TITLE
TEST SPECIFICATIONS FOR
SERVO VALVE DRIVE

FIRST MADE FOR IC3600SSVG1

REVISIONS

ELEMENTARY IC3600SSVG1 SHEET 3.0, 3.1

TEST EQUIPMENT

TWO CHANNEL OSCILLOSCOPE
DIGITAL OHMMETER
TWO VOLTMETERS (SIMPSON OR DIGITAL)
WAVETEK
±12V POWER SUPPLY 200 MA, +5V POWER SUPPLY, 20 MA.
ADJUSTABLE DC SIGNAL SOURCE ±5V, 1 MA (OR POT ACROSS ±12V)
MISC RESISTORS PER FIGURE 1
6 - JUMPERS TO BE USED ON VARIOUS STEPS.

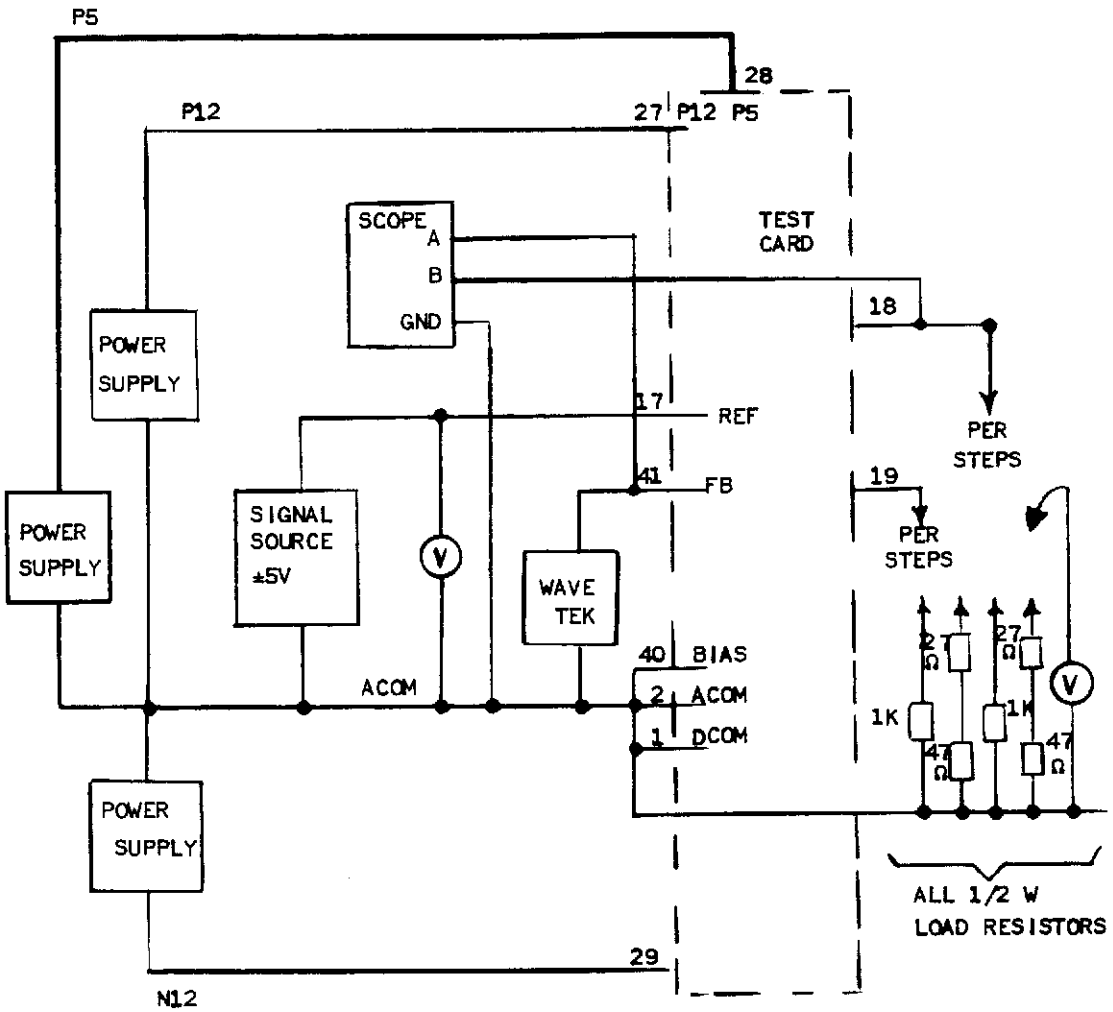

FIGURE 1

REV. 1 4-2-73 JMT

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PRINTS TO

REVISIONS

TEST STEPS

1. RESISTOR MEASUREMENTS with test circuit disconnected. (set gain pot R90 all cw)

FROM	TO	OHMS
J1 (CARD FRONT)	REF (17)	UNDER 1
J2 (CARD FRONT)	VCE (22)	UNDER 1
OUT 2 (CARD FRONT)	OUT2 (19)	UNDER 1
OUT 1 (CARD FRONT)	OUT1 (18)	UNDER 1
SJ (37)	REF (17)	68.1K ± 2%
SJ (37)	FB (41)	68.1K ± 2%
TEST (36)	STAB (39)	22.1K ± 2%
G1 (45)	G2 (47)	12.1K ± 2%
P1 (33)	P3 (32)	66Ω ± 10%
P1 (33)	PA (3)	22Ω ± 10%
P2 (34)	PA (3)	22Ω ± 10%
P2 (34)	P4 (23)	66Ω ± 10%
+ST1 (20)	-OUT1 (18)	5 TO 75Ω (DIODE DROP - MAY
+ST2 (21)	-OUT2 (19)	5 TO 75Ω VARY WITH METER)
GND (5)	CARD FRONT	UNDER 1Ω
BIAS (40)	N12 (29)	15K ± 10%

1a. Tie (40) to com. (close sw9 up).

2. GAIN AND SATURATION WITH 74 OHM LOADS (connect test circuit, R90 full cw) (SW5 OFF)
   - A. TIE PA (3), P3 (32), AND P4 (23) TOGETHER (CLOSE SW2)
   - B. TIE P1 (33), TO OUT 1 (18). TIE P2 (34) TO OUT2 (19) (CLOSE SW3)
   - C. TIE THE 74 OHM LOADS TO OUT1 (18) AND OUT2 (19) (SW1 UP)
   - D. OUTPUT VM ON OUT1 (18). Wavetek off.
   - E. APPLY DC INPUT OF +0.10V to REF (17), VM reads -3 to -4V and no ripple on scope.
   - F. MOVE VM TO OUT2 (19). READS WITHIN 10% OF VALUE IN E.
   - G. INCREASE INPUT UNTIL VM SATURATES, MUST BE OVER -4.4V.
   - H. CHANGE INPUT TO -1V. VM MUST BE OVER +4.7V.
   - J. READ TEST (36). MUST BE +2.85 TO +3.10V.
   - K. REMOVE all jumpers and loads.

3. GAINS WITH 1000 OHM LOADS
   - A. TIE 1K LOADS TO OUT1 (18) AND OUT2 (19) (SW1 DOWN)
   - B. OUTPUT VM STILL ON OUT2 (19). WAVETEK OFF
   - C. APPLY DC INPUT OF +0.20V to REF (17), VM reads -3.2 to -4.2V and no ripple on scope.
   - D. MOVE VM TO OUT1 (18). READS WITHIN 10% OF VALUE IN C.
   - E. INCREASE INPUT TO +1V. OUTPUT VM READS OVER -5.5V
   - F. SET INPUT AT -1V. OUTPUT VM READS OVER +5.5V
   - G. TURN GAIN POT R90 ALL CCW. OUTPUT VM READS +3.2 TO +4V.
   - H. SHORT G1 (45) TO G2 (47). CHANGE INPUT TO -.5V. (CLOSE SW4)
   - I. OUTPUT VM READS +4.6 TO 5.4V.
   - J. REMOVE G1 (45) TO G2 (47) JUMPER. (OPEN SW4)
   - K. JUMPER STAB (39) AND LAG (43). SET DC INPUT AT ZERO. (SET SW5 TO POS1)
   - L. WAVETEK ON SINE WAVE AT 3 HZ. SET MAGNITUDE SO OUTPUT (CHANNEL B) IS 8V PEAK TO PEAK. INPUT (CHANNEL A) IS TO BE 6 TO 8V PEAK TO PEAK.
   - M. MOVE JUMPER IN LAG (43) TO C1 (44). STAB TO C1 IS NOW JUMPERED. (SW5 TO POS.2)
   - N. WAVETEK AT 80 HZ. SET OUTPUT TO 8V PEAK TO PEAK
   - O. INPUT TO BE .6 TO .8V PEAK TO PEAK

1. KCC 10/26/73
2. BU945C JVG 780211
3) HMAPL JMT

DL22

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PRINTS TO

GENERAL ELECTRIC

68A9448846

REV NO.	TITLE
A	TEST INSTRUCTIONS FOR SERVO VALVE DRIVE
68A9448846	
CONT ON SHEET FL SH NO. 3	FIRST MADE FOR SPEEDTRONIC IC3600SSVG

CONT ON SHEET FL SH NO. 3

REVISIONS

TEST STEPS (CONTINUED)

39 TO 46 JUMPER

3. P. MOVE C1 (44) LEAD TO C2 (46). (SW5 To PoS. 3)
   WITH WAVETEK AT 40 HZ, INPUT 0.5 TO 0.7V (OUTPUT 8VP-P)
   Q. MOVE C2 (46) LEAD TO C3 (48). (SW5 To PoS. 4) 39 TO 48 JUMPERED
   SAME AS P.
   R. REMOVE C3 (48) TO STAB (39) JUMPER. (SW5 To oFF PoS.)

4. OUTPUT SATURATION FAULT DETECTOR
   A. WAVETEK OFF, MOVE OUTPUT VM TO OFLTS (12), READS 3.TO 3.5V. 3.38
   B. QUICKLY TURN INPUT TO OVER +2V AND NOTE TIME UNTIL FAULTS LIGHT comes on
   MUST BE 1.5 TO 4 SEC. VM TO READ UNDER .4V.
   C. REDUCE INPUT TO +.3V. LIGHT GOES OUT IN ABOUT 10 SEC.
   D. TURN INPUT TO ZERO AND WAIT 10 SECONDS.
   E. QUICKLY TURN INPUT TO -2V - SAME AS B.
   F. MOVE OUTPUT VM TO FLTS (13). READS 11.5 TO 12.5V. 11.9
   G. REDUCE INPUT TO -.3V. SAME AS C PLUS VM CHANGES TO .2V MAX. .031
   H. PUT ONE END OF JUMPER IN NOZ (9) AND BE READY TO PUT OTHER END IN P12(27). (SW6 UP)
   J. TURN INPUT TO -0.8V. AS SOON AS FLTS LIGHTS COMPLETE H JUMPER AND LIGHT MUST
   GO BACK OFF.
   K. INPUT TO -2V. WHEN LIGHT ON TIE PSG (4) TO ACOM. LIGHT GOES OFF. (SW7 UP)

5. OUTPUT COIL FAULT DETECTOR
   A. OUTPUT VM ON OFLTC (14); JUMPER OUT 1 (18) TO COM. INPUT 0, VM READS 3.TO 3.8V (SW8 UP)
   B. INPUT +1V FLTC LIGHT COMES ON within 10 seconds. 3.7
   C. INPUT TO 0 UNTIL LIGHT OUT, THEN TO -1V. LIGHT COMES BACK ON. VM READS UNDER
   .4V. .03
   D. CHANGE JUMPER IN OUT1(18) TO OUT2(19). (OUT2 SHORTED). (SW8 DOWN)
   E. REPEAT B AND C.
   F. REMOVE JUMPER OUT (19) TO COM. (SW8 OFF)

6. BIAS CIRCUIT
   A. OPEN 40 TO A COM. (SW9 OPEN)
   B. SET OUTPUT OUT 2 (19) ON 0, WITH DC input on Pin 17.
   C. READ DC INPUT VOLTS. MUST BE +1.94V TO +2.06 V. 2.0

REV. 4-8 11/68 RZ DHP 8/1/78
5) 16 May 86 JMT
4) 04 Oct 86 JMT

Rev 1. 3- -73 JMT
REV 2. 4-3-73 RBA
REV. 3 KCC 10/26/73

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MADE BY	APPROVALS		
R. DEMPSEY	BRChausse	INDUSTRY CONTROL (DIV OR DEPT.)	68A9448846
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