Trouble Shooting

Should an operational difficulty or malfunction occur, the diagnostic chart and checkout procedures on the following pages should help to quickly determine the cause and corrective action. The Troubleshooting Chart has a "Symptom" column which describes what the unit is doing; a "Possible Cause" column which identifies possible sources of the problem; and a "Solution" column which describes what must be done to correct the problem.

NOTE: Should the OAM Purger shut down on a FAULT condition, DO NOT POWER OFF THE PURGER until you have first removed the electrical panel cover and recorded the status of the indicator LED's D1 through D5 located on the Logic Board. Knowing the particular LED(s) that are lighted will help you diagnose the cause of the problem. Once the unit is powered off, this information will be lost. Retain the record of the LED readings. Examine the purger for any apparent problems, check the troubleshooting section for possible causes of the fault. Check to see if all appropriate Dip Switches on SW1 & SW2 are off (see pages 23, 33 and 40), then if there is no readily apparent problem, you should *reset one time (and only one time)* to see if the fault repeats.

Trouble-shooting Chart

Symptom	Possible Cause	Solution
Power switch ON but switch L is Off.	Main power to unit Off. Switch light defective.	Restore main power. Replace Switch.
Power switch ON and lighted Logic Board LED's are all OF	Logic Board fuse blown. Logic Board defective.	Replace fuse. Replace Logic Board.
Red Fault LED **D6** ON and fl with Green LED **D1** ON solid Indicates distillation temperatu did not drop below 145 degre during the first 14 minutes of t phase.	Distillation heater stuck on. RLY-1 conta stuck. Temperature Sensor TS-1 defective. Chiller's charging valve closed. Oil Return Solenoid Valve SOL-2 defect the purger has become oil logged. RLY-4 relay which controls Oil Transfer Solenoid (SOL-2) defective. Chiller's oil sump charging valve closed causing purger to become oil logged.	Replace Logic Board. Replace sensor. Open valve. See clearing oil logging procedure 39. Replace solenoid valve Replace Logic Board. Open Valve and see page 39 for cl Oil logging.

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Trouble-shooting Chart (continued)

Symptom	Possible Cause	Solution
Red Fault LED **D6** flashing Green LED **D2** ON solid. Indicates distillation temperatu failed to reach 145 Degrees F within 4 hours after entering Primary Distillation Phase.	Distillation heater defective. Heater relay RLY-1 on Logic Board defe Temperature Sensor TS-1 defective.	Replace heater (see Maintenance Switch SW2 dip switch 4 as a diagr aid See page 40). Replace Logic Board. Replace Temperature Sensor (TS-
Red Fault LED **D6** flashing Green LED **D3** ON solid. Indicates the purger Logic Bo **did not see any activations** Equalization Solenoid Valve S during distillation phases.	Heater may be defective. Oil Return Solenoid Valve Sol-2 failed o closed. Relay RLY-4 contacts failed open or clos Pressure Equalization Solenoid Valve (S failed open or closed. RLY-3 failed open or closed. Purger may be mounted to high. Fill Check Valve CK-2 stuck in open pos Refrigerant Charge low. Differential Pressure Switch DPS-1 defe Dip Switches on Switches SW1 or SW2 be set improperly Fill line may not be insulated properly	Replace Heater Replace valve. Replace Logic Board. Replace Valve. Replace Logic Board. See Mounting Section Page 13, 14 Replace Check Valve CK-2. Correct Refrigerant Charge. Replace Switch. See page 23, 33 and 40 for SW1 a SW2 information. Insulate fill line to Chiller shell.
Red Fault LED **D6** flashing Green LED **D4** ON solid. Indicates the Logic Board **did** **see at least 2 activations** o Equalization Solenoid Valve S during the distillation Phases.	Heater may be defective. Pressure Equalization Solenoid Valve S failed open or closed. Fill Check Valve CK-2 stuck open Differential Pressure Switch defective. Oil Return Solenoid Valve SOL-2 failed RLY-4 Contacts stuck. RLY-3 contacts failed open or closed. Refrigerant Charge low. Purger may be mounted to high. Dip Switches on Switches SW1 or SW2 be set improperly. Fill line may not be insulated properly	Replace Heater. Replace Valve. Replace Check Valve CK-2. Replace switch. Replace Valve. Replace Logic Board. Replace Logic Board. Correct Refrigerant Charge. See Mounting Section Page 13, 14 See page 23, 33 and 40 for SW1 a SW2 information. Insulate fill line to Chiller shell.

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Trouble-shooting Chart (continued)

Symptom	Possible Cause	Solution
Distillation Heater doesn't ge	Defective Heater.	Replace heater (See Maintenance Se on Using Switch SW2 DIP switch 4 as diagnostic aid.)
	RLY-1 relay defective.	Replace Logic Board.
	Disconnected lead.	Reconnect lead.
	Defective Temperature Sensor TS-1. Contacts stuck closed.	Replace Sensor.
Equalization Solenoid Valve 1 fails to open or close.	SOL-1 Solenoid Valve defective.	Replace valve.
	RLY-3 relay defective.	Replace Logic Board.
	Disconnected lead.	Reconnect lead.
	Differential Pressure Switch DPS-1 de	Replace switch.
Oil Return Solenoid Valve SO fails to open or close.	SOL-2 Solenoid Valve defective.	Replace valve.
	RLY-4 relay defective.	Replace Logic Board.
	Disconnected lead.	Reconnect lead.
Distillation Tank will not fill.	Chiller's refrigerant charging valve clos	Open Valve.
	Vapor return line isolation valve closed	Open Valve.
	Equalization Solenoid Sol-1 failed to energize.	Replace Equalization Solenoid Sol-1.
	Distillation Heater stuck ON during Fill Phase.	Defective TS-1, Replace. Or RLY-1 c stuck. Replace Logic Board.
	Distillation Tank oil logged.	See "Maintenance" section for proced clear oil logged distillation tank.
	Fill line kinked or obstructed.	Correct as needed.
	Fill line strainer clogged.	Replace Fill line Strainer.
	Fill Check valve CK-2 fails to open.	Replace Check Valve CK-2.
	Purger may be mounted to high.	See Mounting Section Page 13, 14.
	Fill line and connecting piping up to evaporator shell may not be insulated causing vapor lock.	Insulate, (see page 17 for warning information on insulating.)
	Refrigerant Charge low.	Correct Refrigerant Charge.

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Trouble-shooting Chart (continued)

Symptom	Possible Cause	Solution
Oil will not transfer from Distillation Tank to oil sump.	Oil Return Solenoid Valve SOL-2 Sole defective.	Replace valve.
	Oil Sump valve closed.	Open Valve.
	Oil return line kinked or blocked.	Correct as necessary.
	Oil Filter blocked.	Replace oil filter.
	RLY-4 relay defective.	Replace Logic Board.
	Equalization Solenoid Valve SOL-1 stu open or leaking past valve seat..	Replace valve.
	RLY-3 relay contacts welded closed.	Replace Logic Board.
	Differential Pressure Switch DPS-1 de	Replace DPS-1.
	Fill Check Valve CK-2 stuck open.	Replace Fill Check Valve CK-2.
NO PRESSURE IN DISTILLATION T TO PUSH OIL to oil sump:	Equalization Solenoid Valve SOL-1 stu open or leaking past valve seat..	Replace valve.
	Oil Return Solenoid Valve SOL-2 Sole defective.	Replace valve.
	Differential Pressure Switch DPS-1 de	Replace Differential Pressure Switch D
	Fill Check Valve CK-2 stuck open.	Replace Fill Check Valve CK-2.
	RLY-4 relay defective.	Replace Logic Board.
	RLY-3 relay contacts welded closed.	Replace Logic Board.
	Distillation Tank oil logged.	See “Maintenance” section for proced clear oil logged distillation tank.

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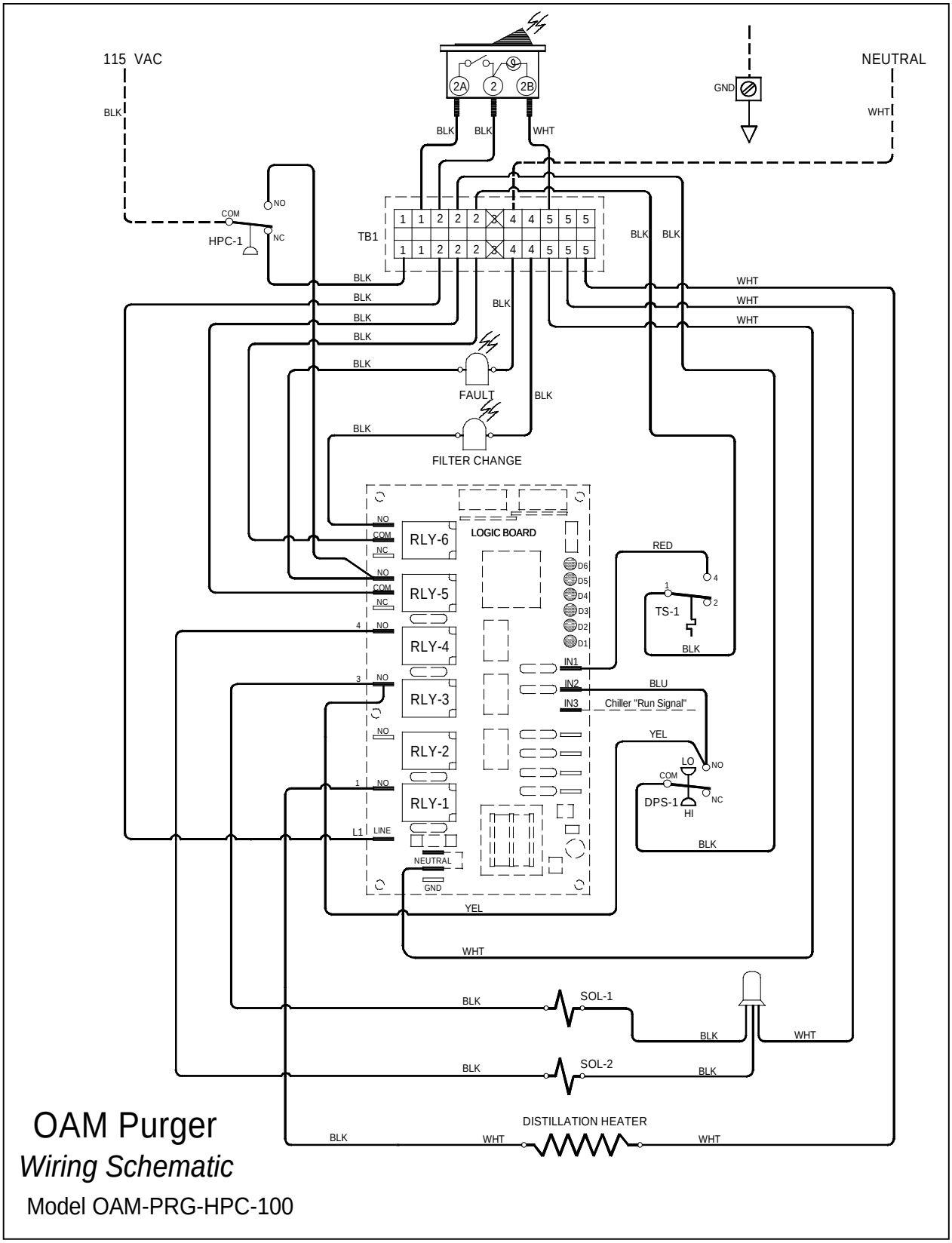

Figure 9. - **Electrical wiring diagram**

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