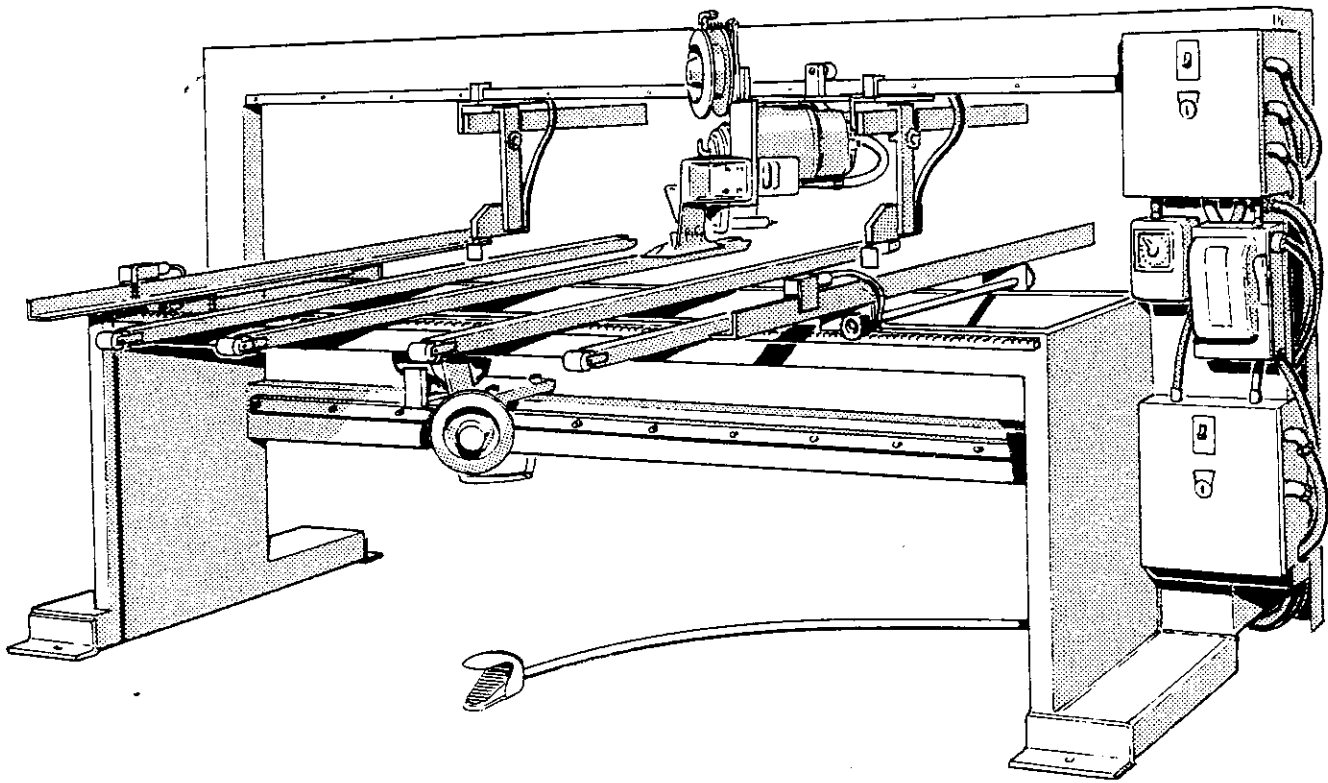


**ACME**  
PRODUCTS  
DIVISION

**interlake**  
STEEL CORPORATION

# INSTRUCTION MANUAL

## ACME RIH1 DUAL SIDE SEAM STITCHER



*Operation / Maintenance / Parts List*



# MAINTENANCE And ADJUSTMENTS

## PRELIMINARY PREPARATIONS

Three phase power must be brought into the fused disconnect switch by user. Machine is shipped completely wired to that point. After applying initial lubrication to the stitcher heads (see S5PO Stitching Head Manual), the machine may be started up as follows:

1. Close disconnect switch to energize the control circuit through the transformer.
2. Close upper and lower motor starters to energize upper and lower stitcher motors. Check for proper motor rotation. Shaft should turn clockwise as viewed from the back or motor side of stitcher. Correct if necessary.

## SET-UP FOR STITCHING (requires a 9/16" wrench)

1. Fold box in half and place it on the table rails (60) so that the completed box will be approximately centered in the machine; long leg of the box facing downward.
2. Release clamp screws (8) (using wrench) for upper stitching head (1). Move upper head into position to stitch upper seam. Lock head in position by tightening clamp screws (8).
3. Release hand clamp (72) and rotate hand knob (75) to position the side gauge (62) so that the upper wall of the box half fits between the side gauge (62) and the open head device (2). With the box firmly against the open head device (2), adjust for approximately 1/8" clearance between the edge of box and side gauge. Lock side gauge in place by tightening hand clamp (72).
4. Release clamp (9) for lower stitching head (95) (use wrench). Position lower stitching head so that lower wall of the box half rests between the side gauge (57) and the open head device (96) leaving about 1/8" clearance. Lock lower head in place by tightening release clamp.
5. Fold the opposite box half and place it on the table rails (60) with the seam edges in the appropriate open head device (2 or 96). Release remaining side gauge (57 or 62) and adjust for approximately 1/8" clearance for the box between the side gauge and the open head device. Lock side gauge in place.
6. Release table rail hand clamps (81) and space the table rails to properly support the box halves, and to permit easy access to the machine by the operator.
7. Position box halves for first stitch in each seam. Release target assembly clamp (hand knob) (32) and position the targets (34) against the box flap so that the targets will act to square up the box halves before the first stitch is made. Target assemblies may also require lateral adjustment to clear stitcher heads (1 or 95) or side gauges (57

# R1H1 DUAL SIDE SEAM STITCHER

or 62) and to achieve effective squaring of the box. Check to see that the front end of the target bar (25) does not interfere with the stitching wire.

8. Position box halves for final stitch in each seam. Release side gauge limit switch clamp (85) (use wrench) and adjust position of limit switch (88) so that the trailing end of the box board releases the limit switch roller arm just before the final stitch position is reached. This must be done for both seams; the left side gauge limit switch controls the lower stitching head; the right side gauge limit switch (88) controls the upper stitching head.
9. A pulse timer (99) is used to initiate each stitch stroke. The speed of making stitches may be varied without losing synchronization between the heads up to about 180 stitches per minute (each head). A typical timer setting using top and bottom stitching heads synchronized is shown in Figure 1.

The upper head (1) only may be used to stitch one piece boxes without synchronization making approximately 290 stitches per minute. The proper timer setting for this situation is shown in Figure 2.

10. To stitch, hold both box halves against the targets (34) and press the foot switch (107). This will operate both the target solenoids (46) and the stitcher heads. Target solenoids will release the targets to permit the box halves to be pushed through after the first stitch is made. Spacing of stitches is determined by the speed at which the box is pushed through the machine. The stitching heads will continue to stitch as long as the foot switch is pressed and the side gauge limit switches (88) are actuated.

## GENERAL OPERATING SEQUENCE

1. First blank box half is positioned in the seam unit (2) with folded edge against the right side gauge (62), and the leading edge against the right-hand target.
2. Second blank box half is positioned in the seam unit (96) with folded edge against the left side gauge (57), and the leading edge against the left-hand target (34).
3. With the box halves in the above position, limit switches (88) are closed to set up the stitching head circuits.
4. The operator presses on the foot pedal to energize the target solenoids (46) and the stitching heads (1 and 95). The targets (34) raise to permit the box halves to be pushed through the machine while the stitching heads apply arcuate stitches.
5. When the box moves off the limit switches (88), the machine stops stitching.



**MAINTENANCE And ADJUSTMENTS**

BLUE KNOB & POINTER ADJUSTS "ON" TIME

BLACK KNOB & POINTER ADJUSTS "OFF" TIME

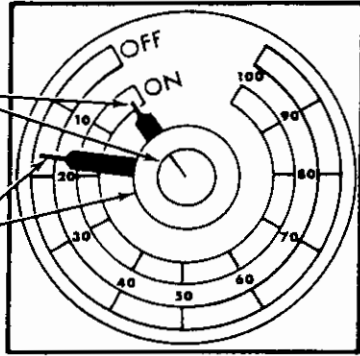


FIGURE 1

BLUE KNOB & POINTER ADJUSTS "ON" TIME

BLACK KNOB & POINTER ADJUSTS "OFF" TIME

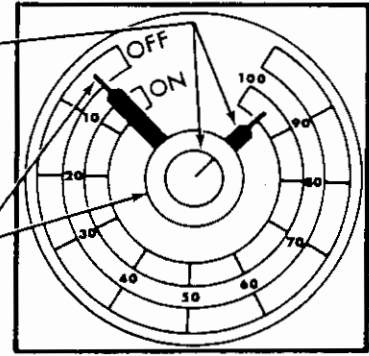


FIGURE 2

**MAINTENANCE**

See S5PO Manual for maintenance of stitching heads.

Periodically brush dirt, bits of paper, and any foreign material from open head device, racks, pinions, rails and slides.

**ELECTRICAL SEQUENCE**

See Schematic - Page 7

NOTE: Numbers in parentheses indicate line numbers on electrical schematic diagram.

**STITCHING SEQUENCE**

1. Operator loads box halves into machine, operating both side gauge limit switches.
2. Operator presses foot switch. This action energizes the target solenoid and the pulse timer.
3. The pulse timer generates an "OFF-ON" cycle of 110 volt current to the coil of 2CR (1).
4. Normally open contacts of 2CR (6) close during the "ON" part of the cycle to energize 1CR (6) of each (upper and lower) stitcher, assuming the appropriate side gauge limit switch (6) is held operated by the box halves.
5. Contacts of 1CR in each stitcher:
  - a. Open (10) to release brake.

b. Close (13) to energize clutch.

c. Close (7) to provide a holding circuit to the coil of 1CR.

6. Clutch engages motor to stitcher and the shaft rotates to apply a stitch.
7. Cam on stitcher shaft operates stitcher limit switch (6) when partially through the cycle.
8. Stitcher limit switch contacts (6) open to break the holding circuit to 1CR.
9. The remaining 1CR contacts:
  - a. Open (13) to drop-out the clutch.
  - b. Close (12) to energize the brake.

Steps 3 through 9 repeat as long as operator holds foot pedal down and box halves hold the side gauge limit switch operated.

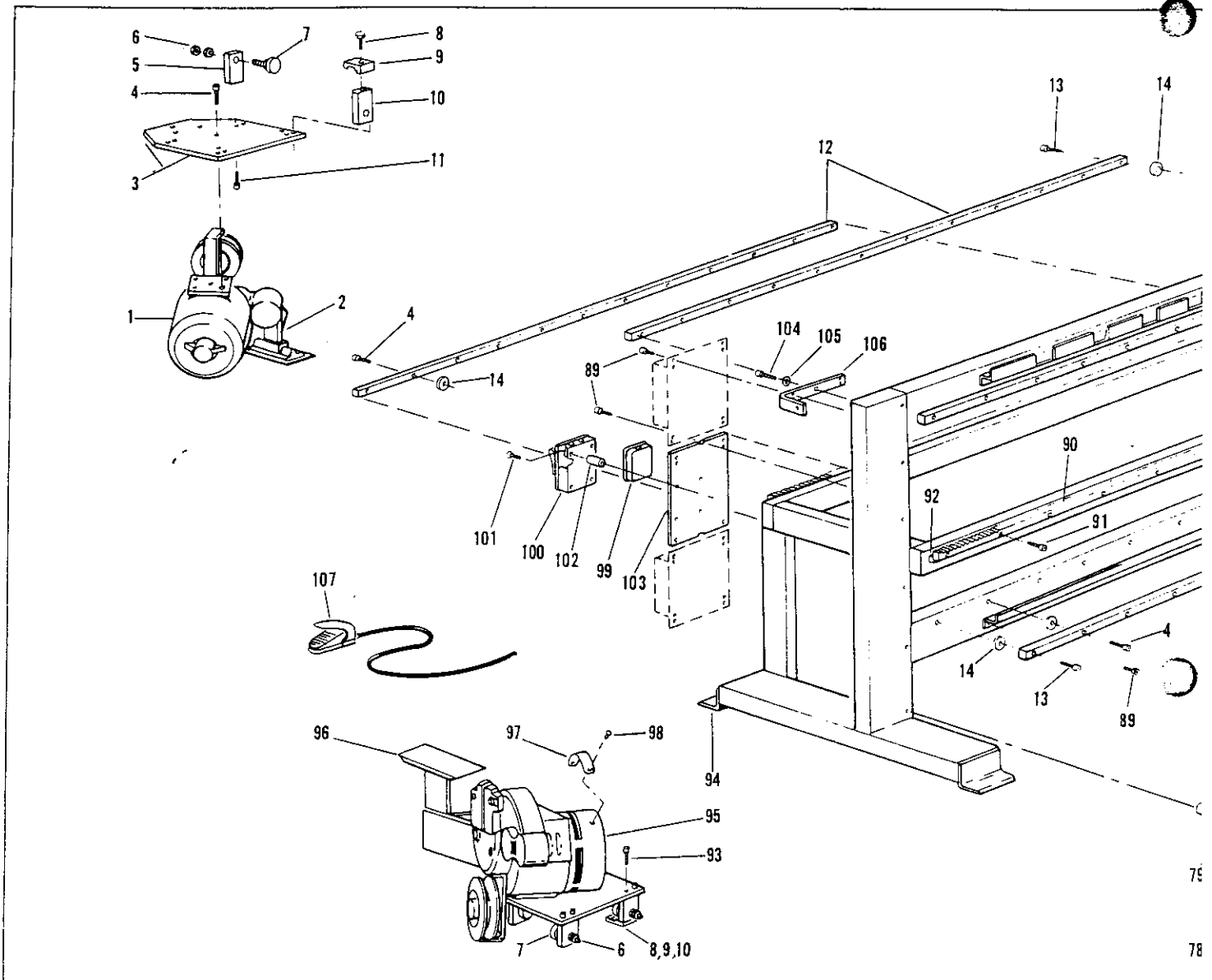
**NOTE**

The selector switch (8) on control cabinet, the normally open contacts of the limit switch (18), and the 2CR contact (19) are not operative on RH1 Stitchers. These component parts make up a non-repeat function switch whose action is replaced by the pulser timer for synchronized stitching.



# BASE And FRAME ASSEMBLY

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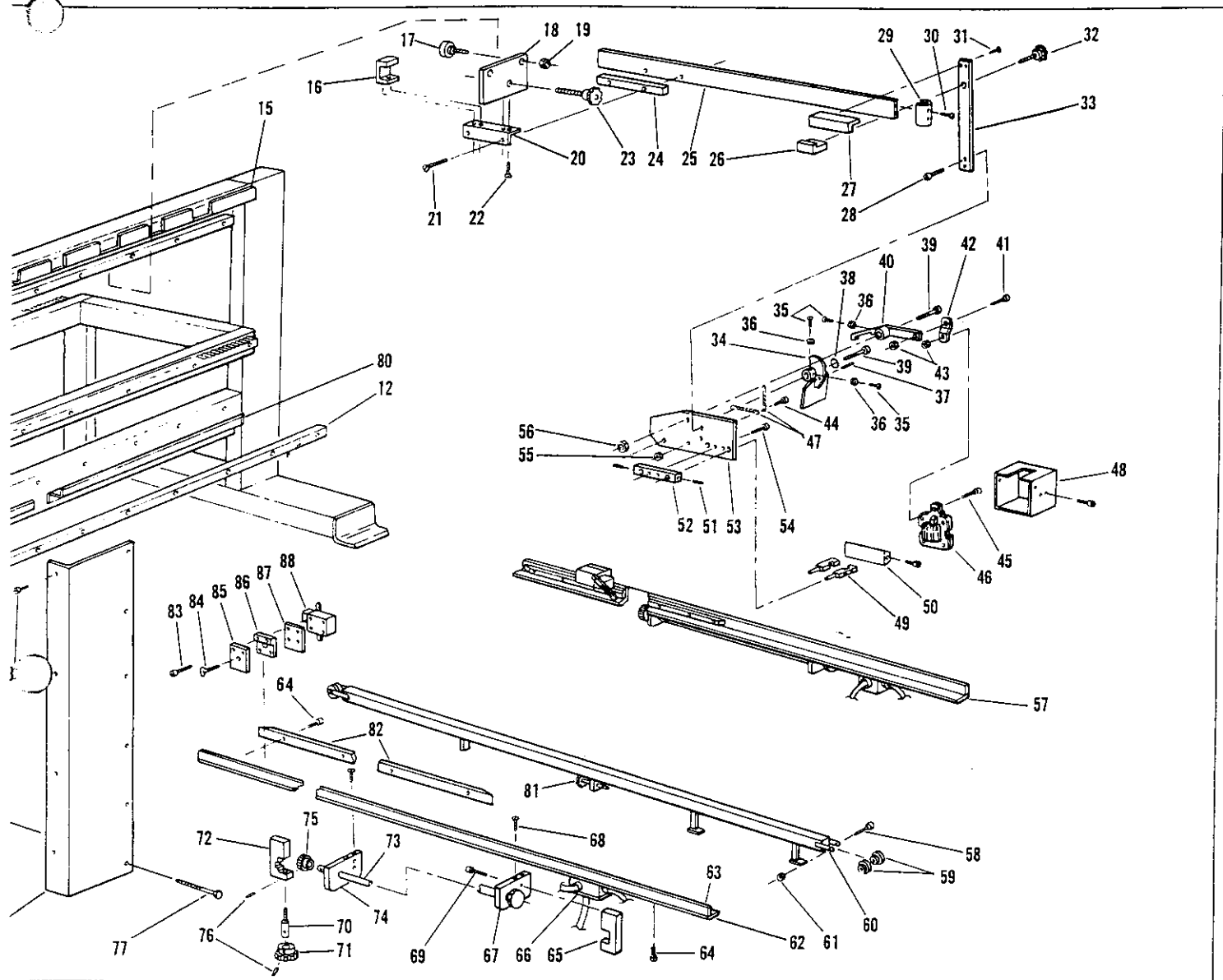
Index Number	Part Number	Part Name	Number Required	Index Number	Part Number	Part Name	Number Required
1		Stitcher Assembly (refer to S5POS for breakdown)	1	22	CB-1046	3/8 - 16x1 Flat Hd. Mach. Screw	8
2		Upper Head Device (refer to S5POS)	1	23	CBB-19-F	Clamp Assy.	2
3	CB-1516	Carriage Plate	2		(2) CB-19-F	Hand Knob	
4	CB-314-B	3/8 - 16x1-3/4" Soc. Hd. CapScrew	38		(2) CB-190-F	Threaded Stud	
5	CB-1519	High Roller Bracket	4	24	CB-1538	Spacer	2
6	CK-32	5/8 - 18 Hex. Nut	16	25	CB-1541	Live Stop Rail	2
7	CB-1335-B	Camrol CF- 1-1/2 -S	8	26	CB-1544	Hanger Clamp	2
8	CB-375	3/8 - 16x1-1/4" Hex. Hd. CapScrew	2	27	CB-1543	Hanger Slide	2
9	CB-1517	Clamp	2	28	CB-53	5/16 - 18x3/4" Soc. Hd. CapScrew	4
10	CB-1518	Low Roller Bracket	4	29	CB-1562	Bumpers	2
11	CB-192	3/8 - 16x1-1/4" Soc. Hd. CapScrew	16	30	CB-416	1/4 - 20 NCx3/8" Fl. Hd. Mach. Screw	4
12	CB-1523-A	Rail	1	31	CB-110	5/16 - 18x1" Soc. Hd. CapScrew	4
13	CB-314-D	3/8 - 16x2-1/4" Soc. Hd. CapScrew	8	32	CBB-19-A	Hand Knob	2
14	CA-46	Washer	133	33	CB-1542	Hanger	2
15	CB-1533	Upper Conduit Trough	2	34	CB-1514	Target	2
16	CB-1540	Low Slide Block	2	35	MF-152	8 - 32x3/4" Rd. Hd. Mach. Screw	6
17	CB-1335-A	Camrol CF-1-S	4	36	CB-719	8 - 32 Hex. Nut	6
18	CB-1539	High Slide Block	2	37	CB-835-B	Pin	2
19	CE-98	7/16 - 20 Hex. Nut	4	38	CB-198	1/2" Washer	4
20	CB-1537	Slide Angle	2	39	CB-1421-C	3/8x16x1-7/16 Shld. Screw	4
21	CB-314-C	3/8 - 16x2" Soc. Hd. CapScrew	8				

FD





PARTS LIST



5

E 3

Index Number	Part Number	Part Name	Number Required	Index Number	Part Number	Part Name	Number Required
40	CB-1515	Stop Latch Assy.	2	60	CB-1547	Table Rail	4
41	CB-449-A	1/4 - 28 x 1" Hex. Hd. Upper Link Cap Screw	2	61	CB-860-C	1/4 - 20 Hex. Nut	8
42	CB-448-C	Magnet Box Link	4	62	CB-1546	Side Gauge Floor - R. H.	1
43	CB-860-D	1/4 - 28 Hex. Nut	4	63	CB-1545	Side Gauge Wall	2
44	CB-651	10-32 x 1/2" Soc. Hd. Cap Screw	2	64	CB-154-A	#10 - 32 NC x 5/8" Soc. Hd. Cap Screw	22
45	CB-450-A	1/4 - 28 x 1-1/4" Hex. Hd. Lower Link Cap Screw	2	65	CB-1531	Hold Down	2
46	CBBB-456-1	Solenoid Assembly	2	66	CB-667-C	Elect. Outlet Box	2
47	CT-247	Spring	4	67	CB-1528	R. H. Guide Plate	2
48	CB-447	Magnet Box	2	68	CB-619	1/4 - 20 x 1" Fl. Hd. Screw	8
49	CB-454-A	Solenoid Mtg. Stud	4	69	CB-629	1/4 - 20 x 3/4" Soc. Hd. Cap Screw	4
50	CB-440	Magnet Box Brace	2	70	CB-1555	Side Gauge Clamp Screw	2
51	CB-141	1/4 - 20 x 1/4" Set Screw	4	71	CB-19-E	Hand Knob	4
52	CB-1513	Solenoid Stud Block	2	72	CB-1530	Side Gauge Clamp	2
53	CB-1508	Stop Mtg. Plate	2	73	CB-1548	Leveler Shaft	2
54	CB-629-A	1/4 - 20 x 1" Soc. Hd. Cap Screw	4	74	CB-1527	L. H. Guide Plate	2
55	CB-278	#10-32 Hex. Nut	2	75	CB-1525	Pinion	4
56	CB-125	3/8 - 16 Hex. Jam Nut	4	76	CB-835	.250 Dia. x 1-3/4" Pin	6
57	CB-1546-A	Side Gauge Floor - L. H.	1	77	CB-487-E	1/4 - 20 x 4-1/2" Hex. Hd. Cap Screw	6
58	MF-103	1/4 - 20 x 2-1/2" Hex. Hd. Cap Screw	16	78	CB-1534	Conduit Take-Up Box	1
59	CB-1247-A	Roller	16	79	CB-1536	Take-up Box Spacers	6
				80	CB-1532	Lower Conduit Trough	2

PARTS LIST CONTINUED ON PAGE 6



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Index Number	Part Number	Part Name	Number Required	Index Number	Part Number	Part Name	Number Required
81	CBB-19	Hand Knob	4	98	CB-370	#10 - 24 NC x 5/16" Rd. Hd. Mach. Screw	3
82	CB-1558	Side Gauge Runner	2	99	CB-1030-C	Solid State Timer	1
83	MF-337	10 - 32 x 1-1/2" Soc. Hd. Cap Screw	8	100	CB-285-S	Safety Switch	1
84	CB-165-B	3/8 - 16 x 1/2" Thumb Screw	2	101	CT-58	1/4 - 20 NC x 2-1/2" Fl. Hd. Mach. Screw	4
85	CB-1520	Clamp Plate	2	102	CB-1561	Spacer	4
86	CB-1522	Spacer Plate	2	103	CB-1549	Control Mtg. Plate	1
87	CB-1521	Switch Mtg. Plate	2	104	CB-314	3/8 - 16 x 1" Soc. Hd. Cap Screw	4
88	CB-662-	Micro Switch	2	105	CB-179	3/8 Washer	4
89	CB-325	1/4 - 20 x 1/2" Soc. Hd. Cap Screw	40	106	CB-1535	Control Box Bracket	4
90	CB-1524	Rack	4		CB-1551	Transformer Hevi-Duty Type SZO 220/440 - 110, 50-60 HZ, 150 VA (see D-41903-F for Upper Head)	1
91	MF-338	10 - 32 x 1-3/4" Soc. Hd. Cap Screw	40		D-41903-F	Transformer - GE No. 9T55442-G2 230/460-115-60-50VA Fused Secondary (Lower Head)	1
92	CB-1526	Rack Spacer	4				
93	CB-375-A	3/8 - 16 x 1-1/2" Hex. Hd. Cap Screw	2	107		Foot Switch	1
94	CB-1550	Frame	1				
95		Stitcher Assembly (refer to S5POS for breakdown)	1				
96		Lower Head Device (refer to S5POS)	1				
97	CB-1559	Motor Cover	1				

## INTERCONNECTION DIAGRAM

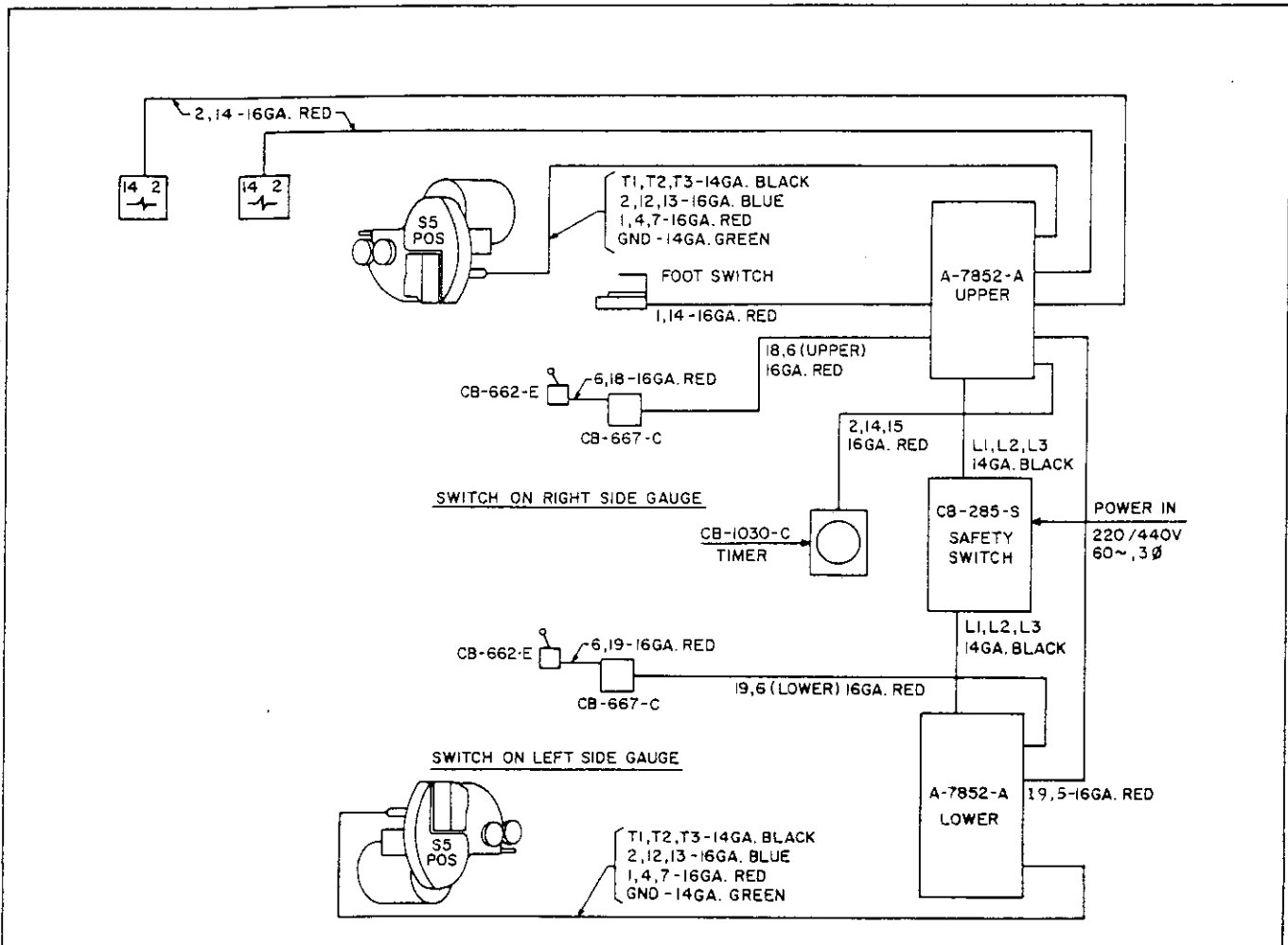
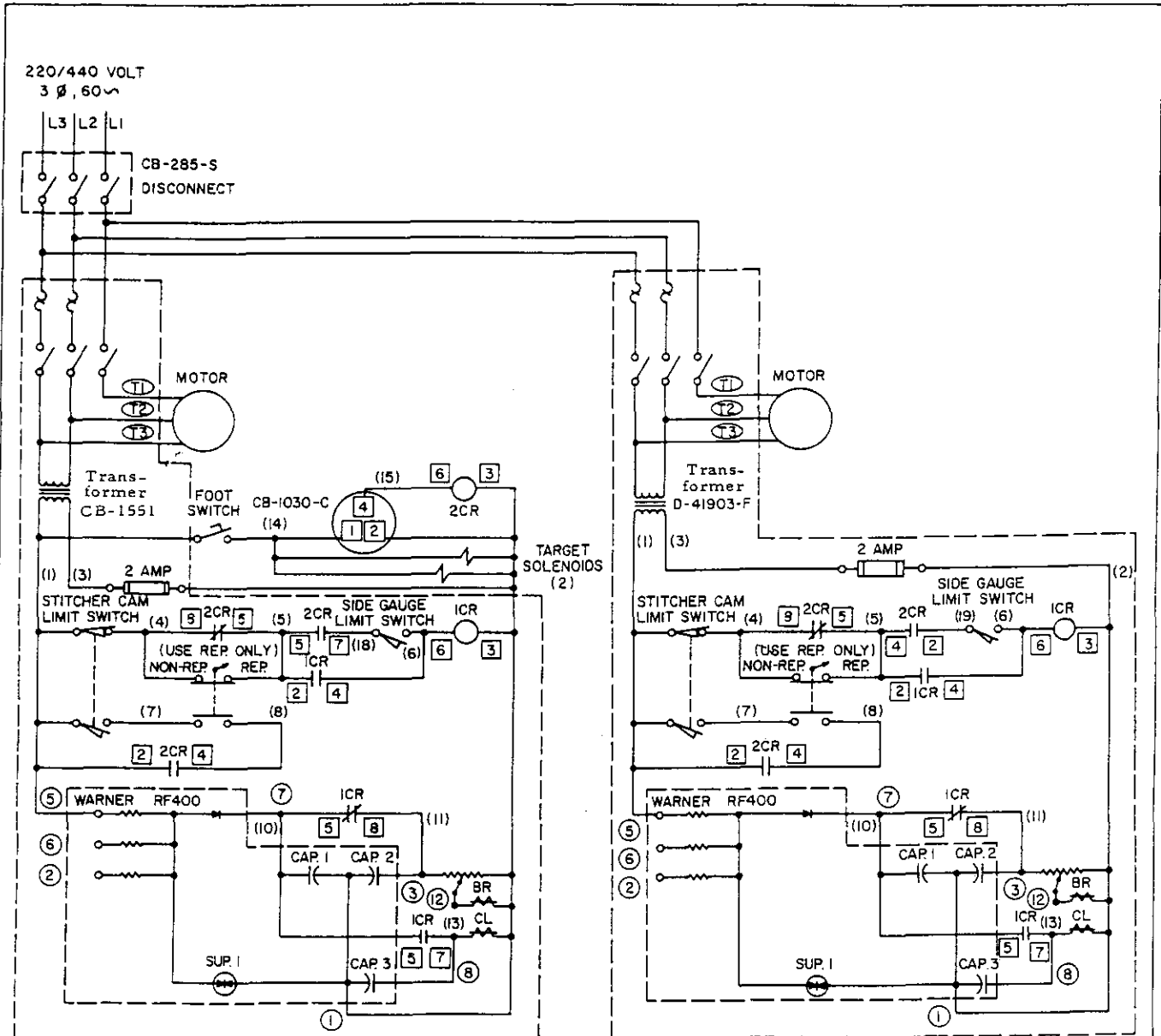


FIGURE 4



ELECTRICAL WIRING DIAGRAM

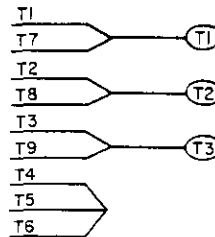


A-7852-A UPPER

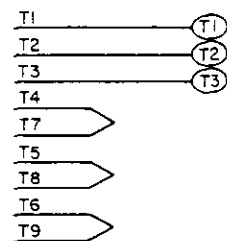
A-7852-A LOWER

MOTOR LEAD CONNECTIONS FOR;

220 VOLT, 3 Ø SUPPLY



440 VOLT, 3 Ø SUPPLY



- ( ) WIRE NO.
- PIN NO.-WARNER CONTROL UNIT
- PIN NO.-RELAY OR CB-1030-C TIMER

FIGURE 5



**R1H1 DUAL SIDE SEAM STITCHER**

When ordering parts, please state: Quantity required, part number, part name, the model and serial number of tool. For example: One CBB-19-A Hand Knob, R1H1 Side Seam Stitcher

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