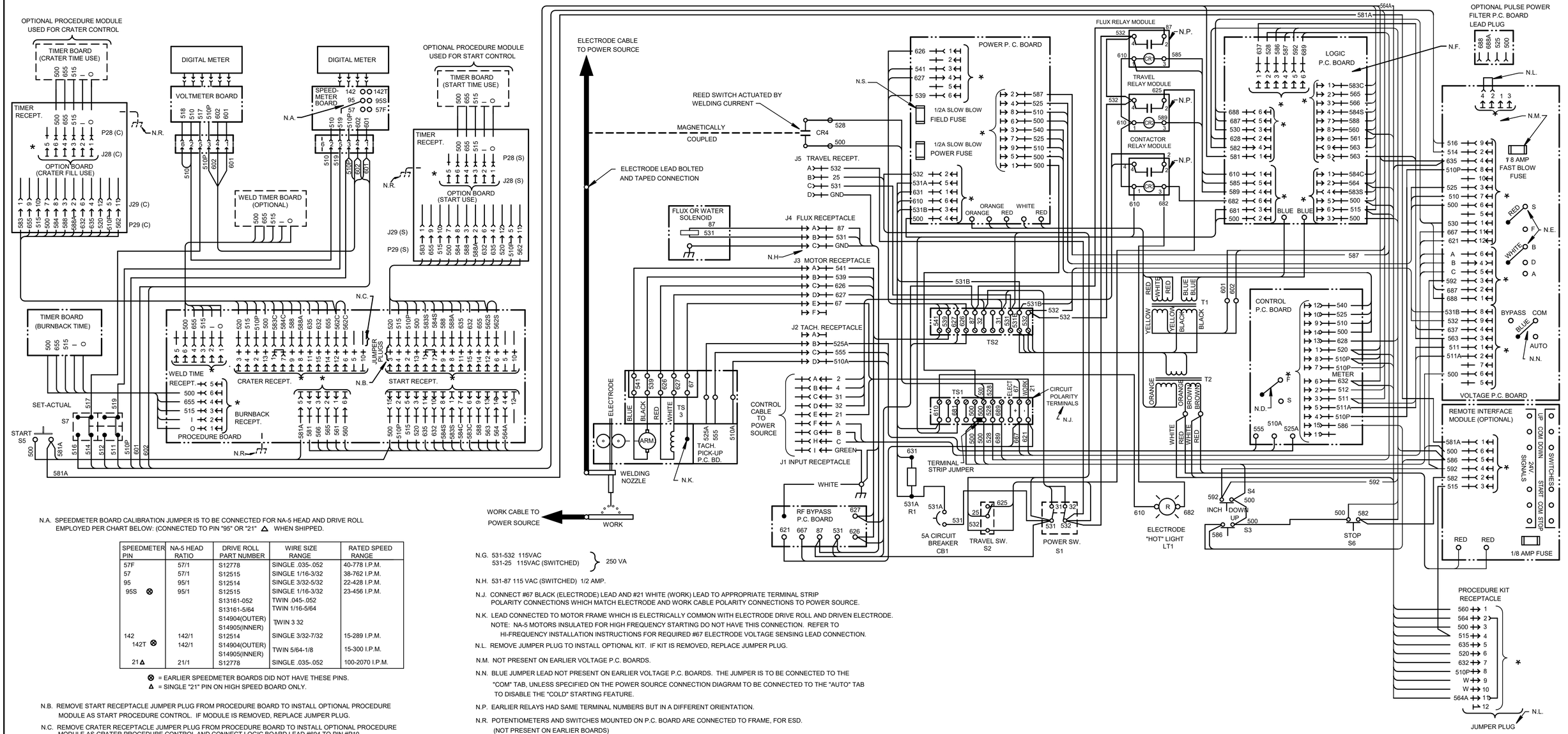
NA-5 WIRING DIAGRAM G1553 REV: A



N.A. SPEEDMETER BOARD CALIBRATION JUMPER IS TO BE CONNECTED FOR NA-5 HEAD AND DRIVE ROLL EMPLOYED PER CHART BELOW: (CONNECTED TO PIN "95" OR "21" △ WHEN SHIPPED.

SPEEDMETER PIN	NA-5 HEAD RATIO	DRIVE ROLL PART NUMBER	WIRE SIZE RANGE	RATED SPEED RANGE
57F	57/1	S12778	SINGLE .035-.052	40-778 I.P.M.
57	57/1	S12515	SINGLE 1/16-3/32	38-762 I.P.M.
95	95/1	S12514	SINGLE 3/32-5/32	22-428 I.P.M.
95S ⊗	95/1	S12515	SINGLE 1/16-3/32	23-456 I.P.M.
		S13161-052	TWIN .045-.052	
		S13161-5/64	TWIN 1/16-5/64	
		S14904(OUTER) S14905(INNER)	TWIN 3 32	
142	142/1	S12514	SINGLE 3/32-7/32	15-289 I.P.M.
142T ⊗	142/1	S14904(OUTER) S14905(INNER)	TWIN 5/64-1/8	15-300 I.P.M.
21△	21/1	S12778	SINGLE .035-.052	100-2070 I.P.M.

⊗ = EARLIER SPEEDMETER BOARDS DID NOT HAVE THESE PINS.
△ = SINGLE "21" PIN ON HIGH SPEED BOARD ONLY.

N.B. REMOVE START RECEPTACLE JUMPER PLUG FROM PROCEDURE BOARD TO INSTALL OPTIONAL PROCEDURE MODULE AS START PROCEDURE CONTROL. IF MODULE IS REMOVED, REPLACE JUMPER PLUG.

N.C. REMOVE CRATER RECEPTACLE JUMPER PLUG FROM PROCEDURE BOARD TO INSTALL OPTIONAL PROCEDURE MODULE AS CRATER PROCEDURE CONTROL AND CONNECT LOGIC BOARD LEAD #694 TO PIN #P10. IF MODULE IS REMOVED, REPLACE JUMPER PLUG AND LOGIC BOARD LEAD #694 TO PIN #P8.

N.D. CONTROL BOARD JUMPER LEAD CONNECTED TO PIN "F" WHEN SHIPPED. SEE OPERATING MANUAL FOR USE OF PIN "S" JUMPER CONNECTION.

N.E. VOLTAGE BOARD RED JUMPER LEAD CONNECTED TO PIN "S" AND WHITE JUMPER LEAD CONNECTED TO PIN "B" WHEN SHIPPED, FOR USE TYPICALLY WITH DC-[ ]TYPE POWER SOURCES. REFER TO CONNECTION DIAGRAM FOR ALTERNATE CONNECTIONS, AND JUMPER CONNECTIONS FOR R3S, SAM AND SAF OR SA POWER SOURCES WITH K224. EARLIER VOLTAGE BOARDS DO NOT CONTAIN PIN "D".

N.F. LOGIC BOARD DIP SWITCHES OR JUMPERS TO BE SET TO SUIT DESIRED APPLICATIONS PER CHARTS BELOW:

▲ NA-5 SHIPPED CONNECTED FOR INDICATED METHODS OF TRAVEL & BURNBACK.

METHODS OF TRAVEL	FOR EARLIER LOGIC P.C. BOARDS WITH JUMPERS	FOR LOGIC P.C. BOARDS WITH DIP SWITCHES
START/STOP WITH SWITCHES ▲	CONNECT LEAD #691 to P6 LEAD #692 to P5	SWITCH #1 / SWITCH #2
START/STOP WITH WELD CURRENT	CONNECT LEAD #691 to P6 LEAD #692 to P7	SWITCH #1 / SWITCH #2
START WITH WELD CURRENT STOP WITH STOP SWITCH	CONNECT LEAD #691 to P5 LEAD #692 to P7	SWITCH #1 / SWITCH #2
START WITH START SWITCH STOP AFTER CRATER TIME (OPTIONAL PROCEDURE MODULE INSTALLED IN CRATER RECEPTACLE)	CONNECT LEAD #691 to P6 LEAD #692 to P9	SWITCH #1 / SWITCH #2
START WITH START SWITCH STOP AFTER BURN-BACK TIME (OPTIONAL PROCEDURE MODULE INSTALLED IN CRATER RECEPTACLE)	CONNECT LEAD #691 to P6 LEAD #692 to P8	SWITCH #1 / SWITCH #2

SAMPLE SWITCH
SWITCH POSITION 1 IS UP
SWITCH POSITION 2 IS DOWN
SWITCH POSITIONS 3 AND 4 ARE NOT APPLICABLE

METHODS OF BURNBACK	FOR EARLIER LOGIC P.C. BOARDS WITH JUMPERS	FOR LOGIC P.C. BOARDS WITH DIP SWITCHES
WIRE FEED STOP WITH CONTACTOR DELAY ▲	CONNECT LEAD #690 TO P4 LEAD #693 TO P3	SWITCH #1 / SWITCH #2
INCH UP WITH CONTACTOR DELAY	CONNECT LEAD #690 TO P4 LEAD #693 TO P1	SWITCH #1 / SWITCH #2
INCH UP WITH NO CONTACTOR DELAY	CONNECT LEAD #690 TO P2 LEAD #693 TO P1	SWITCH #1 / SWITCH #2

USE OF OPTIONAL CRATER MODULE	FOR EARLIER LOGIC P.C. BOARDS WITH JUMPERS	FOR LOGIC P.C. BOARDS WITH DIP SWITCHES
CRATER BOARD INSTALLED?		
YES	CONNECT LEAD #694 TO P10	SWITCH #1 / SWITCH #2
NO ▲	CONNECT LEAD #694 TO P8	SWITCH #1 / SWITCH #2

N.G. 531-532 115VAC
531-25 115VAC (SWITCHED) } 250 VA

N.H. 531-87 115 VAC (SWITCHED) 1/2 AMP.

N.J. CONNECT #67 BLACK (ELECTRODE) LEAD AND #21 WHITE (WORK) LEAD TO APPROPRIATE TERMINAL STRIP POLARITY CONNECTIONS WHICH MATCH ELECTRODE AND WORK CABLE POLARITY CONNECTIONS TO POWER SOURCE.

N.K. LEAD CONNECTED TO MOTOR FRAME WHICH IS ELECTRICALLY COMMON WITH ELECTRODE DRIVE ROLL AND DRIVEN ELECTRODE.
NOTE: NA-5 MOTORS INSULATED FOR HIGH FREQUENCY STARTING DO NOT HAVE THIS CONNECTION. REFER TO HI-FREQUENCY INSTALLATION INSTRUCTIONS FOR REQUIRED #67 ELECTRODE VOLTAGE SENSING LEAD CONNECTION.

N.L. REMOVE JUMPER PLUG TO INSTALL OPTIONAL KIT. IF KIT IS REMOVED, REPLACE JUMPER PLUG.

N.M. NOT PRESENT ON EARLIER VOLTAGE P.C. BOARDS.

N.N. BLUE JUMPER LEAD NOT PRESENT ON EARLIER VOLTAGE P.C. BOARDS. THE JUMPER IS TO BE CONNECTED TO THE "COM" TAB, UNLESS SPECIFIED ON THE POWER SOURCE CONNECTION DIAGRAM TO BE CONNECTED TO THE "AUTO" TAB TO DISABLE THE "COLD" STARTING FEATURE.

N.P. EARLIER RELAYS HAD SAME TERMINAL NUMBERS BUT IN A DIFFERENT ORIENTATION.

N.R. POTENTIOMETERS AND SWITCHES MOUNTED ON P.C. BOARD ARE CONNECTED TO FRAME, FOR ESD. (NOT PRESENT ON EARLIER BOARDS)

N.S. THE FIELD FUSE WAS REPLACED WITH A PTC RESETTABLE FUSE ON LATER MODEL POWER BOARDS.

✱ CAVITY NUMBERING SEQUENCE
(COMPONENT SIDE OF P.C. BOARD)