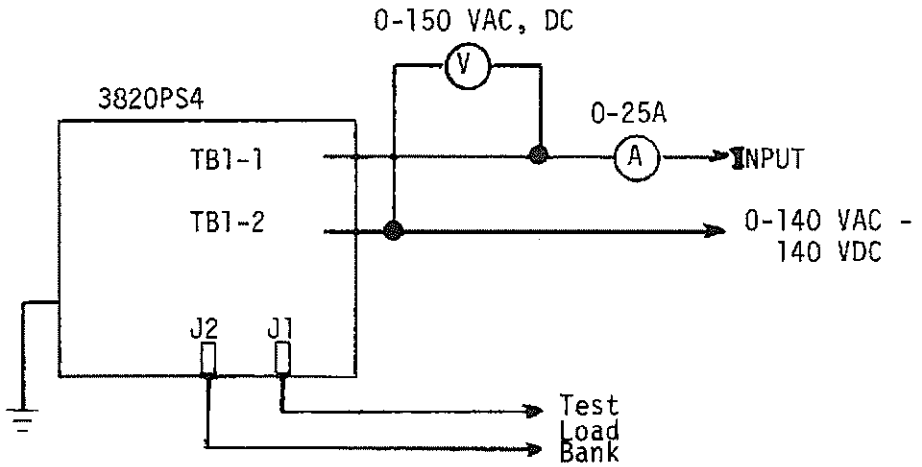
9.0 Test Specifications PS4

9.0.1 Input voltage and connections (CB1) must be "off."

9.0.1.1 Connect TB2-6 to TB2-7, TB2-1 to TB2-2 to TB2-3, TB3-1 to TB3-2.
Connect a jumper wire across C30 on NPSD.
Connect external ground to chassis.

9.0.1.2 Connect a 0 to 140 VAC AC voltage source rated at 10 amps between TB1-1 and TB1-2 and adjust to zero volts.

Test Connection Diagram:



REV. 1	REV. 4	REV. 7	PRINTS TO DL119	ENGINEER	GENERAL ELECTRIC	TEST INSTRUCTIONS
REV. 2 RE-TYPED OFC 1-6-83	REV. 5	ISSUED 11/30/77			SALEM, VA. U.S.A.	DS3820PS4
REV. 3	REV. 6	MADE BY MS HUTKIN				CONT. OF SH. 9BA SH. NO. 9AA

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9.0.1.3 Connect resistive loads per the following table:

Volts	Resistor	Connect Resistor(s) Between
+5	.66Ω, 37.5W,	One resistor between J1-5, J1-6, J1-9 to J1-7 and J2-5 to J2-9
~~+28~~	~~3.73Ω, 210W~~	~~One resistor between J1-8 to J1-6 and J2-8 to J2-7~~
+15	7.5Ω, 30W	J2-10 and J2-12
-15	7.5Ω, 30W	J1-11 and J1-12

9.0.1.4 Connect ~~R5H (J1-3) to P5 (J1-5).~~

9.0.1.5 Connect -12 + .1 VDC rated at .5 amps between C57 - and COM - (TP3) on the NPST control card.

9.0.1.6 Connect +12 + .1 VDC rated at .5 amps between C55+ and COM - (TP3) on the NPST control card.

9.0.1.7 Have available a 1K, ± 5% 1/2W resistor

9.0.2 Power test.

9.0.2.1 Do not apply power (CB1 must be off).

REV. 1	REV. 4	REV. 7	PRINTS TO DL119	ENGINEER	GENERAL ELECTRIC	TEST INSTRUCTIONS
REV. 2 RETYPED EFE 1-6-83	REV. 5	ISSUED 11/30/77				
REV. 3	REV. 6	MADE BY MS HUTKIN			SALEM, VA. U.S.A.	DS3820PS4 CONT. ON SH. 9CA SH. NO. 9BA

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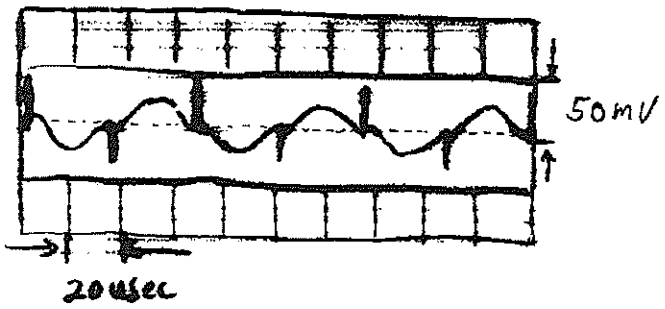
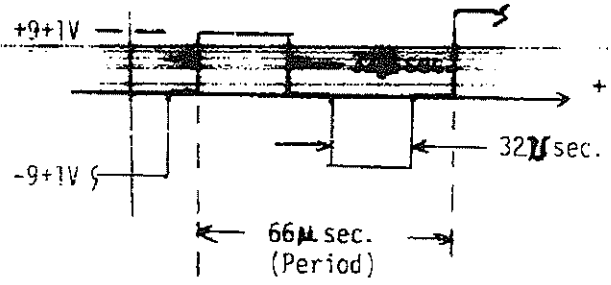
9.0.2.3 With an oscilloscope, observe the voltage from BUS-2 on NPAD to COM and from BUS-4 on NPAD to COM.

JE1
JE5



Remove the +12 VDC and -12 VDC connected between C57-, C55+ and COM-(TP3). Continue to observe the oscilloscope while increasing the voltage of the AC power source to 40 VRMS. The waveform from f2+ to COM and f15+ to COM should be as shown below. (Note: If the waveforms are not as shown, proceed to 9.0.2.4).



REV. 1	REV. 4	REV. 7	PRINTS TO DL119	ENGINEER	GENERAL ELECTRIC	TEST INSTRUCTIONS
REV. 2 RE-TYPED AGE 1-6-93	REV. 5	ISSUED 11/30/77				
REV. 3	REV. 6	MADE BY MS HUTKIN			SALEM, VA. U.S.A.	DS3820PS4 CONT. ON SH. 9DA SH. NO. 9CA

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9.0.2.4 If 9.0.2.3 is incorrect, adjust R2 (on the NPST control card) for T1 (BUS-2) R5 for T2 (BUS-4) (on the NPSD control card) for a period of 66 ± 1 second. If the pulse width is incorrect, adjust R3 for T1 (BUS-2) (on the NPST control card) and R6 for T2 (BUS4) (on the NPSD control card) for 32 ± 1μ.second.

9.0.2.5 Continue to observe the waveforms per 9.0.2.3 and increase the zero to 140 VAC power supply to 82.5 VRMS.

9.0.2.6 Measure the following output voltages and adjust pots per table below. Remove jumper on NPSD C30.

Voltage	From	To	Adjustment Pot (Location)
+5.1 ± .1 VDC	TP2	TP3	R1 (NPST)
+15.1 ± .1 VDC	TP4	TP6	R9 (NPST)
+28.1 ± .1 VDC	TP1	TP3	R4 (NPSD)
-15.1 ± .1 VDC	TP5	TP6	R10 (NPST)

9.0.2.7 Observe that status light glows on the NPST control card.

9.0.2.8 Measure the output ripple per the following table:

From	To	Ripple Volts (Max.)
J1-5	J1-6	50 MV
J1-8	J1-6	280 MV
J2-10	J2-12	150 MV
J1-11	J1-12	150 MV

*Note that all test points are on the NPST control card unless otherwise specified.

REV. 1	REV. 4	REV. 7	PRINTS TO DL119	ENGINEER	GENERAL ELECTRIC	TEST INSTRUCTIONS
REV. 2 ~~RE-WRITE~~ DFE 1-6-83	REV. 5	ISSUED 11/30/77				
REV. 3	REV. 6	MADE BY MS HUTKIN			SALEM, VA. U.S.A.	DS3820PS4 CONT. ON SH. 9EA SH. NO. 9DA

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CARS

9.0.2.9 Increase the voltage of the 0 to 140 VAC power supply from 80 VRMS to 132 VRMS and ascertain that the change in output voltages per the following table are maintained.

Max. Change in Output Volts From 80 to 132 VRMS	From	To
(+5) 50 MV Max.	TP2	TP3
(+15) 150 MV Max.	TP4	TP6
(+28) 280 MV Max.	TP1	TP3
(-15) 150 MV Max.	TP5	TP6

9.0.2.10 Turn CB1 "Off."

9.0.2.11 Remove the jumpers from TB2-1 to TB2-2 and TB2-2 to TB2-3.

9.0.2.12 Wait 15 seconds. Turn CB1 "On." Voltages must be per 9.0.2.6. Adjust the AC input voltage to 82.5 VRMS

9.0.3 Short circuit test.

9.0.3.1 Jumper J1-5 to J1-6 by closing +5V switch on test fixture. The power supply must shut down. Open the 5V switch. Turn CB1 off and wait 15 seconds. Turn CB1 on power supply should be recovered with +5 volts on TP2. (+5V circuit)

9.0.3.2 With CB1 on jumper J1-8 to J1-6 by closing +28V switch on test fixture. The power supply must shut down. Open the +28V switch. Turn CB1 off and wait 15 seconds. Turn CB1 on power supply should be recovered with +28 volts on TP1. (+28V circuit)

9.0.3.3 With CB1 on jumper J2-10 to J2-12 by closing the +15V switch on test fixture. The power supply must shut down. Open the +15V switch. Turn CB1 off and wait 15 seconds. Turn CB1 on power supply should be recovered with +15 volts on TP4. (+15V circuit)

9.0.3.4 With CB1 on jumper J1-11 to J1-12 by closing -15V switch on test fixture. The power supply must shut down. Open the -15V switch. Turn CB1 off and wait 15 seconds. Turn CB1 on power supply should be recovered with -15 volts on TP5. (-15V circuit)

9.0.4 Overvoltage trip levels (Note that all adjustment pots and test points are located on the NPST control card unless otherwise indicated.)

9.0.4.1 Remove J1 and J2 loads.

9.0.4.2 Observe the voltage from TP2 to TP3 while adjusting R1 (on the NPST control card). The power supply must shut down before the voltage between TP2 and TP3 equals +7 VDC. Turn CB1 off. (+5V circuit)

9.0.4.3 Wait 15 seconds. Adjust R1 (on the NPST) CCW two turns. Turn CB1 on.

9.0.4.4 Observe the voltage from TP4 - to TP6. Adjust R9 (on the NPST control card) until the power supply shuts down. The voltage between TP4 and TP6 must be less than +18 VDC. Turn CB1 off. (+15V circuit)

9.0.4.5 Wait 15 seconds, adjust R9 CCW two turns. Turn CB1 on.

9.0.4.6 Observe the voltage between TB1 and TP3. Adjust R4 (on the NPSD control card) until the power supply shuts down. The voltage between TP1 and TP3 must be less than +33 VDC. Turn CB1 off. (+28V circuit)

9.0.4.7 Wait 15 seconds. Adjust R4 (on the NPSD control card) two turns CCW. Turn CB1 on.

9.0.4.8 Observe the voltage between TP5 and TP6. Adjust R10 until the power supply shuts down. The voltage between TP5 and TP6 must be less than -18 VDC. Turn CB1 off. (-15V circuit)

9.0.4.9 Adjust R10 two turns CCW and reconnect J1 and J2 loads. Turn CB1 on.

9.0.5 Reset output voltages per step 9.0.2.6.

9.0.6 Under voltage sensor.

9.0.6.1 Adjust R1 on the NPST control card slowly CCW until the status light goes out. Measure the voltage from TP2 to TP3. It must be +4.75 ± .05 VDC. Measure the voltage from J1-1 (PD-6 on the NPST) to TB1-5. It must be .1 ± .1 VDC. Connect a 1K resistor from the P5 load to J1-2. Measure the voltage from J1-2 (PD-4 on NPS - control card to TB1-5.) It must be +4.75V ± 0.5 VDC.

9.0.6.2 Readjust R1 for +5.1 ± .1 VDC between TP2 and TP3. Measure the voltage between J1-1 and TB1-5. It must be +4.6 ± .4 VDC. Measure the voltage from J1-2 to JB1-5. It must be +.1 VDC.

9.0.7 DC voltage test.

9.0.7.1 Move jumper on TB3 to TB3-2 to TB3-3. Move jumper on TB2 to TB2-7 to TB2-8. Apply 140 VDC to TB1-1 and TB1-2. Power supply should come up and run when CB1 is turned on. Check all voltages in Step 9.0.2.6.

9.0.7.2 Turn CB1 off. Reconnect jumpers on TB3 and TB2 for AC power.

9.0.7.3 Power supply must be given a serial number upon completion of test and logged into power supply book.

9.0.8 End test.