ECONOMY HOT ROLL SIGNMASTER 44"

110 VOLT & 220 VOLT ADDENDUM

PRESSURE SENSITIVE & POUCH

ASSEMBLY PROCEDURES

JUNE 2019

EHR SIGNMASTER
ASSEMBLY PREPARATION
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5) HOUSING PREPARATION

6) WIRING

7) FEED TABLE

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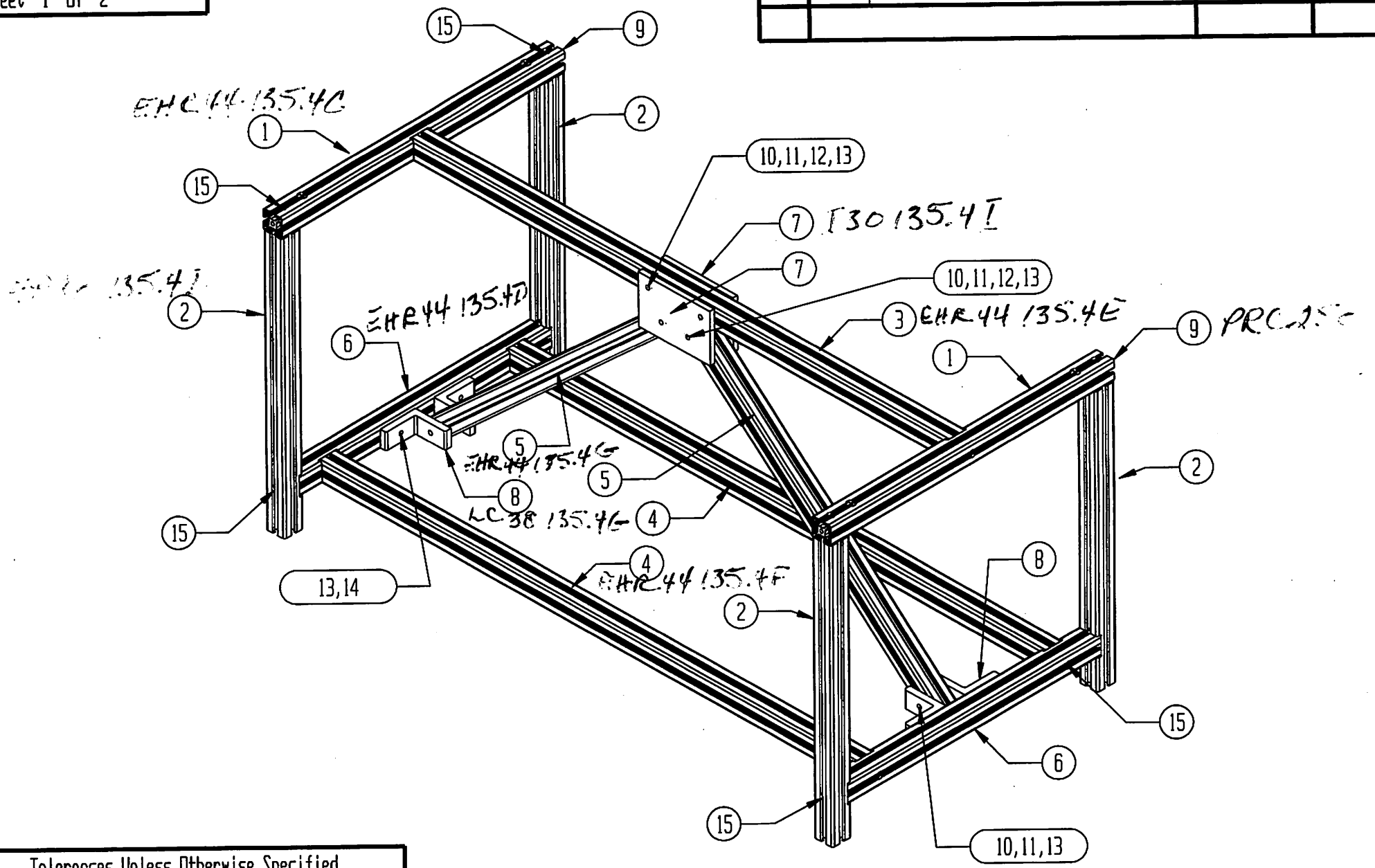
10) SUPPLY ROLLS

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Part # EHR44 135.5B	Title: EHR44 AND EP44 EXTRUDED STAND COMPLETE	Date: 03/02/09	Rev. Level:
Sheet 1 Of 2			

Rev.	Description	Date	App. By



Tolerances Unless Otherwise Specified				
Basic Dimension	UP TO 6.000	6.001 TO 24.000	ABOVE 24.000	∠ ±0° ±30'
2 Place Din.	±.005	±.010	±.031	√
3 Place Din.	±.002	±.005	±.010	

Finish Specs: CLEAN STAND

LEDCO INC.

4265 N. Main St., Henlock N.Y. 14466
Ph # 585-367-2392 Fax # 585-367-2978

Material Specs: SEE SHEET 2	U/M		QTY.		WGT.		Drawn By: RON	App. By: Ron	Date: 03/02/09

Part # EHR44 135.5B	Title: EHR44 AND EP44 EXTRUDED STAND COMPLETE	Date: 03/02/09	Rev. Level:
Sheet 2 Of 2			

Rev.	Description	Date	App. By

#	PART #	DESCRIPTION	PCS	#	PART #	DESCRIPTION	PCS
1	EHR44 135.4C	TOP LEFT/RIGHT WITDH SPANNER	2	9	PRC250	EXTRUDED STAND END CAP 36414	4
2	EP30 135.4D	FRONT/BACK LEGS	4	10	.312PAA48	5/16-18 x 3" SHCS	6
3	EHR44 135.4E	TOP LENGTH SPANNER	1	11	.312KKC01	5/16-18 FLAT WASHER, SAE	16
4	EHR44 135.4F	BOTTOM LENGTH SPANNER	2	12	.312LDF00	5/16-18 HEX NUT	4
5	EHR44 135.4G	DIAGONAL CENTER SUPPORTS	2	13	.312LDE00	5/16-18 ACORN NUT	10
6	EHR44 135.4D	BOTTOM LEFT/RIGHT WIDTH SPANNER	2	14	.312GDA16	5/16-18 x 1" CARRIAGE BOLT	4
7	I30 135.4I	MIDDLE BRACE MTG PLATE	2	15	.312PAA24	5/16-18 x 1-1/2" SHCS	14
8	LC38 135.4G	STAND GUSSETS	4				

Tolerances Unless Otherwise Specified				
Basic Dimension	UP TO 6.000	6.001 TO 24.000	ABOVE 24.000	∠ ±0° ±30'
2 Place Din.	±.005	±.010	±.031	√
3 Place Din.	±.002	±.005	±.010	

Finish Specs: CLEAN STAND

Material Specs: SEE SHEET 2

U/M | QTY. | WGT.

Drawn By: RON

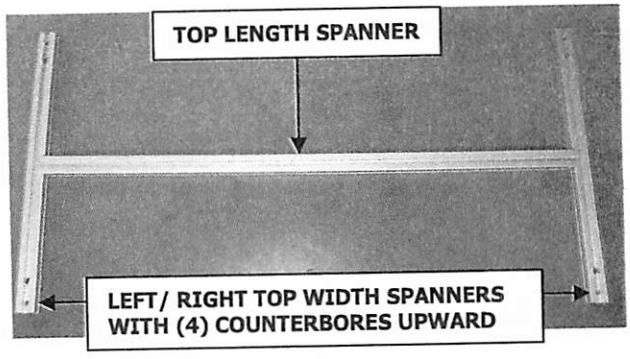
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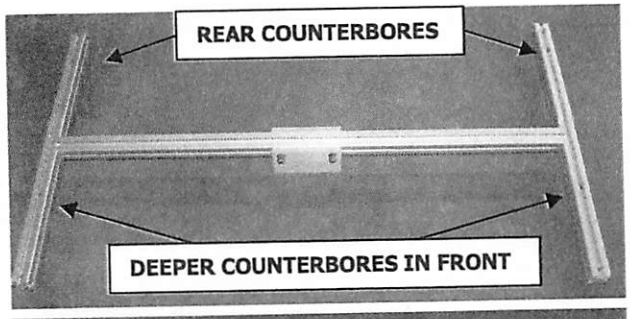
Date: 03/02/09

EHR44 OR EP44 & EP60
EXTRUDED STAND ASSEMBLY

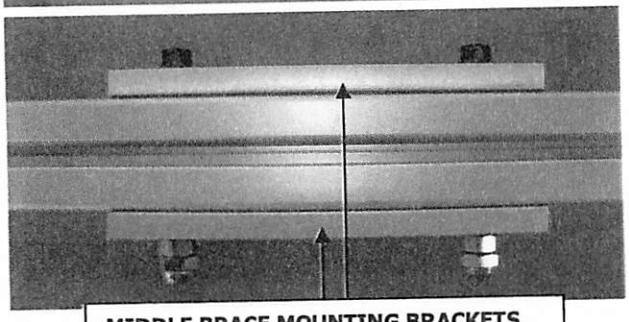
1) THE EHR44 AND THE EP44 REQUIRE THE SAME STURDY, EXTRUDED STAND. THE CHASSIS IS BUILT ON THE COMPLETED STAND WITH "IN HOUSE" CASTERS. BUILD THE STAND IN SECTIONS ON A CLEAN WORKTABLE. USE THE FOLLOWING HARDWARE: (4) 5/16-18 X 1 CARRIAGE BOLTS, (16) 5/16 FLAT WASHERS SAE, (10) 5/16-18 ACORN NUTS, (4) 5/16-18 HEX NUTS, (14) 5/16-18 X 1 ½ SHCS AND (6) 5/16-18 X 3 SHCS AS11, AS12 AND AS13.



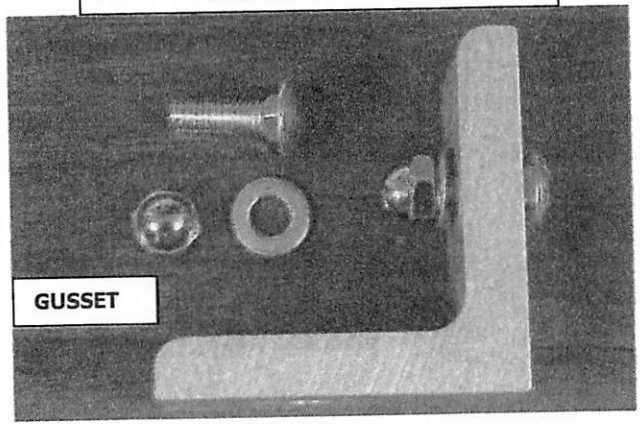
2) FROM LOFT1 PLACE (2) TOP LEFT/RIGHT WIDTH SPANNERS (EHR44 135.4C) ON A WORKTABLE WITH THE CENTER CUT NOTCHES FACING EACH OTHER, INWARD AND ALL (4) OF THE COUNTERBORED OPENINGS FACING UPWARD.



3) THE TOP LENGTH SPANNER (EHR44 135.4E OR EP60 135.4AA) LOFT1, HAS TWO CENTER HOLES TO ACCOMMODATE THE MOUNTING PLATES. ORIENT HOLES FRONT AND BACK. INSERT THE TOP LENGTH SPANNER BETWEEN THE TOP LEFT/RIGHT WIDTH SPANNER NOTCHES. SECURE USING (2) 5/16-18 X 1 ½ SHCS.

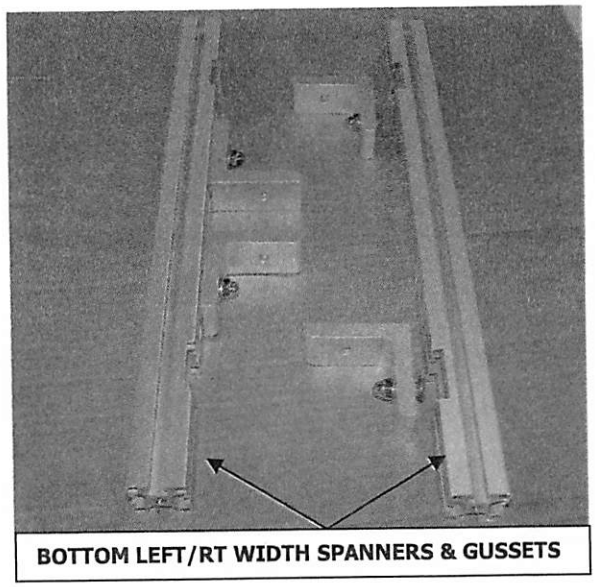


4) ***LOOSELY*** ATTACH (2) MIDDLE BRACE MOUNTING PLATES (I30 135.4I) LOFT1 TO THE FRONT AND REAR CENTER OF THE TOP LENGTH SPANNER. INSERT (2) 5/16-18 X 3 SHCS EACH WITH A 5/16 FLAT WASHER ***THROUGH THE REAR*** MIDDLE BRACE MOUNTING PLATE, THE LENGTH SPANNER AND THE FRONT MOUNTING PLATE. PLACE A 5/16 FLAT WASHER ON THE REMAINING THREADS, A 5/16-18 HEX NUT AND A 5/16-18 ACORN NUT. ***THE ACORN NUTS WILL INDICATE THE FRONT OF THE LAMINATOR.*** DO NOT TIGHTEN YET. SET THIS ASSEMBLY ASIDE.

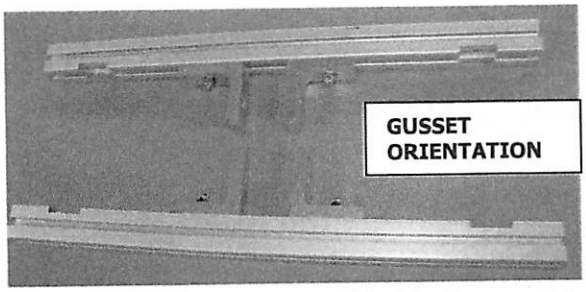


5) ASSEMBLE (4) STAND GUSSETS (LC38 135.4G) LOFT1 BY INSERTING A 5/16-18 X 1 CARRIAGE BOLT THROUGH ONE OF THE OUTER BREAK HOLES ON THE GUSSETS. ADD A 5/16 FLAT WASHER TO THE CARRIAGE BOLT THREADS AND SNUG ON A 5/16-18 ACORN NUT.

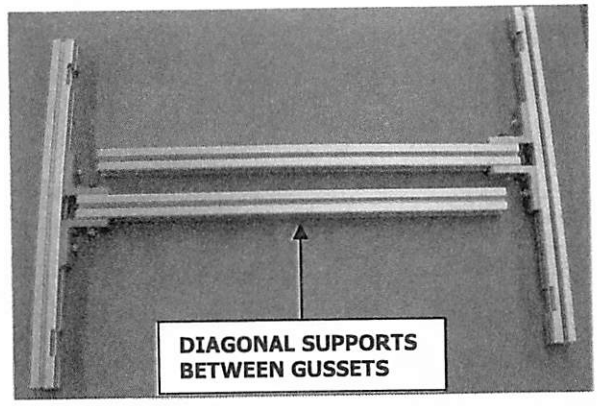
6) PLACE (2) BOTTOM LEFT/RIGHT WIDTH SPANNERS (EHR44 135.4D) LOFT1 ON A WORKTABLE, ORIENTED WITH NOTCHES FACING EACH OTHER, INWARD. SLIDE THE "BOSS" OF (2) ASSEMBLED CARRIAGE BOLTS ON GUSSETS IN CHANNEL BETWEEN NOTCHES ON THE INSIDE OF BOTH BOTTOM LEFT/RIGHT WIDTH SPANNERS. THE OUTSTANDING GUSSET BREAK FACES *INWARD* ON BOTH ALL GUSSETS. SNUG THE ACORN NUTS ON STAND GUSSETS. THEY WILL BE MEASSURED AND TIGHTENED LATER.


BOTTOM LEFT/RT WIDTH SPANNERS & GUSSETS

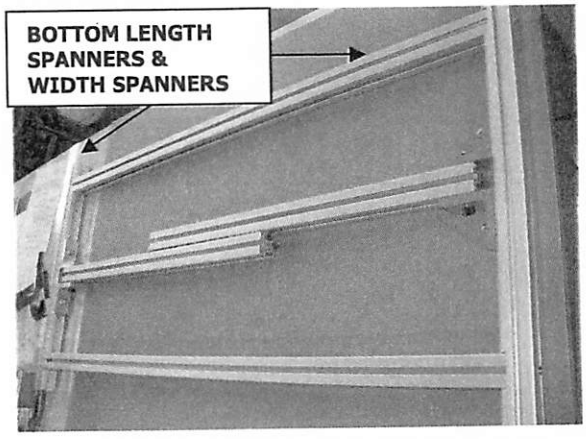
7) ATTACH (2) DIAGONAL CENTER SUPPORTS (EHR44 135.4G OR EP60 135.4J) LOFT1 BETWEEN GUSSETS ON LEFT/RIGHT WIDTH SPANNERS. USE (2) 5/16 X 3 SHCS AS13 EACH WITH A 5/16 FLAT. INSERT THROUGH GUSSET, DIAGONAL SUPPORT AND THE SECOND GUSSET. ADD A 5/16 FLAT WASHER AND A 5/16-18 ACORN NUT TO THREAD ENDS. *ACORN NUTS WILL FACE THE FRONT.*



8) ATTACH THE (2) BOTTOM LENGTH SPANNERS (EHR44 135.4F OR EP60 135.4A) LOFT1 BETWEEN THE BOTTOM LEFT/RIGHT WIDTH SPANNERS, FITTING INTO THE FRONT AND REAR NOTCHES. ***LOOSELY*** INSERT (4) 5/16-18 X 1 ½ SHCS. ADJUSTMENTS WILL BE MADE, THESE MUST NOT BE TIGHT.

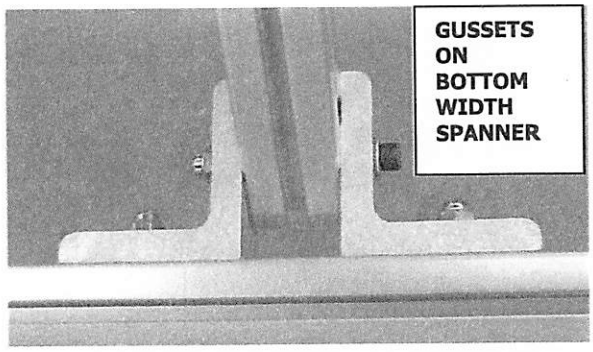


9) MEASURE THE CENTER OF THE RIGHT AND LEFT SIDE DIAGONAL SUPPORTS EVENLY BETWEEN THE FRONT AND REAR NOTCHES ON THE BOTTOM WIDTH SPANNERS. *SNUG* THE ACORN NUTS ON THE GUSSETS. THE DISTANCE WILL BE APPROXIMATELY THE SAME FROM THE DIAGONAL SUPPORT EXTRUSION CENTER TO THE BOTTOM LENGTH SPANNER EXTRUSION CENTER. A FINAL

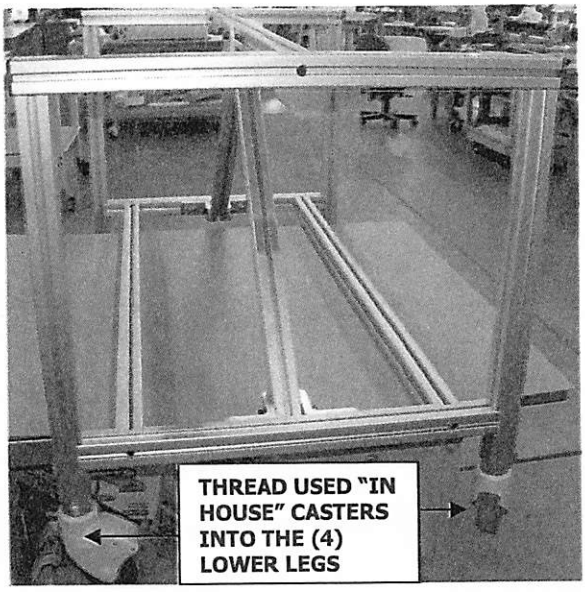


MEASUREMENT WILL BE TAKEN AFTER THE LEGS ARE ON AND THE DIAGONAL SUPPORTS ARE FITTED BETWEEN THE MIDDLE BRACE MOUNTING BRACKETS.

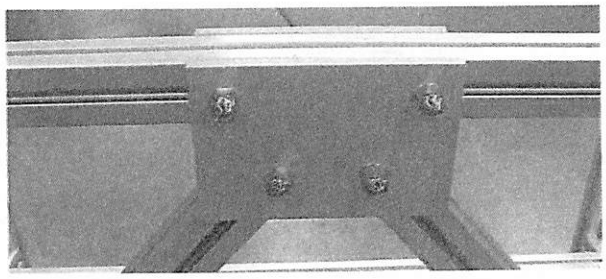
10) *LOOSELY* THREAD (3) OF THE (4) FRONT/BACK LEGS (EP30 135.4D) LOFT1 WITH THE NOTCH FITTING OVER THE ENDS OF THE BOTTOM LEFT/RIGHT WIDTH SPANNERS. SECURE EACH OF THE LEGS TO THE BOTTOM WIDTH SPANNERS WITH A 5/16-18 X 1 ½ SHCS. THE FOURTH LEG IS SECURED AFTER THE DIAGONAL SUPPORT IS FITTED BETWEEN THE FRONT AND REAR MIDDLE BRACE MOUNTING PLATES.



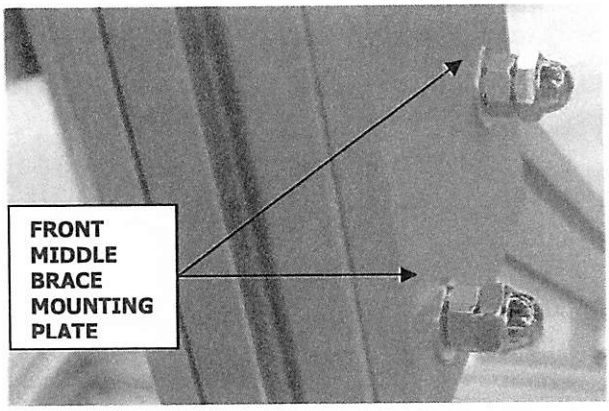
11) FOR ASSEMBLY PURPOSES THREAD (4) USED "IN HOUSE" CASTERS SHIPPING DEPARTMENT INTO THE BOTTOM OF THE LEGS. THESE WILL BE REMOVED BY THE SHIPPING DEPARTMENT WHEN MACHINE IS PACKED. NEW CASTERS ARE SENT WITH THE LAMINATORS.



12) CAREFULLY SET THE TOP LENGTH SPANNER SECTION ONTO THE (3) UPPER LEGS. *LOOSELY* ATTACH THE TOP WIDTH SPANNER ENDS TO THE LEGS, SO THEY DO NOT SLIDE OFF THE LEGS. USE 5/16-18 X 1 ½ SHCS FOR THESE CONNECTIONS. BE CAUTIOUS, AS THE TOP WIDTH SPANNER EXTRUDED ENDS ARE *VERY SHARP AND WILL EASILY CUT YOU.*



13) FIT THE UPPER ENDS OF THE DIAGONAL SUPPORTS BETWEEN THE MIDDLE BRACE MOUNTING PLATES. TAP THE GUSSETS ALONG THE CHANNEL FOR A STRAIGHT FIT. ALIGN THE DIAGONAL SUPPORT HOLES WITH THE LOWER HOLES OF THE MIDDLE BRACE MOUNTING PLATES. INSERT (2) 5/16-18 X 3 SHCS EACH WITH A 5/16 FLAT WASHER *THROUGH THE REAR MOUNTING PLATE*, THE DIAGONAL SUPPORT AND FRONT MOUNTING PLATE. ADD ANOTHER 5/16 FLAT WASHER, THREAD ON A 5/16-18 HEX NUT AND A 5/16-18 ACORN NUT. ALL ACORN NUTS FACE THE FRONT.

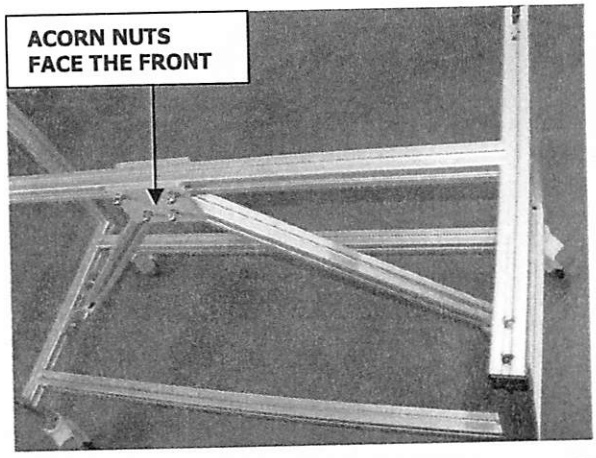


14) AFTER THE DIAGONAL SUPPORTS ARE SECURED, THREAD ON THE FOURTH LEG WITH A 5/16-18 X 1 ½ SHCS ON THE TOP AND BOTTOM. ADD THE LAST CASTER AND PLACE ON FLOOR.

15) USE A TAPE AND MEASURE AN EVEN DISTANCE FOR THE GUSSESTS BEFORE TIGHTENING ALL CONNECTIONS.

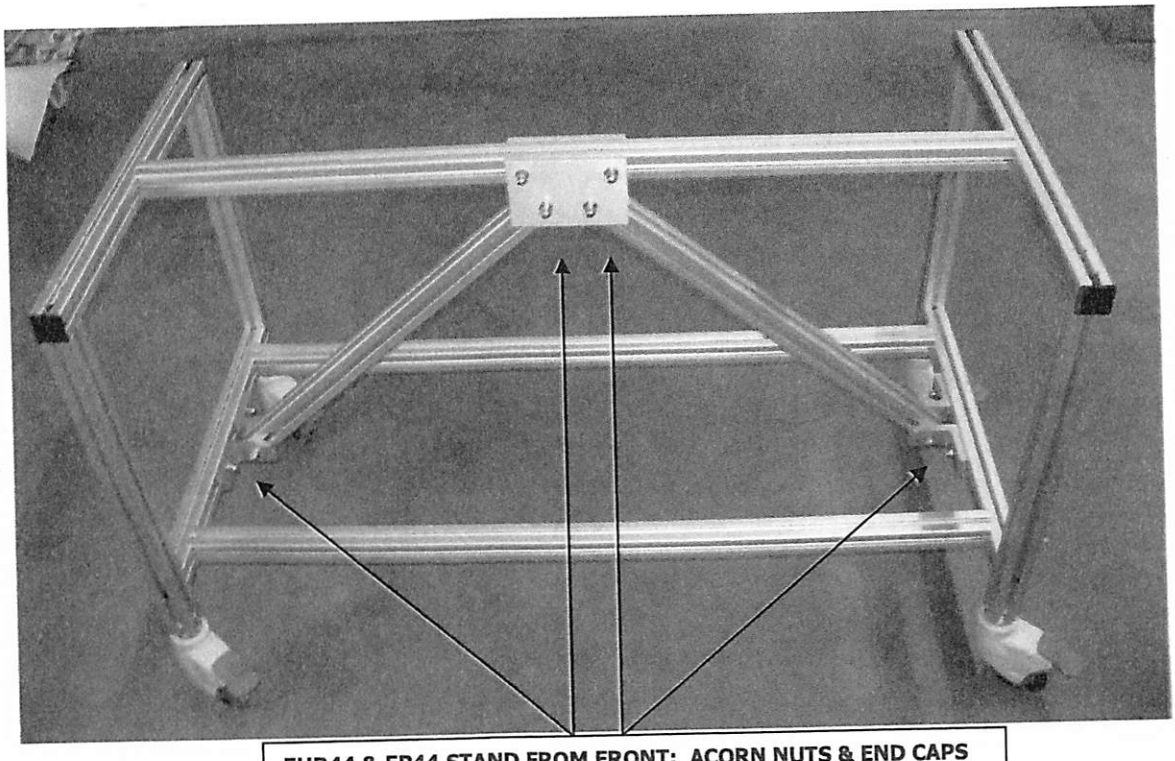
16) PLACE A DROP OF LOCTITE BLACK 380 'INSTANT ADHESIVE CAB1 ON THE CENTER INSERT SECTION OF AN EXTRUDED STAND END CAPS (PRC250) LOFT1. TAP THE END CAP INTO THE (4) EXPOSED EXTRUSION END OF THE TOP LEFT/RIGHT WIDTH SPANNERS. DO THEM ONE AT A TIME, SO THE LOCTITE DOESN'T FIRM UP BEFORE THE END CAP IS INSERTED.

17) TIGHTEN ALL CONNECTING SCREWS AND NUTS. SET THE STAND ON THE FLOOR.



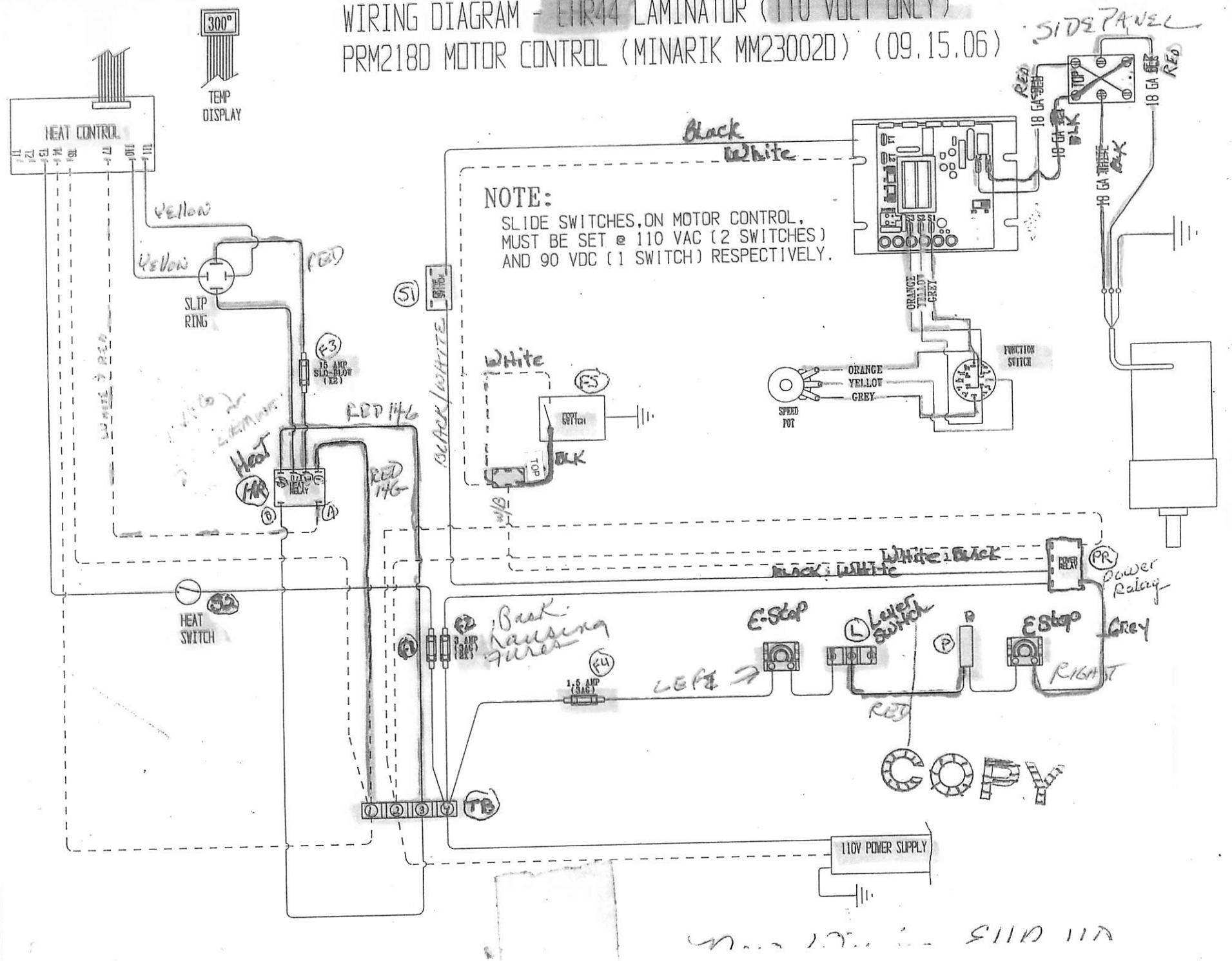


END CAPS & 380 LOCTITE



EHR44 & EP44 STAND FROM FRONT: ACORN NUTS & END CAPS

WIRING DIAGRAM - EHR44 LAMINATOR (110 VOLT ONLY)
PRM218D MOTOR CONTROL (MINARIK MM23002D) (09.15.06)



EHR44 SIDE PANELS, CHASSIS, REWIND

1) ON THE LOWER RIGHT AND LEFT SIDE PANEL (EHR44 090.4R, EHR44 090.4L) AS18 SECURE (2) FEET MOUNTING SHAFT EXTENSIONS (LC38 048.4) AS09. USE (4) 5/16-18 X ¾ FHSH INSERTED FROM THE OUTER COUNTERSUNK OPENINGS.

2) THREAD A ¼-20 X 5/8 SHCS, EACH WITH A SPACER (PRS232) AS07 IN FRONT OF CAM SHAFT HOLE, OUTER SIDE PANEL. THIS STABILIZES CONNECTING PLATE. TAP A ¼ X 1 SPRING PIN INTO THE CLOSEST HOLE BEHIND THE DRIVE AND HOT ROLL, ***FLUSH ON OUTER*** SIDE PANEL, TO STEADY EXIT TRAY.

3) ARBOR PRESS (1) OILITE BEARING (PRB 051) RACK 9 FLANGE ON OUTSIDE INTO BOTH SIDE PANELS FOR CAM SHAFT, UNDER DRIVE ROLL. TRIM WITH A .502.

4) ARBOR PRESS A 1/8" OILITE BEARING (PRB078) RACK 10 INTO UPPER RIGHT SIDE PANEL FLANGE ON INWARD. TAP (2) OILITE WASHERS (PRW338) RACK 10 OVER OUTER BEARING SLEEVE, STAKE WASHERS. TRIM WITH A .625 REAMER.

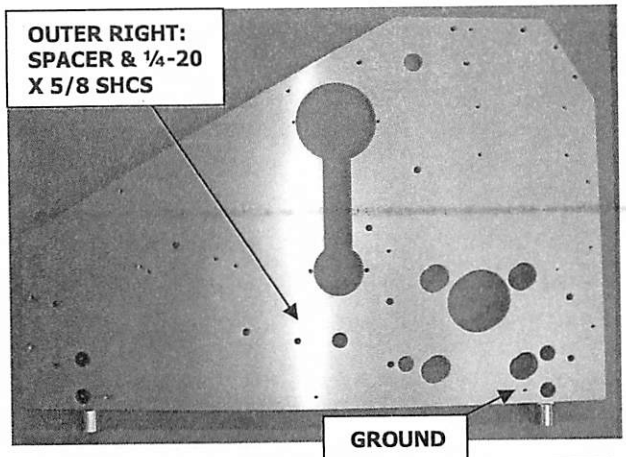
5) ADD (2) MEDIUM SNAP BUSHINGS (PRB 063) RACK 8 FLANGE OUTSIDE, ON BOTH SIDE PANELS FOR RACEWAY WIRES.

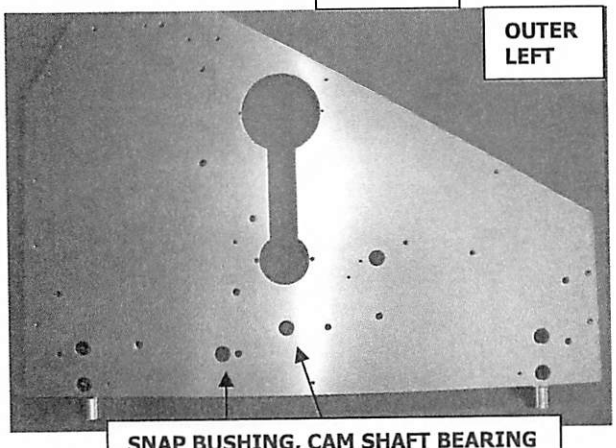
6) FROM *INNER* RIGHT PANEL, UNDER MOTOR HOLES, THREAD AN 8-32 X 1 BH AND #8 STAR WASHER FOR GROUND.

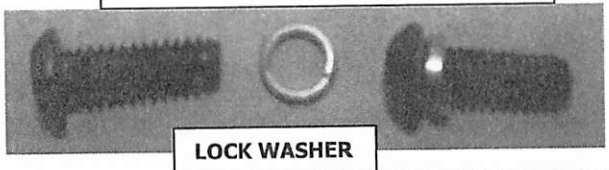
7) ***USE A LOCK WASHER (.250KKL02) ON ALL SUPPORTING PIECES BETWEEN SIDE PANELS.*** CONNECT SIDE PANELS WITH (2) SPACER BARS (EHR44 110.4) AS15 VERTICALLY INCLINED USING (8) ¼-20 X ¾ BHSH LOCATED ON EACH SIDE OF MOTOR POSITION.

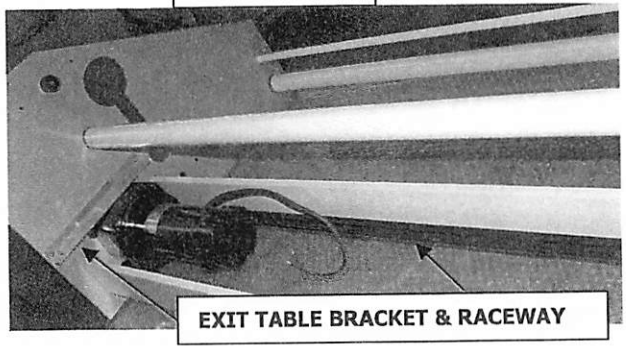
8) ATTACH A FEED/EXIT TABLE BRACKET (EP30 098.4) RACK 8 TO INNER SIDE PANELS, *BREAK DOWN*, ABOVE RIGHT MOTOR HOLES AND PARALLEL ON LEFT. USE (4) 8-32 X 3/8 FH WITH LOCTITE.



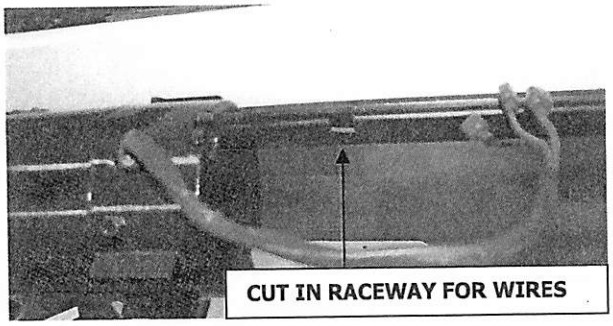




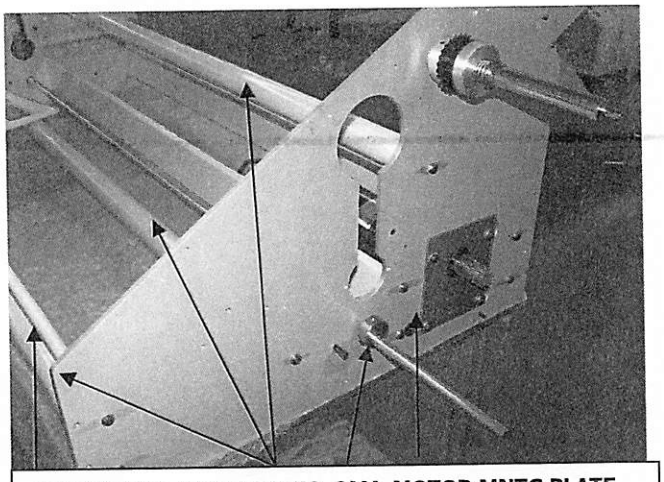




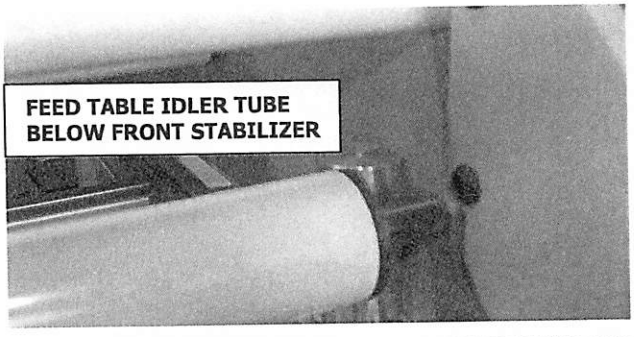
9) CUT ELECTRICAL RACEWAY (PRC076) AS10 MEASURED TO RUN BETWEEN MEDIUM SNAP BUSHINGS. USE 90 VOLT GEAR MOTOR (PRM1000) AS02 TO GAUGE ENTRANCE OF MOTOR WIRES INTO RACEWAY. CUT A 1" WIDE SPACE FOR MOTOR WIRES TO ENTER, TRIM EDGES. CAREFULLY REMOVE STICKY COVERING ON RACEWAY AND ALIGN LOWER EDGE WITH INNER BOTTOM SPACER BAR BETWEEN BUSHINGS.


CUT IN RACEWAY FOR WIRES

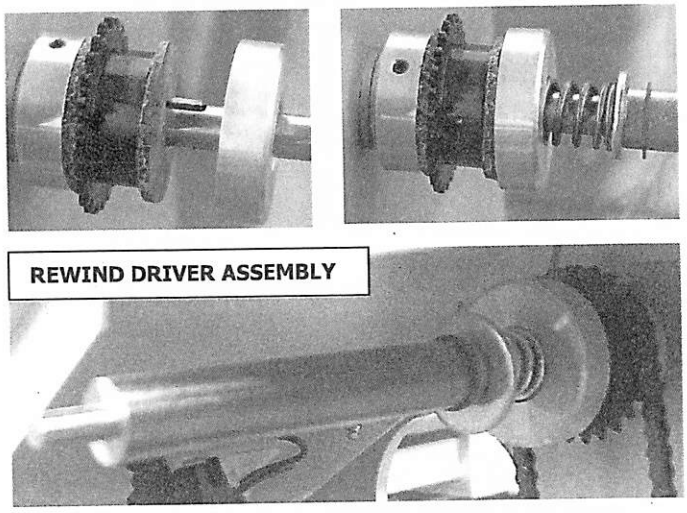
10) ATTACH 90 VOLT MOTOR USING MOTOR CLAMP PLATE (EP30 058.4) RACK 8 ON OUTER RIGHT SIDE PANEL WITH (4) ¼ X 5/8 X 1/8 FLAT WASHERS ON (4) ¼-28 X 1 BHSH. LIFT MOTOR SO IT TOUCHES FEEDTABLE BRACKET AND IS TOWARD FRONT. SCREWS WILL BE LOOSEN LATER SO MOTOR WEIGHT TIGHTENS CHAINS. USE 8" OF 3/8" INSULATION TUBING ON MOTOR WIRES AND SHRINK.


STABILIZER, IDLER TUBES, CAM, MOTOR MNTG PLATE

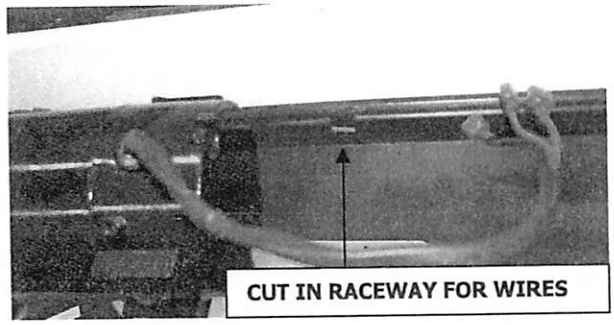
11) TAP (6) IDLER BEARINGS (PRB086A) AS09 INTO THE ENDS OF (2) IDLER TUBES (EHR44 052.4) AND (1) FEED TABLE IDLER TUBE (EHR44 054.4) AS15. SLIDE (3) IDLER SHAFTS (EHR44 053.4) LOFT 2 THROUGH BEARINGS. SECURE (2) RETAINING RINGS (PRR191) LD05 ON FEEDTABLE IDLER TUBE SHAFT. ATTACH TO SIDE PANELS WITH (6) ¼-20 X ¾ BH, USE LOCTITE. POSITION BEHIND HOT ROLL, IN LINE WITH CAM BUSHING. THE FEEDTABLE IDLER TUBE LOCATES UNDER STABILIZER, IN FRONT BOTTOM HOLE.


FEED TABLE IDLER TUBE BELOW FRONT STABILIZER

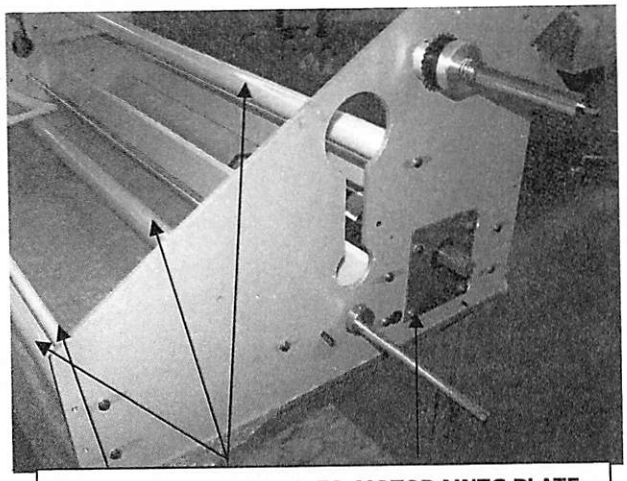
12) INSERT REWIND DRIVER ASSEMBLY (EP30 045.6) RACK 8 FROM INNER RIGHT SIDE PANEL THROUGH FLANGE. FROM OUTSIDE ADD IN ORDER: FIXED FRICTION PLATE (EP30 007.4) RACK 8 WITH 10-32 X ¾ SET SCREW TIGHTENED INTO REWIND DRIVER ASSEMBLY HOLE. **THINNER SIDE OF FIXED FRACTION PLATE IS TOWARD PANEL. ADD LEATHER DISC (PRW336) RACK 22. ADD A 5/8 BORE 25B26 SPROCKET (PRS255A) RACK 8 WITH AN ARBOR PRESSED BEARING (PRB043) AS07 HUB OUT/TEETH IN. ADD ANOTHER LEATHER WASHER. PUT KEY


REWIND DRIVER ASSEMBLY

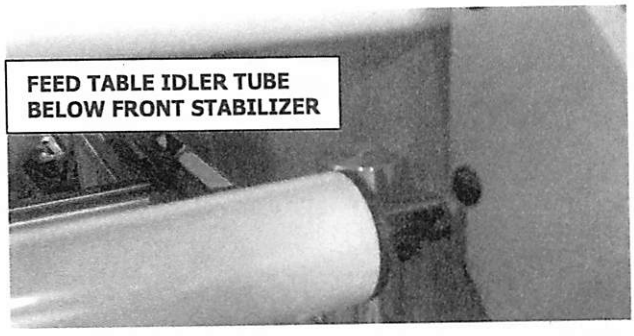
9) CUT ELECTRICAL RACEWAY (PRC076) AS10 MEASURED TO RUN BETWEEN MEDIUM SNAP BUSHINGS. USE 90 VOLT GEAR MOTOR (PRM1000) AS04 TO GAUGE ENTRANCE OF MOTOR WIRES INTO RACEWAY. CUT A 1" WIDE SPACE FOR MOTOR WIRES TO ENTER, TRIM EDGES. CAREFULLY REMOVE STICKY COVERING ON RACEWAY AND ALIGN LOWER EDGE WITH INNER BOTTOM SPACER BAR BETWEEN BUSHINGS.


CUT IN RACEWAY FOR WIRES

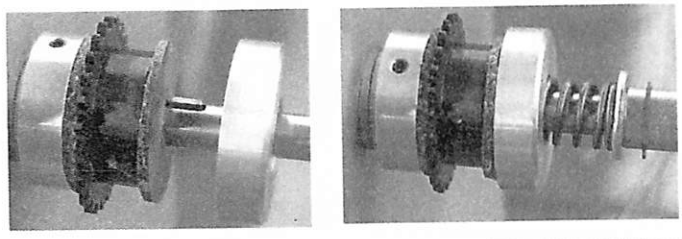
10) ATTACH 90 VOLT MOTOR USING MOTOR CLAMP PLATE (EP30 058.4) RACK 8 ON OUTER RIGHT SIDE PANEL WITH (4) ¼ X 5/8 X 1/8 FLAT WASHERS ON (4) ¼-28 X 1 BHSH. LIFT MOTOR SO IT TOUCHES FEEDTABLE BRACKET AND IS TOWARD FRONT. SCREWS WILL BE LOOSEN LATER SO MOTOR WEIGHT TIGHTENS CHAINS. USE 8" OF 3/8" INSULATION TUBING ON MOTOR WIRES AND SHRINK.


STABILIZER, IDLER TUBES, MOTOR MNTG PLATE

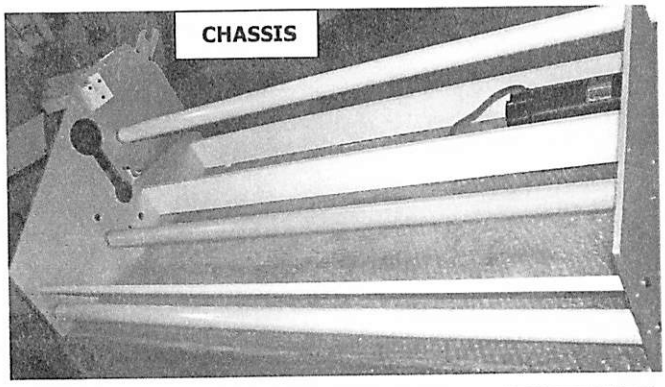
11) TAP (6) IDLER BEARINGS (PRB086A) AS13 INTO THE ENDS OF (2) IDLER TUBES (EHR44 052.4) AND (1) FEED TABLE IDLER TUBE (EHR44 054.4) AS14. SLIDE (3) IDLER SHAFTS (EHR44 053.4) LOFT 2 THROUGH BEARINGS. SECURE (2) RETAINING RINGS (PRR191) LD05 ON FEEDTABLE IDLER TUBE SHAFT. ATTACH TO SIDE PANELS WITH (6) ¼-20 X ¾ BH, USE LOCTITE. POSITION BEHIND HOT ROLL, IN LINE WITH CAM BUSHING. THE FEEDTABLE IDLER TUBE LOCATES UNDER STABILIZER, IN FRONT BOTTOM HOLE.


FEED TABLE IDLER TUBE BELOW FRONT STABILIZER

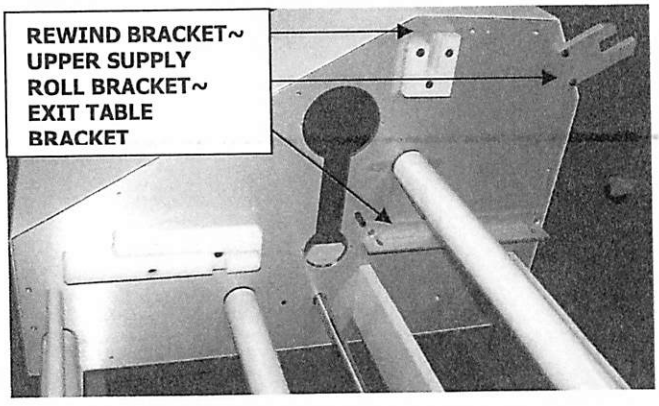
12) INSERT REWIND DRIVER ASSEMBLY (EP30 045.6) RACK 8 FROM INNER RIGHT SIDE PANEL THROUGH FLANGE. FROM OUTSIDE ADD IN ORDER: FIXED FRICTION PLATE (EP30 007.4) RACK 8 WITH 10-32 X ¾ SET SCREW TIGHTENED INTO REWIND DRIVER ASSEMBLY HOLE. **THINNER SIDE OF FIXED FRACTION PLATE IS TOWARD PANEL. ADD LEATHER DISC (PRW336) RACK 22. ADD A 5/8 BORE 25B26 SPROCKET (PRS255A) RACK 8 WITH AN ARBOR PRESSED BEARING (PRB043) AS08 HUB OUT/TEETH IN. ADD ANOTHER LEATHER WASHER. PUT KEY


REWIND DRIVER ASSEMBLY

(PRX347) AS08 INTO REWIND DRIVER KEYWAY. SLIDE ON FRICTION PRESSURE PLATE (H685 007.4A) RACK 8 WITH COUNTERBORE OUTWARD. THE SPRING (PRS226) RACK 10 FITS INTO THE COUNTERBORE. ADD ½ FLAT WASHER SAE, BRUSH ANTI-SEIZE ON REWIND DRIVER THREADS. ADD TENSION NUT (EP30 046.4) RACK 8 ***WHICH HAS REVERSE THREADS***. SLIDE A ¾" SNAP RING (PRR192) AS07 INTO TENSION NUT GROOVE.



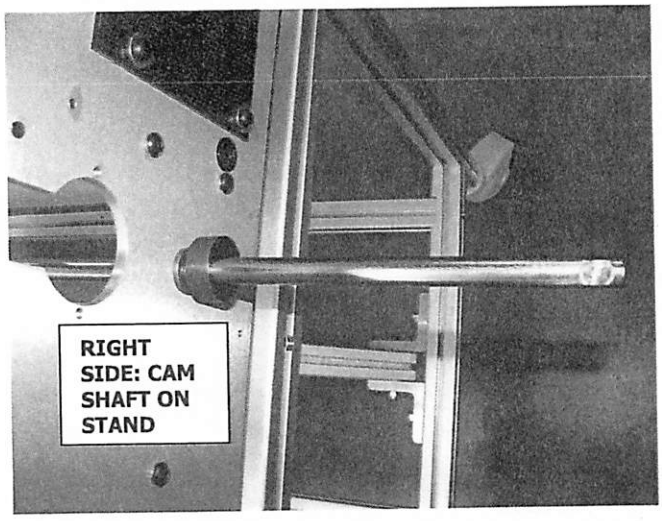
13) FROM RACK 8 ADD TO INNER LEFT PANEL A REWIND ROLL BRACKET (EP30 006.4) AND REWIND BRACKET SPACER (EP30 057.4) USING (3) 10-32 X 1 FHMS.



14) ADD RIGHT AND LEFT UPPER SUPPLY ROLL BRACKETS (EP30 008.4) RACK 8 TO INNER PANELS WITH (4) 10-32 X ¾ BH.

15) ADD FRONT STABILIZER BAR (EHR44 216.4) LOFT2 ABOVE FRONT IDLER TUBE. USE (2) ¼-20 X ¾ BHSH, USE LOCTITE.

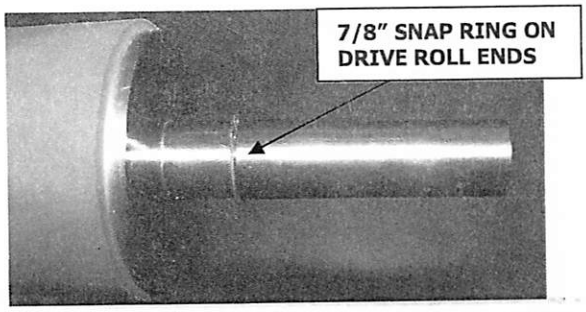
16) ON THE RUBBER ROLL CAM SHAFT (EHR44 130.4) LOFT 2 ADD CAM (H850 133.4) AS08 TO RIGHT END, WITH DEEPER RECESS AND HANDLE GROOVE. USE 10-32 X ¾ SS. <u>WITH A ½ FLAT WASHER SAE BETWEEN BOTH CAMS AND SIDE PANELS</u>, SLIDE CAM SHAFT INTO OILITE BUSHING FROM RIGHT SIDE. ON LEFT ADD SECOND WASHER AND CAM WITH 10-32 X ¾ SS. SCREW GOES OUT OF SIGHT WHEN IN SHAFT HOLE.



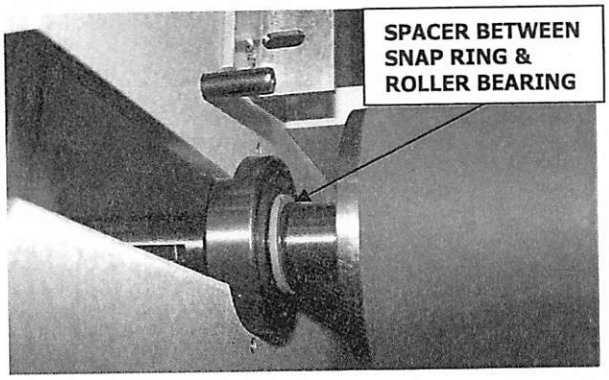
17) MOVE ASSEMBLED CHASSIS TO EHR44 STAND, FITTING OVER EXTRUSION OPENINGS. SECURE MOUNTING FEET TO STAND FROM UNDERSIDE USING (4) ½-13 X 2 ½ HEX HEAD BOLTS, EACH WITH A ½ FLAT WASHER SAE.

EHR44 DRIVE & HOT ROLLS, CONNECTING PLATES AND SLIP RING

1) SECURE (2) 7/8" SNAP RINGS (PRR193) AS07 INTO CHANNELS ON DRIVE ROLL COMPLETE (EHR44 035.4) LOFT 5 AND SLIDE ROLL INTO CHASSIS.

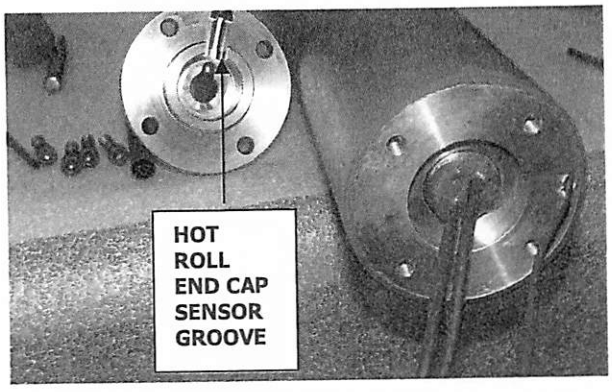


2) ON *LEFT SIDE DRIVE ROLL ONLY*, ADD (1) TOP RUBBER ROLL SPACER (LC38 031.4) RACK 2, TIGHT TO SNAP RING. ADD 1640ZZ BALL BEARING (PRB087A) AS09 ONTO BOTH JOURNAL ENDS. TAP INTO SIDE PANELS, FLUSH ON OUTER PANEL. SECURE WITH (4) 10-32 X ¼ TH.



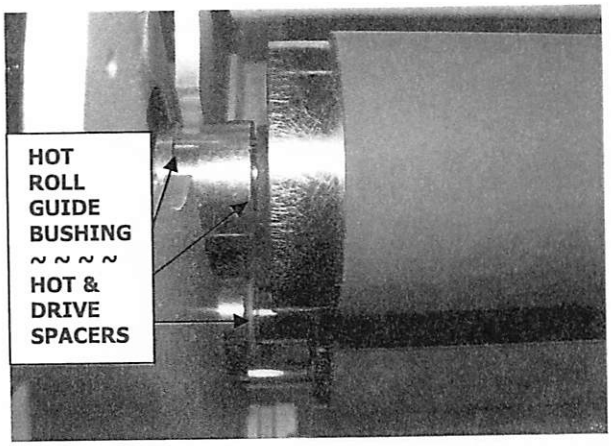
3) REMOVE JOURNAL END CAP *WITHOUT* KEYWAY ON HOT ROLL COMPLETE (EHR44 040.4) LOFT 4. INSERT SENSOR (PRC2121) LD00 AND STAKE TO HOLD IN PLACE. INSERT HEATER (PRH181) LOFT 1 FOR 110 VOLT MACHINE. BRUSH LOCTITE HIGH TEMPERTURE SILICONE SEALANT CAB1 OVER CERAMIC ON HEATER END. THIS ELIMINATES SEEPAGE AROUND HEATER ELEMENTS.

4) FROM CAB1 PLACE 4" OF 1/8" BLACK INSULATION TUBING (PRI162) ON THE SENSOR WIRES AND 4" OF 3/16" (PRI165) TUBING ON EACH HEATER WIRE. HEAT SHRINK TUBING. BUNDLE WITH 4" OF 3/8" (PRI164) TUBING AND HEAT SHRINK. REPLACE END CAP ALIGNING SENSOR WIRE AND GROOVE.



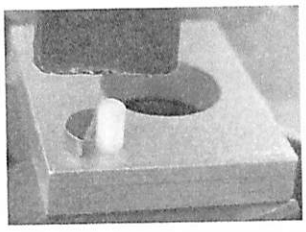
5) INSERT HOT ROLL OVER DRIVE ROLL, WIRES EXIT RIGHT PANEL.

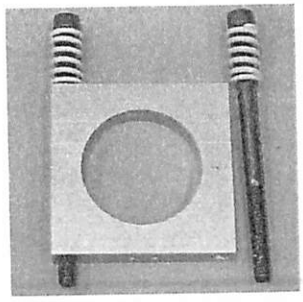
6) ON RIGHT, SLIDE A HOT ROLL GUIDE BUSHING (EHR44 044.4) RACK 14 OVER JOURNAL, ***THICK SIDE INBOARD***. ON LEFT; A TOP RUBBER ROLL SPACER (LC38 031.4) RACK 2, THEN A HOT ROLL GUIDE BUSHING. LOWER GUIDE BUSHING CHANNEL INTO SIDE PANELS.

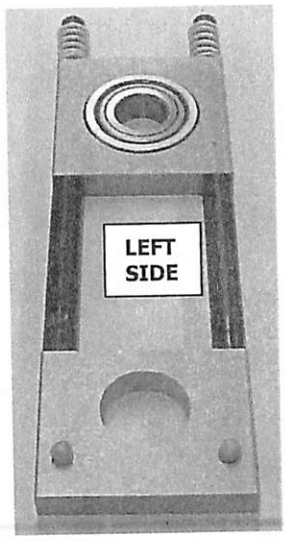


7) TO ASSEMBLE CONNECTING PLATES ARBOR PRESS (4) WHITE PLASTIC CONNECTING PLATE SPACERS (H850

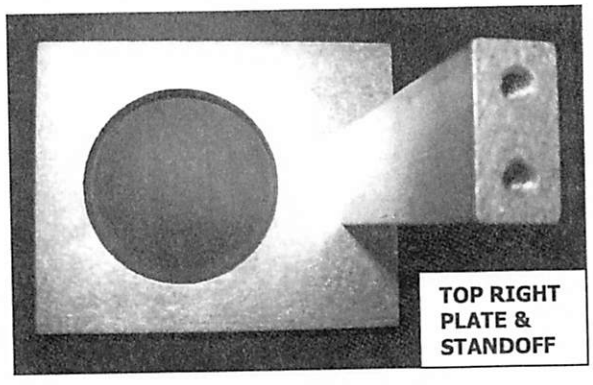
044.4) RACK 8 INTO (2) BOTTOM CONNECTING PLATES (EP30 042.4B) RACK 8 DEPTH OF A MI161 WOODRUFF KEY SHOWING. THREAD IN (4) 5/16-18 X 1 SS INTO BOTTOM CONNECTING PLATES. LOCTITE THREADS, LEAVING ½ INCH OF THREADS SHOWING. LOCTITE SHOWING THREADS AND SECURE (4) CONNECTING PLATE SPACERS (EP30 043.4) RACK 8. TIGHTEN WITH CHANNEL LOCKS.





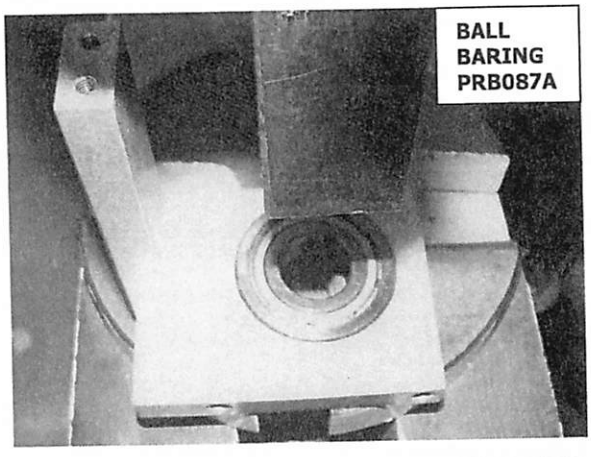


8) FOR *LEFT SIDE* ONLY, ARBOR PRESS 1640ZZ BALL BEARING (PRB087A) AS09 INTO TOP CONNECTING PLATE (EP30 042.4T) RACK 8 <u>FLUSH ON INNER, PLASTIC SPACER SIDE</u>. RUN (2) 5/16-18 X 4 ½ SHCS WITH SPRING (PRS229) RACK 9 THROUGH TOP CONNECTING PLATE INTO CONNECTING PLATE SPACERS. TO SET PRESSURE, TIGHTEN ONE COMPLETE 360 DEGREE TURN AFTER SPRING IS TOUCHING SCREW HEAD AND CONNECTING PLATE.



9) ON *RIGHT SIDE* TOP CONNECTING PLATE (EHR44 042.4TA) RACK 14 SECURE THE SLIP RING STANDOFF (EHR44 049.4A) RACK 14 THROUGH THE COUNTERSUNK OPENINGS USING (2) 10-32 X 1 FH.

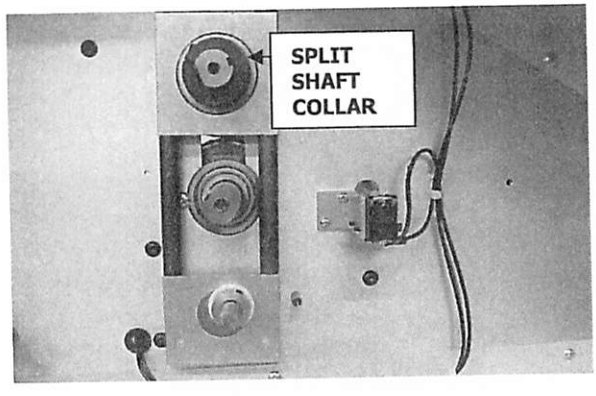
10) ARBOR PRESS A 1640ZZ BALL BEARING (PRB087A) AS09 INTO THE TOP RIGHT CONNECTING PLATE FROM THE STANDOFF SIDE, <u>ROLLER BEARING IS FLUSH ON INWARD, COUNTERSUNK SIDE.</u> THE STANDOFF ALIGNS TOWARD FRONT OF THE LAMINATOR ON LEFT.



11) SET CONNECTING PLATES ASIDE.

12) ALIGN RUBBER ON LEFT SIDE DRIVE AND HOT ROLLS. ADD ANTI-SEIZE TO CAM CIRCUMFERENCE AND SLIDE ON LEFT CONNECTING PLATE, <u>PLASTIC SPACERS INWARD</u>.

13) SNUG BALL BEARING TO HOT ROLL OILITE BEARING. SECURE WITH A 7/8" SPLIT SHAFT COLLAR (PRC112) RACK 2. SNUG CAM, ADD A TEFLON WASHER (PRW337) RACK 8 TO CAM SHAFT AND SECURE WITH A ½" STOP COLLAR



(PRCO96) AS09. REPEAT PROCEDURE FOR RIGHT SIDE CONNECTING PLATE.

14) ON RIGHT SIDE HOT ROLL JOURNAL ADD SLIP RING DRIVER (EHR44 012.4A) RACK 14 FLUSH WITH END OF HOT ROLL. SECURE SLIP RING DRIVER ON FLAT OF JOURNAL WITH A 10-32 X 3/8 SS.

15) TERMINATE HEATER AND SENSOR WIRES TO 3 ½ INCHES PAST JOURNAL END. CRIMP FLAG CONNECTORS ONTO HEATER WIRES AND SMALL RED FEMALES ONTO SENSOR WIRES.

16) ARBOR PRESS A 1/8 X 2 SPRING PIN (.125JO032) INTO SLIP RING DRIVER CLAMP (XL44 024.4) RACK 5.

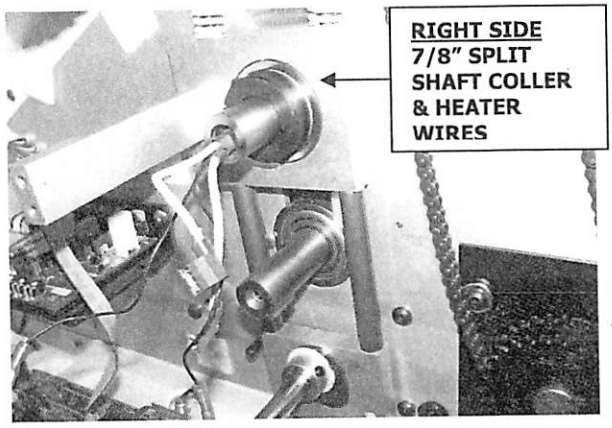
17) SLIDE THE SLIP RING DRIVER CLAMP ONTO THE ROTATING HUB OF A SLIP RING MODEL (PRS001A) AS07. SNUG THE SLIP RING DRIVER CLAMP WITH AN 8-32 X ¾ SHCS. DO NOT OVER TIGHTEN, AS IT WILL DAMAGE THE HUB.

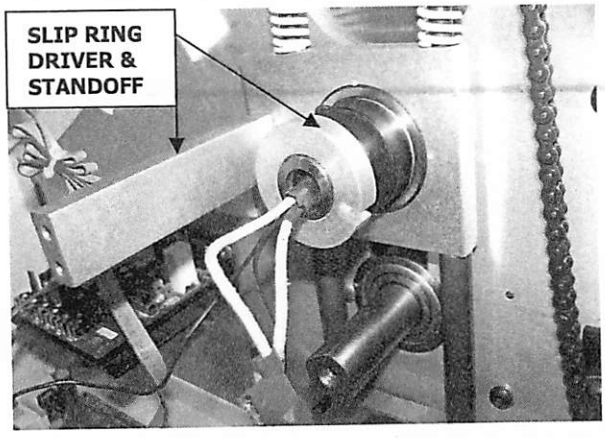
18) SLIDE A SLIP RING MOUNTING CLAMP (XL44 022.4A) RACK 5 ONTO THE OUTER, *STATIONARY*, SLIP RING HUB, LARGER POST TOP HORIZONTAL. SNUG SLIP RING CLAMP WITH A 10-32 X ¾ SHCS.

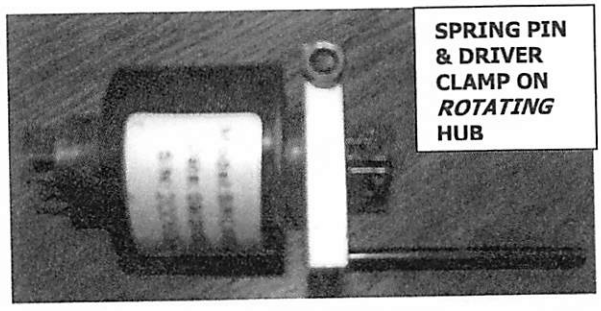
19) SECURE THE WIRES FROM THE SENSOR AND HOT ROLL ONTO THE ROTATING SLIP RING HUB TERMINAL POSTS. FORM WIRES SO THEY DO NOT RUB ANY PARTS WHILE MOVING.

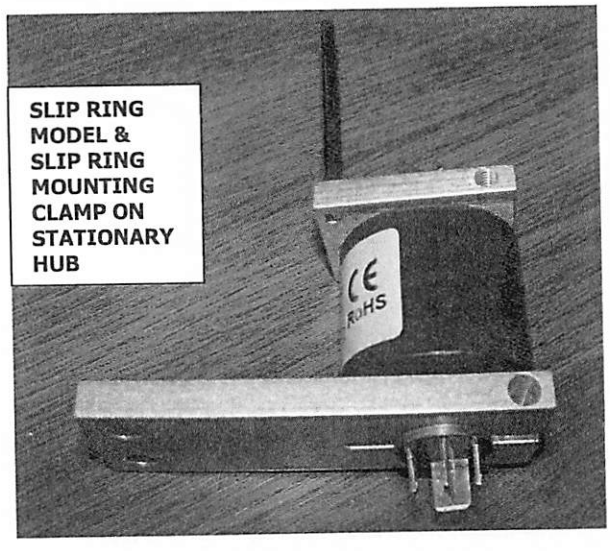
20) INSERT THE SPRING PIN INTO SLIP RING DRIVER NOTCH. ALIGN THE SLIP RING MOUNTING CLAMP WITH THE STANDOFF. FIRMLY HOLD THE SLIP RING MOUNTING CLAMP AND THE STANDOFF WHILE YOU SECURE THE CLAMP TO THE STANDOFF WITH (2) 10-32 X ¾ BHCS. BE CERTAIN THE TWO MEETING PIECES DO NOT SLIDE OFF CENTER WHILE TIGHTENING.

21) MANUALLY ADVANCE THE HOT ROLL TO TEST THE SLIP RING ROTATION FOR SMOOTHNESS AND AGAINST WIRE INTERFERENCE. ADJUST THE SENSOR AND HEATER WIRES SO THEY DO NOT

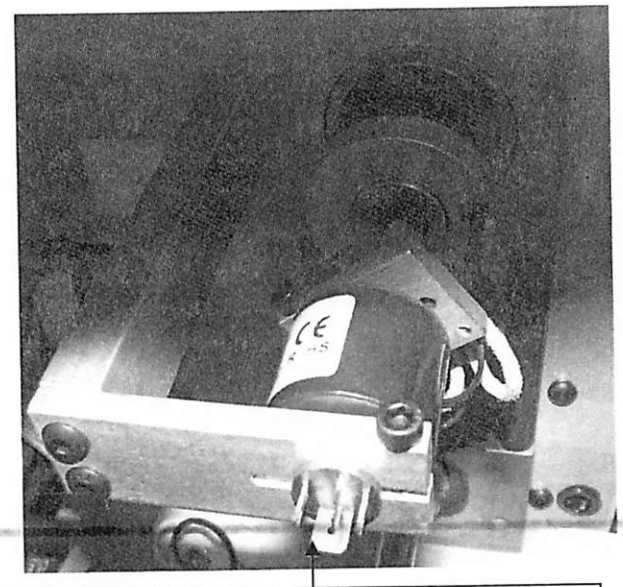




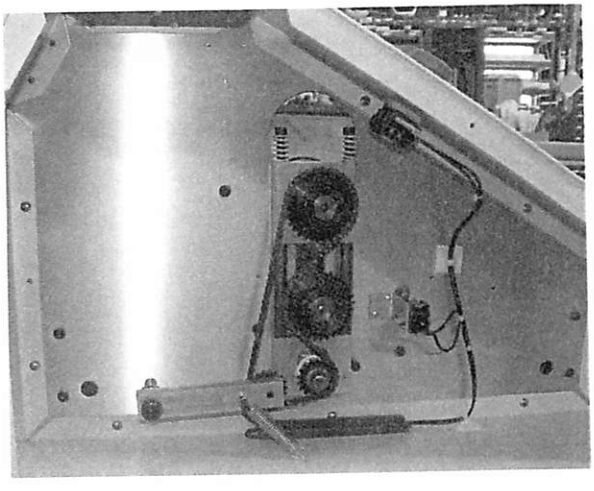


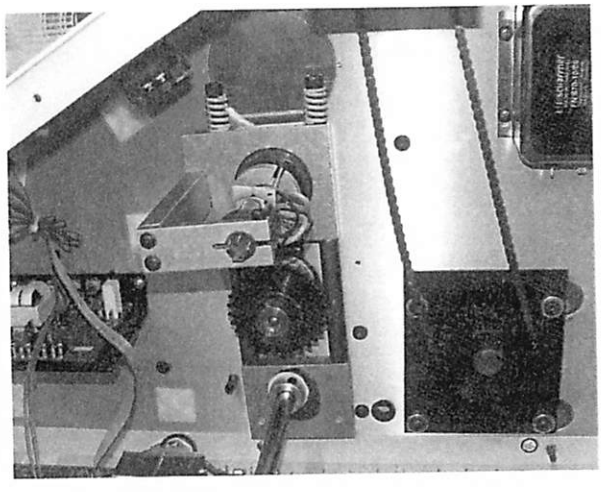


BRUSH THE STANDOFF WHEN THE SLIP RING HUB IS TURNING.



ALIGN LARGER POST UPWARD AND HORIZONTAL BEFORE TIGHTENING

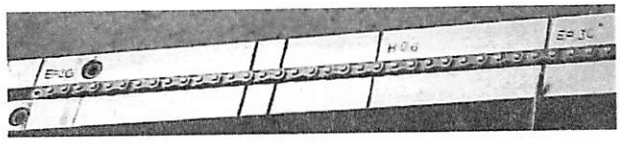


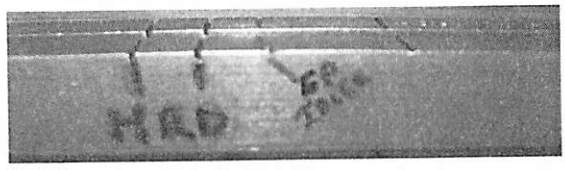


EHR44: LEFT SIDE ~ RIGHT SIDE

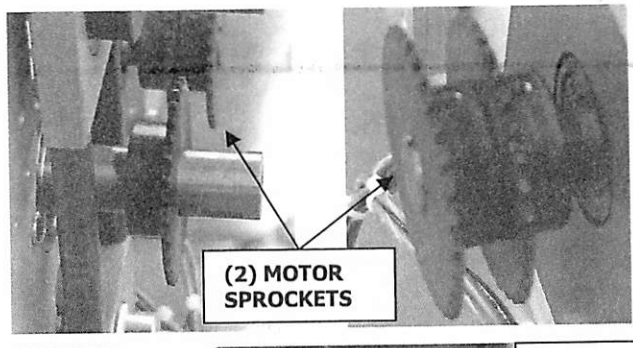
EHR44 CHAINS, SPROCKETS, TENSION SPRING ARM

1) FROM CCT #25 CHAIN ROLL (PRC083.1) CUT (3) CHAINS: ONE MEASURED TO *LONG EP30*, ONE TO *EP30 IDLER* AND ONE *SHORT EP30*. SET CHAINS ASIDE WITH (3) #25 CHAIN CONNECTING LINKS (PRC084) AS09.

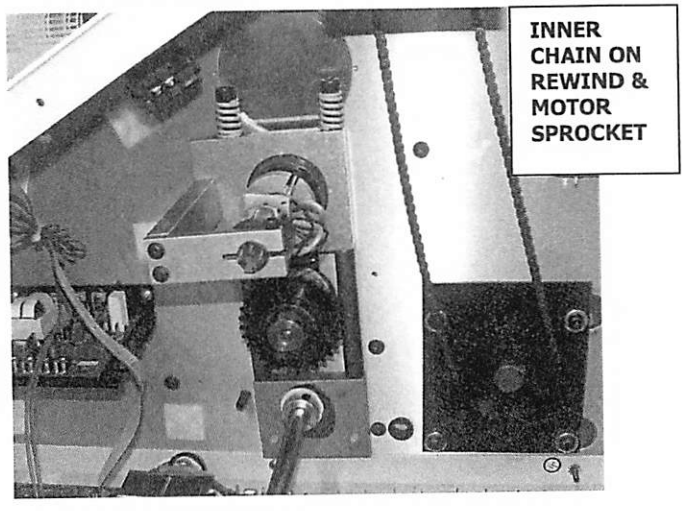




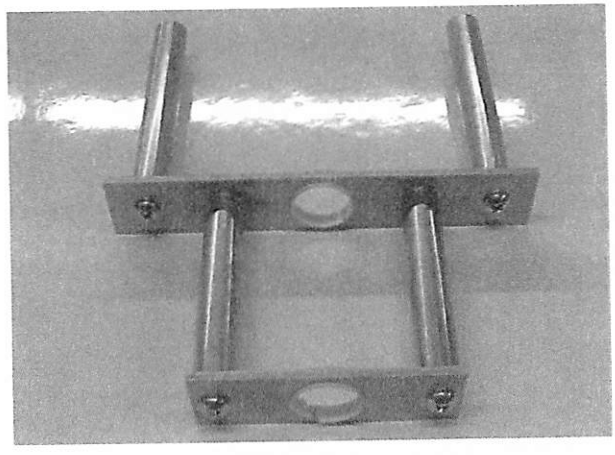
2) START (2) 10-32 X ¼ SS INTO (2) 25B32 ¾" BORED SPROCKETS (PRS258A) RACK 8 AND SLIDE ONTO MOTOR JOURNAL OVER KEY, ***HUB IN/TEETH OUT ON BOTH***. MEASURE INNER SPROCKET 7/8" FROM MOTOR PLATE TO CENTER OF TEETH, ALIGNING WITH REWIND SPROCKET. TIGHTEN SET SCREW ON KEY. SNUG SPROCKETS TO EACH OTHER. TIGHTEN OUTER SET SCREW ON KEY.



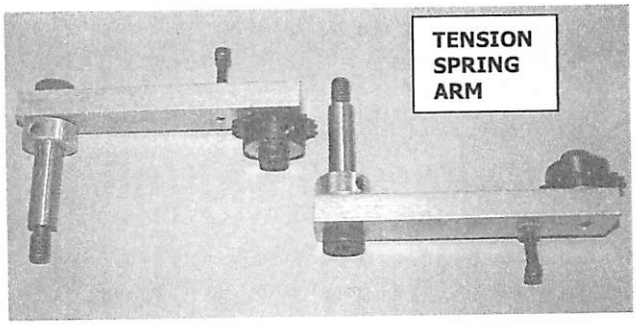
3) INSERT (3) PIN KEYS (MI187) AS02 IN BOTH ENDS OF DRIVE ROLL AND LEFT SIDE HOT ROLL. FILE IF NECESSARY. ALIGN RIGHT SIDE DRIVE ROLL 25B32 SPROCKET 7/8 BORE (PRS258C) RACK 14 HUB IN, ¼-28 X 3/8 SS WITH OUTER MOTOR SPROCKET USING STRAIGHT EDGE. TIGHTEN SET SCREW ON DRIVE ROLL KEY. CONNECT LONG EP30 CHAIN TO CLUTCH ASSEMBLY SPROCKET AND INNER MOTOR SPROCKET. CONNECT MIDDLE LENGTH CHAIN TO OUTER MOTOR SPROCKET AND DRIVE ROLL SPROCKET. LOOSEN SCREWS ON MOTOR AND ADJUST POSITION TO TIGHTEN CHAIN. RETIGHTEN MOTOR SCREWS.

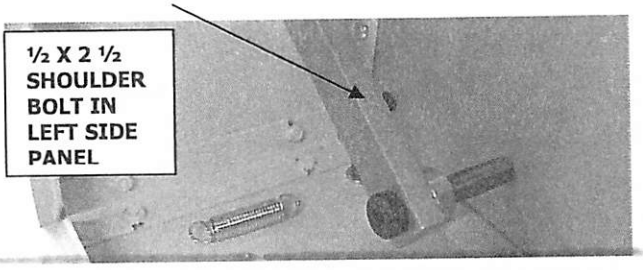


4) FINISH CLUTCH ASSEMBLY BY USING (6) 10-32 X 3/8 RHMS. FROM RACK 8 USE (2) SCREWS TO ATTACH ENDS OF INNER CLUTCH SUPPORT (EP30 076.4) TO (2) LONGER, INNER CLUTCH SPACERS (EP30 078.4). ATTACH OUTER CLUTCH SUPPORT (EP30 077.4) TO (2) SHORTER, OUTER CLUTCH SPACERS (EP30 079.4). ATTACH OUTER CLUTCH SPACERS TO INNER CLUTCH SUPPORT. INSERT (2) NYLINERS (PRB068) AS09 FLANGE INWARD, FLANGE TOWARD SIDE PANEL. SLIDE ASSEMBLY OVER THE REWIND DRIVER NUT AND SECURE WITH (2) 10-32 X ¾ BHSH FROM INSIDE OF PANEL.

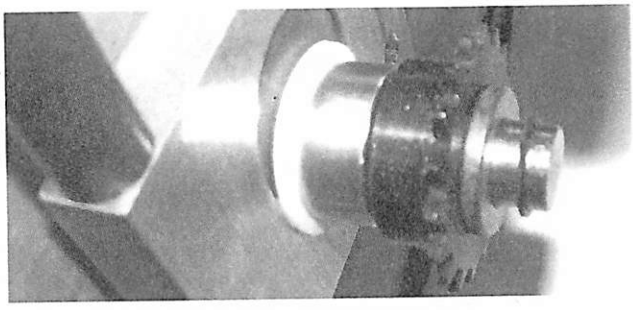


5) ASSEMBLE LEFT SIDE TENSION SPRING ARM. INSERT ½ X 2 ½ SHOULDER BOLT INTO TENSION SPRING ARM (EP30 055.4) RACK 8 SECURED WITH ½" STOP COLLAR (PRC096) AS07. ARM MUST TURN FREELY ON BOLT. ARBOR PRESS OILITE BEARING (PRB047) RACK 9 INTO 25-18 TOOTH SPROCKET (PRS249) LD03 WITH FLANGE ON TOOTH SIDE, ***SET SCREW REMOVED***. ATTACH SPROCKET TO TENSION SPRING ARM WITH 3/8 X 5/8 SHOULDER BOLT, FLANGE AND TEETH NEXT TO ARM. RUN A #10 KEPS NUT UP THE THREADS OF A 10-32 X 1 ¼ SHCS AND INSERT SCREW FROM OUTER SIDE OF TENSION ARM, FLUSH WITH INNER SIDE. WRENCH TIGHTEN KEPS NUT. THREAD ½ X 2 ½ SHOULDER BOLT INTO LEFT SIDE PANEL AND SECURE WITH 3/8-16 ACORN NUT ON INSIDE OF SIDE PANEL, LOCTITE ACORN THREADS.

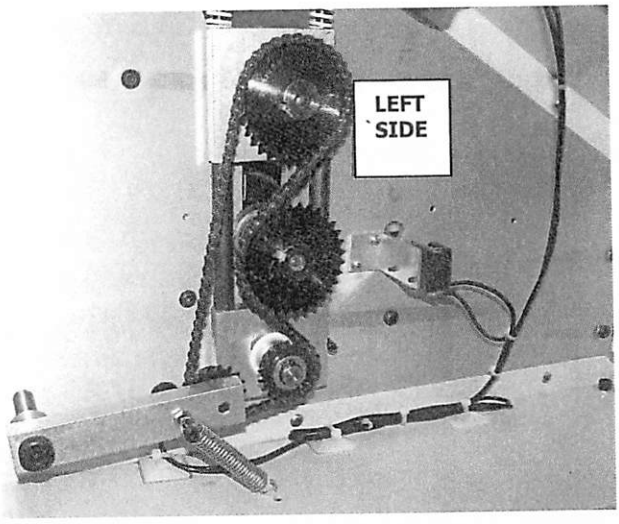




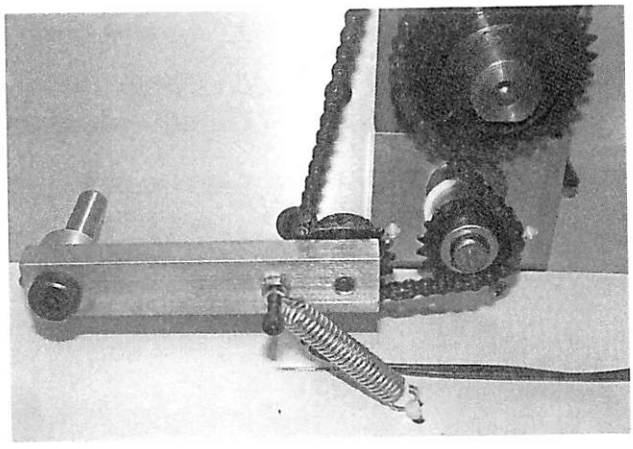
6) PLACE THE FLOATING 25B18 SPROCKET WITH BUSHING (PRS249A.5) RACK 8 ONTO LEFT SIDE CAM SHAFT, WITH ***HUB INWARD, TEETH AND OILITE FLANGE OUTWARD***. SECURE WITH A SNAP RING (PRR191) LD04 ON SHAFT END.

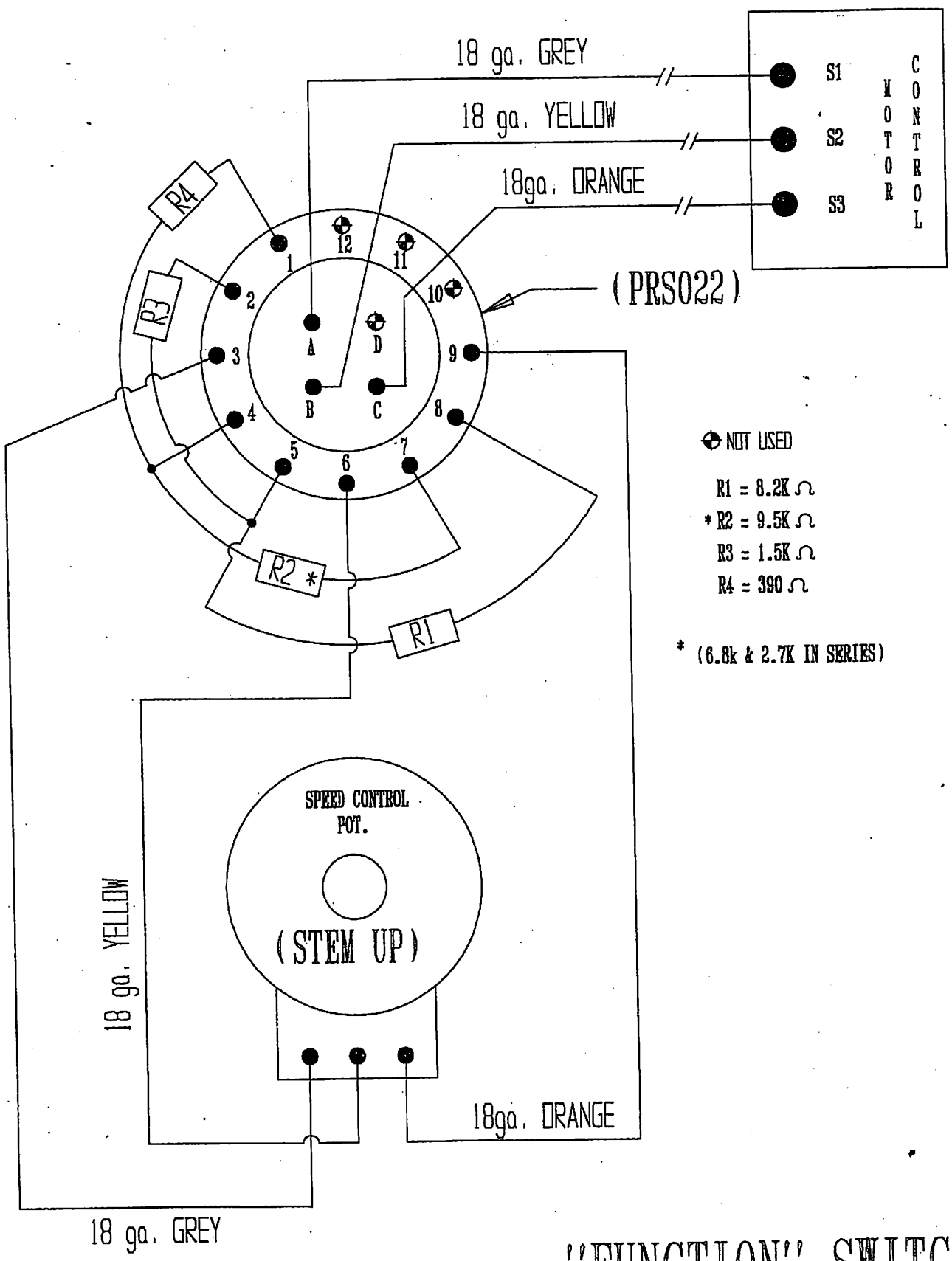


7) ON LEFT SIDE PLACE A 25B32 SPROCKET (PRS258C) RACK 14 WITH ¼-28 X 3/8 SS ONTO DRIVE AND HOT ROLL JOURNALS, <u>TOP HUB OUTWARD, BOTTOM HUB INWARD</u>. ALIGN THESE SPROCKETS WITH <u>SPRING ARM SPROCKET</u> AS GUIDE, TIGHTEN SET SCREWS ONTO KEY (MI187) AS13. CABLE TIE SPRING (PRS223) RACK 10 THROUGH HOLES IN BOTTOM OF HOUSING AND HOOK OTHER END OF SPRING ON OUTER 10-32 X 1 ¼ SHCS ON TENSION ARM.



8) CONNECT "EP30 IDLER" CHAIN 1½" FROM SIDE PANEL AS PICTURED. PLACE CONNECTING LINK ON THE ***<u>INSIDE</u>***, BY SIDE PANEL, SO IT DOES NOT HIT SPRING ARM WHEN TURNING. CHAIN CAN BE REMOVED WITHOUT DISCONNECTING BY LIFTING THE SPRING ARM.

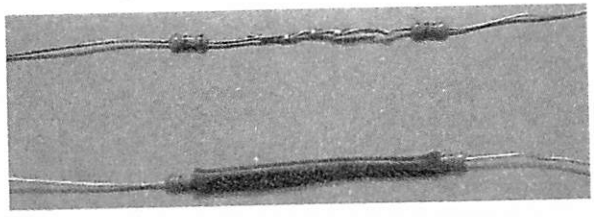




"FUNCTION" SWITCH WIRING DIAGRAM

EHR SIGNMASTER
POTENTIOMETER/FUNCTION SWITCH

1) CUT TWO 10" PIECES EACH OF YELLOW, ORANGE AND GRAY 18 GAUGE WIRE. CRIMP ONE END OF ONE SET WITH A RED FEMALE FASTON (PRT302).



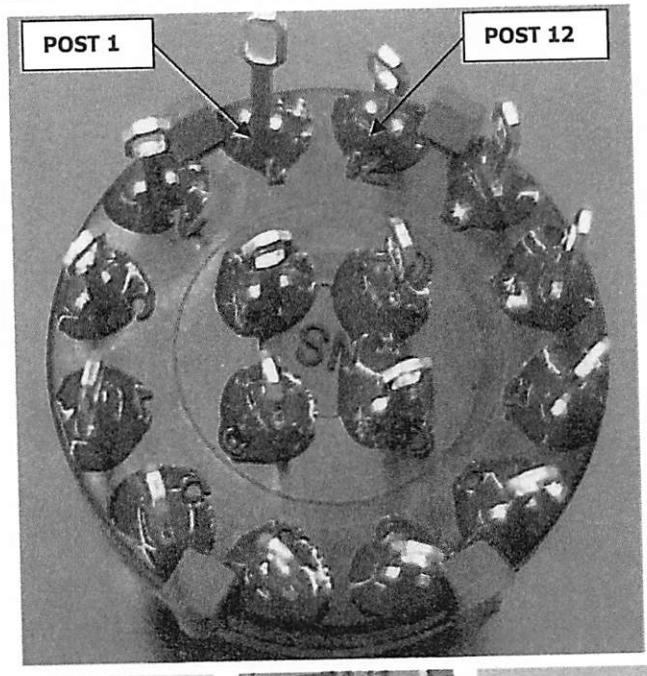
2) PREPARE SEVERAL ¾" PIECES OF BLACK INSULATION TUBING 1/8" (PRI162) AND 3/16" (PRI165) BOTH CAB1.

3) SEPARATE FROM AS08/LDW1 CARBON FILM RESISTORS: BAG R1 = 8.2K OHM (PRR273) BAG R2 = 2.7K OHM (PRR271) AND 6.8K OHM (PRR272). BEND WIRE ON ONE RESISTOR IN THIS BAG TO LATER IDENTIFY IT. BAG R3 = 1.5K OHM (PRR270) BAG R4 = 390 OHM (PRR269).

4) OPEN BAG R2. TWIST 2.7K AND 6.8K RESISTOR WIRES IN LINE (SEE UPPER PHOTO) SECURE END AND APPLY THIN LINE OF SOLDER. COVER SOLDERED WIRES WITH HEAT SHRINK TUBING.

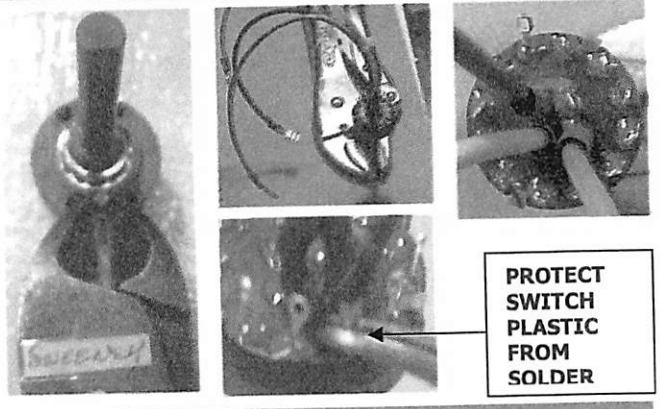
5) SNIP OFF TAB BY STEM ON ROTARY SWITCH (PRS022) AS08. TURN SWITCH SO TERMINAL POSTS ARE FACING YOU.

LOCATE NUMBER 1 TERMINAL POST AND GENTLY BEND IT OUTWARD TO DETERMINE REFERENCE POINT.

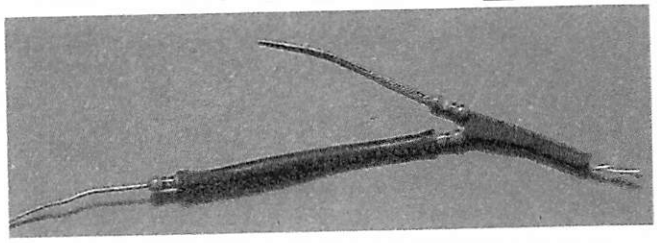


6) SLIDE (PRI162) TUBING OVER EACH TERMINATED WIRE AND CAREFULLY

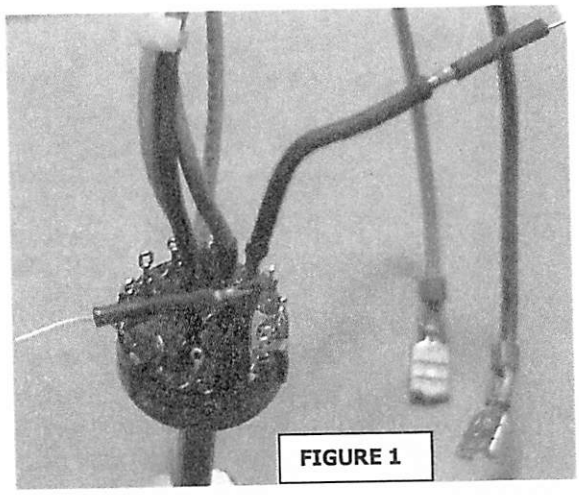
SOLDER IN THE FOLLOWING POSITION: GRAY WIRE TO "A", YELLOW WIRE TO "B" AND ORANGE WIRE TO "C" TERMINIALS. *DO NOT MELT PLASTIC ON SWITCH.* SLIDE TUBING OVER SOLDER AND SHRINK. CABLE TIE THESE WIRES TO KEEP THEM OUT OF THE WAY.



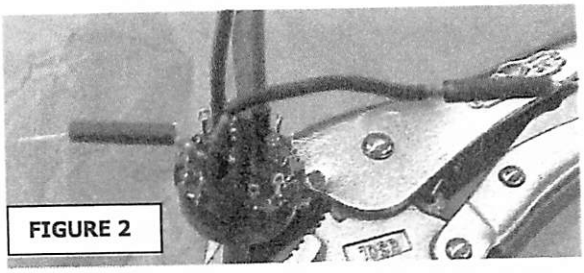
7) TWIST WIRE IN BAG R4 (PRR269) WITH EITHER WIRE END OF SOLDERED RESISTOR. COVER THIS TWISTED WIRE WITH (PRI162) AND SHRINK. SEE PHOTO FOR CONNECTION ALIGNMENT.



8) PLACE HEMOSTAT AT BASE OF TERMINAL POST 4 TO PROTECT PLASTIC AND SOLDER TWISTED WIRES TO IT. SLIDE (PRI165) TUBING OVER RESISTORS, COVER SOLDERED POST AND SHRINK. SLIDE (PRI162) ON BOTH EXPOSED WIRES AND SHRINK. SLIDE (PRI165) OVER THESE COVERED WIRES. SOLDER ENDS TO TERMINAL 7 AND 1, PULL (PRI165) OVER SOLDERED POSTS AND SHRINK. FIG 1&2.

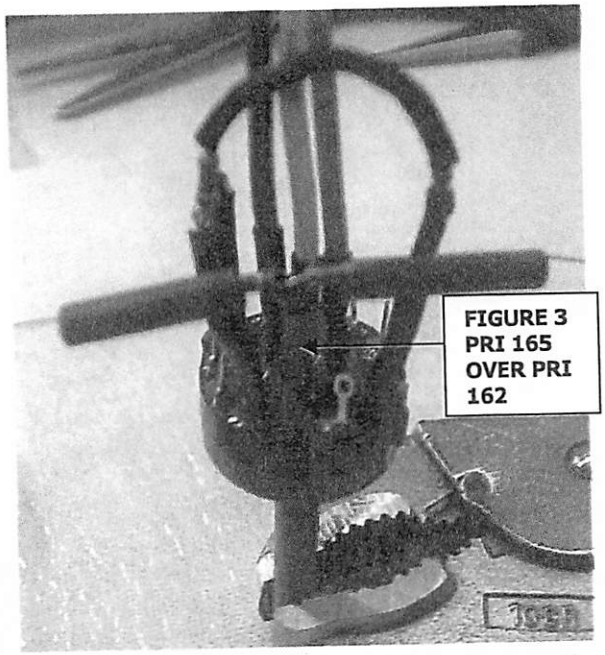

FIGURE 1

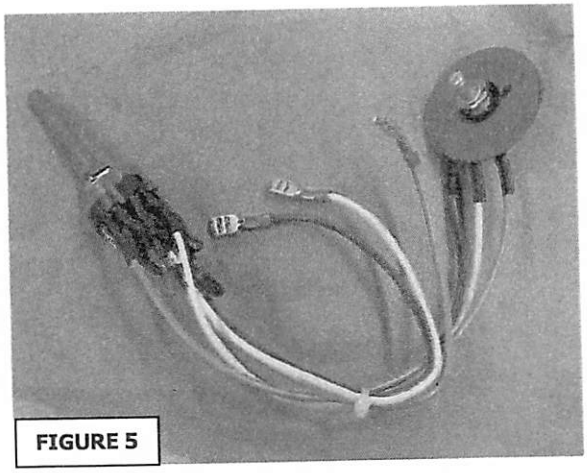
9) TWIST TOGETHER ONE END OF WIRES FROM BAG R1 (PRR273) AND BAG R3 (PRR 270). SLIDE (PRI162) OVER TWISTED WIRES, SHRINK. ADD (PRI165) POSITIONING RESISTER WITH TWO RED INDICATORS (PRR273) FACING POST 8. SOLDER DOUBLED WIRES (FIGURE 3) TO TERMINAL 5, SLIDE SHRINK OVER SOLDER AND HEAT. SHRINK (PRI162) ON EXPOSED WIRE, SLIDE (PRI165) OVER THOSE WIRES. SOLDER RESISTOR WITH TWO RED INDICATORS TO TERMINAL 8, HEAT SHRINK OVER SOLDER. COVER RESISTER (PRS270) AND SOLDER TO TERMINAL 2, HEAT SHRINK OVER SOLDER.

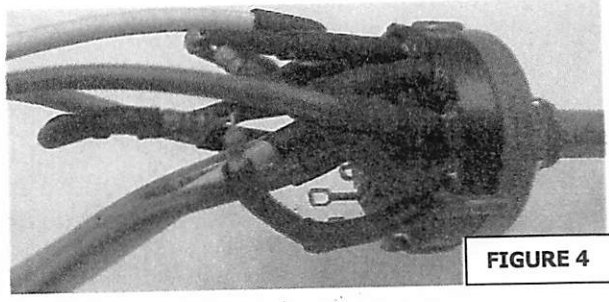

FIGURE 2

10) SOLDER REMAINING SET OF WIRES TO SWITCH AS FOLLOWS: GRAY TO 3, YELLOW TO 6, ORANGE TO 9. SHRINK (PRI162) OVER SOLDERED POSTS. FIG 4.

11) SNIP TAB ON POTENTIOMETER FROM HEAT BOARD (PRM218D). SLIDE HEAT SHRINK OVER OPEN WIRES. WITH STEM FACING AWAY, TERMINALS DOWN SOLDER SWITCH WIRES TO POTENTIOMETER: ORANGE ON LEFT, YELLOW IN MIDDLE AND GRAY TO THE RIGHT. HEAT SHRINK OVER SOLDERED POSTS. FIG 5.


FIGURE 3 PRI 165 OVER PRI 162

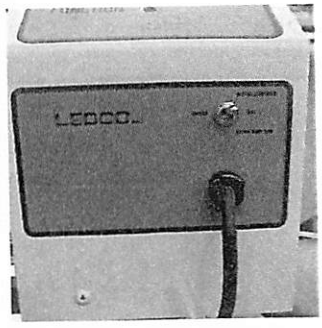

FIGURE 5


FIGURE 4

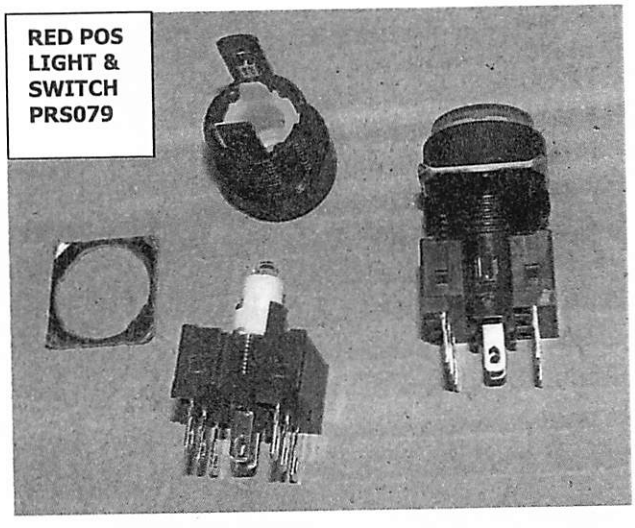
EHR44 HOUSING PREPARATION, BOARDS, INSTALLATION

1) INSERT (3) 4-40 X ¼ FHMS INTO THE COUNTERSUNK HOLES OF THE RIGHT HOUSING TOP 110V (EHR44 094.4RTA) AS06. SECURE (3) WHITE NYLON STANDOFFS (D25 010.4) AS12 TO THE INSIDE THREADS. EHR44 094.4 220V RTA

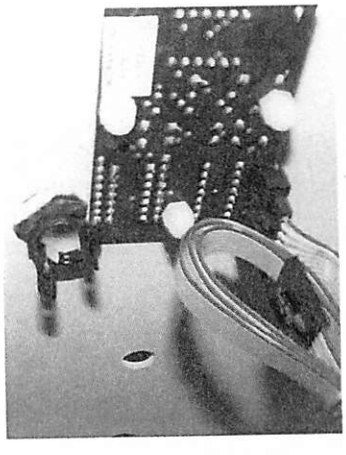


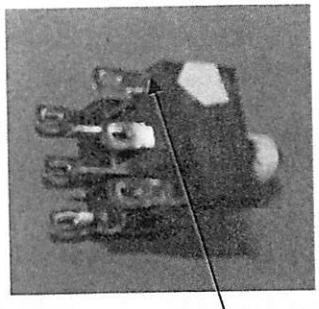


2) CLEAN THE HOUSING AND ROTO BURR HOLES FOR SWITCHES. CAREFULLY ADHERE THE GRAY (LAB 44EHR) RACK 14 FOR 110 VOLT MACHINES, SO ALL HOLES ARE CENTERED AND ACCESSIBLE. BELOW THE CONTROL LABEL, ON LOWER RIGHT SIDE HOUSING, ADHERE THE GRAY FOOT SWITCH DECAL (LAB112) RACK 10 CENTERING HOLES FOR MODE SWITCH AND FOOTSWITCH.



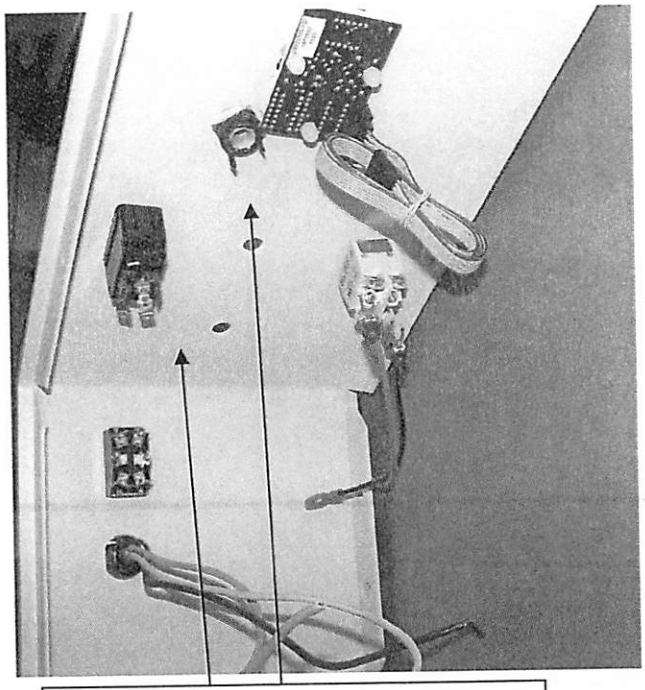
3) *LOOSELY* ATTACH THE SLAVE BOARD AND RIBBON WIRE FROM A HEAT BOARD (PRH130) AS08 TO THE PLASTIC STANDOFFS WITH (3) 4-40 WHITE PLASTIC ACORN NUTS (112LDR00) AS12.





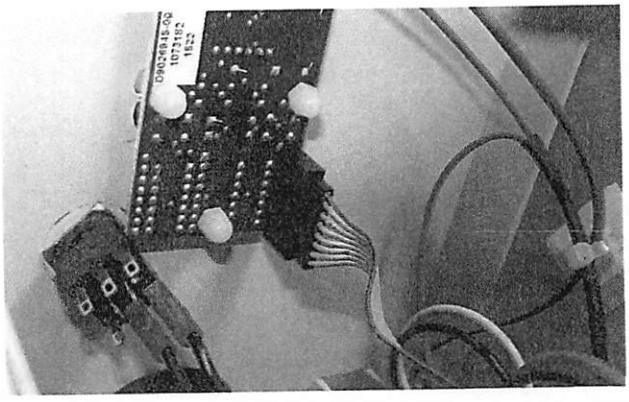
4) ADD THE RED POS. HEAT LIGHT ON/OFF SWITCH (PRS079) RACK 1, WHICH HAS TWO PARTS; THE RED LIGHT SECTION AND THE TERMINAL POST SECTION. ALIGH THE RED SECTION ON THE OUTER HOUSING AND THE TOOTHED METAL

KEEPER ON THE INSIDE. ANGLE THE SWITCH WITH THE WHITE TAB AND CATCH DIAGONALLY TO AND FURTHER AWAY FROM THE SLAVE BOARD CORNER. THE SLAVE BOARD CORNER CAN BE FILED. AS THE RED LIGHT SECTION GOES THROUGH THE HOUSING, SLIDE ON THE METAL CATCH, IT ONLY FITS ONE WAY, AND BEGIN THREADING THE NUT ONTO THE RED SECTION AS IT COMES THROUGH THE HOUSING. THIS IS A VERY TIGHT FIT. USE TOOL TO TIGHTEN. *** ON THE LIGHT AND TERMINAL POST SECTION, IDENTIFY THE 'C' COMMON POST, SO YOU CAN REMEMBER WHICH ONE IT IS WHEN YOU ARE WIRING. THE 'C' COMMON TERMINAL SLIDES ON *OPPOSITE/DOWNWARD* FROM THE WHITE, RED SECTION TAB. *** WIRES FROM THE HARNESS WILL CONNECT TO 'C' COMMON POST AND 'N/O' NORMALLY OPEN POST, WHICH IS NEXT TO THE 'C' POST IN LINE.



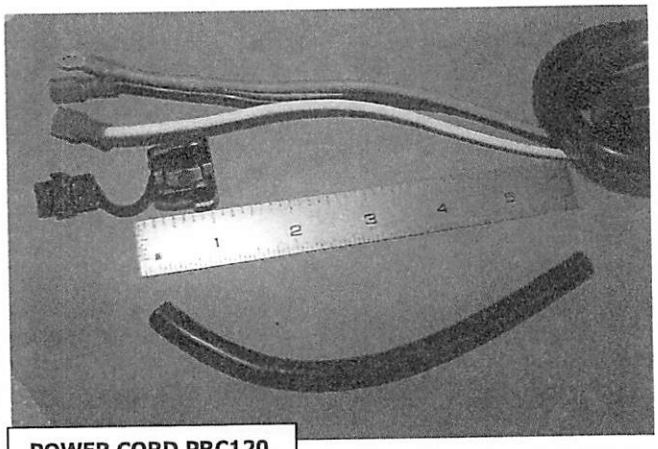
DRIVE SWITCH & RED POS HEAT SWITCH

5) FROM AS07 SNAP ON THE RED BUTTON CAP (PRK185) TO THE LEFT, INNER SLAVE BOARD CONTROL POST AND THE BLUE BUTTON CAP (PRK186) TO THE RIGHT, OUTER SLAVE CONTROL BOARD POST.



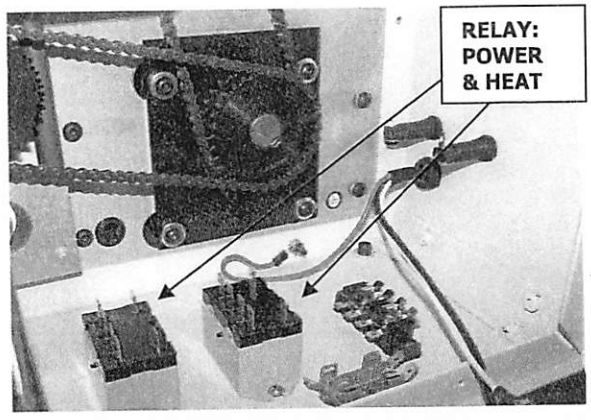
6) STRIP 6" OF BLACK SHEATHING OFF POWER CORD (PRC120) RACK 14. DON"T DAMAGE WIRE COATING. TERMINATE ENDS WITH BLUE RING CONNECTOR (PRT277) ON GROUND WIRE AND BLUE FEMALE (PRT325) ON WHITE AND BLACK WIRES. INSERT THROUGH OUTER REAR HOUSING WITH PLASTIC STRAIN RELIEF (PRB065) AS09 SHOWING ABOUT 1" OF BLACK SHEATHING INSIDE HOUSING.

#8



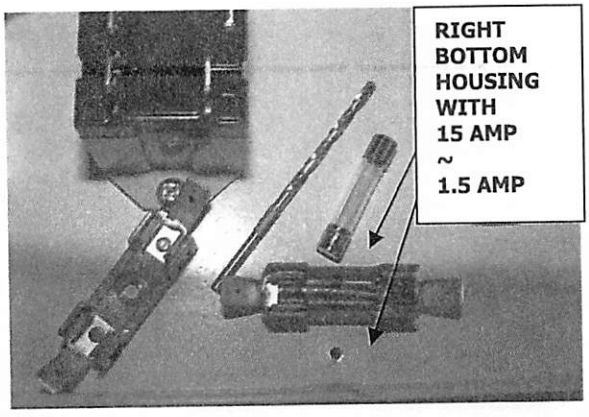
POWER CORD PRC120

7) SECURE (2) RELAYS (PRR150) RACK 12 WITH DOUBLE TERMINAL POSTS FACING RIGHT/REAR TO 110V RIGHT BOTTOM HOUSING (EHR44 094.4RB) AS12. USE (4) 8-32 X ¼ RHMS. FRONT/LEFT RELAY IS POWER, REAR/RIGHT RELAY IS HEAT.



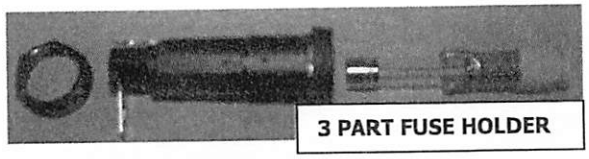
8) ON RIGHT BOTTOM HOUSING BETWEEN REAR RELAY AND TERMINAL BLOCK LOCATION SECURE (2) GRAY FUSE HOLDERS (PRF126) AS09 ALIGNING FUSE HOLDERS WITH OUTER HOUSING LIP. USE 6-32 X ¼ PHMS.

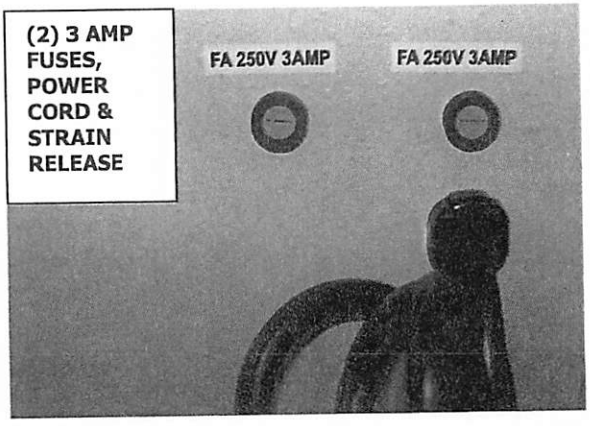
9) ON THE INNER FUSE HOLDER, CLOSEST TO THE RELAY, INSERT A 15 AMP SLO-BLO FUSE (PRF147) AS09. ON THE OUTER HOUSING FUSE HOLDER, INSERT A 1.5 AMP FUSE (PRF128) AS09.



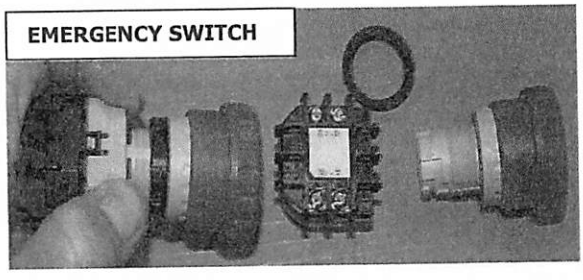
10) ASSEMBLE THE ED TERMINAL BLOCK (PRT301.5) LD01 BY ADDING A JUMPER (PRT309) AS08 TO CONNECT FIRST FOUR POSTS AND MOVING THE EXISTING JUMPER TO CONNECT THE REMAINING FOUR POSTS. ATTACH TERMINAL BLOCK TO HOUSING BOTTOM, RIGHT OF POWER RELAY WITH (2) 8-32 X ¼ RHMS.

11) INSERT (2) THREE PART FUSE HOLDERS (PRF110) LD11 INTO THE REAR TOP HOUSING, WITH TERMINAL POSTS FACING UPWARD. SECURE FUSE HOLDERS WITH NUT ON INNER HOUSING, WRENCH TIGHTENED. PLACE A 3 AMP FUSE (PRF127) AS08 IN BOTH FUSE CARRIERS. SECURE FUSE CARRIERS INTO FUSE HOLDER WITH A SLOTTED SCREWDRIVER, DEPRESSING A CLOCKWISE QUARTER TURN TO THE RIGHT. ADHERE (2) 3 AMP FUSE LABELS (LAB122) AS08 ABOVE FUSE HOLDERS.

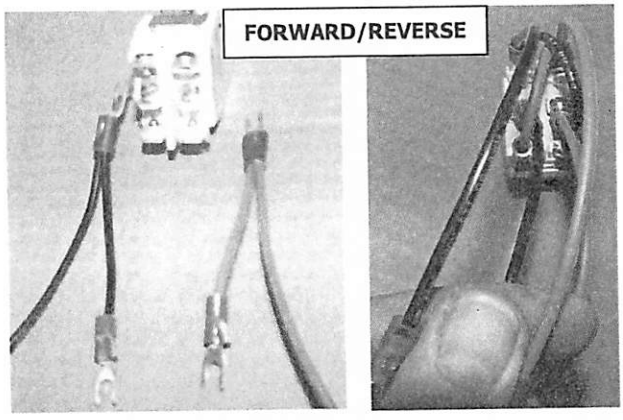




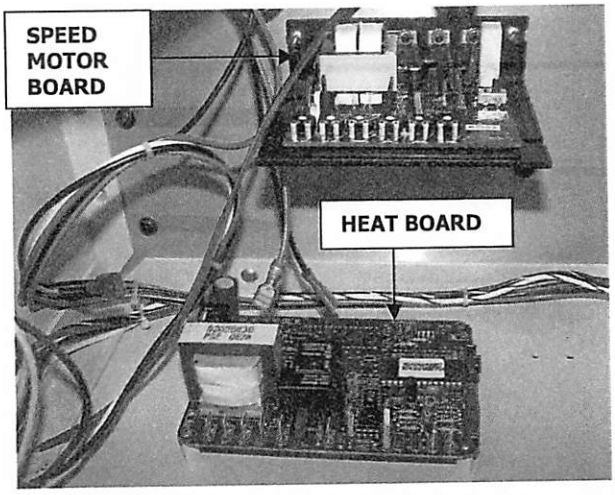
12) INSERT AN EMERGENCY STOP SWITCH (PRS374) AS07 WITH YELLOW E-STOP WASHER (PRS376) AS07 INTO FRONT RIGHT AND LEFT TOP HOUSINGS. SEPARATE RED/YELLOW OUTER BUTTON SECTION BY PULLING AND TWISTING BROWN/YELLOW SECTION. UNTHREAD NUT, INSERT AND RETHREAD NUT. USE CASTLE TOOL TO TIGHTEN NUT.



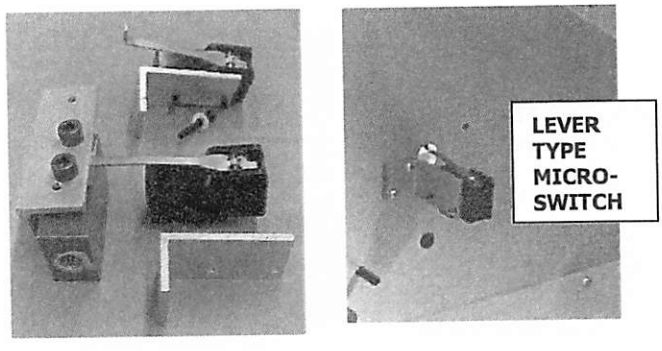
13) USE WIRING HARNESS (PRW356A) RACK 14. ASSEMBLE FORWARD/REVERSE SWITCH (PRS270) RACK 21 BY HOLDING THE TERMINALS FACING YOU AND THE *KEYWAY DOWNWARD*. CONNECT THE HARNESS MOTOR WIRE FORKS *FIRST*; RED TO RIGHT MIDDLE POST AND BLACK TO LEFT MIDDLE POST. FROM 'EHR44 BAG WIRE' CONNECT DOUBLED BLACK WIRE TO UPPER LEFT, JUMPER LOWER RIGHT AND DOUBLED RED WIRE TO UPPER RIGHT, JUMPER LOWER LEFT.
TOP RIGHT . . . . . .2 ½ & 6" RED
BOTTOM RIGHT . . . . . 2 ½ BLACK
BOTTOM LEFT . . . . . .2 ½ RED
TOP LEFT . . . . . .2 ½ & 6" BLACK



14) ATTACH MM23002D MOTOR CONTROL (PRM218D) RACK 10 AFTER YOU HAVE ADJUSTED SWITCHES: *SW503* TO 90 OUTPUT AND BOTH *SW501* TO 115 FOR A 110 VOLT MACHINE. USE (2) 8-32 X 3/8 THMS WITH #8 STAR WASHERS BETWEEN BOARD AND SIDE PANEL. ATTACH THE RED 6" WIRE FROM THE ASSEMBLED FORWARD/REVERSE SWITCH TO A2 ON MOTOR CONTROL AND THE BLACK 6" WIRE (OUTWARD) TO A1 ON MOTOR CONTROL.

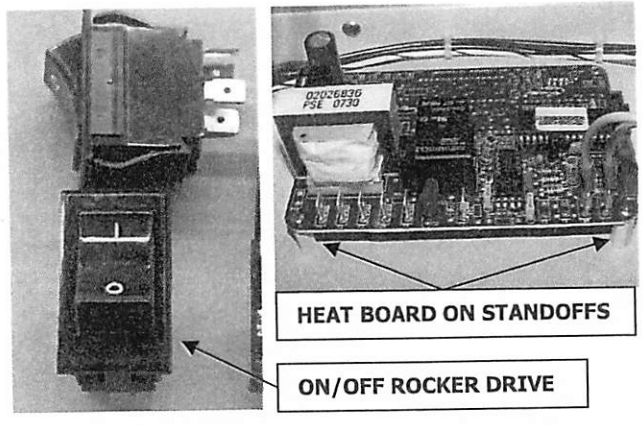


15) FROM RACK 1 ASSEMBLE LEVER TYPE MICROSWITCH (PRS313) BY BENDING LEVER UP WITH TOOL. INSERT (2) 6-32 X 1 SHCS WITH (2) #6 FLAT WASHERS TO ATTACH LEVER TYPE MICROSWITCH TO MOUNTING BRACKET (LC38 170.4). INSERT LEVER THROUGH LEFT SIDE PANEL, POINTING UPWARD. BRACKET ATTACHES TO OUTER SIDE PANEL WITH (2) 6-32 X ¼ PH.

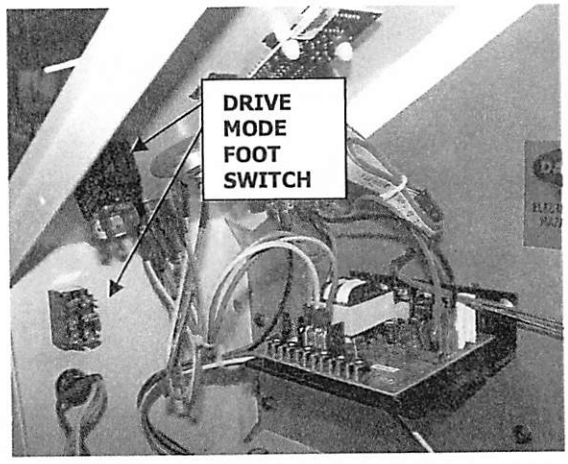


16) FROM UNDER RIGHT HOUSING FLOOR INSERT (4) 4-40 X 3/8 PH AND THREAD ON (4) STANDOFFS (LC25 010.4) LD11. USE (4) MORE 4-40 X 3/8 PH TO ATTACH HEAT BOARD THAT WAS WITH SLAVE BOARD, TERMINAL POSTS OUTWARD.

17) INSERT THE DARK ON/OFF, I/O ROCKER DRIVE SWITCH (PRS290) AS07 INTO THE OPENING ABOVE THE "DRIVE" INDICATION ON THE GRAY RIGHT HOUSING EHR CONTROL LABEL. BEFORE

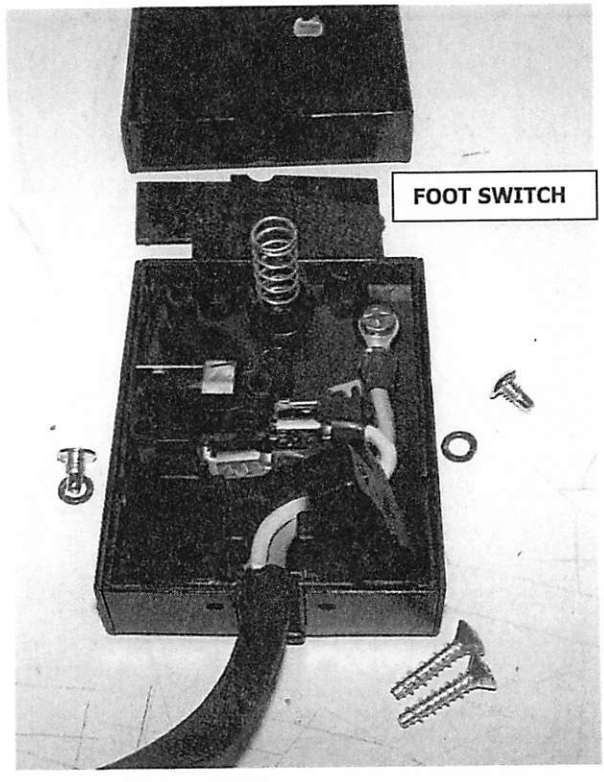


INSERTING, ORIENT THE DRIVE SWITCH SO THAT WHEN SWITCH IS INSERTED INTO HOUSING THE "O" INDICATION FOR "OFF" IS DOWNWARD AND THE TERMINAL POSTS WILL ALSO BE DOWNWARD.

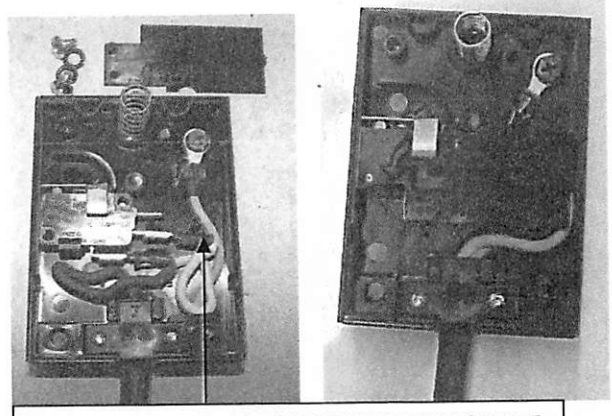


18) INSERT THE MODE SWITCH (PRS048) RACK 10 FOR FOOT DRIVE WITH KEYWAY DOWNWARD. THREAD ON THE WASHER AND LOOSELY SECURE WITH THE HEX NUT ON OUTER HOUSING. DON'T TIGHTEN YET AS IT IS EASIER TO ADD WIRES WHEN SWITCH CAN ROTATE. WIRE WITH KEYWAY DOWNWARD.

19) INSERT WIRING HARNESS (PRW356A) RACK 14 FROM THE RIGHT SIDE PANEL THROUGH SNAP BUSHING. SLIDE THE GREEN, RED AND BLACK TERMINATED WIRES INTO THE RACEWAY FOR THE MOTOR CONNECTION. THIS HARNESS IS ALSO USED FOR THE EP60. THEREFORE, FOLD THE EXTRA LEFT SIDE WIRE IN THE LEFT HOUSING.

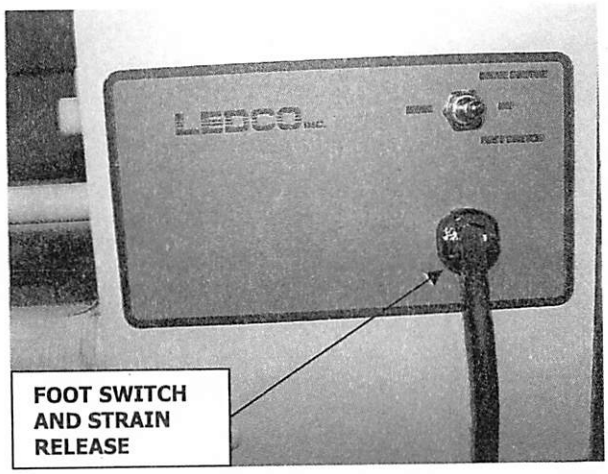


20) TO ASSEMBLE TREADLINE FOOTSWITCH (PRS280) RACK 8 TAKE 12 FEET OF 16/3 BLACK CORD (PRC115) AS15 AND STRIP 3 INCHES OF SHEATHING OFF ONE END, TRIM AND DISCARD INSULATION. TERMINATE GREEN GROUND WIRE WITH BLUE RING (PRT277) AND BLACK AND WHITE WIRES WITH BLUE FEMALE (PRT325). REMOVE (2) SIDE SCREWS AND WASHERS FROM FOOT SWITCH. CATCH AND REMOVE SPRING INSIDE. GREEN INSIDE SCREW SHOULD BE ON UPPER RIGHT. REMOVE "COM" COVER UNDER METAL CLICKER. REMOVE (2) SMS SCREWS ON BOTTOM AND SLIDE OFF COVER. CONNECT WHITE WIRE TO N/O (NORMALLY OPEN) POST, WHICH IS THE CENTER ONE. REMOVE GROUND SCREW AND ATTACH GREEN WIRE USING STAR WASHER PROVIDED. ATTACH BLACK WIRE TO SILVER "COM" POST. SNAP "COM" COVER BACK ON. COVER WIRES WITH CAP AND LOCK. REPLACE THE SPRING AND SCREWS.



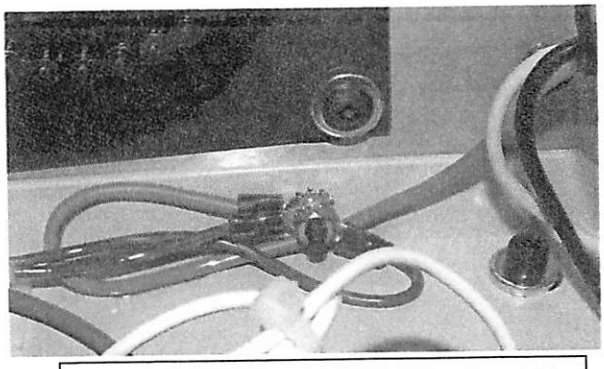
21) ON THE OTHER END OF THE CORD CAREFULLY STRIP 9 INCHES OF

SHEATHING OFF WIRES. INSERT WIRES INTO FRONT OF RIGHT HOUSING, USING STRAIN RELEASE BUSHING (PRB065) AS09. CLEAR CAP GREEN FOOT SWITCH WIRE WITH OPEN HARNESS GREEN GROUND WIRE. TERMINATE WHITE FOOT SWITCH WIRE WITH A #8 BLUE RING. THREAD THE WHITE HARNESS RING WIRE ALONG WITH THE WHITE FOOT SWITCH WIRE INTO THE BOTTOM OUTER MODE SWITCH POST. TERMINATE THE BLACK FOOT SWITCH WIRE WITH A #8 RING AND THREAD INTO TOP OUTER MODE SWITCH POST.

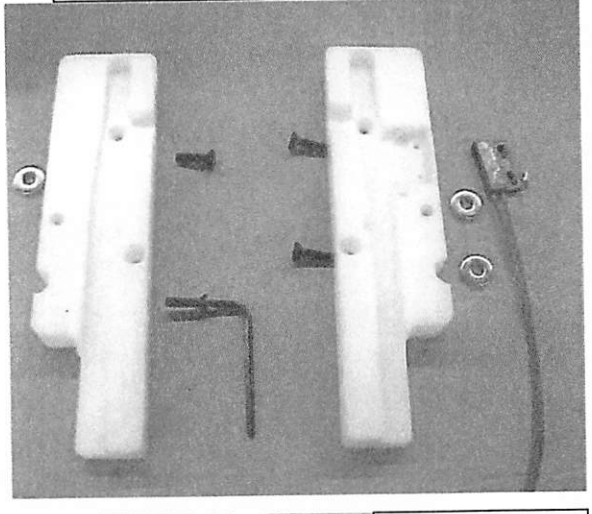


FOOT SWITCH AND STRAIN RELEASE

22) SECURE THE GREEN POWER CORD GROUND WIRE TO THE HOUSING SCREW, WITH A #8 STAR WASHER BY THE HOUSING, THE GROUND WIRE RING CONNECTOR AND SECURE WITH A #8 KEPS HEX NUT. PLACE ANOTHER #8 STAR WASHER ON THE SCREW THREADS.

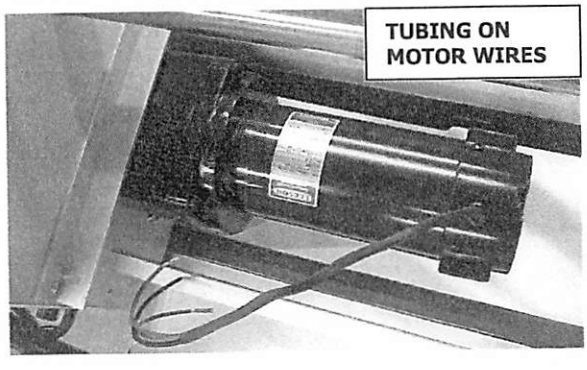

THREE GROUND WIRES TO GROUND SCREW

23) ATTACH PROXIMITY SWITCH MAGNET (PRS351) RACK 1 TO THE RIGHT FEEDTABLE BRACKET (D60 098.4R) AS09 WITH (2) 4-40 X ¼ PHMS. THE RED MAGNET WIRES GO THROUGH CLOSEST HOLE IN BRACKET. PLACE ABOUT 4" OF BLACK INSULATION TUBING ON THE RED WIRES AND HEAT SHRINK TUBING. SECURE FEEDTABLE BRACKET TO INSIDE OF RIGHT SIDE PANEL. USE (2) ¼ X 5/8 X 1/8 FLAT WASHERS BETWEEN SCREW THREADS AND SIDE PANEL ON (2) 10-32 X ¾ FHSH, WIRES THROUGH SIDE PANEL. ATTACH LEFT FEEDTABLE BRACKET (D60 098.4L) AS09 TO LEFT SIDE PANEL WITH SAME HARDWARE.



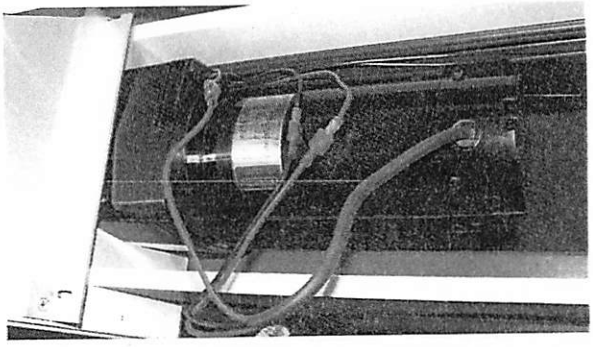
24) CRIMP A FEMALE (PRT331) ONTO ONE OF THE RED MAGNET WIRES. LEAVE THE REMAINING RED WIRE OPEN, WHICH WILL CONTINUE TO EMERGENCY SWITCH ACTUATOR.

25) PLACE ABOUT 5" OF 3/8 INSULATION TUBING (PRI164) CAB1 ON THE MOTOR WIRES. HEAT SHRINK TUBING.

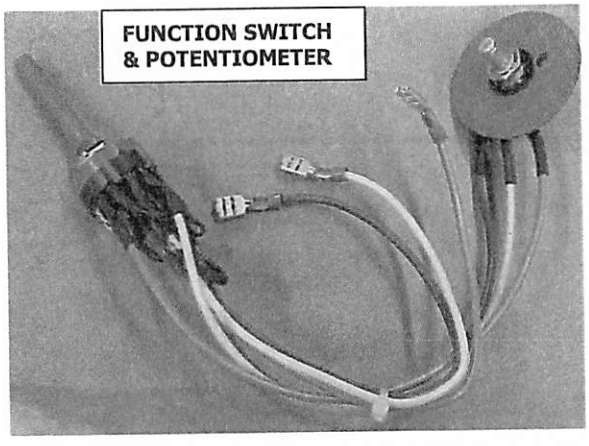

TUBING ON MOTOR WIRES

26) CRIMP (3) FULLY INSULATED MALE CONNECTORS (PRT330) ONTO THE GREEN, RED AND BLACK MOTOR WIRES.

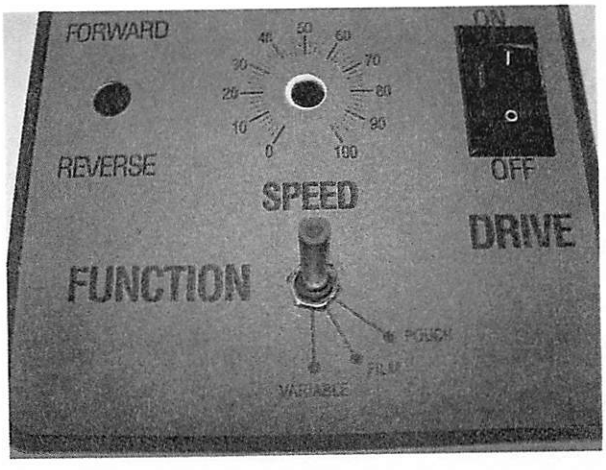
CONNECT THESE WIRES WITH THE MATCHING HARNESS WIRES IN THE RACEWAY. SECURE ALL WIRES IN THE RACEWAY AND SNAP RACEWAY CLOSED. THE RED AND BLACK MOTOR WIRES CONTINUE TO THE FORWARD/RREVERSE SWITCH.



27) ADD ¾" OF 3/16 INSULATION TUBING (PRI165) OVER OPEN ENDED ORANGE, YELLOW AND GRAY WIRES ON THE EHR44 SWITCH ASSEMBLY (EHR44 300.5) AS07. SOLDER THE (3) OPEN ENDED WIRES WITH POTENTIOMETER. COVER POSTS WITH INSULATION TUBING AND HEAT SHRINK.



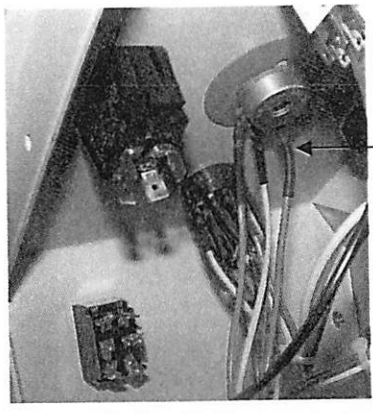
28) REMOVE THE HEX NUT ON THE FUNCTION SWITCH WHILE HOLDING THE TOOTHED WASHER IN PLACE. SECURE THE FUNCTION SWITCH TO THE HOUSING BY TUNING THE STEM FULL CLOCKWISE AND INSERTING THE STEM THROUGH THE HOUSING, WITH THE FLAT SIDE FACING UPWARD OVER THE VARIABLE POSITION. ***BE CAREFUL SILVER NOTCH KEEPER DOES NOT FALL OUT***. RETHREAD THE HEX NUT AND TIGHTEN, KEEPING FLAT SIDE UP STEM UPWARD.



29) CUT OFF THE FUNCTION SWITCH STEM LEAVING ABOUT ½" AND SECURE A KNOB (PRM221A) AS07 ONTO THE REMAINING FUNCTION SWITCH STEM.

30) PLACE THE PAPER WASHER ON THE POTENTIOMETER STEM AND INSERT THE POTENTIOMETER INTO THE HOUSING, AFTER BREAKING OFF THE TAB. ORIENT THE SWITCH WITH THE WIRES DOWNWARD. ON OUTER HOUSING SECURE THE STEM WITH THE TOOTHED WASHER AND HEX NUT.

31) PLACE ANOTHER KNOB (PRM221A) AS07 ONTO THE POTENTIOMETER STEM AND SECURE. TERMINATE THE GRAY WIRE ON THE MOTOR BOARD S1, THE YELLOW WIRE ON S2 AND THE ORANGE WIRE ON S3 OF THE MOTOR BOARD.



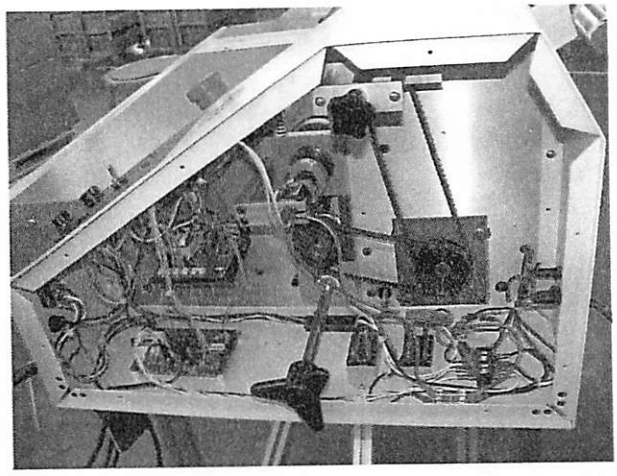
POTENTIOMETER WITH WIRES DOWNWARD, FIBER WASHER ON INSIDE, TOOTHED WASHER AND HEX NUT ON OUTSIDE

32) FROM THE WIRING HARNESS 'EHR BAG WIRE' CONNECT THE (2) YELLOW 18 GAUGE WIRES BETWEEN THE SENSOR SECTION OF THE SLIP RING AND THE HEAT BOARD T10 AND T11. CONNECT (1) RED 14 GAUGE WIRE WITH A FLAG CONNECTOR BETWEEN THE SLIP RING TERMINALS AND THE HEAT RELAY #6. CONNECT THE OTHER RED 14 GAUGE WIRE WITH FLAG CONNECTOR BETWEEN THE SLIP RING AND REAR 15 AMP FUSE.

33) CENTER AND ADHERE A DOMED LEDCO LABEL (LAB05A) AS09 TO THE LEFT HOUSING TOP (EHR44 094.4LTA) AS09, BETWEEN E-STOP AND FRONT BEND.

34) SECURE THE HOUSINGS TO THE SIDE PANELS WITH 8-32 X ¼ THMS. USE THE GROUND SCREW ON THE RIGHT HOUSING BOTTOM, ALONG WITH THMS.

35) SECURE TOP HOUSINGS TO BOTTOM HOUSINGS WITH (2) CORNER BRACKETS (D105 098.4) RACK 1 USING 8-32 X 3/8 FHMS AND #8 KEPS HEX NUTS ON INNER HOUSING.



RIGHT SIDE HOUSING



LEFT HOUSING



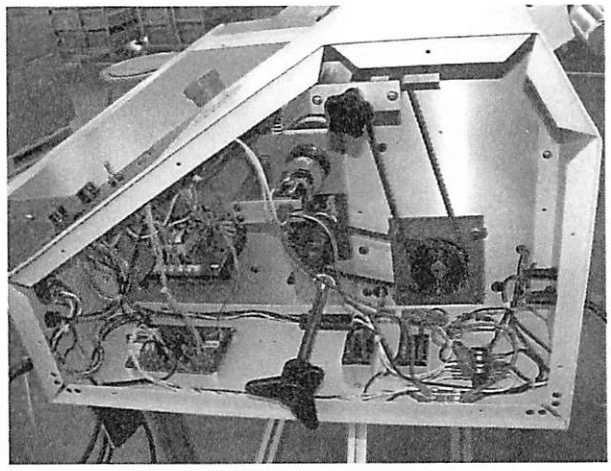
RIGHT HOUSING

32) FROM THE WIRING HARNESS 'EHR BAG WIRE' CONNECT THE (2) YELLOW 18 GAUGE WIRES BETWEEN THE SENSOR SECTION OF THE SLIP RING AND THE HEAT BOARD T10 AND T11. CONNECT (1) RED 14 GAUGE WIRE WITH A FLAG CONNECTOR BETWEEN THE SLIP RING TERMINALS AND THE HEAT RELAY #6. CONNECT THE OTHER RED 14 GAUGE WIRE WITH FLAG CONNECTOR BETWEEN THE SLIP RING AND REAR 15 AMP FUSE.

33) CENTER AND ADHERE A DOMED LEDCO LABEL (LAB05A) AS09 TO THE LEFT HOUSING TOP (EHR44 094.4LTA) AS09, BETWEEN E-STOP AND FRONT BEND.

34) SECURE THE HOUSINGS TO THE SIDE PANELS WITH 8-32 X ¼ THMS. USE THE GROUND SCREW ON THE RIGHT HOUSING BOTTOM, ALONG WITH THMS.

35) SECURE TOP HOUSINGS TO BOTTOM HOUSINGS WITH (2) CORNER BRACKETS (D105 098.4) RACK 1 USING 8-32 X 3/8 FHMS AND #8 KEPS HEX NUTS ON INNER HOUSING.



RIGHT SIDE HOUSING



LEFT HOUSING



RIGHT HOUSING

EHR SIGNMASTER 110V WIRING: NEW F/R & HEAT SWITCH (2015)

1) ARRANGE WIRES FROM SEPARATE BAGS IN EHR WIRING HARNESS (PRW356A) RACK 14: THE WHITE, BLACK, AND WHITE/RED WIRE HARNESS BUNDLE RUN BETWEEN OUTER HEAT BOARD AND INWARD BY 15 AMP FUSE. LAY OUT THE JUMPER WIRES EASY ACCESS.

2) CONNECT THE HEAT BOARD HARNESS (2) WHITE WIRES TO THE OUTER TERMINAL BLOCK 180 DEGREE POSTS.

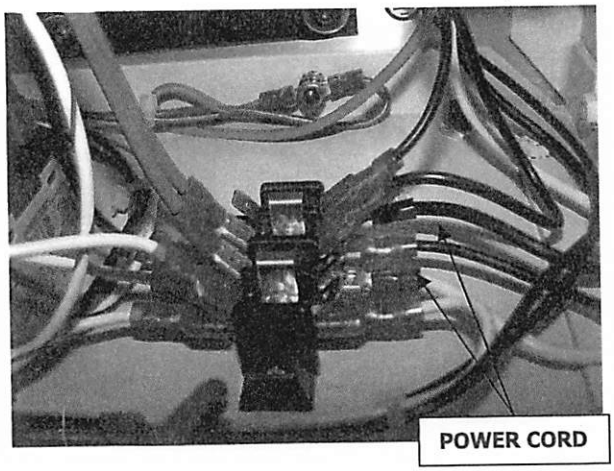
3) ON THE BACK OF RIGHT HOUSING IS THE INNER 3 AMP FUSE. FROM THE JUMPER WIRES CONNECT A 7" BLACK FI FEMALE (PRT341) BETWEEN THE INNER, UPPER 3 AMP TERMINAL POST AND THE INNER REAR 45 DEGREE POST ON THE TERMINAL BLOCK. CONNECT THE LOWER FUSE TERMINAL POST WITH THE 18" BLACK WIRE HAVING A FEMALE (PRT2911) CONNECTOR CONTINUING TO THE POWER RELAY #8. CONNECT THE OUTER 3 AMP FUSE LOWER TERMINAL POST WITH A FEMALE (PRT2911) 6" SHORTER BLACK JUMPER, CONTINUING TO THE BLACK SIDE MIDDLE, REAR 45 DEGREE TERMINAL BLOCK POST. FROM THE HEAT BOARD WIRE HARNESS CONNECT THE UPPER OUTER 3 AMP FUSE WITH THE BLACK HEAT SWITCH WIRE, (PRT341) CONTINUING TO INNER LOWER HEAT SWITCH POST.

4) CONNECT THE GREEN POWER CORD GROUND WIRE TO THE HOUSING USING THE 8-32 X 1 SHCS FROM THE INNER SIDE PANEL. PLACE A #8 STAR WASHER NEXT TO THE HOUSING, THE POWER CORD GROUND WIRE AND TIGHTEN WITH A #8 KEPS HEX NUT.

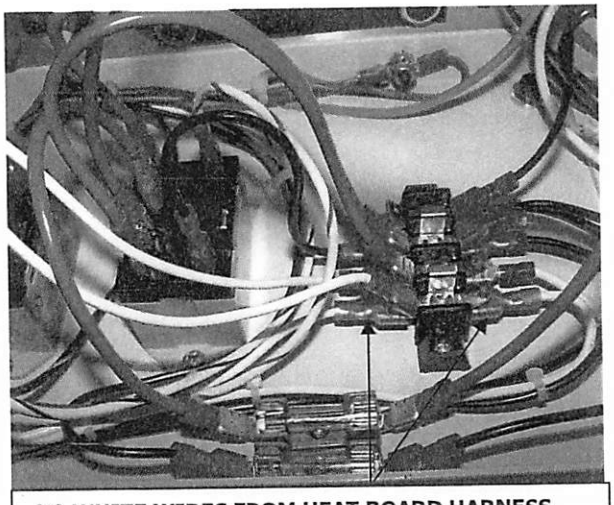
5) THE WHITE POWER CORD WIRE WITH A BLUE FEMALE CONNECTS TO THE REAR OUTER MIDDLE 180 DEGREE TERMINAL BLOCK. THE BLACK POWER CORD WIRE WITH BLUE FEMALE CONNECTS TO THE



LOWER FUSE TERMINALS USE (PRT2911)



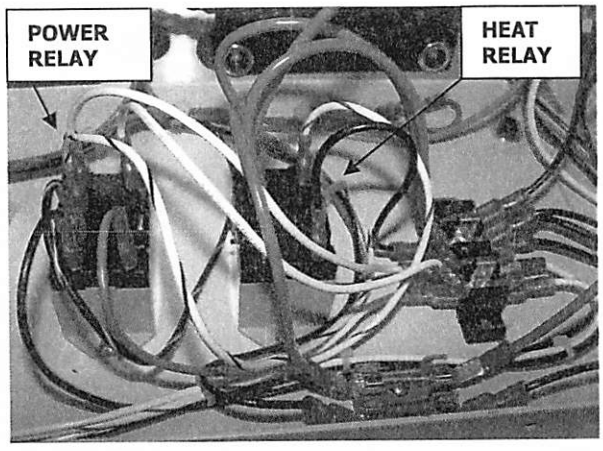
POWER CORD



(2) WHITE WIRES FROM HEAT BOARD HARNESS

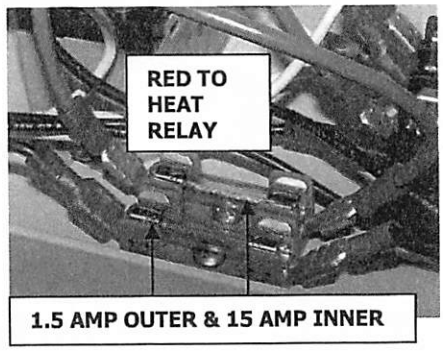
OUTER, REAR 180 DEGREE TERMINAL BLOCK.

6) THE HEAT RELAY IS LOCATED BESIDE THE TERMINAL BLOCK. CONNECT THE 7", 14 GAUGE RED WIRE WITH BLUE FEMALES BETWEEN HEAT RELAY #4 AND 15 AMP SLO BLO FUSE, FRONT POST. HEAT RELAY #8, RED 14 GAUGE 7" CONNECTS THE WHITE SIDE INNER 45 DEGREE POST ON THE TERMINAL BLOCK. THE 5" BLACK WIRE FROM THE JUMPER BAG CONNECTS BETWEEN HEAT RELAY #1 AND THE BLACK SIDE INNER 180 DEGREE POST ON TERMINAL BLOCK. FROM THE HEAT BOARD HARNESS CONNECT THE WHITE/RED TO HEAT RELAY #0. HEAT RELAY #6 CONNECTS WITH FLAG RED FROM SLIP RING. HEAT RELAY #2 CONNECTS RED 14 GAUGE TO BLACK SIDE INNER 45 DEGREE POST.

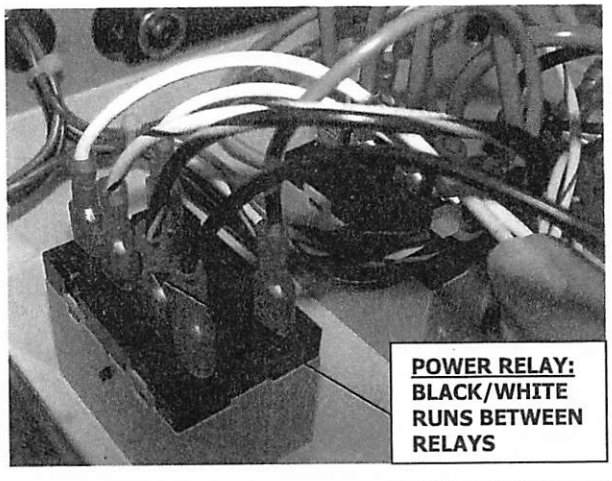


7) THE POWER RELAY IS CLOSER TO THE FRONT OF THE LAMINATOR, BESIDE THE HEAT RELAY. CONNECT WIRES AS FOLLOWS: #8 OUTER, LEFT POST CONNECTS WITH BLACK WIRE TO INNER 3 AMP FUSE. #6 IS THE BLACK/WHITE HARNESS WIRE, #4 IS WHITE/BLACK HARNESS WIRE, #2 IS WHITE JUMPER TO OUTER FRONT 45 TERMINAL BLOCK, #0 IS WHITE JUMPER TO THE 180 POST ON FRONT/MIDDLE TERMINAL BLOCK AND #1 IS GRAY FROM THE HARNESS.



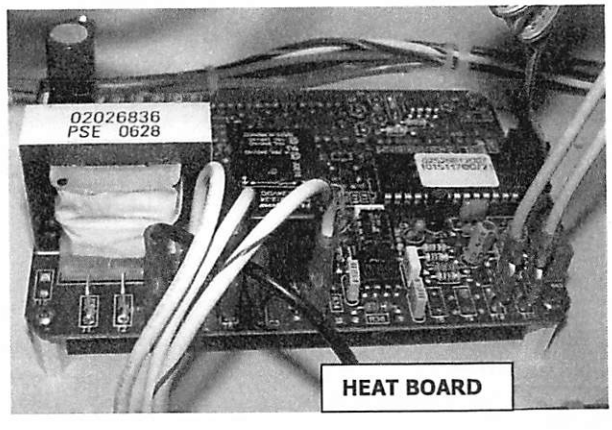


8) THE 1.5 AMP FUSE ON THE OUTER BOTTOM HOUSING CONNECTS THE FRONT POST WITH A BLACK WIRE FROM THE LEFT SIDE HARNESS. CONNECT THE REAR 1.5 FUSE POST WITH A BLACK JUMPER TO REAR 180 DEGREE TERMINAL BLOCK POST.



9) THE INNER 15 AMP SLO BLO FUSE ON THE BOTTOM HOUSING CONNECTS ONE 14 GAUGE RED WIRE FROM SLIP RING TO THE REAR POST, THE FRONT POST CONNETS TO HEAT RELAY #4.

10) FROM SHORTER HEAT BOARD WIRING HARNESS CONNECT: WHITE/RED TO HEAT BOARD T7, CONNECT THE (2) WHITE WIRES TO T6 AND T4, AND BLACK



WIRE TO T3. THIS WIRE CONTINUES TO INNER, MIDDLE HEAT SWITCH POST FOR 110 VOLT MACHINE. CONNECT YELLOW SENSOR WIRES TO T10 AND T11.

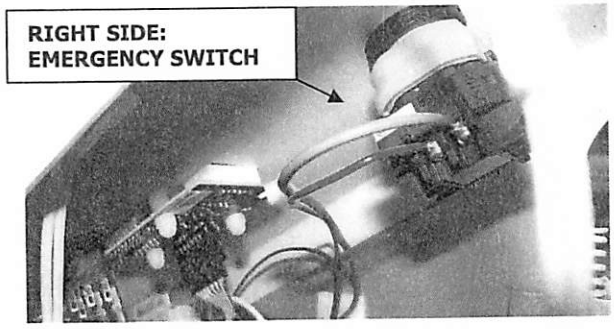
11) CONNECT THE GRAY, OPEN ENDED HARNESS WIRE TO UPPER EMERGENCY STOP SCREW. CONNECT A RED, OPEN ENDED PROXIMITY SWITCH WIRE THE LOWER EMERGENCY STOP SCREW.

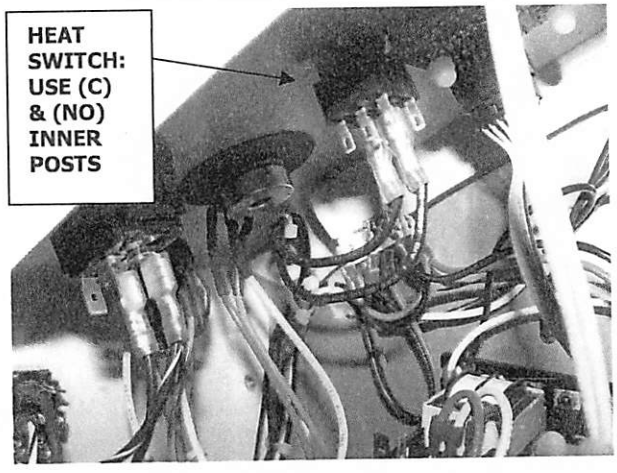
12) PLACE A MATING CONNECTOR ON THE REMAINING RED PROXIMITY MAGNET WIRE AND CONNECT IT TO THE BLACK WIRE IN THE MAIN HARNESS.

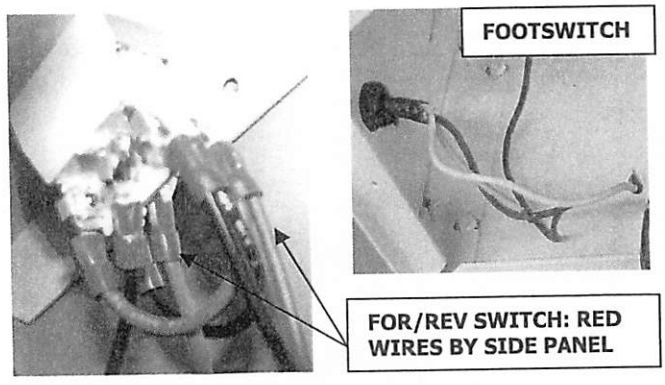
13) CONNECT BOTH BLACK WIRES WITH SMALL FEMALES TO THE HEAT SWITCH 'C' & 'NO' LOWER, INNERMOST POSTS.

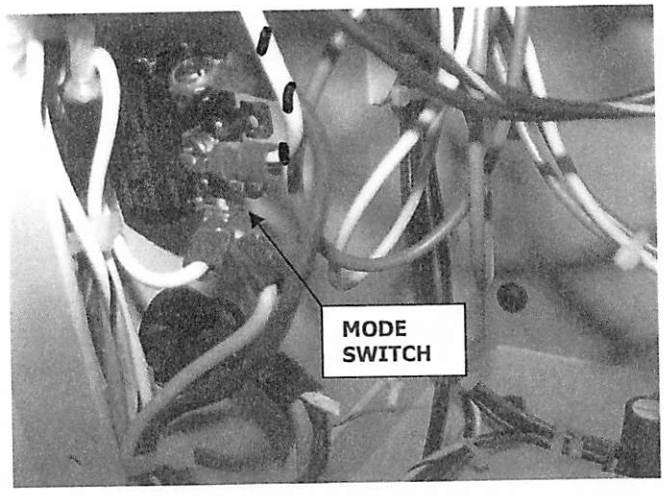
14) WIRE THE *FORWARD/REVERSE SWITCH* AS FOLLOWS, <u>WITH KEYWAY FACING DOWNWARD</u>. FIRST, SECURE RED AND BLACK FORKED HARNESS MOTOR WIRES: RED TO RIGHT MIDDLE INSIDE, BLACK TO LEFT MIDDLE OUTSIDE. CONNECT DOUBLE RED WIRES WITH FORK FASTON TO TOP INNER TERMINAL AND THE RED JUMPER FROM THIS CONNECTION TO LOWER OUTSIDE. CONNECT THE DOUBLE BLACK WIRES WITH FORKS TO UPPER OUTSIDE AND THE BLACK JUMPER TO LOWER INSIDE. THE JUMPERS CROSS EACH OTHER.

15) CONNECT WIRES TO MODE EP30 FOOT SWITCH USING THE BLUE RING CONNECTORS BETWEEN SCREWS AND THREADED POSTS. WIRE FOOTSWITCH BEFORE INSERTING INTO HOUSING. ORIENT WITH <u>KEYWAY FACING DOWNWARD.</u> CONNECT THE BLACK FOOT SWITCH WIRE WITH BLUE RING TO CONNECTOR TO THE TOP OUTER POST. FROM THE MAIN HARNESS CONNECT THE OUTER MIDDLE POST WITH THE WHITE/BLACK STRIPED WIRE CONTINUING TO POWER RELAY. CONNECT THE LOWER OUTER POST WITH THE <u>(2) WIRES,</u> ONE FROM THE WHITE FOOTSWITCH WIRE, WITH A BLUE RING AND ONE FROM THE WHITE MAIN HARNESS WIRE WITH BLUE RING









CONTINUING TO *SPEED BOARD L2*. INSERT MODE SWITCH INTO THE HOUSING. SECURE WITH HEX NUT ON THE OUTER HOUSING. USE WRENCH TO TIGHTEN ON OUTER HOUSING.

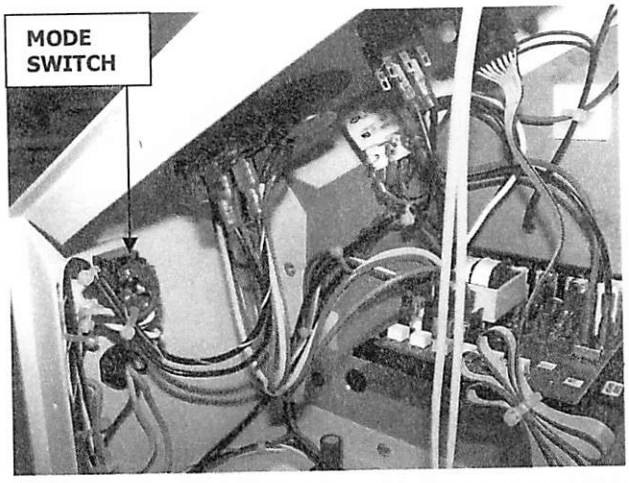
16) MEASURE GREEN GROUND *FOOTSWITCH* WIRE TO COMFORTABLY MEET OPEN ENDED GREEN GROUND WIRE FROM HEAT HARNESS. TWIST THESE GREEN WIRES TOGETHER AND CLEAR CAP THEM WITH A (PRT289).

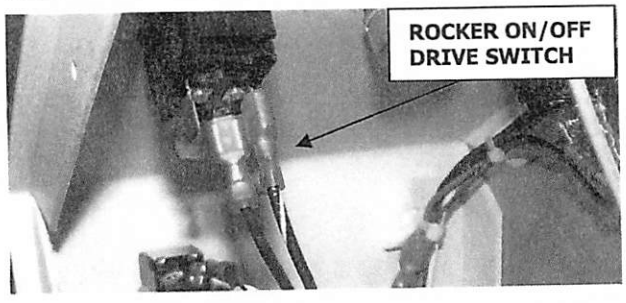
17) WIRE THE *ROCKER ON/OFF SWITCH* LOCATED ABOVE THE MODE SWITCH. BE CERTAIN THAT THE TERMINAL POSTS ARE DOWNWARD AND THE "O" FOR "OFF" IS DOWNWARD. CONNECT THE BLACK/WHITE WIRE FROM THE HEAT HARNESS TO THE <u>INNER TOP TERMINAL POST</u> CONTINUING TO POWER RELAY. CONNECT THE BLACK WIRE FROM MAIN HARNESS TO THE <u>INNER LOWER TERMINAL POST</u> CONTINUING TO SPEED BOARD L1.

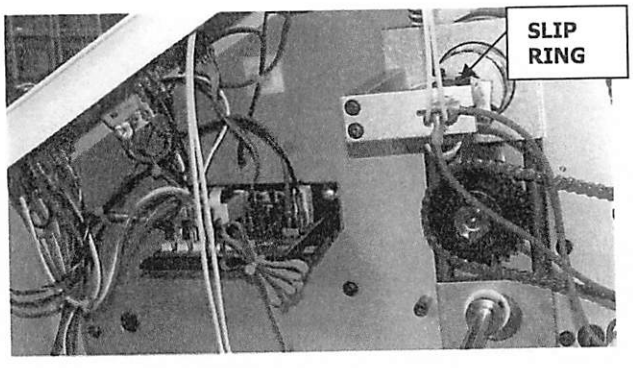
18) USE PRESS CLIPS AND CABLE TIES TO NEATLY SECURE THE WIRES FROM THE FOOT SWITCH, MODE SWITCH, HEAT BOARD AND DRIVE SWITCH SO THEY WILL NOT BECOME PINCHED WHEN THE PANELS ARE ADDED TO THE HOUSINGS.

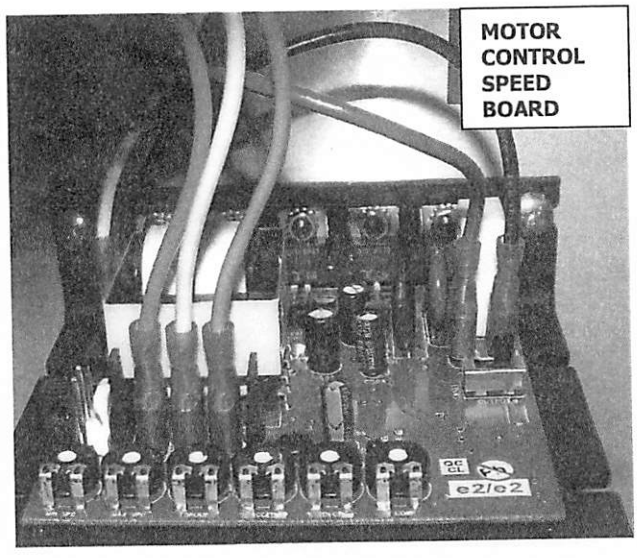
19) PLACE A PRESS CLIP ON THE UPPER HOUSING AND SECURE THE YELLOW SENSOR WIRES, SO THEY RUN DIRECTLY UPWARD FROM THE HEAT BOARD. AN EXTRA CABLE TIE AND HOLD THE YELLOW WIRES TOGETHER HALF WAY BETWEEN HEAT BOARD AND PRESS CLIP.

20) WIRE *MOTOR CONTROL BOARD*. FROM THE *FORWARD/REVERSE* SWITCH CONNECT THE DOUBLE RED WIRE TO BOARD TERMINAL A2. CONNECT THE DOUBLE BLACK WIRE TO A1. PLACE WHITE WIRE FROM HARNESS ON L2 CONTINUING TO DOUBLED *MODE* SWITCH AND THE BLACK WIRE FROM HARNESS ON L1 CONTINUING TO *ON/OFF SWITCH*. CONNECT THE THREE *POTENTIOMETER/FUNCTION SWITCH*







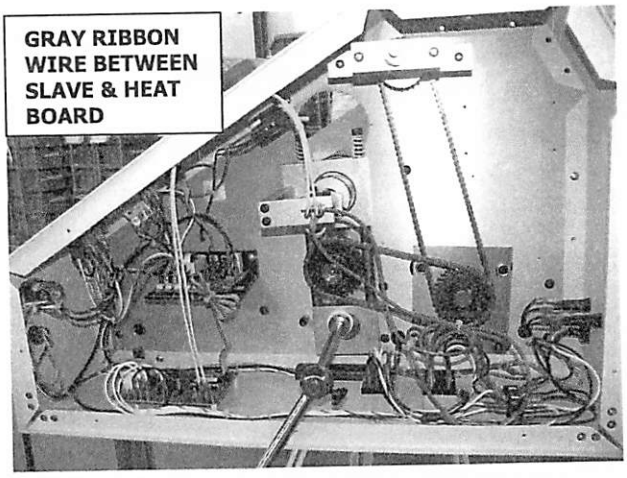


WIRES: ORANGE TO S3, YELLOW TO S2 AND GRAY TO S1. NEATLY TIE THESE WIRES WITH CABLE TIES.

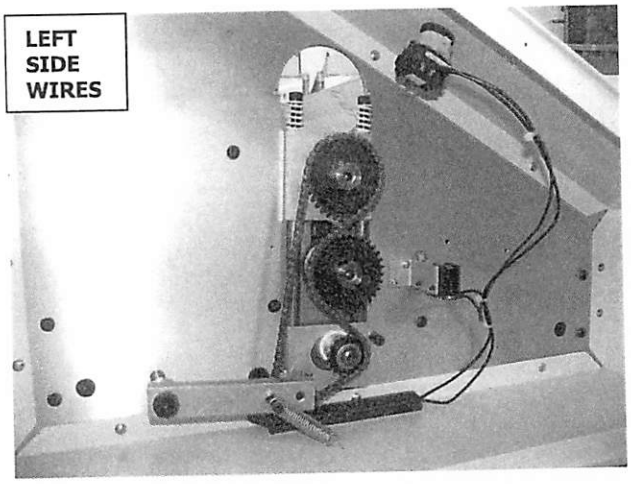
21) SNAP THE GRAY RIBBON WIRE FROM THE SLAVE BOARD INTO THE HEAT BOARD CONNECTION. TIE THE RIBBON WIRE *GENTLY* WITH THE YELLOW SENSOR WIRES GOING TO HEAT BOARD.

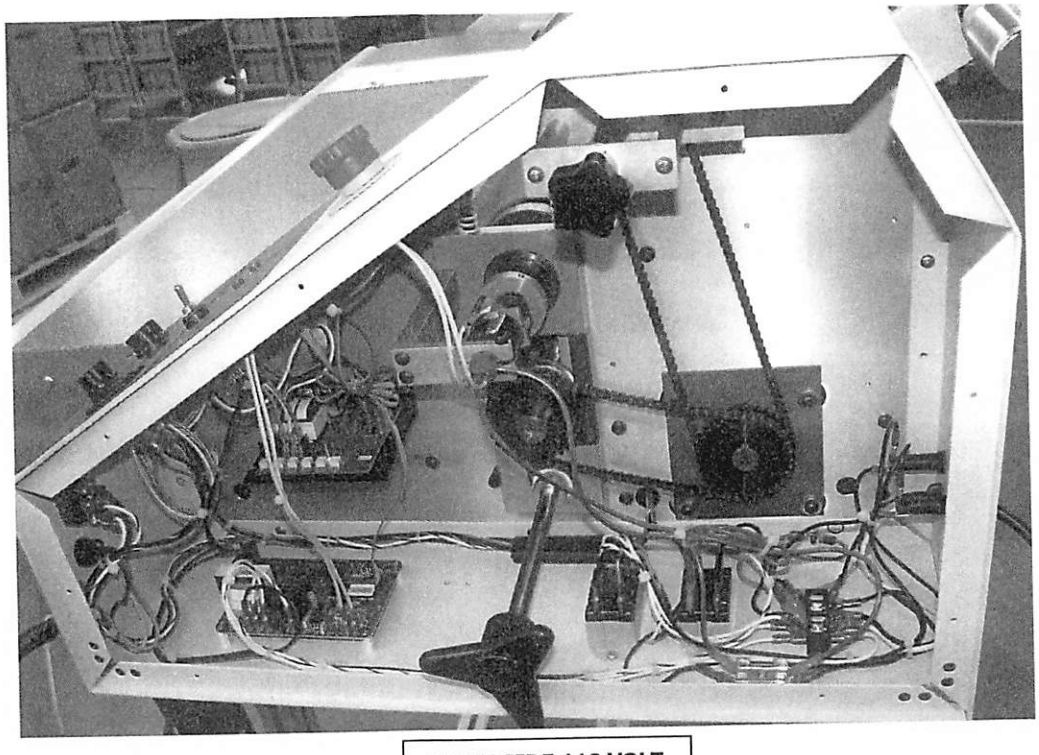
22) WIRE THE <u>LEFT HOUSING</u>. CONNECT HE (2) BLACK WIRES WITH FORKED CONNECTORS FROM MAIN HARNESS TO OUTER AND MIDDLE SCREW ON *MICRO SWITCH*. CONNECT BLACK OPEN ENDED MAIN HARNESS WIRES TO *EMERGENCY SWITCH*. PLACE YELLOW CAP ON EMERGENCY SWITCH LEVER. NEATLY CABLE TIE WIRES.

GRAY RIBBON WIRE BETWEEN SLAVE & HEAT BOARD



LEFT SIDE WIRES

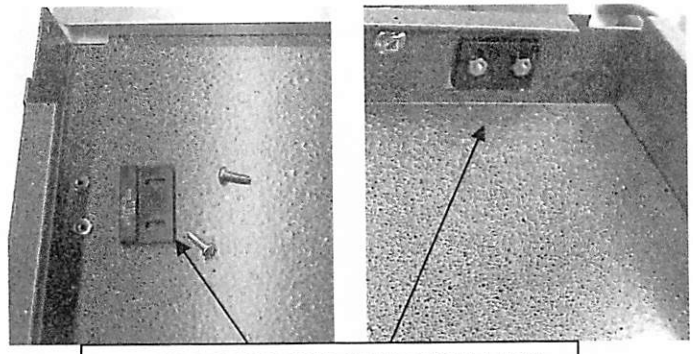




RIGHT SIDE 110 VOLT

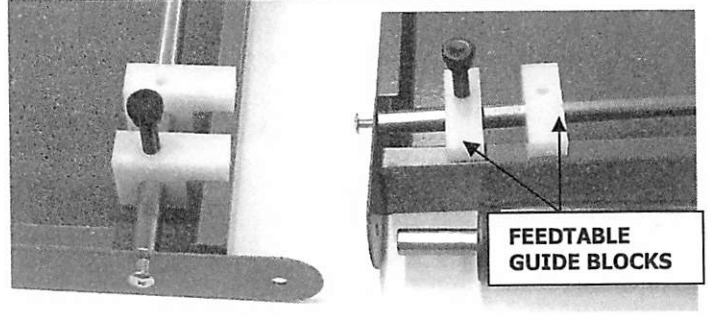
EHR SIGNMASTER
FEEDTABLE ASSEMBLY

1) LAY FEEDTABLE (EHR44 108.4) D-02 UPSIDE DOWN ON WORK BENCH. SECURE PROXIMITY SWITCH MAGNET (PRS352) RACK 1 INTO PROVIDED SLOT WITH (2) 4-40 X 3/8 PH ON OUTSIDE AND (2) 4-40 NUTS ON INSIDE.



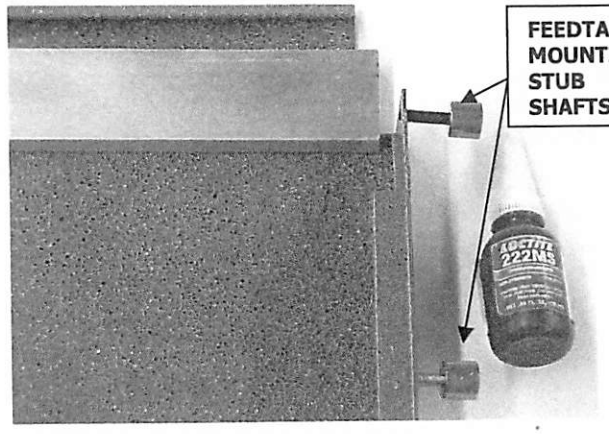
2) SLIDE (2) FEEDTABLE GUIDE BLOCKS (D105 104.4) RACK 1 ONTO A FEEDTABLE IDLER SHAFT (EHR44 109.4) LOFT 2. SECURE SHAFT WITH (2) 10-32 X ½ TH, LOCTITE THREADS. THREAD (1) PLASTIC MOLDED THUMBSCREW (PRK 184) AS09 INTO OUTER GUIDE BLOCK.

3) TAP (2) NYLATRON IDLER BEARINGS (PRB086A) AS13 ONTO ENDS OF FEEDTABLE IDLER TUBE (EHR44 054.4) AS14. RUN SECOND FEEDTABLE IDLER SHAFT THROUGH BEARINGS AND SECURE TO FEEDTABLE ARM IN FRONT OF GUIDE BLOCKS USE 10-32 X ½ TH.



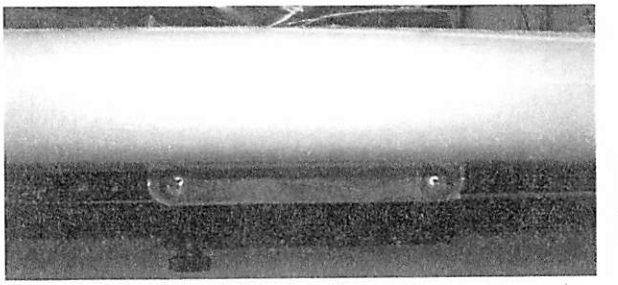
4) THE FEEDTABLE SUPPORT BAR (EHR44 111.4) AS14 IS ANGLED WHEN FIRST ATTACHING TO THE REAR OF THE FEEDTABLE. LOCTITE HALF OF THE THREADS ON (2) 10-32 X ¾ SHSS AND INSERT THAT HALF THROUGH FEEDTABLE AND INTO SUPPORT BAR. FLIP SUPPORT BAR UPRIGHT. LOCTITE REMAINING HALF OF THREADS AND ATTACH (2) FEEDTABLE MOUNTING STUB SHAFTS (D105 101.4) AS13 WITH BEVELED STUB SIDE OUTWARD.

5) ADD <u>ANOTHER PAIR</u> OF FEEDTABLE MOUNTING STUB SHAFTS ON RIGHT AND LEFT OUTSIDE SECURED WITH (2) 10-32 X ½ TH FROM INSIDE, LOCTITE THREADS.



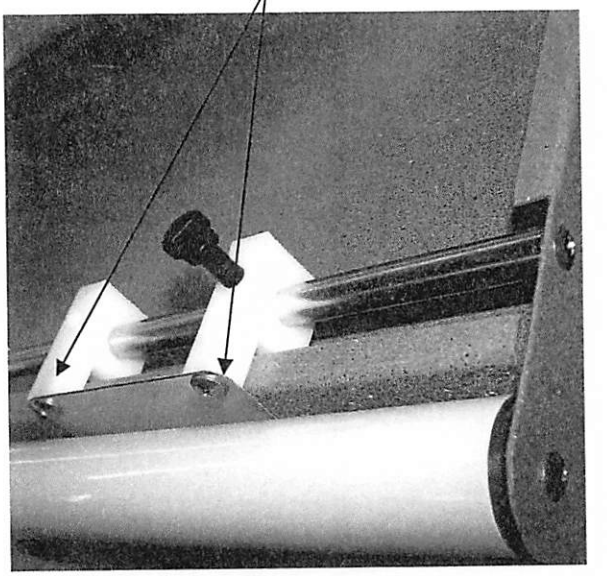
6) PEEL BACK PLASTIC COVERING ON FEEDTABLE GUIDE (LC38 097.4L) AS13

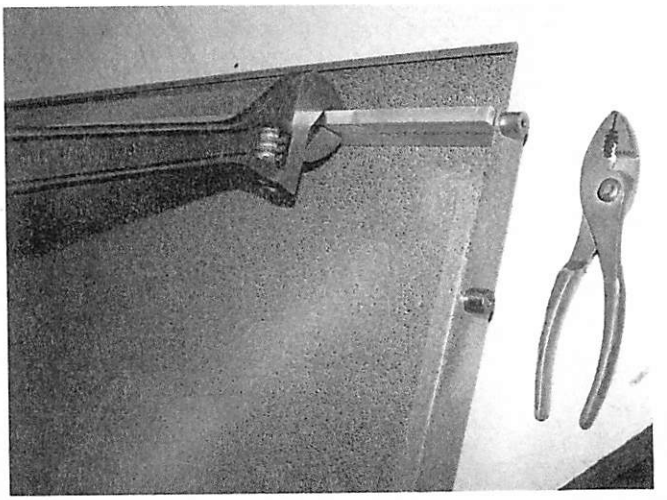
AND ATTACH TO FEEDTABLE GUIDE BLOCKS WITH (2) 10-32 X ½ TH. SECURE ON SHAFT WITH PLASTIC MOLDED THUMBSCREW.



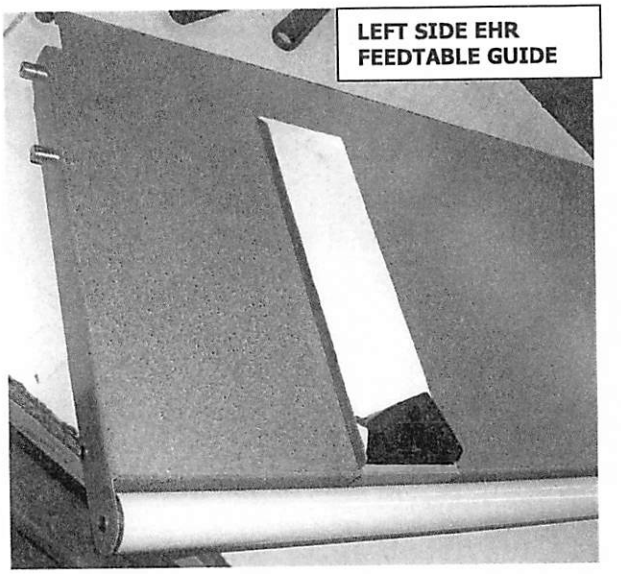
7) SET ASSEMBLY ASIDE OR ALIGN FOUR MOUNTING STUB SHAFTS WITH FEEDTABLE MOUNTING BRACKETS AND SLIDE ONTO MACHINE.

FEEDTABLE GUIDE ATTACHED TO BLOCKS





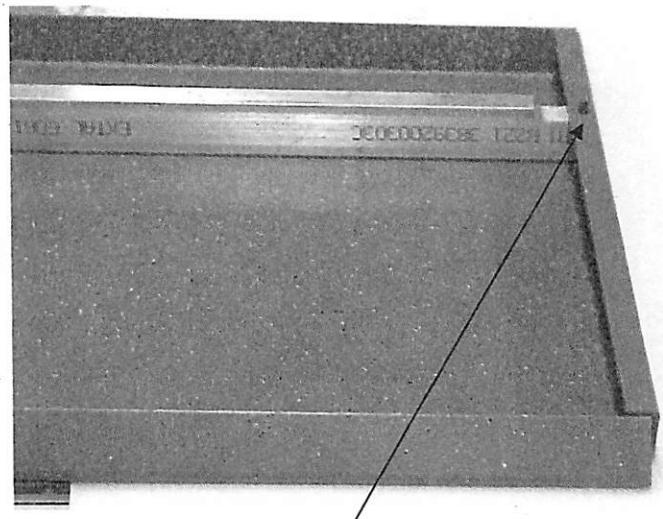
LEFT SIDE EHR FEEDTABLE GUIDE



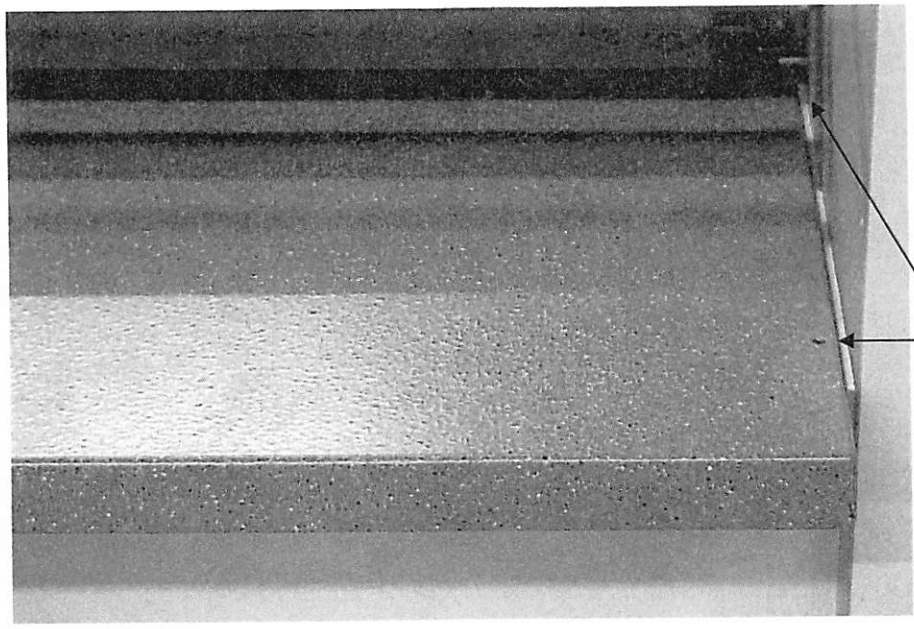
EHR SIGNMASTER
EXIT TABLE

1) THE SIGNMASTER 44" EXIT TABLE (EHR44 096.5) D-02 IS ASSEMBLED IN THE LEDCO SHOP AND REQUIRES NO ADDITIONAL WORK IN THE ASSEMBLY AREA.

2) TO INSTALL THE EXIT TABLE, MOUNT FROM BACK OF MACHINE BY SLIDING ANGLED END IN FIRST. LOCK RIGHT AND LEFT PINS INTO OUTER HOLES ON RIGHT AND LEFT FEEDTABLE BRACKETS.



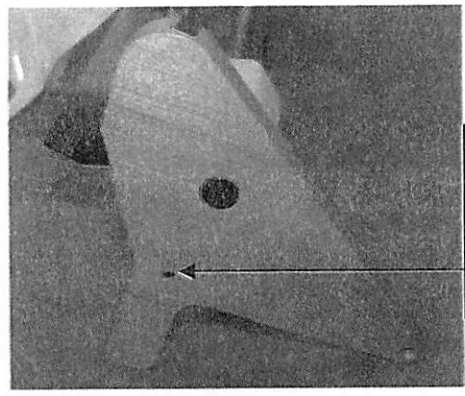
PIN THAT SETS IN OUTER HOLE OF FEED TABLE BRACKET IN REAR OF MACHINE



EXIT TABLE INSTALLED IN ECONOCRAFT SHOWING SIDE PANEL SPRING PIN AND PIN SECURED IN FEEDTABLE BRACKET

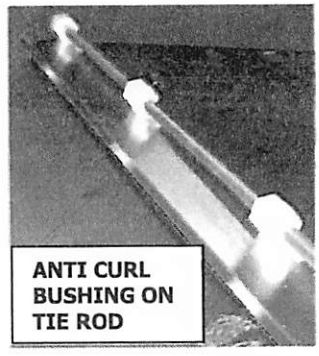
EHR NRTL SIGNMASTER SAFETY SHIELD

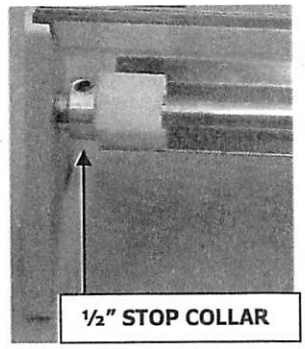
1) ARBOR PRESS 1/8 X ¾ SPRING PIN INTO RIGHT AND LEFT SAFETY SHIELD BRACKET (D105 091.4R & D105 091.4L) AS13 FROM GROOVED SIDE, PIN IS FLUSH ON OUTSIDE OF BOTH BRACKETS.



2) SLIDE (4) ANTI CURL STRIP MOUNTING BUSHINGS (D105 099.4) AS13 ONTO SAFETY SHIELD TIE ROD (EHR44 103.4) LOFT 2. THE #10 TAPPED HOLES FACE THE BACK ON THE OUTER PAIR, AND FACE THE FRONT ON THE INNER PAIR.

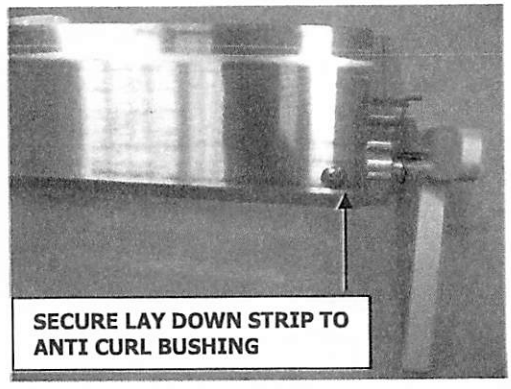
3) SECURE ANTI CURL BUSHINGS TO LAY DOWN STRIP (EHR44 075.4) AS14 WITH 8-32 X ¼ TH. THREAD (2) ¾" SPI KNOBS (PRK177) AS08 INTO MIDDLE PAIR OF ANTI CURL BUSHINGS.



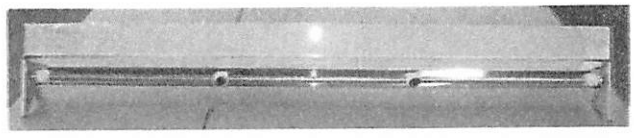


4) ADD ½" SHAFT COLLAR (PRC096) AS07 TO TIE ROD ENDS, LEAVING 3/16 INCH TIE ROD EXTENDING PAST COLLAR.

5) ATTACH RIGHT SAFETY SHIELD BRACKET TO TIE ROD WITH 10-32 X ¾ FHSH, USE LOCTITE. SET POLYCARBONATE SAFETY SHIELD (EHR44 102.4) AS14 INTO RIGHT BRACKET CHANNEL. ALIGN LEFT BRACKET ONTO SAFETY SHIELD. SECURE WITH 10-32 X ¾ FHSH, USE LOCTITE.



6) PEEL BACK FRONT PLASTIC ON SAFETY SHIELD. FROM AS09 ADHERE (2) YELLOW "HOT" LABEL (LAB100) CENTERED ABOVE OUTER ANTI CURL BUSHINGS. ADHERE (2) ARM ENTANGLEMENT LABELS (LAB51) ABOVE SPI KNOBS. ADHERE A YELLOW GENERAL DANGER LABEL (LAB52) BETWEEN ARM ENTANGLEMENT LABELS.





EHR SIGNMASTER
EXTRUDED SUPPLY ROLL

1) PREPARE (6) RUBBER SUPPLY ROLL GRIPPERS (EHR44 003.4D) LOFT 3 FOR (2) 3" SUPPLY ROLL EXTRUSIONS (EHR44 002.4) LOFT 3 BY INSERTING A 6-32 X ½ RH INTO DRILLED ENDS. SET GRIPPERS ASIDE.

2) ALIGN THREADED RECESSES OF (4) SUPPLY ROLL END CAPS (I30 008.4) AS01 WITH THE RECESSED SECTIONS OF THE SUPPLY ROLLS. TAP HEX SECTION OF END CAP INTO SUPPLY ROLL.

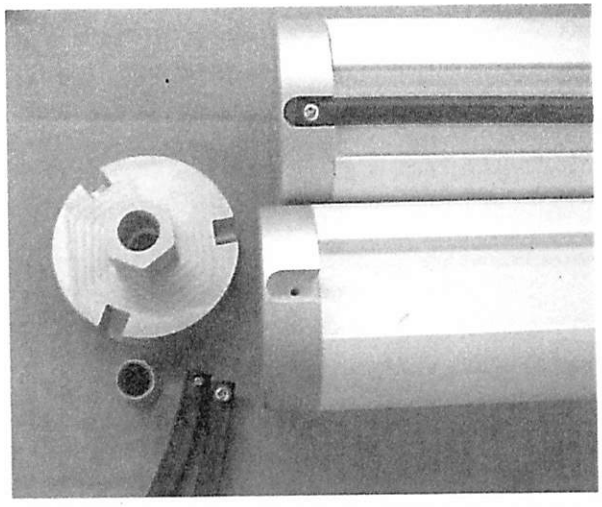
3) SLIDE ADJUSTABLE HEX BUSHING ADAPTOR (D105 022.4) AS01 OVER END OF SUPPLY ROLL SHAFT (EHR44 011.4) AS16 WITH HOLE IN IT. USING STARTER TOOL INSERT 1/8 X ¾ SPRING PIN (.125J0012) INTO HEX GROOVE, REMOVE TOOL AND FINISH TAPPING UNTIL SPRING PIN IS FLUSH WITH HEX BUSHING ADAPTOR.

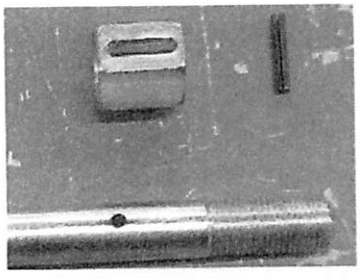
4) THREAD THE RUBBER SUPPLY ROLL GRIPPERS INTO THE SUPPLY ROLL END CAPS, RUNNING RUBBER GRIPPERS ALONG SUPPLY ROLL RECESS.

5) SLIDE SUPPLY ROLL PRESSURE PLATE (LC38 007.4) AS01 ONTO SUPPLY ROLL SHAFT MAKING CERTAIN SPRING PIN ON ADJUSTABLE HEX ADAPTOR IS BETWEEN RECESS ON PRESSURE PLATE.

6) SLIDE LEATHER DISC (H380 004.4) AS01 ONTO SUPPLY ROLL SHAFT NEXT TO PRESSURE PLATE. INSERT THIS ASSEMBLY INTO END CAP CORE ON SUPPLY ROLL.

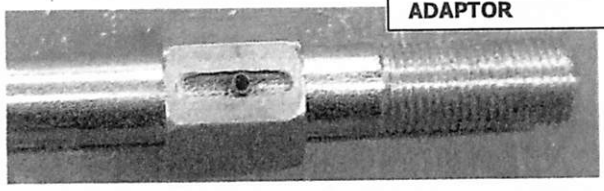
7) ADD ANTI-SEIZE TO END THREADS ON SUPPLY ROLL SHAFT. ADD SUPPLY ROLL TENSION SPRING (PRS222) AS01 AND THREAD KNURLED KNOB (D105 001.4) AS01. IF THREADS ARE OVER PLATED, TRIM WITH DIE/THREAD CHASER.



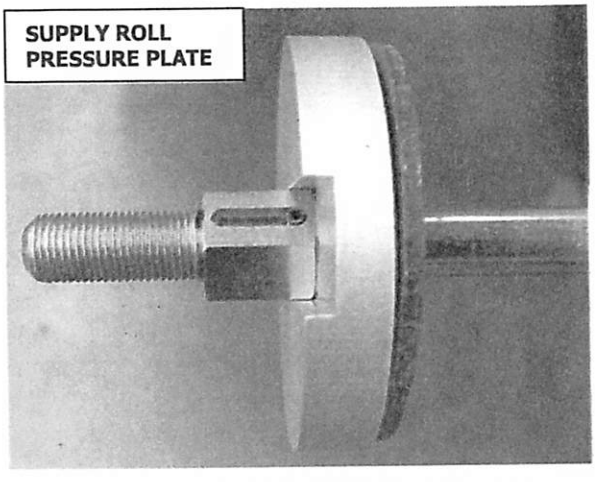


ADJUSTABLE HEX BUSHING, SPRING PIN AND SUPPLY ROLL SHAFT

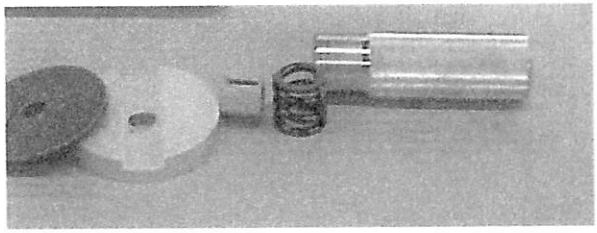
SPRING PIN TAPPED FLUSH INTO HEX BUSHING ADAPTOR



SUPPLY ROLL PRESSURE PLATE



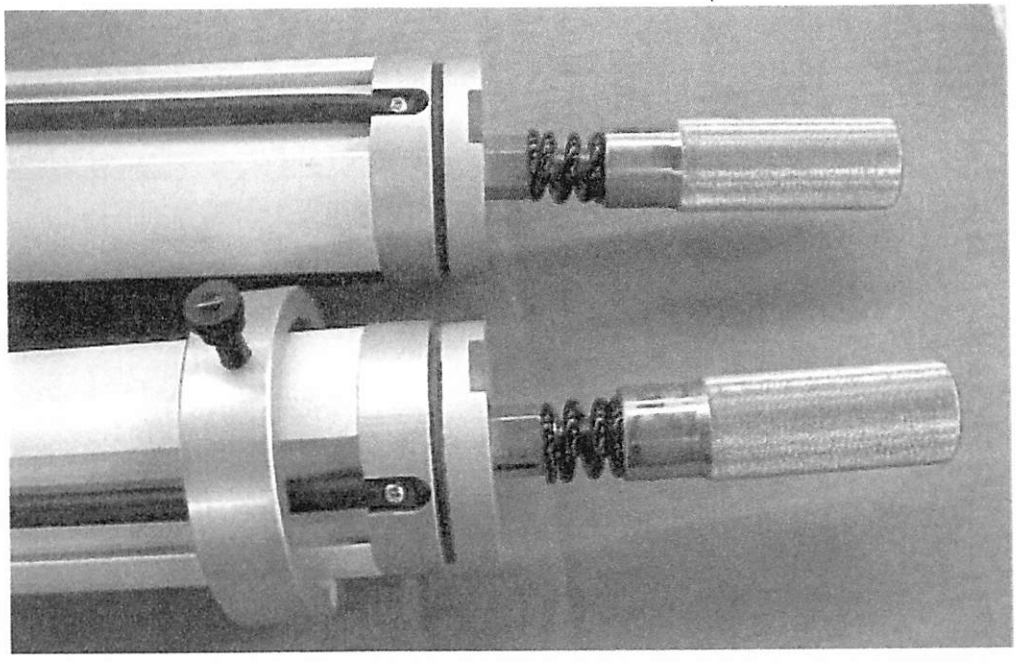
TIGHTEN SO SPRING PIN SHOWS IN CENTER OF ADJUSTABLE HEX BUSING CHANNEL.



8) ON THE OTHER END OF SUPPLY ROLL ADD ANOTHER LEATHER DISC, PRESSURE PLATE AND SUPPLY ROLL HEX ADAPTOR (LC38 0234) AS01 FITTING INTO PRESSURE PLATE RECESS. ADD ANTI-SEIZE TO END THREADS. ADD ANOTHER SPRING AND KNURLED KNOB.



9) STORE SUPPLY ROLL ASSEMBLIES, OR PLACE ON EHR SUPPLY ROLL BRACKETS IN MACHINE.



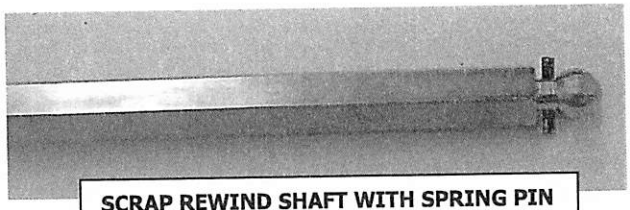
EHR SIGNMSTER
SCRAP REWIND ASSEMBLY

1) ASSEMBLE SCRAP REWIND SHAFT (EHR44 056.4) LOFT 2 BY TAPPING A 1/8 X 1 SPRING PIN EVENLY INTO BALL END OF SHAFT.

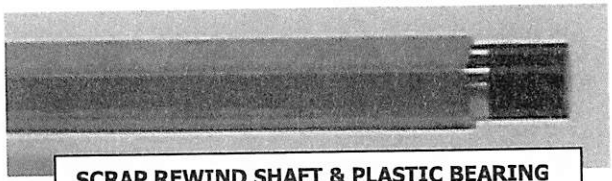
2) SLIDE BLACK PLASTIC BEARING (PRB071) RACK 8 ONTO OTHER END OF REWIND SHAFT. IF BEARING IS LOOSE, USE A DROP OF BLACK LOCTITE GLUE.

3) SLIDE (2) CORE GRIPPER AND HUBS (E850 207.6B) RACK 1 WITH BOTH HUBS FACING OUTWARD ONTO REWIND SHAFT. SECURE CORE GRIPPERS WITH (2) SPI ¾" KNOBS (PRK178) AS08.

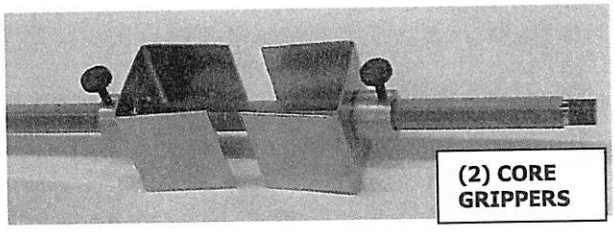
4) TO INSTALL SLIDE SPRING PIN INTO REWIND DRIVER ASSEMBLY ON RIGHT, SHAFT TO REWIND BRACKET ON LEFT.



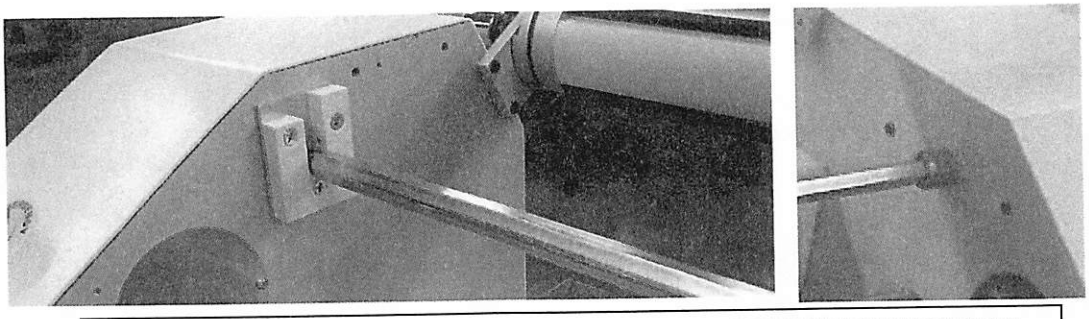
SCRAP REWIND SHAFT WITH SPRING PIN



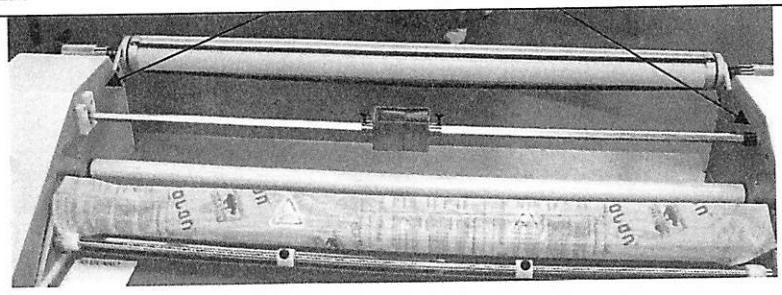
SCRAP REWIND SHAFT & PLASTIC BEARING



(2) CORE GRIPPERS



INSERT LEFT SIDE WITH PLASTIC BEARING ~INSERT RIGHT SIDE WITH SPRING PIN



EHR SIGNMASTER
HIGH POT TESTING

1) TO COMPLY WITH 2/2009 U.S. ETL CERTIFICATION THE 110V EHR SIGNMASTER AND THE 220V EHR SIGNMASTER MUST PASS A HIGH POT TEST FOR POWER LEAKAGE AND GROUNDING. THE 220 VOLT EHR SIGNMASTER ALSO HAS OUTSIDE CERTIFICATION. THE PROCEDURES FOR THE HIGH POT TEST ARE AS FOLLOWS.

2) WITH HIGH POT TESTER POWER SWITCH IN "OFF" POSITION CONNECT <u>TESTER POWER/GROUND CORD</u> BETWEEN THE "INPUT" INLET ON TESTER AND A 110 VOLT POWER SOURCE. THE WHITE "TESTER GROUND" LAMP GLOWS AMBER IF GROUND IS SATISFACTORY. THIS INDICATES THE <u>TESTER</u> IS GROUNDED.

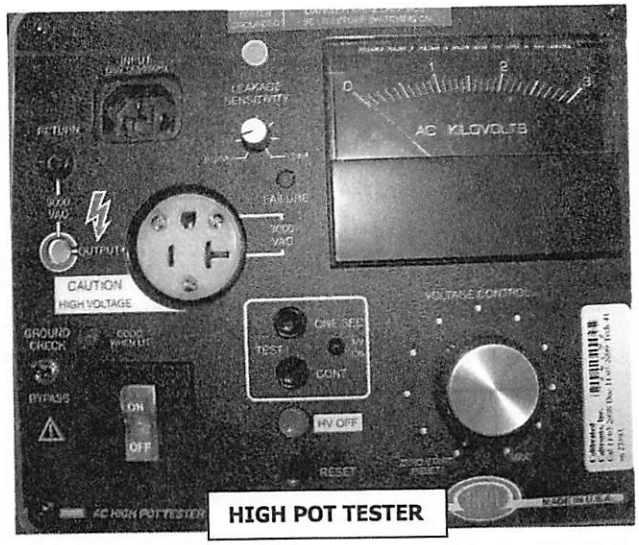
3) ***CLEAR THE AREA!! DO NOT TOUCH THE MACHINE OR THE CORD WHILE HIGH POT TESTING, AS SEVERE SHOCK MAY OCCUR IF MACHINE FAILS TEST.***

4) WITH "GROUND CHECK" SWITCH *UPWARD*, PLUG THE TESTER <u>MACHINE GROUND CORD</u> BETWEEN "RETURN" INLET ON TESTER AND THE CLAMPED TOOTHED END TO A HOLE COVER SCREW ON THE RIGHT SIDE PANEL. SCREWS THAT GO INTO THE SIDE PANEL GENERALLY CONDUCT A GOOD GROUND.

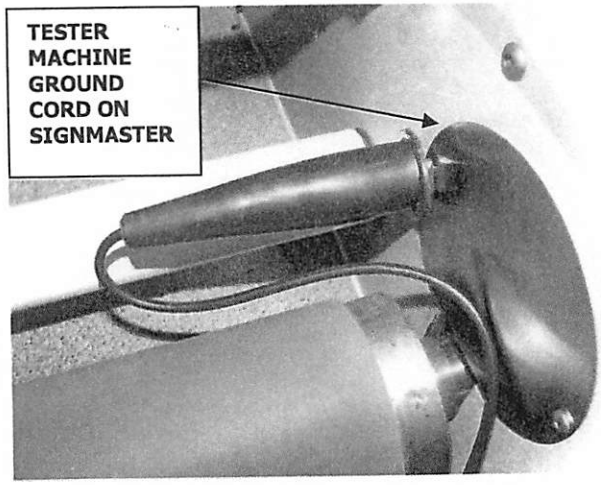
5) PLUG THE <u>SIGNMASTER POWER CORD</u> BETWEEN THE EHR RECEPTACLE AND "OUTPUT" INLET ON THE HIGH POT.

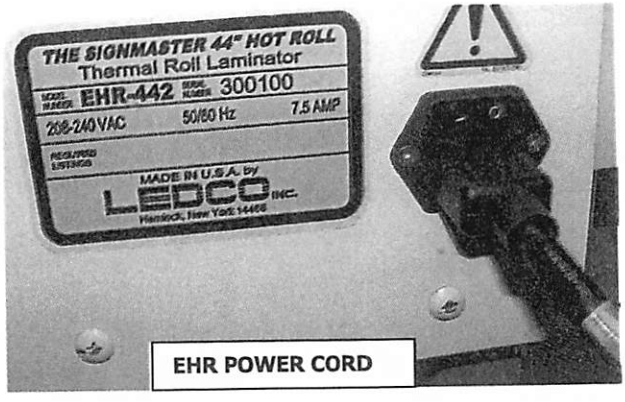
6) PRESS HIGH POT ROCKER SWITCH TO "ON" POSITION. THE GREEN "GOOD WHEN LIT" LIGHT GLOWS WHEN MACHINE IS GROUNDED.

7) WITH "ZERO/START" ON VOLTAGE DIAL, PRESS BLACK "RESET" BUTTON.



HIGH POT TESTER





EHR POWER CORD

8) **PRESS THE BLACK "CONT" BUTTON. THE RED "HV" LIGHT COME ON.**

9) **WITH "VOLTAGE CONTROL" STILL AT ZERO/START, INCREASE AC KILOVOLT DIAL CLOCKWISE TO 1.6 AC KILOVOLTS ON THE REGISTER SCREEN. <u>MAINTAIN 1.6 AC KILOVOLTS FOR TWO SECONDS</u>. A *HIGH POT TEST FAILURE* REGISTERS WITH AN AMBER "FAILURE" LIGHT AND A "BEEP."**

10) **TO END THE HIGH POT TEST, RETURN THE VOLTAGE DIAL TO ZERO/START, PRESS THE "HV OFF" BUTTON, "HV ON" LIGHT GOES OUT.**

11) **TURN "OFF" THE HIGH POT TESTER ROCKER SWITCH, UNPLUG "INPUT" POWER CORD FIRST, THEN THE UNPLUG REMAINING CORDS.**



EHR GROUND, TESTER POWER & GROUND, EHR POWER CORD

EHR 110V SIGNMASTER 6/2015
TESTING: NEW F/R & HEAT SWITCH

1) PLACE THE SAFETY SHIELD DOWN AND FEEDTABLE IN, TO ACTIVATE LEVER TYPE MYCROSWITCH AND PROXIMITY SWITCH MAGNETS BEFORE STARTING.

2) CHECK THAT ALL SWITCHES ARE OFF. PLUG MACHINE CORD INTO POWER SOURCE. RELAYS WILL 'CLICK.'

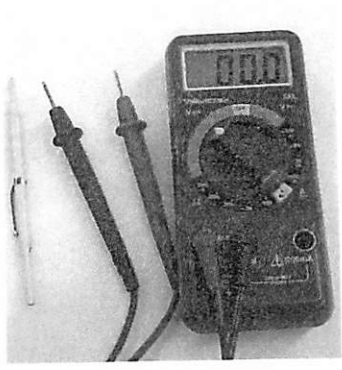
3) DEPRESS RED HEAT ON/OFF BUTTON. DEPRESS RED PUSHBUTTON ON SLAVE BOARD, IT SHOWS AMBIENT HEAT. DEPRESS AGAIN AND DISPLAY WILL RISE TO 400 DEGREES, THEN STOP. DEPRESS BLUE PUSHBUTTON TO DECREASE TEMPERATURE IN DISPLAY TO 150 DEGREES. RELEASE BUTTON AT 150, LET MACHINE WARM UP.

4) LIGHTLY ADD OIL TO ALL CHAINS.

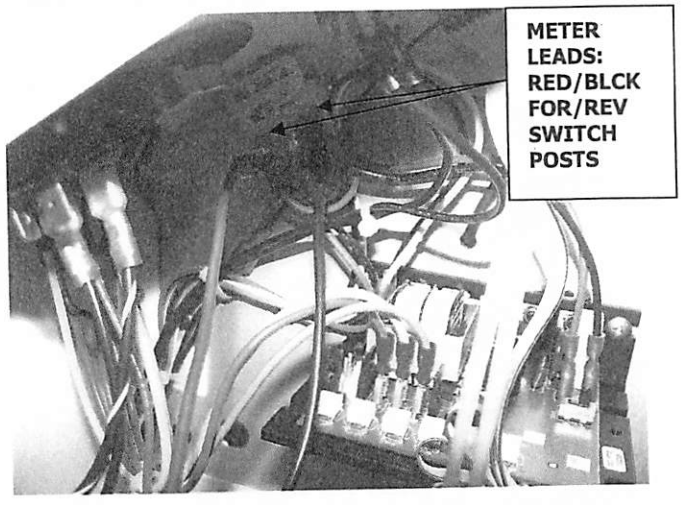
5) ***REMOVE JEWELRY SO YOU DO NOT TOUCH METAL INSIDE***. YOU CAN BE SHOCKED. ***ALWAYS*** TURN DRIVE SWITCH OFF WHEN CHANGING MODE.

6) USE VOLT METER WITH LEADS AND A TRIMMING TOOL TO SET SPEED MOTOR BOARD. A) PLACE FUNCTION SWITCH IN 'VARIABLE' POSITON B) PLACE MODE SWITCH IN FORWARD/DRIVE POSITION C) PLACE THE FORWARD/REVERSE SWITCH IN 'FORWARD' POSITION D) PLACE BROWN DRIVE SWITCH 'ON' E) INCREASE POTENTIOMETER TO FULL SPEED. SWITCH VOLT METER TO 'DC' AND PLACE RED TEST LEAD ON RED DOUBLE RED FORWARD/REVERSE SWITCH TERMINAL AND PLACE BLACK TEST LEAD ON DOUBLE BLACK FORWARD/REVERSE TERMINAL. WITH TRIMMING TOOL, ADJUST 'MAX' SPEED POT TO READ CLOSE TO 90.00 ON METER. TURN OFF BROWN DRIVE SWITCH. SET 'MIN' SPEED POT BY A) PLACE FUNCTION SWITCH IN 'POUCH' POSITION B) MODE SWITCH STILL IN FORWARD/DRIVE POSITION C) THE FORWARD REVERSE SWITCH STILL IN

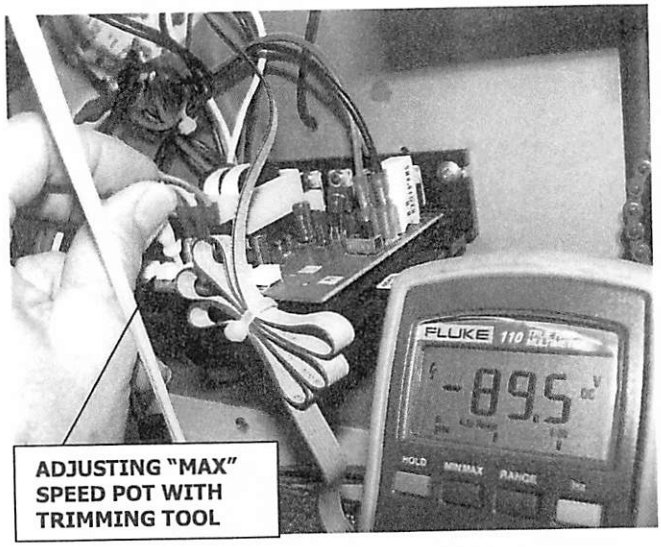




VOLT METER



METER LEADS: RED/BLCK FOR/REV SWITCH POSTS



ADJUSTING "MAX" SPEED POT WITH TRIMMING TOOL

'FORWARD' POSITION D) TURN ON BROWN DRIVE SWITCH. VOLT METER ON 'DC.' LEADS AT SAME POSITION. ADJUST 'MIN' POT TO 4.20 VOLTS ON METER, THE CHAIN SHOULD 'CREEP.' TURN OFF BROWN DRIVE SWITH. PLACE MODE SWITCH IN 'VARIABLE' POSITION. ADJUST 'MAX' TO ACCEPTABLE RANGE OF 89.5 TO 90.5, OPTIMUM READING IS 90.

7) IN 'VARIABLE' POSITION WITH ZERO ON POTENTIOMETER THE CHAIN MUST ***NOT*** CREEP. READJUST "MIN" POT TO CORRECT, IF NECESSARY.

8) TURN OFF BROWN DRIVE SWITCH. PLACE MODE SWITCH IN 'FOOTSWITCH' POSITION, TURN ON DRIVE AND TEST FOOTSWITCH FUNCTION FORWARD, REVERSE BY DEPRESSING FOOTSWITCH.

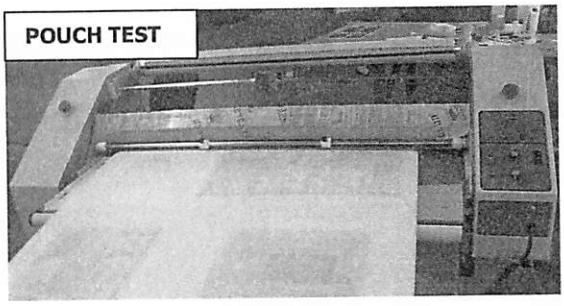
9) WHEN TEMPERATURE REACHES 150 DEGREES, TEST PRESSURE SENSITIVE FILM USING TOP SUPPLY ROLL AND SCRAP REWIND. LOAD SUBSTRATE WITH ROLLS UP. ADHERE STICKY SIDE OF FILM ON SUBSTRATE, WITH TOP LAYER TAPED TO CYLINDER ON SCRAP REWIND GRIPPER CORES. TEST WITH RUBBER ROLLS DOWN AND LOCKED. THE MODE SWITCH SHOULD BE IN 'VERIABLE' OR 'FILM,' DRIVE SWITCH IN 'FORWARD.' THE FILM THREADS UNDER IDLER TUBE AND OVER HOT ROLL. UNLOAD FILM AFTER TESTING.

10) INCREASE TEMPERATURE TO 300 DEGREES. PREPARE MATERIALS FOR POUCH TESTING, INCLUDING LEDCO TEST LAMINATION SHEET WHICH IS SENT TO CUSTOMER. TEST POUCH WITH CAM SHAFT HANDLE DOWN TO CATCH BOARD, ***THEN QUICKLY LOCK***. 'X' TEST POUCH FOR ADHESION.

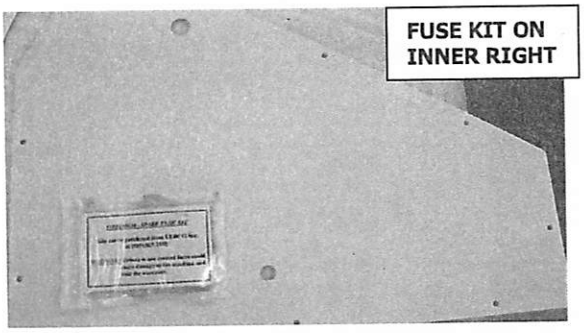
11) REDUCE TEMPERATURE TO 150 DEGREES AND TURN OFF MACHINE, UNPLUG.

12) ADHERE FUSE KIT (SPFEHR44) AS09 TO INNER RIGHT HOUSING SIDE (EP30 095.4R) AS18. USE TEMPLATE ON BOTH OUTER HOUSING SIDES AND ADHERE LEDCO LABEL (LAB05A) AS09. SECURE BOTH HOUSING SIDES (EP30 095.4L) AS18 WITH (9) 8-32 X ¼ TH PER SIDE.

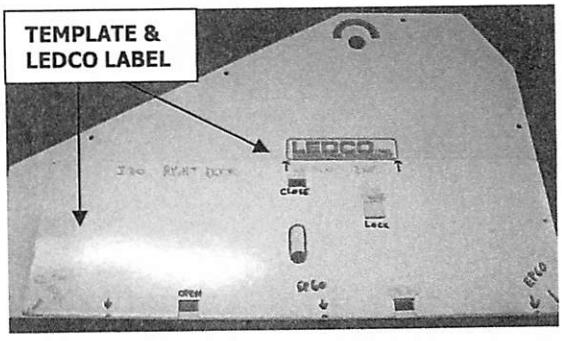
POUCH TEST



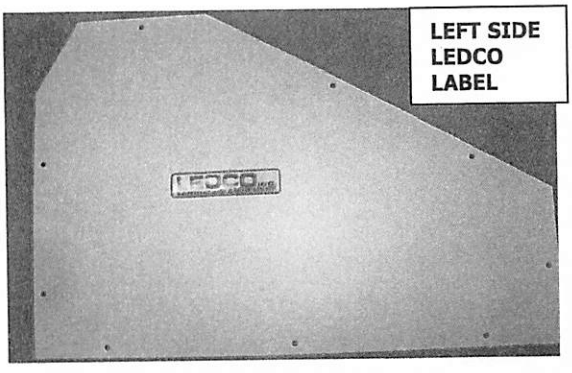
FUSE KIT ON INNER RIGHT



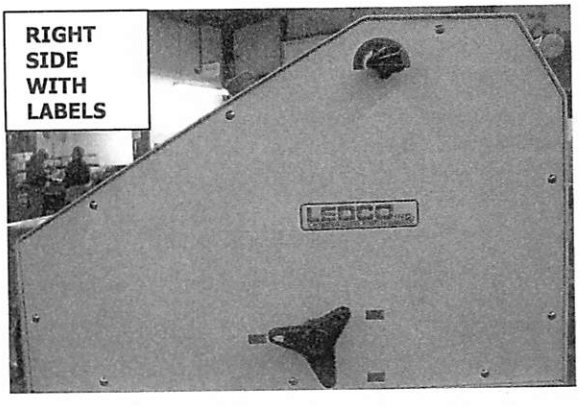
TEMPLATE & LEDCO LABEL



LEFT SIDE LEDCO LABEL



RIGHT SIDE WITH LABELS



13) ATTACH RIGHT SIDE CAM HANDLE (PRH140) AS09 ON FLAT OF CAM SHAFT USING ¼-20 X 3/8 SET SCREW.

14) ADD SCRAP REWIND KNOB (PRK173) RACK 8 ON FLAT OF TENSION NUT USING 10-32 X ¼ SET SCREW.

15) ADHERE 'OPEN, CLOSE AND LOCK' LABEL (XS 13, 14, 15) RACK 10 FOR CAM HANDLE AND WHITE ARROW.

16) ADHERE 'GENERAL DANGER' LABLE (LAB52) AS09 UNDER POWER CORD.

17) CENTER 'INCREASE/DECREASE' LABEL (LAB42A) RACK 10 ABOVE REWIND KNOB.

18) ADHERE SERIAL LABEL (LAB01) JOB ORDER UNDER FUSE HOLDER ON RIGHT REAR HOUSING, LEFT OF POWER CORD.

19) PLACE (2) STOP COLLAR CORE CHUCK STYLE (D105 0044) AS09 WITH A STOP COLLAR THUMBSCREW (PRK184) AS09 THREADED IN ONTO FEEDTABLE.

20) PLACE (4) ½-13 STEM CASTORS (PRC210) AS14 EACH WITH A ½-13 HEX NUT ON FEEDTABLE.

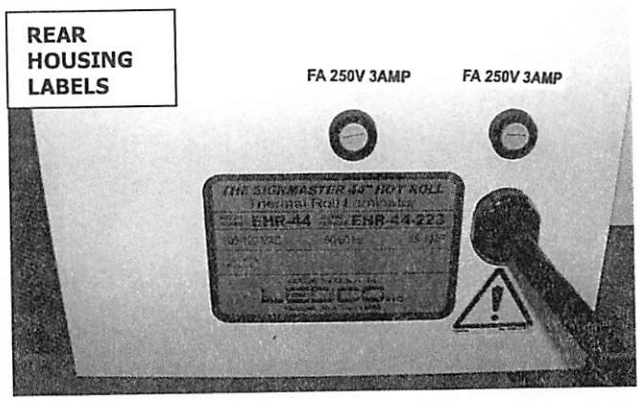
21) ATTACH (2) FRONT SUPPLY ROLL BRACKETS (EP30 009.4) RACK 8 TO INNER SIDE PANELS WITH ¼-20 X ¾ BHSH AND SET IN FRONT SUPPLY ROLL.

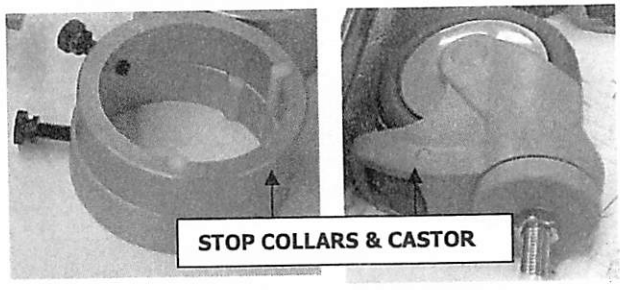
22) ADHERE (4) YELLOW 'HAND CRUSH' LABELS (LAB35) AS09 TO THE OUTER TOP AND BOTTOM SUPPLY ROLLS, AT THE POINT WHERE THE HEX ADAPTERS FIT INTO THE NOTCHES.

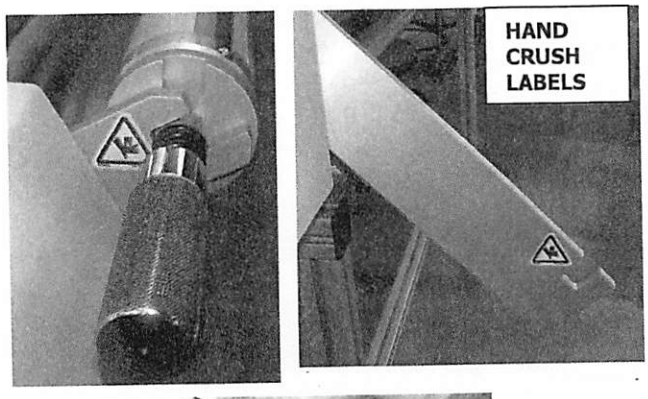
23) TWO 'ARM ENTANGLEMENT' LABELS (LAB51) AS09 ARE ON SAFETY SHIELD.

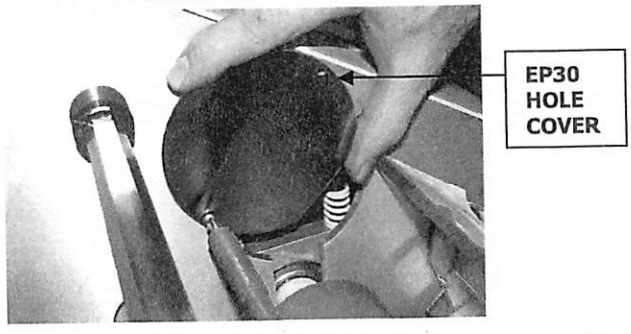
24) SECURE (2) HOLE COVERS (EP60 060.4) RACK 8 TO RIGHT AND LEFT INNER SIDE PANELS, COVERING OPENING. USE (4) 6-32 X ¼ PHMS.

25) SECURE ORANGE 'OPERATOR SAFETY PRECAUTION' (LIT011) ~~AS13~~ LANYARD TO FRONT FEEDTABLE SHAFT.







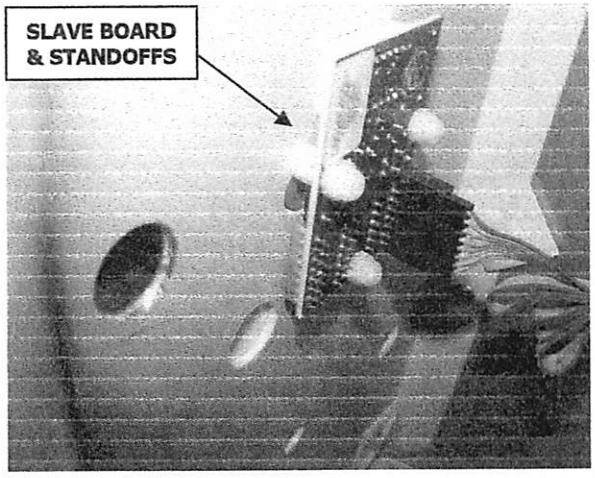




EHR NRTL SIGNMASTER 220V
HOUSING PREPARATION 2019

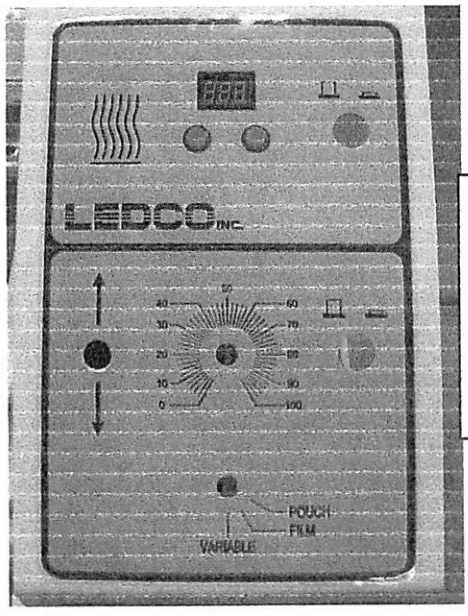
1) INSERT (3) 4-40 X ¼ FHMS SCREWS INTO THE TOP RIGHT HOUSING (EHR44 094.4RTA) AS06 COUNTERSUNK HOLES. THREAD (3) STANDOFFS (D25 010.4) AS12 ON INNER TOP HOUSING.

2) ALIGN THE SLAVE BOARD AND RIBBON WIRE FROM THE HEAT BOARD CONTROL (PRH130) AS08 ONTO THE STANDOFFS. SECURE THE SLAVE BOARD WITH (3) 4-40 NYLON ACORN NUTS (.112LDR00) AS12.



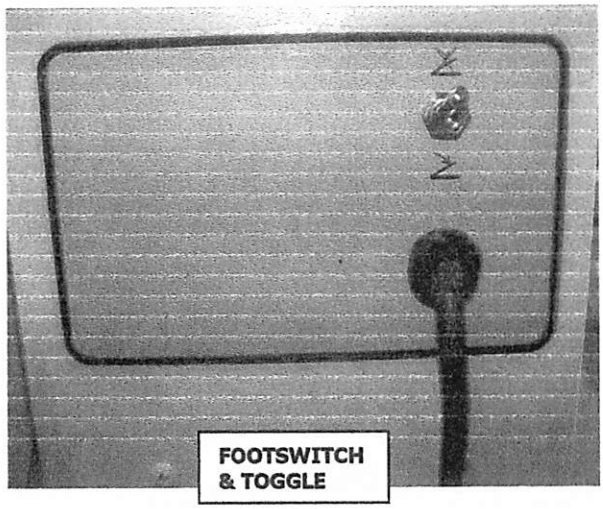
3) CAREFULLY ADHERE THE CONTROL PANEL DECAL, EHR NRTL (LAB EHR44NRTL) RACK 14 OVER THE OUTER FRONT TOP HOUSING, SO ALL HOLES ARE CENTERED AND ACCESSIBLE.

4) FROM AS07 SECURE RED PUSHBUTTON CAP (PRK185) ONTO THE INNER/LEFT SLAVE BOARD POST ON THE OUTER TOP HOUSING. ON THE OUTER/RIGHT SLAVE BOARD POST SECURE THE BLUE PUSHBUTTON CAP (PRK186).

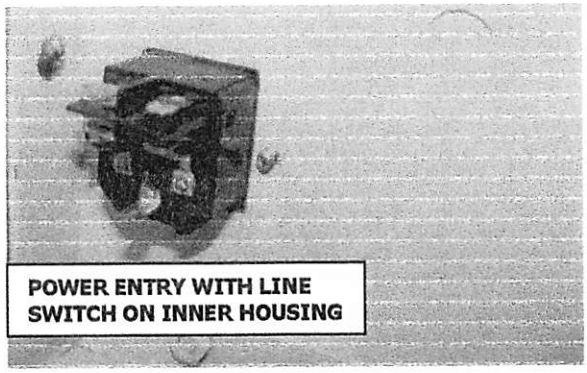


RIGHT TOP HOUSING: CONTROL PANEL LABEL, SLAVE BOARD, RED & BLUE PUSHBUTTON CAPS

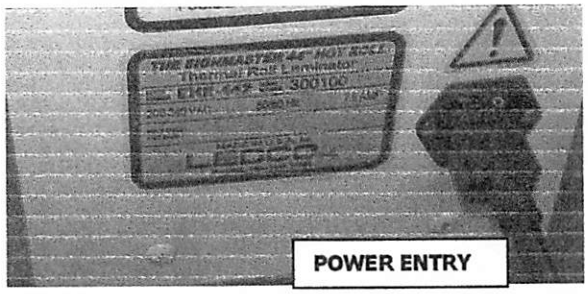
5) CENTERED BELOW THE CONTROL PANEL LABEL, ADHERE THE FOOTSWITCH LABEL EHR44 NRTL (LAB112A) RACK 14 CENTERED UNDER CONTROL LABEL OVER FOOTSWITCH AND TOGGLE SWITCH HOLES.



6) ON THE REAR OF THE RIGHT TOP HOUSING SECURE THE POWER ENTRY WITH LINE SWITCH (PRS314) RACK 3 USING (2) 6-32 X 3/8 FHMS WITH A #6 KEPS HEX NUT ON INSIDE. THIS POWER RECEPTACLE ACCEPTS THE REMOVEABLE CORD (PRC118) LD05. THE OUTER TERMINAL POSTS WILL BE USED FOR WIRING.

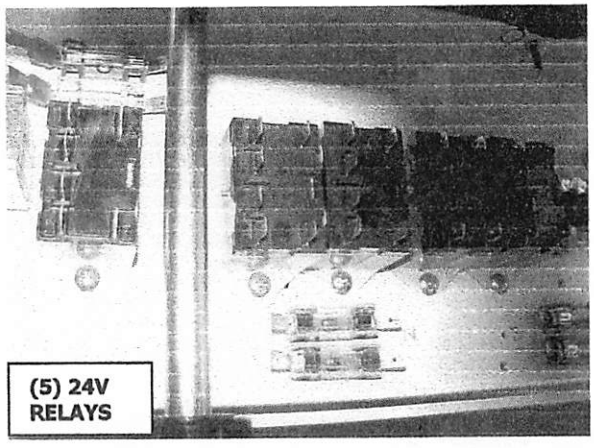


POWER ENTRY WITH LINE SWITCH ON INNER HOUSING



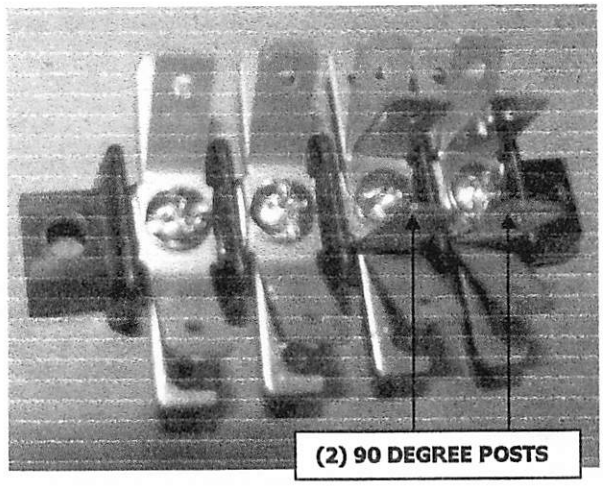
POWER ENTRY

7) ON THE BOTTOM RIGHT HOUSING (EHR44 094.4RBA) AS13 SECURE (5) 24V COIL RELAYS (PRR251) RACK 1 TO HOUSING, DOUBLE TERMINAL POSTS FACING RIGHT/REAR HOUSING USING (2) 8-32 X ¼ RHMS EACH. FROM THE FRONT HOUSING THE RELAYS ARE: SAFETY CIRCUIT RELAY, HEAT RELAY, HEAT SWITCH RELAY, DRIVE SWITCH SAFETY RELAY AND DRIVE SWITCH RELAY.



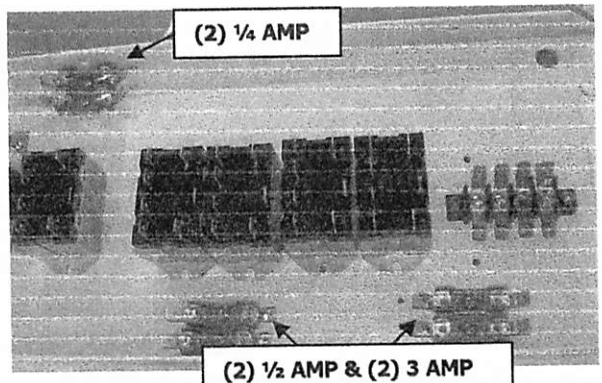
(5) 24V RELAYS

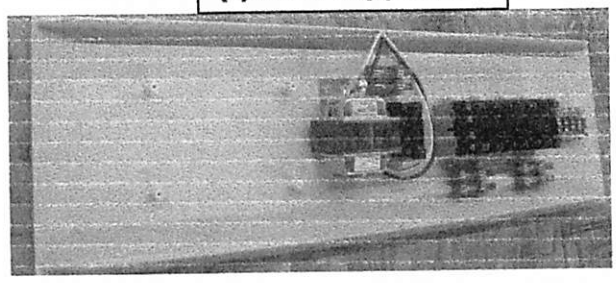
8) FROM AS08 ASSEMBLE (4) 180 DEGREE POSTS (PRT306), (4) 45 DEGREE POSTS (PRT307) AND (2) 90 DEGREE POSTS (PRT308). LOCATE THE (2) 90 DEGREE POSTS; ONE ON THE END AND ONE NEXT TO IT ON THE TERMINAL BLOCK. SECURE TERMINAL POSTS TO A 4 POLE TERMINAL BLOCK (PRT300). TERMINAL BLOCK LOCATES ON THE RIGHT/REAR BOTTOM HOUSING, IN LINE WITH RELAYS. THE 90 DEGREE POSTS FACE TOWARD THE REAR, IN LINE WITH RELAYS. USE (2) 8-32 X ½ PHMS TO SECURE.



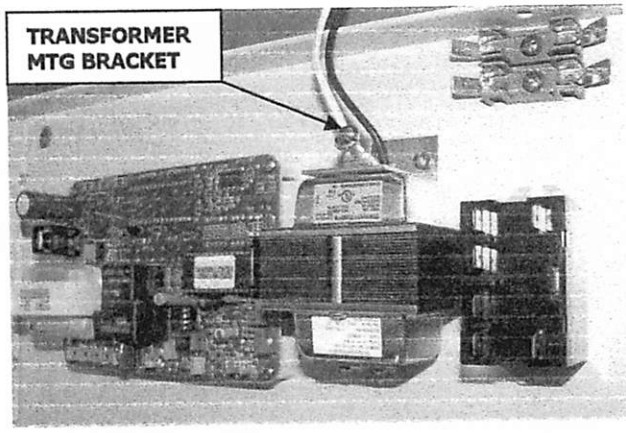
(2) 90 DEGREE POSTS

9) SECURE (6) GRAY FUSE HOLDERS (PRF126) AS09 TO BOTTOM HOUSING USING (6) 6-32 X ¼ PHMS. THE FUSES HOLDERS ARE LOCATED IN PAIRS OF TWO. ON THE INNER HOUSING LIP SECURE (2) FUSE HOLDERS AND INSERT (2) FAST-ACTING ¼ AMP FUSES (PRF107) RACK 14, ON THE OUTER LIP NEAR THE TERMINAL BLOCK SECURE (2) FUSE HOLDERS WITH (2) LITTLEFUSE 3 AMP FUSES (PRF127) AS09, AND ON THE FRONT OUTER LIP SECURE (2) FUSE HOLDERS WITH (2) FAST-ACTING ½ AMP FUSES (PRF136) AS09.



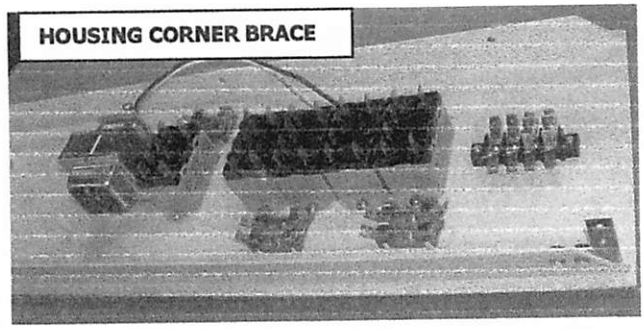


10) ALIGN THE MOUNTING BRACKET FROM THE 24 VOLT TRANSFORMER (PRT335) RACK 1 KIT ON THE BOTTOM HOUSING, WITH THE BREAK FACING *OUTWARD*. USE (2) 6-32 X ¼ PHMS TO SECURE MOUNTING BRACKET. UNTHREAD THE SLOTTED TRANSFORMER SCREW. INSERT THE WHITE AND BLACK TRANSFORMER WIRES AND SCREW BRACKET ON THE TRANSFORMER THROUGH THE MOUNTING BRACKET. A PRESS CLIP CAN BE TRIMMED AND ADHERED UNDER THE TRANSFORMER TO RAISE IT. REPLACE SLOTTED SCREW.



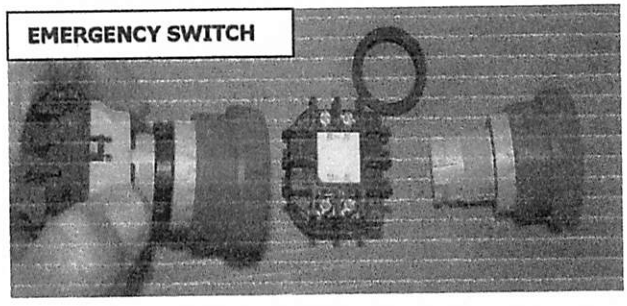
11) FROM UNDER THE FRONT OF THE RIGHT HOUSING BOTTOM INSERT (4) 4-40 X 3/8 PHMS AND THREAD ON (4) NYLON HEX STANDOFFS (LC25 010.4) LD01 ON THE INNER HOUSING.

12) PLACE THE HEAT BOARD (PRH130) AS08 OVER THE NYLON STANDOFFS WITH THE ***TERMINAL POSTS FACING OUTWARD***. SECURE HEAT BOARD TO NYLON HEX STANDOFFS WITH (4) 4-40 X 3/8 PHMS.

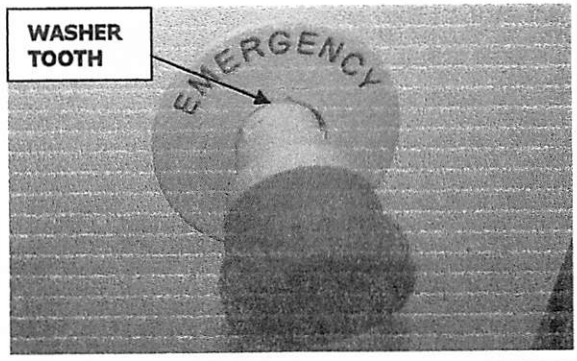


13) SECURE (2) HOUSING CORNER BRACE BRACKETS (D105 098.4) RACK 1 TO THE OUTER BOTTOM HOUSINGS USING 8-32 X 3/8 FHMS THROUGH HOUSING INTO BRACKET, HELD WITH #8 KEPS HEX NUTS ON THE INNER HOUSING.

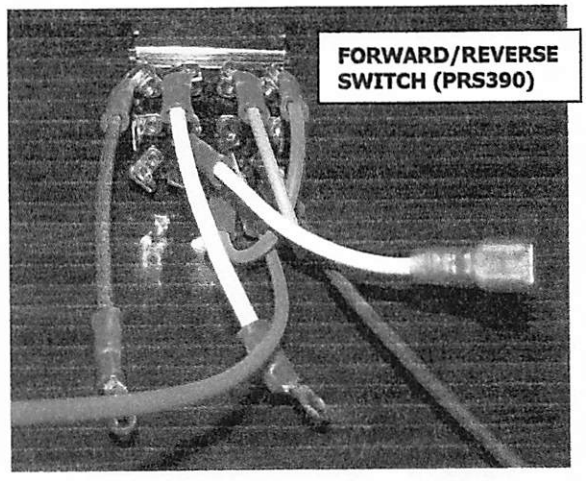
14) THE EHR SIGNMASTER HAS (2) EMERGENCY STOP SWITCHES (PRS374) AS07, ONE EACH ON THE TOP RIGHT

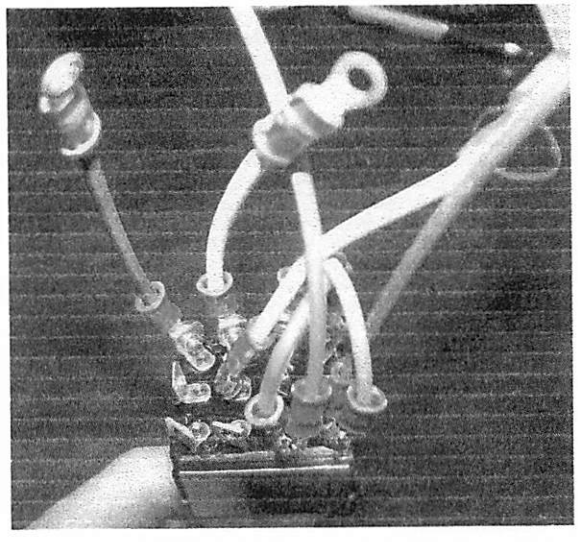


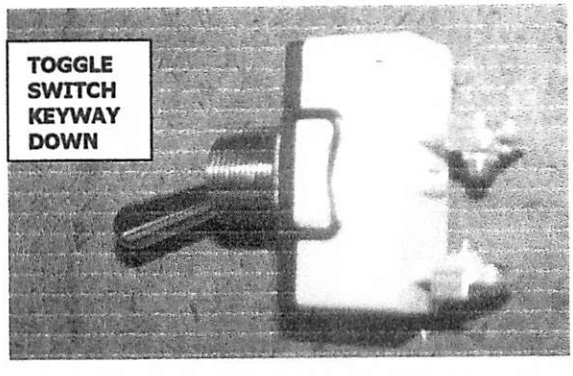
HOUSING AND TOP LEFT HOUSING (EHR44 094.4LTA) AS14. CENTER THE PRINTING ON THE YELLOW EMERGENCY STOP WASHER (PRS375) AS07 OVER THE OPENING. SEPARATE THE E-STOP SWITCH BY DEPRESSING THE SPRING ON THE YELLOW SECTION *OUTWARD* AND TWISTING. UNTHREAD THE BROWN PLASTIC NUT ON THE RED BUTTON SECTION AND INSERT RED BUTTON SECTION WITH "TOP" INDICATION *UPWARD* THROUGH YELLOW WASHER, SLIDING THE WASHER TOOTH UP THE THREADED YELLOW CHANNEL. RETHREAD PLASTIC NUT AND TIGHTEN WITH CASTLE TOOL, WHILE KEEPING PRINTING ON WASHER CENTERED.



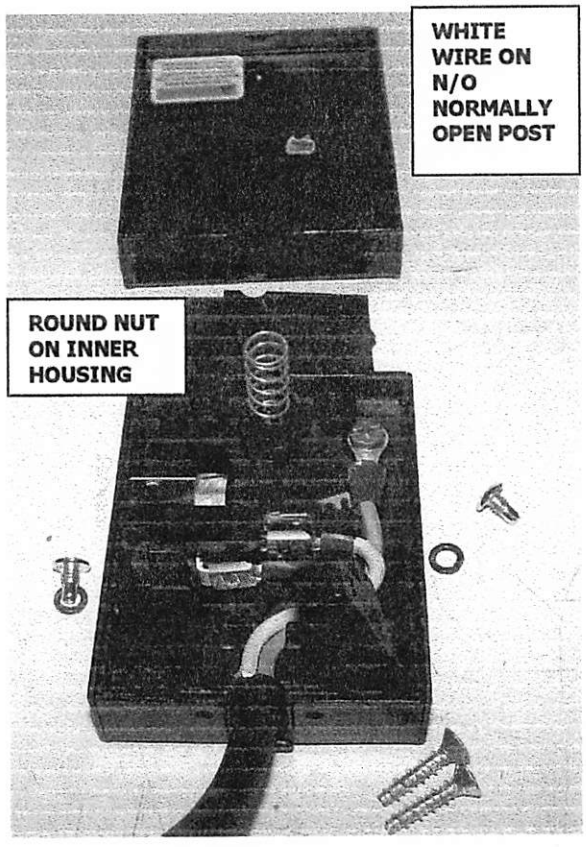
15) ASSEMBLE THE 4 POLE DOUBLE THROW FORWARD/REVERSE SWITCH (PRS390) RACK 16 FROM BAG IN EHR44 220V HARNESS (PRW356B) RACK 14. HOLD FORWARD/REVERSE SWITCH WITH THE POSTS FACING YOU AND THE ***KEYWAY DOWNWARD***. CONNECT THE (5) RING TERMINATED 3" JUMPER WIRES. CONNECT ONE END OF THE BLACK JUMPER TO THE OUTER LEFT TOP CORNER AND DO NOT CONNECT THE OTHER END AS IT WILL DOUBLE WITH HARNESS WIRE. CONNECT ONE END OF THE DOUBLE RING WHITE JUMPER RIGHT OF THE BLACK JUMPER INWARD TOP, IT WILL ALSO DOUBLE WITH HARNESS WIRE. THE BROWN JUMPER CONNECTS ON TOP BY THE WHITE JUMPER AND ON THE BOTTOM RIGHT CORNER DOUBLES WITH THE 7" BLACK RING AND FEMALE ENDED WIRE. THE BLUE JUMPER CONNECTS ON TOP RIGHT CORNER AND DOUBLES ON THE LEFT INWARD POST BESIDE THE DOUBLE BROWN AND BLACK WIRE WITH THE 7" RED RING AND FEMALE WIRE. THE 3" WHITE RING AND FEMALE WIRE CONNECTS TO THE INNER LEFT MIDDLE POST, BELOW THE OTHER WHITE WIRE. DO NOT SECURE FORWARD/REVERSE SWITCH YET, AS IT IS EASIER TO COMPLETE WIRING BEFORE IT IS INSERTED.





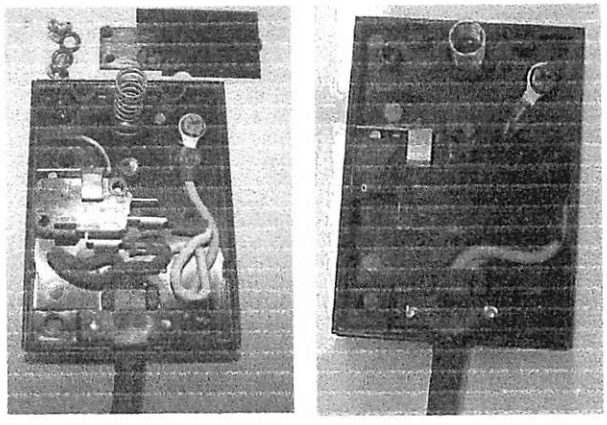


16) INSERT THE ON/OFF TOGGLE SWITCH (PRS268) RACK 21 FOR FOOT DRIVE INTO THE FRONT RIGHT HOUSING ORIENTED WITH ***KEYWAY DOWNWARD***. THE ROUND LOCATOR NUT THREADS ON THE INNER HOUSING AND THE HEX NUT THREADS ON THE OUTER HOUSING. THE TERMINAL POSTS ARE MIDDLE AND DOWNWARD. DON'T TIGHTEN YET AS IT IS EASIER TO ADD WIRES WHEN SWITCH CAN ROTATE.



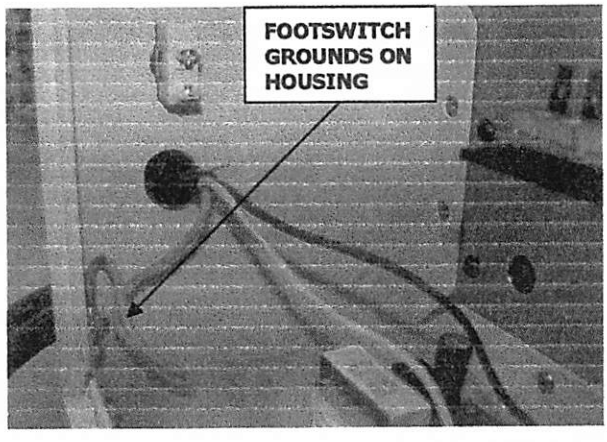
17) TO ASSEMBLE THE TREADLINE FOOTSWITCH (PRS280) RACK 8 FIRST CUT 12 FEET OF 16/3 BLACK CORD (PRC115) AS15 AND STRIP 3 INCHES OF SHEATHING OFF ONE END, TRIM AND DISCARD INSULATION. TERMINATE GREEN GROUND WIRE WITH BLUE RING (PRT294) AND BLACK AND WHITE WIRES WITH BLUE FEMALE (PRT292).

18) REMOVE (2) SIDE SCREWS AND WASHERS FROM FOOT SWITCH. CATCH AND REMOVE SPRING INSIDE. GREEN INSIDE SCREW SHOULD BE ON UPPER RIGHT. REMOVE "COM" COVER UNDER METAL CLICKER. REMOVE (2) SMS SCREWS ON BOTTOM AND SLIDE OFF COVER. CONNECT WHITE WIRE TO N/O (NORMALLY OPEN) POST, WHICH IS THE CENTER ONE. REMOVE GROUND SCREW AND ATTACH GREEN WIRE USING STAR WASHER PROVIDED. ATTACH BLACK WIRE TO SILVER "COM" POST. SNAP "COM" COVER BACK ON. COVER CORN ENTRY WIRES WITH CAP AND LOCK. REPLACE SPRING AND SECURE COVER WITH SCREWS.



19) ON THE OTHER END OF THE FOOTSWITCH CORD STRIP 8 INCHES OF SHEATHING OFF WIRES. INSERT WIRES INTO LOWER, FRONT RIGHT HOUSING, UNDER THE TOGGLE SWITCH. SECURE THE STRAIN RELIEF BUSHING (PRB065) AS09 LEAVING ABOUT 1" OF SHEATHING ON THE INSIDE OF THE STRAIN RELIEF.

20) CRIMP A #8 BLUE RING CONNECTOR (PRT277) ONTO THE GREEN GROUND FOOTSWITCH WIRE. THE GROUND WIRE TERMINATES ON THE CORNER HOUSING



BRACKET WITH AN 8-32 X ½ FH AND #8 KEPS NUT. TRIM THE WHITE AND BLACK FOOTSWITCH WIRES TO LOOP AND REACH TOGGLE SWITCH SCREWS. CRIMP A RED RING CONNECTOR (PRT296) ONTO THE WHITE AND BLACK WIRES. *LOOSELY* THREAD THE WHITE WIRE ON THE LOWER TOGGLE SWITCH SCREW AND *LOOSELY* THREAD THE BLACK WIRE ON THE UPPER/MIDDLE TOGGLE SWITCH SCREW.

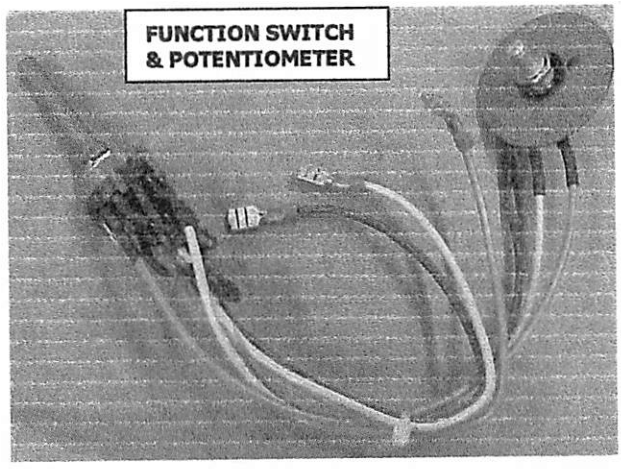
21) THE FUNCTION SWITCH COMPLETE (EHR44 300.5) AS07 SOLDERED TO THE POSTENTIOMETER IS INSERTED IN THE HOUSING.

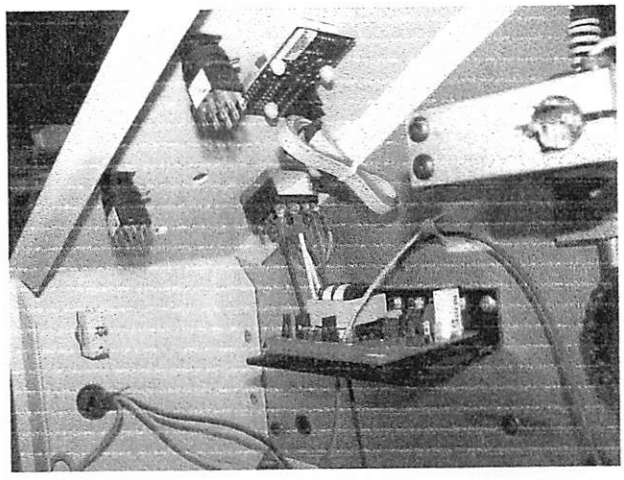
22) TO INSERT THE FUNCTION SWITCH COMPLETE, REMOVE THE HEX NUT ON THE FUNCTION SWITCH WHILE HOLDING THE TOOTHED WASHER IN PLACE. SECURE THE FUNCTION SWITCH TO THE HOUSING BY TUNING THE STEM FULL CLOCKWISE AND INSERTING THE STEM THROUGH THE HOUSING, WITH THE FLAT SIDE FACING UPWARD OVER THE VARIABLE POSITION. ***BE CAREFUL SILVER NOTCH KEEPER DOES NOT FALL OUT***. RETHREAD THE HEX NUT AND TIGHTEN, KEEPING FLAT SIDE UP STEM UPWARD.

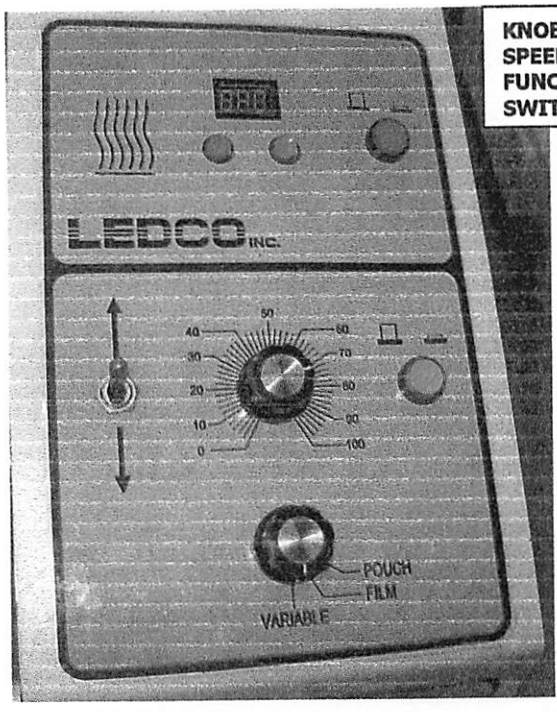
23) CUT OFF THE FUNCTION SWITCH STEM LEAVING ABOUT ½" AND SECURE A KNOB (PRM221A) AS07 ONTO THE REMAINING FUNCTION SWITCH STEM.

24) WITH THE PAPER WASHER ON THE POTENTIOMETER STEM, INSERT THE POTENTIOMETER INTO THE HOUSING, AFTER BREAKING OFF THE TAB. ORIENT THE POTENTIOMETER WITH THE WIRES FACING DOWNWARD. ON OUTER HOUSING SECURE WITH THE TOOTHED WASHER AND HEX NUT.

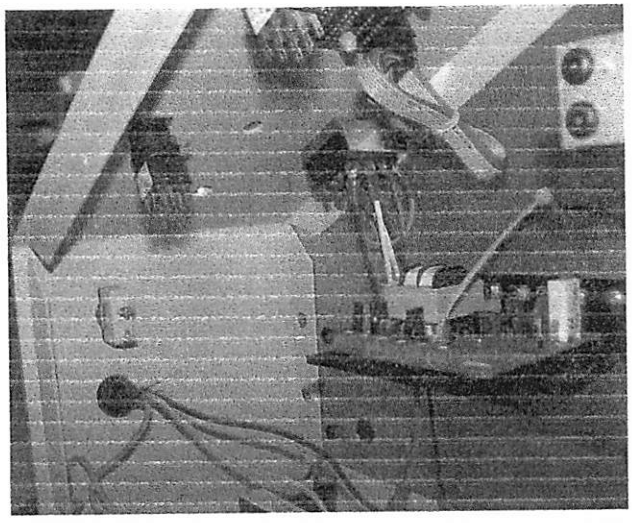
25) PLACE ANOTHER KNOB (PRM221A) AS07 ONTO THE POTENTIOMETER STEM AND SECURE, ORIENTING THE WHITE INDICATOR ON THE KNOB FLUSH WITH THE "ZERO" ON THE LABEL.







26) **FROM RACK 1 INSERT THE RED HEAT POSITIVE (PRS017) WITH 'TOP' UPWARD BY THE SLAVE BOARD AND INSERT THE GREEN POSITIVE DRIVE SWITCHE (PRS018) BELOW IT, 'TOP' UPWARD.**





EHR NRTL SIGNMASTER 220V
CHASSIS ASSEMBLY

1) ATTACH MM23002D MOTOR CONTROL (PRM218D) RACK 10 TO THE OUTER RIGHT SIDE PANEL, AFTER ADJUSTING SWITCHES: *SW503* TO OUTPUT 90 AND BOTH *SW501* TO AC INPUT 230 FOR THE 220 VOLT MACHINE. USE (2) 8-32 X 3/8 THMS WITH #8 STAR WASHERS BETWEEN BOARD AND SIDE PANEL.

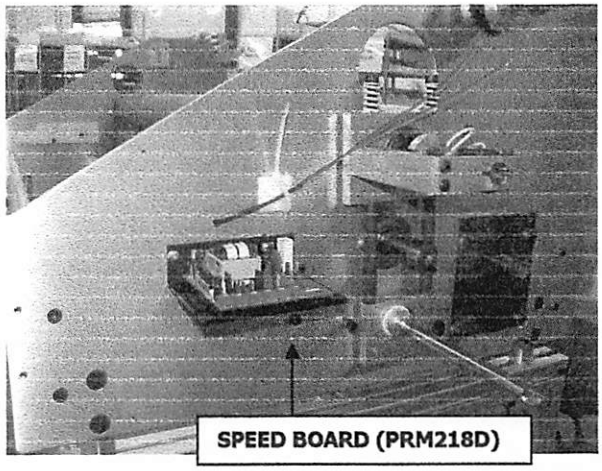
2) BEHIND THE REWIND ASSEMBLY SECURE THE POWER FILTER (PRF142) AS08, ORIENTED WITH THE "LINE SIDE" DOWNWARD. USE (4) 8-32 X ¼ RHMS.

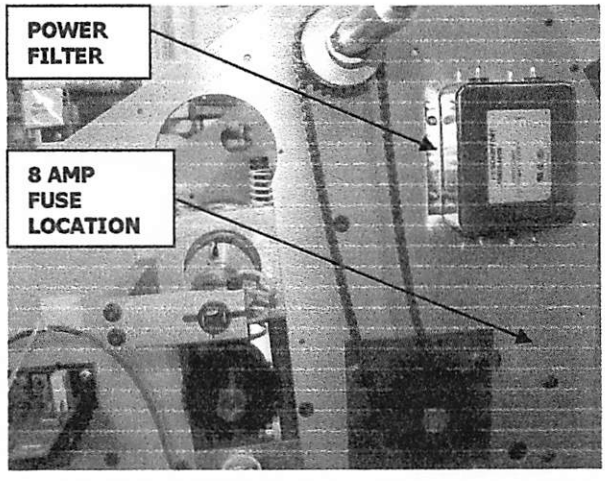
3) BELOW THE POWER FILTER SECURE A LITTLEFUSE HOLDER (PRF126) AS08 VERTICALLY WITH A 6-32 X ¼ PHMS. INSERT A SLO-BLO 8 AMP FUSE (PRF137) AS09.

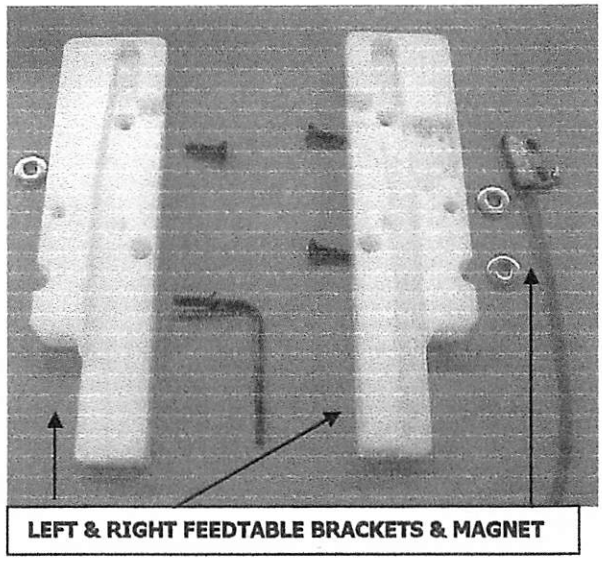
4) ATTACH PROXIMITY SWITCH MAGNET (PRS351) RACK 1 TO THE INDENTED LOCATION ON RIGHT HAND FEEDTABLE BRACKET (D60 098.4R) AS09 WITH (2) 4-40 X ¼ PHMS. INSERT THE RED MAGNET WIRES THROUGH THE CLOSEST HOLE IN BRACKET. PLACE 5" OF 3/16" BLACK INSULATION TUBING (PRI165) CAB1 ON RED WIRES, CLOSE TO MAGNET AND HEAT SHRINK. INSERT (2) 10-32 X ¾ FHSH INTO FEEDTABLE BRACKET. PLACE A ¼ X 5/8 X 1/8 FLAT WASHER ON REMAINING THREADS. BEND MAGNET WIRES AND INSERT THROUGH SIDE PANEL OPENING. SECURE RIGHT FEEDTABLE BRACKET TO SIDE PANEL. ABOVE REAR SPEED MOTOR BOARD ADHERE A PRESS CLIP TO HOLD MAGNET WIRES.

5) CRIMP A RED FULLY INSULATED FEMALE (PRT331) ONTO ONE MAGNET WIRE, LEAVE THE OTHER MAGNET WIRE OPEN.

6) ATTACH LEFT FEEDTABLE BRACKET (D60 098.4L) AS09 TO LEFT SIDE PANEL WITH

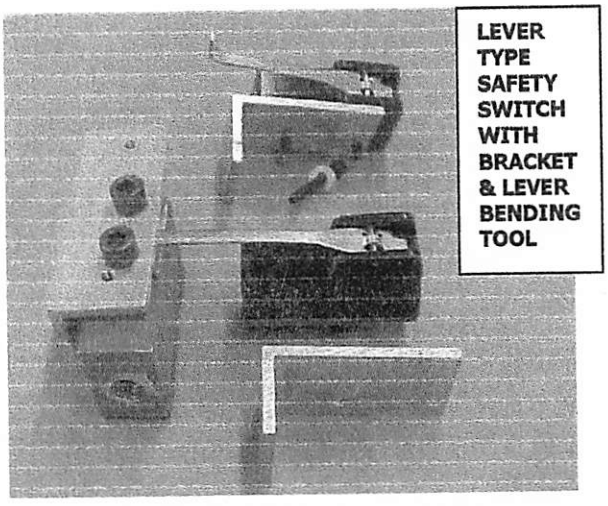






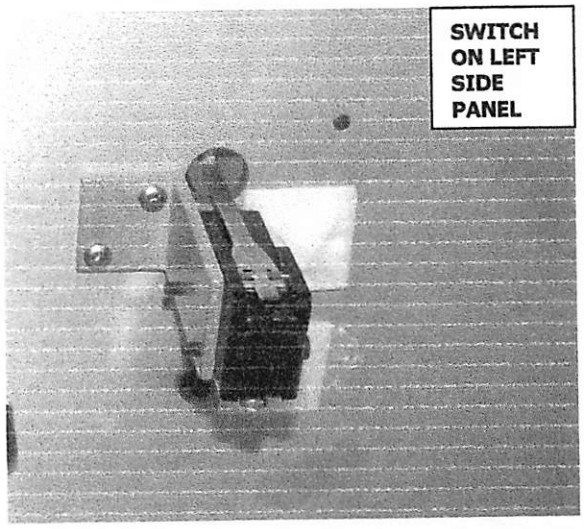
(2) 10-32 X ¾ SHCS EACH WITH A ¼ X 5/8 X 1/8 FLAT WASHER.

7) FROM RACK 1 ASSEMBLE LEVER TYPE MICROSWITCH (PRS313) BY BENDING THE LEVER UPWARD, USING THE TOOL PICTURED. HOLDING THE LEVER TYPE MICROSWITCH WITH THE SCREWS *DOWNWARD* AND THE LEVER AWAY FROM YOU, INSERT (2) 6-32 X 1 SHCS EACH WITH A #6 FLAT WASHER INTO THE RIGHT SIDE OF THE MICROSWITCH. THREAD THE ENDS OF THE SHCS INTO THE SAFETY SWITCH BRACKET (LC38 170.4).



LEVER TYPE SAFETY SWITCH WITH BRACKET & LEVER BENDING TOOL

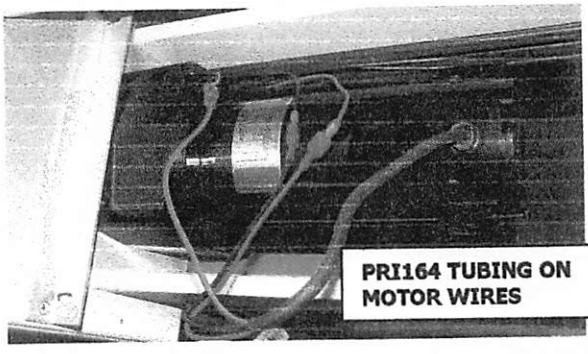
8) INSERT THE UPWARD BENT LEVER THROUGH THE OUTER LEFT SIDE PANEL, IN FRONT OF THE RUBBER ROLL OPENINGS. THE BRACKET IS SECURED WITH (2) 6-32 X ¼ PHMS AT AN ANGLE.



SWITCH ON LEFT SIDE PANEL

9) PLACE 8" OF 3/8" BLACK INSULATION TUBING (PRI164) CAB1 ON THE MOTOR WIRES, SNUG TO THE MOTOR. HEAT SHRINK TUBING.

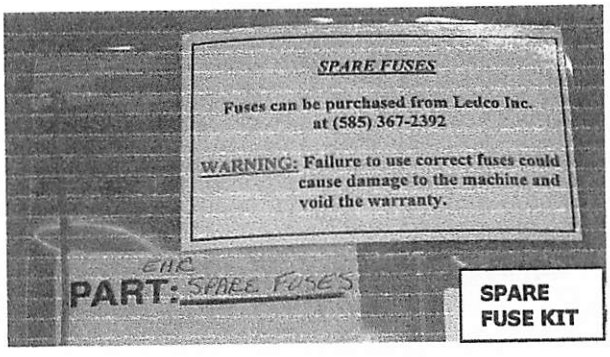
10) CRIMP (3) FULLY INSULATED MALE CONNECTORS (PRT330) ONTO THE GREEN, RED/BLUE AND BLACK/BROWN MOTOR WIRES. MOTOR WIRE COLORS VARY WITH MANUFACTURERS. THESE WILL MATE WITH HARNESS WIRES.



PRI164 TUBING ON MOTOR WIRES

11) FROM AS09 CREATE AN EHR NRTL 220V SPARE FUSE KIT WITH (1) EACH: FAST ACTING ¼ AMP (PRF107), FAST-ACTING ½ AMP (PRF136), 3 AMP (PRF127) AND A SLO-BLO 8 AMP (PRF137) EACH IN AN INDIVIDUAL LABELED BAG. ADD A SPARE FUSE LABEL (LAB126) AS08. PUT THESE ITEMS IN A LARGER BAG AND WRITE: "SPARE FUSES" AND IDENTIFY FUSES.

12) SECURE SPARE FUSE KIT TO POWER CORD WITH A CABLE TIE.



SPARE FUSE KIT

EHR NRTL 220V SIGNMASTER DRIVE AND HOT ROLLS, CONNECTING PLATES AND SLIP RING

1) INSTALL (2) 7/8" SNAP RINGS (PRR193) AS13 ON DRIVE ROLL COMPLETE (EHR44 035.4) FLOOR BEFORE CAREFULLY SLIDING INTO CHASSIS.

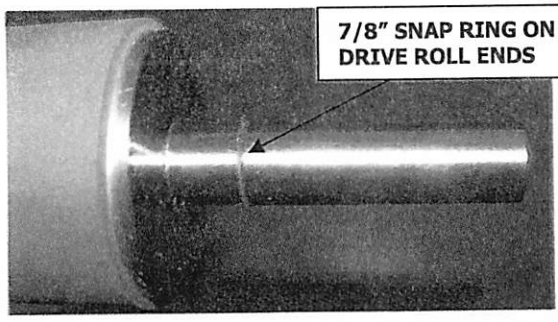
2) ON ***LEFT SIDE DRIVE ROLL ONLY***, ADD (1) TOP INNER RUBBER ROLL SPACER (LC38 031.4) RACK 1 SLIDE TIGHT TO SNAP RING. ADD A 1640ZZ BEARING (PRB087A) AS07 ONTO BOTH JOURNAL ENDS. TAP INTO SIDE PANELS, FLUSH ON OUTER PANEL. SECURE BALL BEARINGS WITH (4) 10-32 X ¼ TH.

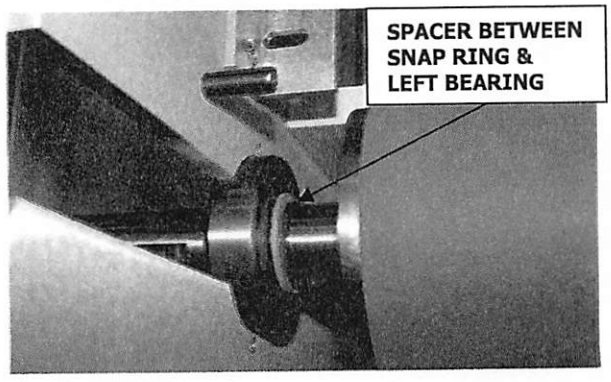
3) REMOVE JOURNAL END CAP *WITHOUT* KEYWAY ON HOT ROLL COMPLETE (EHR44 040.4) FLOOR. INSERT SENSOR (PRC212S) LD03 AND STAKE BY EDGE TO HOLD IN PLACE. INSERT HEATER (PRH187) LOFT 1 FOR 220 VOLT MACHINE. ADD SEALANT TO HEATER END, COVERING CERAMIC CORE WITH LOCTITE SUPERFLEX RED HIGH TEMPERTURE RTV SILICONE ADHESIVE SEALANT CAB1. THIS ELIMINATES SEEPAGE OF SAND PARTICLES FROM AROUND HEATER ELEMENTS.

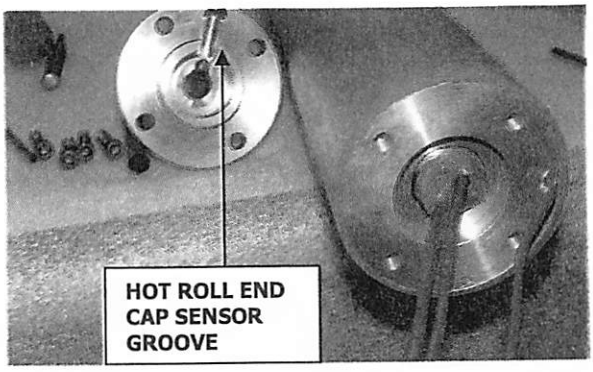
4) FROM CAB1 PLACE 4" OF 1/8" INSULATION TUBING (PRI162) ON THE SENSOR WIRES AND 4" OF 3/16" INSULATION TUBING (PRI165) ON EACH HEATER WIRE. SHRINK ALL THREE. BUNDLE WITH 4" OF 3/8" INSULATION TUBING (PRI164) AND SHRINK. REPLACE END CAP ALIGNING SENSOR WIRE WITH GROOVE.

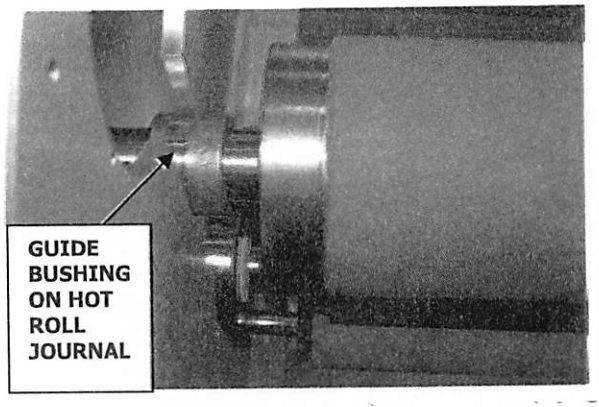
5) INSERT HOT ROLL OVER DRIVE ROLL WITH WIRES ON THE RIGHT SIDE PANEL.

6) SLIDE A HOT ROLL GUIDE BUSHING (EHR44 044.4) RACK 14 OVER EACH JOURNAL, ***THICK SIDE INBOARD***. LIFT THE JOURNAL END AND SLIDE THE



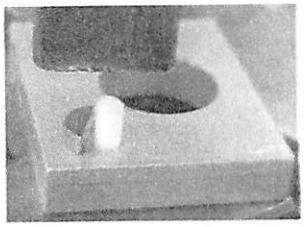


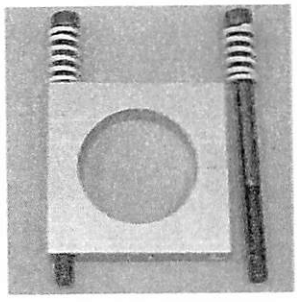


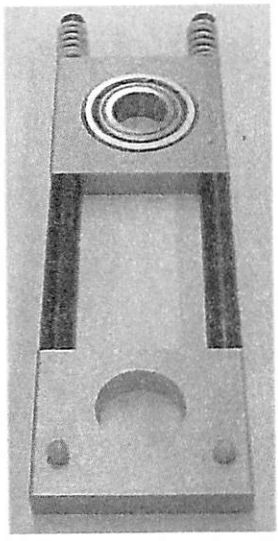


GUIDE BUSHING CHANNEL DOWN BETWEEN THE SIDE PANELS.

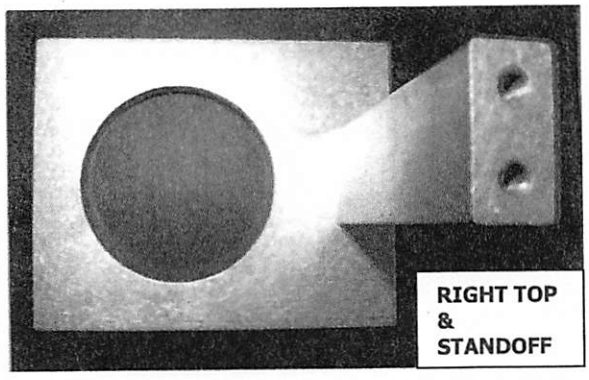
7) TO ASSEMBLE CONNECTING PLATES ARBOR PRESS (4) WHITE PLASTIC CONNECTING PLATE SPACERS (H850 044.4) RACK 8 INTO (2) BOTTOM CONNECTING PLATES (EP30 042.4B) RACK 8 DEPTH OF A M.161 WOODRUFF KEY SHOWING. THREAD IN (4) 5/16-18 X 1 SS INTO BOTTOM CONNECTING PLATES. LOCTITE THREADS, LEAVING ½ INCH OF THREADS SHOWING. LOCTITE SHOWING THREADS AND SECURE (4) CONNECTING PLATE SPACERS (EP30 043.4) RACK 8. TIGHTEN WITH CHANNEL LOCKS.





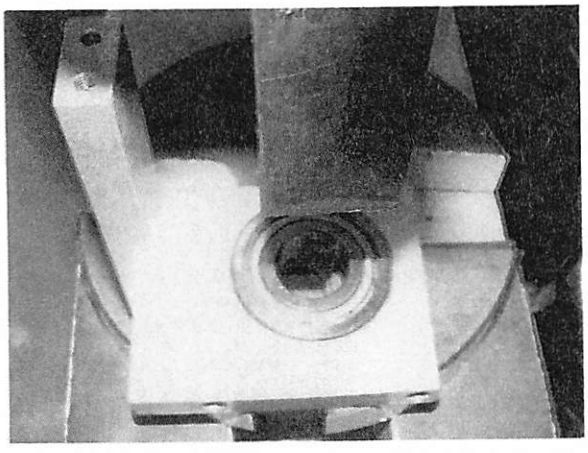


8) FOR *LEFT SIDE* ONLY, ARBOR PRESS 1640ZZ BALL BEARING (PRB087A) AS07 INTO TOP CONNECTING PLATE (EP30 042.4T) RACK 8 FLUSH ON *INNER* PLASTIC SPACER SIDE. RUN (2) 5/16-18 X 4 ½ SHCS WITH SPRING (PRS229) RACK 9 THROUGH TOP CONNECTING PLATE INTO CONNECTING PLATE SPACERS. TO SET PRESSURE, TIGHTEN ONE COMPLETE 360 DEGREE TURN AFTER SPRING IS TOUCHING SCREW HEAD AND CONNECTING PLATE.



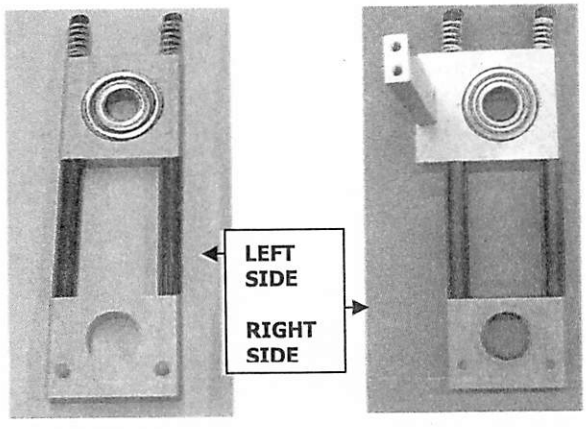
9) FOR *RIGHT SIDE* CONNECTING PLATE SECURE THE SLIP RING STANDOFF (EHR44 049.4A) RACK 14 TO THE TOP CONNECTING PLATE (EHR44 042.4TA) RACK 14 THROUGH THE COUNTERSUNK HOLES USING (2) 10-32 X 1 FH.

10) ARBOR PRESS A 1640ZZ BALL BEARING (PRB087A) AS07 INTO THE TOP RIGHT CONNECTING PLATE FROM THE STANDOFF SIDE, BEARING FLUSH ON *INWARD* SIDE, STANDOFF OUTWARD.



11) RUN (2) 5/16 -18 X 4 ½ SHCS EACH WITH A SPRING (PRS229) RACK 9 THROUGH RIGHT TOP CONNECTING PLATE INTO CONNECTING PLATE SPACERS. SET SPRING PRESSURE WITH ONE COMPLETE 360 DEGREE TURN AFTER SPRING TOUCHES SCREW HEAD.

12) ALIGN RUBBER ON DRIVE AND HOT ROLLS ON LEFT SIDE. ADD ANTI-SEIZE



TO CAM CIRCUMFERENCE AND SLIDE ON LEFT CONNECTING PLATE, PLASTIC SPACERS INWARD. SNUG BALL BEARING TO HOT ROLL BUSHING AND SECURE WITH 7/8 SPLIT SHAFT COLLAR (PRC112) RACK 2.

13) SNUG CAM FLUSH WITH BOTTOM CONNECTING PLATE. SLIDE A TEFLON WASHER (PRW337) RACK 8 ALONG CAM SHAFT AND SECURE BY CAM WITH ½" STOP COLLAR (PRC096) AS07. USE SAME PROCEDURE FOR RIGHT SIDE CONNECTING PLATE. THE STANDOFF WILL BE TOWARD THE LEFT/FRONT.

14) ON RIGHT SIDE HOT ROLL JOURNAL ADD THE SLIP RING DRIVER (EHR44 012.4A) RACK 14 FLUSH WITH END OF JOURNAL, NOTE CATCH NOTCH ON RIGHT. TIGHTEN ON FLAT OF JOURNAL WITH 10-32 X 3/8 SET SCREW.

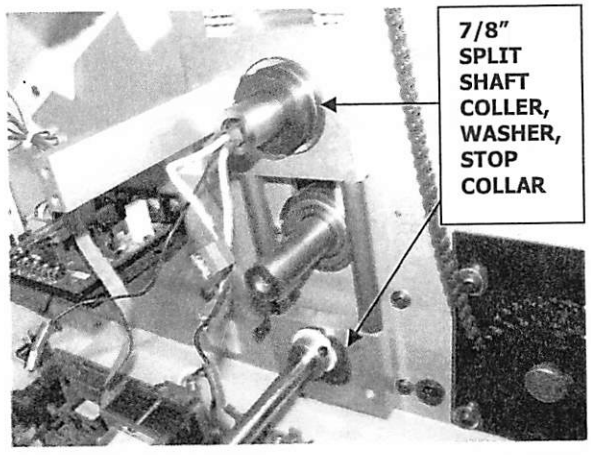
15) TERMINATE HEATER AND SENSOR WIRES TO 3 ½ INCHES PAST JOURNAL. ADD FLAG CONNECTORS TO HEATER WIRES AND SMALL FEMALES TO SENSOR WIRES.

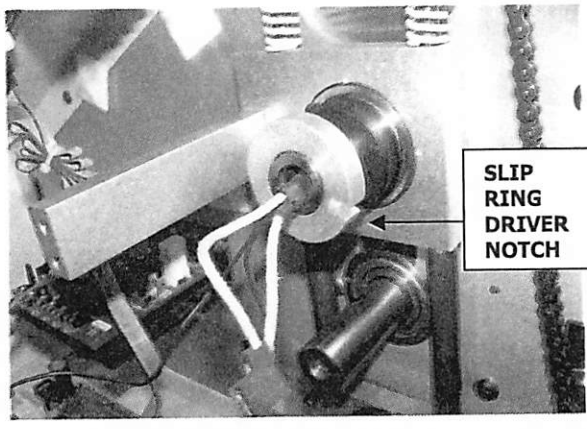
16) ARBOR PRESS A 1/8 X 2 SPRING PIN (.125JO032) AS13 INTO A SLIP RING DRIVER CLAMP (XL44 024.4) RACK 5. SLIDE THE SLIP RING DRIVER CLAMP ON THE *ROTATING HUB* OF THE SLIP RING MODEL (PRS001A) AS08. *SNUG* THE DRIVER CLAMP WITH A 8-32 X ¾ SHCS. DO NOT OVER TIGHTEN, AS IT WILL DAMAGE HUB.

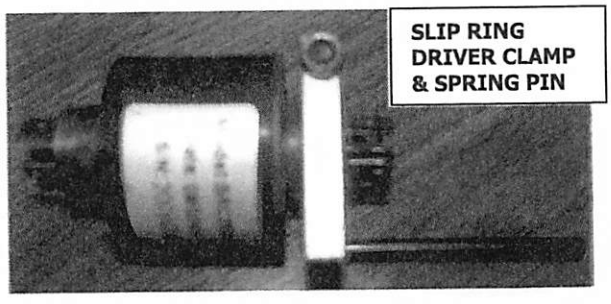
17) SLIDE THE SLIP RING MOUNTING CLAMP (XL44 022.4A) RACK 5 ONTO THE SLIP RING MODEL *STATIONARY HUB*. SNUG WITH A 10-32 X ¾ SHCS.

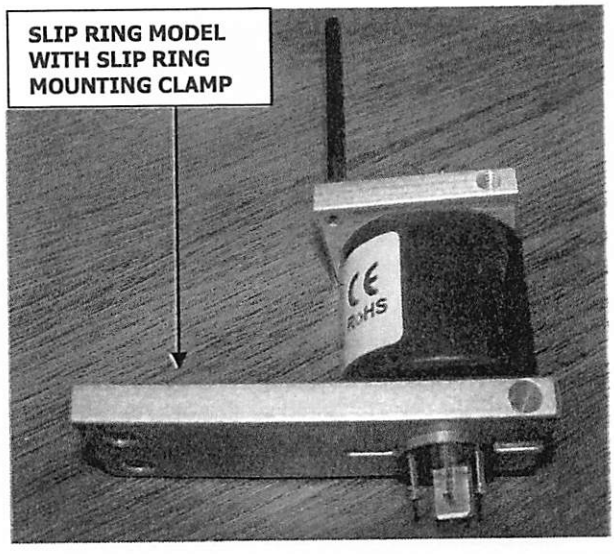
18) SECURE THE HOT ROLL SENSOR WIRE TERMINALS TO THE ROTATING SLIP RING HUB TERMINALS. SECURE THE HOT ROLL HEATER WIRES TO ROTATING HUB TERMINALS. FORM WIRES SO THEY WILL NOT WEAR WHILE ROTATING.

19) INSERT THE SPRING PIN INTO THE SLIP RING DRIVER NOTCH. ALIGN THE SLIP RING MOUNTING CLAMP WITH THE STANDOFF AND SECURE THE SLIP RING



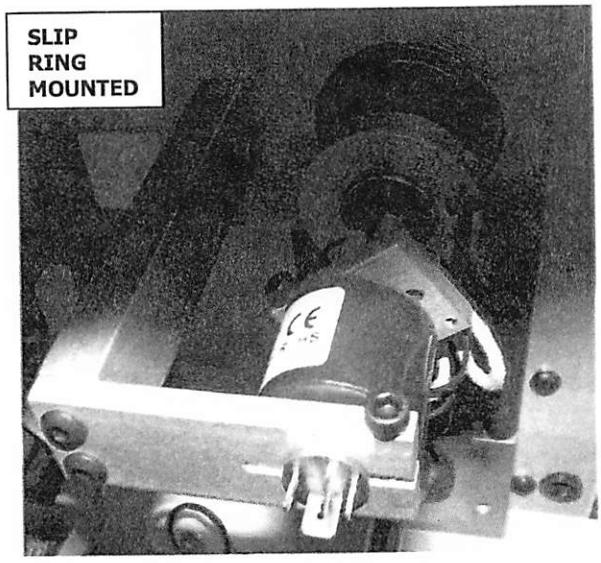


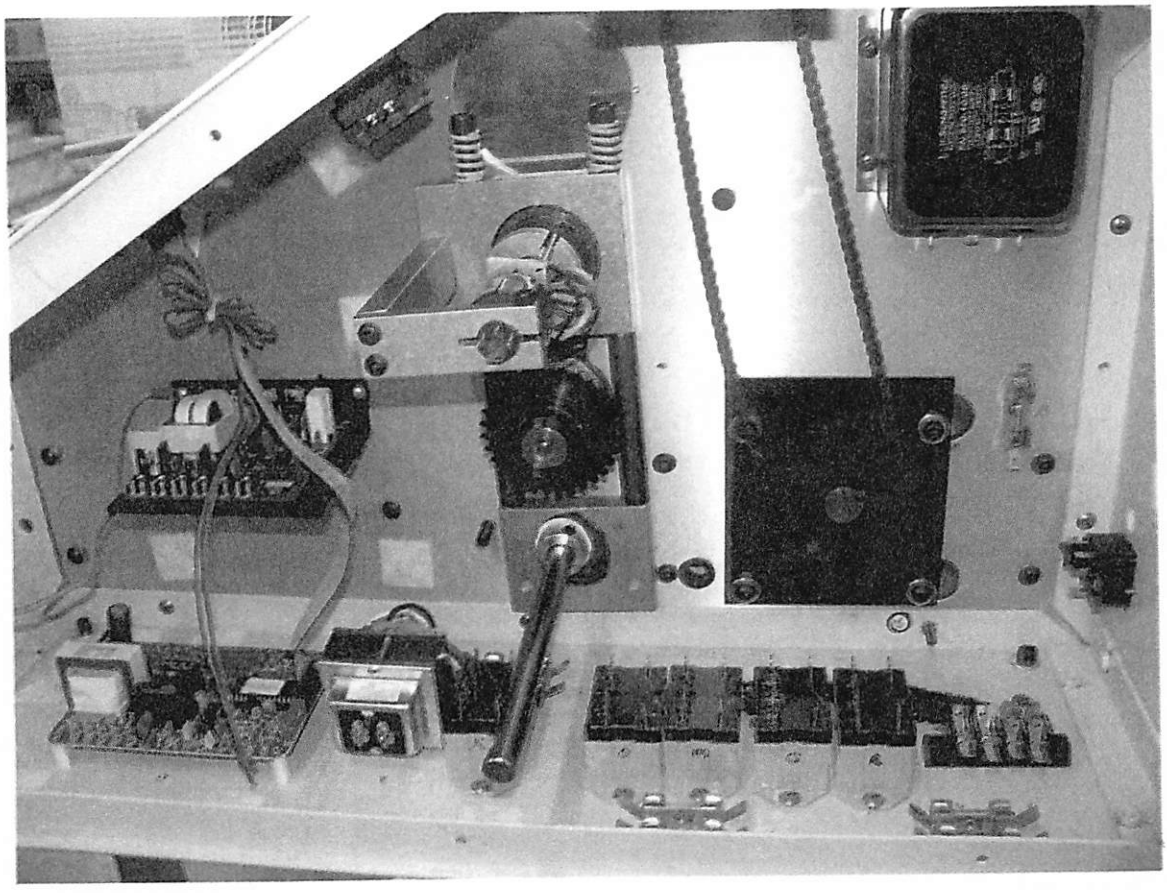




MOUNTING CLAMP TO THE STANDOFF WITH (2) 10-32 X ¾ BHCS.

20) MANUALLY ADVANCE THE HOT ROLL TO TEST SMOOTHNESS OF SLIP RING ROTATION. CHECK THAT WIRES HAVE NO INTERFERENCE DURING ROTATION.





EHR NRTL 220V SIGNMASTER WIRING

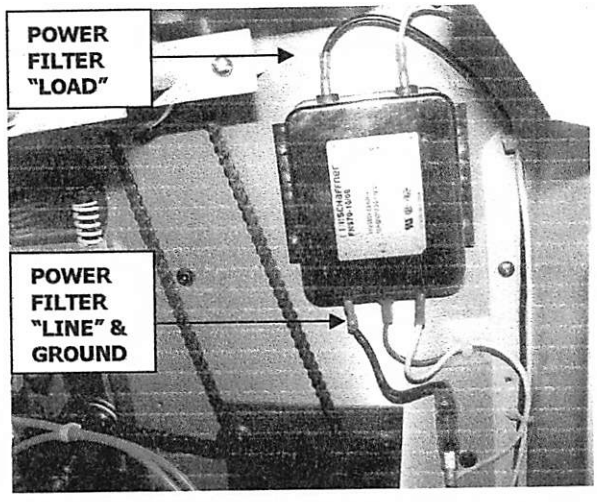
1) USE 14 GAUGE WIRES ON THE NRTL 220V SIGNMASTER POWER FILTER. THE POWER FILTER "LINE" TERMINAL POSTS FACE *DOWNWARD*. CONNECT THE 4" BLACK WIRE BETWEEN THE LOWER, INNER "P" POWER FILTER "LINE" TERMINAL POST AND THE UPPER 8 AMP FUSE POST. THE LOWER 8 AMP FUSE POST CONNECTS WITH 3" BLACK WIRE TO THE *UPPER, OUTWARD TERMINAL* ON THE POWER CORD RECEPTACLE. THE WHITE 12" "LINE" WIRE CONNECTS BETWEEN THE LOWER, REAR "N" POWER FILTER POST AND THE *MIDDLE, OUTER* POWER CORD RECEPTACLE POST. A 14" GREEN GROUND POWER FILTER WIRE CONNECTS BETWEEN THE MIDDLE "LINE" POST AND THE GROUND SCREW, ** *AFTER POWER CORD GROUND WIRE IS ON*. THEN USE A #8 STAR WASHER AND ANOTHER KEPS NUT. THE (2) "LOAD" TERMINAL POSTS FACE *UPWARD* ON THE SIDE PANEL. THE 18" BLACK AND WHITE "LOAD" WIRES WITH BLUE CONNECTORS CONTINUE TO THE REAR, INNER 180 DEGREE TERMINAL BLOCK POSTS, BLACK WIRE ON OUTER REAR.

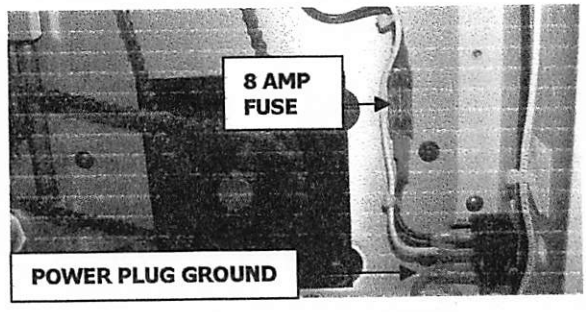
2) THE 4 ½" POWER RECEPTACLE GREEN GROUND WITH A (PRT343) FEMALE GOES TO HOUSING SCREW WITH A #8 STAR WASHER AND #8 KEPS HEX NUT.

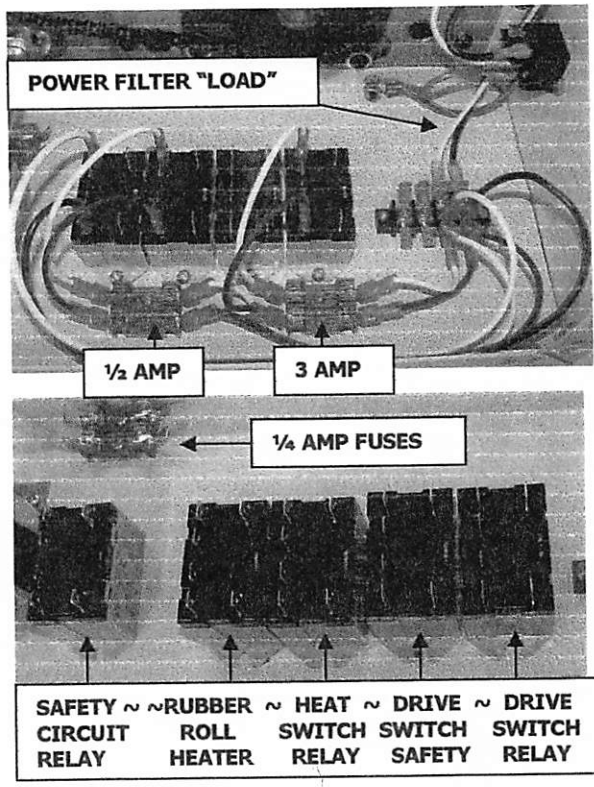
3) SEPARATE WIRES FROM A SEPARATE BAG IN THE EHR NRTL 220V HARNESS.

4) USE AN 18 GUAGE 3" WHITE WIRE BETWEEN THE OUTER MIDDLE, REAR 180 DEGREE TERMINAL BLOCK POST AND INNER, REAR 3 AMP FUSE. CONNECT A 3" BLACK WIRE BETWEEN THE OUTER, REAR 180 DEGREE TERMINAL BLOCK POST AND OUTER, REAR 3 AMP FUSE.

5) USE AN 18 GAUGE 9 ½" WHITE WIRE BETWEEN INNER, REAR ½ AMP FUSE AND OUTER, MIDDLE, REAR 45 DEGREE TERMINAL BLOCK POST. CONNECT A 9" BLACK WIRE BETWEEN OUTER, REAR ½







AMP FUSE AND OUTER, REAR 45 DEGREE TERMINAL BLOCK POST.

6) FROM THE RUBBER ROLL HEATER RELAY LOCATED IN THE FRONT GROUP OF FOUR RELAYS, CONNECT 14 GAUGE, 18" WHITE WIRE BETWEEN RELAY #2 AND TERMINAL BLOCK OUTER, MIDDLE, REAR 90 DEGREE POST. CONNECT 14 GAUGE, 18" BLACK WIRE BETWEEN RELAY #8 AND THE OUTER, REAR 90 DEGREE POST.

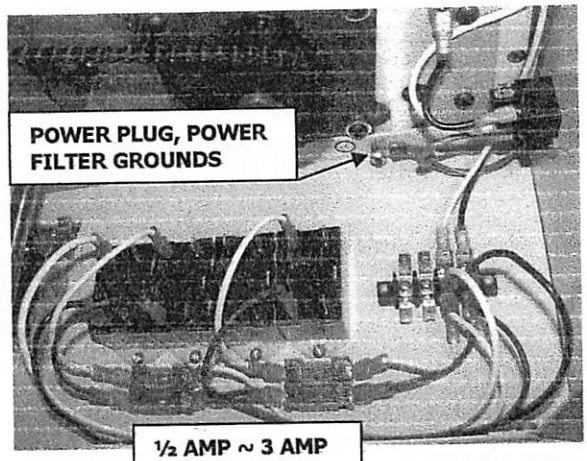
7) RIGHT OF RUBBER ROLL HEATER RELAY IS THE HEAT SWITCH RELAY. USE AN 18 GAUGE, 6" WHITE WIRE BETWEEN RELAY #2 AND THE INNER, FRONT ½ AMP FUSE. CONNECT A 5" BLACK WIRE BETWEEN THE HEAT SWITCH RELAY #8 AND THE OUTER, FRONT ½ AMP FUSE.

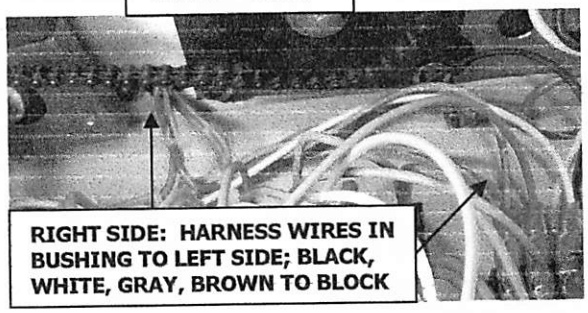
8) FROM THE DRIVE SWITCH RELAY *IN THE REAR*, CONNECT AN 18 GUAGE 6" WHITE WIRE BETWEEN RELAY #2 AND INNER, FRONT 3 AMP FUSE POST. CONNECT A 5" BLACK WIRE BETWEEN RELAY #8 AND OUTER, FRONT 3 AMP FUSE POST.

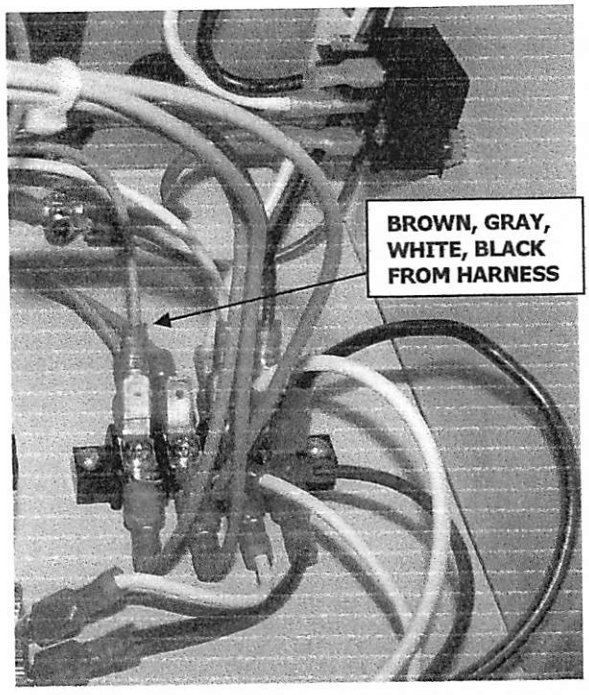
9) LAY EHR NRTL 220V WIRING HARNESS (PRW356B) RACK 14 IN THE RIGHT HOUSING. INSERT THE (3) MOTOR WIRES (BROWN, BLUE AND GREEN) WITH THE LONG BROWN AND RED WIRES THROUGH SNAP BUSHING UNTIL REACHING GROUND BUNDLE. CONTINUE THE BROWN AND RED WIRES THROUGH THE RACEWAY TO LEFT SIDE.

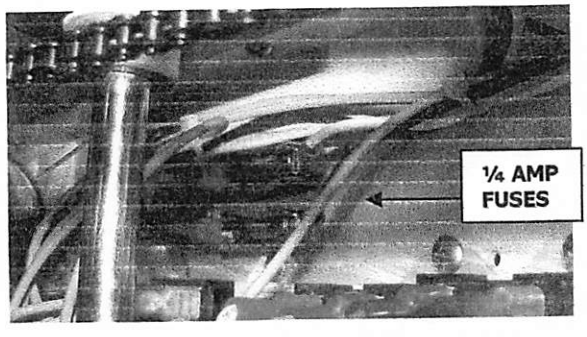
10) CONNECT REAR HARNESS BUNDLE TO TERMINAL BLOCK POSTS: BLACK TO INNER, REAR 45 DEGREE POST CONTINUING TO OUTER, REAR ¼ AMP FUSE. CONNECT WHITE WIRE TO INNER, MIDDLE, REAR 45 DEGREE POST CONTINUING TO INNER, REAR ¼ AMP FUSE. CONNECT BROWN TO INNER, MIDDLE, FRONT 180 DEGREE POST AND CONNECT (2) GRAY WIRES TO INNER, FRONT 180 AND 45 DEGREE POSTS.

11) THE GROUND SCREW HAS AN #8 STAR WASHER, THE POWER PLUG GROUND WITH A #8 KEPS HEX NUT. ANOTHER #8 STAR WASHER, POWER FILTER GROUND AND MOTOR GROUND WIRE WITH A SECOND KEPS HEX NUT.









12) THE TRANSFORMER IS LOCATED IN THE BOTTOM HOUSING WITH THE WHITE AND BLACK WIRES RACING THE SIDE PANEL. MAKING A COMFORTABLE LOOP WITH THESE WIRES AND TERMINATE THEM WIRES WITH RED INSULATED FEMALE CONNECTORS (PRT330). SECURE THE TRANSFORMER WIRES ON THE FRONT POSTS OF THE ¼ AMP FUSE, WITH THE WHITE WIRE INWARD BY THE PANEL AND BLACK WIRE OUTWARD.

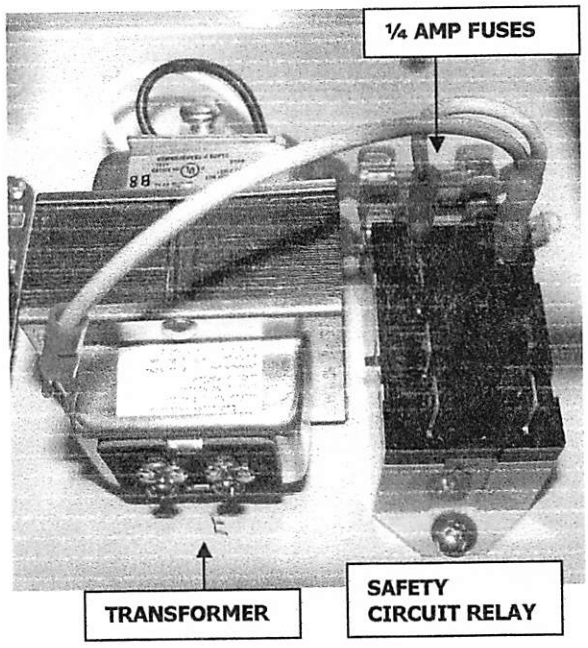
13) FROM A SEPARATE BAG IN THE EHR220V HARNESS, TAKE THE GRAY WIRE WITH A 6" FORKED END, DOUBLED WITH A BLUE FIF AND A 4" JUMPER WITH A RED FEMALE. CONNECT THE FORKED GRAY WIRE UNDER THE FRONT/LEFT TRANSFORMER SCREW. CONNECT THE DOUBLED BLUE FEMALE TO THE SAFETY CIRCUIT RELAY #0. CONNECT THE GRAY JUMPER WITH THE RED FEMALE TO THE SAFETY CIRCUIT RELAY #2.

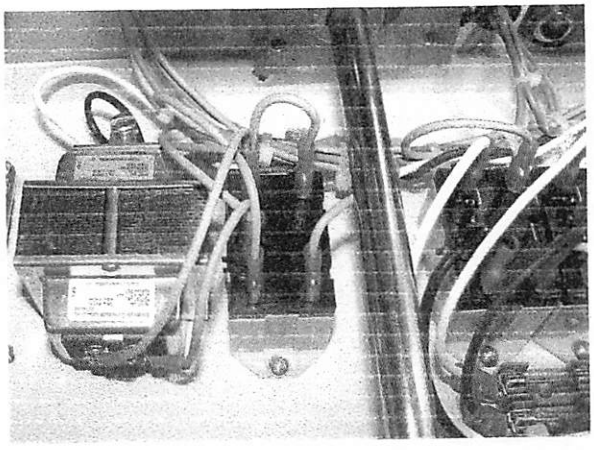
14) FROM THE HARNESS WHICH RUNS ALONG THE INNER HOUSING, CONNECT THE BROWN WIRE WITH A FORKED CONNECTOR UNDER THE OUTER RIGHT/REAR TRANSFORMER SCREW. THE BROWN FORKED WIRE DOUBLES WITH A BLUE CONNECTOR AND ANOTHER BROWN HARNESS WIRE. CONNECT THIS DOUBLED BROWN WIRE TO THE SAFETY CIRCUIT RELAY, RIGHT OF THE TRANSFORMER, ON RELAY #8. THE LONG END OF THE DOUBLED BROWN WIRE RUNS ACROSS THE INNER HOUSING, THROUGH BUSHING AND RACEWAY TO THE LEFT SIDE FRONT EMERGENCY STOP SWITCH.

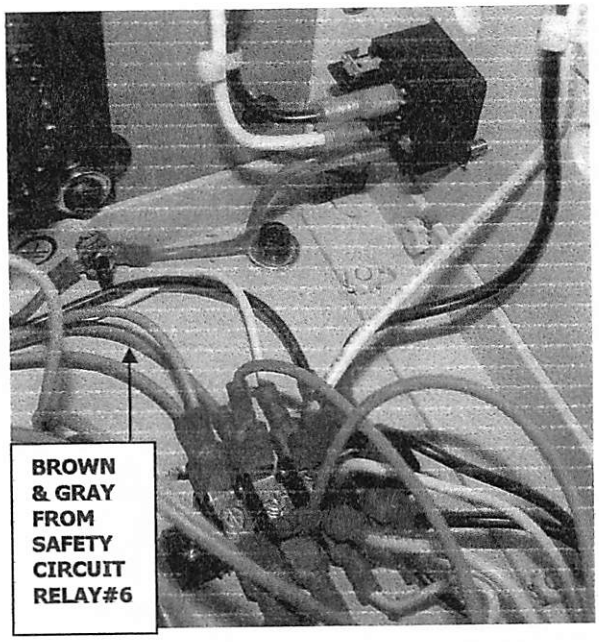
15) THE BROWN HARNESS WIRE WITH A RED FEMALE CONNECTOR IN THE SAFELTY CIRCUIT RELAY BUNDLE CONNECTS BETWEEN SAFETY CIRCUIT RELAY #6 AND INNER TERMINAL BLOCK.

16) ON THE SAFETY CIRCUIT RELAY #4 TERMINATE GRAY HARNESS WIRE THAT CONTINUES TO INNER, FRONT TERMINAL BLOCK.

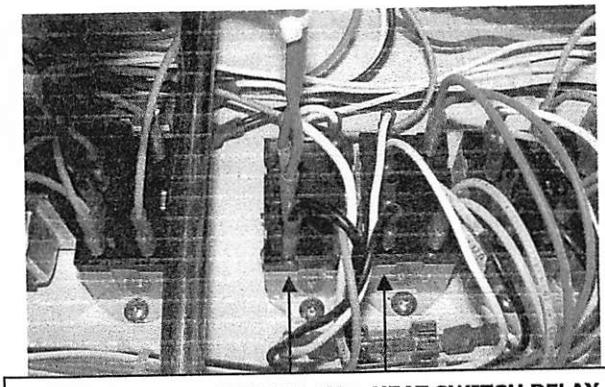
17) SAFETY CIRCUIT RELAY #1 HAS BROWN WIRE TO RIGHT EMERGENCY STOP.





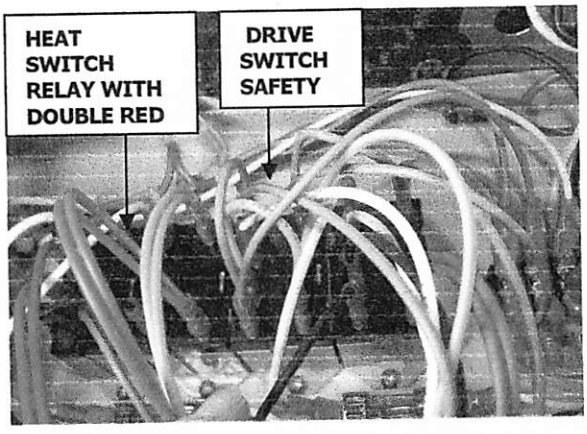


18) FOLLOWING THE SAFETY CIRCUIT RELAY IS THE RUBBER ROLL HEATER RELAY, WHICH ALREADY HAS HAD SOME BLACK AND WHITE WIRES CONNECTED TO IT. WIRE THE REMAINING RUBBER ROLL HEATER RELAY TERMINAL POSTS: GRAY ON RELAY #0 TO TERMINAL BLOCK, BROWN ON #1 TO HEAT BOARD T7, BLACK 14 GAUGE ON #8, RED FROM HEATER SLIP RING ON #4 AND #6, AND WHITE 14 GAUGE ON #2.

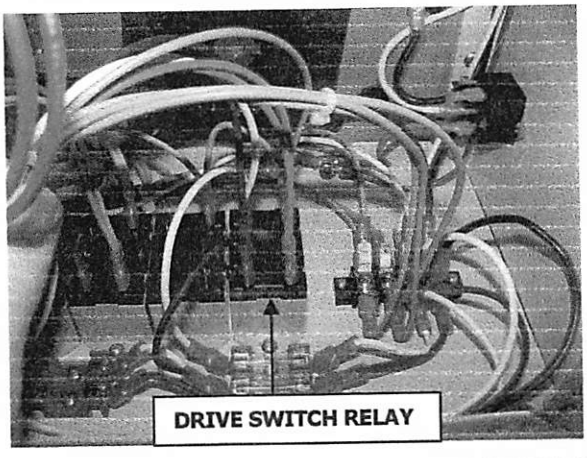


RUBBER ROLL HEATER RELAY ~ HEAT SWITCH RELAY

19) RIGHT OF THE RUBBER ROLL HEATER RELAY IS THE HEAT SWITCH RELAY, ALREADY WITH A BLACK AND WHITE WIRE TO THE ½ AMP FUSES. WIRE THE HEAT SWITCH RELAY: DOUBLE RED WIRES ON #1 TO HEAT SWITCH, DOUBLE ORANGE WIRES ON #0 TO HEAT SWITCH, WHITE ON #2, WHITE ON #4 TO HEAT BOARD T4, BLACK ON #6 TO HEAT BOARD T1, AND BLACK ON #8.

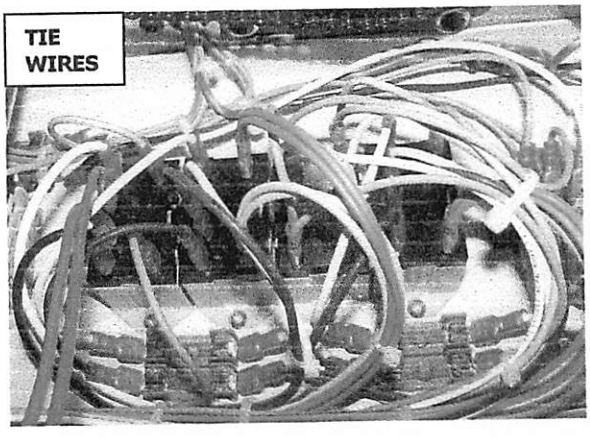


20) RIGHT OF THE HEAT SWITCH RELAY IS THE DRIVE SWITCH SAFETY RELAY. WIRE THE DRIVE SWITCH SAFETY RELAY: DOUBLE GRAY JUMPER FROM DRIVE SWITCH RELAY ON #0, WITH GRAY JUMPER CONTINUING TO OUTER FRONT 45 DEGREE TERMINAL BLOCK POST. DOUBLE ORANGE WITH JUMPER ON #1, ORANGE JUMPER END ON #6. DOUBLE BROWN, FRONT HARNESS WIRE WITH JUMPER ON #8 WITH LONG END TO TERMINAL BLOCK. ANOTHER DOUBLED BROWN JUMPER ON #2 WITH THE FINAL JUMPER ON TERMINAL BLOCK POST. THE YELLOW HARNESS WIRE CONNECTS TO RELAY #4 CONTINUING TO DRIVE SWITCH.

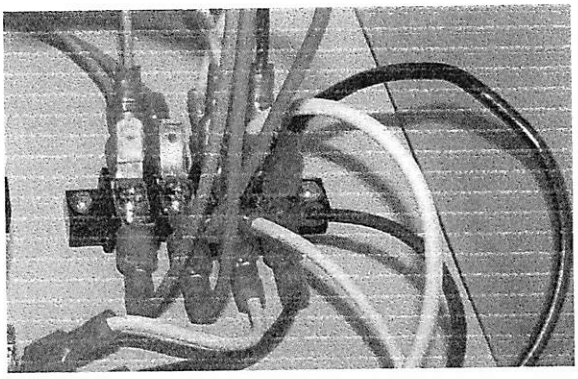


21) THE REAR RELAY IS THE DRIVE SWITCH RELAY, WHICH ALREADY HAS #2 WHITE AND #8 BLACK WIRES TO THE 3 AMP FUSES. TERMINATE HARNESS WHITE WIRE ON #4, BLACK WIRE ON #6, AND THE DOUBLE BLUE WIRES ON #1 TO DRIVE SWITCH. CONNECT THE DOUBLE GRAY WITH JUMPER ON #0.

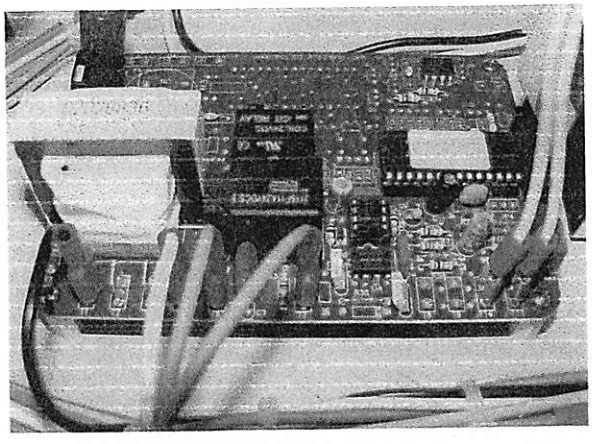
22) FINISH WIRING THE TERMINAL BLOCK. FROM THE END OF THE HARNESS WHICH RUNS TOWARD THE REAR HOUSING, BETWEEN THE LIP AND THE FUSES, THAT



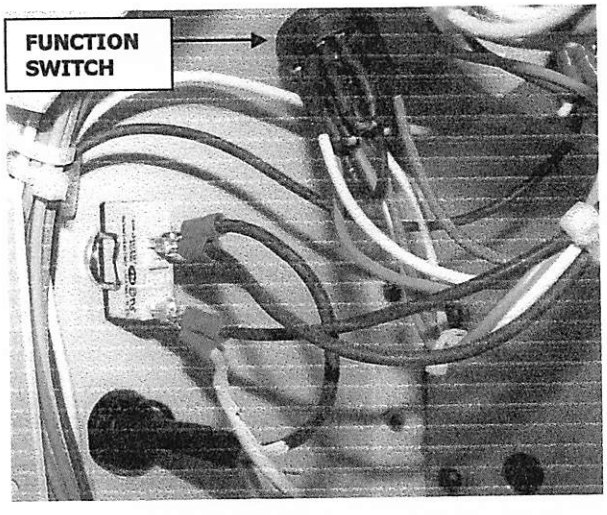
IS BUNDLED WITH THE RELAY WIRES, CONNECT ONE BROWN WIRE TO THE OUTER, FRONT, MIDDLE 90 DEGREE TERMINAL BLOCK POST. CONNECT THE SECOND BROWN WIRE TO THE OUTER, MIDDLE, FRONT 45 DEGREE POST ABOVE IT. CONNECT THE GRAY WIRE TO THE OUTER, FRONT 180 DEGREE TERMINAL BLOCK POST.



23) FROM THE FRONT HARNESS, ALONG THE OUTER HOUSING FINISH WIRING THE HEAT BOARD. TERMINATE A BROWN WIRE ON T6 WHICH CONTINUES TO THE MIDDLE, FRONT TERMINAL BLOCK POST. T7 BROWN TO RELAY. T4 WHITE TO RELAY AND T1 BLACK RELAY. THE YELLOW WIRES FROM THE SLIP RING SENSOR CONNECT TO T10 AND T11.

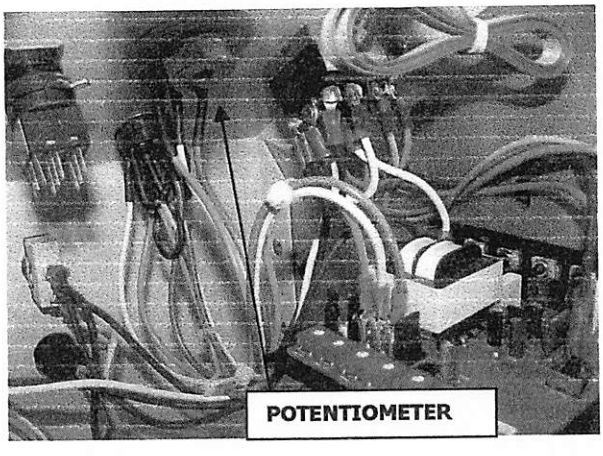


24) REMOVE THE HEX NUT ON THE FUNCTION SWITCH, WHILE HOLDING THE TOOTHED WASHER IN PLACE. SECURE THE FUNCTION SWITCH TO THE HOUSING BY TURNING THE STEM *FULL CLOCKWISE* AND INSERTING THE STEM THROUGH THE HOUSING, WITH THE FLAT STEM SIDE FACING UPWARD OVER THE "VARIABLE" POSITION ON THE OUTER LABEL. *BE CAREFUL SILVER NOTCH KEEPER DOES NOT FALL OUT*. RETHREAD THE HEX NUT AND TIGHTEN WITH WRENCH, KEEPING FLAT SIDE UPWARD.

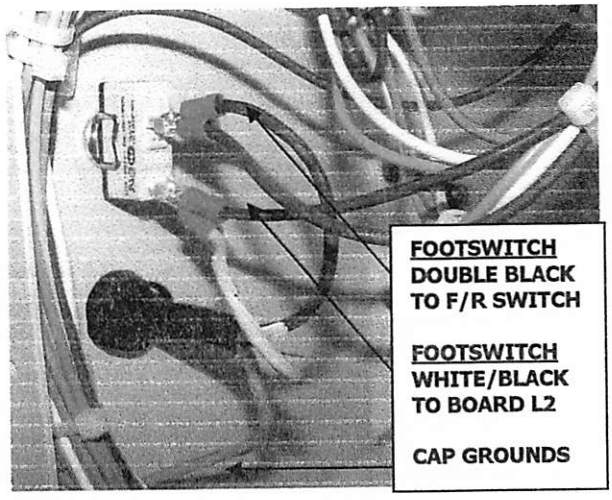


25) CUT OFF THE EXTRA FUNCTION SWITCH STEM, LEAVING ABOUT ½" AND SECURE A KNOB (PRM221A) AS08 ONTO THE REMAIN FUNCTION SWITCH STEM.

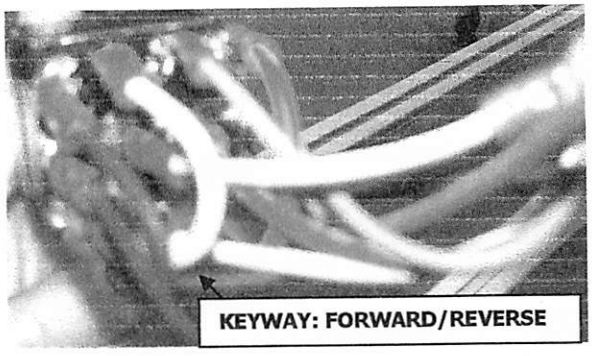
26) PLACE THE FIBER WASHER ON THE POTENTIOMETER STEM AND INSERT THE STEM INTO THE HOUSING, AFTER BREAKING OFF THE TAB. ORIENT POTENTIOMETER WITH THE WIRES FACING *DOWNWARD*. ON THE OUTER HOUSING, SECURE THE THREADS WITH THE TOOTHED WASHER AND HEX NUT.

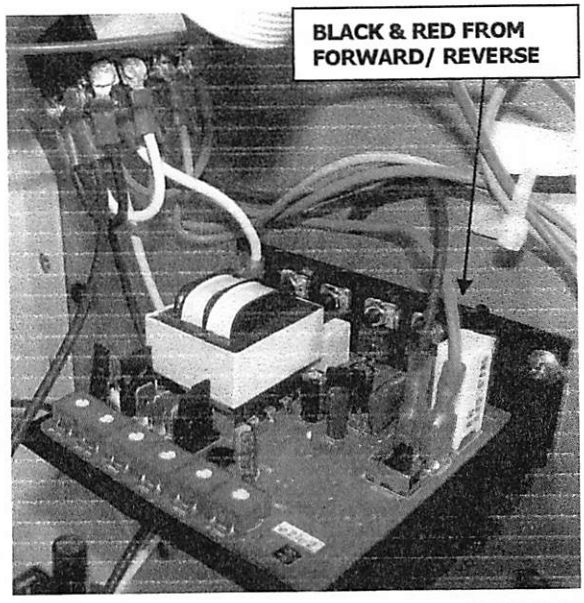


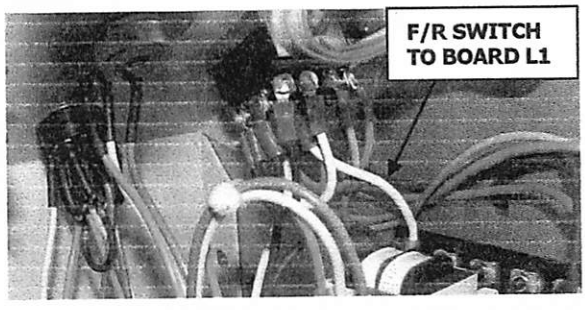
27) THE BLACK AND WHITE WIRES FROM THE FOOTSWITCH ARE TRIMMED TO REACH THE DRIVE/TOGGLE SWITCH POSTS AND CRIMPED WITH RED RING CONNECTORS. THE WHITE FOOTSWITCH WIRE SECURES TO THE LOWER DRIVE/TOGGLE SWITCH SCREW *ALONG WITH A 10" BLACK RING WIRE* THAT HAS A RED RING AND A RED FIF CONNECTOR. CONTINUE THE 10" BLACK WIRE TO SPEED BOARD L2. THE BLACK FOOTSWITCH WIRE SECURES TO THE UPPER/MIDDLE DRIVE/TOGGLE SWITCH SCREW *ALONG WITH A 10" BLACK WIRE WITH RINGS ON BOTH ENDS*. CONTINUE THE BLACK 10" WIRE TO THE OUTER POST BETWEEN THE BLACK JUMPERS ON THE FORWARD/REVERSE SWITCH. CLEAR CAP (PRT289) THE GREEN GROUND FOOTSWITCH WIRE TO THE OPEN ENDED GREEN HARNESS WIRE. SECURE THE OTHER GROUND END TO SIDE PANEL GROUND SCREW.



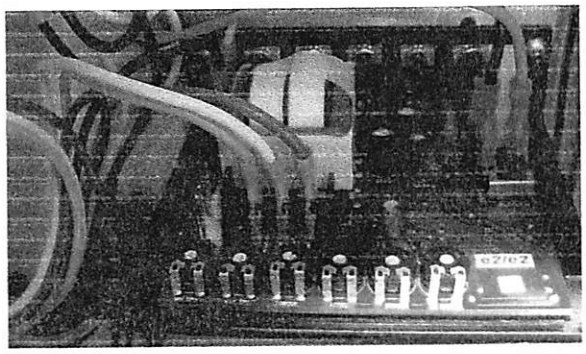
28) FINISH WIRING THE PARTIALLY ASSEMBLED 4 POLE DOUBLE THROW FORWARD/REVERSE SWITCH WITH THE (4) 3" JUMPERS FIRST. ORIENT THE SWITCH WITH THE *KEYWAY UPWARD*. THE DOUBLED WIRES WILL FACE DOWNWARD. CONNECT: BLACK JUMPER FROM THE OUTER TOP WITH BLACK HARNESS RING WIRE FROM DRIVE SWITCH RELAY #6 TO BOTTOM CORNER SCREW. CONNECT: WHITE JUMPER FROM TOP WITH WHITE HARNESS RING WIRE FROM DRIVE SWITCH RELAY #4 TO BOTTOM INWARD SCREW BESIDE THE BLACK JUMPER. CONNECT: BROWN JUMPER FROM TOP SCREW BY WHITE JUMPER WITH 7" BLACK RING AND FEMALE ENDED WIRE TO BOTTOM CORNER SCREW, CONTINUE THE FEMALE END TO MOTOR BOARD A2. CONNECT: BLUE JUMPER FROM TOP CORNER SCREW WITH 7" RED RING AND FEMALE WIRE TO SCREW BETWEEN WHITE AND BROWN JUMPER ON THE BOTTOM, TERMINATE RED WIRE ON BOARD A1. TERMINATE THE FEMALE END OF THE 4" WHITE WIRE ON INWARD POST WITH MOTOR BOARD L1. THE DRIVE/TOGGLE SWITCH 10" BLACK WIRE IS BETWEEN BLACK JUMPERS ON





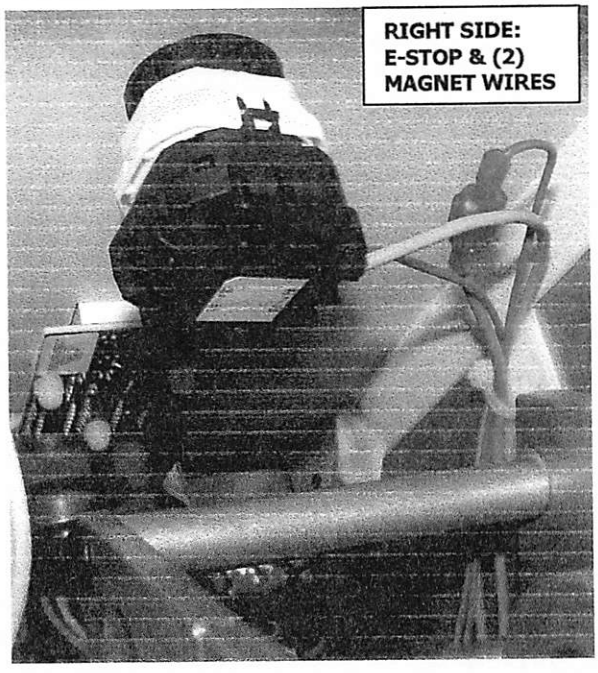


END. THE HARNESS BROWN WIRE WITH RING CONNECTOR FROM THE MOTOR TERMINATES ON END POST BETWEEN BLUE AND BROWN CORNER JUMPERS. THE HARNESS BLUE WIRE WITH RING CONNECTOR FROM THE MOTOR CONNECTS TO INNER POST BESIDE INNER WHITE WIRE.



29) CONNECT THE (3) <u>POTENTIOMETER</u> WIRES TO THE SPEED MOTOR BOARD: ORANGE WIRE ON S3, YELLOW WIRE ON S2 AND GRAY WIRE ON S1.

30) WIRE THE RIGHT SIDE <u>EMERGENCY STOP SWITCH</u> BY CONNECTING AN OPEN ENDED RED PROXIMITY SWITCH MAGNET WIRE AND AN OPEN ENDED BROWN HARNESS WIRE TO THE INNER E-SWITCH SCREWS.

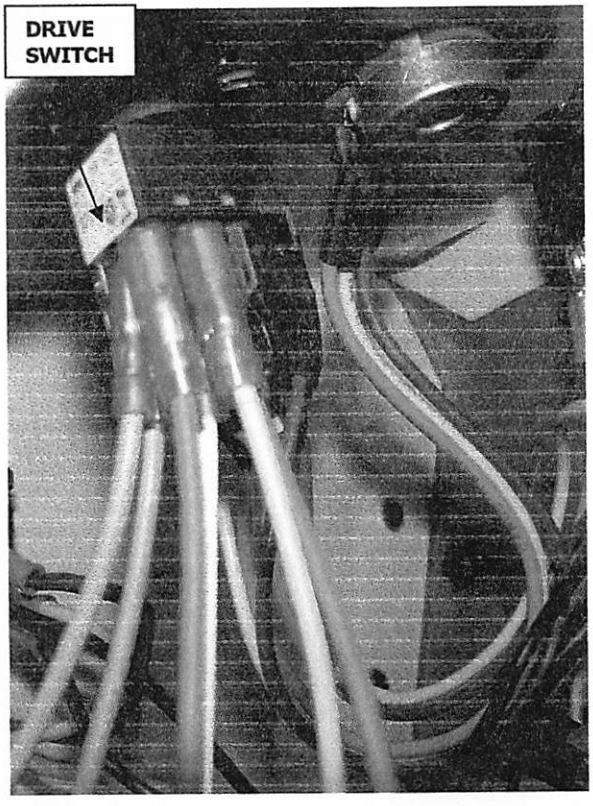


31) THE CRIMP A RED FEMALE (PRT331) ONTO THE SECOND RED PROXIMITY SWITCH MAGNET WIRE AND UNITE IT WITH A RED HARNESS WIRE HAVING A MALE END. THESE WIRES ARE SECURED TO THE SIDE PANEL WITH A PRESS CLIP AND CABLE TIE.

32) WIRE THE <u>RED POSITIVE HEAT SWITCH</u> WHICH IS LOCATED OUTWARD FROM THE SLAVE BOARD, ORIENTED WITH THE PRINTING ON THE SWITCH FACING *OUTWARD* AND THE "TOP" INDICATION *UPWARD*: USE THE LONGER WIRES WHEN DUPLICATE COLORS OCCUR. THE TOP INNER POST IS EMPTY, THE MIDDLE INNER POST IS ORANGE. THE LOWER INNER POST IS BROWN. THE TOP MIDDLE POST IS EMPTY, THE CENTER POST IS RED, THE LOWER MIDDLE POST IS GRAY. THE TOP OUTER POST IS ORANGE, THE MIDDLE OUTER POST IS RED AND THE LOWER OUTER POST IS EMPTY.

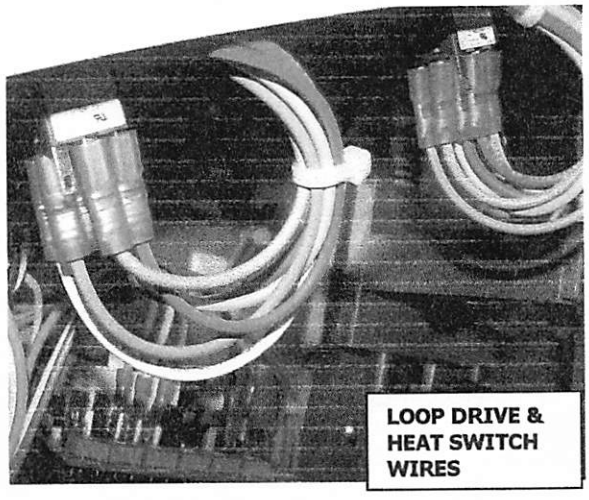


33) WIRE THE GREEN DRIVE SWITCH WITH THE "TOP" INDICATION *UPWARD* AND THE PRINTING *OUTWARD*: THE INNER TOP POST IS EMPTY, THE MIDDLE INNER POST IS BLUE, THE LOWER INNER POST IS YELLOW. THE TOP MIDDLE POST IS ORANGE, THE CENTER POST IS EMPTY, THE MIDDLE LOWER POST IS BROWN. THE TOP OUTER POST IS BLUE, THE MIDDLE OUTER POST IS GRAY AND THE LOWER OUTER POST IS EMPTY.



34) LOOP THE LONGER HEAT SWITCH WIRES DOWNWARD AND TOWARD THE REAR, THEN BACK TOWARD THE FRONT ALONG THE OUTER HOUSING LIP. SECURE WITH PRESS CLIPS AND CABLE TIES.

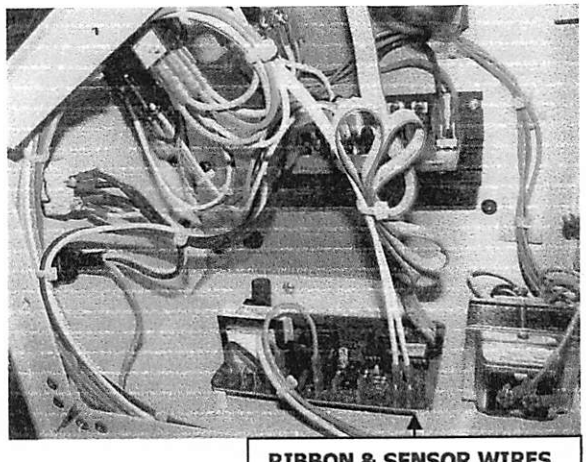
35) LOOP THE DRIVE SWITCH WIRES DOWN AND TOWARD THE REAR, THEN BACK TOWARD THE FRONT ALONG OUTER HOUSING LIP. SECURE WITH PRESS CLIPS AND CABLE TIES.



36) WIRE THE OUTER SLIP RING SENSOR AND HEATER TERMINAL POSTS. CONNECT THE (2) 20" 18 GAUGE YELLOW WIRES FIRST, TO THE SMALLER SLIP RING TERMINAL POSTS. THE YELLOW WIRES CONTINUE TO THE HEAT BOARD T10 AND T11. SECURE THE YELLOW WIRES TO THE UPPER HOUSING USING A PRESS CLIP AND CABLE TIE LOCATED UPWARD FROM THE HEAT BOARD CONNECTION. CONNECT THE 14" RED 14 GAUGE WIRES WITH FLAG CONNECTORS TO THE LARGER SLIP RING POSTS. THE RED SLIP RING WIRES CONTINUE TO THE RUBBER ROLL HEATER RELAY AND CONNECT ON #4 AND #6. USE CABLE TIES TO SECURE WIRES.

37) SNAP THE GRAY RIBBON CABLE FROM THE SLAVE BOARD INTO THE CONNECTION ON THE HEAT BOARD.

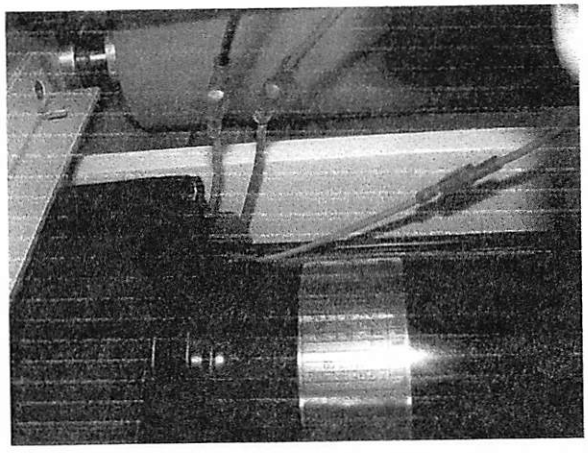
38) RUN THE LONG BROWN AND RED WIRES THROUGH THE RACEWAY, EXITING THE



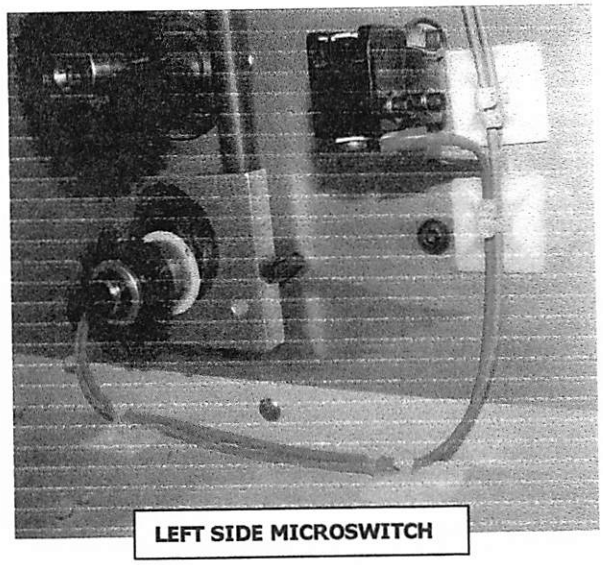
LEFT SIDE BUSHING. CONNECT THE (3) MOTOR WIRES, WITH HARNESS GREEN BLUE AND BROWN WIRES: GREEN TO GREEN; BLUE TO RED AND BROWN TO BLACK. THE MOTOR WIRE COLOR VARIES WITH MANUFACTURER. TUCK WIRES AND CONNECTORS INTO THE RACEWAY AND SNAP RACEWAY SHUT.

39) LEFT SIDE NRTL SIGNMASTER HARNESS HAS FORKED CONNECTORS ON THE RED AND BROWN WIRES TO FIT UNDER THE OUTER (2) LEVER TYPE MICROSWITCH SCREWS. CONNECT THE RED WIRE TO THE OUTER SCREW AND THE BROWN WIRE TO THE MIDDLE SCREW.

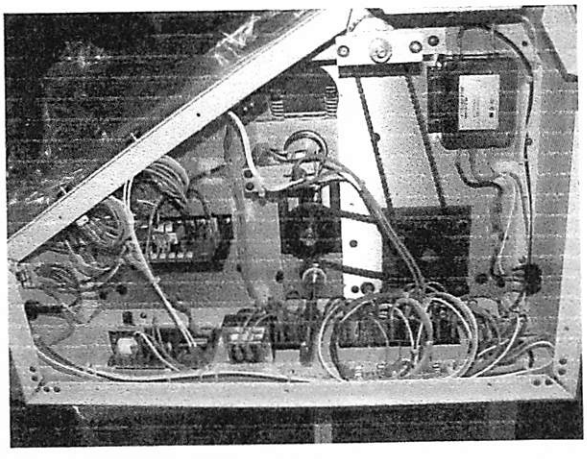
40) THE REMAINING OPEN ENDED BROWN WIRES CONNECT UNDER THE OUTER E-STOP SCREWS, IN THE FRONT OF THE LEFT HOUSING. SECURE WIRES WITH PRESS CLIPS AND CABLE TIES.

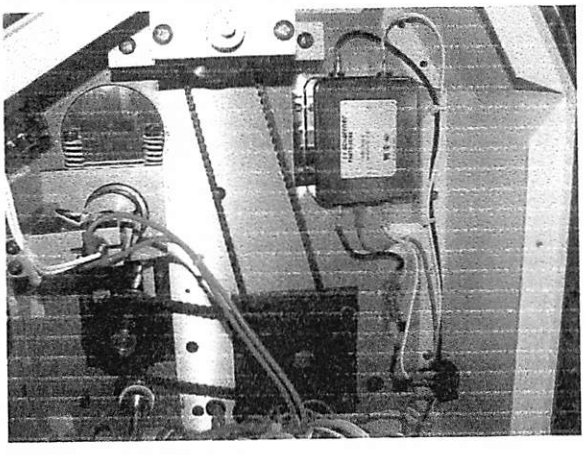


MOTOR WIRES: BLK/BRW, RED/BLU, GR/GR

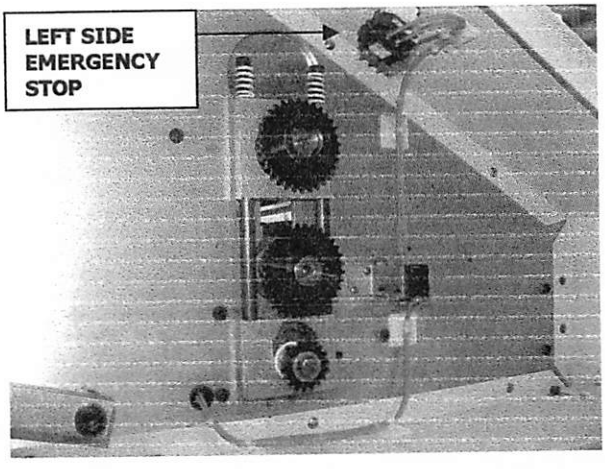


LEFT SIDE MICROSWITCH





LEFT SIDE EMERGENCY STOP



EHR 220V SIGNMASTER
TESTING PROCEDURES

1) THE SAFETY SHIELD AND FEEDTABLE MUST BE IN PLACE TO ACTIVATE LEVER TYPE MYCROSWITCH AND PROXIMITY SWITCH MAGNETS BEFORE STARTING. EXTRA STICK ON MAGNETS MAY BE USED FOR TESTING PURPOSES.

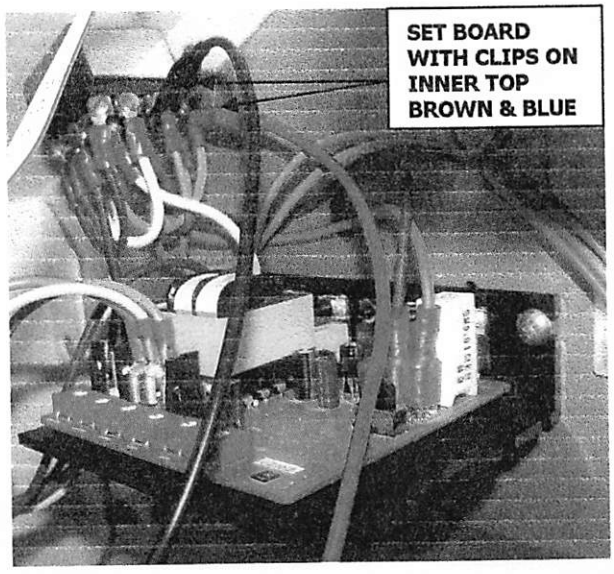
2) CHECK THAT ALL SWITCHES ARE OFF. PLUG IN MACHINE. YOU WILL HEAR RELAYS CLICK. TURN ON SWITCH BY POWER PLUG.

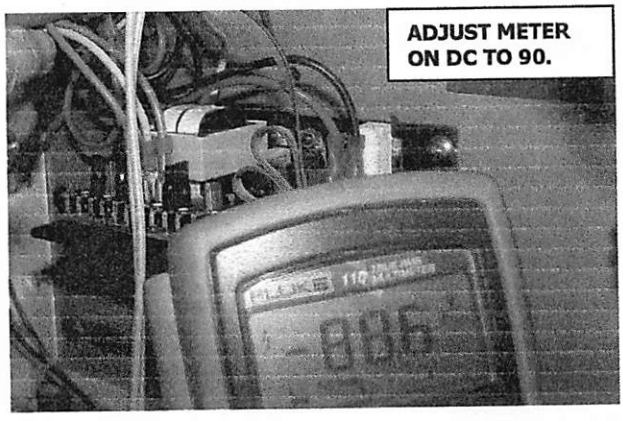
3) DEPRESS HEAT ON/OFF BUTTON. HOLD RED PUSHBUTTON ON SLAVE BOARD DOWN, IT SHOULD STOP AT 400 DEGREES. DECREASE TEMPERATURE TO 150 DEGREES BY HOLDING DOWN BLUE SLAVE BOARD PUSHBUTTON. RELEASE BUTTON AT 150, LET MACHINE WARM.

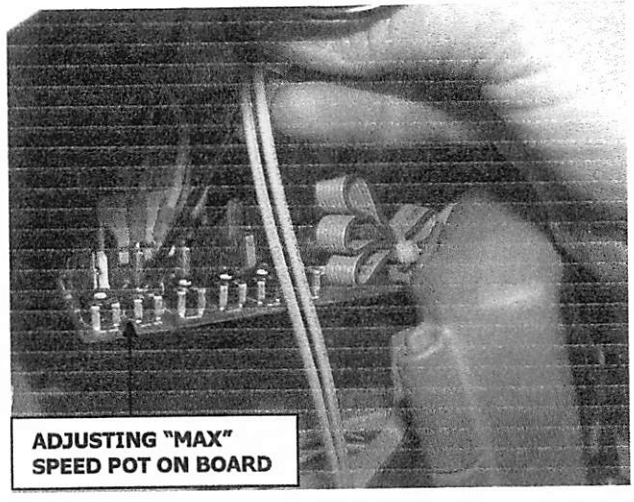
4) CHECK ROLL MOVEMENT DIRECTION AND SPEED IN EACH MODE. ***ALWAYS*** TURN DRIVE SWITCH OFF WHEN CHANGING MODE.

5) TO SET MAXIMUM SPEED: MODE FOOT SWITCH ON, DRIVE SWITCH OFF, POTENTIOMETER ON ZERO, FUNCTION SWITCH IN VARIABLE POSITION. CONNECT ALLEGATOR CLIPS TO FORWARD REVERSE SWITCH UPPER, INWARD BLUE AND BROWN WIRES. CONNECT TO VOLT METER LEADS. TURN ON DRIVE SWITCH, INCREASE POTENTIOMETER TO FULL. SET VOLT METER ON DC. OPTIMUM READING IS 90. VOLT, ACCEPTABLE RANGE BETWEEN 89.5 AND 90.5. <u>DO NOT LET JEWELRY TOUCH METAL INSIDE. YOU CAN BE SHOCKED.</u>

6) ADJUST SPEED BOARD IN "MAX" POT WITH TRIMMING TOOL. RETEST UNTIL YOU HAVE REACHED ACCEPTABLE RANGE, CLOSEST TO 90.


SET BOARD WITH CLIPS ON INNER TOP BROWN & BLUE




ADJUSTING "MAX" SPEED POT ON BOARD

7) CHECK POUCH SPEED BY WATCHING THE MOTOR KEY. THE DRIVE ROLL SHOULD CREEP AT 1 ½ REVOLUTIONS PER MINUTE. TRIM IN "MIN" SPEED POT. CHECK "MAX" SPEED AGAIN. TEST FOOT SWITCH FUNCTION FORWARD, REVERSE.

8) WHEN TEMPERATURE REACHES 150 DEGREES, TEST PRESSURE SENSITIVE FILM USING TOP SUPPLY ROLL AND SCRAP REWIND. LOAD SUBSTRATE WITH ROLLS UP. ADHERE STICKY SIDE OF FILM ON SUBSTRATE, WITH TOP LAYER TAPED TO CYLINDER ON SCRAP REWIND GRIPPER CORES. TEST WITH RUBBER ROLLS DOWN AND LOCKED. THE MODE SWITCH SHOULD BE IN "VERIABLE," DRIVE SWITCH IN "FORWARD." THE FILM THREADS UNDER IDLER TUBE AND OVER HOT ROLL. UNLOAD FILM AFTER TESTING.

9) INCREASE TEMPERATURE TO 300 DEGREES AND PREPARE MATERIALS FOR POUCH TESTING, INCLUDING LEDCO TEST LAMINATION SHEET WHICH IS SENT TO CUSTOMER WITH MACHINE. TEST POUCH WITH CAM SHAFT HANDLE DOWN, BUT NOT LOCKED. TEST POUCH FOR ADHESION WITH "X" TEST.

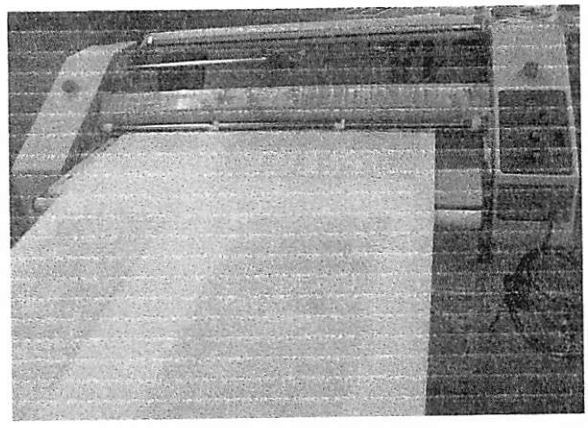
10) REDUCE TEMPERATURE TO 150 DEGREES AND TURN OFF MACHINE, UNPLUG.

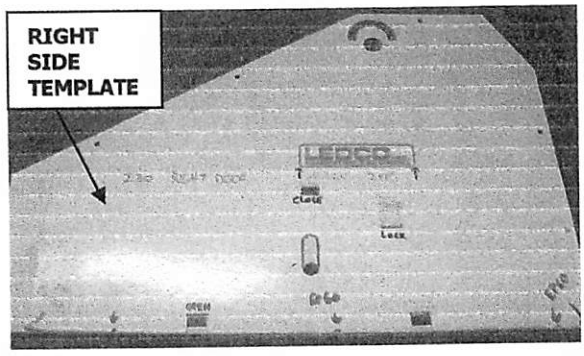
11) ATTACH RIGHT AND LEFT HOUSING SIDES (EP30 095.4R AND EP30 095.4L) AS18 WITH 8-32 X ¼ THMS PER SIDE.

12) ATTACH RIGHT SIDE CAM HANDLE (PRH140) AS02 ON FLAT OF CAM SHAFT USING ¼-20 X 3/8 SS.

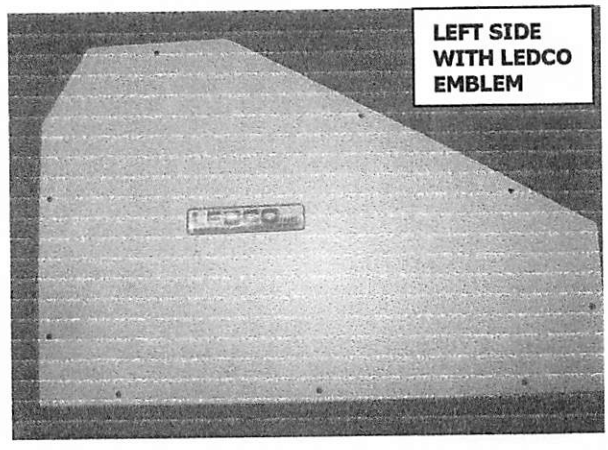
13) ADD SCRAP REWIND KNOB (PRK173) RACK 8 ON RIGHT SIDE FLAT OF TENSION NUT USING 10-32 X ¼ SS.

14) USING TEMPLATE FOR EP60 AND I30, ALIGN DOMED LEDCO EMBLEM (LAB05A) AS08. OPEN AND CLOSE ROLLS. ADHERE WHITE ARROW TO HANDLE POINT AND ADHERE OPEN, CLOSE AND LOCK LABELS (XS13, 14, 15) RACK 9 FOR CAM HANDLE.









15) ADHERE FUSE KIT (SPFEHR44) AS08 ***FOR 220V*** TO INNER RIGHT HOUSING SIDE.

16) CENTER INCREASE/DECREASE LABEL (LAB42A) RACK 9 ABOVE REWIND KNOB.

17) ADHERE THE GRAY EHR44 SERIAL 220V LABEL (LAB136) JOB ORDER LEFT OF THE POWER PLUG ON RIGHT REAR HOUSING.

18) PLACE (2) STOP COLLAR CORE CHUCK STYLE (D105 004.4) AS08 EACH WITH A STOP COLLAR THUMBSCREW (PRK184) AS08 ON FEEDTABLE.

19) PLACE (4) ½-13 X 1 ½ STEM CASTORS (PRC210) AS05 ON FEEDTABLE, WITH THREADED USS WASHER AND A ½-13 HEX NUT ONTO EACH.

20) ATTACH (2) FRONT SUPPLY ROLL BRACKETS (EP30 009.4) RACK 8 TO SIDE PANELS WITH ¼-20 X ¾ BHSH AND SET IN FRONT SUPPLY ROLL.

21) FROM AS08 ABOVE SERIAL TAG ADHERE EARTH GROUND WARNING LABEL (LAB101A) AND ABOVE THAT ADHERE NEUTRAL FUSING LABEL (LAB103A).

22) ADHERE A GENERAL DANGER LABEL (LAB52) AS08 ABOVE POWER PLUG.

23) ADHERE (4) HAND CRUSH/FORCE FROM ABOVE LABELS (LAB35) AS08, ONE EACH ON SUPPLY ROLL BRACKETS.

24) ADHERE AN ARM ENTANGLEMENT LABEL (LAB51) AS08 ABOVE RIGHT AND LEFT FEED TABLE BRACKETS.

25) SECURE RIGHT/LEFT HOLE COVER (E060 060.4) RACK 8 WITH (4) 6-32 X ¼ PHMS.

26) SECURE ORANGE 'OPERATIOR SAFETY PRECAUTION' (LIT011) AS02 LANYARD TO FRONT FEEDTABLE SHAFT.

