I. GENERAL

This test instruction is to be used for testing: 125D3638G1 thru G9
125D5788G1 thru G3

Refer to Table 1 for the specific data needed to test each circuit board.

II. EQUIPMENT NEEDED (or equivalent)

A.	+ 30VDC Power Supply	HP 6112A
B.	- 22VDC Power Supply	HP 6112A
C.	Digital Multimeter	SD 7005A
D.	2 Acrams Voltmeters	HP 427A
E.	Oscilloscope (X1 probe)	TEK 5103N
F.	Sine Wave Oscillator	HP 3310A

125D5788G1
G1 RI(50K) RF(2 50K) RL(2K)

III. PROCEDURE

1. Connect an input resistor RI to Pin 27 connect a feedback resistor RF from Pin 27 to Pin 41.

   Connect a load resistor RL from Pin 41 to Pin 19.

2. Apply +30 VDC to Pin 17.
   Apply -22 VDC to Pin 21.
   Connect common to Pin 19.

3. Initial Adjustments

   For 125D3638 G-1, 2, 5, 6, 8 & 9 only.
   125D5788 G-1, & 2 only.

   45K For G1

   a) Adjust R9 for Rz which is the parallel resistance combination of R9, R10 and R12. Measure this Rz between TP11 and the junction of R10 and R12. Apply ~~red locking solution~~ to R9.

   TP1 or TP1 Top of R10 To com

   For 125D3638 G3, 4 & 7 only.
   125D5788 G3 only

   Temporarily install a 10K pot in the position for R3. Adjust R9 for Rz which is the parallel resistance combination of R9, R10 & R12. Measure this Rz between TP11 and the junction of R12 and R10. Apply red locking solution to R9.

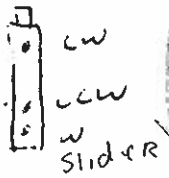
   TP1

   STV

10K-Pot- U6011AAXP0010

273-
273-
273-
273-2
273-1
273-1
273-2
273-7

R3 & R9



For {125D3638 G1 & G2 only

b) Plug the card into the test position and ground the input at Pin 27 thru the proper input resistor RI. Adjust R3 for .0000 VDC as measured at the output TP2.

c) Remove the card from the test position and measure the resistance from R3 CCW to slider. Determine the values of R4 and R5 by the following calculation:

Ra = R3 CCW to SLIDER
Rb = R3 CW to SLI

$$R4 = \frac{50k \times Ra}{50k - Ra}$$

$$R5 = \frac{50k \times Rb}{50k - RB}$$

R4 R5 > U6008AAXP — Series Resistors

U6011AA XP0014 P14

d) Have Manufacturing install R3 (100k) and R4 and R5. (Closest values available).

4. Test Procedure

TURN Power ON

a) Plug the card into the test position and ground the input at Pin 27 thru RI. Adjust R3 for .0000 VDC at the output TP2.

Note: Adjust R9 on 125D3638 G1 and 2 only.

b) Check the output TP2 with a scope and observe the signal. It should be high frequency (white noise) and not more than 3.0 MV P-P.

c) Allow the circuit to stabilize ~~for 1 hour.~~ ?

d) Re-adjust R3 for .0000 at TP2. Check the drift after a period ~~of 1 hour.~~ It should be less than .00050 VDC.

e) Remove the ground from the input thru RI 50K and apply Va DC to this point. The voltage at TP2 should be -5.00 VDC + - 100 MV. Through 50K

f) Increase the applied voltage to Vb DC. The voltage at TP2 should be between -7.5 VDC and -9.0 VDC.

g) Change the polarity of the applied voltage Vb to negative. The voltage at TP2 should be between + 7.5 VDC and +9.0 VDC.

h) Remove the applied DC voltage from the input thru RI and apply an AC-RMS signal to this point using an oscillator. Connect a frequency counter and an AC-RMS voltmeter to the

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CIRCUIT BOARD TEST - IC OP AMP

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h) (Cont'd.) output of the oscillator. Connect a 2nd AC-RMS voltmeter to TP2 of the board.

i) Adjust the amplitude of the signal out of the oscillator to Va AC-RMS. Refer To TABEL I VA

j) Adjust the frequency of the signal out of the oscillator for 3.500V AC-RMS at TP2 of the card.

k) ~~Repeat steps 9 and 10 until all conditions are met.~~ Observe the frequency of the oscillator. It should be equal to FRC + - 20%. IF this won't come in see note, below.

5. Test complete.

Group 2 1800 ± " % ± 360

FRC = 2160 To [illegible]

[illegible]

Final = 2310

* Test note Step (J) OUT OF TOLERANCE CAP "C2" (820K) C2 in BOARD WAS 804K " = too HIGH AND [illegible] 3.5V PUT IN '810K' : PASSED ON [illegible] TOLERANCE (2310)

U6000HBXP0012 or U6000BUXP0025

DRAWING NUMBER	RI	RF	RL	RZ	FRC	VA	VB
125D3638 G1	50K	250K	3K	NA	200	+ 1.00	+ 2.00
G2	500K	500K	3K	NA	200	+ 5.00	+10.00
G3	50K	500K	2K	NA	200	+ .500	+ 1.00
G4	50K	500K	2K	45K	200	+ .500	+ 1.00
G5	50K	250K	2K	45K	200	+ 1.00	+ 2.00
G6	1 meg	1 meg	2K	500K	200	+ 5.00	+10.00
G7	50K	500K	2K	45K	200	+ .500	+ 1.00
G8	50K	250K	2K	45K	200	+ 1.00	+ 2.00
G9	1 meg	1 meg	2K	500K	200	+ 5.00	+10.00
125D5788 G1	50K	250K	2K	45K	1800	+ 1.00	+ 2.00
G2	1 meg	1 meg	2K	500K	1800	+ 5.00	+10.00
G3	50K	500K	2K	45K	~~1800~~ 2300	+ .500	+ 1.00

TABLE 1

See Note 1 on Test Instruction 11C

MADE BY D. Mone Feb. 17, 1976

ISSUED FEB 17 1976

APPROVALS

Steam Turbine

Schenectady, N.Y.

DIV OR DEPT.

LOCATION

P3K-AL-0243

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P3K-AL-0243

CONT ON SHEET 5 SH NO. 4

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