DSE D-3800 SN 92521454 VK2ZIP 22-Jan-17

LM723 (IC1) pin voltages when D-3800 is working correctly, for output voltages of 14 V, 10 V and 5 V, no load (at 240 V AC 50 Hz input):

Pin No.	14.02 V	10.00 V	5.01 V	Function	Comment
1	0.00	0.00	0.00	NC	
2	14.02	10.04	5.00	Current Limit	Pins 2 and 3 connected across 0.1E emitter resistor R3
3	14.02	10.04	5.00	Current Sense	
4	1.99	1.99	1.99	Inverting Input	
5	1.98	1.98	1.98	Non-inverting Input	(derived from 7 V reference via voltage divider R10/R14)
6	7.14	7.14	7.14	Vref	LM723 internal reference
7	0.00	0.00	0.00	V- (ground)	
8	0.00	0.00	0.00	NC	
9	7.32	3.28	0.00	Vz	Vout minus nominal (? V) zener drop: not used as far as I can tell
10	15.07	11.03	6.01	Vout	Greater than the final output by the two base-emitter voltages of the Darlington output stages, which are only about 0.5 V each at no load.
11	26.2	26.3	26.3	Vc	
12	26.2	26.3	26.3	V+	Raw supply volts
13	16.3	12.2	7.2	Frequency Compensation	This pin is being used for Remote Shutdown via D12 (IN4148) from pin 13 of IC 2D.
14	0.00	0.00	0.00	NC	

LM339 (IC2) pin voltages when D-3800 is working correctly, for output voltages of 14 V, 10 V and 5 V, no load (at 240 V AC 50 Hz input):

Pin No.	14 V	10 V	5 V	Function	Comment
1	0.03	0.03	0.03	B out	Analaogue Quad Comparator
2	0.00	0.00	0.00	A out	Open collector outputs are pulled low if IN - is greater than IN +
3	15.23	15.3	15.3	V+	
4	0.00	0.00	0.00	A IN -	Fan control
5	10.53	10.56	10.56	A IN +	Fan control
6	0.38	0.38	0.38	B IN -	Fan control
7	0.00	0.00	0.00	B IN +	Fan control
8	7.62	7.65	7.65	C IN -	Overlaod LED
9	15.13	15.15	15.16	C IN +	Overlaod LED
10	9.27	6.63	3.33	D IN -	Current sense
11	9.49	6.70	3.34	D IN +	Current sense
12	0.00	0.00	0.00	V -	
13	15.9	14.9	14.9	D out	Shuts down LM723 (IC1) if IN - greater than IN +
14	24.8	24.6	24.6	C out	Turns on LED if IN - greater than IN +

Note: Number of decimal places is indicative of stability of voltage. My multimeter has an accuarcy of about 1 mV at 10 V