Violux 3002S & 5002S Lighting System Trouble Shooting Chart

Problem	Possible cause or symptom	Test Procedure	Remedy
Lighting System Does not Turn On			
Main Power Contactor does not remain energized	No electrical power to equipment	Check power line fuses or circuit breakers.	
	Power is present but the main power contactor will not remain energized	1. Check for 220 VAC at Coil terminals of K1 when the green Push button is depressed If not present Check F3, S103 & S1 2. If there is voltage check the K1	1. F3 P/N is 63306 S103 P/N is 72202 S1 P/N is 70911 & 70943 2. K1 P/N is 63725
Main exposure lamp does not light but contactor Energizes	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 a. 3002S Multi Spec.THS 3027; Diazo THS 3020 b. 5002S Multi Spec.THS 5027; Diazo THS 5020
	Main power transformer defective	On the main transformer (T1) 1. Check voltage between terminals 2 & 4 for 220 VAC (+/- 10 Volts) 2. Remove the wire on terminal # 6 Check voltage between terminals 4 & 6 for 800 VAC	If Main Transformer (T1) is defective replace with a. 3002S P/N is 43777 b. 5002S P/N is 43779
	Reduced Power Choke defective	Check DC resistance of Choke Coils (L1), They should be approximately 1/4 w	Choke (L1) is P/N 44577
	Poor connection in lamp circuit	Check the following wire connections 1. K 2 Contactor 2. The Lamp House connector 3. The Lamp Holder connections	
Lighting Draws very High Current	Defective lamp	Check lamp Current a) 3002S Max current is 9 Amps. b) 5002S Max current is 12.5 Amps)	If Exposure Lamp is defective replace with a. 3002S Multi Spec.THS 3027; Diazo THS 3020 b. 5002S Multi Spec.THS 5027; Diazo THS 5020
	Defective power compensation circuit	Check power compensation Capacitors C1. a) 5002S is 18 Amps, (180mf) b) 3002S is 12 Amps, (120 mf)	Compensation Capacitors C1, are P/N 20972 a) 5002S Quantity 6 Each b) 3002S Quantity 4 Each
	Tap incorrectly set	Verify tap setting	

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Lamp Does Not Switch To Proper Power Level	Remote / Low switch incorrectly set	Check switch position.	
	1. Defective exposure control relay, K3 2. Defective Remote / Low switch	1. Check that 220 VAC is present during Expo ter # 23 on the K3 relay. 2. Check S2 for continuity.	1. K3 is P/N 63717 2. S2 is P/N 71304
	2. Defective Remote / Low switch	2. Check S2 for continuity.	2. S2 is P/N 71304
	3. Defective High / low power contactor	Check that 220 VAC is present at the contactor coil during Exposure.	a) High Power Contactor K2; is P/N 63725
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 a. 3002S Multi Spec.THS 3027; Diazo THS 3020 b. 5002S Multi Spec.THS 5027; Diazo THS 5020
	TAP improperly set	Check tap setting	
	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.
	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)		

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Shutter System			
Shutter does not open or close	Problem with DC supply	1. Check fuses F1 & F2 2. Check AC input to Bridge Rectifier (22 VAC between pins 2 & 3) 3. Check DC output of Bridge Rectifier, CR1 Should be (+) 32 VDC, pin 4 & (-)32 VDC pin 1 in reference to terminal 9 on T1	1. F1 or F 2 is P/N 63306 2. Bridge Rectifier, CR1 , is P/N 95108
Shutter Does Not Open	Expose relay K3 not actuating or providing a output to open shutter	1. Check 110 VAC control input during exposure on coil terminals of K3. 2. Check operation of K3 relay a. (+32) VDC out put of K3 at terminals 5 & 4 of the light unit terminal strip	1. If not present check integrator and interconnections to integrator. 2. Exposure Relay , P/N is 63717
	Limit switch defective or Limit switch sticking	Check operation of "open" sensing limit switch S101.	Limit switch, S101 is a. External P/N 72104 B. Internal P/N 60457
	Shutter motor defective	Check for 12 VDC at Shutter Motor, M3	Shutter Motor, M3, is P/N 1108640
	Shutter or Shutter motor Gears worn	Visual examination of Gears	A) Shutter Motor Gear is 1. New Style P/N 160432 2. Old Style P/N 68607 B) Shutter Assembly 1. For external limit Switches is P/N 161729 2. For internal limit Switches is P/N 60487 & 60488 (Shutter gears are available separately, but require a pinning operation to attach them to the shutters. Shutter Gear P/N 68714) (For older machines the brass studs have to be replaced with steel P/N 100503
Shutter Does Not Close	Expose relay K3 not deactivating or providing a output to close shutter	1. Disconnect the integrator and make shore that the K3 relaxes. 2. Check operation of K3 relay a. (-) 32 DC t output of K3 at terminals 6 & 4 of the light unit terminal strip.	2. Exposure Relay , P/N is 63717
	Limit switch defective or Limit switch sticking	Check operation of "open" sensing limit switch S102.	Limit switch, S102 is a. External P/N 72104 B. Internal P/N 60457
Shutter Opens Or Closes Noisily	Limit switches out of adjustment		Adjust limit switches

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	Braking diodes defective	Check braking diodes. Located under heat shrink at terminal # 8 in Lamp House.	Breaking 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	Defective blower control Board, Z101	1. Check lamp voltage at Blower Board, Z101 Terminals #2 & 4. If there is over 180 Volts the blower circuit should turn on. If the voltage is low check the Exposure Lamp for proper operation 2. Bypass blower control card by removing the wire from terminal #1 of the Blower control board and attaching it to terminal #2. If blower work normally, the Z101 board is bad.	1. If the lamp voltage is low, check lamp circuit for proper operation and than replace the lamp. (See lamp section for Info) 2. The Blower Control board is P/N 56528
	Defective Low speed capacitors	Bypass the Blower Control Board, Z101. Check the Blower Voltage at Terminals 3 & 2 of the light unit terminal strip 1) High Power Exposure 211 To 230 VAC 2) Low Power Exposure 95 to 110 VAC	If the voltages are wrong check the following 1) Voltage high or low on High Power Exposure Verify that the Tap is set Correctly, and Verify that the control circuit (F3) is on the 220 VAC terminal of the T1 Transformer. 2) Voltage high or low on Low Power Exposure. Low speed Cap. is defective. Check Cap. and replace if defective, with a. 3002S P/N 23737 b. 5002S P/N 23739
	Defective Blower	With the Lamp disabled, the Blower Control card by passed, and the lighting system on High Power Exposure, check for 220 Volts at the Blower Motor. If present and blower does not run, the blower motor and or the starting cap are defective.	1. Exposure Lamp Blower Motor & Capacitor a. 3002SMotor P/N 43455, Cap. P/N 23736 b. 5002S Motor P/N 43401, Cap. P/N 23737
Lighting System turns off and power indicator Extinguishes.	1. Lamp house safety is sensing over temperature situation.	1. Check for over heating of Lamp House	1. Correct Cooling system problem and replace lamp house safety thermostat, P/N 72202.