

SPECIAL SERVICE BULLETIN - SEASONAL INSPECTION AND SERVICE  
FOR  
PROPANE VAPORIZERS

For U Series, DH Series, and FFC-H Series Fan-Heater Units and Fan-Heater Units for Liquid Propane Fuel, AB and CMS Series Dryers. Refer to Bulletin PV-04-2, Installation and Operation, Propane Vaporizer Kits, and to Bulletin PV-03-3, Propane Vaporizer Parts List.

Fan-heater units or portable dryers ordered for liquid propane fuel are factory equipped with a vaporizer; many fan-heater units have had vaporizer kits installed in the field. Since vaporizers operate at relatively high pressure, and since leakage can result in release of liquid propane, it is extremely important to maintain the condition of all components to provide safe operation. Vaporizers should be inspected and serviced prior to each season of operation, including the following:

1. Carefully inspect the surfaces of the vaporizer ring and the welds (or the pipe coil), and the liquid inlet and vapor outlet pipes for evidence of severe corrosion or abrasion of metal which could cause subsequent leakage of liquid propane, gross overheating, and fire hazard. Such inspection may be through the inspection port, and by removing the vaporizer mounting plate and partially withdrawing the vaporizer, and by inspection from the exhaust end of the fan-heater unit.

Insecure mounting of either the vaporizer or the burner, by loosened bolts, can cause interference between burner vanes and vaporizer pipes, with the natural vibration of the unit causing erosion of the pipe metal at the point of maintained contact. Such contact also depends upon adjustment of the vaporizer toward or away from the burner. (Contact is more likely to occur on 24" diameter units because of the closer spacing of burner vanes and less tolerance for variation in burner and vaporizer mounting.

If there is contact between burner vane and vaporizer pipe, adjust the position of the burner and/or vaporizer, or bend the edge of the burner vane if necessary, to provide clearance. If there has been significant abrasion of the heavy steel vaporizer pipe (0.147" wall thickness), the worn area should be repaired by welding and testing under pressure (after removal from the unit and purging all fuel) or by replacement of the vaporizer ring weldment or pipe coil. See Fig. 1.

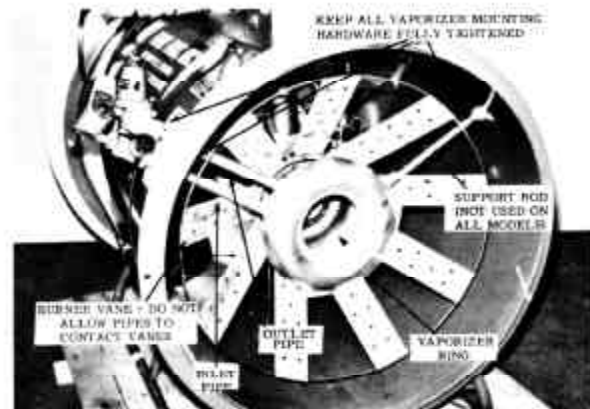


Figure 1

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2. Inspect the fuel train components - liquid solenoid valve, pressure relief valve, pressure regulator, hi-limit vapor thermostat, and the fuel lines and fittings. The fan-heater hi-limit thermostat should also be checked, since it is the manual reset safety device to stop burner operation, by closing the liquid solenoid valve, in the event of a vaporizer leak and excessive heat from liquid propane release.

Various electrical connections to the liquid solenoid valve (with hi-limit vapor thermostat in series) will make the liquid valve operational. However, maximum safety is provided by connecting the two wires, one from the liquid solenoid valve and one from the hi-limit vapor thermostat, to the same points as the vapor solenoid valve, as shown in Fig. 2, to terminals 1 and 3 on U24-B units and to the red and white terminals (or wires) on all other units equipped with master controls. By that connection the liquid and vapor solenoid valves open and close simultaneously.

Electrical connections, if different from those described above, should be changed, to provide for simultaneous operation of the two solenoid valves, and to ensure that the liquid valve will close if the fan-heater manual reset hi-limit thermostat goes open-circuit as a result of excessive heat.

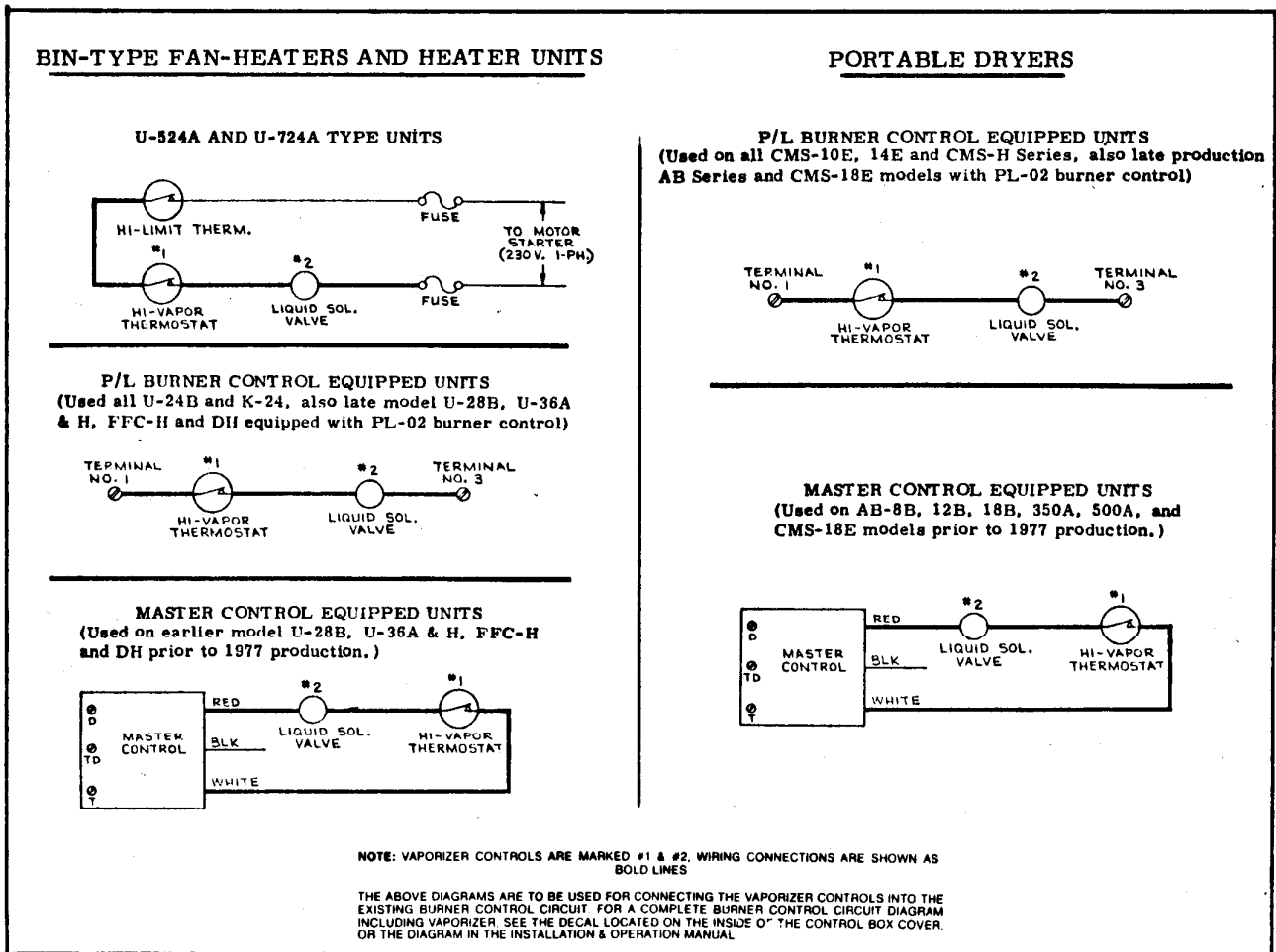


Figure 2