

1500S Lighting System Trouble Shooting Chart

Problem	Possible cause or symptom	Test Procedure	Remedy
Lighting System Does not Turn On			
Lighting System will not turn on	No electrical power to equipment	Check power line fuses or circuit breakers.	
	Power is present but no power to the main transformer T1	1. Check for 120 VAC at terminals 1 & 2 of the T1 transformer. If not present check main switch S1	1. S1 P/N is 71384
Main exposure lamp does not light	Exposure Lamp is too hot to restart	Allow Exposure lamp to cool down for at least five minutes before attempting to restart.	
	Exposure Lamp, E1, is defective or has reached end of operating life.	Check Exposure Lamp for glass or electrode damage.	If Exposure Lamp is defective replace with THS 1507
	Defective starter	Check igniter , GZ 501, on starter circuit board in Lamp House for proper firing. Replace igniter if it does not glow at all or glows steadily when the lamp is not lit. If problem still exists replace Starter circuit board St1	1. GZ 501 is P/N 33309 2. Starter Circuit Board ST1, is P/N 33306
	Main power transformer defective	On the main transformer (T1) 1. Check voltage between terminals 1 & 2 for 120 VAC 2. Remove the wire on terminal # 5 Check voltage between terminals 1 & 5 for 230 VAC	If Main Transformer (T1) is defective replace with P/N 44020
	Poor connection in lamp circuit	Check the following wire connections 1. K 3 Contactor 2. The Lamp House connections 3. The Lamp Holder connections 4. Connections on Capacitor bank	
Lighting System Draws very High Current	Defective lamp	Check lamp Current Max current is 12.5 Amps.	If Exposure Lamp is defective replace with THS 1507
	Defective high low contactor	Check Voltage drop across the normally closed contact. In standby it should be (0 VAC)	High Low Contactor, K3, is part number 63778
Lamp Does Not Switch To The High Power Level	High / Low switch incorrectly set	Check switch position.	
	1. Defective High / low power contactor K3	1. Check that 120 VAC is present during Expo on the coil of the K3 relay.	1. K3 is P/N 63778
	2. Defective integrator	2. Check for power level control a. for Timetronic integrators 120 VAC on Pins 1 & 2 of Integrator connector	2. Repair integrator
Lamp Does Not Switch To The low Power Level	Defective high low contactor	Check Voltage drop across the normally closed contact. In standby it should be (0 VAC)	High Low Contactor, K3, is part number 63778

1500S Lighting System Trouble Shooting Chart

Problem	Possible cause or symptom	Test Procedure	Remedy
Light Problems			
Low Light Output	Lamp is near end of operating life	Check for blackening or distortion of Exposure Lamp. Does the lamp have more than 1000 hours? Replace lamp.	If Exposure Lamp is defective replace with THS 1507
	Defect in Lamp Ballast Capacitors	Check Lamp current a. High power is 10.5 Amps b. Low power is 5 Amps	Check a. High / Low contactor P/N 63778 b. Ballasts capacitors P/N 23755
	Reflector or glass dirty.	Clean reflector and glass	Use a good Quality Graphic Arts Glass Cleaner such as Theimoclean. P/N 85164
Long Exposures do to Vacuum Frame Glass	Does your glass cleaner have a polymer wax or UV block in it?	Expose a step scale through a piece of 1/4" Plate glass on top of the Vacuum Frame Glass, Then expose the same scale through the Vacuum Frame Glass. The 2 exposures should be the same.	Clean glass with alcohol and than a Graphics Arts quality glass cleaner, such as Theimoclean. P/N 85164. If the the problem continues, replace the Vacuum Frame Glass with Select Quality 1/4" Polished Plate Glass.
	<p>Warning UV HAZARD When trouble shooting the shutter system or the cooling system the Exposure Lamp Should be disabled by removing the wire on terminal # 6 of the Main Transformer (T1)</p>		
Shutter System			
Shutter does not open or close	Problem with DC supply	1. Check AC input to Bridge Rectifier (22 VAC between pins 2 & 3 on A1 Board) 3. Check DC output of Bridge Rectifier, A1 Board Should be (+) 32 VDC, pin 4 & (-)32 VDC pin 1 in reference to terminal 7 on T1	1. T1 is P/N 44020 2. A1 Board, is P/N 95108
Shutter Does Not Open	Defective Integrator	1. Check for + 32 VDC on pin # 4 of the Integrator connector 2. Check for + 32 VDC on pin #6 of the integrator connector during exposure. Reference is term. # 7 on the T1	1. If not present check chassis wiring and DC supply 2. If not present check integrator and interconnections to integrator.
	Defective steering diode PC Board	Check for + 32 VDC on terminal # 7 of the main terminal strip	Steering diode, D1, P/N is 56693
	Limit switch defective or Limit switch sticking	Check operation of "open" sensing limit switch S3.	Limit switch, S3, is P/N 72104
	Shutter motor defective	Check for 12 VDC at Shutter Motor, M1	Shutter Motor, M1, is P/N 1108640

1500S Lighting System Trouble Shooting Chart

Problem	Possible cause or symptom	Test Procedure	Remedy
Shutter Does Not Close	Defective Integrator	1. Check for (-) 32 VDC on pin # 5 of the Integrator connector 2. Check for (-) 32 VDC on pin #6 of the integrator connector during standby. Reference is term. # 7 on the T1	1. If not present check chassis wiring and DC supply 2. If not present check integrator and interconnections to integrator.
	Defective steering diode PC Board	Check for (-32) VDC on terminal # 6 of the main terminal strip	Steering diode, D1, P/N is 56693
	Limit switch defective or Limit switch sticking	Check operation of "open" sensing limit switch S2.	Limit switch, S2, is P/N 72104
Shutter Opens Or Closes Noisily	Limit switches out of adjustment		Adjust limit switches
	Braking diodes defective	Check braking diodes. Located under heat shrink at terminal # 8 in Lamp House.	Braking diodes are P/N 95516
Lamp House Cooling System			
Lamp swells	Lamp not cooled properly	1. Check for obstruction at blower air intake. Remove obstruction, dust, dirt, paper ect. 2. Is air intake over 95 deg F at blower 3. Blower circuit defective	1. Remove Blower from Lamp House and clean thoroughly 2. Ventilate room properly
	Exposure Lamp Blower not functioning	1. Check blower voltage at term.# 3 & 4 of the main terminal strip. a. Low power 90 VAC b. High power 250 VAC 2. Check blower wiring in light unit	1. Check lamp Ballast for proper operation 2. Blower, B2, is P/N 43445 Blower Start Capacitor, C2, is P/N 23744
Lamp turns off and power indicator stays on.	1. Lamp house safety is sensing over temperature situation.	1. Check for over heating of Lamp House 2. Defective safety relay, check operation of K4	1. Correct Cooling system problem and replace lamp house safety thermostat, P/N 72202. 2. K4 is P/N 63717