

SCOPE

This instruction provides a method for performing a functional check with the necessary adjustments for the subject circuit board prior to installation in the EHC cabinet. R1 will require further trimming when the circuit board is installed in the EHC cabinet.

TEST PROCEDURE

- (1) Examine the circuit board to see that the electrical components and printed circuits are not physically damaged.
- (2) Plug circuit board 947D374 G3 into the test fixture.
- (3) Use an ohmmeter to check that there are no short-circuits between any combination of pins 19, 21, 38, and 40.
- (4) Connect resistors between pins as follows:

1.8Kohm, 1 WATT between pins 38 and 23.
 1.8Kohm, 1 WATT between pins 38 and 5.
 2.2K ohm, 1 WATT between pins 23 and 19.
 7.2Kohm, 1 WATT between pins 5 and 19.
- (5) Connect an adjustable 5.0K ohm potentiometer between pins 22 and 19. The potentiometer slider should be connected to pin 7. Connect the potentiometer electrically such that the slider is shorted to pin 22 when the potentiometer is in the full clockwise position. This potentiometer will be referred to as R_A.
- (6) Connect the input of a high gain dc operational amplifier to pin 13 and the output to pin 31.
- (7) Connect the input of a second high gain dc operational amplifier to pin 3 and the output to pin 1.
- (8) Connect a well regulated plus (+) 30.0 volt dc power supply to pin 38. The negative voltage terminal should be connected to pin 19.
- (9) Connect a well regulated minus (-) 22.0 volt dc power supply to pins 21 and 40. The positive terminal should be connected to pin 19.
- (10) All voltage measurements will be made with respect to testpoint TP11.
- (11) Turn potentiometer R_A to its full counterclockwise position.
- (12) Connect TP2 to signal ground, pin 19. The voltage at pin 5 should be between +2.4 and +2.6 volts. The voltage at pin 23 should be between -0.1 and +0.1 volts.
- (13) Remove the 1.87K ohm resistor between pins 38 and 5. The voltage at pin 23 should be greater than +5.0 volts.
- (14) Replace the 1.87K ohm resistor between pins 38 and 5.
- (15) Remove the signal ground from TP2.
- (16) Set R_A for -0.625 volts as measured at TP2. The voltage at pin 5 should be between +3.35 and +3.65 volts. The voltage at pin 23 should be between -0.1 and +0.1 volts.

FOR 48
 DATE 7/14/91

FL-6
 1-1 GAIN 2.5 + .625 = 3.12
 From STEP 12 2.49 + .625 = 3.12 1 to 1 GAIN
 FLA

MADE BY H. Keller Jan. 24 '69 ISSUED FEB 3 1969	APPROVALS <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	DIV OR DEPT. Steam Turbine LOCATION Schenectady, N. Y.	P24B-AL-4912 CONT ON SHEET 2 SH NO. 1
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REV NO. <u>0</u>	TITLE	CONT ON SHEET --	SH NO.
P24B-AL-4912	INSTRUCTIONS FOR TESTING THE COMBINED MAXIMUM FLOW LIMIT CIRCUIT BOARD FIRST MADE FOR Drwg. 947D374 G3		
CONT ON SHEET --	SH NO. 2		

- (17) Turn R_A to the full clockwise position.
- (18) Adjust R_1 for -5.02 volts at TP2.
- (19) Remove all test equipment.
- (20) Remove the circuit board from the test fixture and identify it with a suitable mark to indicate that it has been tested and adjusted in accordance with this instruction.

PREPARED BY:

H. Keller
H. Keller
Control Design Engineering

DATE:

1/30/69

APPROVED BY:

J. Kure-Jensen
J. Kure-Jensen, Manager
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DATE:

1/31/69

REVIEWED BY:

R. J. Dell Orfano
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EHC Test Engineer

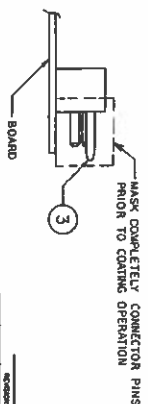
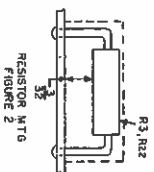
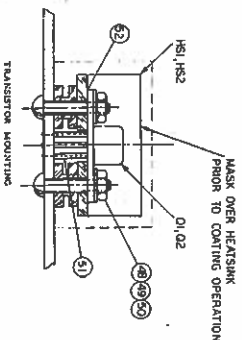
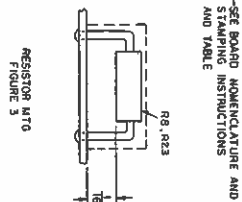
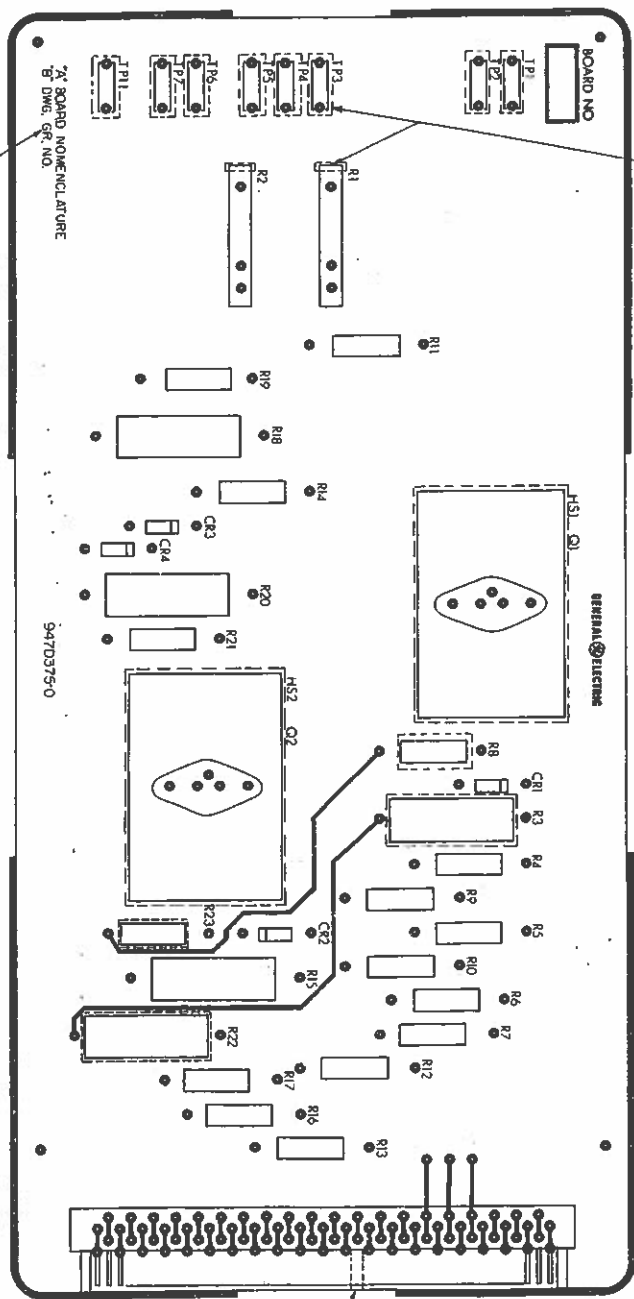
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1/31/69

MADE BY H. Keller Jan. 24 '69	APPROVALS	Steam Turbine	DIV OR DEPT.	P24B-AL-4912
ISSUED FEB 3 1969		Schenectady, N. Y.	LOCATION	CONT ON SHEET --
				SH NO.

1/9/2012
CW

GROUP NO.	BOARDS NOMENCLATURE	REF. TITLE	"E" DRAINING	PI-PILOT NO.	APL ITEM	PI-15 INST.
1	C MAX. FLOW LIMIT	COMBINED MAX FLOW LIMIT	94/03/16 G1	PI09	4K4	125-181-4823
2	B/P VALV AMP	BYPASS VALVE AMP-AFTER	94/03/14 G2	PI05	4K6	152-6-1-1824
3	C VALV FLOW LIMIT	COMBINED MAX AMP-AFTER	94/03/14 G2	PI05	4K4	125-6B-1-1824
4	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
5	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
6	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
7	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
8	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
9	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
10	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
11	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
12	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
13	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
14	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
15	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
16	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
17	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
18	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
19	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
20	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
21	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
22	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
23	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
24	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
25	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
26	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
27	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
28	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
29	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
30	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
31	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
32	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
33	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
34	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
35	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
36	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
37	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
38	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
39	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
40	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
41	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
42	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
43	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
44	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
45	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
46	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-6B-1-1815
47	B/P VALV AMP	BYPASS VALVE AMP-BEFORE	94/03/12 G4	PI05/5	4K6	125-



KEYING OF CIRCUIT BOARD PER U4025X00P
(SEE TABLE "C")

- [illegible]

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