



KIT PART NUMBER VE5880
INSTRUCTIONS FOR INSTALLING REGENERATION UCB IN
NATIONAL 147AND 148 MACHINES.

COMPARE THE PARTS RECEIVED IN THIS KIT WITH THE PARTS LIST IN
THE INSTRUCTIONS. IF ANY PARTS ARE MISSING CONTACT THE
VENDORS EXCHANGE PARTS DEPARTMENT AT 1-800-321-2311.

Read these instructions carefully before installing the kit.
Keep these instructions for part numbers and for future reference.

THIS KIT CONTAINS THE FOLLOWING:

INDEX	PART NUMBER	DESCRIPTION	QTY
1	VE5802D	110V POWER SUPPLY HARNESS	1
2	VE5815	POWER SUPPLY	1
3	VE5802E	24V POWER SUPPLY HARNESS	1
4	VE5801	UNIVERSAL CONTROL BOARD PCB	1
5	VE5816	MDB HARNESS	1
6	VE5817	DEX HARNESS	1
7	VE5802B	HARNESS PCB	1
8	VE5802C	DISPLAY RIBBON CABLE	1
9	VE5804	CLEAR DISPLAY LENS FOR NAT 147/148	1
10	VE5802A	DISPLAY PCB	1
11	VE5819	FCC LABEL	1
12	VE5881	KEYPAD LABEL	1
13	INSTRUCTIONS	KIT INSTRUCTIONS	1
14		PROGRAMMING INSTRUCTIONS	1

Tools Required:

Phillips Screwdriver or Cordless Screwdriver
Flat Head Screwdriver
1/4 " Nut Driver
Flashlight



****WARNING****

Electrical Shock Hazard – Turn machine off and disconnect electrical from the wall outlet before installing this kit. Failure to do so could result in electrical shock.

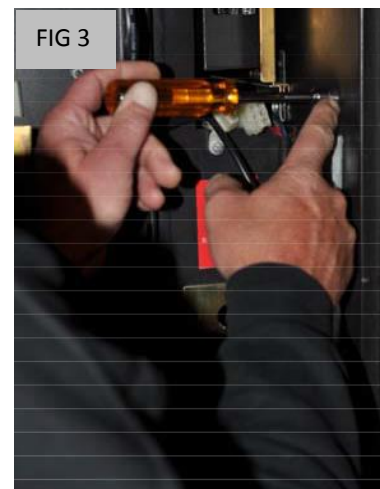
1. Read instructions carefully before installing kit.
2. Turn machine OFF with main switch and unplug cord from wall outlet. Failure to do so could result in electrical shock.
3. Unfasten ¼" HEX screws inside monetary panel. Unplug and remove validator. Save ¼" HEX screws. (FIG 1).



4. Unplug and remove coin mech from machine. If present, loosen 2 - ¼" HEX screws in bracket at top right-hand corner of coin mech (FIG 2).



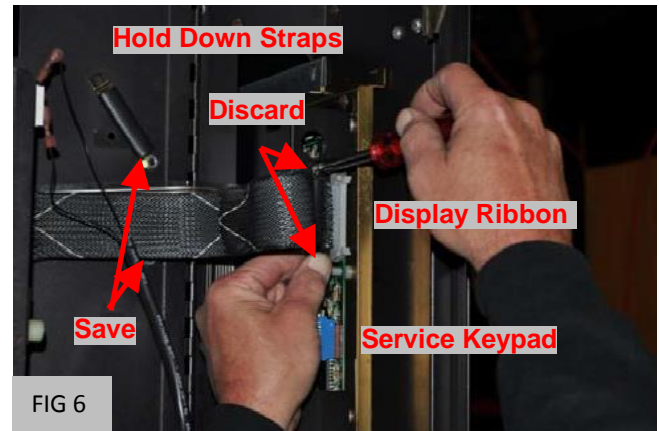
5. Remove ¼" HEX screw and spacer cup in machine sidewall to allow electronics drawer removal. Save ¼" HEX screw and spacer cup (FIG 3).



6. Remove flathead screws in display cover. Unplug keypad. Discard screws and cover (FIGS 4 and 5).



7. Remove 2 hold down straps on display ribbon cable. Save hold down strap and 11/32" nuts on monetary panel. Discard hold down strap and 1/4" HEX screws from electronics cover. Unplug display ribbon cable and service keypad (FIG 6).



8. Remove service keypad by removing 1/4" HEX screw. Discard service keypad and 1/4" HEX screw (FIG 7).



9. To remove display and bracket assembly unfasten 2 – 11/32" HEX nuts. Discard display and bracket assembly. Save 11/32" HEX nuts (FIG 8)



10. From inside of monetary compartment remove top 2 – ¼” HEX screws and spacer cups. Loosen next 2 – ¼” HEX screws and spacer cups that secure plastic frame to front of monetary compartment (FIG 9).

FIG 9



11. From front, gently pry plastic frame forward at top and slide out original display lens insert (FIG 10).

FIG 10



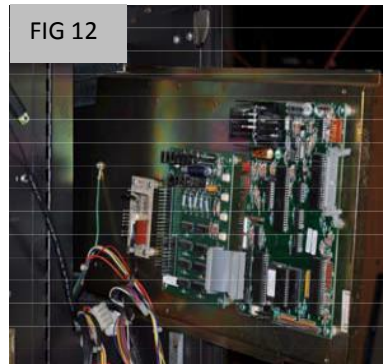
12. Remove protective film from new DISPLAY LENS (kit item) and install in monetary frame. Reinstall and tighten all ¼” HEX screws. DO NOT OVERTIGHTEN (FIG 11).

FIG 11



13. Slide electronics drawer forward and remove 4 – ¼" HEX screws holding cover. Discard cover and screws.

14. To disconnect all harnesses and remove all original PCBs (controller, machine interface, coin mech interface and DEX interface if present) remove flat head screws. Remove all harness clamps from slide out drawer. Save flat head screws (FIG 12).

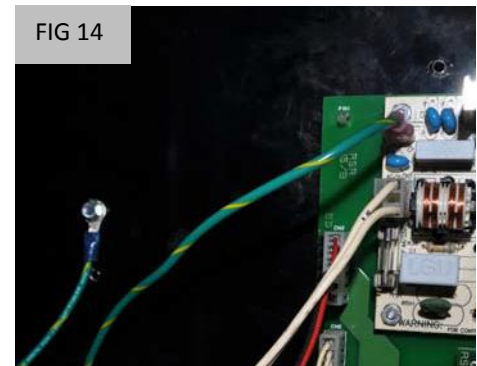


15. Install UCB assembly (kit item) using 8 flat head screws from previous step (FIG 13).

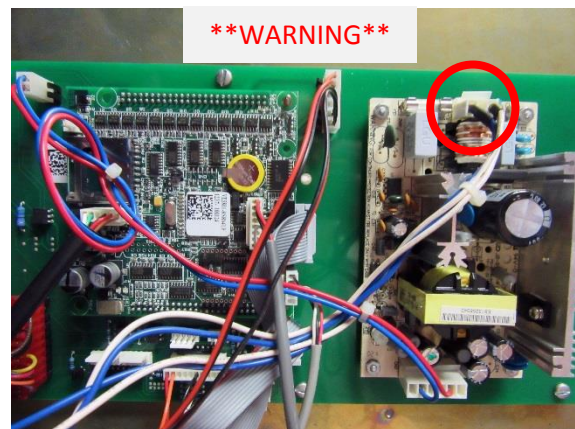
16. Affix FCC label (kit item) near UCB (FIG 13).



17. Connect ground wire (kit item—attached to power supply PCB) to any solid sheet metal in machine using #8 self-tapping screw (kit item) and 2 – #8 star washers (FIG 14).



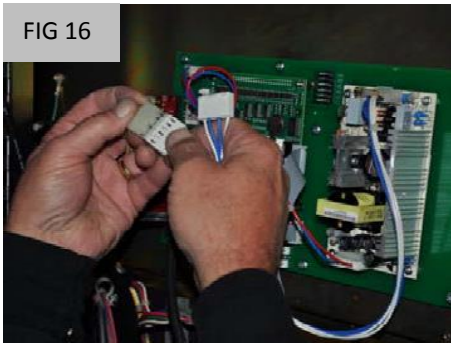
****WARNING****
Connect 110V power supply harness only to connector as shown. Attachment to any other connector could damage entire UCB.



18. Connect motor, gum and mint and power harnesses as shown. Slide electronics drawer back into machine. Make sure display ribbon (kit item), MDB harness (kit item) and DEX harness (kit item) are accessible. Reinstall $\frac{1}{4}$ " HEX screw and spacer cup (FIG 15,16,17)



19. Install new display PCB and bracket assembly (kit item) to inside of monetary compartment. Use 2-11/32" HEX nuts from step 9 (FIG 18).



20. Attach display ribbon (kit item) and selection keypad.

21. Use single hold down strap from step 7 to secure ribbon cable (FIG 18).

22. Affix keypad label (kit item) to front of monetary compartment (FIG 19).



23. Install MDB validator and coin mech and connect to MDB harness (kit item).

24. Reconnect power cord to wall outlet and turn on main power switch. Program machine per programming instructions included in kit.

