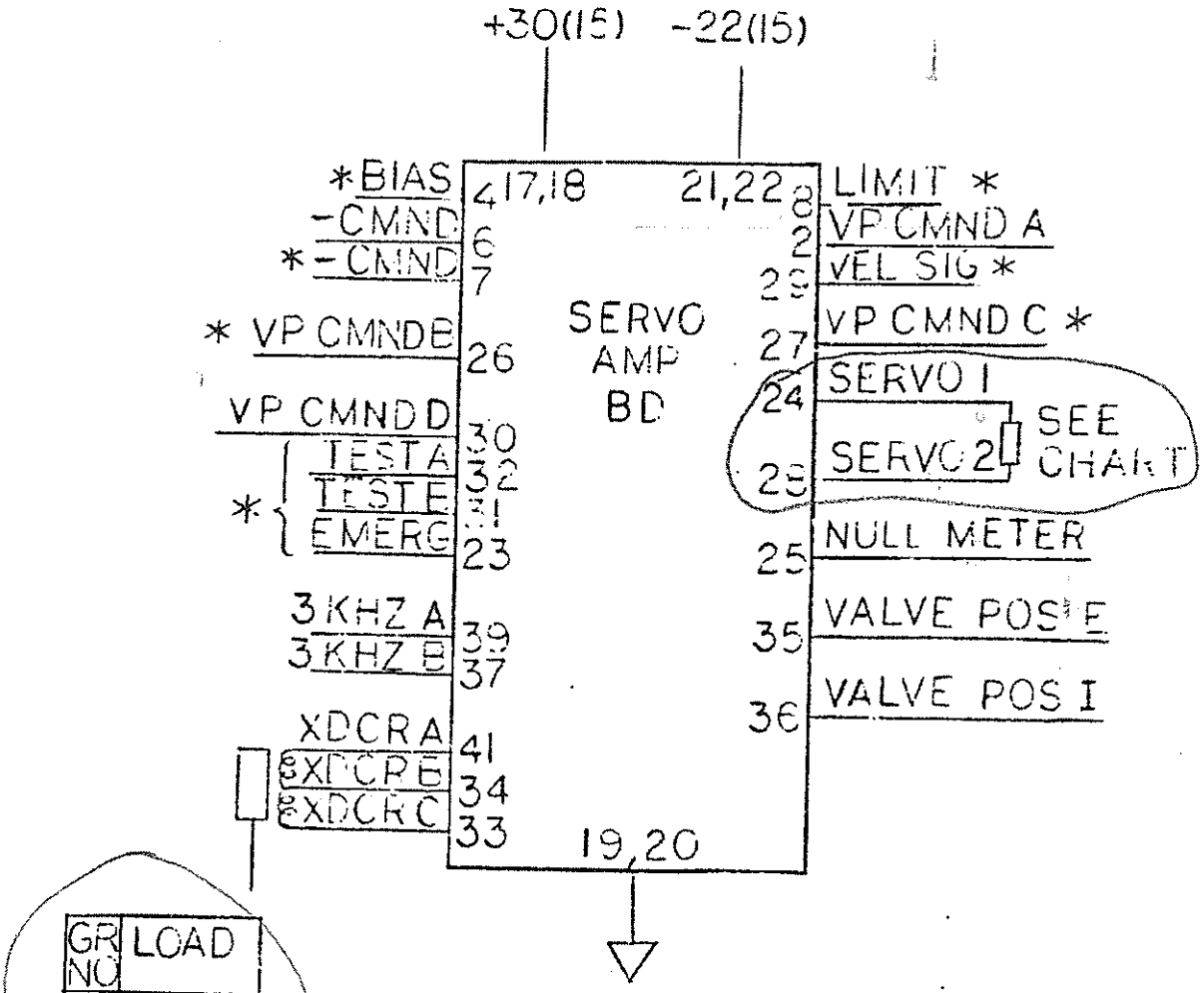
Fixture # H033981
Transducer # H188540

TEST CKT-SERVO AMP BD



GR NO	LOAD
1	125Ω
2	125Ω
3	62.5Ω

* NOT USED

PERFORMANCE REQUIREMENTS

SIGNATURES		M	YR
DRAWN			5
ISSUED		7	5

SIZE	FSCM		REV
A	01289	1280J89	
N		SH 5	

DIST TO 930 SH3 973

SIZE A | 1280J89 | SHEET 5

GS-102

MARK III

REV D

SERVO AMPLIFIER

APPLICATION	P.C. BD. NO.	BD. NO.	SER NO.
4131J19 G1, G2, G3			

TURBINE

SCHEMATIC: 874E638

TEST: INSTRUCTIONS 1280J89 EQUIPMENT MK3 Servo Amp DATE

1.0 INSPECTION

.1 Identification ______ .3 Solder/Wire ______ .5 Key Slot 3 + 25

.2 Comp./Conn. ______ .4 Temp. Cycle ______ .6 ______

.7 ______

REMARKS: 6VRMS | 17VP/P sine wave ~~(consistent through amp)~~

Fixture # H033981

2.0 INTITIAL CONDITIONS: APPLY 3KHZ, +30 VDC, -22 VDC. 15 8" OK

2.1 PWR. COM. TO TEST KIT. CONNECT 15" TEST TRANS. TO TRANS. INPUT. ______

2.2 SET S1 TO 40 MA FOR G1 AND G2, 80 MA FOR G3. Fixture# H188540 ______

2.3 SET S2 TO MCV. ______

2.4 SET S3 TO MCV, M2 SWITCH TO IN POSITION. ______

2.5 PLUG BOARD INTO TEST KIT. ______

2.6 CONNECT JUMPER BETWEEN PIN 2 AND PIN 30. ______

3.0 POWER SUPPLY CHECK

3.1 READ VOLTAGE TP2 TO TP11 (+15.0 ±.4 VDC). ______ VDC

3.2 READ VOLTAGE TP1 TO TP11 (-15.0 ∓.4 VDC). ______ VDC

3.3 READ TP2 TO TP11, LESS THAN 20 MVP-P A.C. RIPPLE. ______ VP-P

3.4 READ TP1 TO TP11, LESS THAN 20 MVP-P A.C. RIPPLE. ______ VP-P

4.0 TRANSDUCER NULL

4.1 SET TRANSDUCER AT TOP SYNC, ADJUST R60 AND R68 FOR 0.0 ±0.02 VRMS AT TP10 TO TP11. ______ VRMS

4.2 READ TP9 TO TP11 (0.0 ±.05 VDC). ______ VDC

5.0 GAIN CHECK

5.1 SET TRANSDUCER FOR 0.0 ±0.01 VDC AT TP9 TO TP11. ______

5.2 SET R86 FULL CCW, READ TP6 (-7.5 ±.2 VDC). ______ VDC

5.3 SET R86 FULL CW, READ TP6 TO TP11 (0.0 ±.05 VDC). ______ VDC

5.4 SET TRANSDUCER TO BOT SYNC. ______

5.5 SET R67 CCW, READ TP9 TO TP11 (-1.66 ±0.2 VDC). ______ VDC

5.6 SET R67 CW, READ TP9 TO TP11 (-4.44 ±0.4 VDC). ______ VDC

5.7 ADJUST R67 FOR -3.00 ±0.01 VDC AT TP9 TO TP11, READ TP6 TO TP11 (+4.5 ±0.1 VDC). ______ VDC

5.8 ADJUST R67 FOR +5.00 ±0.01 VDC AT TP6 TO TP11. ______

Start here 7-9 pm — 5.9 READ TP6 TO TP11, LESS THAN 50 MV P-P A.C. RIPPLE. ______ VP-P

5.10 SET TRANSDUCER FOR 0.0 ±0.01 VDC AT TP6 TO TP11. ______

5.11 SET INPUT AT "CMND" (PIN 6) TO 0.00 VDC. ______

5.12 SET R88 FULL CW, READ TP8 TO TP11:

G1 +2.67 ±0.1 VDC. ______ VDC

G2 +5.22 ∓0.15 VDC. ______ VDC

G3 +2.25 ∓0.07 VDC. ______ VDC

REV. C

5.0 GAIN CHECK (Cont).

5.13 SET R88 FULL CCW, READ TP8 TO TP11:
G1 -2.67 ±0.1 VDC. _____ VDC
G2 -5.22 ±0.15 VDC. _____ VDC
G3 -2.25 ±0.07 VDC. _____
5.14 SET R88 FOR 0.0 ±0.01 VDC AT TP8 TO TP11. _____
5.15 APPLY 1.00 VDC TO PIN 6, READ TP8 TO TP11:
G1 = +5.93 ±0.15 VDC _____ VDC
G2 = +11.60 ±0.35 VDC. _____ VDC
G3 = =5.00 ±0.15 VDC. _____ VDC
5.16 SET INPUT AT PIN 6 TO 0.00 VDC. _____
5.17 SET TRANSDUCER FOR +1.00 ± 0.01 VDC AT TP6 TO TP11. READ TP8 TO TP11:
G1 = -5.91 ±0.15 VDC _____ VDC
G2 = -11.56 ±0.35 VDC _____ VDC
G3 = -4.98 ±0.15 VDC _____ VDC

6.0 OUTPUT CURRENT CHECK

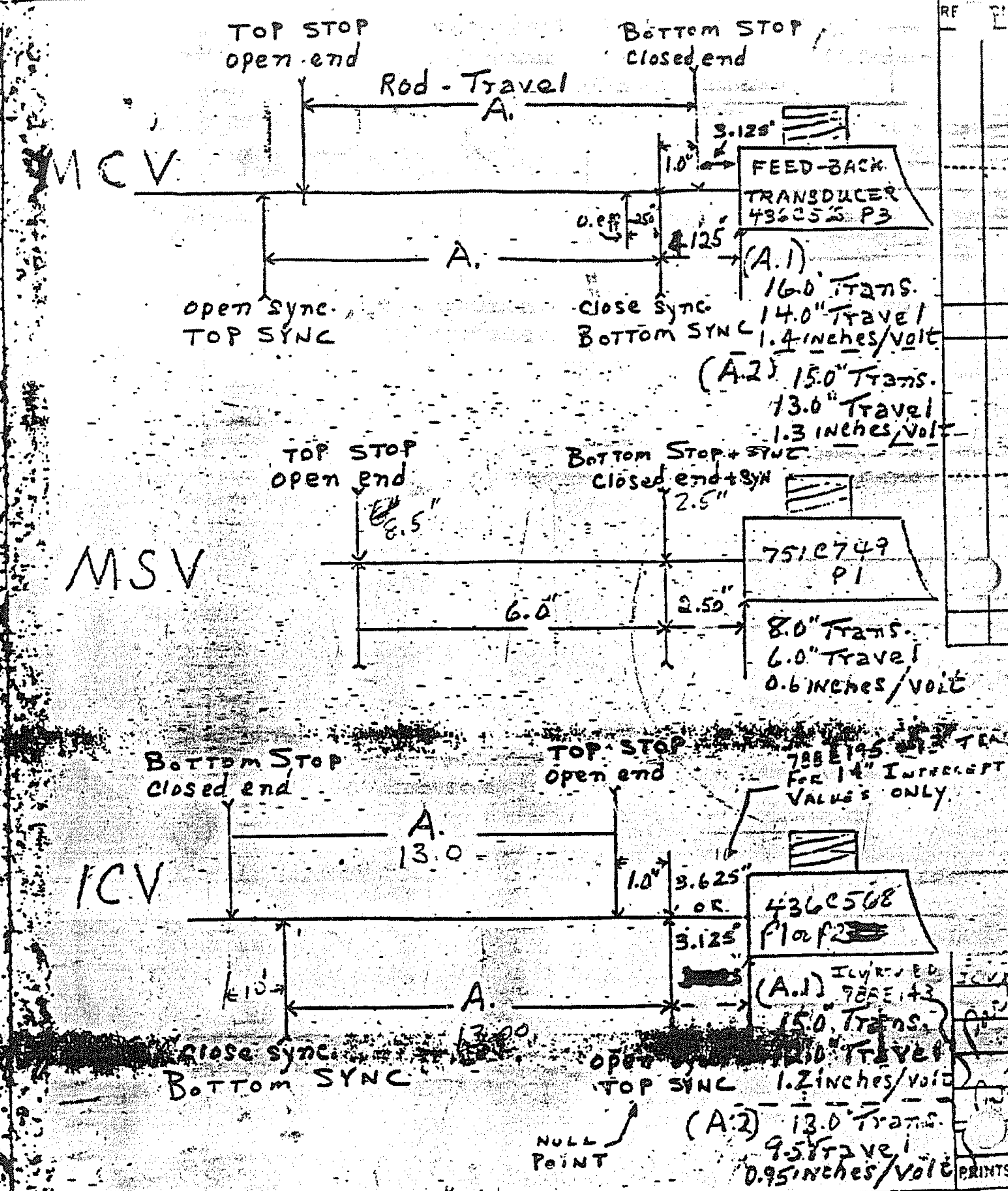
6.1 SET TRANSDUCER FOR 0.00 ±0.01 VDC AT TP8 TO TP11. _____
6.2 NOTE M1 READS 0.0 +1 MA. _____
6.3 SET INPUT FOR +5.00 ±0.01 VDC AT TP8 TO TP11. _____
Connect Resistor Load as per Table on Page 1
6.4 READ PIN 28 TO TP11, -1.4 ±0.1 VDC. _____ VDC
6.5 READ PIN 24 TO TP11, -6.2 ±0.2 VDC. _____ VDC
Depending on Gr See 1280J89 Sh. 5 For Resistor Across Pin 28 & 24 Resistor INSTALLED is For G1, PUT Parallel Resistor in Pin 28 to 24 For G2 & G3
6.6 NOTE M1 READS -37 +1 MA. _____
6.7 READ PIN 24 TO TP11 LESS THAN 20 MV P-P. _____ VP-P
6.8 SET INPUT FOR -5.00 ±0.01 VDC AT TP8 TO TP11. _____
6.9 READ PIN 28 TO TP11, +1.4 ±0.1 VDC. _____ VDC
6.10 READ PIN 24 TO TP11, +6.2 ±0.2 VDC. _____ VDC
6.11 NOTE M1 READS +37 ±1 MA. _____
6.12 READ PIN 24 TO TP11, LESS THAN 20 MV P-P. _____ VP-P

7.0 FINAL ADJUSTMENT

7.1 SET TRANSDUCER AT TOP STOP, SET INPUT AT PIN 6 FOR -5.00 ±0.01 VDC.
TP5 MUST BE +5.00 ±.1 VDC. _____ VDC
7.2 ADJUST R86 CCW FOR 0.0 MA ON M1. _____
7.3 SET TRANSDUCER AT BOT. STOP, SET INPUT AT PIN 6 TO 0.00 VDC. _____
7.4 ADJUST R67 FOR 0.0 MA ON M1. _____
7.5 ADJUST R91 FOR 0% ON M2. _____
7.6 READ PIN 35 TO TP11, 0.0 ±0.2 VDC. _____ VD
7.7 SET TRANSDUCER AT TOP STOP, ADJUST R84 FOR 100% ON M2. _____
7.8 READ PIN 35 TO TP11, +5.00 ±0.1 VDC. _____ VD

TITLE MK III INDUSTRIAL

FIRST MADE FOR E.H.C. SERVO INPUT 0 TO 10V



MADE BY R. C. [illegible] APPROVALS

ISSUED

1-77 [illegible] LOCATION CONT ON SHEET