the membrane that corresponds with the letter "A" (Figure 5). This is a **CRUCIAL STEP** that will allow for easier installation of the membrane in the new keypad enclosure in a future step.

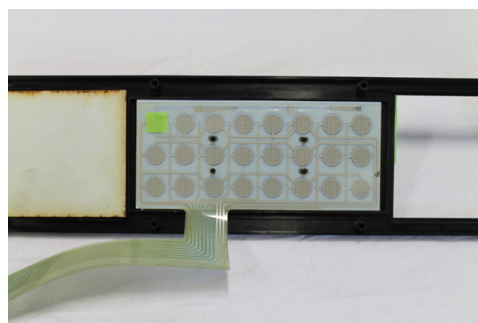


Figure 5

Step 7 - Remove the keypad membrane and the keypad membrane overlay and set them aside

Step 8 - Carefully remove the portion of the masking tape that covers the plastic keys that kept them from moving during disassembly. Be sure to leave the masking tape on the display lens and the cover for the 2nd validator knockout. Lay the plastic bezel and the front portion of the new keypad enclosure on a table as shown in Figure 6.



Figure 6

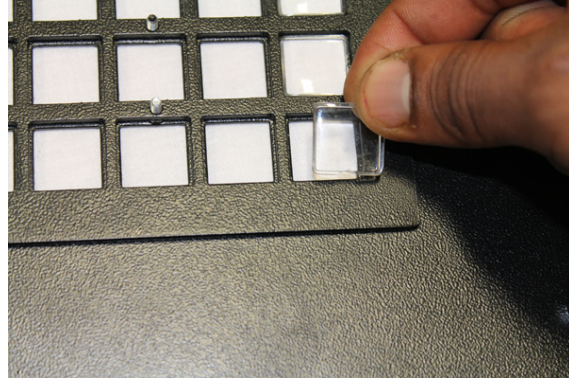


Figure 7

Step 9 - Carefully remove the clear plastic keys from the old bezel and place them into the new keypad enclosure (Figure 7).

Step 10 - Make sure that the new keypad enclosure is placed so that the largest portion of the unit is facing you (red arrow in Figure 9). Carefully place the new keypad membrane overlay into the new enclosure. Ensure that the letter "A" is placed in the lower left hand corner (Figure 8). Next, place your existing keypad membrane in the enclosure. Again, ensure that the portion of the membrane that corresponds to selection "A", marked by masking tape in step 6 and a green arrow in Figure 9, is placed in the lower left hand corner face down.

Carefully raise the corner of the membrane with the masking tape and remove it (Figure 9A)



Figure 8

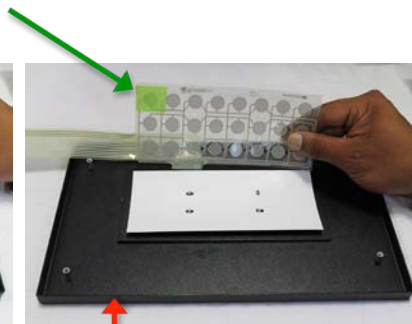


Figure 9



Figure 9A

Step 11 - Install the new membrane backing plate using the four #4 – 40 hex nuts provided in your kit. Make sure that the cut out for the ribbon cable is placed correctly as shown in Figure 10.

Flip the assembly over (Figure 11) and ensure that the overlay is centered properly. Loosen the 4 hex nuts for the back plate and adjust if necessary. Retighten hex nuts

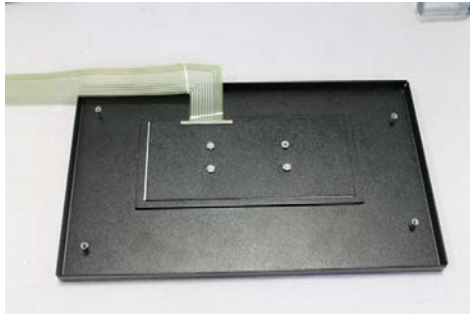


Figure 10



Figure 11

Step 12 - Carefully fold the ribbon cable as shown in Figure 12. **DO NOT** crease the cable. Use a piece of tape to hold it in place.

Install the back cover plate. Carefully route the ribbon cable through the opening in the back as shown in Figure 13. Be careful not to crease the cable.

Attach back cover plate with the four #6-32 x 3/16 counter sunk machine screws (Figure 14).

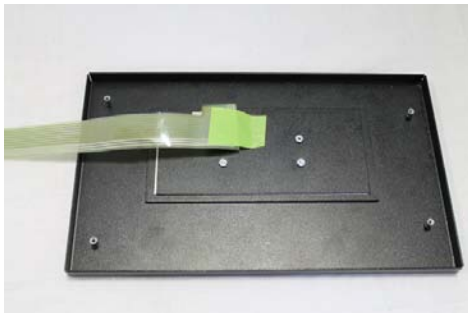


Figure 12

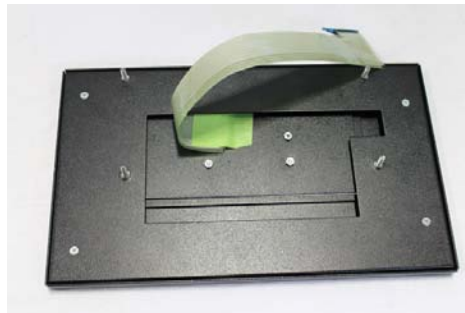


Figure 13



Figure 14

Step 13 - Cut out the template by following the dotted lines. Using tape, attach the template so that it is even with the bottom of the “J” channel and centered between the left and right trim pieces (Figure 15).

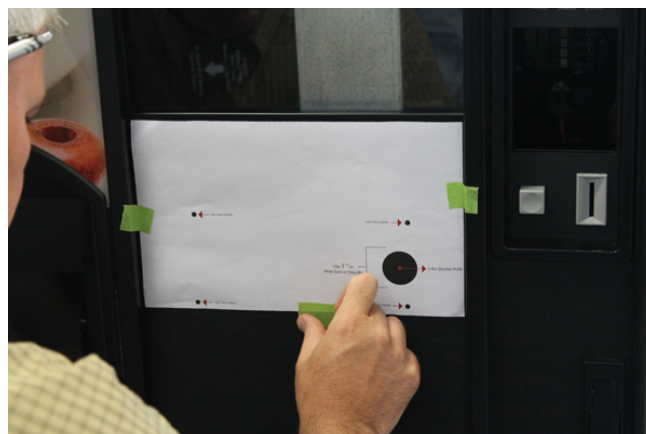


Figure 15

Step 14 - Drill holes as directed on template (Figure 16). Insert 1 ¼" grommet supplied in your kit (Figure 17).



Figure 16



Figure 17

Step 15 - Carefully and slowly feed the ribbon cable through the grommet and feed it out the channel on the back of the door (Figures 18 – 24).



Figure 18



Figure 19



Figure 20



Figure 21



Figure 22



Figure 23



Figure 24

Step 16 - Attach the keypad enclosure with four of the flat washers (multiple sizes are included incase you need to enlarge a hole for better positioning) and the 8-32 hex nuts provided in the kit. The top two studs on the keypad enclosure will be accessible through the two factory holes in the channel on the back of the door, and the bottom two studs will be directly under the channel as shown in Figures 25 and 26. Check for center and level and adjust accordingly.



Figure 25

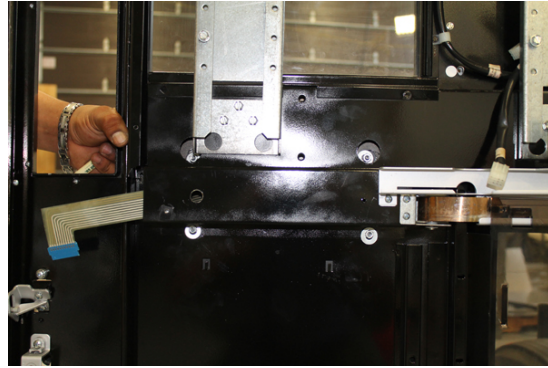


Figure 26

Step 17 - Attach the wiring harness to the keypad ribbon cable. Hold the ribbon cable as shown in Figure 27, with the 8 white (maybe be silver on some keypads) wires and 3 gold (may be green) wires facing upward. Plug the new wiring harness into the ribbon cable with the clip facing up and the indexing keys facing down.

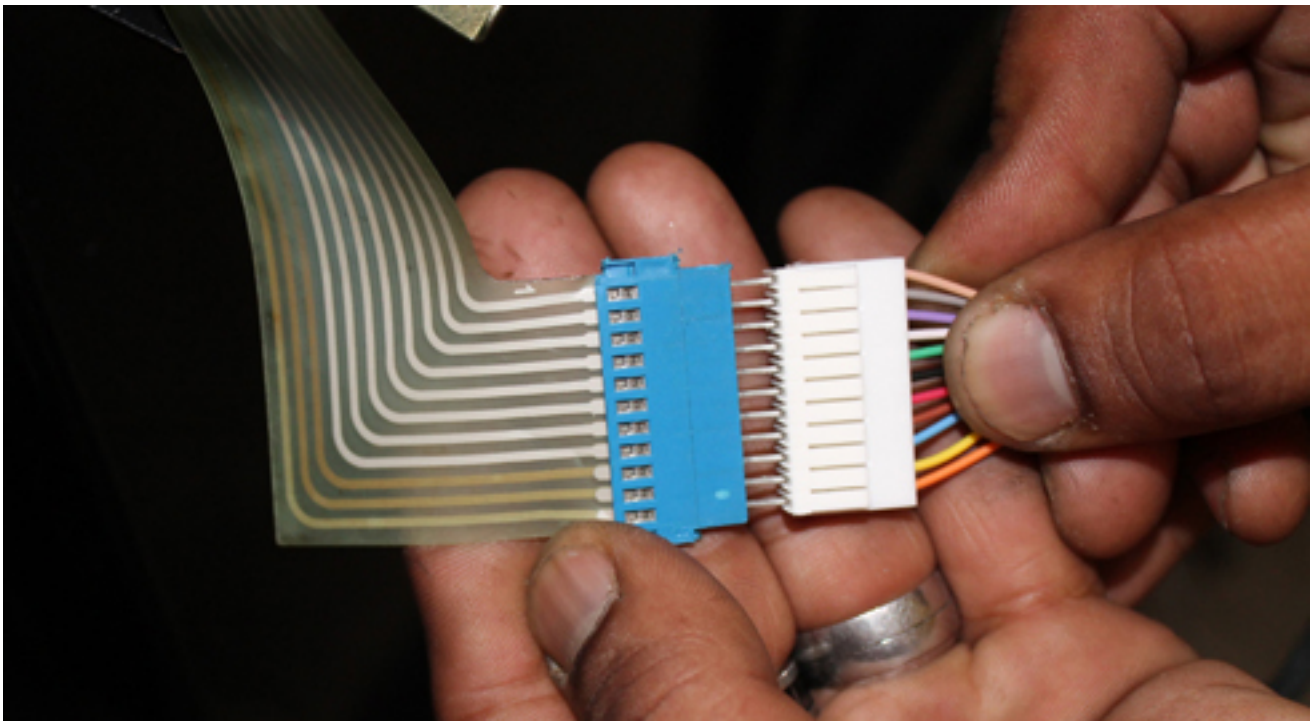


Figure 27

Step 18 - Tuck the connection of the ribbon cable and wiring harness into the channel on the back of the door (Figure 28). Begin routing the cable towards the display board. Place two adhesive back wire tie downs as shown in Figure 29 and attach the wiring harness with supplied zip ties. This will allow you to merge the cable into the factory harnessing that runs to the control panel and display board. Be sure to thoroughly clean the area where you are attaching the adhesive back wire ties before installation.

Continue routing the cable through factory wire retainers, using the provided zip ties when needed. Follow the cabinet wiring from the left side of the cabinet, to the back wall and then to the right wall (Figure 30).



Figure 28

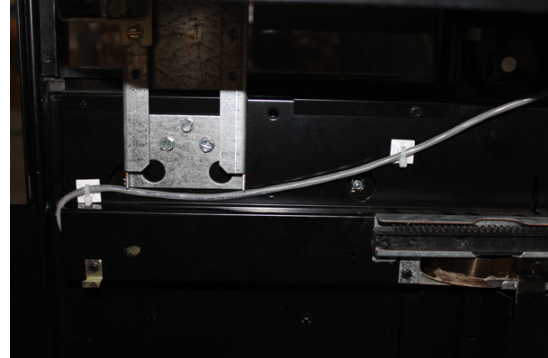


Figure 29

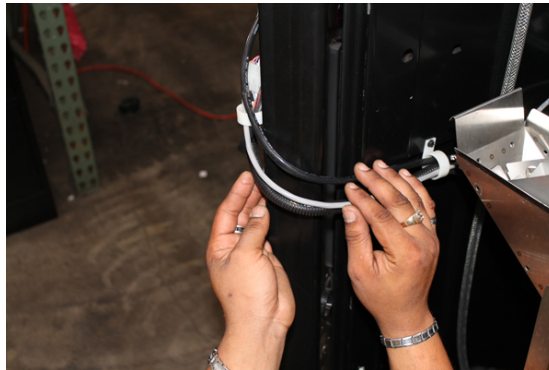


Figure 30

Step 19 - Remove control board cover and route wiring harness through the wall holding the control board. Continue routing wiring harness through the factory wiring clips (Figure 31).

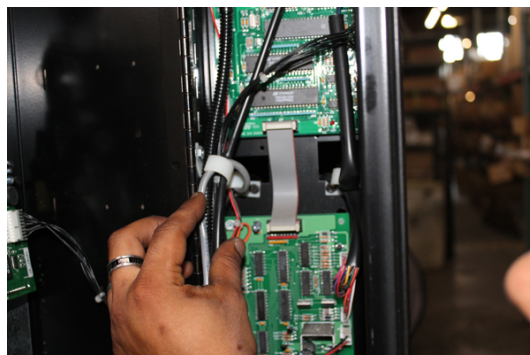


Figure 31

Step 20 - Attach wiring harness to the display board where the keypad ribbon cable was previously connected. The wiring harness and the connector on the display board are keyed, so they can only be connected one way (Figures 32 and 33)

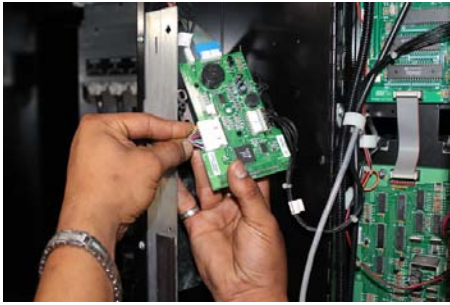


Figure 32



Figure 33

Step 21 - Take excess grey cable and feed back into the cabinet. Attach cable to the existing wires running to the display board (Figure 34). Inside the cabinet, bundle the excess wire and attach to factory wiring (Figure 35). Reattach the control board cover.



Figure 34



Figure 35

Step 22 - Reinstall the plastic bezel that holds the display lens and 2nd validator knockout cover. Do not remove the remaining masking tape until the bezel is completely installed.

Step 23 - Remove all remaining tape from the bezel. Loosen the two screws that hold the display board in place and center the display in the lens. Reattach the display board cover.

Step 24 - Install the textured plastic cover supplied in the kit, over the old keypad area (Figure 36 - Green Arrow). Remove the double stick tape and secure in place (Figures 37 through 39).



Figure 36



Figure 37

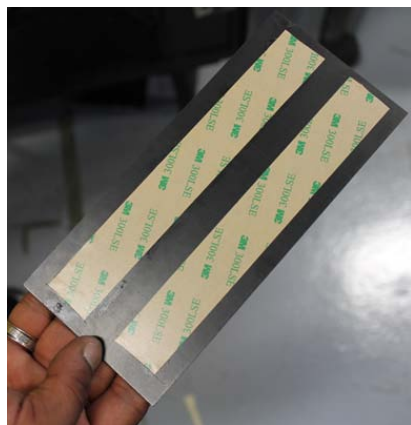


Figure 38



Figure 39

Step 25 - Your installation is now complete. Reconnect your machine to a power supply, power up the machine and test your new keypad assembly.

If your keypad does not function correctly:

- Return to step 17 and ensure that your new wiring harness is attached to the keypad ribbon cable correctly.
- Return to step 20 and ensure that your new wiring harness is attached to the display correctly.

Finally, if you are unable to resolve an issue, please call **1-800-321-2311** and select **option 3** for **Support**