

HOT ROLL DIGITAL 44 LAMINATOR

ASSEMBLY PROCEDURES

UPDATED MARCH 2019

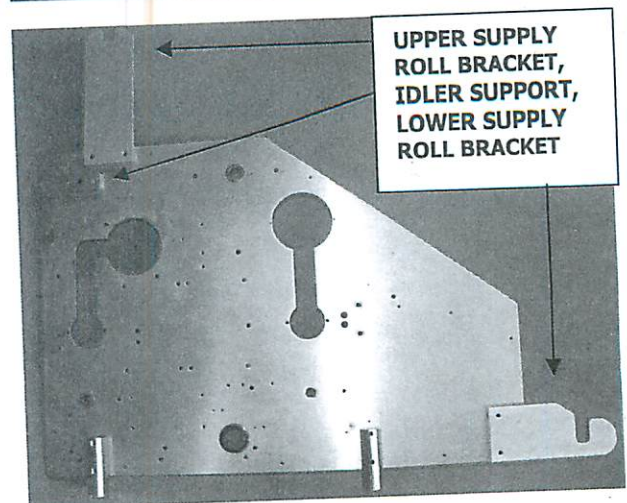
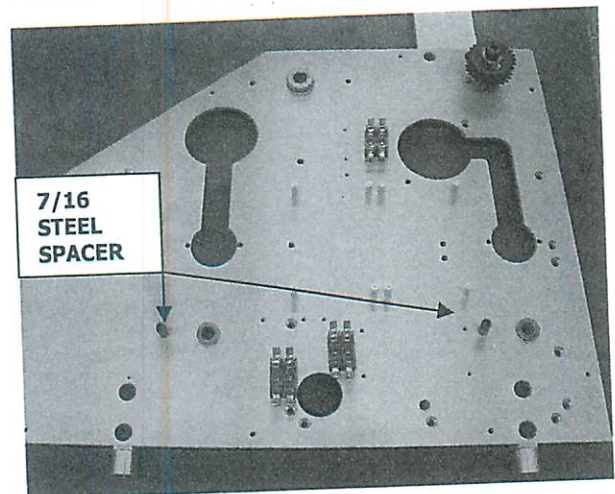
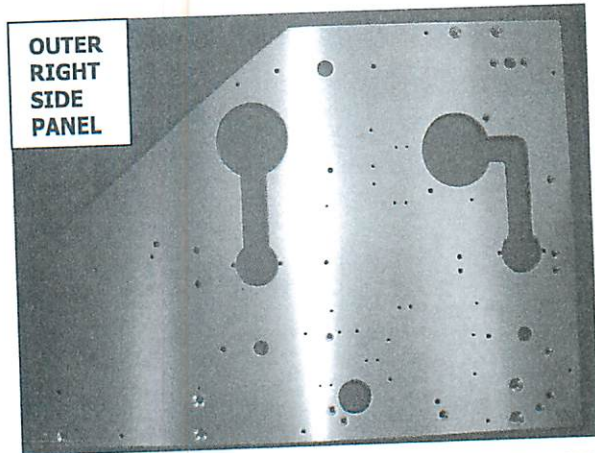
HRD 44 ASSEMBLY

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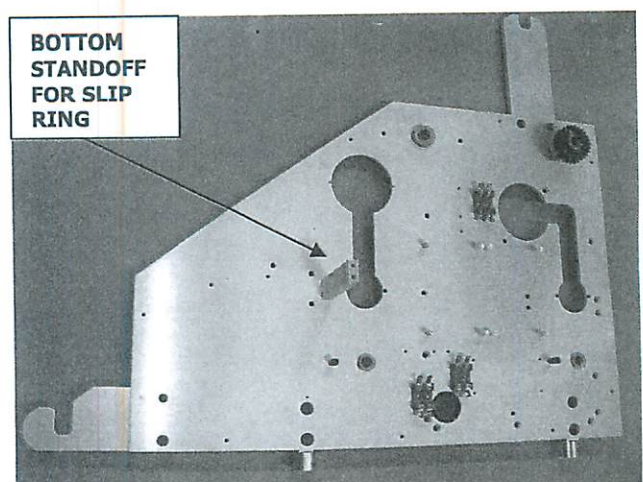
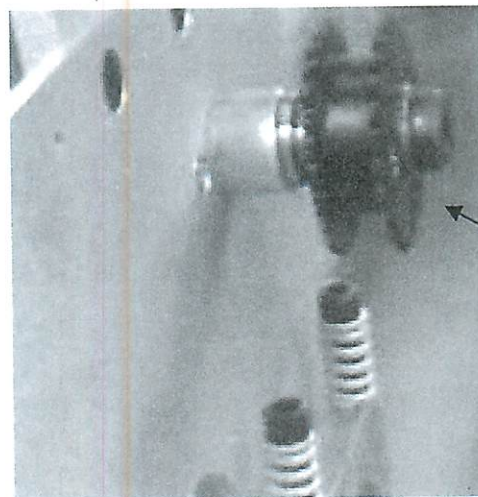
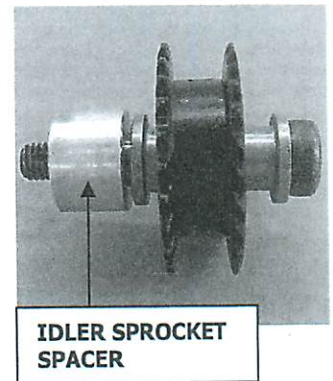
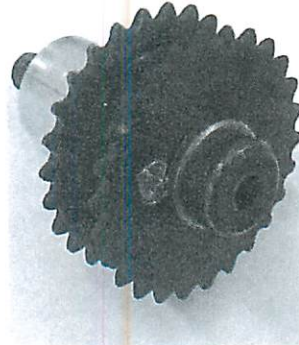
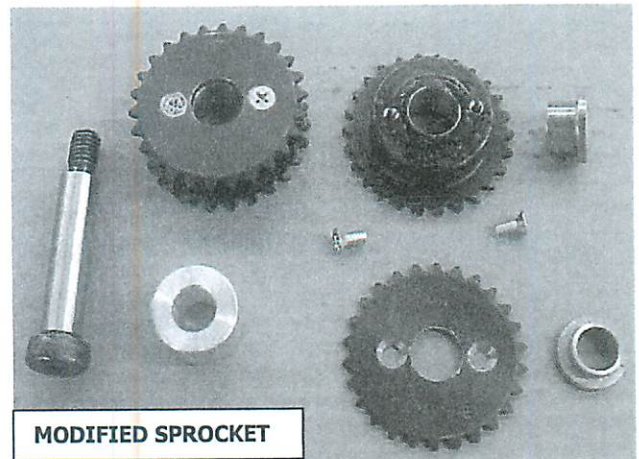
HRD 44 NRTL RIGHT SIDE PANEL ASSEMBLY

- 1) ASSEMBLE THE RIGHT SIDE PANEL (HRD44 090.4R) AS15 BY ARBOR PRESSING A 1/8" FLANGE OILITE BEARING (PRB078) RACK 10 INTO UPPER FRONT PANEL, FLANGE INWARD. TAP (2) OILITE WASHERS (PRW338) RACK 10 ONTO BEARING SHAFT, STAKE. USE A .625 REAMER.
- 2) ARBOR PRESS (1) BEARING OILITE (PRB048B) RACK 8 INTO REAR CAM SHAFT APERTURE AND (1) BEARING OILITE (PRB048A) RACK 14 INTO FRONT CAM SHAFT APERTURE. BOTH FLANGES OUT. REAM WITH A .502.
- 3) ATTACH (2) FEET MOUNTING SHAFT EXTENSIONS (LC38 048.4) AS13 TO BOTTOM OF SIDE PANEL USING (4) 5/16-18 X 3/4 FHSH INSERTED FROM COUNTERSUNK HOLES ON OUTSIDE.
- 4) PLACE A 7/16 STEEL SPACER (PRS232) AS08 ON (2) 1/4-20 X 5/8 SHCS. THREAD INTO OUTER PANEL IN FRONT OF CAM BEARINGS. THE SPACERS STABILIZE CONNECTING PLATES.
- 5) ATTACH UPPER SUPPLY ROLL BRACKET (HRD44 008.4) RACK 14 TO INSIDE PANEL USING (2) 1/4-20 X 1/2 FHSH.
- 6) ATTACH BOTTOM SUPPLY ROLL BRACKET (HRD44 009.4) RACK 14 TO THE INSIDE PANEL USING A 1/4-20 X 1/2 FHSH ON TOP AND A 1/4-20 1/2 BHSH ON THE BOTTOM.
- 7) ON INSIDE UPPER REAR SIDE PANEL ATTACH IDLER SUPPORT BAR (HRD44 031.4) RACK 14 USING (2) 10-32 X 1/2 FHMS TROUGH COUNTERSUNK OPENINGS ON OUTER SIDE PANEL.
- 8) FROM RACK 14 ATTACH SPROCKET 25A26 MODIFIED (HRD44 030.4) TO 25B26 5/8" SPROCKET MODIFIED (PRS255C). USE (2) 8-32 X 1/2 FHMS. ON SIDE WITH SCREWS ARBOR PRESS



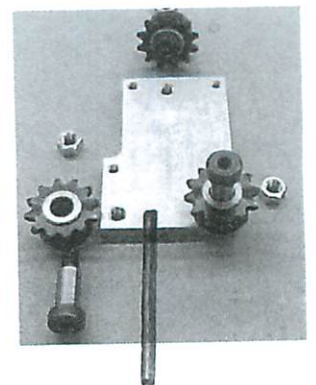
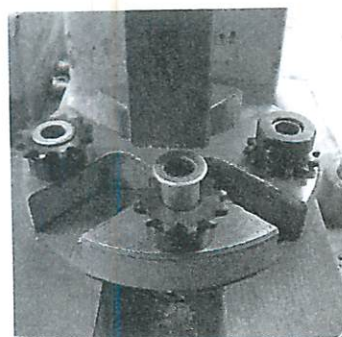
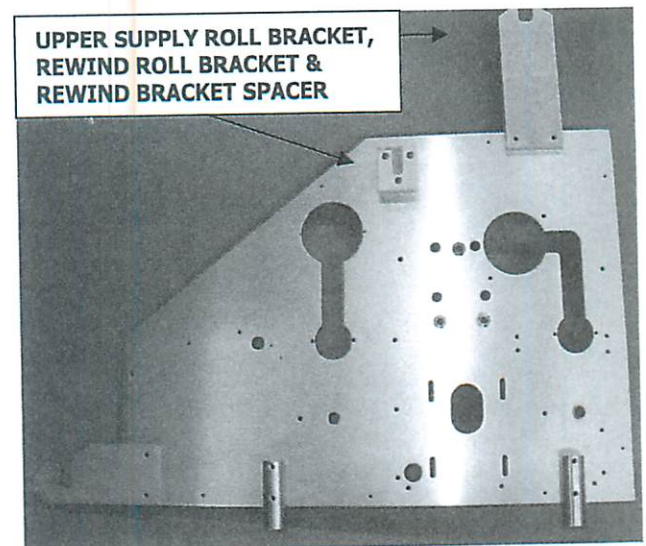
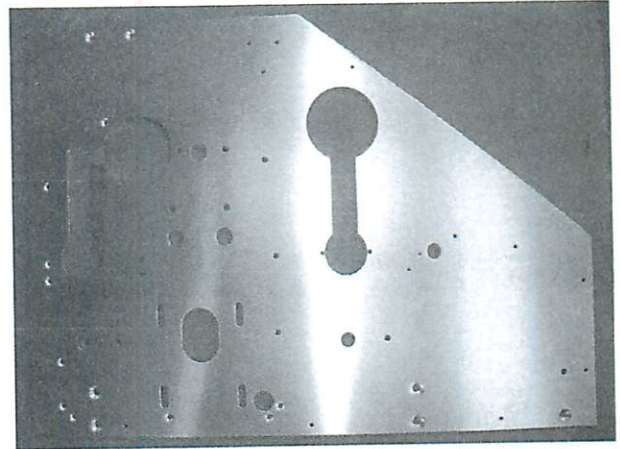
OILITE BEARING (PRB048A), WORKED TO 3/16". OPPOSITE ARBOR PRESS OILITE BEARING 1/2-5/8-1/2 (PRB048B) RACK 8. REAM BEARINGS WITH A .502.

- 9) INSERT A 1/2 X 2 SHOULDER BOLT AS13 INTO MODIFIED SPROCKETS FROM FH SCREW SIDE. PLACE AN IDLER SPROCKET SPACER (HRD44 032.4) RACK 14 ON SHOULDER BOLT BY SPROCKET. THREAD INTO IDLER SUPPORT BAR SECURED ON INNER SIDE PANEL. THE SPROCKET HAS 'PLAY.'
- 10) SECURE (8) STANDOFF-NYLON 5/8 X 1/4 HEX (LC25 010.4) LD09 TO OUTER SIDE PANEL. USE (8) 4-40 X 3/8 FHMS THROUGH COUNTERSINKS ON INSIDE.
- 11) SECURE (6) FUSE HOLDERS (PRF126) AS07 TO OUTER RIGHT SIDE PANEL USING (6) 6-32 X 1/4 PHMS. PUT IN FUSES LATER.
- 12) ADD A #10 STAR WASHER ON A 10-32 X 1 BSHS. INSERT THROUGH CLEARANCE HOLE UNDER SPEED BOARD, FROM OUTER SIDE PANEL. ON INNER THREADS START A #10 STAR WASHER AND #10 KEPS HEX NUT FOR WIRES LATER.
- 13) ADHERE GROUND LABEL (LAB06) WB09 ABOVE GROUND SCREW ON OUTER PANEL.
- 14) INSERT SNAP BUSHING (PRB088) AS07 INTO WIRING APERTURE, FLANGE ON OUTWARD, BETWEEN LOWER FUSES.
- 15) SECURE TO THE OUTER PANEL, IN FRONT OF THE HOT ROLL OPENINGS A BOTTOM STANDOFF (HRD44 049.4A) RACK 14 (THE HRD STANDOFF IS LONGER THAN THE EHR STANDOFF) USING 10-32 X 3/4 FSHS. THE BOTTOM STANDOFF IS FOR THE BOTTOM HOT ROLL SLIP RING MOUNTING BRACKET.



HRD 44 NRTL LEFT SIDE PANEL ASSEMBLY

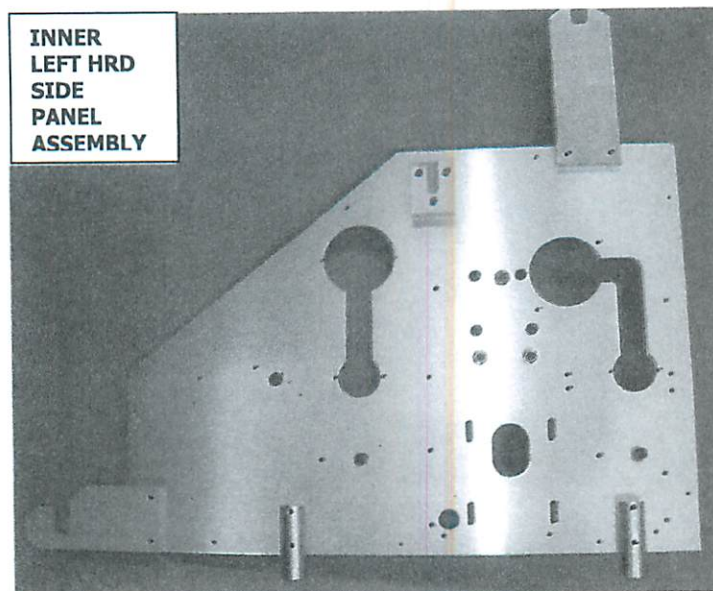
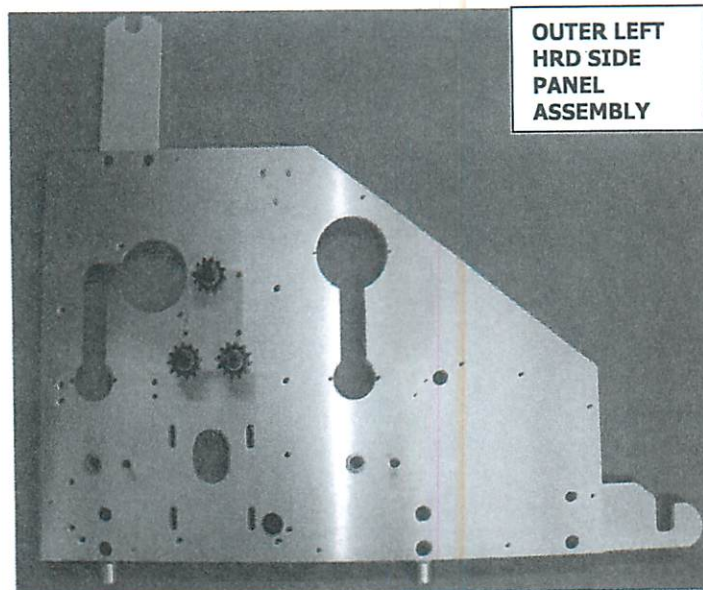
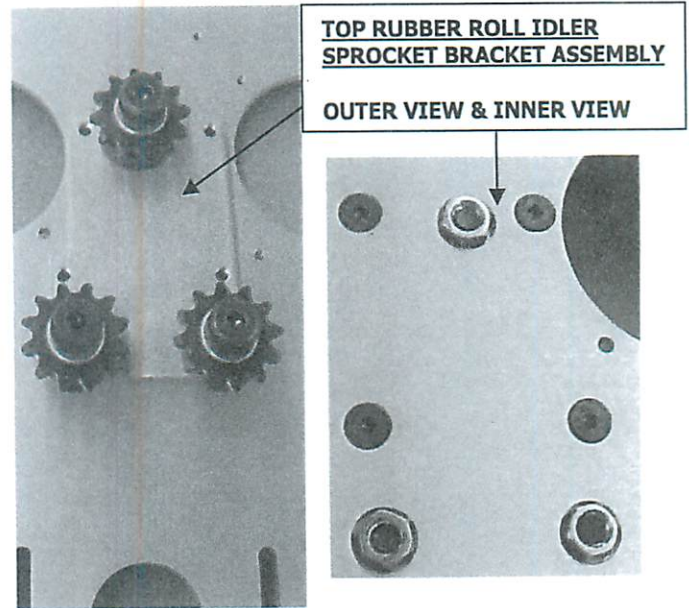
- 1) ASSEMBLE LEFT SIDE PANEL (HRD44 090.4L) AS15 BY ARBOR PRESSING (1) BRG OILITE (PRB048) RACK 8 INTO REAR CAM SHAFT APERTURE AND (1) BRG OILITE (PRB048A) RACK 14 INTO FRONT CAM SHAFT APERTURE. BOTH FLANGES OUT. REAM WITH A .502.
- 2) ATTACH (2) FEET MOUNTING SHAFT EXTENSIONS (LC38 048.4) AS13 TO BOTTOM OF SIDE PANEL USING (4) 5/16-18 X 3/4 FHSH INSERTED FROM COUNTERSUNK HOLES ON OUTSIDE.
- 3) PLACE A 7/16 STEEL SPACER (PRS232) AS08 ON (2) 1/4-20 X 5/8 SHCS. THREAD INTO OUTER LEFT PANEL IN FRONT OF CAM BEARINGS. SPACERS STABILIZE CONNECTING PLATES.
- 4) ON INNER LEFT PANEL ADD REWIND ROLL BRACKET C (EP30 006.4) AND REWIND BRACKET SPACER C (EP30 057.4) FROM RACK 8 SECURED WITH (3) 10-32 X 1 FHMS.
- 5) ATTACH UPPER SUPPLY ROLL BRACKET (HRD44 008.4) RACK 14 TO INNER SIDE PANEL USING (2) 1/4-20 X 1/2 FHSH.
- 6) ATTACH THE BOTTOM SUPPLY ROLL BRACKET (HRD44 009.4) RACK 14 TO INNER SIDE PANEL USING A 1/4-20 X 1/2 FHSH ON TOP AND A 1/4-20 X 1/2 BH ON THE BOTTOM, THROUGH OUTER HOLES.
- 7) FROM RACK 2 TAKE (3) 35B12 5/8 BORE IDLER SPROCKETS (PRS320) AND ARBOR PRESS (3) OILITE FLANGE BEARINGS (PRB094) INTO SPROCKETS WITH FLANGE ON TOOTH SIDE.
- 8) INSERT (3) 1/2 X 1 SHOULDER BOLTS (.500IAC16) AS13 INTO SPROCKET OILITE BEARINGS WITH BOLT HEAD NEXT TO FLANGE AND TEETH. THREAD BOLTS AND SPROCKETS INTO TOP RUBBER ROLL IDLER SPROCKET



SECURE TO INSIDE OF BRACKET WITH
(3) 3/8-16 HEX NUTS (.375LDFOO).

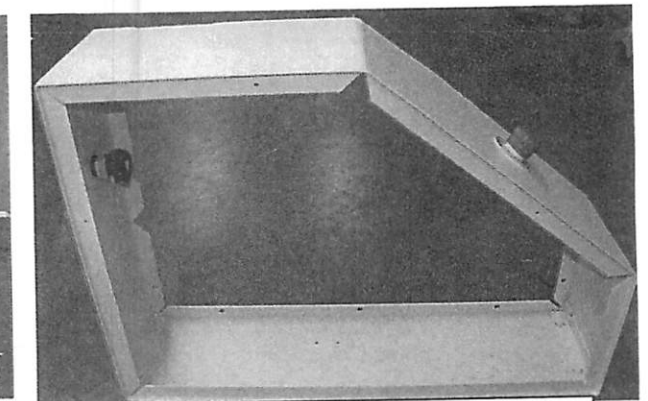
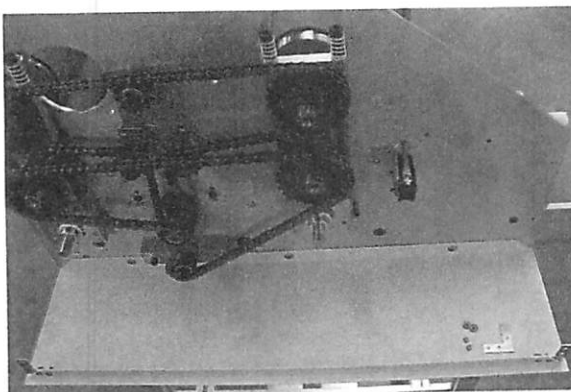
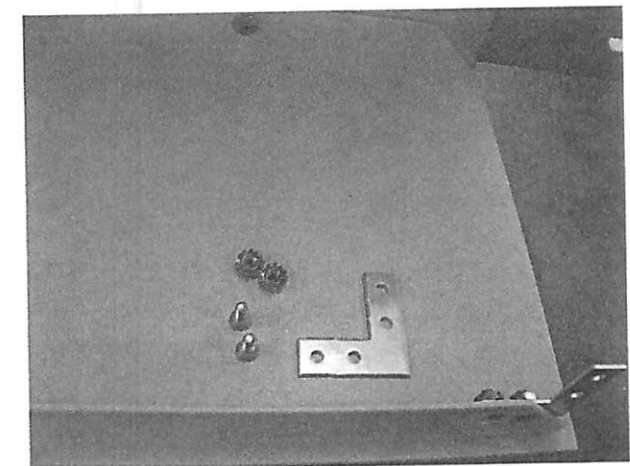
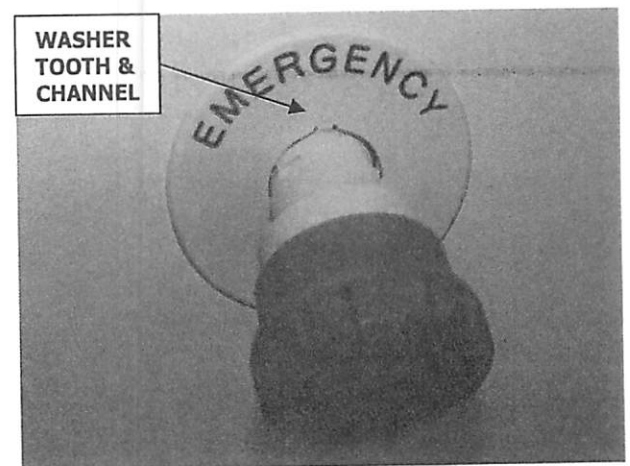
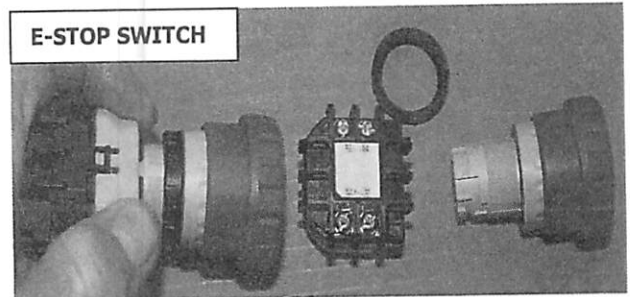
9) SECURE TOP RUBBER ROLL IDLER
SPROCKET BRACKET ASSEMBLY TO
OUTER LEFT SIDE PANEL WITH (4) 1/4-20
X 1/2 FSH SCREWS FROM INNER
COUNTERSINKS. NOTE POSITION ON
PICTURE.

10) INSERT SNAP BUSHING (PRB064) AS07
INTO WIRING APERTURE ON SIDE
PANEL, FLANGE OUTWARD, LOCATED IN
FRONT OF MOTOR ATTACHMENT SLOT.



HRD 44 LEFT HOUSING TOP & BOTTOM

- 1) THE HRD 44 LEFT HOUSING TOP (HRD44 094.4LTA) AS14 HAS AN EMERGENCY STOP SWITCH (PRS374) AND YELLOW WASHER (PRS375) AS07 ON THE FRONT AND REAR TOP HOUSING. NO LABELS ARE ON THE LEFT HOUSING.
- 2) TO INSTALL THE (2) E-STOP SWITCHES CENTER THE PRINTING ON A YELLOW EMERGENCY STOP WASHER (PRS375) OVER THE FRONT OR REAR OPENING. SEPARATE THE EMERGENCY STOP SWITCH (PRS374) BY DEPRESSING THE YELLOW SCREW SECTION SPRING *DOWNWARD AND TWISTING*. UNTHREAD THE BROWN NUT AND INSERT THE THREADED SECTION WITH "TOP" INDICATION UPWARD, ALIGNING YELLOW WASHER TOOTH WITH CHANNEL IN THREADING. RETHREAD THE PLASTIC NUT ON THE INNER HOUSING AND TIGHTEN WITH CASTLE TOOL, KEEPING THE PRINTING CENTERED ON THE YELLOW WASHER.
- 3) ON THE LEFT HOUSING BOTTOM (HRD 44 094.4LB) AS14. SECURE (2) CORNER BRACKETS (D105 098.4) RACK 1 TO THE COUNTERSUNK OUTER ENDS WITH 8-32 X 3/8 FHMS AND #8 KEPS HEX NUTS.



HRD 44 LEFT HOUSING TOP & BOTTOM

HRD 44 RIGHT HOUSING BOTTOM & TOP ASSEMBLY

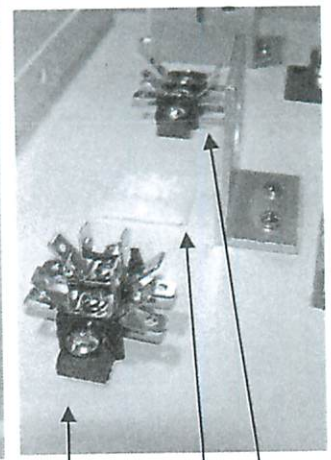
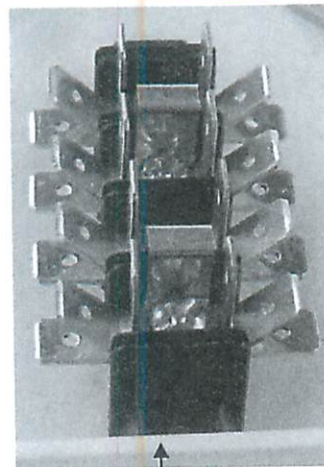
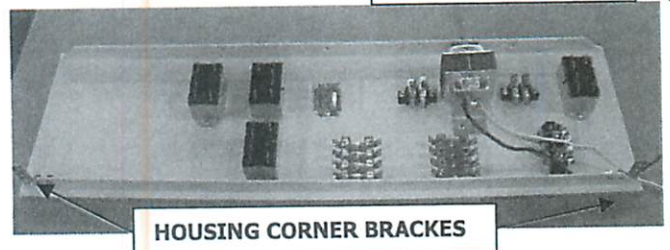
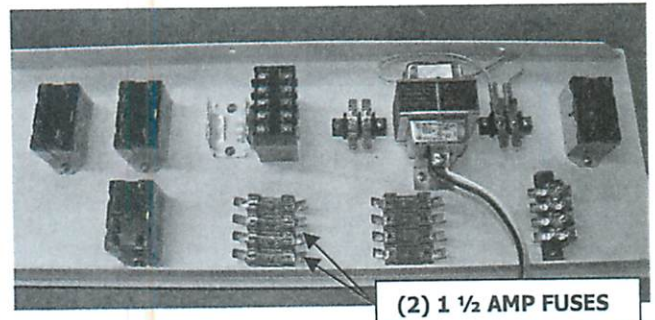
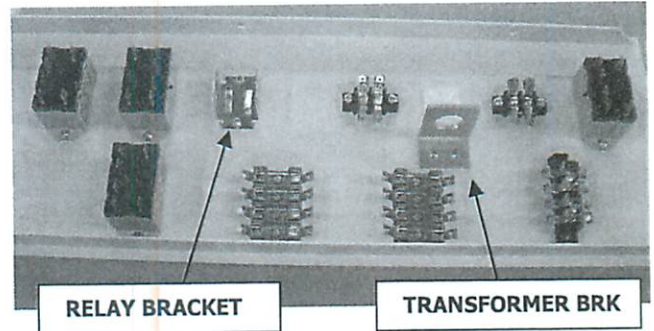
1) ATTACH COMPONENTS TO FLOOR OF RIGHT HOUSING BOTTOM (HRD44 094.4RBA) AS14 BEFORE SECURING HOUSING TO RIGHT SIDE PANEL.

2) SECURE (4) OMRON RELAYS 24 VAC (PRR251) RACK 1 WITH (8) 8-32 X 1/4 RH. ORIENT DOUBLE TERMINAL POSTS TO THE RIGHT/REAR ON ALL RELAYS.

3) FROM AS09 ATTACH (8) LITTLEFUSE FUSE HOLDERS (PRF126) USING (8) 6-32 X 1/4 PH. INSERT (6) FAST-ACTING 1/2 AMP FUSES (PRF136) TO THE GROUP OF (4) FUSE HOLDERS ON THE RIGHT NEAREST ED TERMINAL BLOCK AND THE INNER TWO NEAREST THE FORWARD/REVERSE RELAY. THE REMAINING (2) FUSE HOLDERS ON THE LEFT/FRONT OUTER GROUP, INDICATED IN THE PICTURE, RECEIVE (2) 1 1/2 AMP FUSES (PRF128).

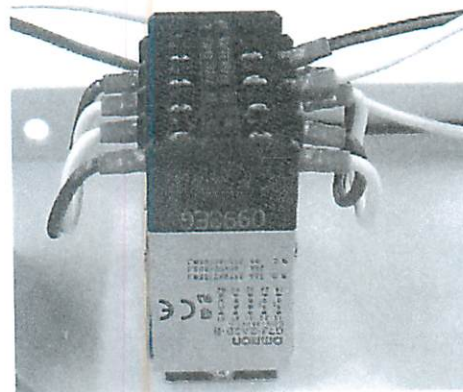
4) REMOVE THE JUMPER ON THE ED TERMINAL BLOCK (PRT301.5) LD01. FROM AS08 ADD (4) KULKA 90 DEGREE TERMINAL POSTS (PRT308) TO POSTS ALREADY ON TERMINAL BLOCK. PLACE TERMINAL BLOCK JUMPER OVER TO CONNECT THE FOUR POSTS FROM ONE SIDE AND ADD ANOTHER KULKA TERMINAL JUMPER (PRT309) TO CONNECT THE REMAINING FOUR POSTS. ATTACH TERMINAL BLOCK TO HOUSING USING (2) 8-32 X 1/4 RH.

5) REMOVE SCREWS FROM (2) KULKA TERMINAL BLOCKS (PRT304) AS08. ON ONE TERMINAL BLOCK ADD (2) EACH: 180 DEGREE (PRT306), 45 DEGREE (PRT307) AND 90 DEGREE (PRT308) TERMINAL POSTS, REPLACE SCREWS. CONNECT THIS TERMINAL BLOCK LEFT OF THE TRANSFORMER. THE OTHER (PRT304) TERMINAL BLOCK RECEIVES (2) EACH: 180 DEGREE AND 45 DEGREE TERMINAL POSTS, REPLACE SCREWS. ATTACH THIS DOUBLE POSTED



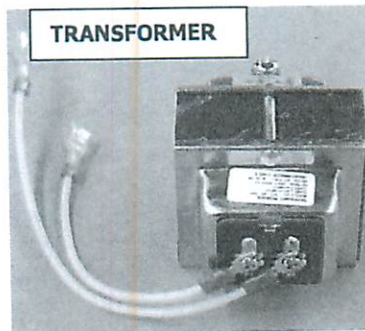
TERMINAL BLOCK TO THE RIGHT OF THE TRANSFORMER BY ED TERMINAL BLOCK WITH (4) 8-32 X 1/2 PH.

- 6) FROM RACK 1 ATTACH RELAY MOUNTING BRACKET (PRR252) USING (2) 8-32 X 1/4 RH. **DO NOT** CLIP IN OMRON RELAY (PRR250) AT THIS TIME, AS IT BLOCKS A HOUSING TO PANEL SCREW HOLE. WIRE WITH THE PRINTING FACING OUTWARD.

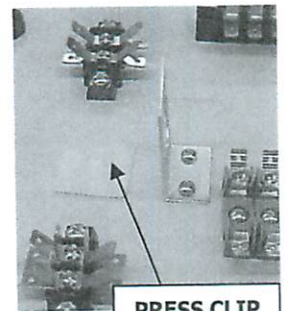


FORWARD/REVERSE RELAY - A1 & A2 INWARD

- 7) USE A MOUNTING FOOT BRACKET (PRT336) RACK 1 TO SECURE THE 24 VOLT DORMEYER TRANSFORMER (PRT335) RACK 1. POSITION MTG FOOT BRACKET WITH BREAK INWARD AND SCREW HOLES OUTWARD SEE. ATTACH MOUNTING FOOT BRACKET WITH (2) 6-32 X 1/4 PHMS.



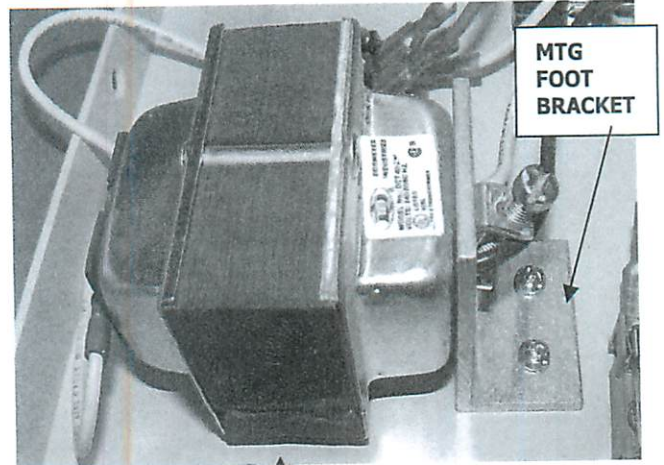
TRANSFORMER



PRESS CLIP

- 8) TRIM OFF CABLE TIE CATCH FROM PRESS CLIP (PRC081) AS07 AND ADHERE CLIP BETWEEN TWO SMALLER TERMINAL BLOCKS POSITIONED SO TRANSFORMER WILL REST ON PRESS CLIP INSTEAD OF HOUSING. SECURE (2) YELLOW WIRES WITH FORK CONNECTORS FROM DIG WIRING BAG (PRW346A) RACK 2 UNDER TRANSFORMER SCREWS BEFORE ATTACHING TRANSFORMER TO BRACKET. TRIM WHITE AND BLACK TRANSFORMER WIRES, LEAVING 6" REMAINING. CRIMP A FIF (PRT331) ONTO BOTH WIRES.

AS09



MTG FOOT BRACKET

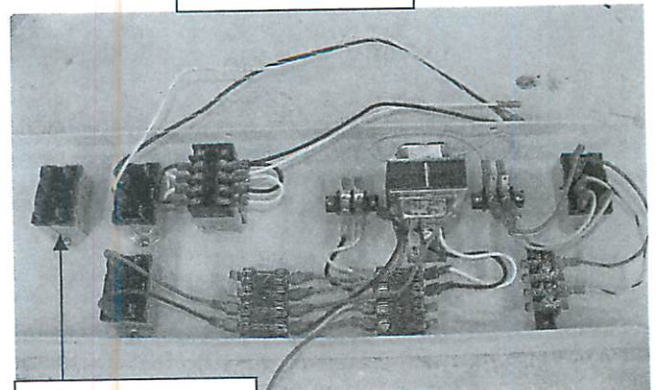
- 9) SECURE (2) HOUSING CORNER BRACES (D105 098.4) RACK 1 TO HOUSING COUNTERSINKS WITH 8-32 X 3/8 FHMS AND #8 KEPS NUTS. SECURE WIRES FROM DIG BAG (PRW346A) RACK 2.

TRANSFORMER

- 10) THE HRD 44 HAS (2) EMERGENCY STOP SWITCHES (PRS374) AS08 ON EACH TOP HOUSING. ONE E-STOP IS IN THE FACIA FOR THE RIGHT SIDE. INSTALL THE SECOND E-STOP TO THE REAR TOP RIGHT HOUSING (HRD44 094.4RTA) AS14. CENTER THE PRINTING ON A YELLOW EMERGENCY STOP WASHER (PRS375) AS08 OVER THE REAR OPENING. SEPARATE THE E-STOP SWITCH BY DEPRESSING THE YELLOW SCREW SECTION SPRING **DOWNWARD AND TWISTING**. UNTHREAD PLASTIC

AS07

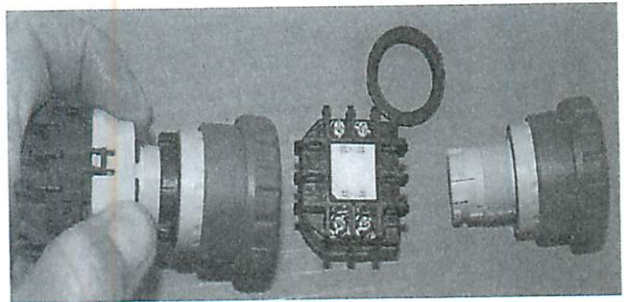
AS07



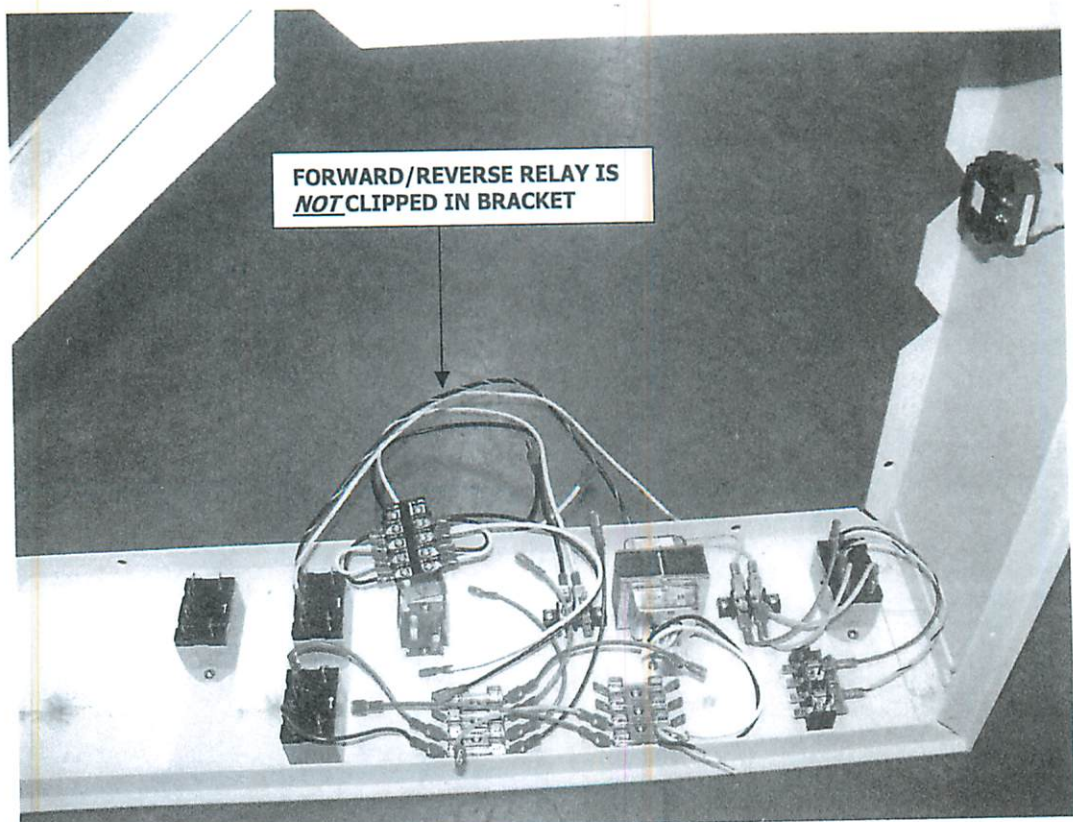
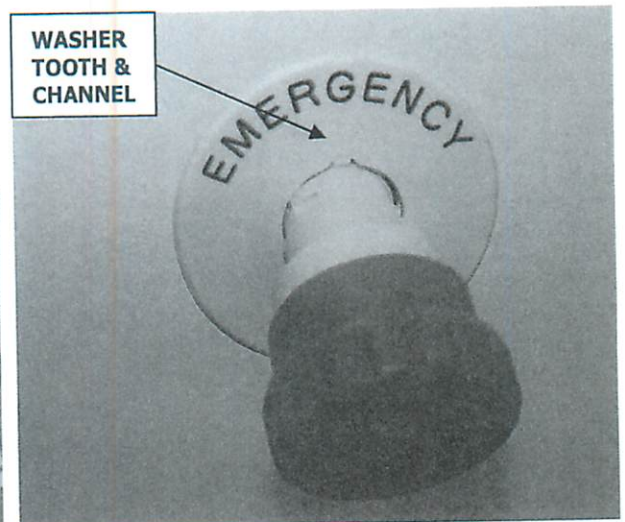
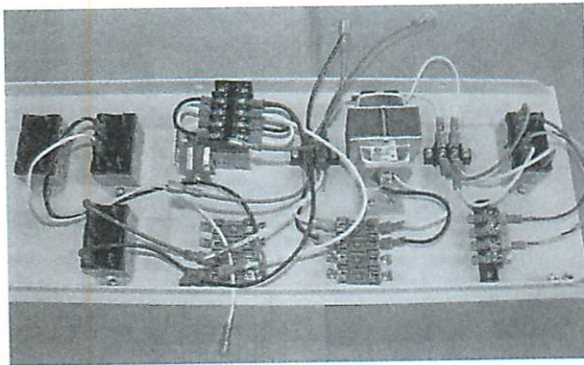
NO WIRES ON FRONT LATCHING RELAY

WIRE BOTTOM RIGHT HOUSING

NUT AND INSERT THREADED SECTION THROUGH THE REAR HOUSING, WITH "TOP" INDICATION UPWARD, ALIGNING YELLOW WASHER TOOTH WITH CHANNEL BY THREADING. RETHREAD PLASTIC NUT AND TIGHTEN WITH CASTLE TOOL, KEEPING WASHER PRINTING STRAIGHT. FOR EASE, WIRES E-STOP BEFORE RECONNECTING BOTH SECTIONS.

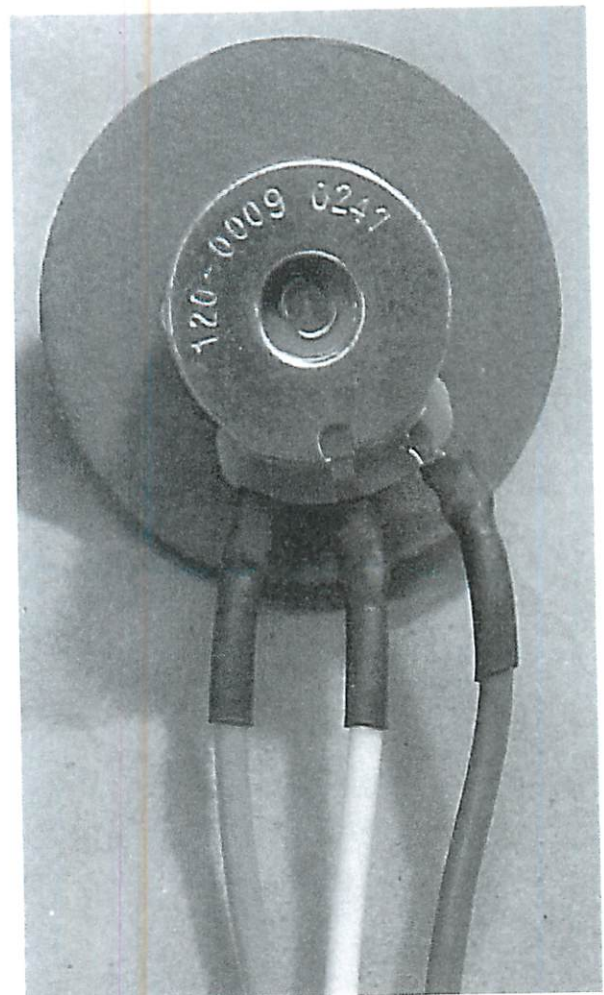
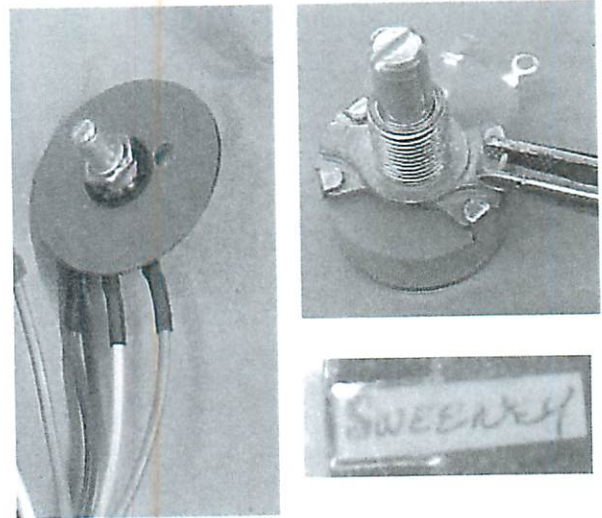


- 11) THE TOP LEFT HOUSING (HRD44 094.4LTA) AS14 ALSO HAS (2) E-STOPS WITH WASHERS. NO LABELS GO ON THE REAR OF THE LEFT TOP HOUSING.



HRD 44 POTENTIOMETER

- 1) BREAK OFF TAB FROM STEM SIDE OF POTENTIOMETER IN MINARIK SPEED CONTROL UNIT (PRM218A) AS08.7
- 2) CUT (3) $\frac{3}{4}$ INCH PIECES OF $\frac{3}{16}$ BLACK INSULATION TUBING (PRI165) CAB01 AND SLIDE ONE PIECE OF TUBING OVER EACH INDEPENDENT OPEN ENDED ORANGE, YELLOW AND GRAY WIRES IN THE DIGITAL WIRING HARNESS (PRW346A) RACK 2.
- 3) WITH STEM FROM POTENTIOMETER FACING AWAY FROM YOU AND TERMINAL POSTS FACING DOWNWARD, CAREFULLY SOLDER ORANGE WIRE TO LEFT POST, YELLOW WIRE TO MIDDLE POST AND GRAY WIRE TO RIGHT POST.
- 4) SLIDE THE THREE PIECES OF BLACK INSULATION TUBING UP OVER SOLDERED CONNECTIONS AND AS MUCH TERMINAL POST AS POSSIBLE. HOLD IN THAT POSITION WITH NEEDLE NOSE PLYERS. HEAT SHRINK TUBING OVER SOLDER CONNECTIONS.
- 5) SLIDE PAPER WASHER, THEN TOOTHED WASHER OVER STEM AND ADD HEX NUT PROVIDED TO HOLD IN POSITION UNTIL NEEDED FOR ASSEMBLY.



D60, D42, HRD44

Title: DIGITAL 42, 60 AND HRD44 FACIA HARNESS CONNECTIONS - OMRON SWITCHES

Date: 06/18/2015

Rev. Level:

Of 1

Rev.	Description	Date	App. By

DIGITAL 42, 60, AND HRD44 FACIA HARNESS CONNECTIONS

TOP HEAT RED

NC	X		X	NC
		WHT/BLK		
NO	BRN/BLK		GRY/BLK	NO
		RED		
C	YEL/BLK		ORA/BLK	C

MOMENTARY RED

NC	X		JUMPER	NC
		BLUE		
NO	JUMPER		X	NO
		JUMPER		
C	WHT		BLK	C

FWD / REV

X	X
JUMPER	GREY
BLK	BROWN

DRIVE GREEN

NC	X		ORA (BAG)	NC
		BLK		
NO	YEL		X	NO
		YEL		
C	RED (BAG)		ORA	C

FAN BLUE

NC	X		X	NC
		YEL/BLK		
NO	JUMPER		RED/BLU	NO
		JUMPER		
C	BLK/WHT		BLK/WHT	C

BOTTOM HEAT RED

NC	X		X	NC
		WHT/GRN		
NO	WHT/BLU		WHT/RED	NO
		GREY		
C	BLU/RED		BRN/WHT	C

Dimensions Unless Otherwise Specified

Dimension	UP TO 6.000	6.001 TO 24.000	ABOVE 24.000	Angle
Din.	±.005	±.010	±.031	± 0° ± 30'
Din.	±.002	±.005	±.010	✓

Finish Specs:

LEDSCO INC.

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

9/2009

OBSOLETE

DIGITAL AND HRD FACIA HARNESS CONNECTIONS

W/BLK	⊗
RED	BR/BLK
⊗	YEL/BLK

TOP HEAT

MOMENTARY

BLUE	⊗	B/J	⊗
B/J	→	B/J	⊗
⊗	WHT	BLK	

FWD/REV

⊗	⊗
B/J	GREY
BLK	BROWN

DRIVE

BLK	X	OR (BAG)
⊗	YEL	⊗
YEL	RED (BAG)	OR

FAN

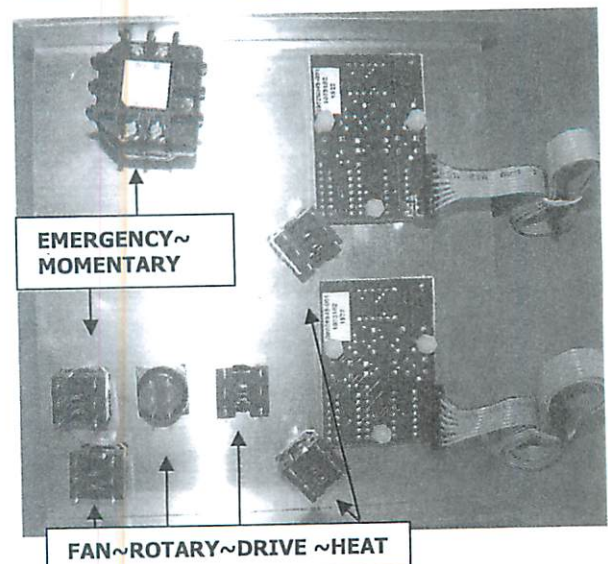
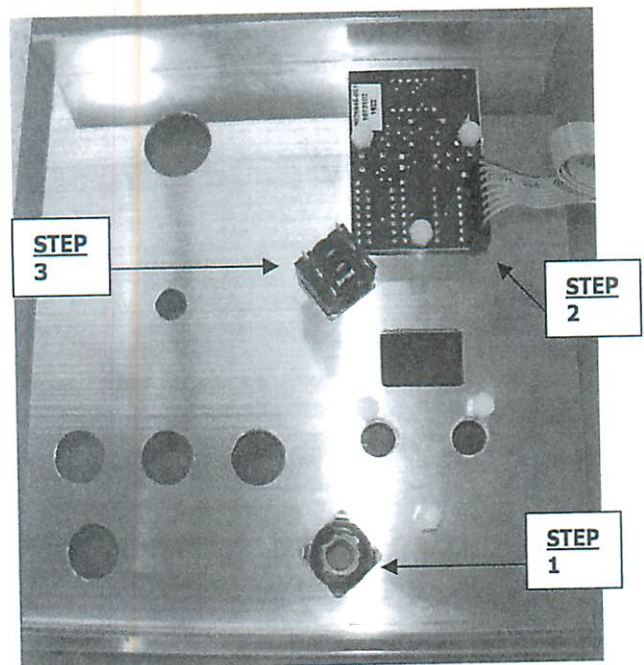
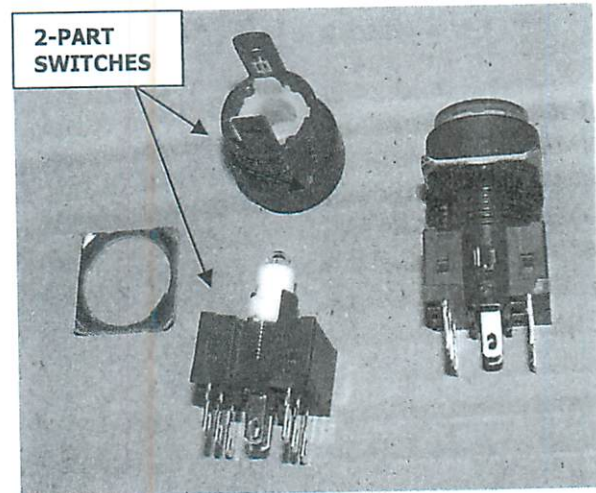
YEL/BLK	⊗	⊗
B/J	→	B/J
⊗	BLK/WHT	BLK/WHT

BOTTOM HEAT

WHT/GRN	⊗	C
GREY	WHT/BLUE	W
⊗	Blue/RED	B

HRD 44 – JUNE 2015

- AS11
- 1) ATTACH (6) STANDOFFS (D25 010.4) ~~RACK 1~~ TO FACIA CONTROL PANEL (D105 220.4) RACK 2 WITH (6) 4-40 X 1/4 FH.
 - 2) ADHERE DIGITAL CONTROL DECAL (LAB98) RACK 2 TO FRONT OF FACIA CONTROL PANEL, CENTERING CAREFULLY OVER HOLES.
 - 3) INSERT (2) POS RED LIGHTED ON/OFF HEAT SWITCHES (PRS079) RACK 1 BY SLAVE BOARD AREA. INSERT THE RED SECTION AND ON THE INNER FACIA ORIENT THE LARGER TAB UPWARD, SLIDE ON METAL KEEPER AND ANGLE WITH THE CORNER RIGHT OF LARGER TAB FACING UPWARD. THREAD AND TIGHTEN NUT WITH TOOL.
 - 4) PLACE SLAVE BOARDS FROM HEAT CONTROLLER KIT (PRH130) AS08 ON STANDOFFS. COMPONENTS MAY BE SLIGHTLY BENT FOR BETTER SLAVE FIT. SECURE SLAVE BOARD TO STANDOFFS WITH (6) 4-40 NYLON ACORN NUT (.112LDR00) RACK 1.
 - 5) SLIDE TERMINAL POST SECTION OF SWITCH ONTO SECURED SECTION. THE 'C' COMMON POST IS DOWNWARD.
 - 6) INSERT GREEN LIGHTED DRIVE SWITCH (PRS080) RACK 1 IN HOLE CLOSEST TO ON/OFF HEAT SWITCHES. ORIENT WITH LARGER TAP UPWARD SO 'C' COMMON POST WILL BE DOWNWARD. TIGHTEN WITH CASTLE TOOL.
 - 7) NEXT TO THE GREEN LIGHTED DRIVE SWITCH INSERT THE ROTARY FORWARD/REVERSE SWITCH (PRS020) RACK 1. CHECK "UP" POSITION AND TIGHTEN WITH CASTLE LOCK TOOL.
 - 8) NEXT TO THE ROTARY SWITCH INSERT THE RED LIGHTED MOMENTARY REVERSE SWITCH (PRS077) RACK 1. LARGER TAP UPWARD 'C' POST WILL BE DOWNWARD AND TIGHTEN WITH CASTLE LOCK TOOL.



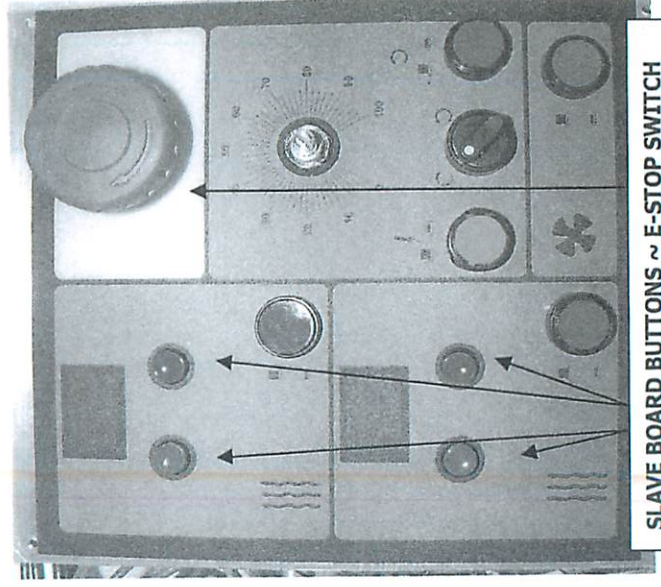
9) BELOW THE MOMENTARY SWITCH INSERT THE BLUE LIGHTED FAN SWITCH (PRS081) RACK 1. ALIGN LARGER TAB UPWARD SO 'C' POST IS DOWNWARD AND TIGHTEN WITH CASTLE TOOL.

10) IN LARGER HOLE INSERT EMERGENCY STOP (PRS374) AS08. ALIGN "TOP" AT 10 O'CLOCK, SO WIRES WILL CONNECT DOWNWARD. TIGHTEN WITH.

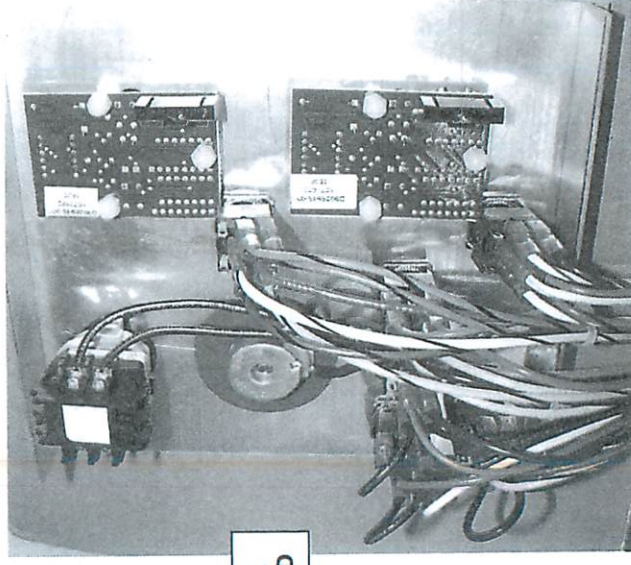
11) SNAP RED PUSH BUTTON CAP (PRK185) AS08 ONTO LEFT SLAVE BOARD STEM AND BLUE PUSH BUTTON CAP (PRK186) AS08 ONTO RIGHT SLAVE BOARD STEM.

12) INSERT PRE-WIRED POTENTIOMETER, WIRES DOWNWARD. USE HEX NUT AND WASHERS PROVIDED. SECURE MINARIK KNOB (PRM221A) AS08 ONTO STEM.

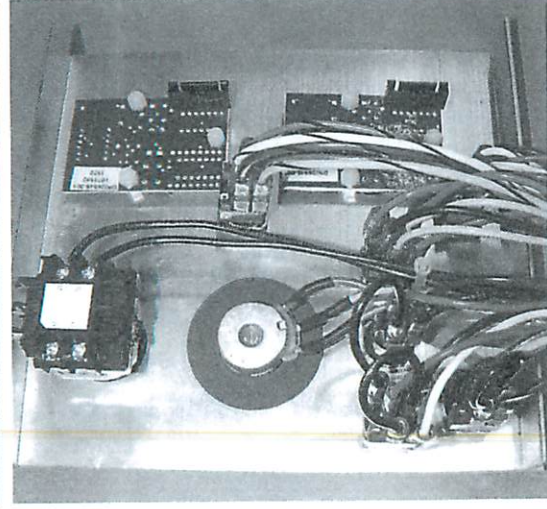
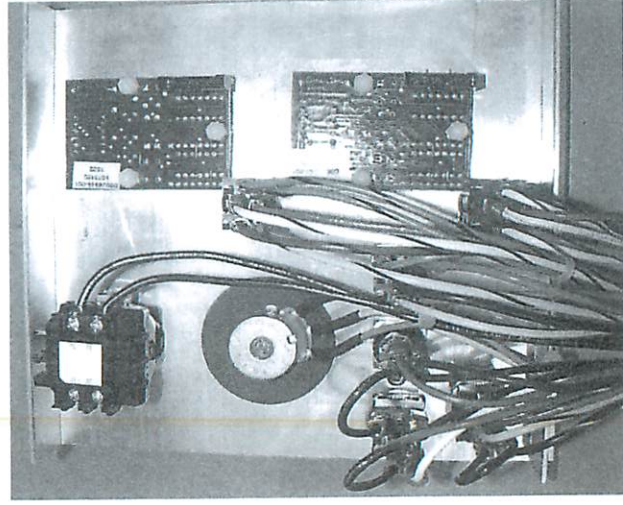
13) FROM RACK 2 WIRE FACIA. USE D60 HARNESS (PRW346) AND (3) JUMPERS.



SLAVE BOARD BUTTONS ~ E-STOP SWITCH



FACIA WIRED



Rev.	Description	Date	App. By

#	PART #	DESCRIPTION	PCS	#	PART #	DESCRIPTION	PCS
1	HRD44 135.4A	TOP LEFT WIDTH SPANNER	1	8	LC38 135.4G	STAND GUSSETS	4
1A	HRD44 135.4B	TOP RIGHT WIDTH SPANNER	1	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	14
6	HRD44 135.4C	BOTTOM LEFT/RIGHT WIDTH SPANNER	2	14	.312GDA16	5/16-18 x 1" CARRAGE BOLT	4
7	I30 135.4I	MIDDLE BRACE MTG PLATE	2	15	.312PAA24	5/16-18 x 1-1/2" SHCS	14

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



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

Material Specs: SEE SHEET 2

L/M

QTY.

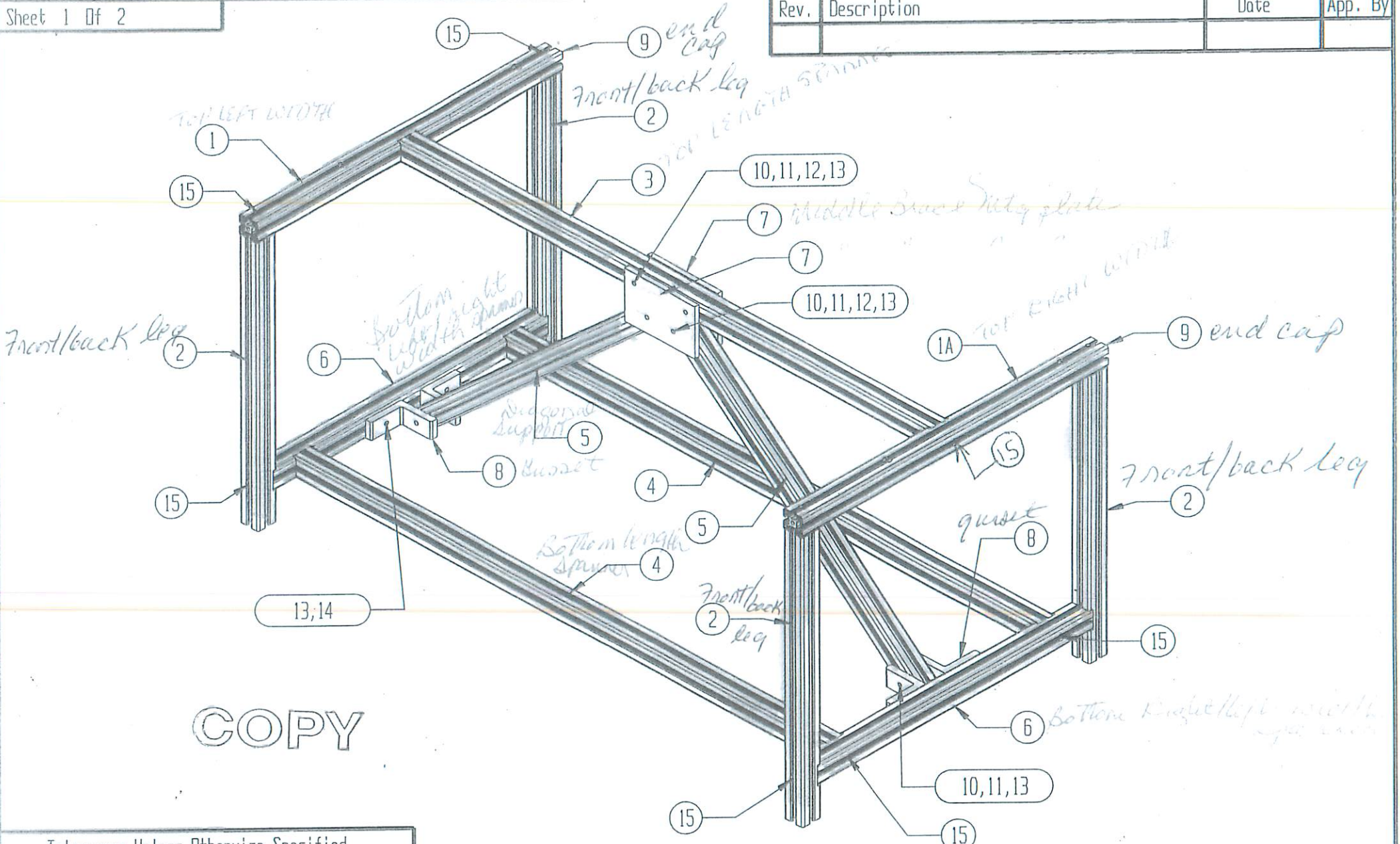
WGT.

Drawn By: RDN

App. By: Ron

Date: 03/12/09

Rev.	Description	Date	App. By



COPY

Tolerances Unless Otherwise Specified				
Basic Dimension	1" TO 6.000	6.001 TO 24.000	ABOVE 24.000	$\angle \pm 0^\circ \pm 30'$
2 Place Din.	$\pm .005$	$\pm .010$	$\pm .031$	
3 Place Din.	$\pm .002$	$\pm .005$	$\pm .010$	

Finish Specs: CLEAN STAND

LEDCO INC.

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

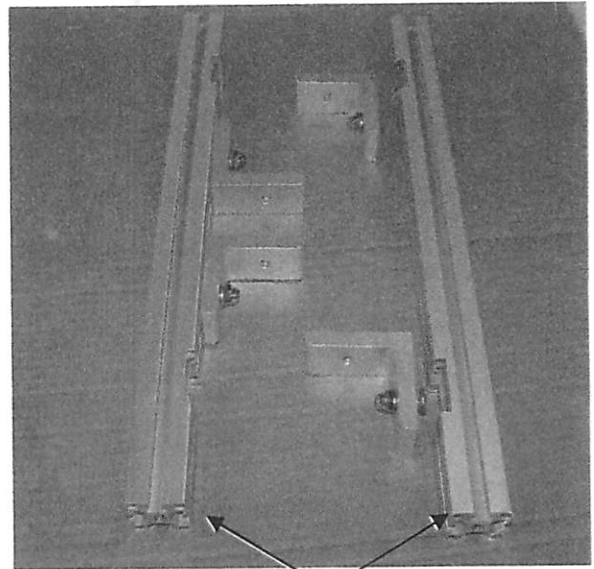
5) *Left 2* ASSEMBLE (4) STAND GUSSETS (LC38 135.4G) AS06 BY INSERTING A 5/16-18 X 1 CARRIAGE BOLT THROUGH ONE OF THE OUTER BREAK HOLES ON THE GUSSETS. ADD A 5/16 FLAT WASHER TO THE CARRIAGE BOLT THREADS AND SNUG A 5/16-18 ACORN NUT ONTO THREADS.

6) *Left 2* PLACE (2) BOTTOM LEFT/RIGHT WIDTH SPANNERS (HRD44 135.4C) AS14 ON THE WORKTABLE, ORIENTED WITH NOTCHES FACING EACH OTHER, INWARD. SLIDE THE "BOSS" OF (2) ASSEMBLED CARRIAGE BOLTS ON GUSSETS 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 MEASURED AND TIGHTENED LATER.

7) *Left 2* ATTACH (2) DIAGONAL CENTER SUPPORTS (EHR44 135.4G) AS06 BETWEEN THE GUSSETS ON THE LEFT/RIGHT WIDTH SPANNERS. USE (2) 5/16 X 3 SHCS AS13 EACH WITH A 5/16 FLAT. INSERT THROUGH GUSSET, DIAGONAL SUPPORT AND SECOND GUSSET. ADD A 5/16 FLAT WASHER AND A 5/16-18 ACORN NUT TO THREAD ENDS. ACORN NUTS WILL FACE FRONT.

8) ATTACH THE (2) BOTTOM LENGTH SPANNERS (EHR44 135.4F) AS06 BETWEEN THE BOTTOM LEFT/RIGHT WIDTH SPANNERS, FITTING INTO THE FRONT AND REAR NOTCHES. LOOSELY INSERT (4) 5/16-18 X 1 1/2 SHCS. ADJUSTMENTS WILL BE MADE, THESE MUST NOT BE TIGHT.

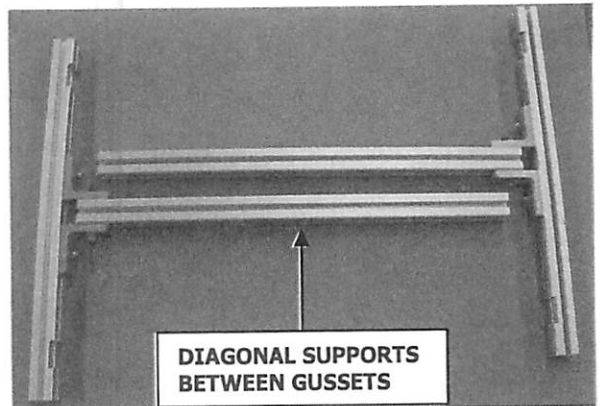
9) MEASURE THE CENTER OF THE RIGHT AND LEFT SIDE DIAGONAL SUPPORTS EVENLY BETWEEN THE FRONT AND REAR NOTCHES ON THE BOTTOM WIDTH SPANNERS. SNUG THE ACORN NUTS ON THE GUSSETS. THE DISTANCE WILL BE APPROXIMATELY 8 1/2" FROM THE DIAGONAL SUPPORT EXTRUSION CENTER TO THE BOTTOM LENGTH



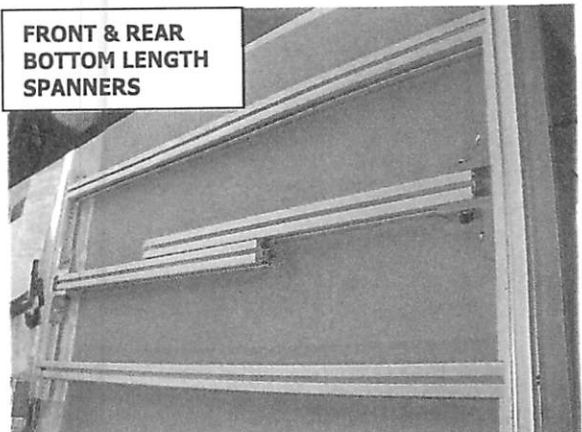
BOTTOM RT/LFT WIDTH SPANNERS & GUSSETS



GUSSET ORIENTATION



DIAGONAL SUPPORTS BETWEEN GUSSETS



FRONT & REAR BOTTOM LENGTH SPANNERS

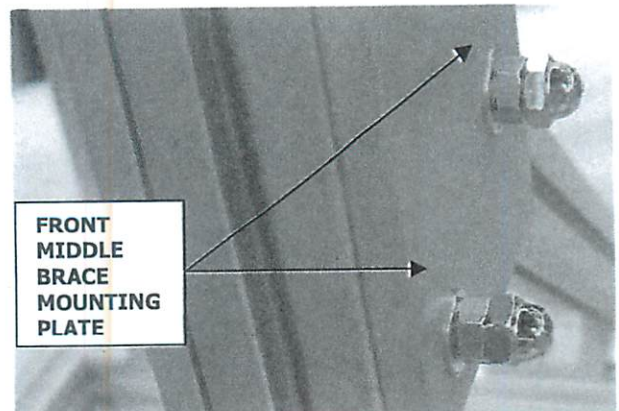
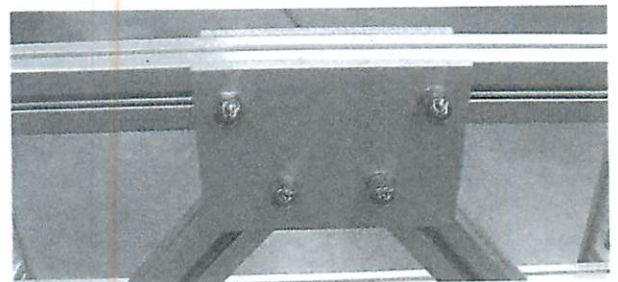
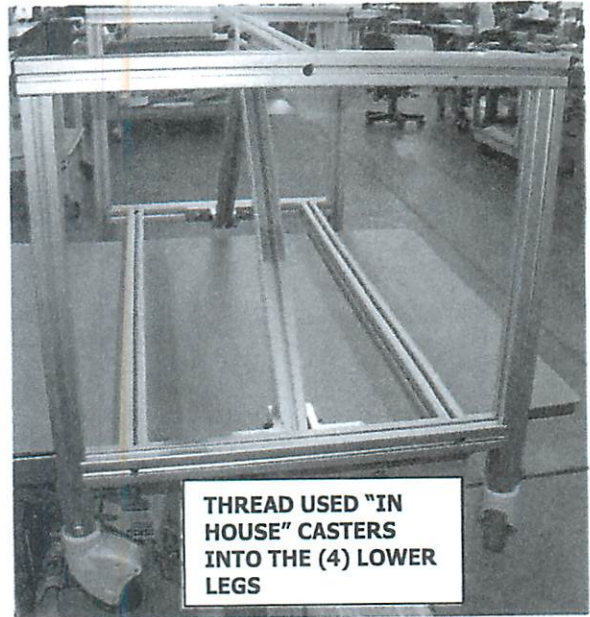
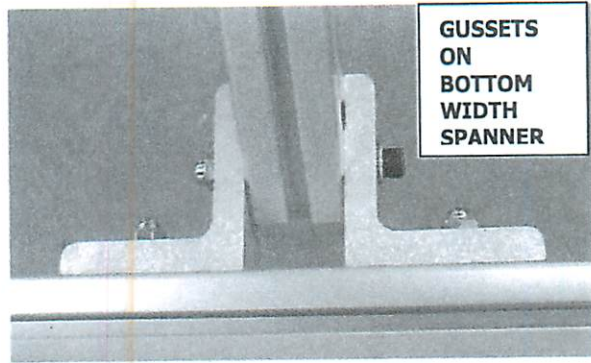
SPANNER EXTRUSION CENTER. A FINAL MEASUREMENT WILL BE TAKEN AFTER THE LEGS ARE ON AND THE DIAGONAL SUPPORTS ARE FITTED BETWEEN THE MIDDLE BRACE MOUNTING BRACKETS.

- 10) *step 2* **LOOSELY** THREAD (3) OF THE (4) FRONT/BACK LEGS (EP30 135.4D) AS22 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 1/2 SHCS. THE FOURTH LEG IS SECURED AFTER THE DIAGONAL SUPPORT IS FITTED BETWEEN THE FRONT AND REAR MIDDLE BRACE MOUNTING PLATES.

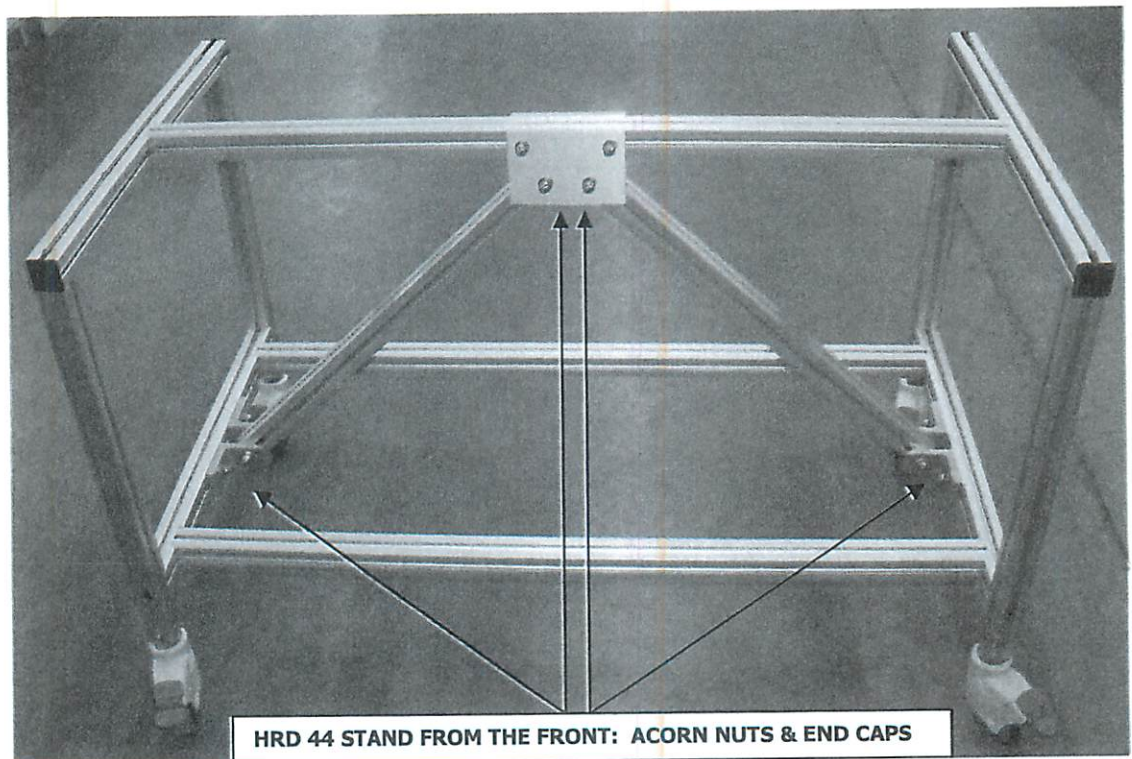
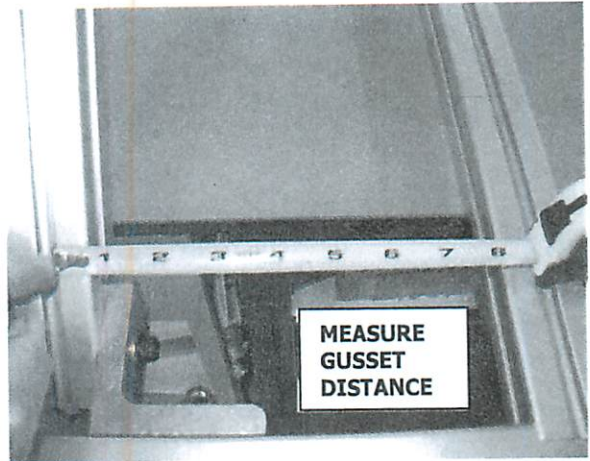
- 11) FOR ASSEMBLY PURPOSES THREAD (4) USED "IN HOUSE" CASTERS SHIPPING DEPT. INTO THE BOTTOM OF THE LEGS. THESE WILL BE REMOVED BY SHIPPING DEPARTMENT WHEN MACHINE IS PACKED. NEW CASTERS ARE SENT WITH THE HRD44.

- 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 1/2 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.

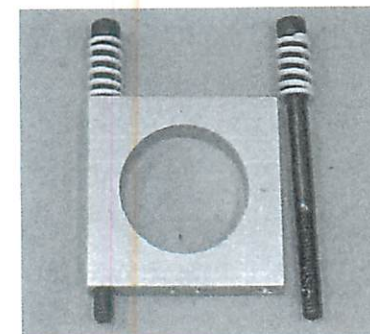
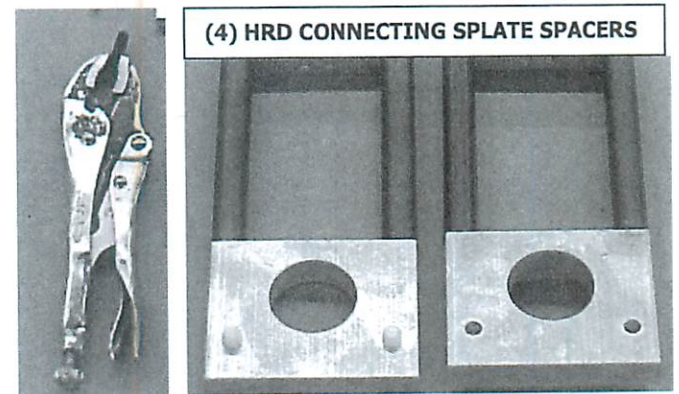
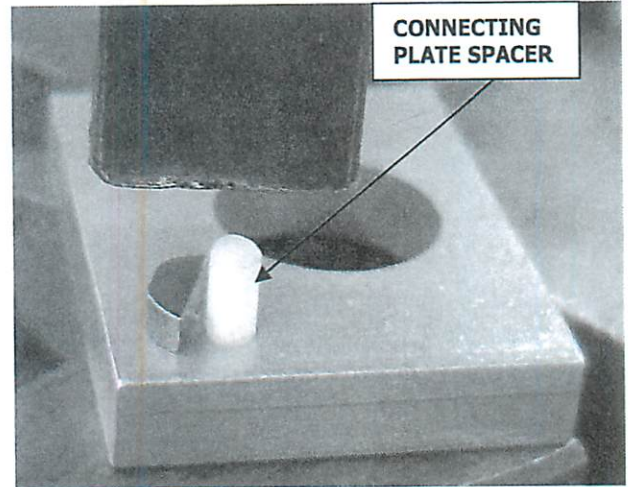


- 14) AFTER THE DIAGONAL SUPPORTS ARE SECURED, THREAD ON THE FOURTH LEG WITH A 5/16-18 X 1 1/2 SHCS ON THE TOP AND BOTTOM.
- 15) USE A TAPE AND MEASURE AN EVEN DISTANCE FOR THE GUSSETS BEFORE TIGHTENING.
- 16) PLACE A DROP OF LOCTITE BLACK 380 INSTANT ADHESIVE CAB1 ON THE CENTER INSERT SECTION OF AN EXTRUDED STAND END CAPS (PRC250) AS06. 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.



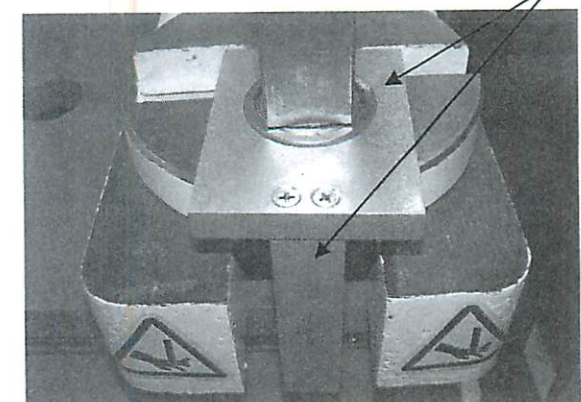
HRD 44 NRTL CONNECTING PLATES

- 1) THERE ARE TWO REAR AND TWO FRONT CONNECTING PLATE ASSEMBLIES NEEDED FOR THE HOT ROLL DIGITAL 44. THE FRONT RIGHT SIDE HAS A DIFFERENT TOP CONNECTING PLATE FROM THE OTHER THREE. ALL FOUR ROLLER BALL BEARINGS SHOULD BE FLUSH WITH THE OUTER TOP PLATE.
- 2) TO ASSEMBLE CONNECTING PLATES, ARBOR PRESS (8) WHITE PLASTIC CONNECTING PLATE SPACERS (H850 044.4) RACK 8 INTO (4) BOTTOM CONNECTING PLATES (EP30 042.4B) RACK 8 THE DEPTH OF A MI161 WOODRUFF KEY SHOWING.
- 2) PLACE LOCTITE ON END THREADS OF (8) 5/16-18 X 1 SET SCREWS AND INSERT INTO BOTTOM CONNECTING PLATES LEAVING 1/2 INCH OF THREADS STILL SHOWING. LOCTITE SHOWING THREADS AND SCREW ON (8) HRD CONNECTING PLATE SPACERS (HRD44 043.4) RACK 14. TIGHTEN WITH CHANNEL LOCKS.
- 3) ARBOR PRESS (4) 1640ZZ ROLLER BALL BEARINGS (PRB087A) ~~A567~~ INTO (3) TOP CONNECTING PLATE C (EP30 042.4T) RACK 8 WITH THE BALL BEARING FLUSH ON OUTSIDE.
- 4) THE 4TH BALL BEARING IS ARBOR PRESSED INTO TOP CONNECTING PLATE (EHR44 042.4TA) RACK 14 FLUSH SIDE OUTWARD OPPOSITE COUNTERSINKS.
- 5) POSITION THE TOP AND BOTTOM CONNECTING PLATE SEGMENTS WITH EXCESS BALL BEARING SHOWING ON TOP AND WHITE PLASTIC SPACERS SHOWING ON BOTTOM. RUN (2) 5/16-18 X 4 1/2 SHCS WITH A ROUND WIRE SPRING (PRS229) RACK 9 ON EACH THROUGH TOP CONNECTING PLATES AND THREAD INTO CONNECTING PLATE SPACERS. TO SET PRESSURE, TIGHTEN ONE COMPLETE 360 DEGREE TURN



USE (3) TOP CONNECTING PLATES

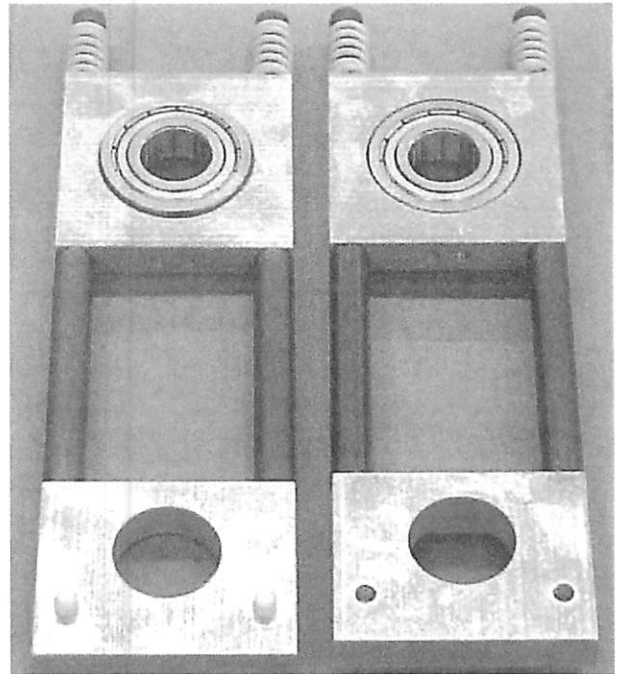
PRESS BEARING INTO FRONT RIGHT TOP CONNECTING PLATE FROM COUNTERSUNK SIDE, SEE STANDOFF



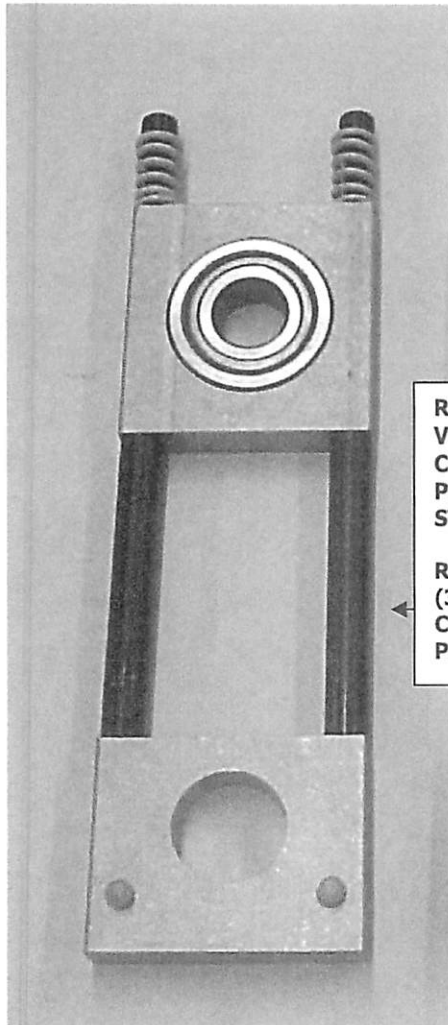
A509

AFTER THE SPRING IS TOUCHING
SCREW HEAD AND TOP CONNECTING
PLATE.

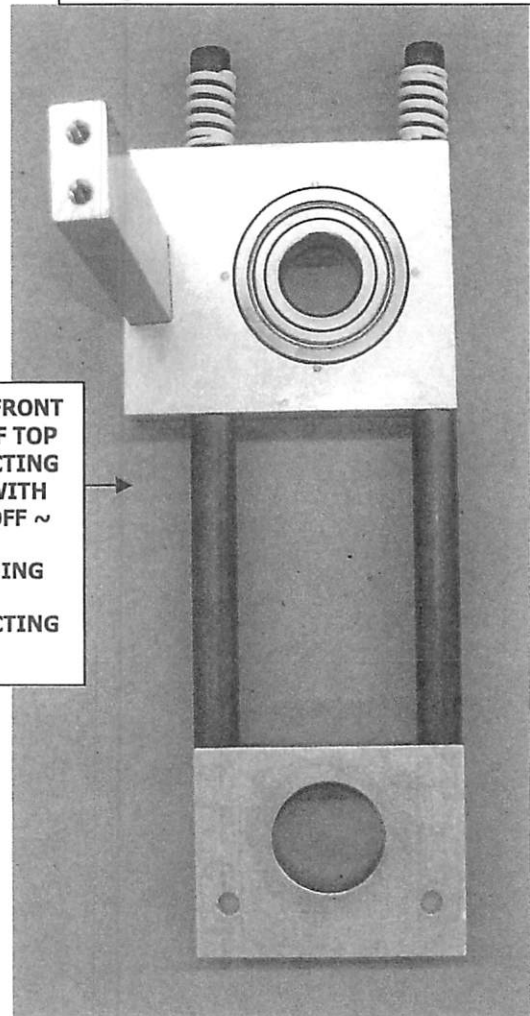
- 6) SECURE A SLIP RING STANDOFF (EHR44 049.4A) RACK 14 TO TOP RIGHT CONNECTING PLATE THROUGH THE COUNTERSUNK HOLES USING (2) 10-32 X 1 FH PH MS.
- 7) CONNECTING PLATE ASSEMBLIES CAN BE STORED UNTIL NEEDED FOR CHASSIS. REMEMBER WHEN PLACING PLATES ON LAMINATOR THE EXCESS BALL BEARING AND THE WHITE SPACERS FACE INWARD.
- 8) BELOW FRONT CONNECTING PLATE ASSEMBLIES SHOWING LEFT INNER AND RIGHT OUTER VIEW.



EXCESS BEARING & NYLON SPACERS FACE
INWARD ON HRD CONNECTING PLATES

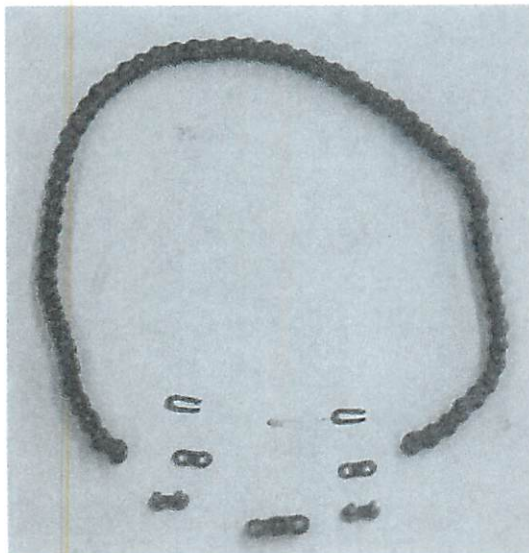
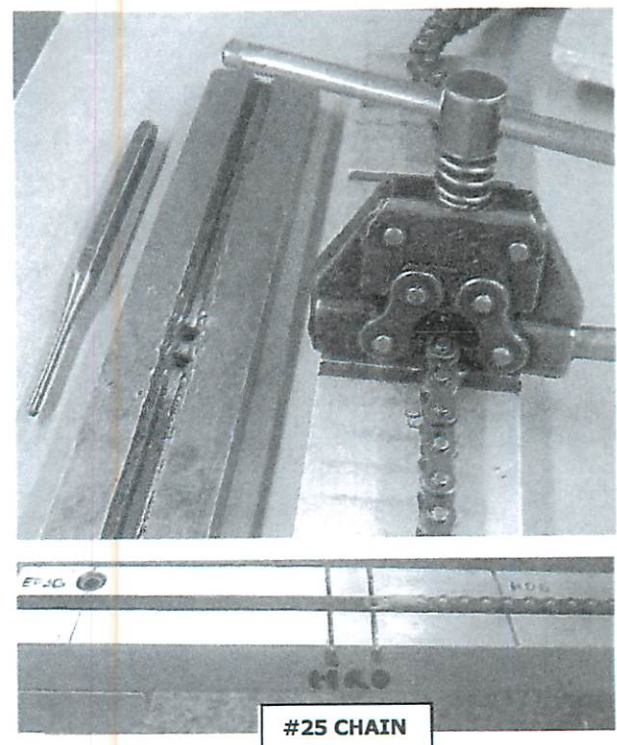
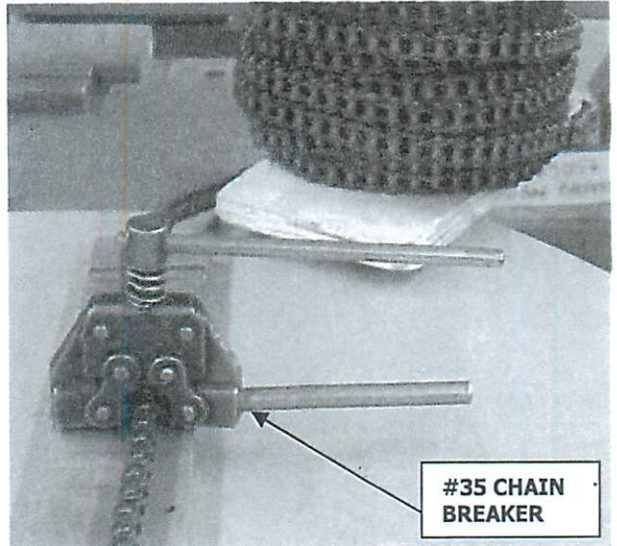


RIGHT FRONT
VIEW OF TOP
CONNECTING
PLATE WITH
STANDOFF ~
REMAINING
(3)
CONNECTING
PLATES



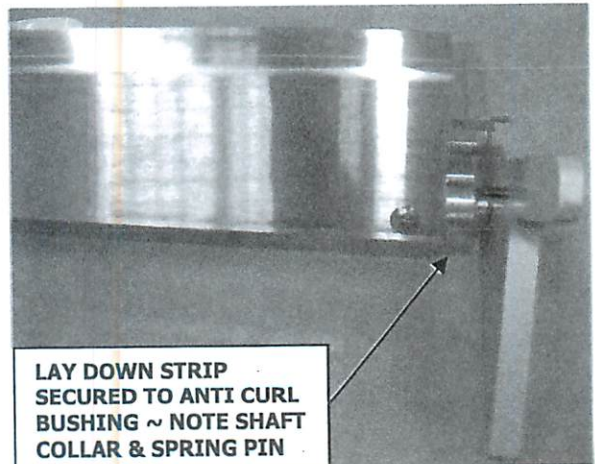
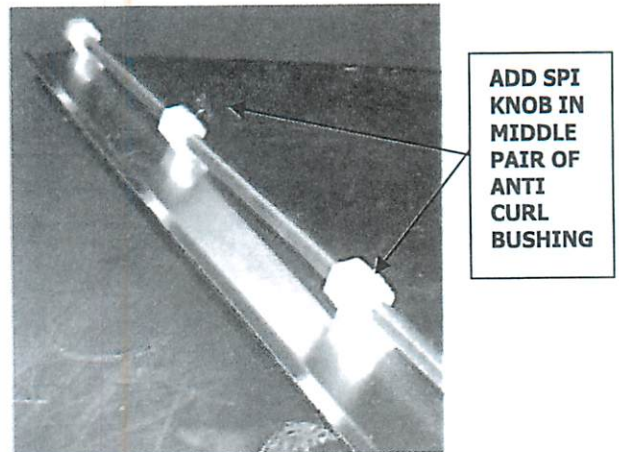
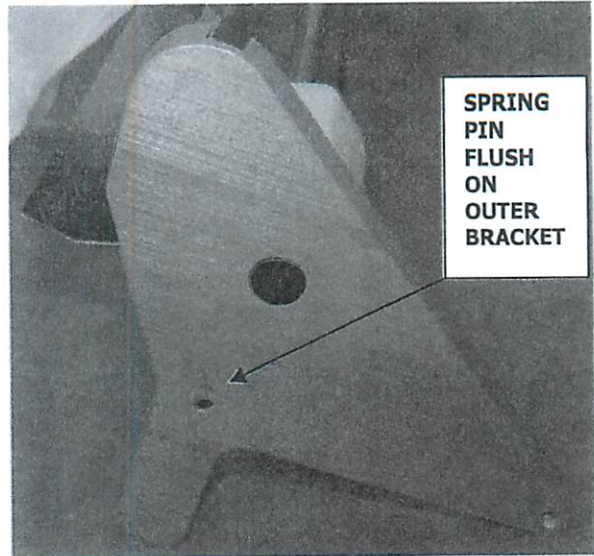
HOT ROLL DIGITAL 44 CHAINS

- 1) CUT (2) CHAINS FROM #35 CHAIN ROLL (PRC086) CCT. ONE EACH MEASURED TO LONG AND SHORT INDICATION ON HRD 44 ON METAL CHAIN GAUGE CCT.
- 2) PROCEDURE FOR CUTTING #35 CHAIN IS TO PLACE END LINK OVER HOOK ON CHAIN GAUGE. SQUEEZE BARS TO OPEN CHAIN BREAKER AND PLACE ON INDICATED LINE. TURN TOP ROD TO DISCONNECT LINK RIGHT OF LINE.
- 3) USE PUNCH AND TOOL PICTURED TO REMOVE LINKS.
- 4) CONNECT WITH #35 CHAIN CONNECTING LINK (PRC087) AS09.
- 5) CUT (2) CHAINS FROM #25 CHAIN ROLL (PRC083.1) CCT. ONE EACH MEASURED TO LONG AND SHORT "HRD 44" INDICATION ON METAL CHAIN GAUGE.
- 6) ON THE SHORTER #25 CHAIN ADD A #25 CHAIN OFFSET LINK (PRC085) AS09. ATTACH WITH #25 CHAIN CONNECTING LINK (PRC084) AS09.
- 7) STORE ALL FOUR CHAINS UNTIL ASSEMBLY.



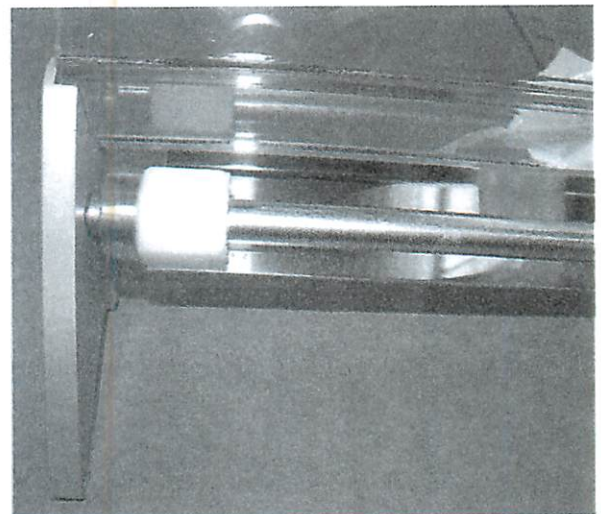
HRD 44 NRTL SAFETY SHIELD

- 1) ARBOR PRESS A 1/8 X 3/4 SPRING PIN INTO RIGHT AND LEFT PIVOTING SAFETY SHIELD BRACKET (D105 091.4R AND D105 091.4L) AS13 FROM *INNER* BRACKET GROOVED SIDE. SPRING PIN IS FLUSH ON *OUTER* BRACKET SIDE.
- 2) SLIDE (4) ANTI CURL STRIP MOUNTING BUSHINGS (D105 099.4) RACK 2 ONTO SAFETY SHIELD TIE ROD (EHR44 103.4) LOFT 2. THE #10 TAPPED HOLES FACE THE BACK OF THE OUTER PAIR, AND THE #10 TAPPED HOLES FACING THE FRONT ON THE MIDDLE PAIR.
- 3) PEEL OFF PLASTIC COVERING FROM LAY DOWN STRIP T304 SS (EHR44 075.4) AS14 AND DISCARD COVERING. SECURE THE (4) ANTI CURL STRIP MOUNTING BUSHINGS TO THE LAY DOWN STRIP USING (4) 8-32 X 1/4 TH.
- 4) THREAD (2) SPI KNOBS WITH 3/4" SCREW (PRK178) AS08 INTO #10 TAPPED HOLES ON THE MIDDLE PAIR OF ANTI CURL BUSHINGS, SECURING TO SAFETY SHIELD TIE ROD.
- 5) PLACE A 1/2 SHAFT COLLAR (PRC096) AS07 ON BOTH ENDS OF THE SAFETY SHIELD TIE ROD, NEXT TO OUTER ANTI CURL BUSHINGS. LEAVE ABOUT 3/16" OF TIE ROD SHOWING ON BOTH SIDES. SECURE SHAFT COLLAR TO TIE ROD WITH SET SCREW.
- 6) ATTACH RIGHT PIVOTING SAFETY SHIELD BRACKET TO TIE ROD END WITH 10-32 X 3/4 FSH, LOCTITE THREADS. SET PEEL BACK PLASTIC END COVERING ON SAFETY SHIELD (EHR44 102.4) AS14. PLACE IN BRACKET GROOVE ON BOTH BRACKETS BEFORE SECURING TIE ROD ON LEFT SIDE. SECURE OPPOSITE SIDE WITH 10-32 X 3/4 FSH, LOCTITE THREADS.

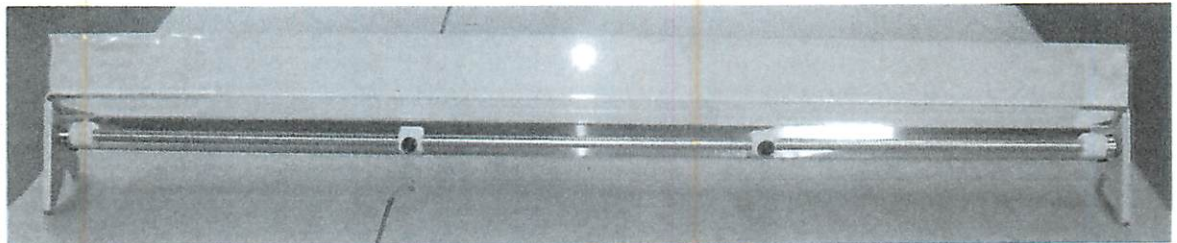


7) PEEL BACK PLASTIC COVERING ON SAFETY SHIELD FROM TOP EDGE DOWNWARD. ADHERE (2) ARM ENTANGLEMENT LABELS (LAB51) AS09 CENTERED ABOVE SPI KNOBS, ADHERE (1) YELLOW INTERNATIONAL "HOT" WARNING LABEL (LAB100) AS09 BETWEEN SPI KNOBS AND ADHERE (2) GENERAL DANGER LABELS (LAB52) ON SAFETY SHIELD ENDS.

8) STORE COMPLETED SAFETY SHIELD ASSEMBLY UNTIL NEEDED FOR INSTALLATION ON CHASSIS. IF ADDING TO MACHINE NOW, SET ASSEMBLY INTO FEEDTABLE BRACKETS. TEST FUNCTION OF LEVER TYPE MICRO SWITCH. SECURE SAFETY SHIELD BRACKETS TO SIDE PANELS WITH $\frac{1}{4}$ X $\frac{1}{4}$ SHOULDER TURN DOWN SCREWS (.250IAC04A) AS13.

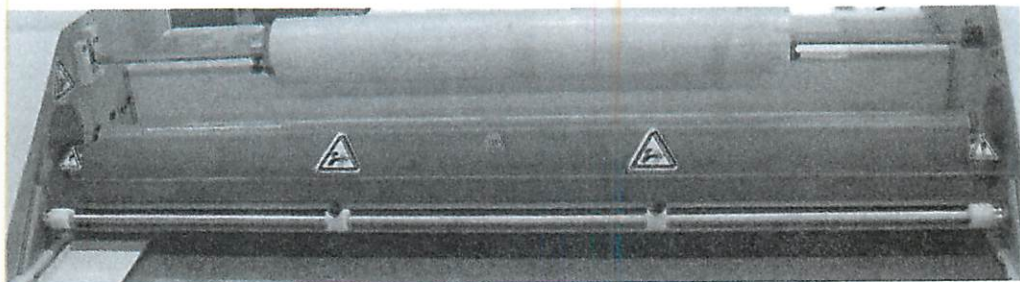


FRONT OF SAFETY SHIELD, TIE ROD & ANTI CURL BUSHING, $\frac{1}{2}$ " SHAFT COLLAR



HRD 44 SAFETY SHIELD

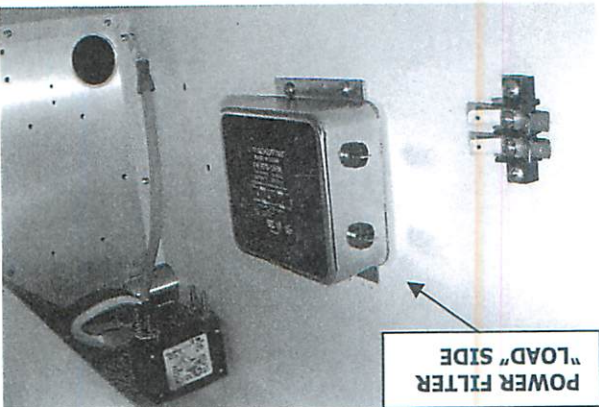
HRD44 NRTL SAFETY SHIELD INSTALLED WITH (5) LABELS ADHERED IN POSITION



(2) GENERAL DANGER (2) ARM ENTANGLEMENT & (1) HOT LABEL

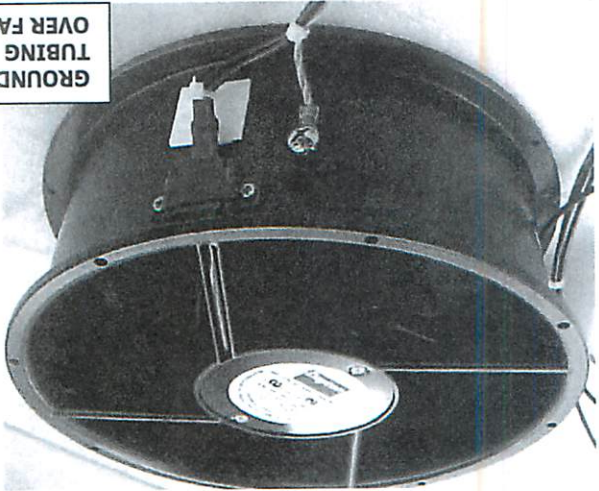
HOT ROLL DIGITAL 44 NR1L BOTTOM MOTOR COVER

- 1) PREPARE THE NR1L HRD BOTTOM MOTOR COVER (HRD44 093.4) AS14 BY SECURING THE POWER FILTER (PRF142) AS07 TO THE (4) THREADED HOLES BETWEEN THE BREAKER AND TERMINAL BLOCK POSITIONS. ORIENT THE POWER FILTER WITH THE "LINE" TERMINALS FACING OUTWARD AND THE "LOAD" TERMINALS FACING THE FAN POSITION. USE (4) 8-32 X 1/4 RH, EACH WITH A #8 STAR WASHER.



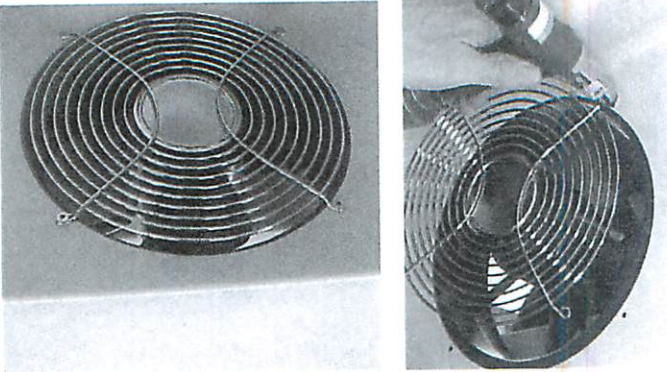
POWER FILTER
"LOAD" SIDE

- 2) WIRE (1) 10" DIA AXIAL FAN (PRF130) AS09 BY CRIMPING (2) FULLY INSULATED FEMALE FASTONS (PR1310) ONTO ONE END OF (2) 7" 18 GAUGE WIRES, ONE BROWN AND ONE GRAY CUT FROM SPOOL. CRIMP (2) FULLY INSULATED FEMALE (PR131) FASTONS ONTO THE REMAINING ENDS OF THESE WIRES. PLACE 1" OF 3/8 BLACK INSULATING TUBING (PR1164) CAB1 OVER THE SMALLER (PR1310) FASTONS AND INSERT WIRES ONTO FAN TERMINALS. SHRINK TUBING OVER CONNECTION. THE FACIA WIRING HARNESS HAS THE GREEN STRIPED GROUND WIRE WHICH CONNECTS TO THE FAN. LOOSELY ADD A #10 STAR WASHER TO THE FAN SCREW.

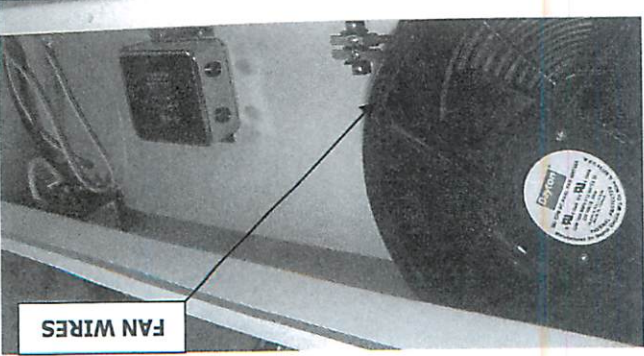


GROUND &
TUBING
OVER FAN

- 3) LAY MOTOR COVER ON WORK TABLE. USING (4) 5/32 X 3/8 BUTTONHEAD POP RIVETS (.15600Q06) INSERTED THROUGH LARGE 10" FAN GUARD (PRF121) AS07 FROM OUTSIDE MOTOR COVER CONNECTING TO "AXIAL FAN" INSIDE. BEFORE RIVETING, BE CERTAIN AIR FLOW AND PRINTING ON FAN FACES UPWARD AND WIRE CONNECTIONS FACE THE POWER CORD SIDE.

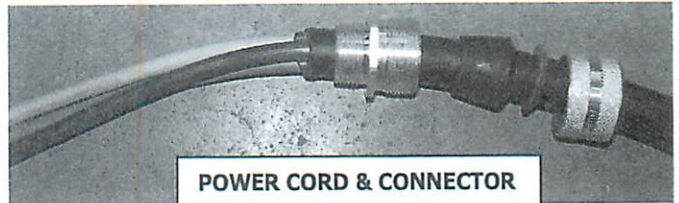


- 4) FROM AS09 ATTACH (2) 180 DEGREE TERMINAL POSTS (PR1306) TO THE TERMINAL BLOCK (PR1304), SECURE TERMINAL BLOCK TO THE INNER MOTOR COVER BY FAN APERTURE USING (2) 8-32 X 1/2 PHMS. CONNECT FAN WIRES TO CLOSEST TERMINAL POSTS.



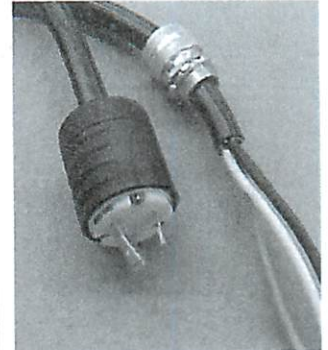
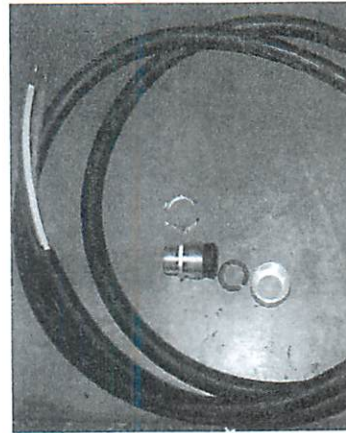
FAN WIRES

- 5) FROM AS09 UNTHREAD STRAIN RELIEF CORD CONNECTOR (PRB095) AND SLIDE SECTIONS ONTO 30 AMP POWER CORD (PRC218) AS14. TRIM CORD SHEATHING. TIGHTEN BY THREADING STRAIN RELIEF ONTO CORD. INSERT CONNECTOR THREADS AND POWER CORD THROUGH BOTTOM COVER. ORIENT CORD WITH GREEN GROUND WIRE TOWARD SIDE RIGHT PANEL. THREAD ON TOOTHED WASHER. TIGHTEN TO INNER MOTOR COVER.



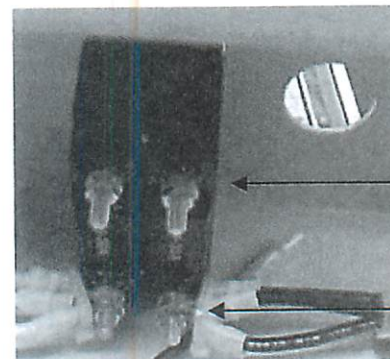
POWER CORD & CONNECTOR

- 6) **BEFORE** INSERTING THE BREAKER LC38, 30 AMP (PRS057) RACK 1 ATTACH (3) BLACK AND (3) WHITE RING WIRES FROM SEPARATE WIRING HARNESS PACK #4 TO BOTTOM "LOAD" POSTS. THE BLACK WIRES FACE THE SIDE PANEL AND WHITE WIRES FACE INWARD. USE HEX NUT, WASHER AND STAR WASHER PROVIDED WITH THE BREAKER. CABEL TIE EACH SET OF (3) WIRES. INSERT BREAKER FROM INNER MOTOR COVER, "OFF" POSITION WILL BE PRINTED AND VISABLE WHEN SWITCH IS DOWN. SECURE BREAKER ON REAR MOTOR COVER WITH (4) 6-32 X 1/4 PHMS.



POWER CORD PRC218

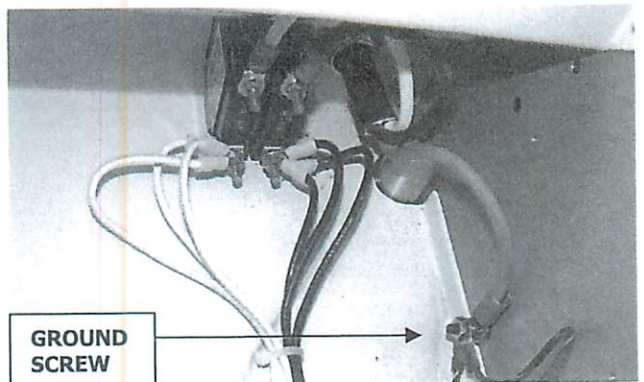
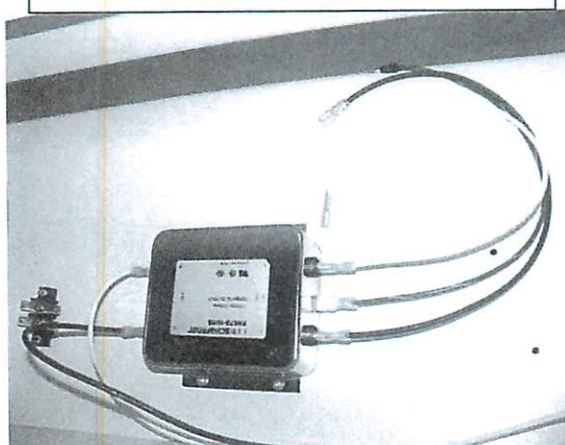
- 7) CONNECT WHITE POWER CORD WIRE TO THE INNER "LINE SIDE" ON UPPER BREAKER POST AND BLACK POWER CORD WIRE TO UPPER "LINE" BREAKER POST BY SIDE RIGHT PANEL.



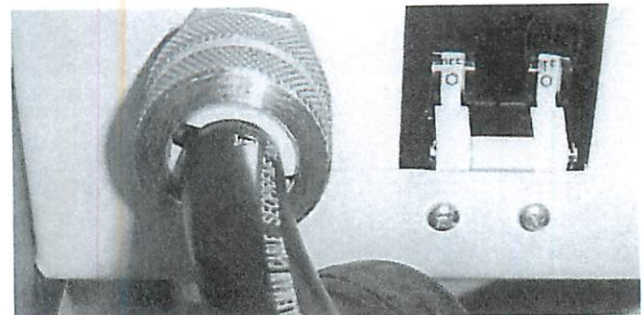
TOP "LINE" POSTS:
POWER CORD

BOTTOM "LOAD"
POSTS: BAG WIRES

TERMINAL BLOCK & WIRED POWER FILTER



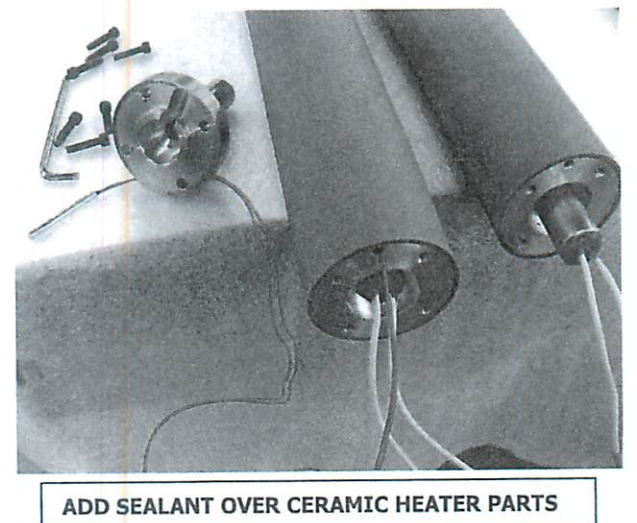
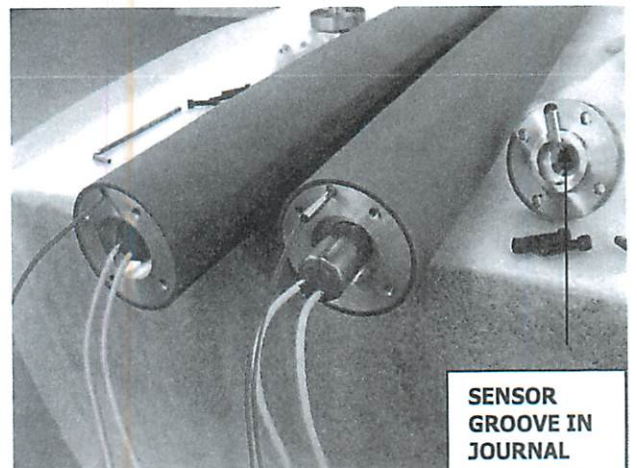
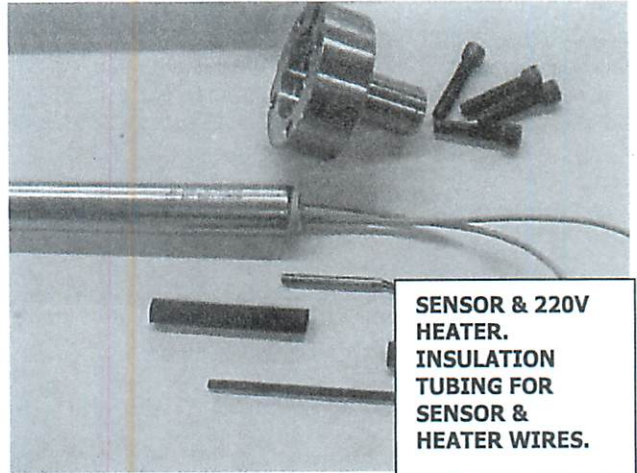
GROUND
SCREW



HOT ROLL DIGITAL 44

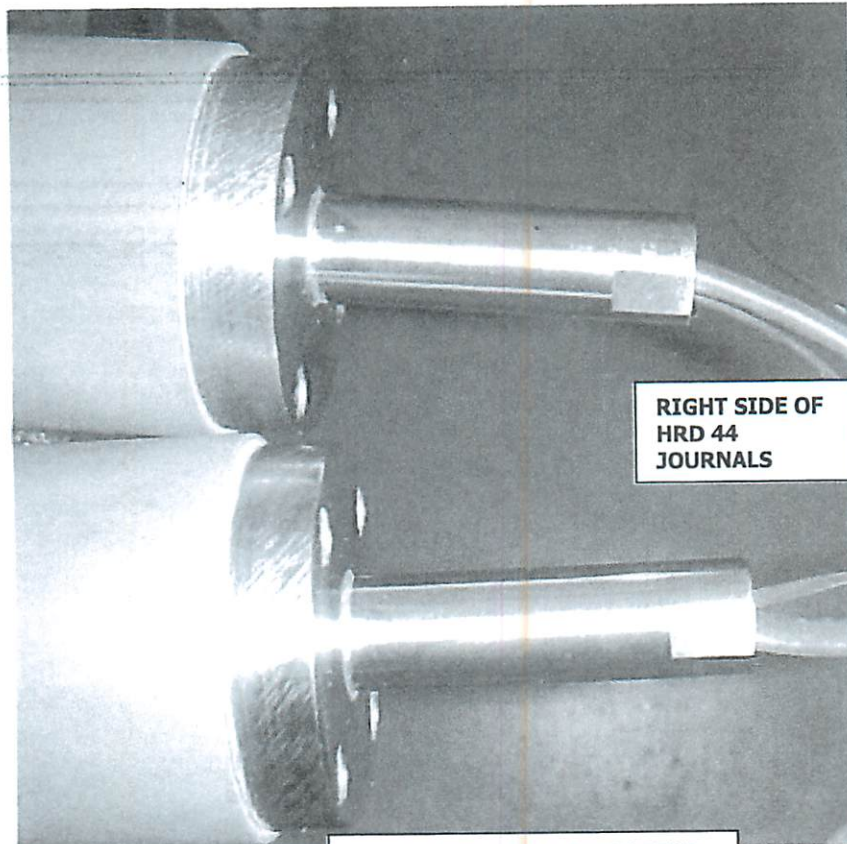
HOT ROLL ASSEMBLY 2015

- 1) THE HRD 44 USES (2) IDENTICAL HOT ROLL ASSEMBLIES. THEY WILL LOCATE IN THE UPPER AND LOWER FRONT OF MACHINE. ASSEMBLE BOTH HOT ROLLS AS FOLLOWS.
- 2) LOOSEN (4) SOCKET HEAD CAPSCREWS HOLDING HOT ROLL SENSOR END HUB ONTO HOT ROLL BODY COMPLETE (EHR44 040.4) LOFT 6. THIS HUB HAS THE OPEN BORE JOURNAL FOR WIRE EXIT.
- 3) CAREFULLY REMOVE JOURNAL FROM HOT ROLL BODY. USE PLASTIC MALLET IF NESSECARY.
- 4) INSERT 1.000" DIA. CARTRIDGE HEATER 220V (PRH180) LOFT 1 INTO EACH HOT ROLL CORE. INSERT A SENSOR FOR TRAKSTAT (PRC2121) LD00 INTO BOTH SENSOR APERTURES. **WARNING: DO NOT FORCE THEM INTO THE BORE.** IF NESSECARY, CLEAN BORE WITH BORE SWAB TOOL. STAKE SENSOR AND BOTH ENDS OF HEATERS.
- 5) CUT (3) 4" PIECES OF 3/16" BLACK INSULATION TUBING (PRI165) CAB1 AND PLACE ONE ON EACH HEATER WIRE AND BOTH SENSOR WIRES. SHRINK TUBING. CUT 4" OF 3/8" BLACK INSULATION TUBING (PRI164) CAB1, COVER WIRE BUNDLE AND SHRINK TUBING.
- 6) ADD LOCTITE SILICONE SEALANT TO COVER ALL CERAMIC AREA OF HEAT CARTRIDGE, CAB1 ESPECIALLY AROUND WIRES AND EDGE.
- 7) PLACE WIRE LEADS THROUGH JOURNAL BORE AND ALIGN GROOVE INSIDE JOURNAL FACE TO CORRESPOND WITH SENSOR LEADS. REATTACH JOURNAL



ONTO CORE USING 1/4-20 X 1 SHCS.
**WARNING: DO NOT PINCH THE LEADS
BETWEEN JOURNAL AND BORE.**

- 8) DO NOT TERMINATE LEADS. AFTER HOT ROLLS ARE IN CHASSIS, THEY CAN BE MEASURED TO 3 1/2" AND TERMINATED, USING (2) FEMALE FASTONS (PRT310) ON SENSOR WIRES AND (2) FLAG FASTONS (PRT284) ON HEATER WIRES. **WARNING: GREAT CARE MUST BE TAKEN WHEN STRIPPING WIRES AND TERMINATING. IF CUT TOO SHORT THE HEATER | SENSOR WILL BE SCRAPPED. MAKE ABSOLUTELY SURE THAT ALL CRIMP CONNECTIONS ARE SECURE.**
- 9) SLIDE A 1" PIECE OF 3/8" INSULATION TUBING ONTO WIRES AND SHRINK AT END OF JOURNAL FOR EXTRA PROTECTION.



RIGHT SIDE OF
HRD 44
JOURNALS

HRD 44 HOT ROLLS COMPLETED
WITH INSULATION TUBING ON
HEATER AND SENSOR WIRES

HRD 44 NRTL CHASSIS ASSEMBLY

- 1) SECURE LEFT SIDE PANEL ASSEMBLY TO ASSEMBLED BOTTOM MOTOR COVER USING (4) 10 X 1/2 PH SQ DR SMS AND (6) 10 X 5/8 FH SQ DR SMS. SECURE RIGHT SIDE PANEL ASSEMBLY TO ASSEMBLED BOTTOM MOTOR COVER USING (4) 10 X 1/2 PH SQ DR SMS AND (6) 10 X 5/8 FH SQ DRIVE SMS. POSITIONS ARE SHOWN WITH ARROWS IN PHOTOS.

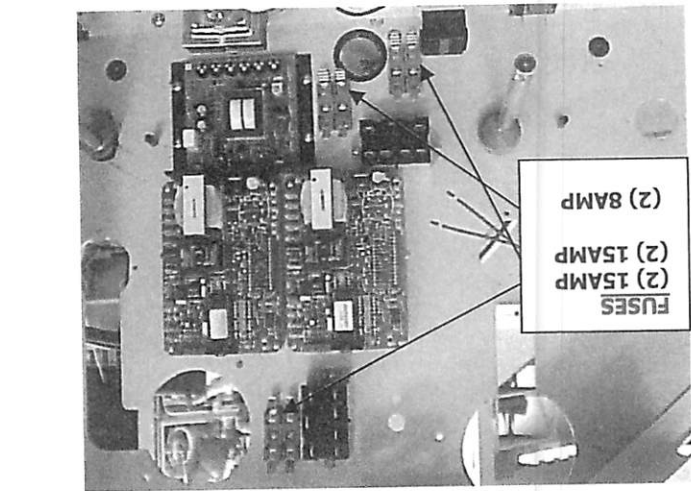
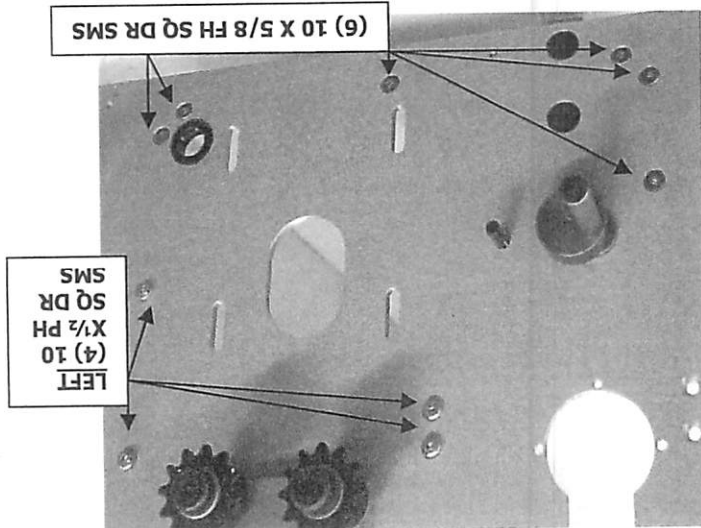
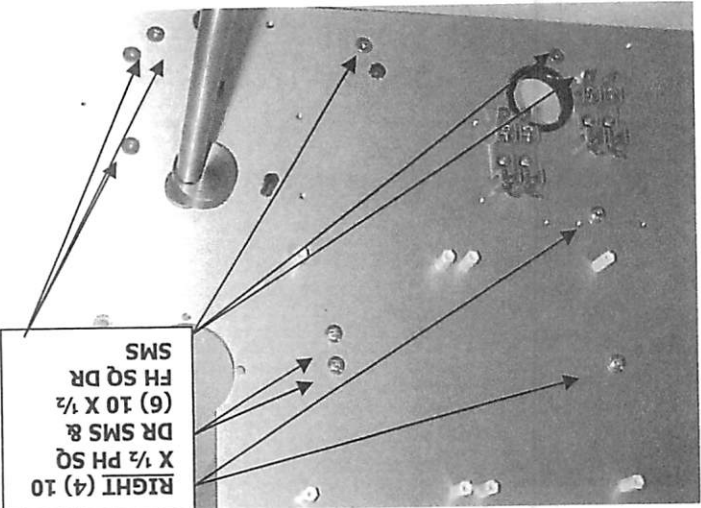
- 2) SECURE MOUNTING FEET TO HRD STAND WITH 1/2-13 X 2 1/2 HEX HEAD BOLTS AND 1/2" FLAT WASHERS AS13.

- 3) ON RIGHT SIDE PANEL ATTACH MINARIK SPEED CONTROL 115-220 VAC (PRM218A) AS08 USING (4) 8-32 X 1/4 TH AND A #8 STAR WASHER. POSITION THE FIVE TERMINAL POSTS ON LEFT TOWARD THE HRD FRONT. SWITCH BOTH VOLT INDICATORS TO THE RIGHT (180 AND 230), SETTING THE BOARD FOR 220 VOLTS.

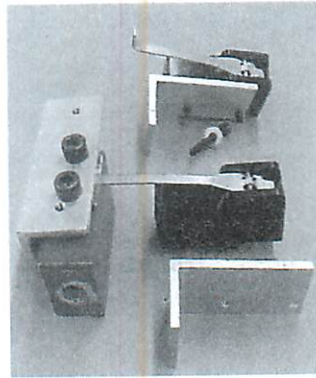
- 4) ATTACH (2) HEAT CONTROLLER KIT BOARDS (PRH130) AS07 WITH TERMINAL POSTS ON RIGHT FACING REAR OF MACHINE. SECURE WITH (8) 4-40 X 3/8 PH INTO STANDOFFS ALREADY ON SIDE PANEL.

- 5) ATTACH (2) OMRON RELAYS 24 VAC (PRR251) RACK 1 WITH TOP RELAY DOUBLE TERMINAL POSTS ON RIGHT BY FUSES AND LOWER HORIZONTAL RELAY POSITIONED WITH DOUBLE TERMINAL POSTS DOWN BY FUSES. SECURE BOTH RELAYS TO SIDE PANEL USING (4) 8-32 X 1/4 RH.

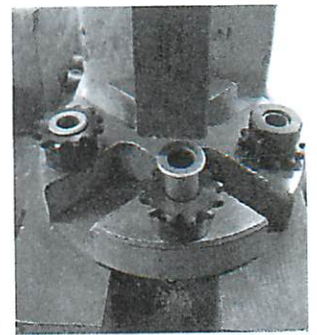
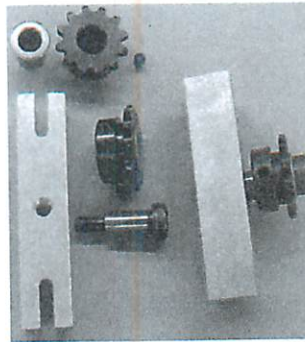
- 6) FROM AS07 INSERT THE FOLLOWING FUSES (2) 15 AMP "SLO-BLO" (PRF147) INTO TOP FUSE HOLDERS, (2) 15 AMP "SLO-BLO" (PRF147) BELOW RELAY AND (2) 8 AMP LITTLEFUSE "SLO-BLO" (PRF137) AS07 LEFT OF MOTOR SPEED BOARD.



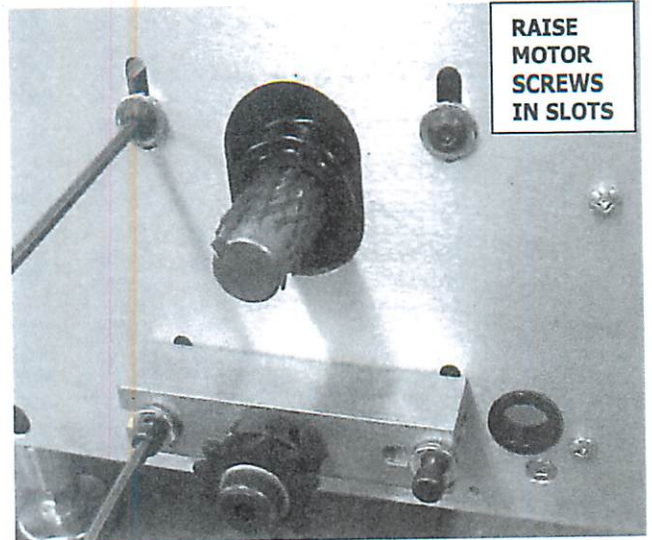
- 7) FROM RACK 1 ASSEMBLE LEVER TYPE MICROSWITCH (PRS313) BY FIRST BENDING UP MICROSWITCH TONGUE WITH GAUGED TOOL. THEN INSERT (2) 6-32 X 1 SHCS WITH (2) #6 FLAT WASHERS ON THEM THROUGH SIDE OF MICROSWITCH AND INTO SAFETY SWITCH BRACKET (LC38 170.4). ALIGN TONGUE THROUGH LEFT HRD 44 SIDE PANEL APERTURE AND SECURE BRACKET TO SIDE PANEL WITH (2) 6-32 X 1/4 PH.



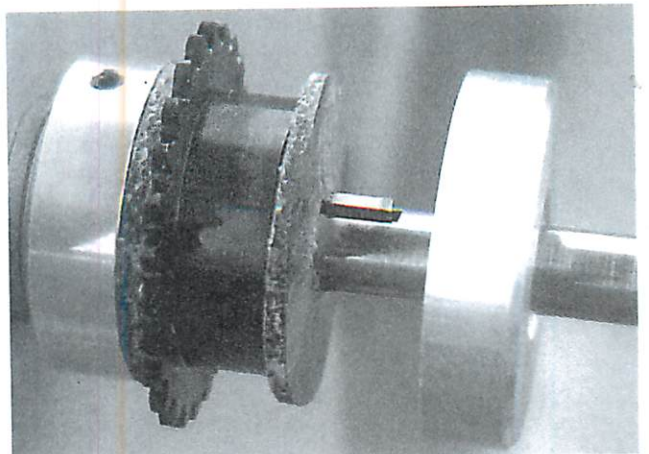
- 8) ASSEMBLE BOTTOM RUBBER ROLL CHAIN ADJUSTER (LC38 055.4) RACK 2. TAKE A 35B12 IDLER SPROCKET 5/8 BORE (PRS320) RACK 2 AND ARBOR PRESS AN OILITE FLANGE BEARING (PRB094) RACK 2 INTO THE SPROCKET FROM THE TOOTH SIDE. INSERT A 1/2 X 1 SHOULDER BOLT (.500IAC16) AS13 INTO FLANGE/TOOTH SIDE OF SPROCKET AND THREAD INTO BOTTOM RUBBER ROLL CHAIN ADJUSTER.



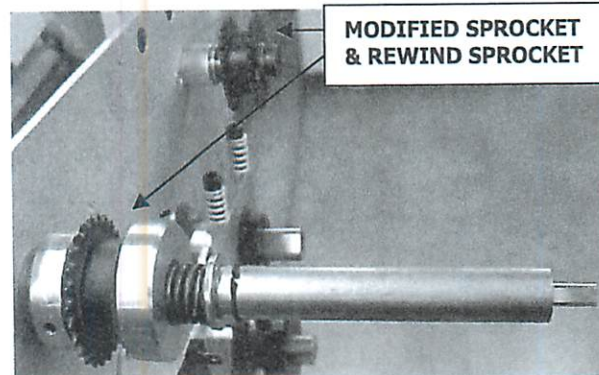
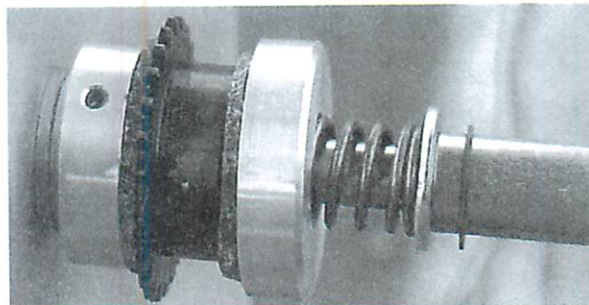
- 9) PLACE LEESON OR BALDOR GEAR MOTOR (PRM2000) AS05 IN MOUNTING POSITION THROUGH LEFT SIDE PANEL, MOTOR WIRES FACING UPWARD. FROM OUTSIDE START (2) 1/4-28 X 3/4 BH WITH A 1/4 X 5/8 X 1/8 WASHER ON EACH INTO TOP MOTOR THREADS. START A 1/4-28 X 1 3/4 SHCS WITH A 1/4 X 5/8 X 1/8 WASHER ON IT INTO ONE BOTTOM MOTOR THREAD, SLIDE ON LOWER CHAIN ADJUSTER ASSEMBLY AND THEN START THE OTHER BOTTOM MOTOR THREAD WITH SAME HARDWARE. RAISE MOTOR UP AS FAR AS POSSIBLE AND TIGHTEN ONE TOP SCREW, ONLY SNUG OTHERS AS MOTOR WILL BE LOWERED FOR TENSION WHEN CHAIN IS CONNECTED.



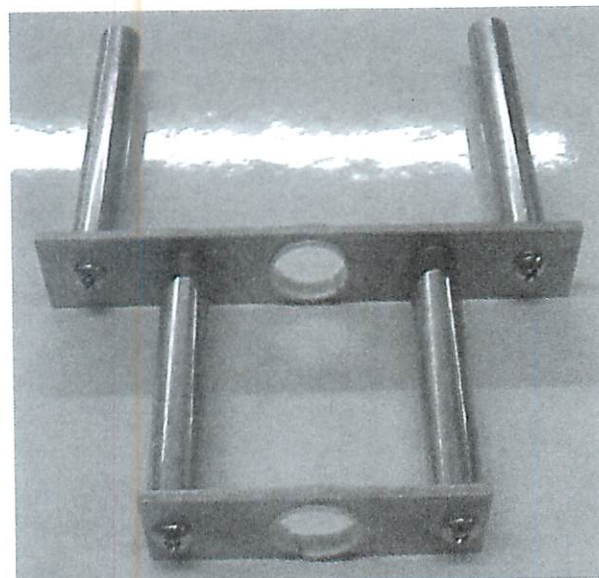
- 10) FROM INNER RIGHT SIDE PANEL INSERT REWIND DRIVER ASSEMBLY C (EP30 045.6) RACK 8 THROUGH BRASS FLANGE. FROM OUTSIDE ADD IN ORDER: FIXED FRICTION PLATE C (EP30 007.4) RACK 8 CONTAINING A 10-32 X 3/4 SET SCREW TIGHTENED INTO REWIND DRIVER ASSEMBLY HOLE. ** BE SURE THINNER SIDE OF FIXED FRICTION PLATE IS TOWARD SIDE PANEL. ADD LEATHER DISC (PRW336) RACK 22, THEN A 25B26



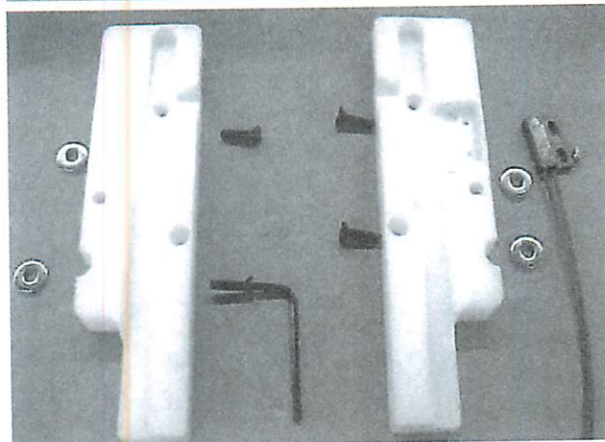
5/8 BORE SPROCKET (PRS255A) RACK 8 CONTAINING AN ARBOR PRESSED BEARING 1/2 X 5/8 X 1/2 (PRB043) AS08 HUB OUT, TEETH IN. ADD ANOTHER LEATHER DISC. PUT HD KEY (PRX347) AS09 INTO REWIND DRIVER ASSEMBLY KEYWAY. SLIDE ON SUPPLY ROLL FRICTION PRESSURE PLATE (H685 007.4A) RACK 8 WITH COUNTERBORE TOWARD OUTSIDE. EP REWIND SPRING (PRS226) RACK 10 FITS INTO COUNTERBORE. ADD 1/2 INCH WASHER SAE (.500KKC01) AS13. BRUSH ANTI-SEIZE ON REWIND DRIVER ASSEMBLY THREADS AND ADD TENSION NUT C (EP30 046.4) RACK 8 WHICH HAS REVERSE THREADS. ON THE TENSION NUT GROOVE ADD A 3/4" RETAINING RING (PRR192) AS08.



- 11) ASSEMBLE CLUTCH SUPPORT BY USING A TOTAL OF (6) 10-32 X 3/8 RH SCREWS TO CONNECT PARTS LOCATED IN RACK 8 AS FOLLOWS: USE (2) SCREWS TO ATTACH ENDS OF THE LONGER, INNER CLUTCH SUPPORT C (EP30 076.4) TO (2) INNER CLUTCH SPACERS C (EP30 078.4). USE (2) SCREWS TO ATTACH SHORTER, OUTER CLUTCH SUPPORT C (EP30 077.4) TO (2) OUTER CLUTCH SPACERS C (EP30 079.4). USE (2) SCREWS TO ATTACH OUTER CLUTCH SPACERS TO INNER CLUTCH SUPPORT. ADD (2) 3/4" SHAFT NYLINERS (PRB068) AS07 FROM THE INSIDE TO THE OUTSIDE, FLANGE TOWARD SIDE PANEL. AFTER THE CHAINS ARE CONNECTED, THIS ASSEMBLY WILL SLIDE OVER THE REWIND DRIVER NUT AND SECURE TO THE SIDE PANEL WITH (2) 10-32 X 3/4 BH.

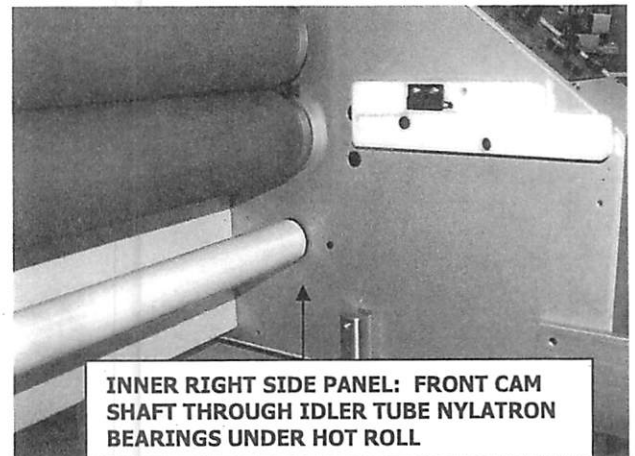
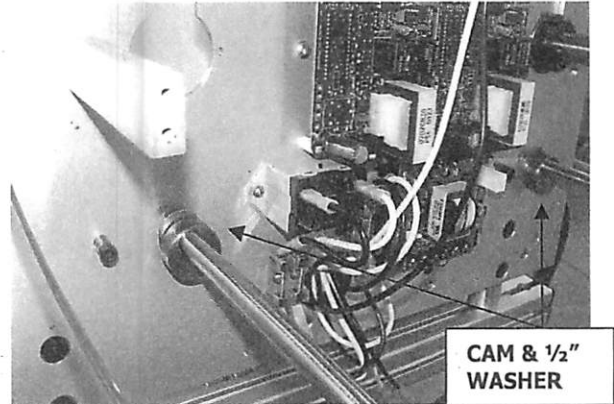


- 12) ATTACH PROXIMITY SWITCH MAGNET (PRS351) RACK 1 TO RIGHT FEED TABLE BRACKET (D60 098.4R) AS13 USING (2) 4-40 X 1/4 PH. THE RED MAGNET WIRES GO THROUGH THE CLOSEST HOLE IN THE BRACKET. PLACE 6-8" OF BLACK INSULATION TUBING ON THE WIRES AND HEAT SHRINK. SECURE BRACKET TO INNER RIGHT SIDE PANEL USING (2) 1/4 X 5/8 X 1/8 FLAT WASHER ON (2) 10-32 X 3/4 FHS SCREWS, WIRES GO THROUGH SIDE PANEL. ATTACH LEFT FEED TABLE BRACKET (D60 098.4L) AS13 TO LEFT

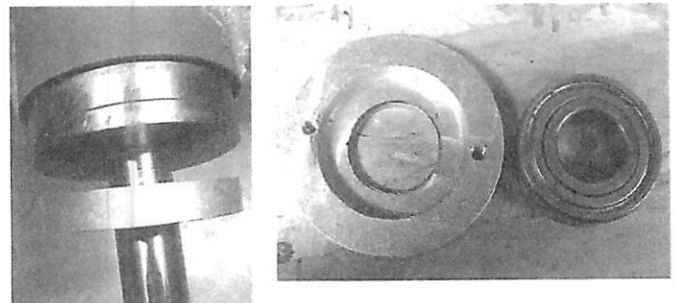


SIDE PANEL WITH THE SAME HARDWARE.

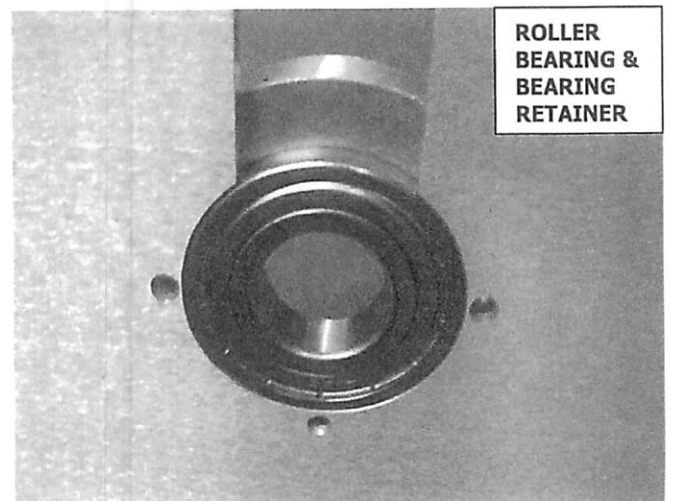
- 13) INSERT (1) RUBBER ROLL CAM SHAFT (EHR44 130.4) LOFT 2 SHAFT RACK ORIENTED WITH LONGER, FLAT CUT END FOR HANDLE ON RIGHT SIDE THROUGH SIDE PANEL CAM SHAFT OILITE BEARINGS IN THE REAR, OVER FAN. ADD A 1/2 INCH FLAT WASHER SAE AS13 TO BOTH ENDS OF THE CAM SHAFT AND THEN A CAM (H850 133.4) AS08 TO BOTH CAM SHAFT ENDS. SECURE THE CAMS IN SHAFT HOLES WITH 10-32 X 3/4 SET SCREWS. START ANOTHER RUBBER ROLL CAM SHAFT INTO THE RIGHT FRONT CAM SHAFT BEARING, WITH 1/2 WASHERS AND SLIDE AN IDLER TUBE (EHR44 052.4) AS14 WITH NYLATRON BEARINGS (PRB086A) AS13 ONTO THE CAM SHAFT. RUN CAM SHAFT THROUGH IDLER TUBE AND LEFT PANEL. ADD A 1/2 INCH FLAT WASHER AND SECURE A CAM TO BOTH SHAFT ENDS WITH 10-32 X 3/4 SET SCREW IN CAM SHAFT HOLES.



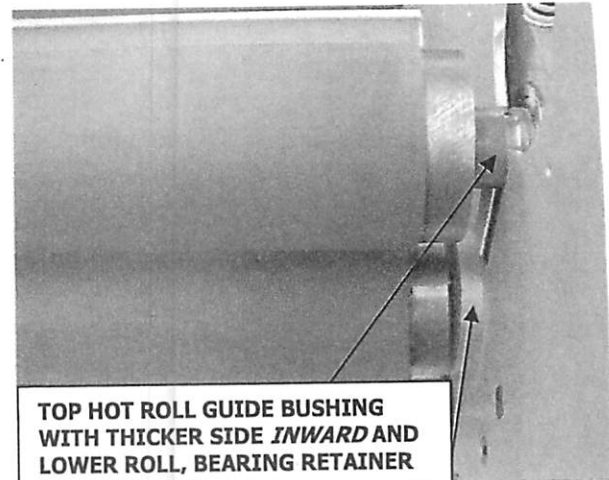
- 14) BEFORE PUTTING THE BOTTOM HOT ROLL AND BOTTOM PULL ROLL BETWEEN SIDE PANELS, ROTO BURR THE SIDE PANEL OPENING, SO BEARING FITS EASILY.



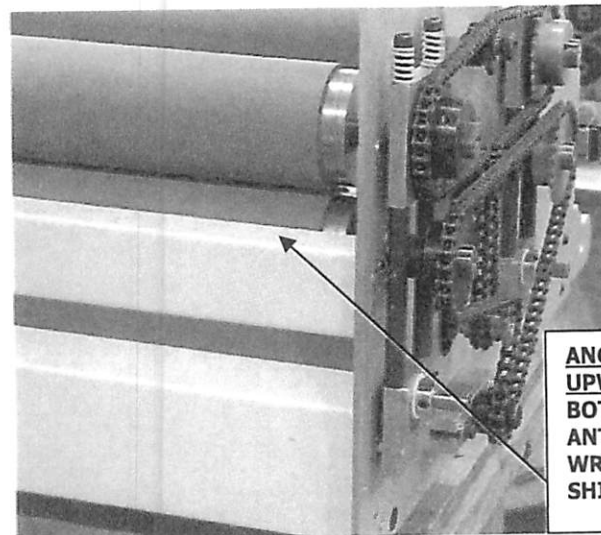
- 15) TEST R14Z ROLLER BALL BEARINGS (PRB087) AS07 OVER JOURNALS ON BOTTOM DRIVE ROLL AND BOTTOM HOT ROLL. FILE BURRS IF NECESSARY, REMOVE BEARING. PLACE A BEARING RETAINER (HRD44 060.4) RACK 14 ON BOTH JOURNALS OF THE BOTTOM REAR DRIVE ROLL COMPLETE (EHR44 035.4) LOFT 5 ORIENTED WITH THE RECESSED SIDE OF THE BEARING RETAINER FACING OUTWARD. INSERT THE DRIVE ROLL INTO THE CHASSIS WITH BOTH BEARING RETAINERS ON THE INSIDE OF THE SIDE PANELS. ALIGN BEARING RETAINER THREADS WITH SIDE PANEL APERTURES AND TAP THE ROLLER BALL BEARINGS (PRB087) INTO BOTH BEARING RETAINER RECESSES. SECURE TO SIDE PANELS WITH 10-32 X 1/2 TH FITTING ROLLER BALL BEARING FLUSH WITH OUTER PANELS. CENTER BOTTOM DRIVE ROLL BETWEEN SIDE PANELS.



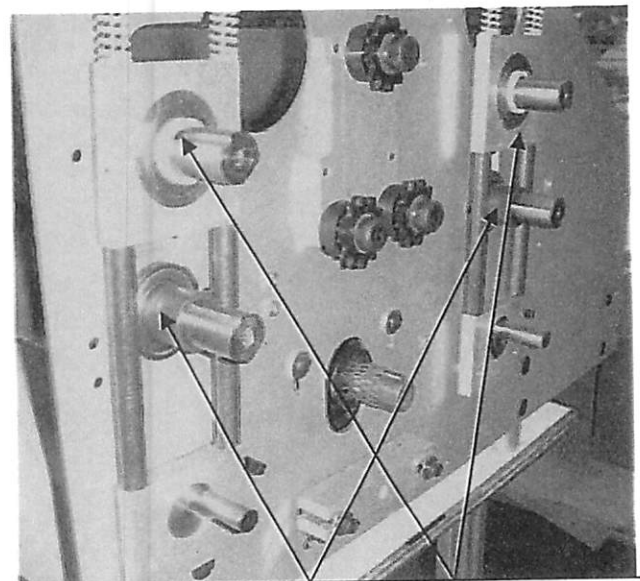
- 16) PLACE ANOTHER DRIVE ROLL COMPLETE IN REAR OF CHASSIS, RESTING IN OVERHANG. IF RUBBER ROLLS ARE COVERED, REMOVE COVERING. CLEAN RUBBER ON BOTH DRIVE ROLLS.
- 17) PLACE AN HRD44 BEARING RETAINER ON BOTH JOURNALS OF THE FRONT, BOTTOM COMPLETED HOT ROLL ASSEMBLY, RECESS ON RETAINER OUTWARD. INSERT INTO FRONT OF CHASSIS WITH RETAINERS ON INSIDE OF PANEL, HEAT AND SENSOR WIRES ON RIGHT. PRESS A ROLLER BALL BEARING (PRB087) AS07 INTO BOTH BEARING RETAINERS AND SECURE BEARING RETAINER TO SIDE PANELS WITH (4) 10-32 X 1/2 TH. CENTER BOTTOM HOT ROLL IN CHASSIS.
- 18) ATTACH BOTTOM ANTI-WRAP SHIELD (HRD44 013.4) AS14 BETWEEN REAR SIDE PANELS, ORIENTED WITH THE SLANTED ANGLE UPWARD, STRAIGHT DOWNWARD. POSITION BEHIND LOWER DRIVE ROLL AND SECURE WITH (4) 10 X 5/8 FL SQ DR SMS.
- 19) ADD (4) SHAFT SPACERS (HRD44 033.4) RACK 14 ONTO JOURNALS OF LOWER FRONT AND REAR RUBBER ROLLS, SNUG TO ROLLER BALL BEARINGS.
- 20) SET TOP REAR DRIVE ROLL ONTO BOTTOM DRIVE ROLL, ALIGNING RUBBER ROLLS. SET TOP HOT ROLL ONTO BOTTOM HOT ROLL, ALIGNING RUBBER ROLLS. PLACE (4) HOT ROLL GUIDE BUSHINGS (HRD44 044.4) RACK 14 ON ALL TOP JOURNALS, WITH BUSHING GROOVE RESTING IN SIDE PANEL AND THICKER SIDE OF BUSHING INWARD.
- 21) BRUSH ANTI-SEIZE ONTO RIGHT AND LEFT REAR CAM CIRCUMFERENCE. ADD BOTH BACK CONNECTING PLATES, FITTING CAMS INTO BOTTOM CONNECTING PLATES AND ROLLER BALL BEARINGS OVER TOP DRIVE ROLL JOURNALS. THE WHITE CONNECTING PLATE SPACERS FACE INWARD.



TOP HOT ROLL GUIDE BUSHING WITH THICKER SIDE *INWARD* AND LOWER ROLL, BEARING RETAINER

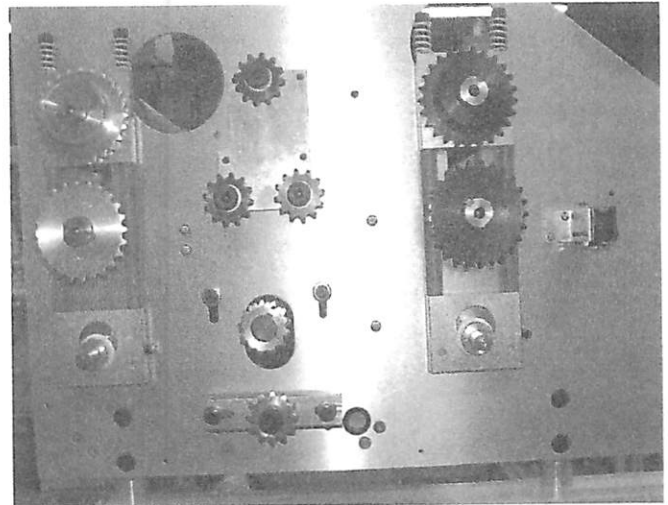


ANGLE UPWARD
BOTTOM ANTI-WRAP SHIELD



BOTTOM RUBBER ROLL SHAFT SPACER & TOP LEFT OUTER RUBBER ROLL SPACER ON BOTH LEFT HOT & PULL ROLL JOURNALS ~~~ CONNECTING PLATES

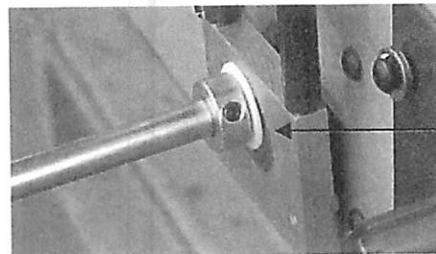
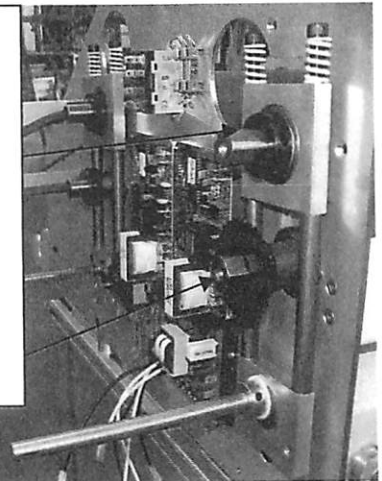
- 22) CHECK TOP AND BOTTOM DRIVE ROLL ALIGNMENT. ON BOTTOM LEFT DRIVE ROLL ADD A PULL ROLL SPROCKET FOR DIGITAL 105 35B24 (PRS322) RACK 2 HUB IN, OVER KEY (MI187) AS13, SNUG TO SPACER. SECURE WITH 1/4-28 X 3/8 SET SCREW TIGHTENED ONTO KEY.
- 23) ON TOP LEFT DRIVE ROLL, AFTER CONNECTING PLATE, ADD 'MEDIUM' TOP LEFT OUTER RUBBER ROLL SPACER (LC38 032.4) RACK 2. THEN, ADD ANOTHER 35-24 PULL ROLL SPROCKET FOR DIGITAL 105 (PRS322) RACK 2 HUB OUT OVER KEY (MI187) AS13. SECURED WITH 1/4-28 X 3/8 SS TIGHTENED ONTO JOURNAL FLAT.
- 24) ON BOTTOM RIGHT DRIVE ROLL ADD A 25B32 7/8" BORE SPROCKET (PRS258C) RACK 14 HUB IN OVER KEY (MI187) BY SPACER. TIGHTEN WITH 1/4-28 X 3/8 SS.
- 25) ON TOP RIGHT DRIVE ROLL ADD A 7/8 SPLIT SHAFT COLLAR (PRC112) RACK 2 TIGHT TO CONNECTING PLATE, SECURE.
- 26) TAP REAR CAMS FLUSH WITH OUTER CONNECTING PLATE. SLIDE A 1-3/16 X 1/2 TEFLON WASHER (PRW337) RACK 8 ONTO BOTH ENDS OF REAR CAM SHAFT FLUSH WITH CAMS. TIGHTEN A 1/2" SHAFT COLLAR (PRC096) AS07 TO BOTH TEFLON WASHERS.
- 27) BRUSH ANTI-SEIZE ONTO RIGHT AND LEFT FRONT CAM CIRCUMFERENCE. TAP BOTH CONNECTING PLATES ON. THE RIGHT FRONT CONNECTING PLATE HAS THE STANDOFF.
- 28) ON LEFT BOTTOM FRONT HOT ROLL ADD LAM. ROLL SPROCKET FOR DIGITAL 105 35-25 (PRS321) RACK 2 HUB IN OVER KEY (MI187) AS13 SNUG TO SPACER AND TIGHTEN SPROCKET WITH 1/4-28 X 3/8 SS ON JOURNAL FLAT.
- 29) ON LEFT TOP FRONT HOT ROLL ADD A 'MEDIUM' TOP LEFT OUTER RUBBER ROLL SPACER (LC38 032.4) RACK 2 BY CONNECTING PLATE ROLLER BEARING,



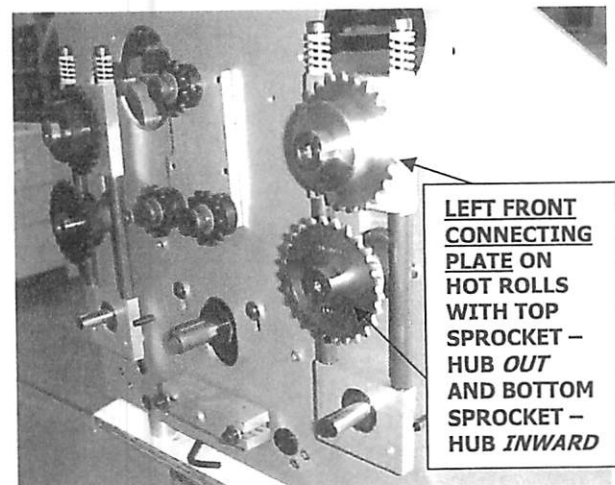
**RIGHT REAR
CONNECTING PLATE**

7/8 SPLIT SHAFT COLLAR ON TOP RIGHT DRIVE ROLL

7/8" BORE 25B32 SPROCKET SNUG TO SHAFT SPACER ON BOTTOM RIGHT DRIVE ROLL, SPROCKET HUB FACES INWARD



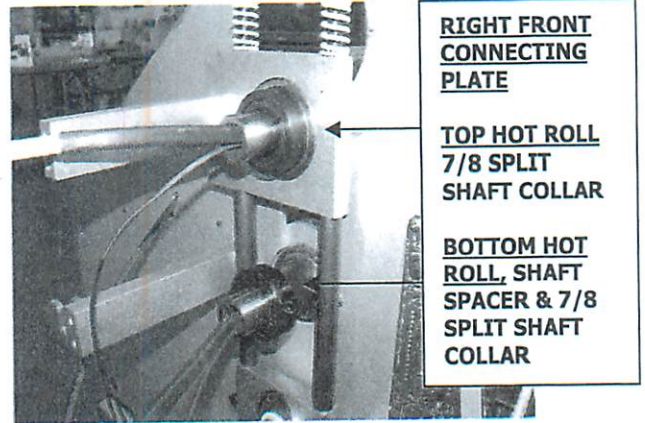
RIGHT SIDE CAM SHAFT W/ TEFLON WASHER & 1/2" SHAFT COLLAR



LEFT FRONT CONNECTING PLATE ON HOT ROLLS WITH TOP SPROCKET - HUB OUT AND BOTTOM SPROCKET - HUB INWARD

THEN ADD LAM. ROLL SPROCKET 35-25 FOR DIGITAL 105 (PRS321) RACK 2 HUB OUT OVER KEY (MI187) AS13. SECURE SPROCKET ON JOURNAL FLATS WITH 1/4-28 X 3/8 SS.

- 30) ON RIGHT BOTTOM FRONT HOT ROLL JOURNAL SNUG A 7/8 SPLIT SHAFT COLLAR (PRC112) RACK 2 NEXT TO THE SPACER.
- 31) ON RIGHT TOP FRONT HOT ROLL JOURNAL SNUG A 7/8 SPLIT SHAFT COLLAR (PRC112) RACK 2 NEXT TO THE CONNECTING PLATE BEARING.
- 32) TAP FRONT CAMS FLUSH WITH OUTER CONNECTING PLATE. ADD TEFLON WASHER (PRW337) RACK 8 OVER BOTH CAM SHAFT ENDS. SECURE WITH (2) 1/2" SHAFT COLLARS (PRC096) AS07.
- 33) ON LEFT SIDE ADD TO MOTOR SHAFT (2) 35-12 DRIVE SPROCKETS FOR DIGITAL 60 (PRS320A) RACK 2 BOTH HUBS IN. ALIGN INNER MOTOR SPROCKET TEETH WITH UPPER RUBBER ROLL SPROCKET TEETH AND OUTER MOTOR SPROCKET TEETH WITH LOWER RUBBER ROLL SPROCKET TEETH. SECURE MOTOR SPROCKETS WITH (2) 8-32 X 1/4 SS ON MOTOR SHAFT KEY.
- 34) WITH ROLLS UP CONNECT LONGER #35 CHAIN TO UPPER ROLL SPROCKETS, OVER TOP IDLER BRACKET SPROCKET, INSIDE BOTH LOWER IDLER BRACKET SPROCKETS AND INNER MOTOR SPROCKET. CONNECT SHORTER #35 CHAIN TO LOWER ROLL SPROCKETS, RIGHT OF OUTER MOTOR SPROCKET AND LEFT SIDE OF CHAIN ADJUSTOR SPROCKET. LOWER ROLLS AND MOTOR.
- 35) ON THE RIGHT SIDE CONNECT THE LONGER #25 CHAIN (WITHOUT OFFSET) BETWEEN THE SCRAP REWIND ASSEMBLY SPROCKET AND THE INNER TEETH ON THE MODIFIED SPROCKET. CONNECT THE SHORTER #25 CHAIN (WITH OFFSET) BETWEEN THE OUTER TEETH OF THE MODIFIED SPROCKET AND DOWN TO THE LOWER DRIVE ROLL SPROCKET.



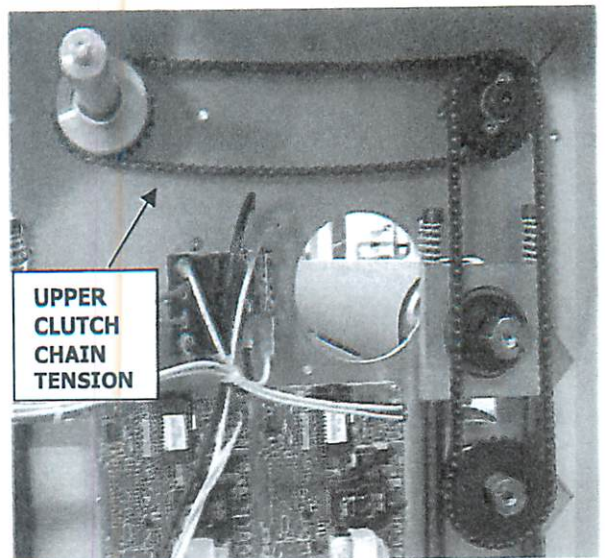
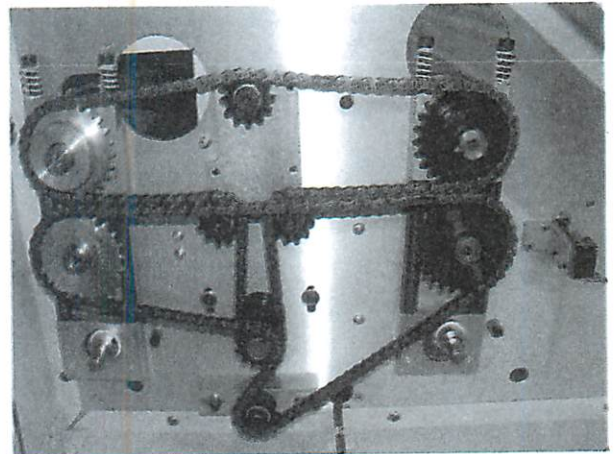
**RIGHT FRONT
CONNECTING
PLATE**

**TOP HOT ROLL
7/8 SPLIT
SHAFT COLLAR**

**BOTTOM HOT
ROLL, SHAFT
SPACER & 7/8
SPLIT SHAFT
COLLAR**

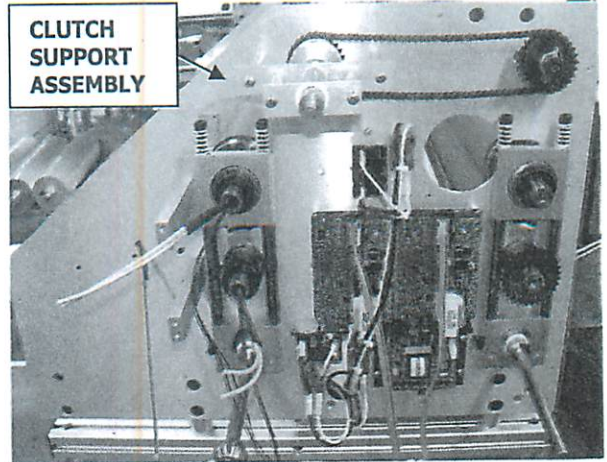


**(2) DRIVE
SPROCKETS
HUB INWARD
ON MOTOR
SHAFT, 8-32 X
1/4 SS ON KEY**

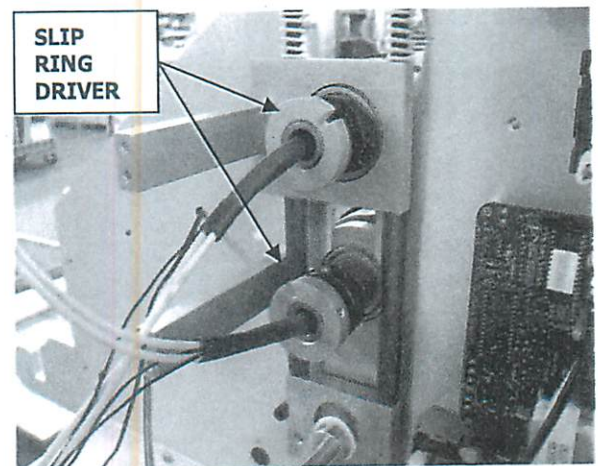


**UPPER
CLUTCH
CHAIN
TENSION**

36) SLIDE CLUTCH SUPPORT ASSEMBLY OVER REWIND DRIVER NUT AND SECURE TO SIDE PANEL WITH (2) 10-32 X 3/4 BH.



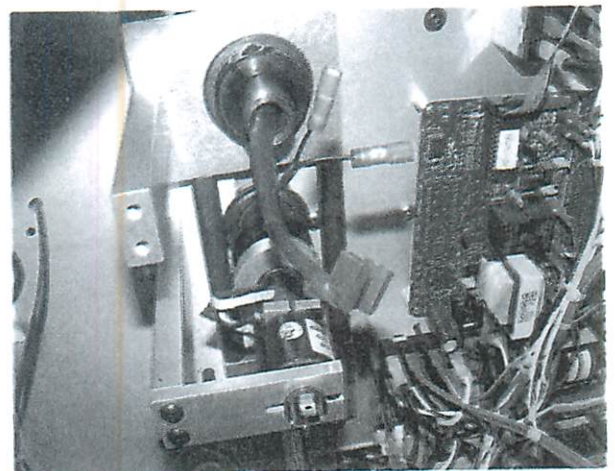
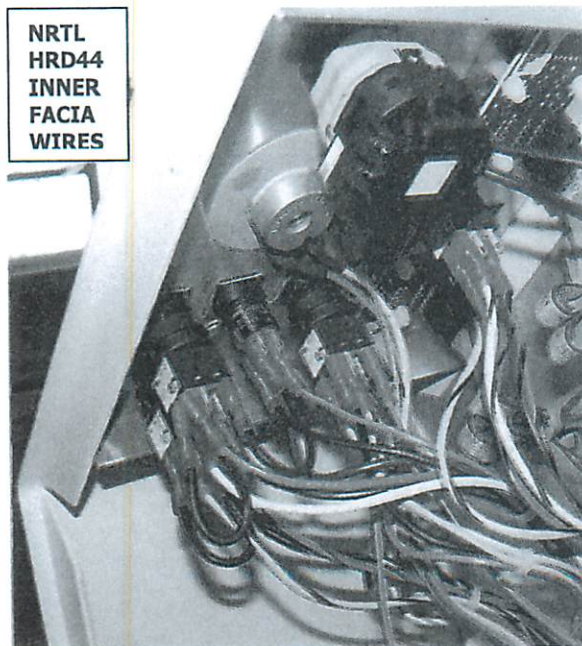
37) ADD (2) SLIP RING DRIVERS (EHR44 012.4A) RACK 14 FLUSH WITH THE OUTER EDGE ON BOTH OF THE RIGHT FRONT HOT ROLL JOURNALS. SECURE BOTH SLIP RING DRIVERS TO THE *FLAT PORTION* OF THE HOT ROLL JOURNALS WITH A 10-32 X 3/8 SET SCREW. THE NOTCH WILL HOLD THE SLIP RING SPRING PIN.



38) ATTACH RIGHT/LEFT TOP/BOTTOM HOUSING ASSEMBLIES TO SIDE PANELS USING (9) 10-32 X 1/4 TH AND 8-32 X 3/8 FH WITH #8 KEPS NUT ON BREACKETS.

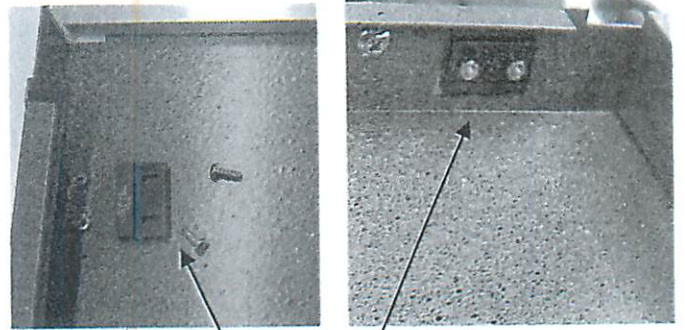
39) SECURE FACIA ASSEMBLY TO INNER RIGHT HOUSING. ALIGN FACIA THREADS WITH CLEARANCE HOLES IN HOUSING, USE (4) 6-32 X 1/4 PH.

40) INSERT WIRES FROM HARNESS ON RIGHT HOUSING SIDE.



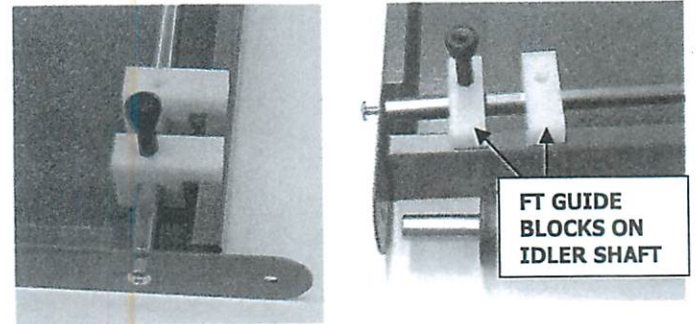
HOT ROLL DIGITAL 44 FEED TABLE ASSEMBLY

- 1) LAY FEED TABLE (EHR44 108.4) AS21 UPSIDE DOWN ON WORK BENCH. SECURE PROXIMITY SWITCH MAGNET (PRS352) RACK 1 INTO SLOT WITH (2) 4-40 X 3/8 PH ON OUTSIDE AND (2) 4-40 NUTS INSIDE.



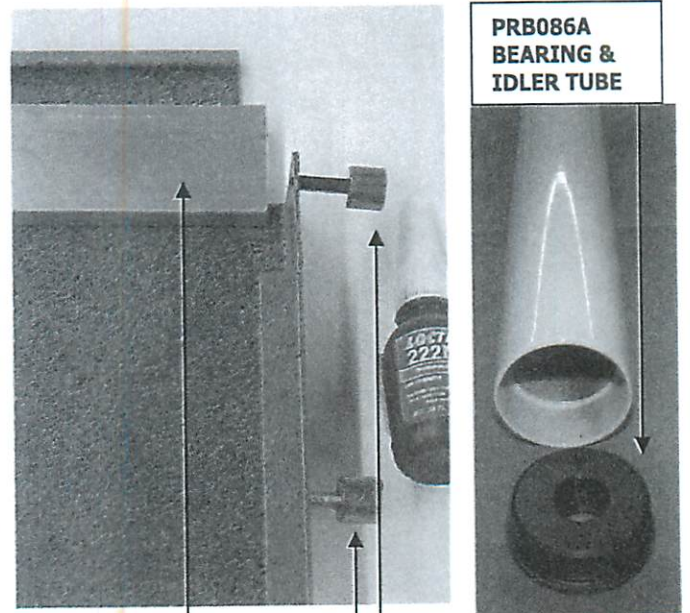
MAGNET BEFORE AND AFTER INSERTION

- 2) SLIDE (4) FEED TABLE GUIDE MOUNTING BRACKETS (D105 104.4) AS13 ONTO FEED TABLE IDLER SHAFT (EHR44 109.4) AS14. NOTE PICTURED POSITION. SECURE IDLER SHAFT WITH (2) 10-32 X 1/2 TH, USING LOCTITE ON THREADS. INSERT (2) 5/16-18 X 1" PLASTIC MOLDED THUMBSCREWS (PRK184) AS09 INTO OUTER GUIDE BLOCKS.



FT GUIDE BLOCKS ON IDLER SHAFT

- 3) TAP (2) NYLATRON IDLER BEARINGS (PRB086A) AS13 ONTO ENDS OF FEED TABLE IDLER TUBE (EHR44 054.4) AS14. INSERT A SECOND FEED TABLE IDLER SHAFT THROUGH NYLATRON BEARINGS AND SECURE SHAFT TO FEED TABLE ARMS IN FRONT OF GUIDE BLOCKS USE (2) 10-32 X 1/2 TH.

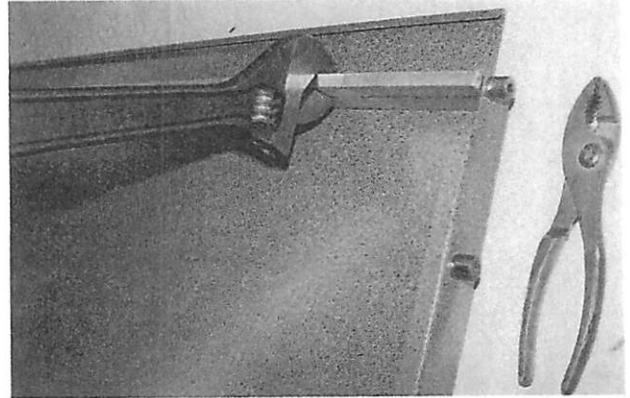


PRB086A BEARING & IDLER TUBE

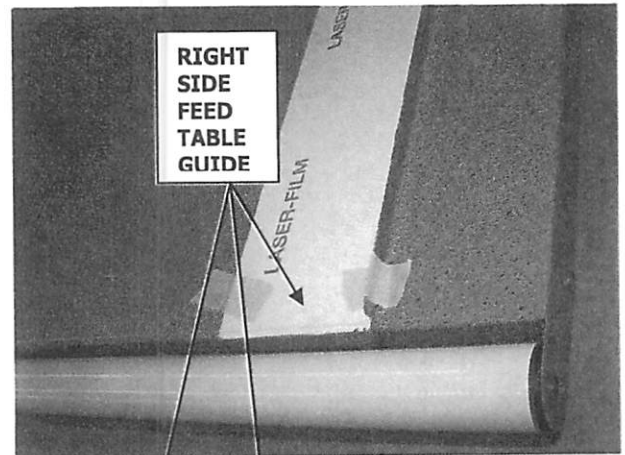
- 4) THE FEED TABLE SUPPORT BAR (EHR44 111.4) AS14 ALIGNS AT AN ANGLE TO THE FEED TABLE WHEN FIRST ATTACHING TO THE REAR. LOCTITE HALF OF THE THREADS ON (2) 10-32 X 3/4 SHSS AND INSERT THAT HALF THROUGH FEED TABLE AND INTO SUPPORT BAR. NOW FLIP SUPPORT BAR UPRIGHT USING LARGE WRENCH. LOCTITE EXPOSED REMAINING HALF OF THREADS AND ATTACH (2) FEED TABLE MOUNTING STUB SHAFTS (D105 101.4) AS13. TIGHTEN STUBS WITH WRENCH.

FEED TABLE SUPPORT BAR WITH (2) FEED TABLE MOUNTING STUB SHAFTS

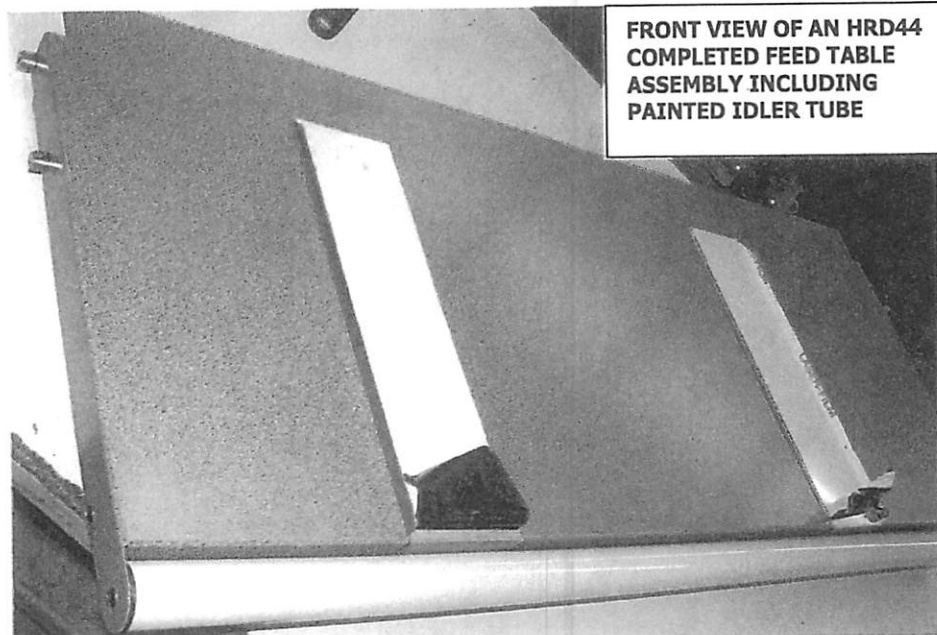
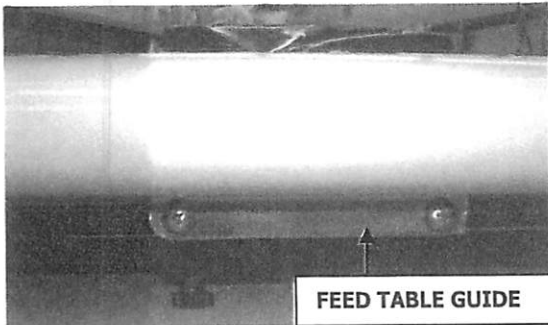
- 5) ADD ANOTHER PAIR OF FEED TABLE MOUNTING STUB SHAFTS TO THE RIGHT AND LEFT OUTER SIDE, SECURED WITH (2) 10-32 X 1/2 TH FROM THE INSIDE, LOCTITE THREADS.



- 6) PEEL BACK PLASTIC COVERING ON RIGHT AND LEFT FEED TABLE GUIDES (LC38 097.4L AND LC38 097.4R) AS13 TO EXPOSE SCREW HOLES. ATTACH GUIDES TO FEED TABLE GUIDE BLOCKS WITH (4) 10-32 X 1/2 TH. SECURE GUIDES ON IDLER SHAFT WITH PLASTIC MOULDED THUMBSCREWS.

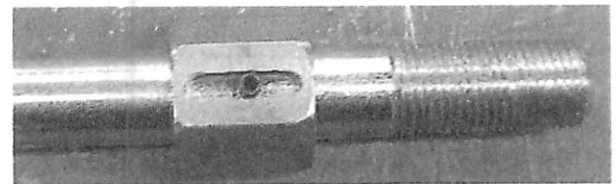
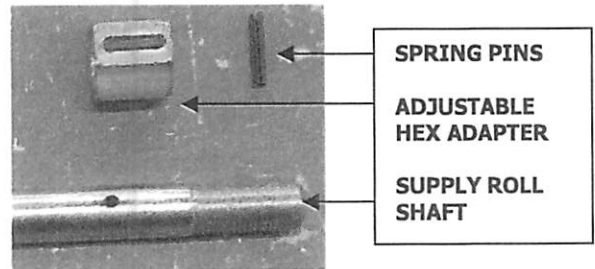
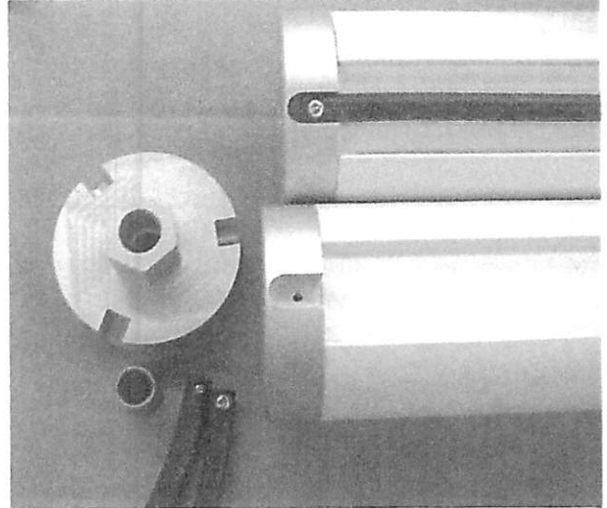


- 7) STORE COMPLETED FEED TABLE UNTIL READY TO INSTALL ON LAMINATOR.

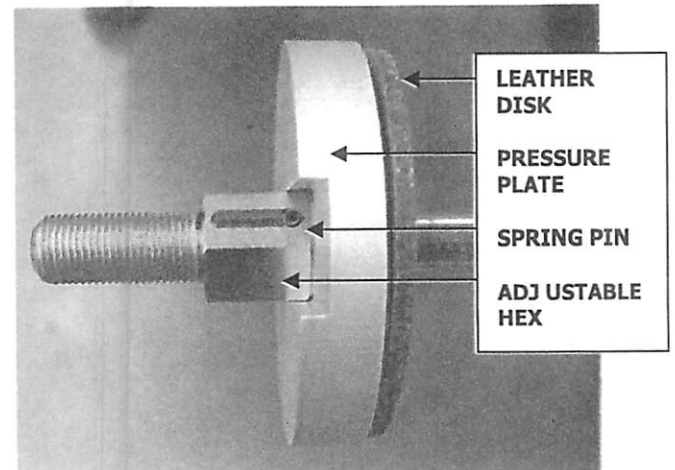


HRD 44 SUPPLY ROLL ASSEMBLY

- 1) PREPARE (2) SUPPLY ROLL ASSEMBLIES FOR THE HRD 44 DIGITAL USING THE FOLLOWING PROCEDURES.
- 2) INSERT 6-32 X 1/2 RH SCREWS INTO THE DRILLED OPENINGS ON BOTH ENDS OF (6) RUBBER GRIPPERS (EHR44 003.4B) LOFT 3. SET RUBBER GRIPPERS ASIDE.
- 3) ALIGN AND TAP AN END CAP (I30 008.4) AS08 INTO EACH END OF (2) 3" SUPPLY ROLL EXTRUSIONS (EHR44 002.4) LOFT 3 WITH THE THREADED CHANNELS SHOWING IN THE RECESSED SECTIONS OF THE SUPPLY ROLL.
- 4) THREAD THE SCREWS IN THE RUBBER GRIPPER ENDS INTO THE SUPPLE ROLL END CAPS. THE GRIPPERS RUN ALONG RECESSED SECTION OF SUPPLY ROLL.
- 5) SLIDE AN ADJUSTABLE HEX BUSHING ADAPTOR (D105 022.4) AS08 OVER END OF SUPPLY ROLL SHAFT (EHR44 011.4) AS14 WITH HOLE IN IT. USE STARTER TOOL, ALIGN AND INSERT 1/8 X 3/4 SPRING PIN (.125J0012) THROUGH HEX CHANNEL AND INTO SHAFT. REMOVE TOOL AND FINISH TAPPING OR ARBOT PRESS SPRING PIN UNTIL IT IS FLUSH WITH ADJUSTABLE HEX BUSHING.
- 6) SLIDE A SUPPLY ROLL PRESSURE PLATE (LC38 007.4) AS08 DOWN THE LONG END OF BOTH SUPPLY ROLL SHAFTS. THE SPRING PIN ON ADJUSTABLE HEX ADAPTOR IS LOCATED BETWEEN RECESS ON PRESSURE PLATE.
- 7) SLIDE LEATHER DISK (H380 004.4) AS08 ONTO SUPPLY ROLL SHAFT NEXT TO PRESSURE PLATE. INSERT THIS ASSEMBLY INTO END CAP ON SUPPLY ROLL, AND EXIT END CAP ON OTHER SIDE OF SUPPLY ROLL.
- 8) BRUSH ANTI-SEIZE ON END THREADS OF SUPPLY ROLL SHAFT BY ADJUSTABLE



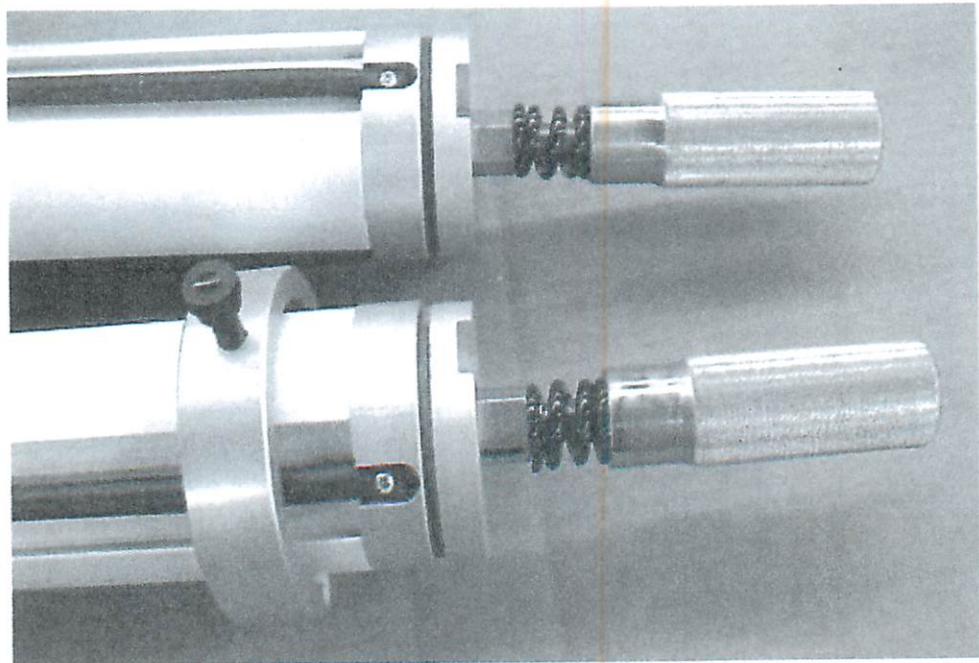
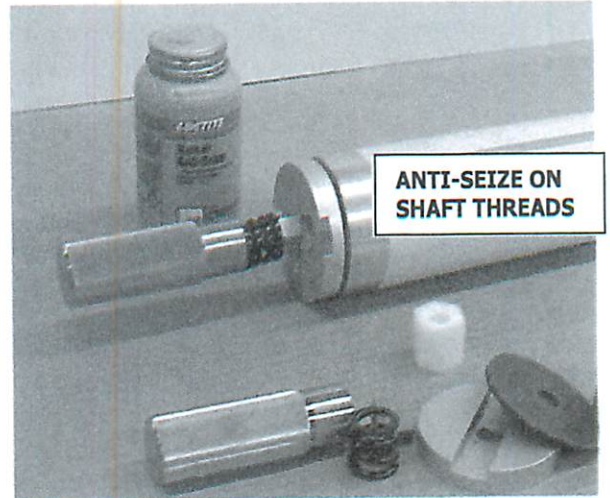
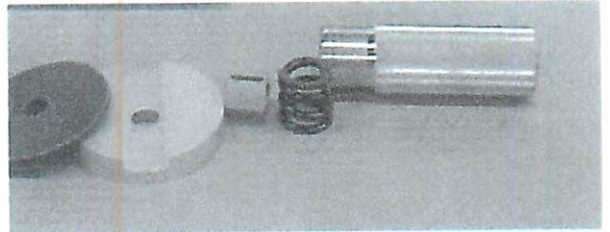
ADJUSTABLE HEX BUSHING ON SUPPLY ROLL SHAFT



loft 3

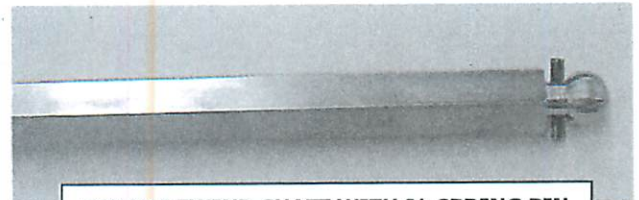
HEX BUSHING. SLIDE ON SUPPLY ROLL TENSION SPRING (PRS222) AS08 AND THREAD ON KNURLED KNOB (D105 001.4) AS01. CONTINUE *THREADING UNTIL SPRING PIN IS IN CENTER OF ADJUSTABLE HEX BUSHING GROOVE*. IF THREADS ARE OVER PLATED, TRIM THEM WITH DIE/THREAD CHASER.

- 9) ON THE OTHER END OF THE SUPPLY ROLL ADD ANOTHER LEATHER DISC, PRESSURE PLATE AND SUPPLY ROLL HEX ADAPTOR (LC38 023.4) AS08 FITTING INTO PRESSURE PLATE RECESS. BRUSH ANTI-SEIZE ON SHAFT THREADS, ADD SPRING AND KNURLED KNOB.



HOT ROLL DIGITAL 44 SCRAP REWIND ASSEMBLY

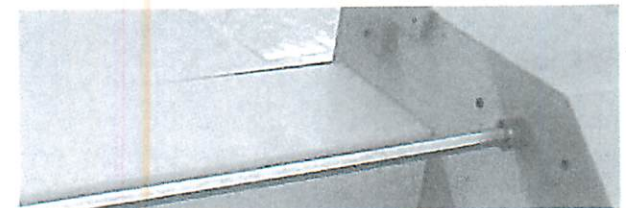
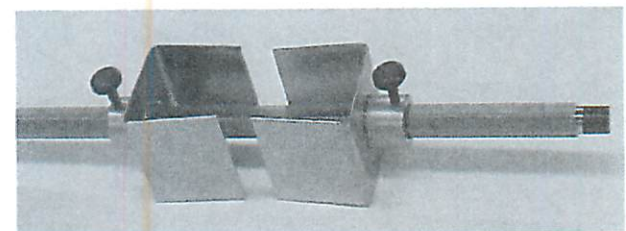
- 1) **ASSEMBLE SCRAP REWIND SHAFT (EHR44 056.4) LOFT 2 BY TAPPING A 1/8 X 1 SPRING PIN INTO BALL END OF SHAFT, EVEN AMOUNT SHOWING.**
- 2) **SLIDE BLACK PLASTIC BEARING (PRB071) RACK 8 ONTO OTHER END OF REWIND SHAFT. IF BEARING IS LOOSE, USE A DROP OF BLACK LOCTITE GLUE.**
- 3) **SLIDE (2) CORE GRIPPER AND HUBS (E850 207.6B) RACK 1 WITH HUBS FACING OUTWARD ONTO REWIND SHAFT. SECURE GRIPPERS WITH (2) SPI 3/4" SCREWS (PRK178) AS07.**
- 4) **TO INSTALL SLIDE SPRING PIN INTO REWIND DRIVER ASSEMBLY ON RIGHT, SHAFT TO REWIND BRACKET ON LEFT.**



SCRAP REWIND SHAFT WITH 3/4 SPRING PIN



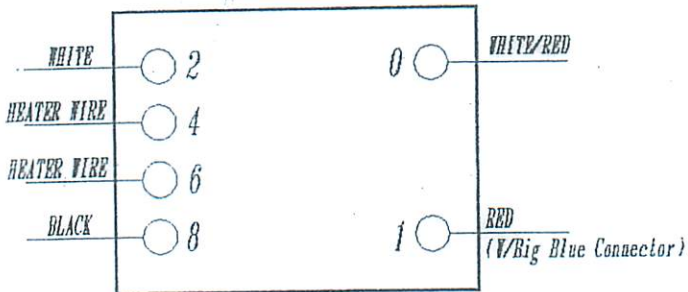
SCRAP REWIND SHAFT WITH PLASTIC BEARING



SLIT SCRAP REWIND

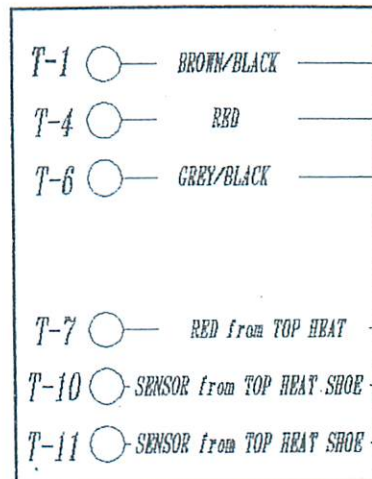
TOP HEAT CIRCUIT

TOP RELAY



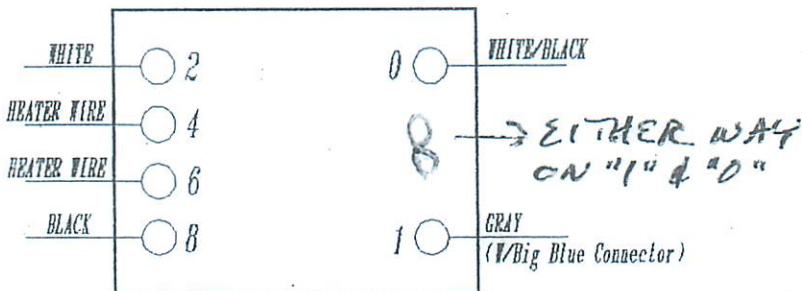
TOP HEAT CONTROLLER

(Rear)

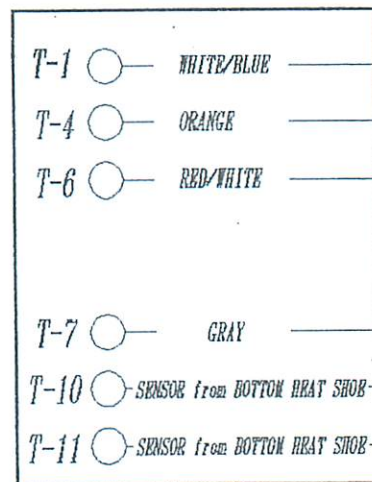


BOTTOM HEAT CIRCUIT

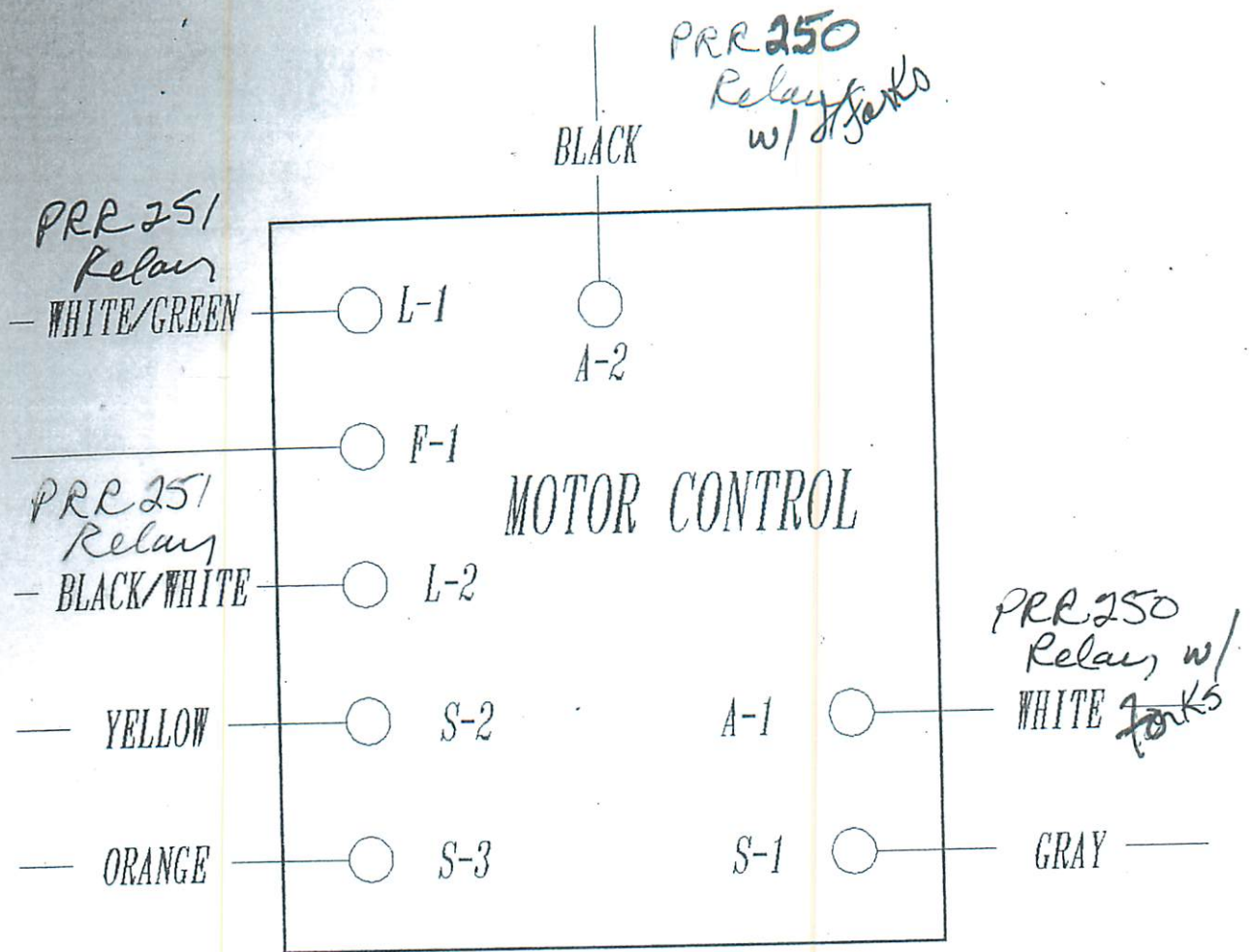
BOTTOM RELAY



BOTTOM HEAT CONTROLLER



Just
WIR
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PROXIMITY / FT BRK

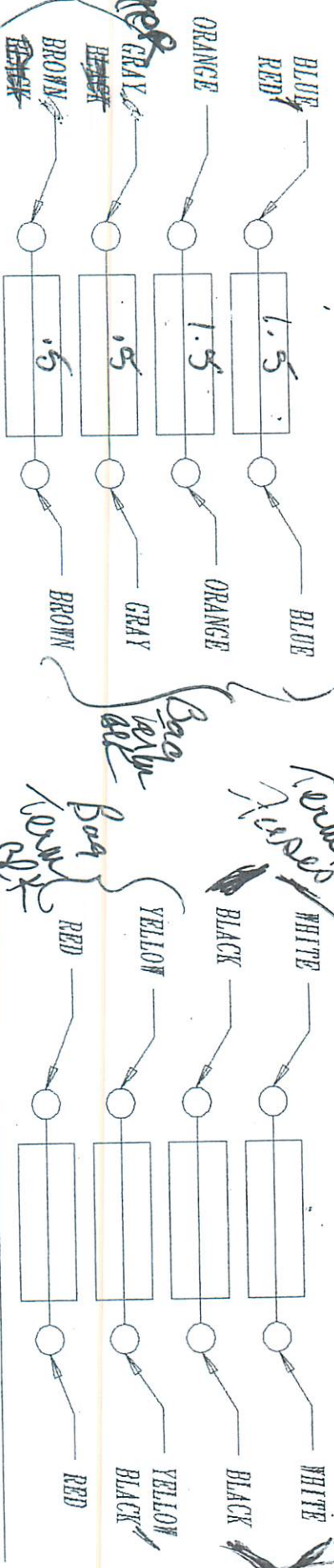
TOP MAGNET: FEMALE CONNECTORS BOTH WIRES

~~BOTTOM MAGNET: ONE MALE/ONE FEMALE CONNECTOR (NOT ON HRD)~~

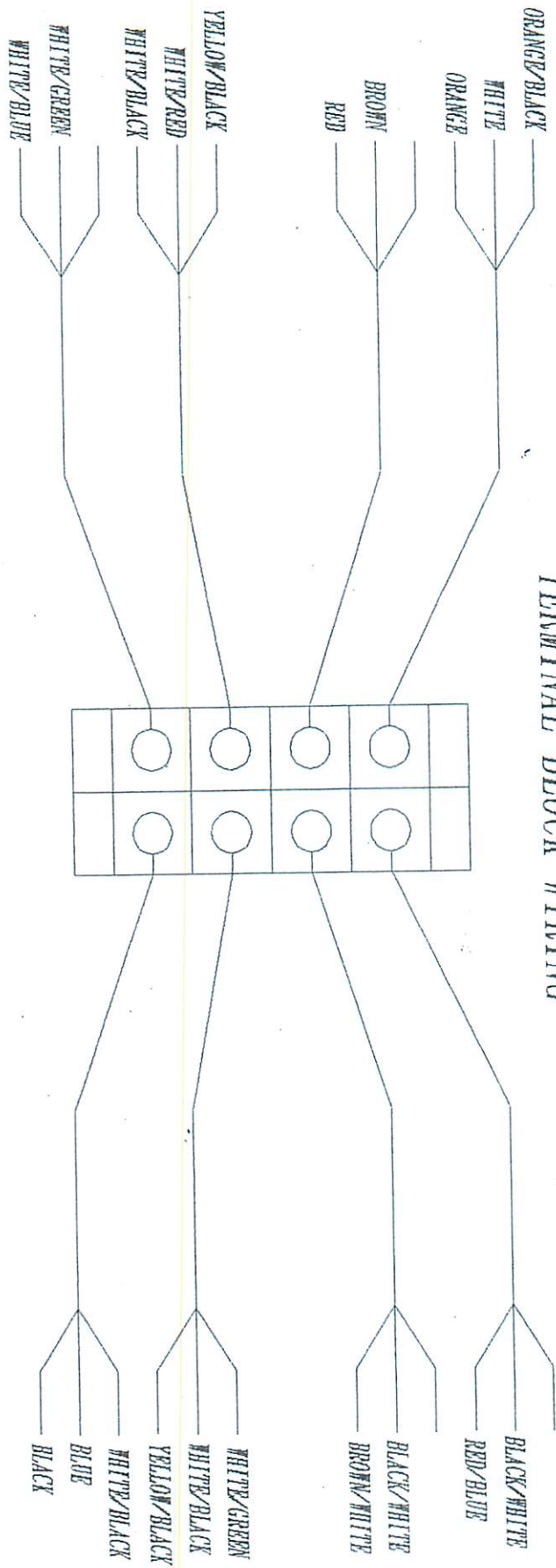
HRD-44

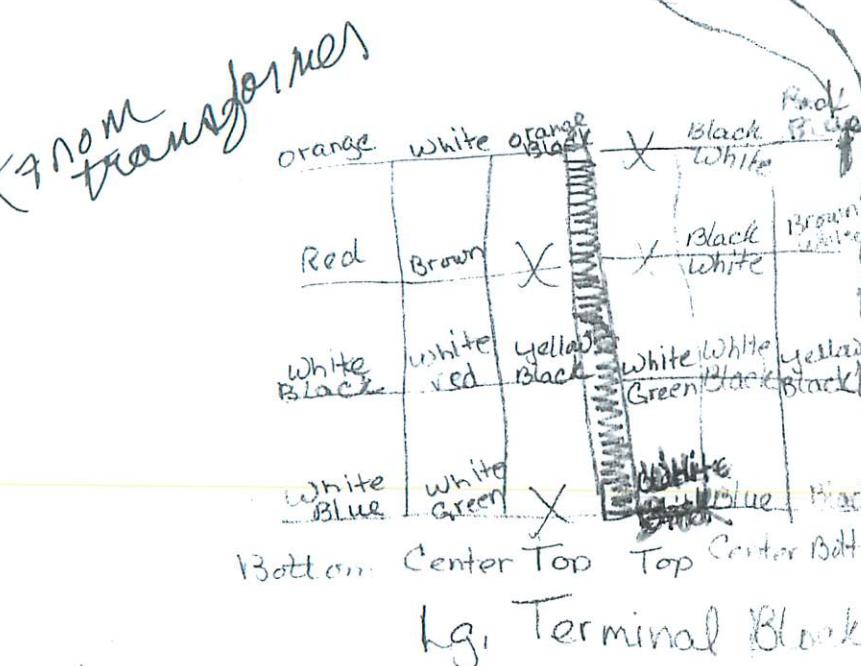
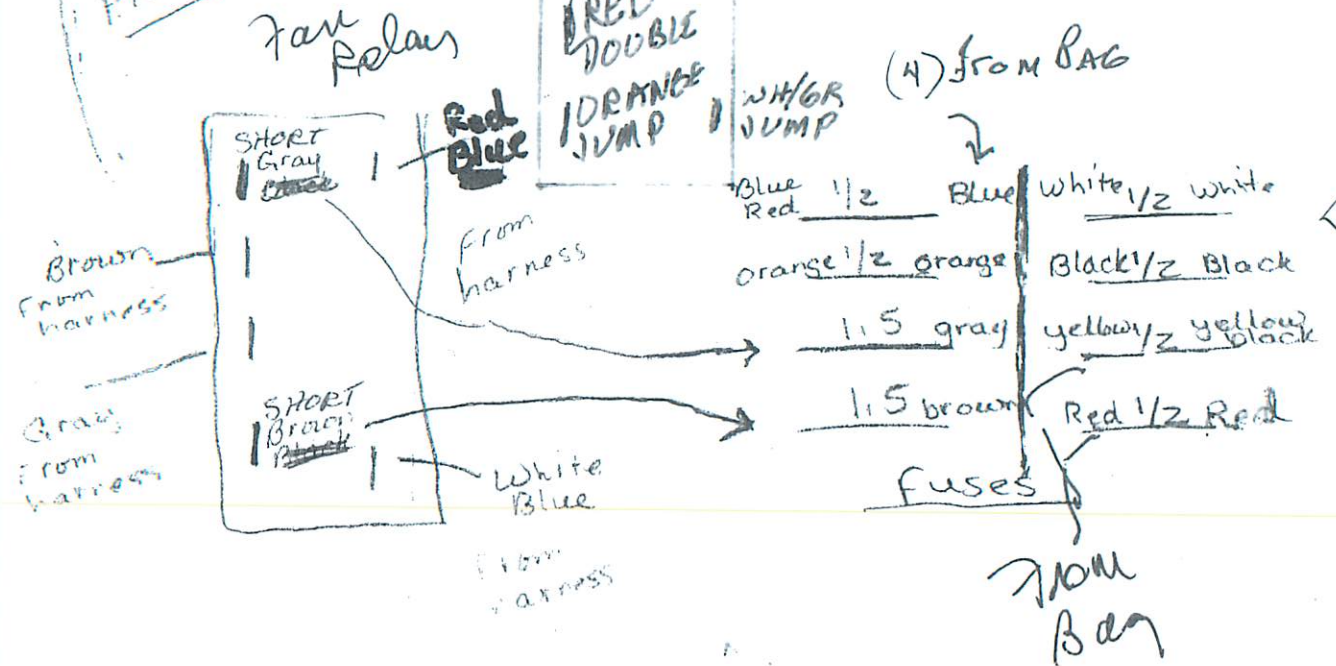
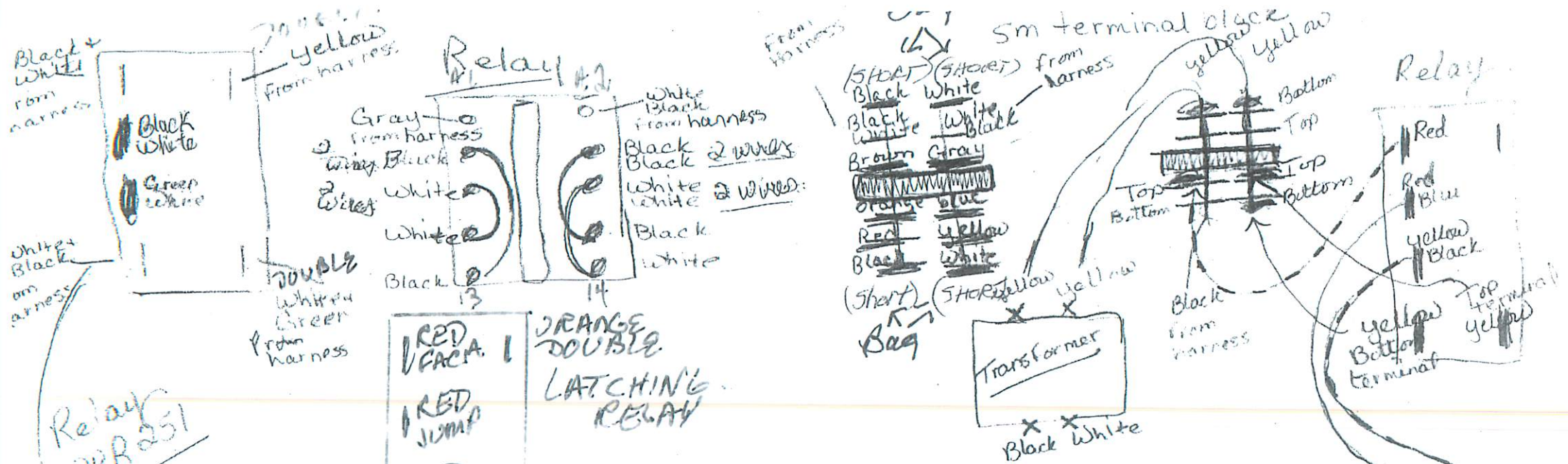
FUSE BLOCK WIRING

1.5 AMP



TERMINAL BLOCK WIRING





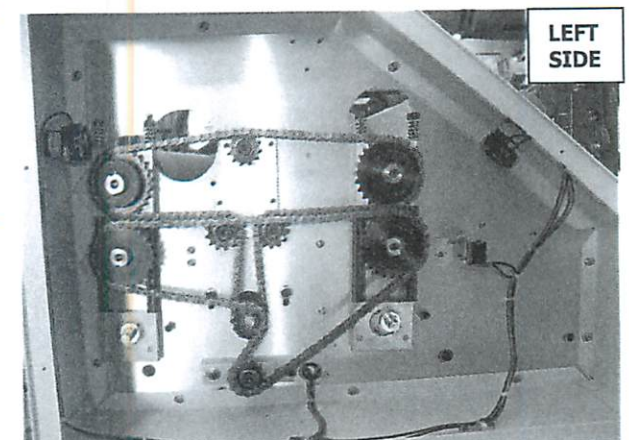
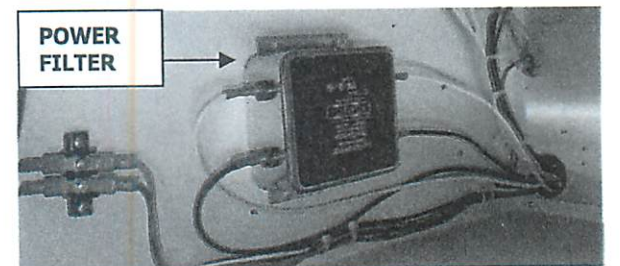
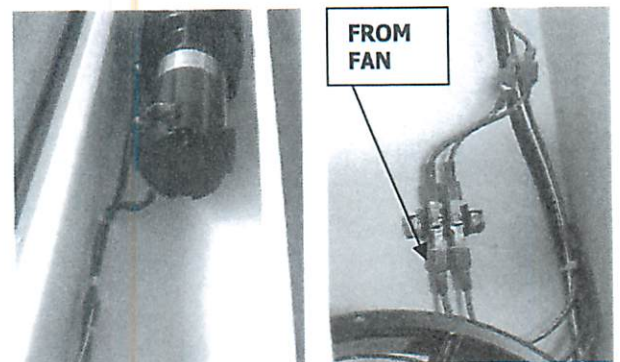
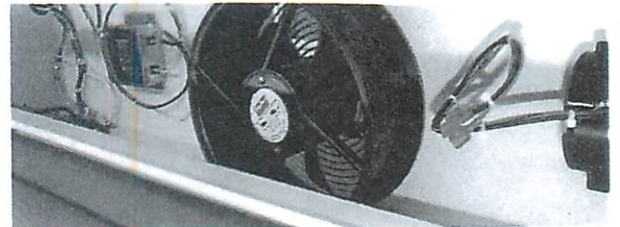
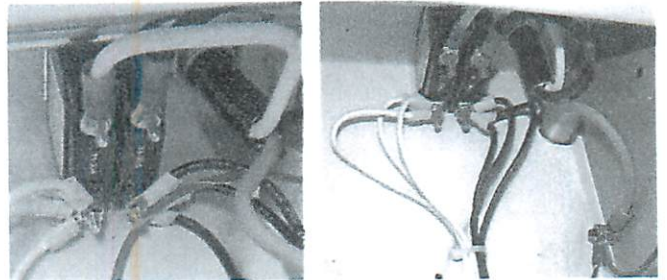
(2) red magnet wires female to BLK harness - hole. EHTD14

BLUE INK W/ MATS BAG 1 "DIGITAL"

HRD 44 NRTL

WIRING & CHASSIS COMPLETION

- 1) WITH FACIA INSTALLED, LAY WIRING HARNESS FOR NRTL DIGITAL LAMINATOR (PRW346A) AS14 ALONG RIGHT HOUSING. INSERT MOTOR WIRES, GREEN GROUNDS AND LONG BLACK HARNESS WIRES FOR LEFT SIDE SWITCHES THROUGH SNAP BUSHING.
- 2) CRIMP (3) MALE CONNECTORS ONTO THE MOTOR WIRES. MATE TO ENDS IN HARNESS, BLACK TO BLACK, ETC.
- 3) CONNECT THE GREEN GROUND HARNESS WIRE TO THE FAN USING A #10 STAR WASHER AND 10-32 TRUSSHEAD.
- 4) CONNECT FAN WIRES TO TERMINAL BLOCK AND HARNESS WIRES TO THE OTHER SIDE OF THE TERMINAL BLOCK.
- 5) FROM BAG #4 CONNECT THE BLACK AND WHITE WIRES BETWEEN "LINE" SIDE OF POWER FILTER AND LOWER 8 AMP FUSE TERMINALS, BY SPEED BOARD. CONNECT "LOAD" SIDE BLACK AND WHITE WIRES TO THE INNER 90 DEGREE TERMINAL BLOCK POSTS, WHITE WIRES TO REAR.
- 6) IN LEFT HOUSING, WIRE BOTH EMERGENCY SWITCHES BY LOOSENING SCREWS ON SAME SIDE AND PLACING THE OPEN ENDED WIRES UNDER SCREW PLATES ON CONTACT SECTIONS.
- 7) CONNECT LEVER TYPE MICROSWITCH USING SPADE CONNECTORS IN HARNESS ON THE (2) OUTERMOST SCREWS.
- 8) REPLACE (1) MALE CONNECTOR WITH A FEMALE CONNECTOR (PRT331) ON THE DIGITAL HARNESS AND UNITE FOR A CLOSED SAFETY CIRCUIT ON THE HRD44.
- 9) USE PRESS CLIPS (PRC081) AS07 AND 5 1/4" CABLE TIES (PRC082A) AS07 TO NEATLY SECURE LEFT SIDE WIRES, SO THEY WILL NOT INTERFERE WITH ANY MOVING PARTS.



10) CONNECT (6) BLACK AND WHITE WIRES FROM "LOAD" SECTION OF THE BREAKER. THE LONGEST PAIR CONNECT TO UPPER POSTS ON TOP 15 AMP FUSES, WHITE TOWARD THE REAR; ANOTHER PAIR CONNECT TO UPPER 8 AMP FUSES, WHITE TOWARD THE REAR; LAST PAIR CONNECT TO LOWER POSTS ON LOWER 15 AMP FUSES, WHITE TOWARD REAR.

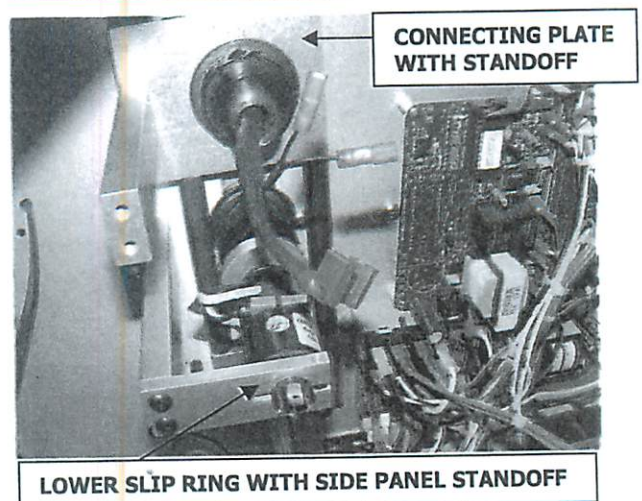
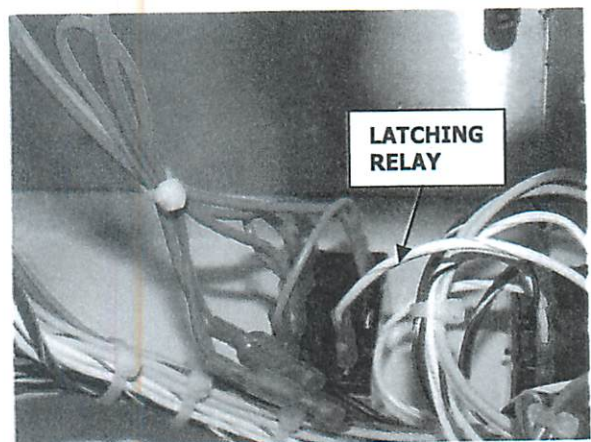
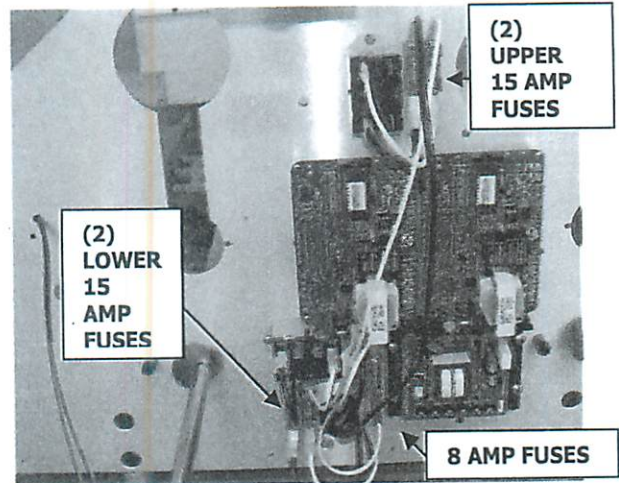
11) WIRE FRONT "LATCHING" RELAY: FACIA RED ON #2, DOUBLED ORANGE ON #0, ORANGE JUMPER ON #8, WHITE/GREEN JUMPER ON #1, DOUBLED RED ON #6 AND RED JUMPER ON #4.

12) FROM SEPARATE BAG CONNECT THE REMAINING BLACK AND WHITE WIRES: THE LONGER BLACK AND WHITE PAIR CONNECT BETWEEN BOTTOM POSTS ON UPPER 15 AMP FUSES AND UPPER RELAY, WHITE TO #2, BLACK TO #8. THE SHORTER PAIR CONNECT BETWEEN UPPER POSTS ON FRONT 15 AMP FUSES AND HORIZONTAL RELAY ON SIDE PANEL, WHITE TO #2 AND BLACK TO #8.

13) A FEW CONNECTIONS WILL HELP TO ANCHOR THE HARNESS IN THE RIGHT HOUSING. CONNECT OPEN ENDED EMERGENCY SWITCH WIRES TO THE REAR RIGHT SIDE. CONNECT DOUBLED RED WIRES TO TOP RELAY #1 AND WHITE/RED WIRE TO TOP RELAY #0. CONNECT HARNESS BLACK/WHITE AND WHITE/BLACK WIRES TO THE FRONT, INNER 2-POLE TERMINAL BLOCK. CONNECT SHORT BLACK HARNESS WIRE TO INNER, REAR TERMINAL BLOCK.

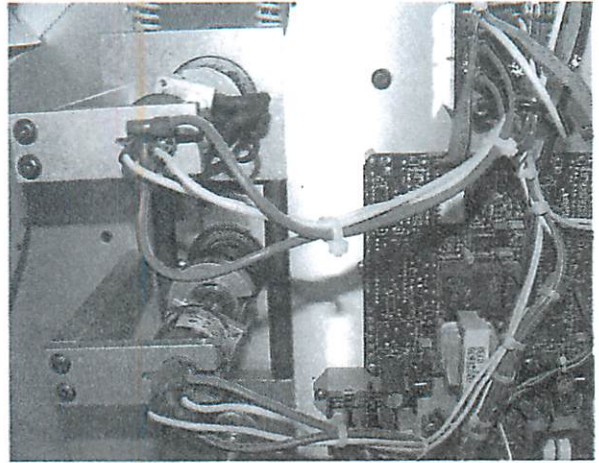
14) PROCEED WITH VARIOUS WIRING DIAGRAMS FOR RIGHT HOUSING, LEAVING THE SLIP RING ASSEMBLY AND WIRING UNTIL LAST.

15) ARBOR PRESS (2) 1/8 X 2" SPRING PINS AS12 INTO (2) SLIP RING DRIVER CLAMPS (XL44 024.4) RACK 5. SLIDE THE CLAMPS OVER THE ROTATING HUB OF (2) SLIP RING MODELS (PRS001A) AS08 WITH THE SPRING PIN FACING AWAY FROM SLIP RING. SECURE THE SLIP RING DRIVER CLAMP ONTO THE

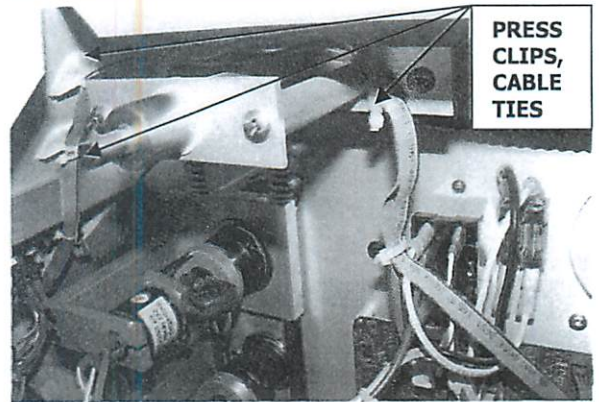


ROTATING HUB USING AN 8-32 X 3/4 SHCS. DO NOT OVER TIGHTEN SCREW AND CRUSH HUB.

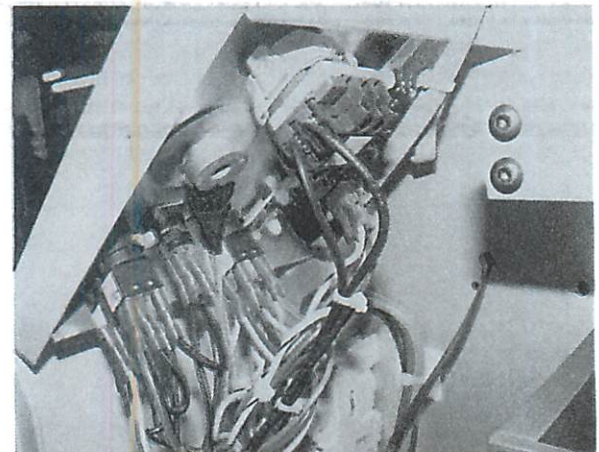
- 16) **TRIM SENSOR WIRES 3 1/2" FROM JOURNAL END AND CRIMP (4) FIF SENSOR CONNECTORS (PRT310) ONTO SENSOR WIRES. TRIM HEATER WIRES 3 1/2" AND CRIMP (4) FIF FLAG STYLE CONNECTORS (PRT284) ONTO THE HOT ROLL HEATER WIRES. CONNECT THE SLIP RING ROTATING HUB TO THESE TERMINALS, SENSORS WIRES FIRST.**



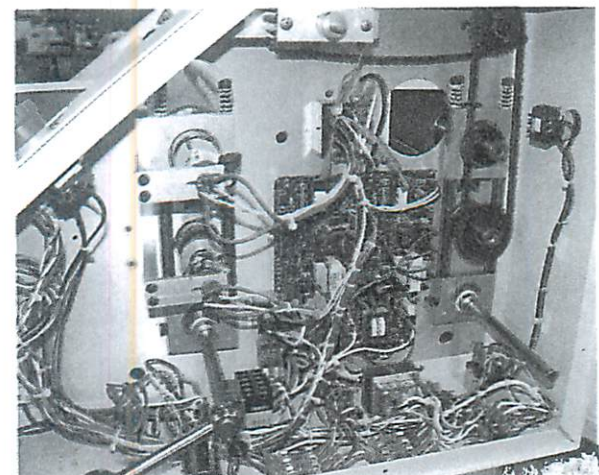
- 17) **SLIDE OUTER HUB OF THE LOWER SLIP RING ASSEMBLY INTO OPENING OF A SLIP RING CLAMP (XL44 022.4A) RACK 5. INSERT SPRING PIN INTO CATCH NOTCH ON LOWER SLIP RING DRIVER. ATTACH SLIP RING CLAMP TO CONNECTING PLATE STANDOFF USING (2) 10-32 X 3/4 THSH. ADJUST THE SLIP RING IN THE SLIP RING CLAMP AND SECURE USING A 10-32 X 3/4 SHCS.**



- 18) **USE SAME PROCEDURE FOR THE TOP HOT ROLL AND SLIP RING ASSEMBLY. THIS STANDOFF IS ALSO TOWARD THE FRONT, ATTACHED TO THE CONNECTING PLATE. SECURE OUTER HUB WITH A SLIP RING CLAMP, SAME HARDWARE.**

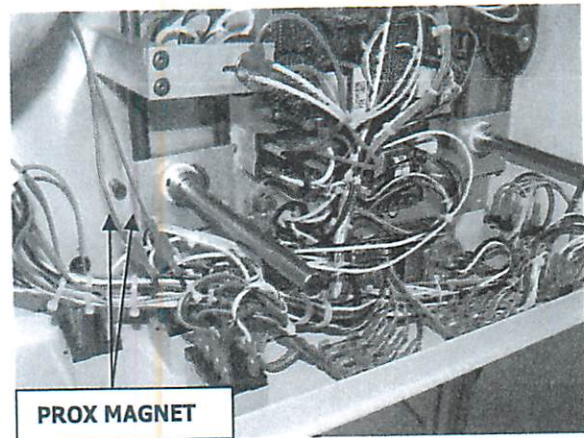


- 19) **WIRE THE TERMINAL POSTS ON THE OUTER HUB OF THE SLIP RING. TOP SLIP RING USES 14" OF 18 GAUGE YELLOW WIRE TO REAR/TOP HEAT BOARD T10 AND T11 AND 10" OF RED 14 GAUGE WIRE FROM HEATER WIRES TO TOP RELAY #4 AND #6. THE LOWER SLIP RING USES 12" OF YELLOW 18 GAUGE WIRE ON FRONT/BOTTOM HEATER BOARD FOR SENSOR AND 8" OF RED 14 GAUGE WIRE FOR LOWER HEATER. CONNECT TO LOWER HEAT BOARD AND RELAY, SAME NUMBERS.**



- 20) **CONNECT THE GRAY RIBBON WIRE BETWEEN THE TOP SLAVE BOARD/TOP HOT ROLL AND THE REAR HEAT BOARD. CONNECT THE GRAY RIBBON WIRE BETWEEN THE LOWER SLAVE BOARD/LOWER HOT ROLL AND THE FRONT HEAT BOARD. USE PRESS CLIP AND CABLE TIES TO SECURE.**

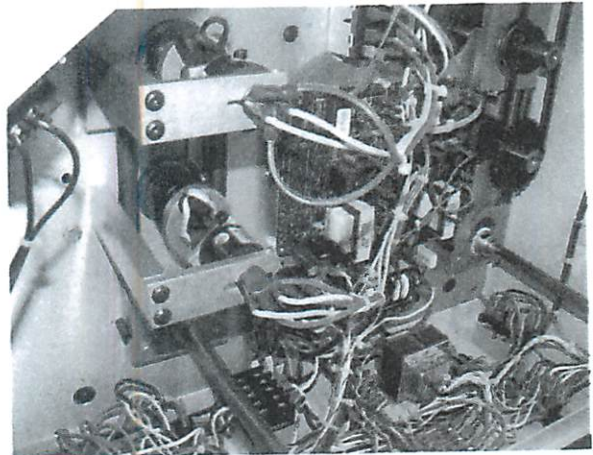
21) CRIMP RED FEMALE CONNECTORS ONTO RED PROXIMITY MAGNET WIRES, UNITE WITH BLACK HARNESS WIRES. BUNDLE LOOSE WIRES AND CABLE TIE. NOTE TIES ON SLIP RING WIRES.



22) AFTER WIRING IS COMPLETED, PLUG THE HRD 44 LAMINATOR INTO THE 60HZ OUTLET WITH A 30 AMP ADAPTER. THE MACHINE WILL WORK WITHOUT USING THE FEEDTABLE, IF YOU TAPE A MAGNET (PRS352) RACK 1 ONTO THE PROXIMITY SWITCH MAGNET AND HOLD THE MICROSWITCH LEVER DOWN WITH A TOOL. RELEASE THE (2) EMERGENCY STOP BUTTONS ON LEFT. CHECK THAT SWITCHES ARE "OFF." RELEASE RIGHT SIDE BACK EMERGENCY BUTTON, THEN FRONT EMERGENCY BUTTON. TEST FUNCTION OF FAN AND SWITCHES.



23) SET THE TEMPERATURE ON THE TOP RUBBER ROLL BY DEPRESSING THE RED PUSHBUTTON CAP ON THE SLAVE BOARD AND LETTING IT INCREASE TO 400 DEGREES, IT SHOULD STOP BY ITSELF. REDUCE TEMPERATURE BY DEPRESSING THE BLUE PUSHBUTTON CAP UNTIL IT READS 150 DEGREES. RELEASE BUTTON AND LET TOP ROLL HEAT FOR TESTING PRESSURE SENSITIVE FILM. FOLLOW THE SAME PROCEDURE WITH THE BOTTOM HOT ROLL EXCEPT SET THE TEMPERATURE AT 240 DEGREES, THEN TURN THE HEAT OFF THE BOTTOM ROLL.



24) TO SET MOTOR SPEED DEPRESS GREEN DRIVE SWITCH AND INCREASE POTENTIOMETER TO FULL. USE VOLT METER ON DC-1000. HOLD ONE TEST LEAD ON THE FORWARD/REVERSE RELAY SCREW FOR WHITE DOUBLED WIRES (14) ON THE RIGHT SIDE OF RELAY (PRR250) AND HOLD THE OTHER TEST LEAD ON THE SCREW FOR BLACK WIRE (24) NEXT TO THE WHITE WIRE. AT THE SAME TIME ADJUST SPEED ON "MAXIMUM" POT (THIRD FROM LEFT) WITH A TRIMMING TOOL. THE OPTIMUM READING IS 180, TOUCHY BOARDS CAN RANGE FROM 179-181 DC VOLTS. BE VERY CAREFUL OF JEWELRY TOUCHING INSIDE BECAUSE YOU CAN BE SHOCKED.



25) TIGHTEN LEFT SIDE CHAINS BY LOWERING MOTOR FOR THE INNER CHAIN AND BY MOVING THE BOTTOM CHAIN ADJUSTOR FROM SIDE TO SIDE FOR OUTER CHAIN.

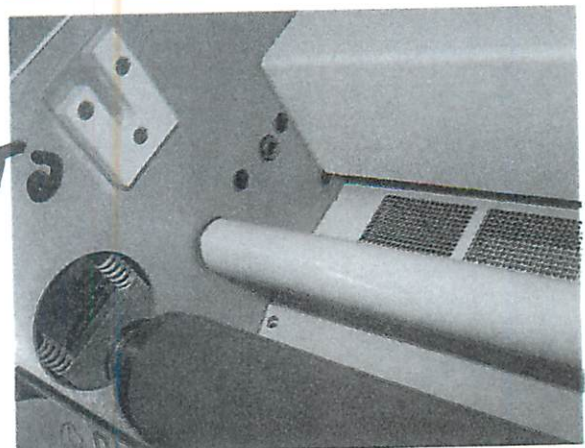
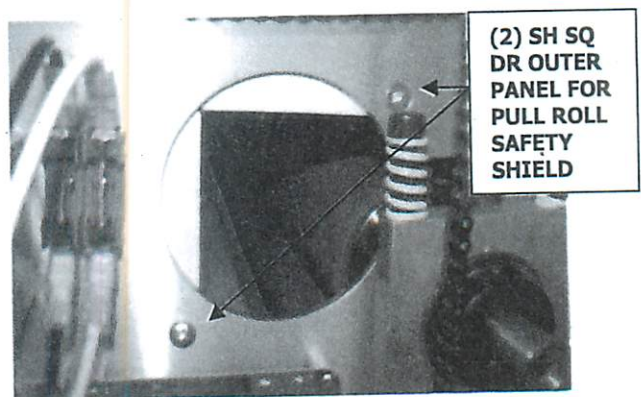
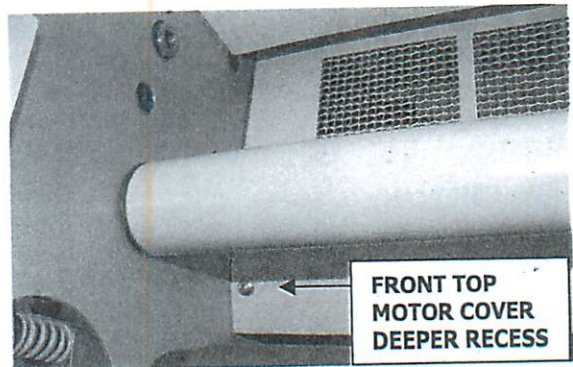
26) LIGHTLY ADD STP OIL OR ONTO BOTH LEFT SIDE #35 CHAINS AND BOTH RIGHT SIDE #25 CHAINS, WHILE THE MOTOR IS RUNNING. USE A CLOTH TO PROTECT THE WIRES ON THE RIGHT SIDE FROM EXCESS GREASE ON #25 CHAINS.

27) SET THE HRD44 TOP MOTOR COVER (HRD44 092.4) AS14 OVER THE BOTTOM MOTOR COVER, FIRST CHECKING THAT ALL WIRES ARE TIED IN PLACE. THE ANGLED, DEEPER RECESSED SCREW HOLES FACE THE FRONT OF THE MACHINE. CONNECT THE TOP MOTOR COVER TO THE BOTTOM MOTOR COVER USING (8) 10 X 1/2 PH SQ DRIVE SMS.

28) WITH THE PULL ROLLS IN THE "DOWN" POSITION, PLACE THE PULL ROLL SAFETY SHIELD (HRD44 012.4) AS14 OVER THE PULL ROLLS, ORIENTED WITH THE BENT LENGTH TOWARD THE REAR. SECURE PULL ROLL SAFETY SHIELD TO SIDE PANELS FROM INSIDE HOUSINGS USING (2) HOLES BY RUBBER ROLLS. THE FRONT AND TOP REAR HOLES ARE USED. ONE HOLE IS COUNTERSUNK. USE (2) 10 X 1/2 PH AND FH SQ DR SMS.

29) CENTER, ALIGN AND ADHERE A DOMED LEDCO EMBLEM (LAB05A) AS09 IN THE FRONT OF THE PULL ROLL SAFETY SHIELD. USING THE GAUGE THAT IS PICTURED.

30) TAP (2) NYLATRON STYLE BEARINGS (PRB086A) AS13 INTO ENDS OF IDLER TUBE (EHR44 052.4) AS14. INSERT IDLER SHAFT (EHR44 053.4) ~~AS14~~ **10FT** BETWEEN NYLATRON BEARINGS AND SECURE TOP IDLER TO SIDE PANELS BELOW SCRAP REWIND BRACKET. LOCTITE (2) 1/4-20 X 3/4 BSHS AND THEREAD THROUGH OUTER SIDE PANELS INTO IDLER SHAFT.

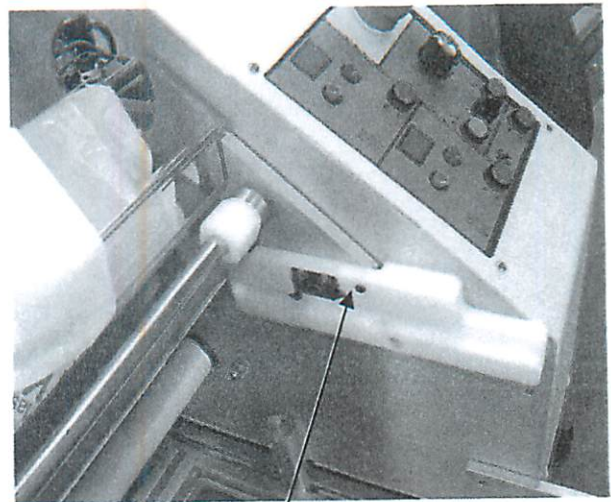


31) USE GAUGE ARROW TO ALIGN (2) "ARM ENTANGLEMENT" LABELS (LAB51) AS09 ON BACK OF PULL ROLL SAFETY SHIELD.

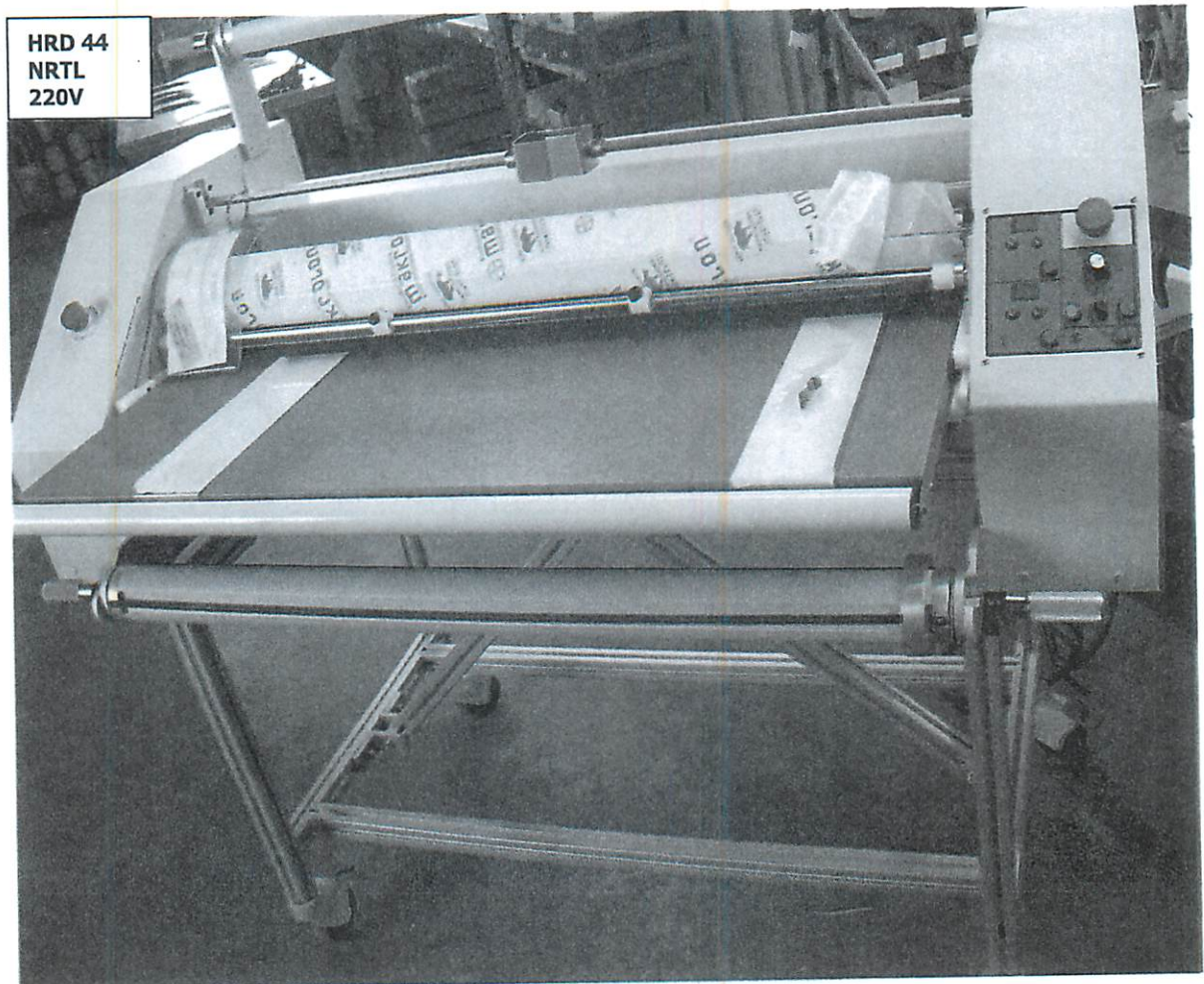
32) PLACE SAFETY SHIELD ASSEMBLY INTO FEED TABLE BRACKETS. USE (2) 1/4 X 1/4 TURNED SHOULDER BOLT (.250IAC04A) RACK 2 THROUGH BRACKET.

33) INSERT FEED TABLE ASSEMBLY. THIS WILL ACTIVATE THE PROXIMITY SWITCH MAGNETS.

34) PLACE SUPPLY ROLLS INTO BRACKETS.



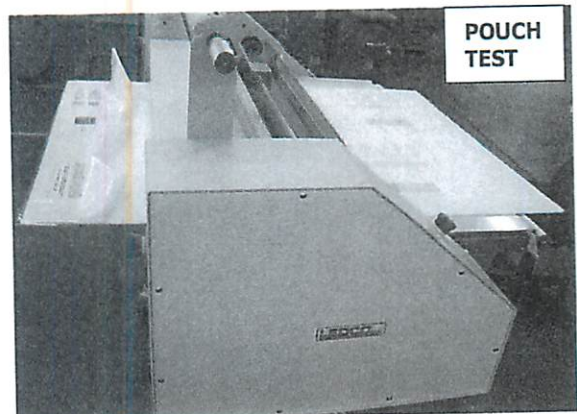
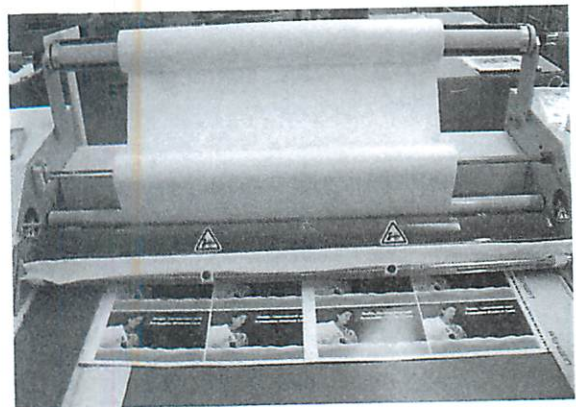
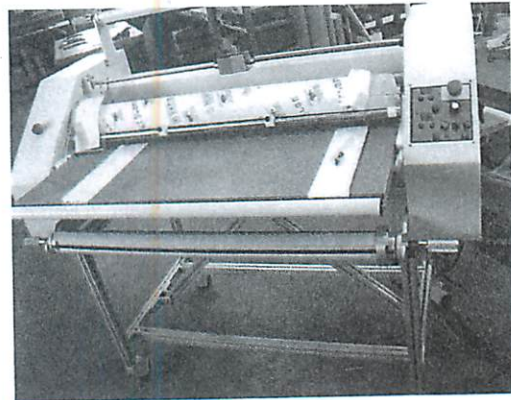
1/4 X 1/4 TURNED SHOULDER BOLT



HRD 44
NRTL
220V

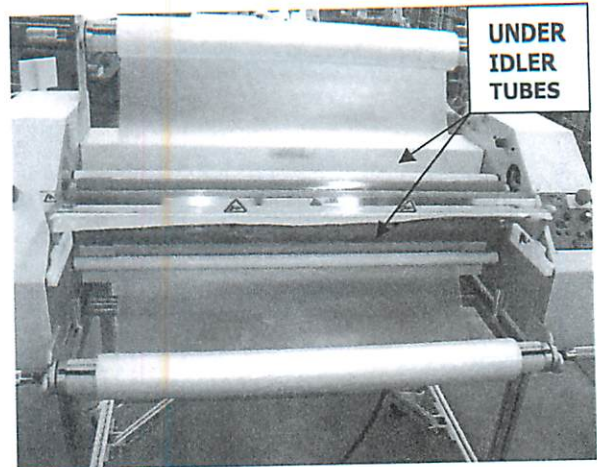
HRD44 POST-NRTL TESTING 6/2015

- 1) INSERT FEED TABLE AND CLOSE SAFETY SHIELD. WITH THE BREAKER IN THE "OFF" POSITION, PLUG THE 30 AMP HRD44 INTO A 60 HRZ OUTLET, USING A 30 AMP ADAPTER. SWITCH ON THE BREAKER. TEST OPERATION OF SWITCHES ON CONTROL PANEL AND CHECK RUBBER ROLL DIRECTION.
- 2) **FIRST** TEST SINGLE SIDED PRESSURE SENSITIVE MATERIAL. SET THE TOP HEAT CONTROL TO 150 DEGREES. SET THE BOTTOM HEAT CONTROL TO 240 DEGREES. TURN THE BOTTOM HEAT CONTROL OFF, AS IT IS NOT USED WITH PRESSURE SENSITIVE OR POUCH LAMINATING. THE 220 VOLT HRD44 WILL REACH TEMPERATURE QUICKLY.
- 3) PLACE TOP ROLLS IN "UP" POSITION AND LOAD THE SINGLE SIDED PRESSURE SENSITIVE FILM ONTO TOP SUPPLY ROLL WITH THE FILM DRAPING OFF THE REAR OF THE TOP SUPPLY ROLL. THREAD FILM AND COVERING UNDER IDLER. CENTER SCRAP CORE ON SCRAP REWIND SHAFT. SEPARATE THE FILM FROM THE COATING. ADHERE COATING ONTO SCRAP REWIND CORE AND FILM OVER TOP ROLL. ADHERE STICKY FILM TO TEST MATERIAL AND INSERT BETWEEN OPEN ROLLS. LOWER AND LOCK TOP, FRONT RUBBER ROLL. REMEMBER, LAMINATE MATERIAL MUST MEET OR EXCEED FILM WIDTH OR ADHESIVE WILL STICK TO EXPOSED RUBBER ROLL. AFTER THE TOP ROLL TEMPERATURE REACHES 150 DEGREES, PLACE BACK RUBBER ROLL IN *DOWN* POSITION. SLOWLY RUN TEST MATERIAL, CHECK EXITING FILM. INCREASE SPEED AND CHECK FILM ADHESION. UNLOAD FILM.
- 4) **SECOND** PREPARE A POUCH AND TEST. INCREASE THE TOP HOT ROLL TEMPERATURE TO 300-305 DEGREES. USE NO HEAT ON BOTTOM RUBBER ROLL. POUCHES 3/16 AND LESS CAN BE LAMINATED WITH THE TOP DRIVE ROLLS AND PULL ROLLS DOWN. WHEN TEMPERATURE IS REACHED, INSERT

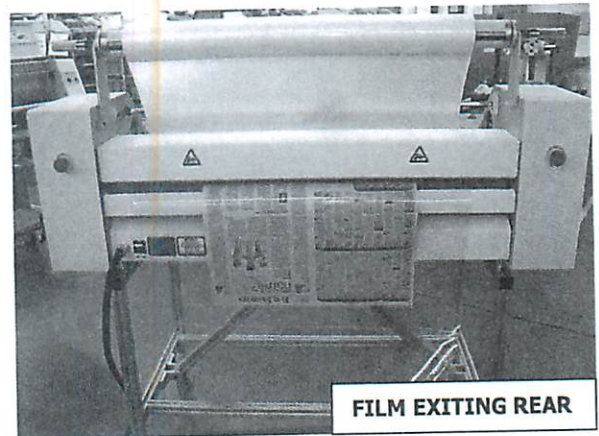


CLOSED END OF POUCH CARRYING MATERIAL WITH SHEET SIDE UP. RUN POUCH AT ABOUT SPEED "8" AND PERFORM "X" TEST AFTER MATERIALS IS COOLED. TRIM BOARD FOR CUSTOMER.

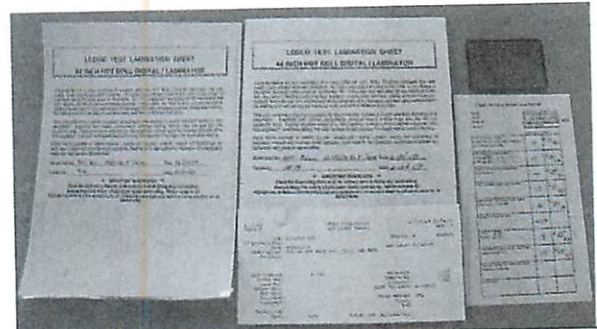
- 5) ***THIRD*** TEST DOUBLE SIDED LAMINATION. LOAD BOTH SUPPLY ROLLS WITH 3 MIL FILM, SHINY SIDE NEXT TO HOT ROLL. THE FILM DRAPES OFF THE BACK ON THE TOP ROLL AND OFF THE FRONT ON THE BOTTOM ROLL. REDUCE TEMPERATURE ON TOP TO 240 DEGREES. TURN ON THE BOTTOM HOT ROLL, SET AT 240 DEGREES. AFTER TEMPERATURE IS REACHED ON BOTH ROLLS, THREAD FILM UNDER IDLER TUBES AND LAY FILM ON HOT ROLLS. USE A THREADBOARD IN NIP OF ROLLS TO START FILM. THE FILMS WILL STICK TOGETHER WHEN HEATED. AFTER THREADING FILM, STOP AND **LOCK** BOTH ROLLS. CHECK DWELL LINE FOR EVENNESS. ADJUST PRESSURE IF NECESSARY. TEST TWO-SIDED LAMINATE MATERIAL. CHECK FOR CURLING, WRINKLES, BUBBLES AND ADHESION. CORRECT AS NECESSARY.
- 6) FILL OUT ALL PAPERWORK: (2) 8 1/2 X 11 "LEDKO TEST LAMINATE SHEET-HRD 44 LAMINATOR" FOR THE CUSTOMER. ONE COPY IS FOR **POUCH TESTING** AND THE OTHER IS FOR **DOUBLE SIDED LAMINATION**. ON THE OFFICE JOB SHEET WRITE THE SERIAL NUMBER, DATE TESTED AND ASSEMBLER NUMBER. FILL IN THE "FINAL TEST AND INSPECTION REPORT" CARD, TAKING INFORMATION FROM THE JOB SHEET.
- 7) LAMINATE THE LEDKO TEST LAMINATION SHEET FOR THE HRD44 FOR THE CUSTOMER. TRIM LAMINATE AND PLACE ON FEED TABLE.
- 8) REMOVE FILM FROM SUPPLY ROLLS. LEAVE SUPPLY ROLLS IN BRACKETS.
- 9) PLACE (2) STOP COLLAR CORE CHUCK STYLE (D105 004.4) AS09, EACH WITH A PLASTIC MOLDED 5/16-18 X 1 THRU SCREW (PRK184) AS09 ON THE FEED TABLE.



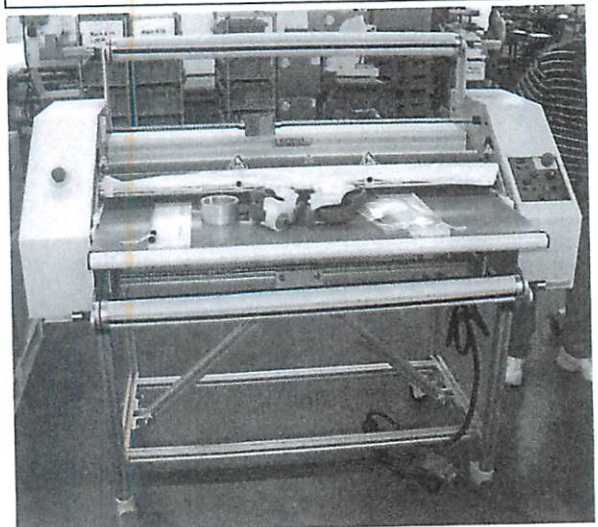
UNDER IDLER TUBES



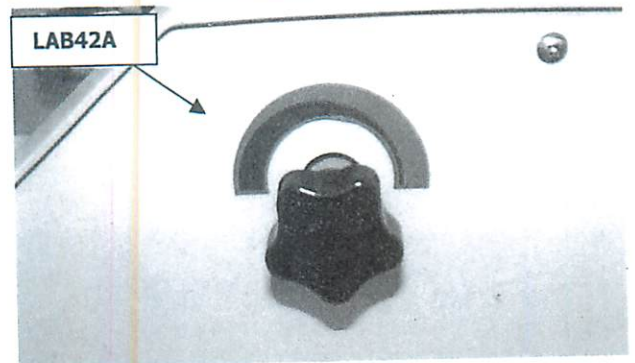
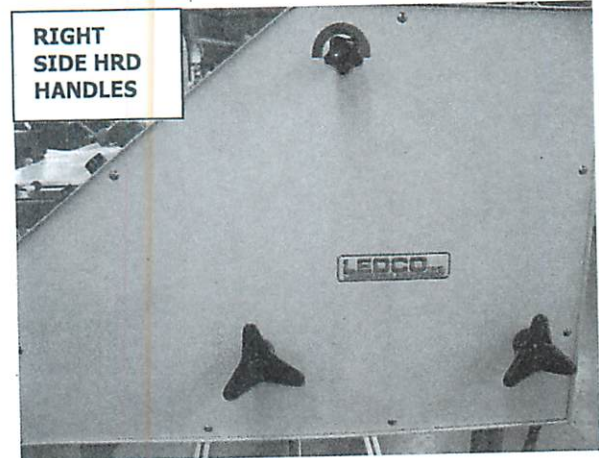
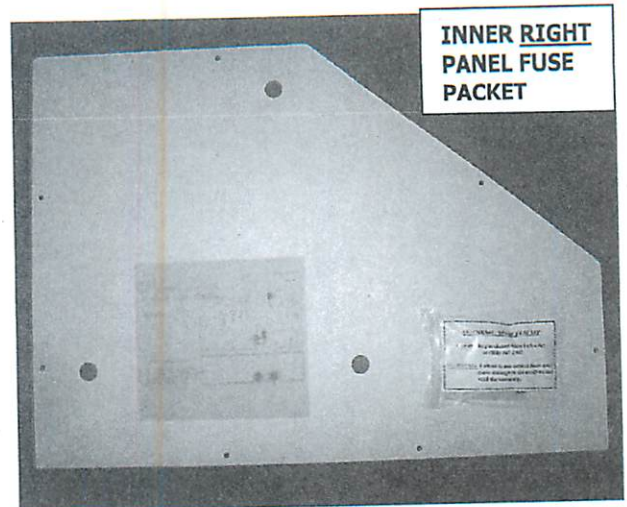
FILM EXITING REAR



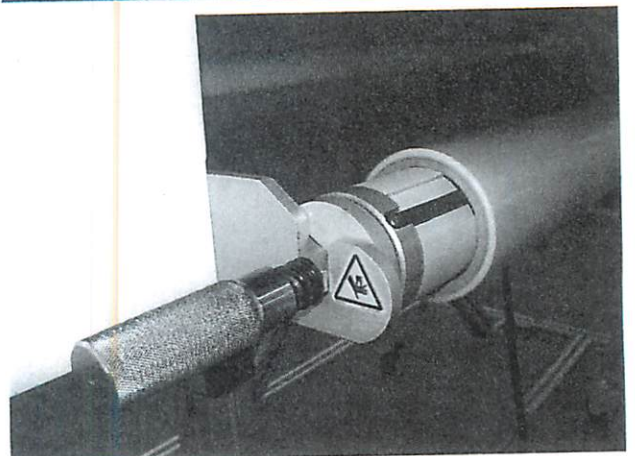
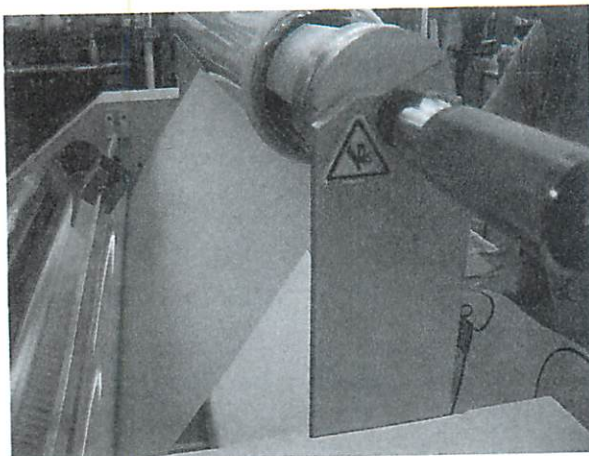
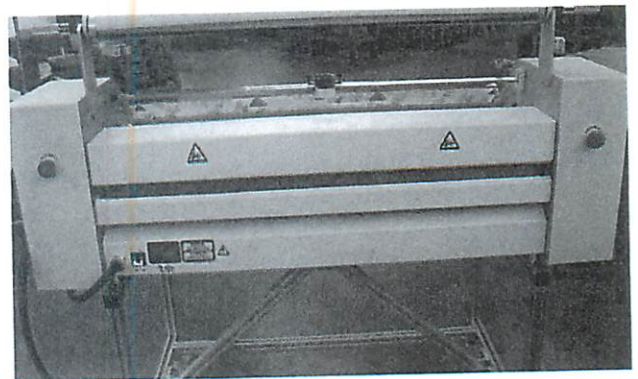
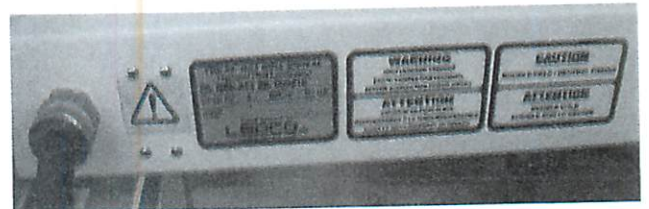
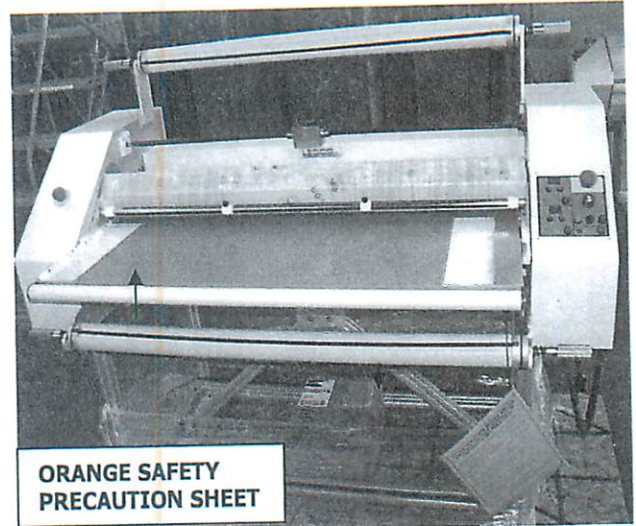
LAM & POUCH TEST, JOB, TEST CARD, SERIAL TAG



- 10) **THREAD A 1/2-13 HEX NUT (.500LDF00) ONTO (4) CASTORS (PRC210) AS14 AND PLACE CASTORS ON THE FEED TABLE.**
- 11) **IF MACHINE IS SOLD SHOWING A CENTIGRADE TEMPERATURE READING, CHANGE BOTH HEAT REGISTERS FROM FAHRENHEIT TO 126 C AT THIS TIME.**
- 12) **SECURE LEFT HOUSING PANEL COMPLETE (HRD44 095.4L) AS14 TO LEFT HOUSING USING (7) 8-32 X 1/4 TH. USE TEMPLATE TO ALIGN DOMED LEDCO EMBLEM (LAB05A) AS09 ONTO OUTER HOUSING PANEL.**
- 13) **ON THE INNER RIGHT HOUSING PANEL (HRD44 095.4R) AS14 ADHERE THE SPARE FUSE KIT (#SPFHRD44) AS09 TO THE FRONT CORNER AND THE FUSE DIAGRAM (LAB45A) AS09 CENTERED. SEE PHOTO. SECURE RIGHT HOUSING USING (7) 8-32 X 1/4 TH. USE TEMPLATE TO ALIGN DOMED LEDCO EMBLEM (LAB05A) AS09.**
- 14) **SECURE (2) CAM HANDLES (PRH140) AS07 TO THE FLAT SIDE OF THE FRONT AND REAR CAM SHAFTS ON RIGHT. USE A 1/4-20 X 3/8 SET SCREW IN EACH.**
- 15) **SECURE A SCRAP REWIND KNOB (PRK173) RACK 8 ONTO THE FLAT PORTION OF THE REWIND DRIVER NUT SHAFT USING A 10-32 X 1/4 SS.**
- 16) **CENTER AND ADHERE THE GRAY INCREASE/DECREASE LABEL (LAB42A) RACK 10 TO RIGHT HOUSING PANEL, ABOVE THE SCRAP REWIND KNOB.**
- 17) **SECURE (2) HOLE COVERS (HRD44 061.4) RACK 14 OVER RIGHT AND LEFT SIDE PANEL OPENINGS BY CONNECTING PLATE SPRINGS, USING 6-32 X 1/4 PH.**
- 18) **ADHERE (4) ARM ENTANGLEMENT LABELS (LAB51) AS09; (2) ON REAR PULL ROLL SAFETY SHIELD, ONE FOOT IN FROM SIDE PANEL AND (2) ON SAFETY SHIELD, ABOVE SPI KNOBS.**
- 19) **ADHERE GRAY SERIAL NUMBER TAG LABEL (LAB01) JOB SHEET RIGHT OF REAR BREAKER ON BOTTOM COVER.**

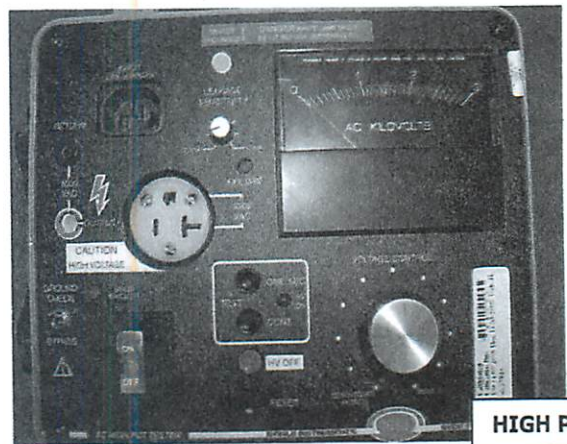


- 20) **ADHERE YELLOW WARNING LEAKING CURRENT LABEL (LAB101A) AS09 RIGHT OF SERIAL TAG LABEL.**
- 21) **SNAP AN ORANGE 'SAFETY PRECAUTION' SHEET (LIT011) AS13 UNDER THE FEEDTABLE ON THE FEEDTABLE SHAFT.**
- 22) **THE 3 PHASE HRD44 HAS AN ADDITIONAL LABEL, THE YELLOW CAUTION DOUBLE POLE/NEUTRAL FUSING LABEL (LAB103A) AS09 WHICH IS ADHERED RIGHT OF THE WARNING LEAKING CURRENT LABEL.**
- 23) **THE SINGLE PHASE HAS A YELLOW GENERAL DANGER (LAB52) AS09 ADHERED RIGHT OF THE WARNING LEAKAGE LABEL. ADHERE THE GENERAL DANGER LABEL OVER THE BREAKER PLATE ON THE 3 PHASE HRD.**
- 24) **ADHERE (4) HAND CRUSH LABELS (LAB35) AS09 TO THE OUTER, FRONT PORTION OF EACH SUPPLY ROLL BRACKET, CENTERED BY THE NOTCH.**
- 25) **TURN OFF ALL SWITCHES AND THE BREAKER. CLEAN THE MACHINE WITH A DAMP CLOTH. CHECK TOP AND BOTTOM RUBBER ROLLS AND CLEAN OFF ANY RESIDUE GLUE FROM FILM. UNPLUG POWER CORD AND STORE CORD. PLACE THE RUBBER ROLLS IN THE "OPEN" POSITION.**



HRD44 HIGH POT TESTING

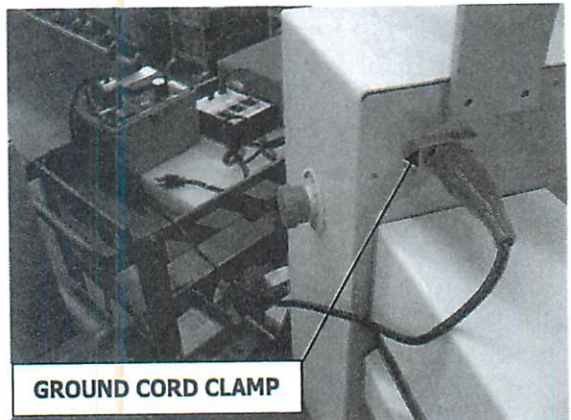
- 1) SECURE THE HRD44 IN AN AREA LARGE ENOUGH TO WALK AROUND THE MACHINE. **YOU SHOULD NOT TOUCH THE MACHINE OR CORD DURING HIGH POT TESTING.** A SEVERE SHOCK MAY OCCUR IF THE TEST FAILS.
- 2) ROLL THE TEST EQUIPMENT CART NEXT TO THE RIGHT, POWER SIDE, HOUSING.
- 3) THE 44" HOT ROLL DIGITAL HAS BEEN CERTIFIED FOR U.S. ETL SHIPMENT AS OF 2/2009 AND MUST PASS A HIGH POT TEST TO CHECK POWER LEAKAGE AND GROUND. HIGH POT TEST AS FOLLOWS.
- 4) A) WITH HIGH POT ROCKER POWER SWITCH IN "OFF" POSITION, CONNECT THE **TESTER POWER/GROUND CORD** BETWEEN THE TESTER "INPUT" INLET AND THE POWER BAR ON THE TEST TABLE OR A 110 VOLT OUTLET.
- 5) B) WITH THE "GROUND CHECK" SWITCH **UPWARD**, PLUG THE **TESTER MACHINE GROUND CORD**, WHICH HAS A TOOTHED CLAMP ON ONE END, BETWEEN THE "RETURN" INLET ON THE TESTER AND CLAMP THE TOOTHED END ONTO THE EXPOSED THREADS OF THE BOLT HOLDING THE IDLER SUPPORT BAR LOCATED ON THE INNER RIGHT SIDE PANEL. GOOD GROUNDING LOCATIONS VARY WITH MACHINES.
- 6) C) TO CONNECT THE HRD44 TO THE MAIN POWER USE (2) ADAPTORS. PLUG THE HRD44 30 AMP POWER CORD INTO A 30AMP-TO-20AMP ADAPTOR. PLUG THE 20AMP END OF THAT ADAPTOR INTO A 20AMP-TO-110 VOLT ADAPTOR. PLUG THE 3-PRONG END OF 110 VOLT ADAPTOR INTO A 110 VOLT POWER SOURCE. THE AMBER COLORED TESTER GROUND LAMP SHOULD LIGHT UP, AND IT INDICATES THE TESTER, ITSELF, IS GROUNDED. IF LAMP DOES NOT LIGHT AT THIS TIME THE POWER OUTLET IS UNSUITABLE, DO NOT CONTINUE. IF LAMP LIGHTS UP, CONTINUE.



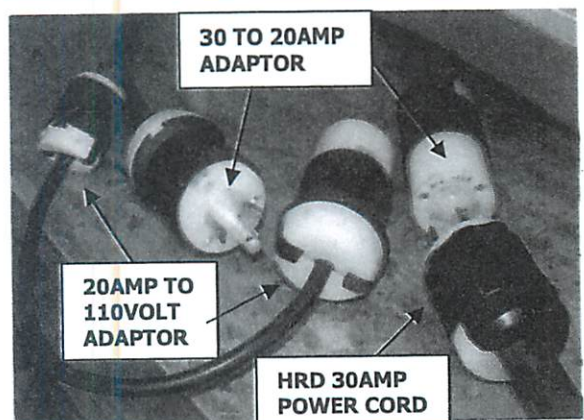
HIGH POT



TESTER POWER CORD ON POWER BAR



GROUND CORD CLAMP



30 TO 20AMP ADAPTOR

20AMP TO 110VOLT ADAPTOR

HRD 30AMP POWER CORD

7) D) PLUG THE 110 VOLT, 3-PRONG END OF THE 20AMP TO 110 VOLT ADAPTOR INTO THE MAIN POWER RECEPTACLE ON THE HIGH POT TESTER EQUIPMENT. **CLEAR THE AREA!! DO NOT TOUCH THE MACHINE OR THE CORD WHILE HIGH POT TESTING AS SEVERE SHOCK MAY OCCUR IF THE MACHINE FAILS.**

8) E) PRESS THE HIGH POT TESTER SWITCH TO "ON" POSITION. THE 'ON/OFF' SWITCH COMES ON GREEN. IF THE GROUND TO THE MACHINE IS ACCEPTABLE, THE HIGH POT "GOOD WHEN LIT" GREEN LIGHT COMES ON.

9) F) WITH THE "VOLTAGE CONTROL" DIAL ON ZERO/START, PRESS THE BLACK "RESET" BUTTON ON THE HIGH POT TESTER.

10) G) PRESS THE BLACK "CONT" (FOR 'CONTINUOUS') BUTTON ON THE HIGH POT TESTER. THE RED "HV ON" LIGHT BECOMES LIT.

11) H) WITH "VOLTAGE CONTROL" STILL AT ZERO/START POSITION, INCREASE AC KILOVOLT CONTROL DIAL CLOCKWISE UNTIL READING 1.6 KILOVOLTS ON THE REGISTER SCREEN. MAINTAIN 1.6 AC KILOVOLTS FOR TWO SECONDS. IF MACHINE FAILS HIGH POT TEST: AMBER LIGHT COMES ON AND "BEEP" SOUNDS. IF NOTHING HAPPENS, THE TEST IS A SUCCESS.

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

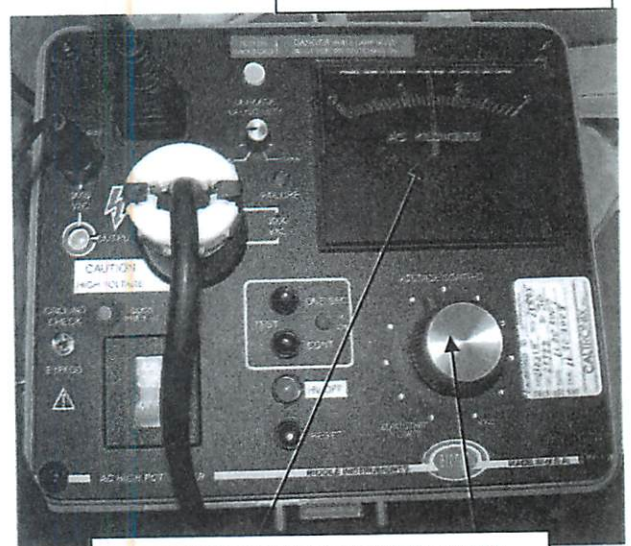
13) J) TURN OFF HIGH POT TESTER SWITCH, UNPLUG "INPUT" POWER CORD FIRST, THEN UNPLUG REMAINING CORDS. NEATLY COIL ALL CORDS AND ROLL THE HIGH TEST CART BACK TO THE DESIGNATED LOCATION.



GROUND CHECK & OFF/ON ROCKER SWITCH



VOLTAGE CONTROL DIAL



1.5 AC KILOVOLT ON SCREEN & DIAL

- 14) K) CLEAN THE HRD AND NOTIFY SHIPPING THAT THE LAMINATOR IS READY FOR CRATING.

