

IMPORTANT SAFETY NOTICE
THIS INFORMATION IS INTENDED FOR USE BY PERSONS POSSESSING ADEQUATE BACKGROUNDS OF ELECTRICAL, ELECTRONIC AND MECHANICAL EXPERIENCE. ANY ATTEMPT TO REPAIR A MAJOR APPLIANCE MAY RESULT IN PERSONAL INJURY AND PROPERTY DAMAGE. THE MANUFACTURER OR SELLER CANNOT BE RESPONSIBLE FOR THE INTERPRETATION OF THIS INFORMATION, NOR CAN IT ASSUME ANY LIABILITY IN CONNECTION WITH ITS USE.

DISCONNECT POWER BEFORE SERVICING
IMPORTANT: RECONNECT ALL GROUNDING DEVICES ALL PARTS OF THIS APPLIANCE CAPABLE OF CONDUCTING ELECTRICAL CURRENT ARE GROUNDED. IF GROUNDING WIRES, SCREWS, STRAPS, CLIPS, NUTS, OR WASHERS USED TO COMPLETE A PATH TO GROUND ARE REMOVED FOR SERVICE, THEY MUST BE RETURNED TO THEIR ORIGINAL POSITION AND PROPERLY FASTENED.

GROUNDING SPECIFICATIONS
Ground Path Resistance 0.10 Max.
Insulation Resistance 250K Min.

INSTALLATION REQUIREMENTS:
Power Supply
The hood must be connected to a supply circuit of the proper voltage and frequency as specified on the rating plate. Wire size must conform to the National Electrical Code or the prevailing local code. The rating plate is located on the left side and is visible when filter is removed.

WARNING: IMPROPER CONNECTION OF ALUMINUM HOUSE WIRING TO COPPER LEADS CAN RESULT IN A SERIOUS PROBLEM. USE ONLY CONNECTORS DESIGNED FOR JOINING COPPER TO ALUMINUM AND FOLLOW THE MANUFACTURER'S RECOMMENDED PROCEDURE CLOSELY.

MODEL NUMBER ZV850

**IMPORTANT
SERVICE INFORMATION
DO NOT DISCARD**

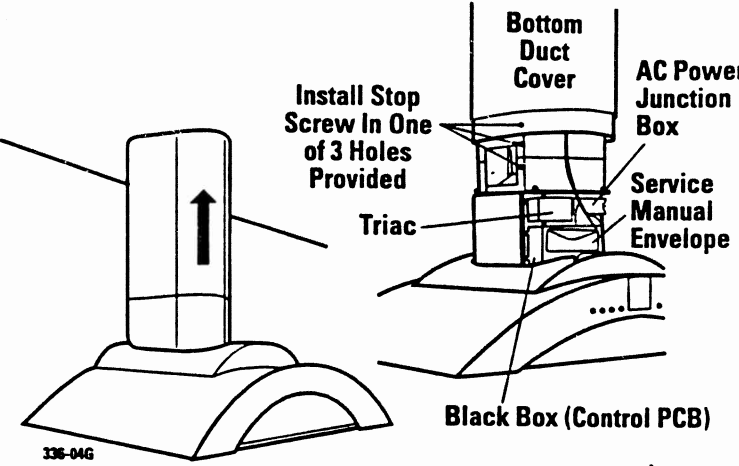
Pub. No. 31-20753-1

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TO ACCESS COMPONENTS:

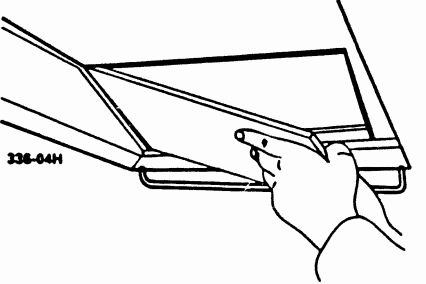
CAUTION: Stop screw must be installed. Failure to do so may cause personal injury or damage to duct cover. The stop screw is located in the Service Manual envelope. In one of three holes provided, install stop screw as shown.



TO REMOVE FILTERS:

(Access to lighting, wiring and transformer)

1. Push tab back.
2. Tip the filter down.
3. Slide filter out.



NOTE: Review Operation & Service Diagnostic Flow Chart before removing any components.

OPERATION OF FRONT PANEL CONTROL PUSHBUTTONS & LED DISPLAY

Fan Keypad Operation

- 1 ON/OFF – Remembers the last fan speed used
- 2 Decreases speed
- 3 Increases speed
- 4 High speed
- 5 Delayed shut-off – Choose 5, 10 or 20 minutes by pushing this button (see item 10).

Hood Lights Keypad Operation

- 6 Light ON/OFF – Remembers the last light level used
- 7 Dims light
- 8 Brightens light

Display LEDs

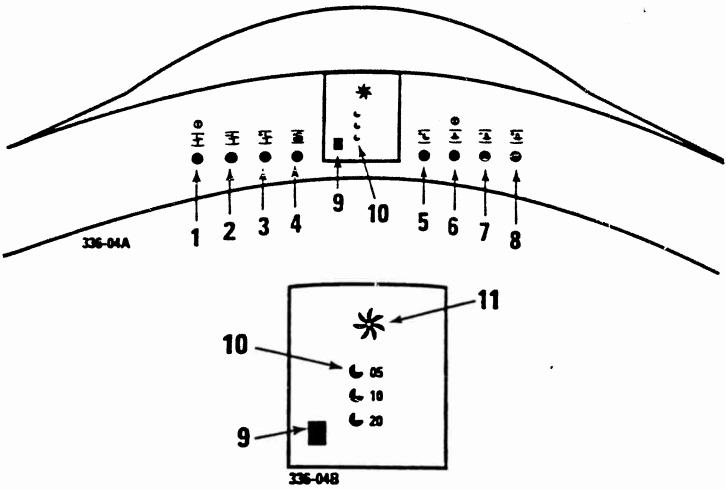
- 9 Lights after 30 hours of "ON" time to remind you to clean the metal grease filters. The light blinks until the filters are replaced. Then the timer resets automatically.
- 10 Indicates delayed time setting
- 11 Fan operating symbol

ELECTRONIC HOOD CONTROL DESCRIPTION

The electronic hood control system consist of the following parts:
1) Entry/Display Assembly; 2) Control PCB; 3) Triac; 4) Fuse Holder; 5) Motor Capacitor; 6) Transformer; 7) Halogen Lamps; 8) Filter Microswitch; 9) Induction Fan Motor

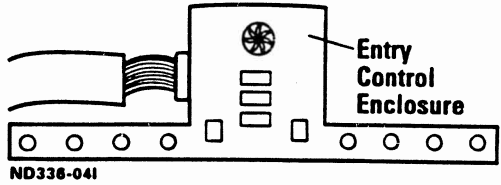
CAUTION: Components are electrically HOT on the electronic control when voltage is connected to the hood.

ENTRY/DISPLAY FRONT PANEL ASSEMBLY



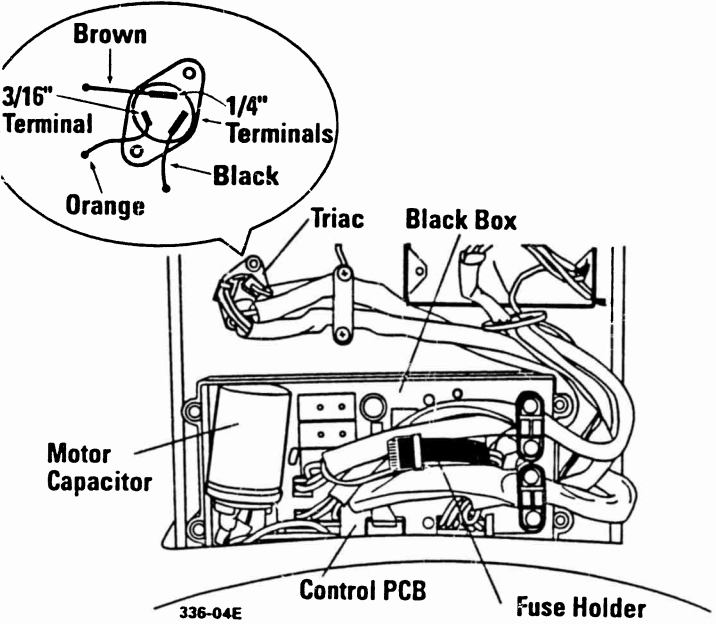
1) ENTRY/DISPLAY ASSEMBLY

The replacement assembly has three PCBs mounted in a plastic enclosure with (8) push buttons and a ribbon cable. It consists of the Fan Touch Control PCB, Lamp Touch Control PCB and the Display PCB.



IMPORTANT: Before replacing the assembly check the operation of the hood by plugging the new Entry/Display Assembly cable into connector CN5 on the Control PCB. If the unit does not work replace the control board first and then recheck whether the existing Entry/Display assembly is OK.

The harness in the hood can be used instead of the one supplied with the assembly by carefully removing the five screws from the enclosure assembly and unplugging the cable.



2) CONTROL PCB

This PCB has the AC to DC power supply, microprocessor and fan relays and is located in the black box in the hood chimney area.

NOTE: The five green connectors are locking type. Use a small flat blade screwdriver to unlock as follows: Insert screwdriver in the center of the space between the plug and connector receptacle on the PCB. Push down on the screwdriver and pull out the plug at the same time.

TO CHECK OPERATION OF CONTROL PCB:

Check that all six connectors are locked in place, no leads are broken and connector solder joints are not broken on PCB copper side.

3) TRIAC

The triac controls the four hood lamps and is mounted in a box in the chimney area. Triac has an isolated case, which is mounted to the chimney with two screws.

IMPORTANT: Triac wire connection must be correct or lamp flickering could occur.

Triac can be checked for electrical short by removing the black lead and measuring the resistance between the two 1/4" terminals (terminals with black and brown wires). Resistance should be greater than 1M ohm.

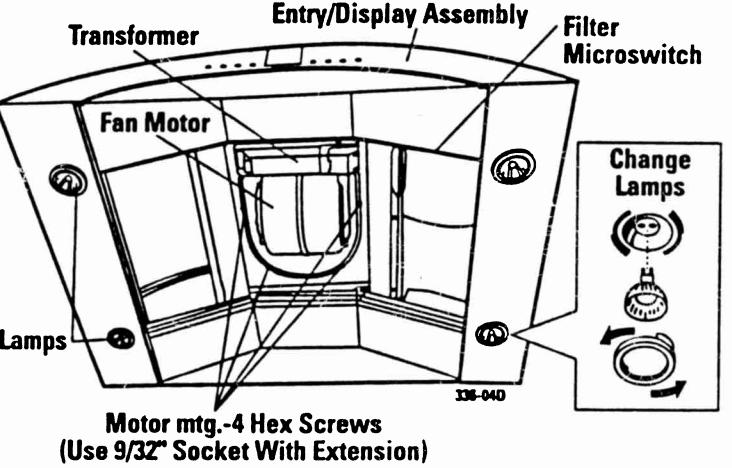
4) FUSE HOLDER

The fuse holder is an in-line type, which is in series with 12V AC from the transformer and is located in blackbox. An open fuse may be caused by a lamp failing or wrong wattage lamp.

NOTE: The fuse is 5 x 20 mm and rated at (8) A, 250V AC.

5) MOTOR CAPACITOR

The capacitor is mounted in black box and plugs into the Control PCB connector CN3.



6) TRANSFORMER

The transformer provides 12V AC to the hood lamps and the Control PCB power supply. It is attached by three screws from the top of the chassis.

7) HALOGEN LAMPS

The four halogen lamps are the push-in type rated at 12V AC/20W. The equivalent GE lamp is a Q20MR16/C/CG40 - BAB.

8) FILTER MICROSWITCH

Microswitch is mounted in the filter area and senses when filters are removed which causes the red display light to blink continually. The red display light turns "ON" after 30 hours of fan operation to remind the user to clean the filters. Make sure the filter is seated properly when installed or filter light will blink.

9) INDUCTION FAN MOTOR ASSEMBLY

Motor is a four speed capacitor run induction type rated at 120VA C/1.7A.

Motor stator winding resistances:

Orange-Red = 17 ohms

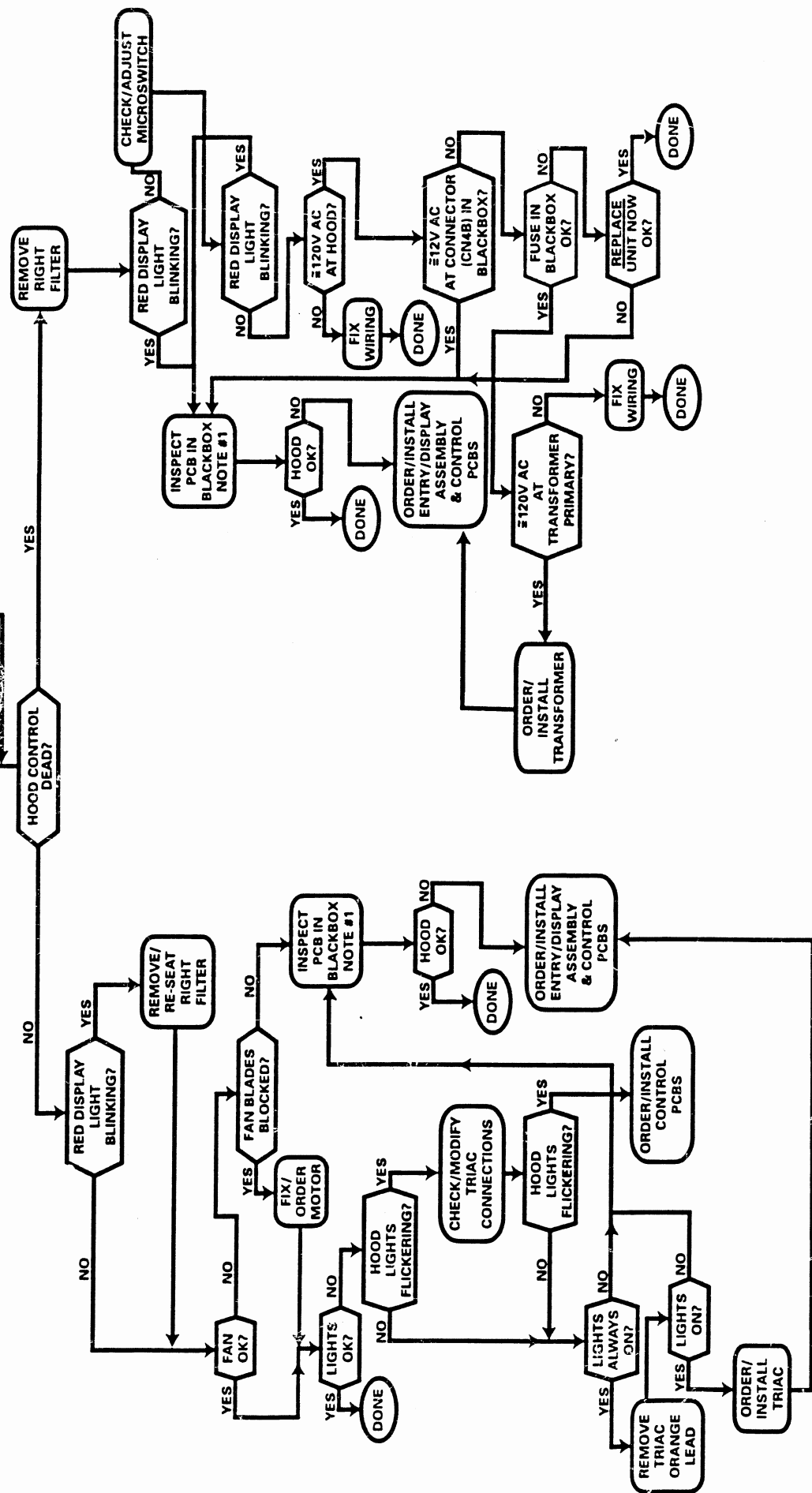
Blue-Black = 17 ohms

Blue-White = 8.5 ohms

Blower assembly can be replaced without removing the hood by using a 9/32" socket and long extension.

⚠ WARNING

- DISCONNECT POWER BEFORE SERVICING
- "DO NOT TOUCH" ELECTRICAL OR UNGROUNDED METAL PARTS WHILE SERVICING WITH POWER CONNECTED.



Note #2 – Loosen and re-position entry/display assembly as follows:

- Loosen (2) screws on under surface of hood
- Loosen (2) screws on assembly pusher plate
- Check for button protrusion through the hood holes and that buttons have "movement"

Note #1 – Check parts in the black box as follows:
All six connectors are locked in place and no leads are broken.
Connector solder joints are not broken on PCB copper side.
Fuse is OK.
Capacitor (12.5uF 250V AC); Check that cap. is not open or shorted.

SCHEMATIC DIAGRAM

