

# **H20 LAMINATOR**

## **ASSEMBLY PROCEDURES**

**APRIL 2002, UPDATED MAY 2007 & JANUARY 2009**

# **H20/MGI LAMINATOR**

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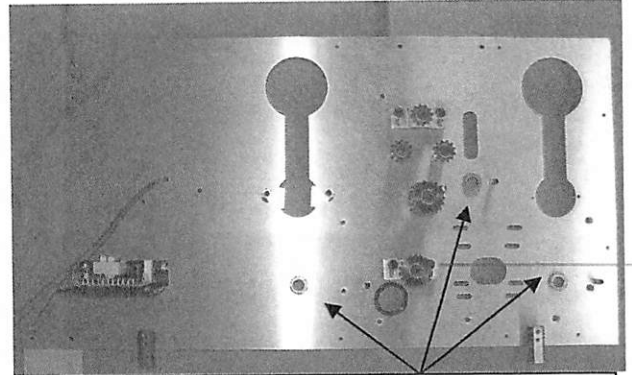
- 1) RIGHT SIDE PANEL ASSEMBLY**
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**JANUARY 2009**

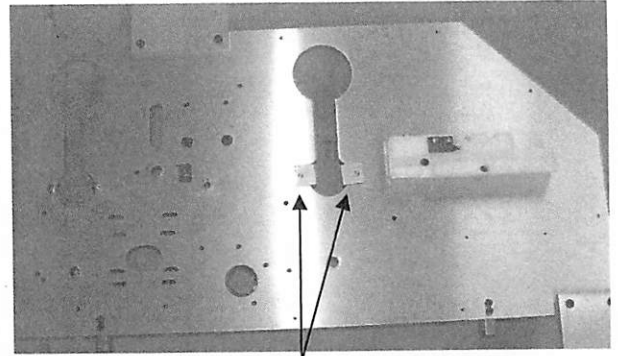
# H20

## RIGHT SIDE PANEL 2008

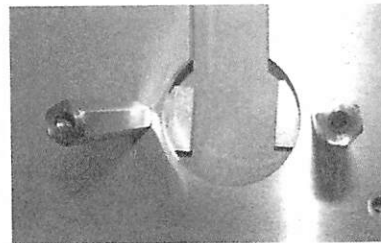
- 1) H20 PARTS ARE LOCATED IN LOFT 0 UNLESS OTHERWISE INDICATED.
- 2) ASSEMBLE THE RIGHT SIDE PANEL (H20 090.4R) AS FOLLOWS. PLACE (3) 7/16 SPACERS (PRS232) AS07 ONE EACH ON A 1/4-20 X 5/8 SHCS. THREAD SPACERS FROM OUTER SIDE PANEL; LOCATE BEHIND SLITTER CAM AND BOTH PRESSURE PLATE CAM SHAFTS. THE SPACERS STABILIZE THE PRESSURE PLATES AND SLITTER CAM.
- 3) TAP IN (3) OILITE BEARINGS (PRB048B) RACK 8 ORIENTED WITH ALL FLANGES ON OUTER PANEL. REAM WITH .505.
- 4) SECURE (2) MOUNTING LEGS (H20 048.4) EXPOSED ON THE OUTER SIDE PANEL. USE (4) 10-32 X 3/4 BSHS TIGHTENED FROM THE INSIDE, WITH LOCTITE ON THE END THREADS. LEGS MUST BE STRAIGHT.
- 5) FROM THE OUTSIDE OF THE RIGHT SIDE PANEL INSERT (2) 2 1/2" THREADED HEX BOTTOM STANDOFF (H20 047.4B) LOCATED BY THE FRONT ROLLER BEARING APERTURE. ON THE INSIDE OF THE SIDE PANEL, THREAD BOTTOM STANDOFFS INTO (2) BEARING RETAINERS (H20 060.4) LDP2 ORIENTED TO SECURE ROLLER BEARING.
- 6) MEASURE ABOUT 4" OF 3/16" BLACK INSULATION SHRINK TUBING (PRI165) CAB1, TRIM AND PLACE OVER RED WIRES ON A PROXIMITY SWITCH (PRS351) RACK 1. HEAT SHRINK INSULATION.
- 7) INSERT RED PROXIMITY SWITCH WIRES THROUGH OPENING ON THE FEED TABLE BRACKET RIGHT (D60 098.4R) AS13 AND SECURE SWITCH WITH (2) 4-40 X 1/4 PH.
- 8) INSERT INSULATED WIRES THROUGH THE OPENING ON THE INNER SIDE PANEL. ATTACH FEED TABLE BRACKET WITH PROXIMITY SWITCH MAGNET USING (2)



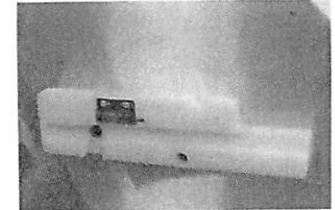
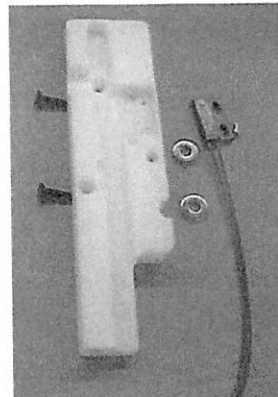
OUTER RIGHT SIDE PANEL OILITE BEARINGS



INNER RIGHT SIDE PANEL BEARING RETAINERS

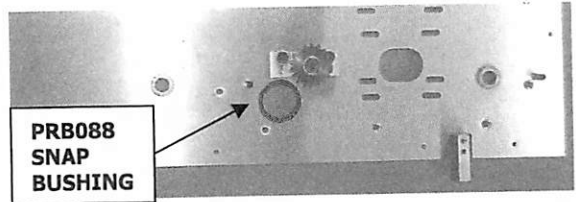


2 1/2" HEX  
BOTTOM  
STANDOFFS &  
INNER  
BEARING  
RETAINERS

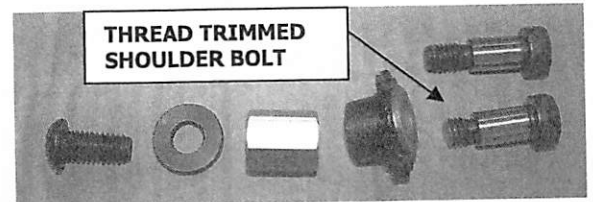


FEED TABLE BRACKET  
WITH PROXIMITY  
SWITCH MAGNET

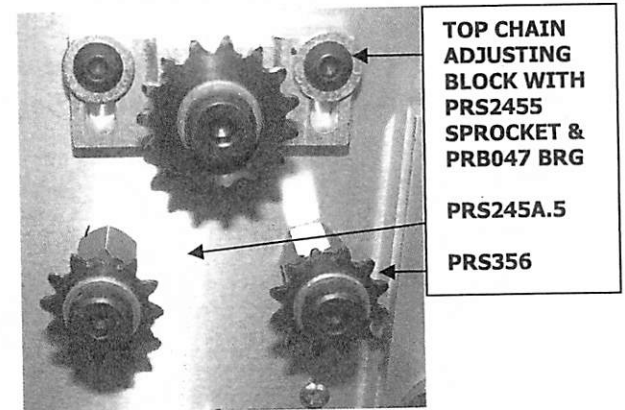
10-32 X 3/4 FHS THROUGH THE BRACKET. ADD A 1/4 X 5/8 X 1/8 WASHER ONTO EACH SCREW, RESTING ON THE THREADS BETWEEN THE BRACKET AND THE SIDE PANEL. NOW SECURE TO SIDE PANEL.



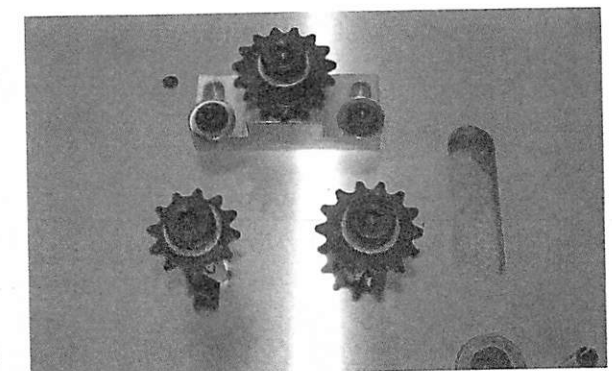
9) INSERT SNAP BUSHING (PRB088) AS07 INTO SIDE PANEL, FLANGE OUTWARD.



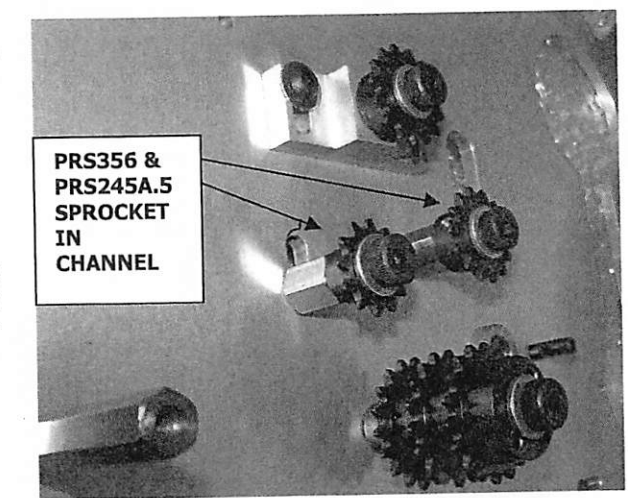
10) LOOSELY ATTACH THE TOP CHAIN ADJUSTING BLOCK (H20 069.4) WHICH HAS A "BOSS" OR RAISED CENTER SQUARE, TO THE UPPER THREADED OUTER RIGHT SIDE PANEL USING (2) 1/4-20 X 3/4 BHCS WITH A 1/4 FLAT WASHER SAE ON EACH. THE TOP CHAIN ADJUSTING BLOCK MUST MOVE UP AND DOWN THE SIDE PANEL CHANNELS AND WILL BE TIGHTENED LATER TO ADJUST THE CHAIN.



11) REMOVE SET SCREW FROM A 25B15 SPROCKET (PRS2455) LD13. PRESS AN OILITE BEARING 3/8 X 1/2 X 5/8 (PRB047) RACK 9 INTO TOOTH SIDE OF SPROCKET. FLANGE IS ON TEETH. SAND OILITE EXCESS IF NECESSARY. INSERT A 3/8 X 5/8 SHOULDER BOLT INTO THE FLANGE SIDE OF SPROCKET BY TEETH. LOCTITE AND THREAD INTO TOP CHAIN ADJUSTING BLOCK BOSS. SPROCKET SHOULD SPIN.



12) PLACE A 25B12, 1/2 BORE SPROCKET (PRS245A.5) RACK 21, FLANGE AND TEETH OUTWARD ON A THREAD TRIMMED 3/8 X 5/8 SHOULDER BOLT LOFT 0. LOCTITE THREADS ON SHORTER IDLER SPROCKET SPACER (H20 072.4) SECURE BOLT. LOCATE IN CHANNEL, BELOW AND LEFT OF TOP CHAIN ADJUSTING BLOCK. LOOSELY SECURE SPACER FROM INNER SIDE PANEL USING A 5/16-18 X 3/4 BHCS AS13 WITH A 5/16 WILLIAMS WASHER LOFT 0.



13) PRESS OILITE BEARING (PRB047) RACK 9 INTO TOOTH END OF 25B14 1/2 BORE SPROCKET (PRS356). PLACE FLANGE AND TEETH OUTWARD ON A THREAD TRIMMED 3/8 X 5/8 SHOULDER BOLT. LOCTITE AND THREAD INTO ANOTHER IDLER SPROCKET SPACER. LOCATE BELOW AND RIGHT OF TOP CHAIN ADJUSTING BLOCK. ON INSIDE LOCTITE A 5/16-18 X 3/4 BHSH WITH 5/16 WILLIAMS WASHER, SECURE.

H20  
071.4  
Spacer



14) ARBOR PRESS (2) OILITE BEARINGS (PRB047) RACK 9 INTO THE ENDS OF THE PRE-ASSEMBLED DRIVE SPROCKET CLUSTER ASSEMBLY (H20 073.5).

15) WITH CLUSTER SPROCKET TEETH INWARD, HUB OUTWARD INSERT A 3/8-16 X 2 1/4 SHOULDER BOLT (.375IAC36) AS12 FROM THE HUB END. ADD A SPROCKET CLUSTER SPACER (H20 074.4) ON SHOULDER BOLT AND THREAD INTO THE SIDE PANEL. TIGHTEN ON INNER SIDE PANEL WITH A 5/16-18 FIN HEX JAM NUT (.312LDJ00) AS13.

16) PLACE LOCTITE ON THE THREADS OF A 5/16-18 X 3/4 FSH AND INSERT THROUGH THE COUNTERSUNK CENTER OPENING OF THE CHAIN TENSIONER (H20 070.4). THREAD ON THE HEX TENSIONER SPACER (H20 071.4).

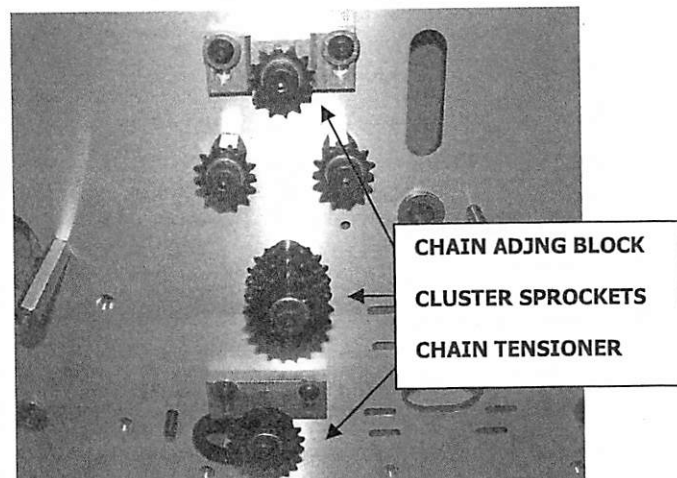
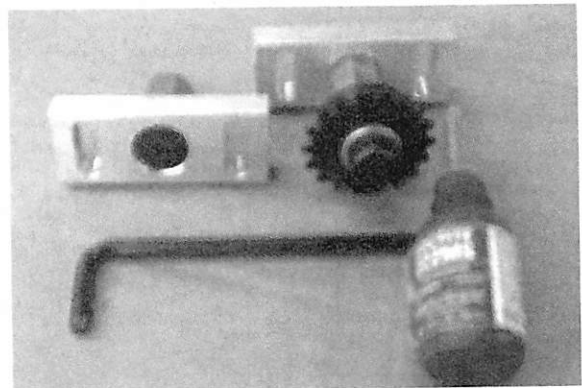
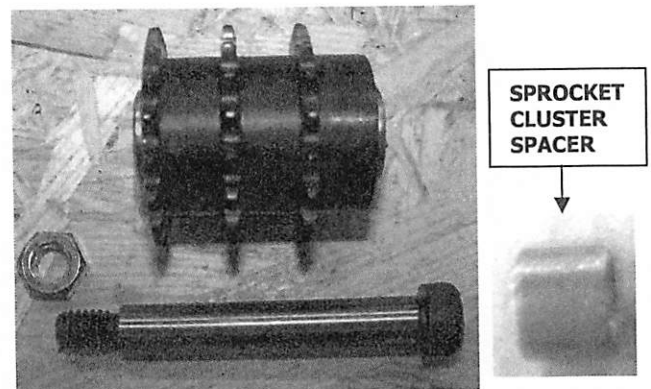
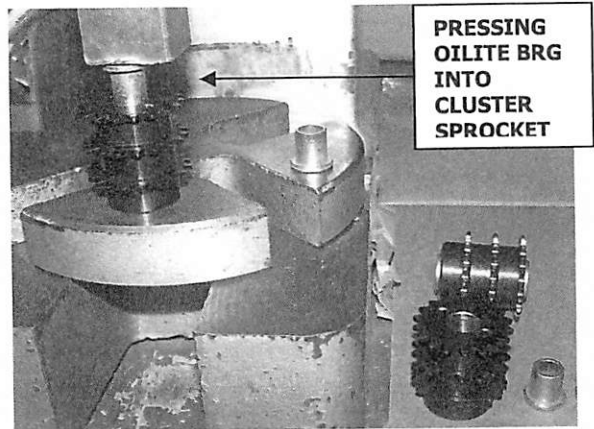
17) REMOVE SET SCREW FROM THE 25B18 SPROCKET (PRS249) LD13. ARBOR PRESS AN OILITE BEARING (PRB047) RACK 9 INTO TOOTH SIDE OF SPROCKET. INSERT A 3/8 X 5/8 SHOULDER BOLT, TEETH OUTWARD AND THE HUB ON THE TENSIONER SPACER. LOCTITE AND THREAD INTO THE TENSIONER SPACER.

18) LOOSELY ATTACH CHAIN TENSIONER ASSEMBLY BELOW THE CLUSTER SPROCKETS USING (2) 1/4-20 X 3/4 BSHS EACH WITH A 1/4 FLAT WASHER SAE.

19) SECURE A TINNEMAN BRACKET (PRT319) LD01 TO INNER SIDE PANEL IN FRONT OF THE UPPER OILITE BEARING. USE AN 8 X 1/2 PH SMS ON TINNEMAN BRACKET.

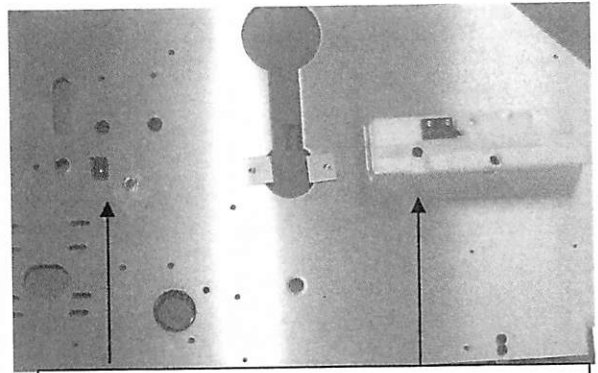
20) PLACE A DROP OF LOCTITE ON THE ENDS OF (2) 10-32 X 1/2 TH SCREWS AND THREAD THEM FROM THE INSIDE FLUSH TO THE OUTSIDE TO HOLD THE REAR BOTTOM PULL ROLL ROLLER BEARING FROM SLIPPING OFF THE SIDE PANEL. *THE INNER THREADS WILL SHOW.*

21) *FROM INNER SIDE PANEL* TIGHTEN A 10-32 X 1 BSHS WITH A #10 STAR WASHER ON THREADS, THROUGH THE THREADED HOLE IN FRONT OF THE REAR MOUNTING LEG. ON OUTER PANEL PLACE ANOTHER #10 STAR WASHER AND



START A #10 KEPS NUT. THIS WILL HOLD THE GROUND WIRE.

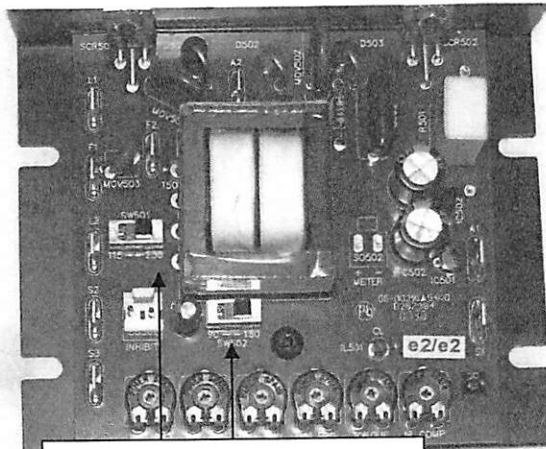
- 22) ADHERE THE INTERNATIONAL GROUND LABEL (LAB06) WB09 BELOW MOTOR AND ABOVE THE SCREW THREADS FOR GROUND WIRE CONNECTION ON OUTER SIDE PANEL.
- 23) SECURE TOP SUPPLY ROLL BRACKET (H20 010.4), BRACKET CHANNEL FORWARD, TO INNER SIDE PANEL USING (2) 1/4-20 X 1/2 BSH. NO LOCTITE AS THEY ARE REMOVED FOR SHIPPING.
- 24) ATTACH THE BOTTOM SUPPLY ROLL BRACKET (H20 009.4) TO THE INNER SIDE PANEL USING (2) 1/4-20 X 1/2 BSH. USE LOCTITE.
- 25) TOWARD THE FRONT SECURE MM23011C MINARIK SPEED CONTROL 115-240VAC (PRM218A) AS08 USING (2) 8-32 X 3/8 TH, WITH A #8 STAR WASHER BETWEEN SPEED CONTROL AND SIDE PANEL. SET SWITCHES TO 180 AND 230.



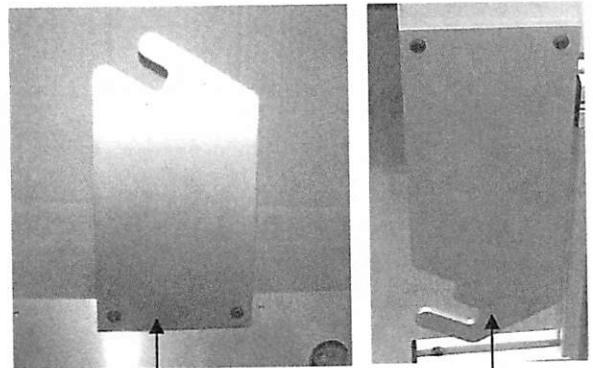
TINNEMAN BRACKET & FEED TABLE BRACKET



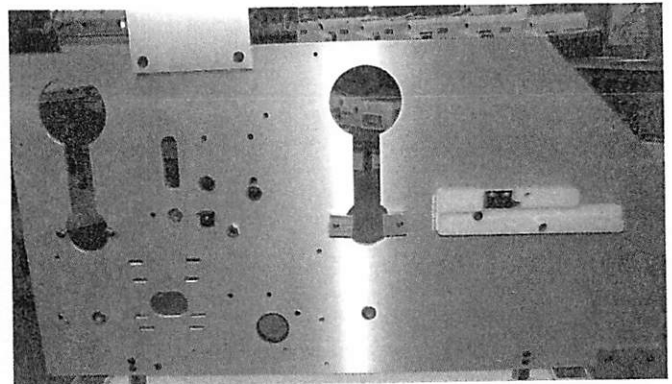
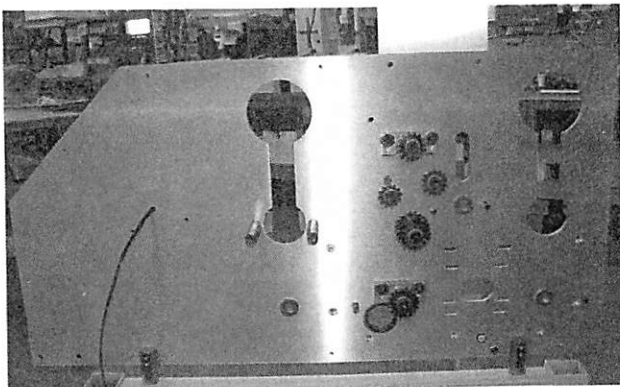
GROUND LABEL & SCREW



SET SPEED BOARD SWITCHES



UPPER SUPPLY ROLL BRACKET & LOWER BRACKER



# H20 LEFT SIDE PANEL

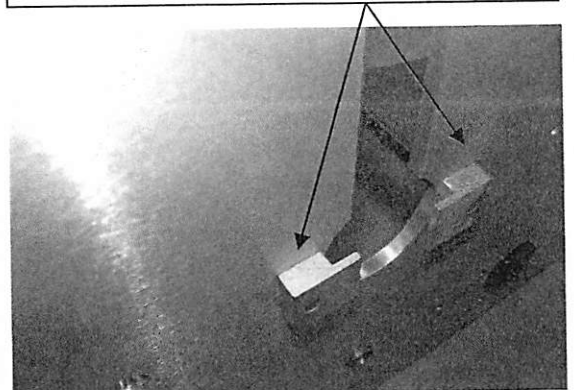
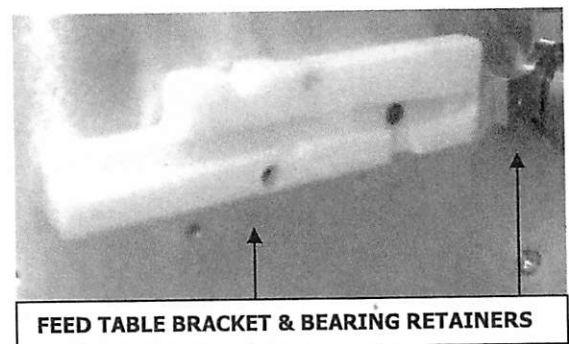
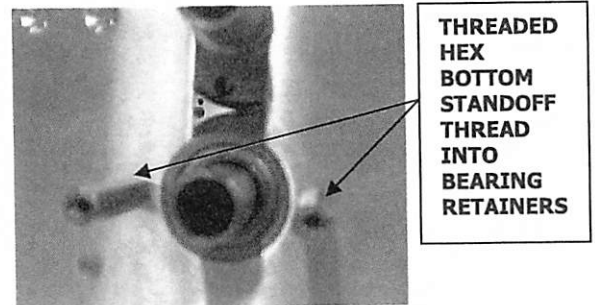
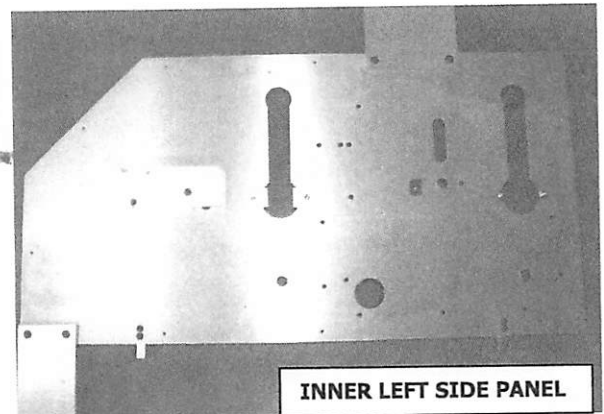
- 1) ASSEMBLE THE LEFT SIDE PANEL (H20 090.4L) BY FIRST ARBOR PRESSING (3) OILITE BEARINGS (PRB048B) RACK 8 INTO THE SIDE PANEL, ORIENTED WITH ALL OILITE BEARING FLANGES ON THE OUTER SIDE PANEL. USE A .505 REAMER TO OPEN THESE BEARINGS.

- AS07  
2) PLACE (3) 7/16 SPACERS (PRS232) AS08 ONE EACH ON A 1/4-20 X 5/8 SHCS. THREAD SPACERS FROM OUTER SIDE PANEL; LOCATE BEHIND SLITTER CAM AND BOTH PRESSURE PLATE CAMS. THE SPACERS STABILIZE PRESSURE PLATES AND THE SLITTER CAM SHAFT DRIVER.

- 3) SECURE (2) MOUNTING LEGS (H20 048.4) TO SIDE PANEL WITH MOUNTING LEGS EXPOSED ON THE OUTER SIDE PANEL. LOCTITE END THREADS ON (4) 10-32 X 3/4 BSHS, TIGHTENED FROM THE INSIDE.

- 4) FROM THE OUTSIDE OF THE LEFT SIDE PANEL INSERT (2) 2 1/2" THREADED HEX BOTTOM STAND OFF (H20 047.4B) LOCATED BY THE FRONT ROLLER BEARING APERTURE. LOCTITE END THREADS. ON THE INNER SIDE PANEL, THREAD THE BOTTOM STAND OFFS INTO (2) BEARING RETAINERS (H20 060.4). HOLD THE BEARING RETAINERS SO THEY ARE ORIENTED TO SECURE ROLLER BEARING, AS PICTURED, WRENCH TIGHTEN.

- AS09  
5) SECURE THE FEED TABLE BRACKET LEFTHAND (D60 098.4L) AS13 TO THE INNER LEFT SIDE PANEL BY INSERTING (2) 10-32 X 7/8 FHS THROUGH THE COUNTERSUNK BRACKET OPENINGS. PLACE A F/T SPACER (EP60 052.R) RACK 10 ON EACH OF THE EXPOSED THREADS AS YOU HOLD THEM IN THE FEED TABLE BRACKETS. THREAD SCREWS INTO SIDE PANEL. THE WASHER RESTS ON THE SCREW THREADS BETWEEN THE FEED TABLE BRACKET AND THE SIDE PANEL.



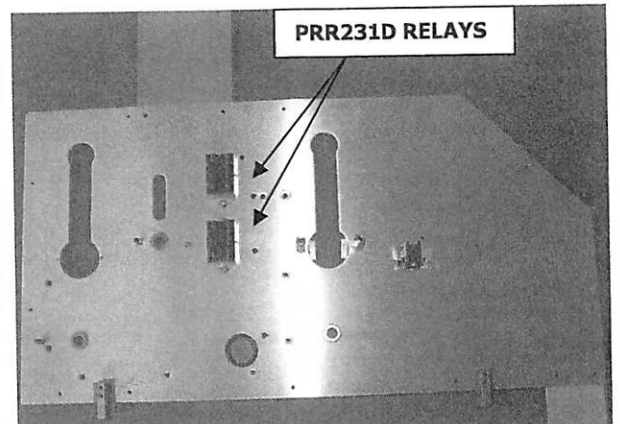


AS09

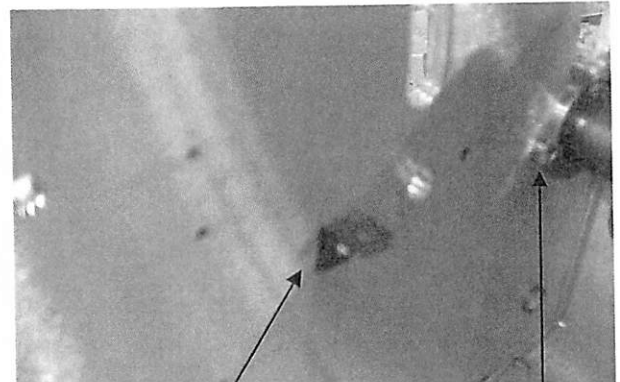
6) INSERT SNAP BUSHING (PRB088) AS0X INTO LOWER SIDE PANEL OPENING WITH THE FLANGE TO THE OUTSIDE. THIS BUSHING PROTECTS AGAINST WEAR ON WIRING HARNESS.

AS07

7) SECURE (2) 240VAC 5ZH39 OMRON TAB MOUNT RELAYS (PRR231D) AS0X, ONE ABOVE THE OTHER VERTICALLY WITH THE DOUBLE TERMINAL POSTS ON BOTH RELAYS FACING THE REAR OF THE H20. USE (4) 8-32 X 1/4 RH.



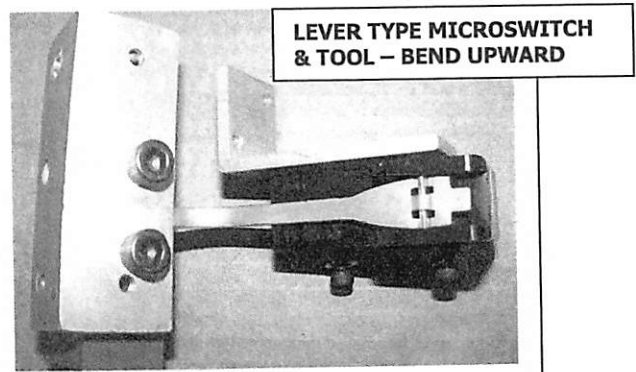
8) PLACE LOCTITE ON THE END THREADS OF (2) 10-32 X 1/2 TH AND INSERT THEM FROM THE INSIDE, TO FLUSH ON THE OUTSIDE BY THE REAR ROTTOM PULL ROLL ROLLER BEARING, TO HOLD THE BEARING FROM SLIPPING OFF THE SIDE PANEL. *INNER THREADS SHOW.*



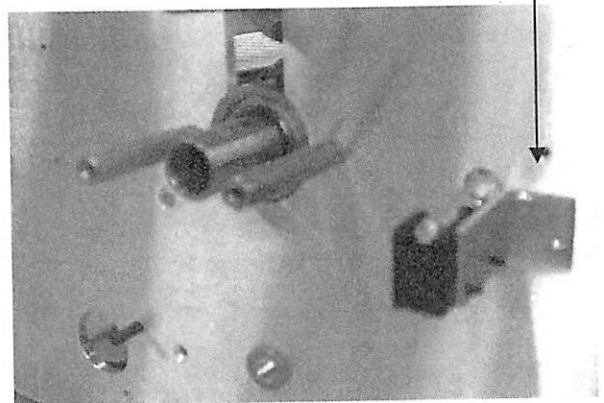
TINNEMAN BRACKET & TRUSSHEAD FOR BEARING

9) SECURE A TINNEMAN BRACKET (PRT319) LD01 TO THE INSIDE OF THE SIDE PANEL IN FRONT OF THE UPPER OILITE BEARING, FLAT SIDE UPWARD. SECURE TINNEMAN BRACKET WITH AN 8 X 1/2 PH SMS.

10) BEND THE LEVER END OF THE LEVER TYPE MICROSWITCH (PRS313) RACK 1 UPWARD USING THE TOOL PICTURED. ATTACH THE LEVER TYPE MICROSWITCH TO THE SAFETY SWITCH BRACKET (H20 170.4) USING (2) 6-32 X 1 SHCS WITH A #6 FLAT WASHER ON EACH, THROUGH SWITCH AND INTO BRACKET THREADS.



11) INSERT THE UPWARD BENT LEVER OF THE LEVER TYPE MICROSWITCH THROUGH THE OPENING IN THE SIDE PANEL LOCATED IN FRONT OF THE BOTTOM HOT ROLL. SECURE THE LEVER TYPE MICROSWITCH TO THE OUTER LEFT SIDE PANEL WITH (2) 6-32 X 1/4 PH. NOTE THE ORIENTATION WITH THE BRACKET TOWARD THE FRONT OF THE H20 LAMINATOR.



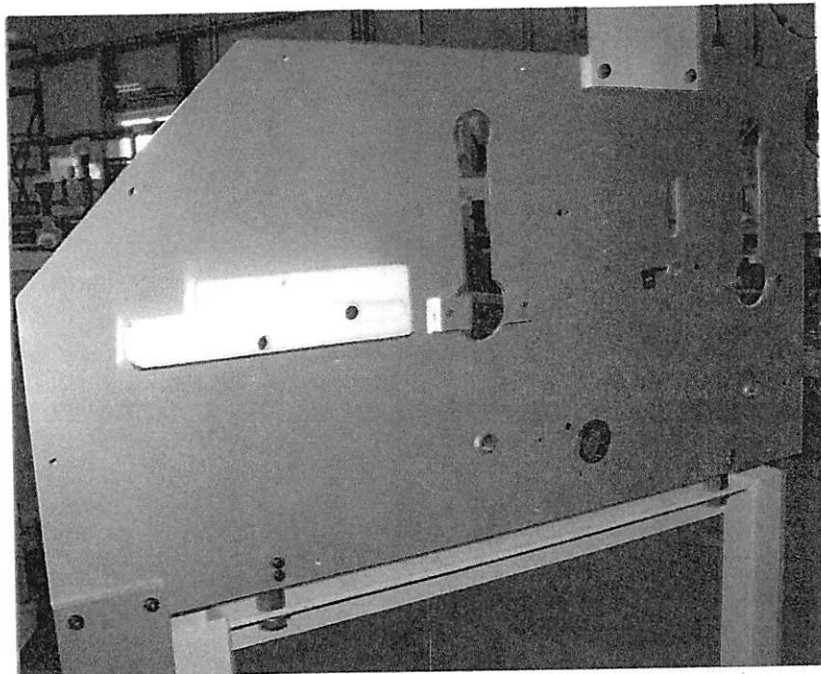
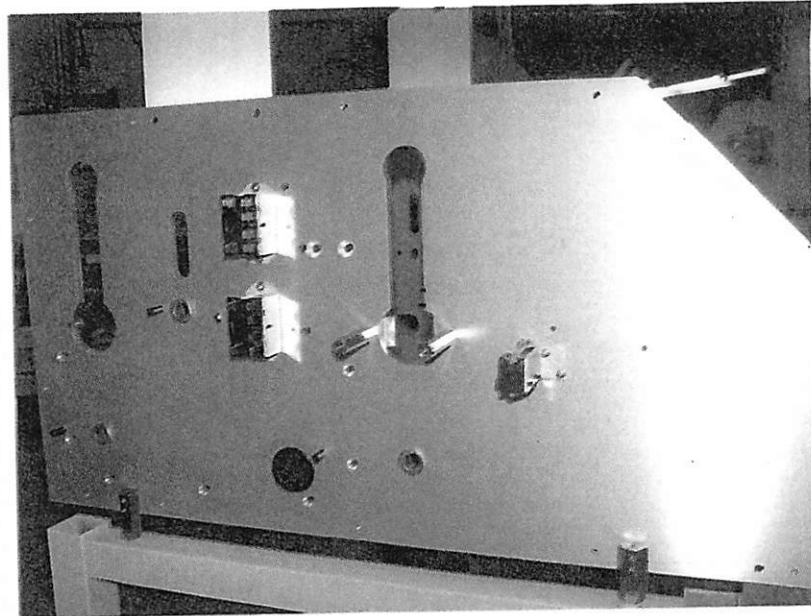
12) SECURE THE TOP SUPPLY ROLL BRACKET (H20 010.4) LOFT 0 TO THE INNER SIDE PANEL ORIENTED WITH THE NOTCHES FORWARD USING (2) 1/4-20 X 1/2 BSHS.

**DO NOT LOCTITE THESE AS THEY ARE REMOVED FOR SHIPPING.**

- 13) SECURE THE BOTTOM SUPPLY ROLL BRACKET (H20 009.4) TO THE LOWER INNER SIDE PANEL ORIENTED WITH THE NOTCHES FORWARD USING (2) 1/4-20 X 1/2 BSH. LOCTITE THREADS.**



**TOP & BOTTOM SUPPLY ROLL BRACKET**



# H20

## BOTTOM MOTOR COVER 6/2015

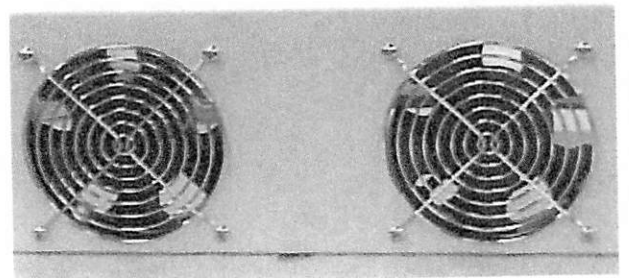
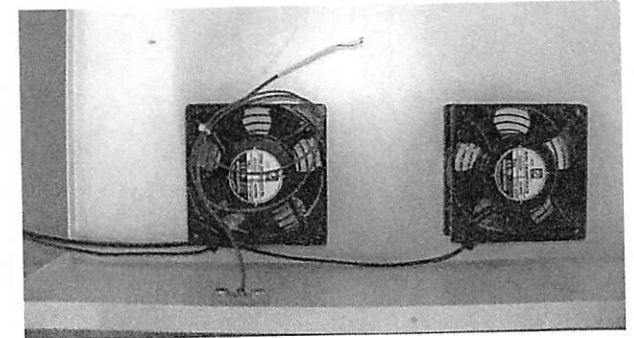
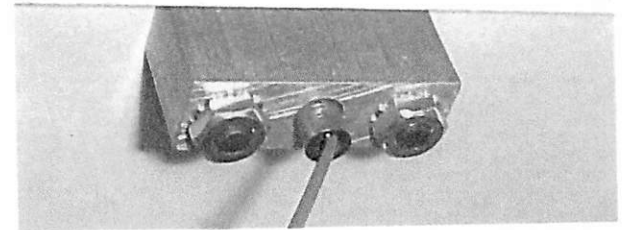
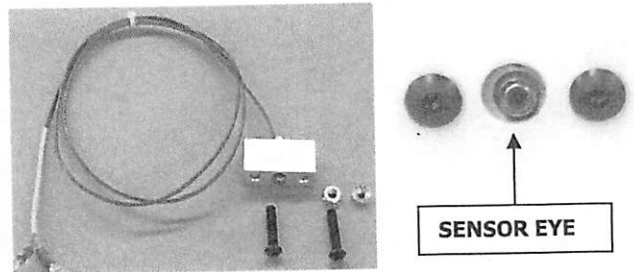
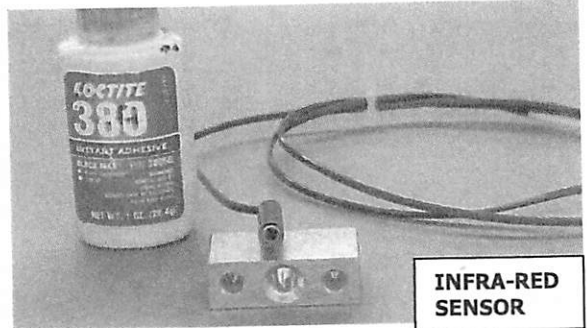
1) **BEFORE** THE H20 LAMINATOR BOTTOM MOTOR COVER (H20 093.4) IS CONNECTED TO THE SIDE PANEL ASSEMBLIES, PREPARE IT AS FOLLOWS.

2) PREPARE THE SENSOR ASSEMBLY FOR THE BOTTOM HOT ROLL BY FIRST TESTING FIT OF INFRA-RED SENSOR (PRC300S) AS07 INTO SENSOR BRACKET (PL27 055.4) RACK 7. PLACE A DROP OF BLACK LOCTITE 380 INSTANT ADHESIVE, ON THE MIDDLE-TOP AND BOTTOM OF THE INFRA-RED SENSOR. USE H20 SENSOR TEMPLATE AND SLIDE THE SENSOR THROUGH THE OPPOSITE COUNTERSINK SIDE OPENING ON THE SENSOR BRACKET SO THE "EYE" OF THE SENSOR IS 1/16 PAST FLUSH WITH THE COUNTERSUNK SIDE OF THE BRACKET. COUNTERSINKING ALLOWS MORE LIGHT TO REACH THE INFRA-RED SENSOR "EYE". GIVE THE LOCTITE TIME TO DRY BEFORE SECURING THE INFRA-RED SENSOR INTO THE BOTTOM MOTOR COVER. THE SENSOR SHOULD BE FLUSH WITH THE OUTER MOTOR COVER.

3) AFTER FANS ARE IN, AND THE LOCTITE IS DRY, PLACE THE INFRA-RED SENSOR AND SENSOR BRACKET INTO THE OPENING IN THE FRONT OF THE BOTTOM MOTOR COVER AND SECURE BRACKET TO BOTTOM COVER USING (2) 10-32 X 1 BHCS FROM THE OUTSIDE INWARD AND #10 KEPS HEX NUTS ON THE INSIDE. TIGHTEN KEPS NUTS WITH NUT DRIVER.

4) ATTACH (2) FAN CORD SETS (PRF116) LD03 ONTO (2) 220 VOLT FANS (PRF111) AS07. ALIGN THE FANS INSIDE THE BOTTOM MOTOR COVER SO THE FAN CORDS FACE THE FRONT OF THE BOTTOM COVER WITH SENSOR WIRE. THIS IS CLOSER TO THE LEFT SIDE PANEL AND WIRES EXIT LEFT SIDE FROM FRONT.

5) SECURE FANS FROM UNDER BOTTOM MOTOR COVER USING (2) SMALL FAN GUARDS (PRF120) AS07, AIR FLOW



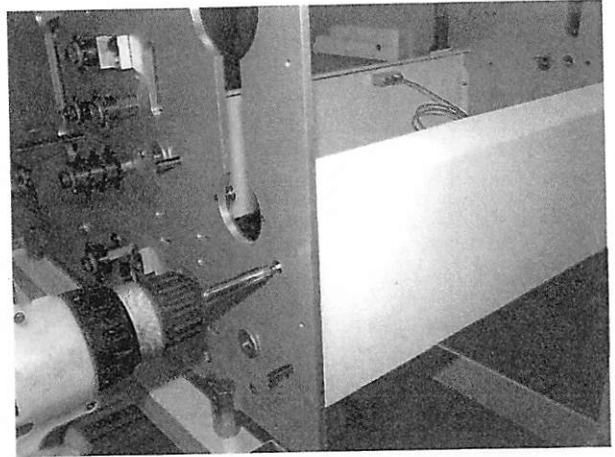
AS09

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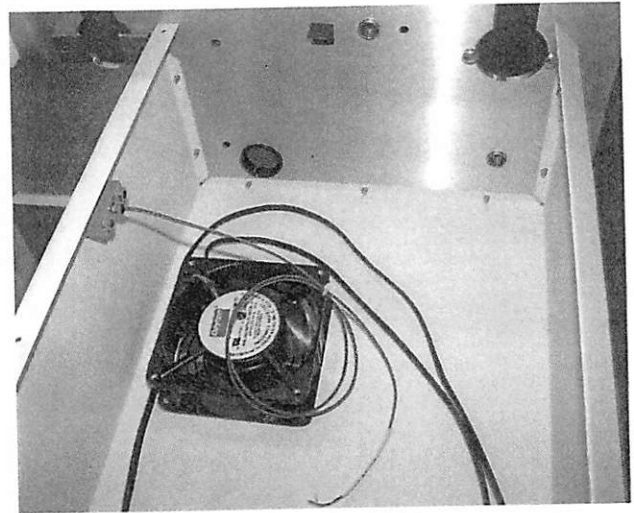
AS09

**INWARD**, ALIGNING THE METAL RING CONNECTING "V" ON THE FAN GUARDS SO THEY POINT INWARD FROM SIDES ON BOTH. USE (8) 10 X 1/2 PH SMS.

- 6) CONNECT THE ASSEMBLED RIGHT AND LEFT SIDE PANELS TO THE BOTTOM MOTOR COVER THROUGH THE COUNTERSUNK HOLES USING (14) 10 X 5/8 FH SQ DRIVE SMS; THREE ALONG THE BOTTOM, TWO IN THE UPPER FRONT AND TWO IN THE UPPER REAR.



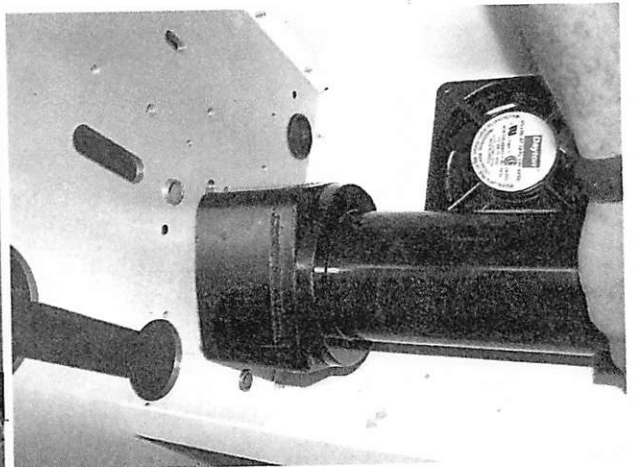
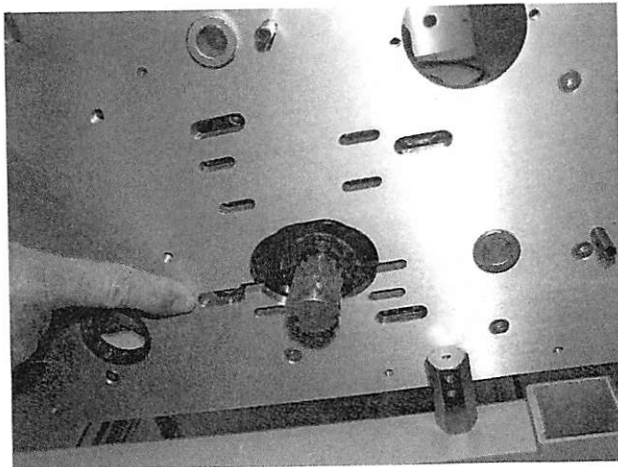
- 7) PLACE THE SPEED MOTOR (PRM2000) AS05 IN THE BOTTOM MOTOR COVER AND ALIGN THREADED OPENINGS WITH THE HORIZONTAL SLOTS ON THE RIGHT SIDE PANEL. TILT THE MOTOR OFFSET, WITH HIGHER HALF SIDE INWARD AND WIRES DOWNWARD. TIGHTEN MOTOR TO SIDE PANEL IN FRONT SECTION OF SLOT, ADJUSTMENT WILL BE MADE WHEN CHAIN IS ADDED. USE (4) 1/4-28 X 3/4 BHCS WITH A 1/4 X 5/8 X 1/8 FLAT WASHER ON EACH.



- 8) CRIMP (3) FULLY INSULATED MALE CONNECTORS (PRT330) ONTO THE MOTOR WIRES.

- 9) SECURE MOUNTING FEET TO EXTRUDED STAND USING (4) 1/2-13 X 2 1/4 HEXHEAD (H20 049.4) AS20, EACH WITH A 1/2 FLAT WASHER SAE.

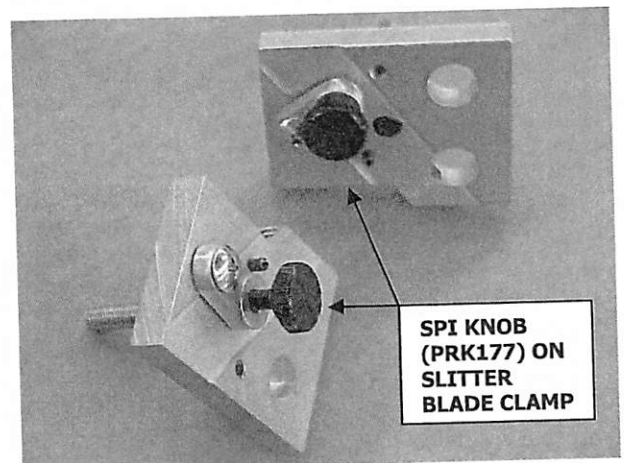
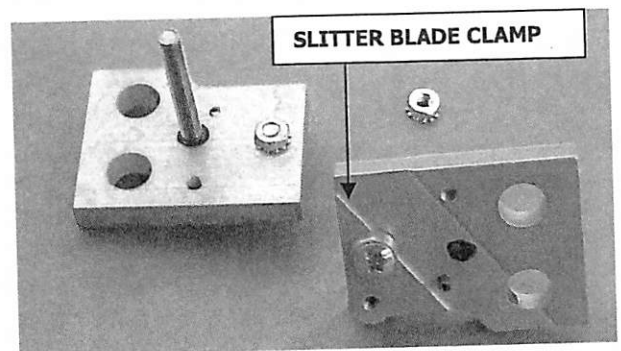
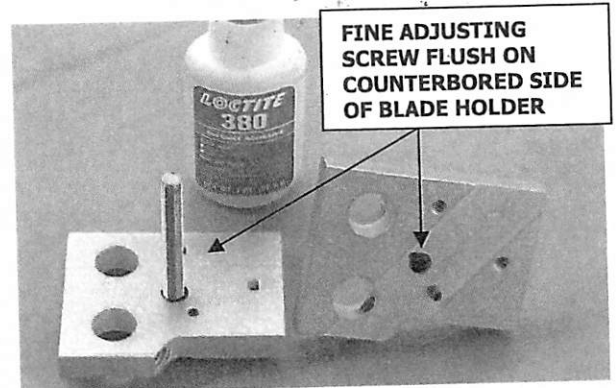
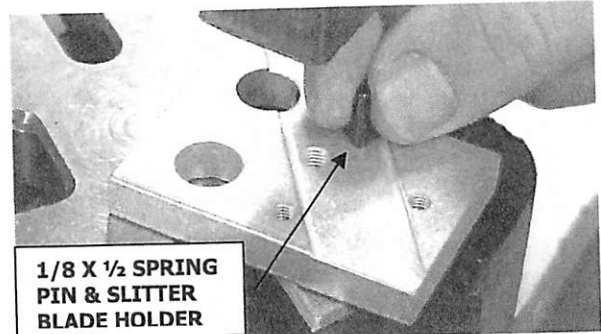
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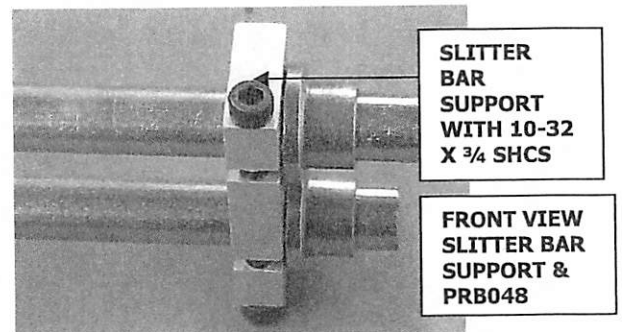
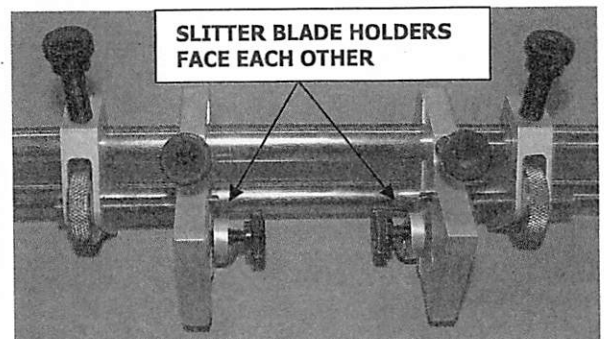
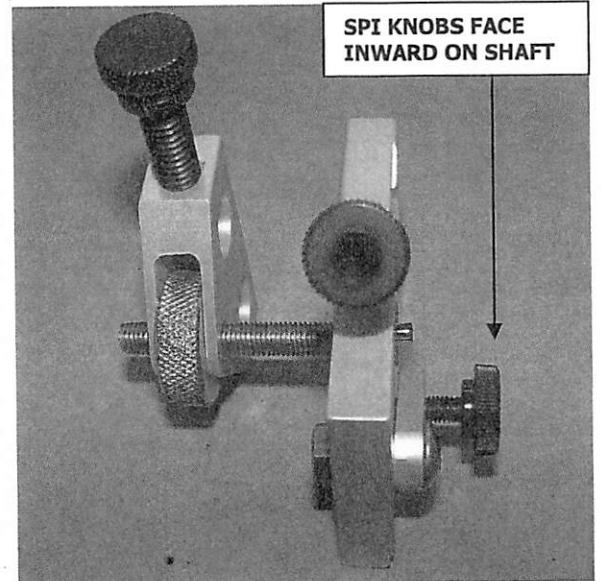
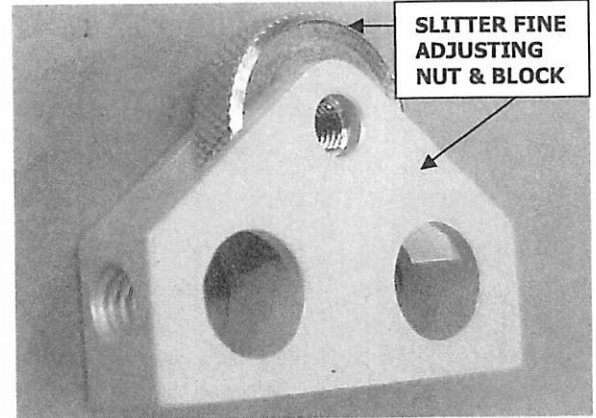
# H20 SLITTER ASSEMBLY

- 1) WHEN REFERRING TO RIGHT AND LEFT PARTS ON THE H20, ORIENT FROM THE **FRONT** OF THE MACHINE.
- 2) USE STARTER TOOL AND ARBOR PRESS (2) 1/8 X 1/2 SPRING PINS (.125J0008), ONE EACH INTO THE COUNTERBORED SIDE OF A RIGHT AND LEFT SLITTER BLADE HOLDER (I30 187.4R AND I30 187.4L) RACK 16 FLUSH WITH THE FLAT SIDE OF THE SLITTER BLADE HOLDERS.
- 3) USE BLACK LOCTITE 380 GLUE TO SECURE (2) SLITTER FINE ADJUSTING SCREWS (I30 183.4) RACK 16 INTO THE RIGHT AND LEFT SLITTER BLADE HOLDERS. FIRST PLACE GLUE ON THE LARGER THREADS IN THE COUNTERBORED SECTION OF THE SLITTER BLADE HOLDERS. THEN ADD A DROP OF GLUE ONTO THE END OF THE SLITTER FINE ADJUSTING SCREW. THREAD THE SCREW FROM THE FLAT SIDE OF THE BLADE HOLDER UNTIL **JUST BELOW FLUSH** ON THE COUNTERBORED SIDE. FILL THAT SMALL CAVITY WITH GLUE. ALLOW GLUE TO FIRM UP FOR APPROXIMATELY 15 MINUTES.
- 4) PLACE THE **UNTHREADED** OPENING OF (2) SLITTER BLADE CLAMPS (I30 186.4) RACK 16 ONE EACH ON A 10-32 X 3/4 TH. THREAD TRUSSHEAD WITH CLAMP INTO OPENING ON THE COUNTERBORED SIDE OF THE SLITTER BLADE HOLDER, CLOSER TO SPRING PIN. **DO NOT OVER TIGHTEN**, AS THE SLITTER BLADE CLAMPS **MUST MOVE FREELY** AND CATCH ON EXPOSED SPRING PIN. USE A NUT DRIVER ON THE FLAT SIDE OF THE BLADE HOLDER AND SECURE WITH #10 KEPS NUT.
- 5) SNUG THE THREADED END OF BOTH SLITTER BLADE CLAMPS TO THE COUNTERBORE IN THE BLADE HOLDERS USING A SPI KNOB (PRK177)



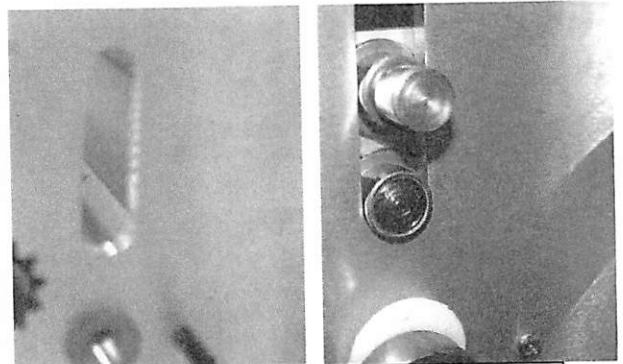
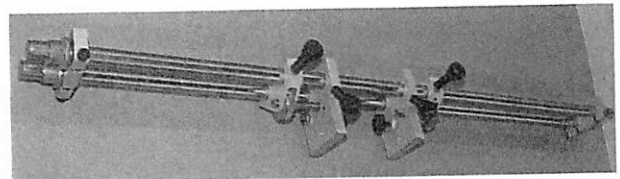
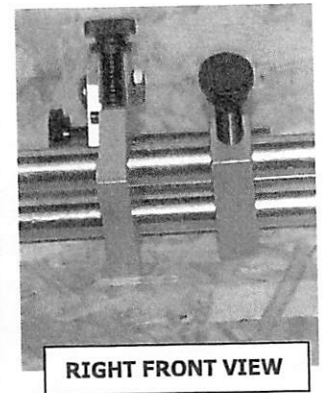
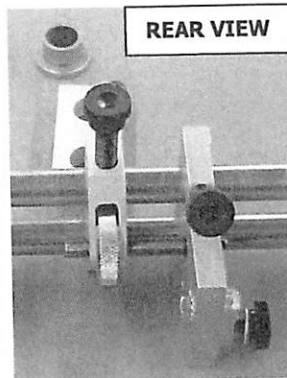
AS08. LATER THE SPI KNOBS WILL SECURE THE SLITTER BLADES.

- 6) THREAD (2) 5/16-18 X 1 PLASTIC MOLDED THUMBSCREWS (PRK184) AS09, ONE EACH INTO THE RIGHT AND LEFT SLITTER BLADE HOLDERS. THESE THUMBSCREWS WILL FACE THE REAR OF THE H20.
- 7) FROM RACK 16 SLIDE (2) SLITTER FINE ADJUSTING NUTS (I30 184.4) BETWEEN THE POINTS ON (2) SLITTER FINE ADJUSTING BLOCKS (I30 185.4).
- 8) THREAD ANOTHER (2) 5/16-18 X 1 PLASTIC MOLDED THUMBSCREWS, ONE EACH INTO THE SLITTER FINE ADJUSTING BLOCKS. THESE THUMBSCREWS WILL FACE UPWARD.
- 9) ALIGN THE TWO SHAFT HOLES IN THE FINE ADJUSTING BLOCKS AND THE TWO SHAFT HOLES IN THE SLITTER BLADE HOLDERS, WITH THE SLITTER BLADE CLAMPS *INWARD*, AS PICTURED. THREAD THE FINE ADJUSTING NUTS ONTO THE FINE ADJUSTING SCREW.
- 10) INSERT THE LONGER TOP SLITTER BAR (H20 190.4) THROUGH THE UPPER HOLES IN BOTH PAIRS OF SLITTER FINE ADJUSTING BLOCKS AND SLITTER BLADE HOLDERS. NOTE THAT THE TOP SLITTER BAR HAS GROOVES AT THE ENDS FOR SNAP RINGS.
- 11) INSERT THE SHORTER BOTTOM SLITTER BAR (H20 191.4) THROUGH THE LOWER HOLES IN BOTH PAIRS OF SLITTER FINE ADJUSTING BLOCKS AND SLITTER BLADE HOLDERS. THE BLADE HOLDER SECTION WILL FACE *INWARD* ON BOTH ASSEMBLIES AND NUTS TO THE REAR.
- 12) THREAD (4) 10-32 X 3/4 SHCS INTO (2) SLITTER BAR SUPPORTS (I30 188.4) RACK 16. THE SOCKET HEAD SCREWS WILL FACE THE FRONT OF THE H20.
- 13) SLIDE A SLITTER BAR SUPPORT ONTO BOTH ENDS OF THE TOP AND BOTTOM SLITTER BARS. THE OPEN SECTION OF THE SLITTER BAR SUPPORTS AND

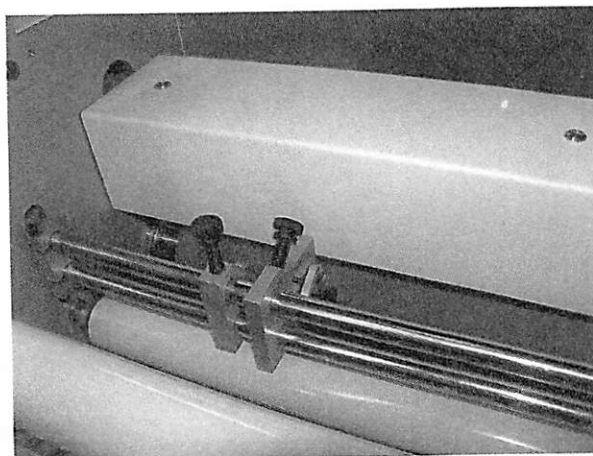


SOCKET HEAD SCREWS SHOULD FACE THE H20 FRONT OF THE H20.

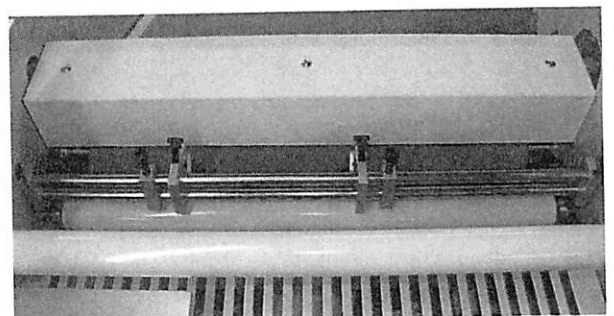
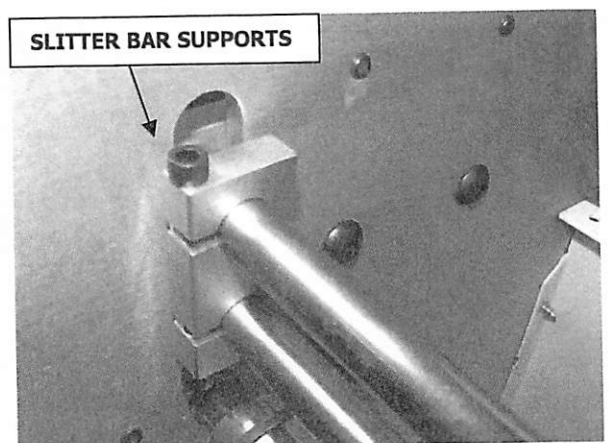
- 14) PLACE (4) OILITE BEARINGS (PRB048) AS08 ONE EACH ONTO BOTH ENDS OF THE TOP SLITTER BAR AND THE BOTTOM SLITTER BAR. THE BEARING FLANGES SHOULD BE INWARD.
- 15) WHEN PLACING THE SLITTER ASSEMBLY INTO THE CHASSIS, THE OILITE BEARING SLEEVES RIDE IN THE RIGHT AND LEFT SIDE PANEL CHANNELS WITH THE FLANGE ON THE INNER SIDE PANEL. THE OILITE BEARINGS ARE SECURED WITH THE SLITTER BAR SUPPORTS ON THE INSIDE. CENTER THE TOP AND BOTTOM SLITTER BARS AND TIGHTEN THE SLITTER BAR SUPPORTS. MEASURE SHAFTS TO EQUAL DISTANCE.
- 16) THE SLITTER ASSEMBLY MUST GO IN CHASSIS BEFORE THE IDLER TUBE. SEE CHASSIS SECTION FOR FUTURE SLITTER INSTALLATION INFORMATION.



SIDE PANEL OPENING FOR SLITTER BARS



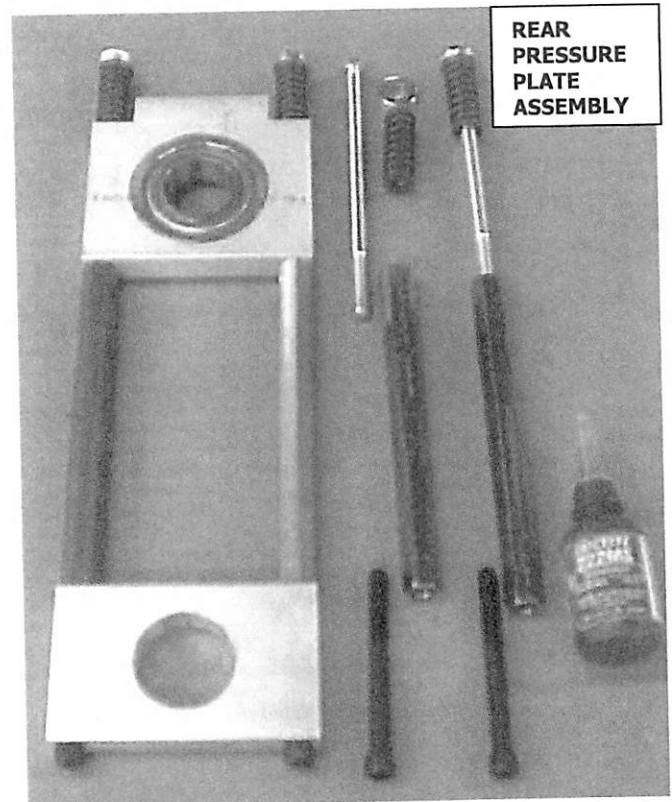
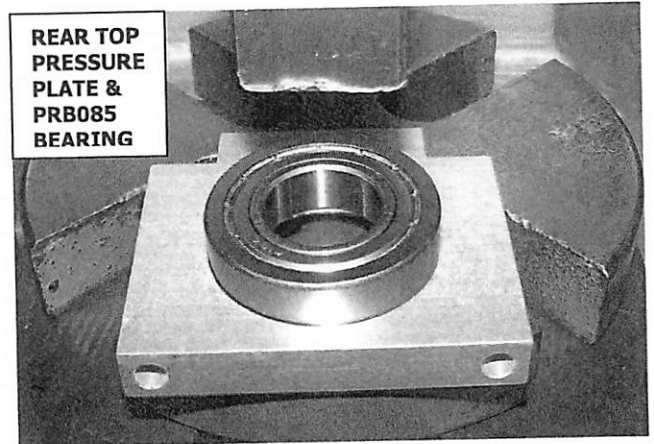
SLITTER ADJUSTMENTS FACE REAR





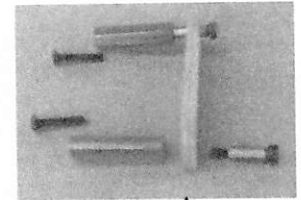
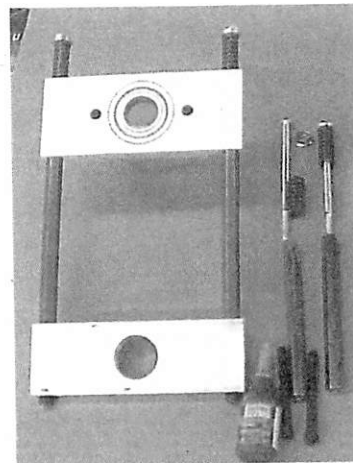
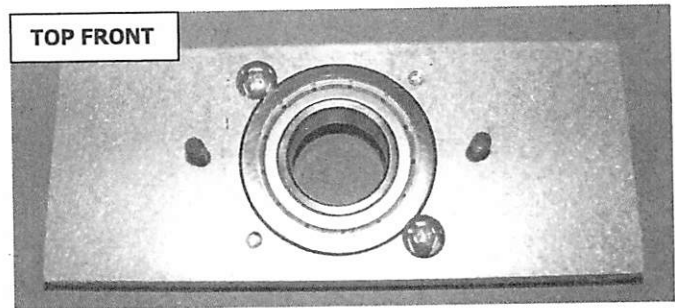
# H2O PRESSURE PLATE ASSEMBLY

- 1) TWO REAR PRESSURE PLATE AND TWO FRONT PRESSURE PLATE ASSEMBLIES ARE NEEDED FOR THE H2O LAMINATOR. ASSEMBLE REAR PRESSURE PLATE.
- 2) ARBOR PRESS AN R16-ZZ ROLLER BEARING (PRB085) AS07 INTO (2) REAR TOP PRESSURE PLATES (H20 042.4RT).
- 3) PLACE A  $\frac{1}{4}$  X  $\frac{5}{8}$  X  $\frac{1}{8}$  WASHER (1250KLD02) ON EACH OF (4)  $\frac{1}{4}$ -20 X  $4\frac{1}{2}$  HEX HEAD SH BOLTS (.250HDA72). ADD A RED DANLY DIE SPRING (PRS062) RACK 7 TO EACH HEX HEAD BOLT. THE ROLLER BEARING WILL BE HELD IN THE SIDE PANEL BY A GUIDE BUSHING ON THE INSIDE AND A RETAINING RING ON THE OUTSIDE, WHEN THE PRESSURE PLATES ARE ADDED TO THE CHASSIS.
- 4) INSERT (2) OF THE ASSEMBLED HEX HEAD BOLTS INTO THE RECESSED END OF BOTH REAR TOP PRESSURE PLATES, WITH THE SPRINGS FITTING INTO THE RECESSES.
- 5) LOCTITE EXPOSED HEX HEAD THREADS AND THREAD A PRESSURE PLATE SPACER (H20 043.4F) ONTO EACH. THREAD THE SPACER TO THE BOTTOM OF EACH REAR TOP PRESSURE PLATE UNTIL SPRING JUST TOUCHES WASHER AND SPACER.
- 6) INSERT (4)  $\frac{1}{4}$ -20 X  $2\frac{1}{2}$  SHCS THROUGH THE OPENINGS ON (2) REAR BOTTOM PRESSURE PLATES (H20 042.4RB). ADD LOCTITE TO THE EXPOSED THREADS AND SECURE INTO THREADED PRESSURE PLATE SPACERS.
- 7) ASSEMBLE (2) FRONT PRESSURE PLATES. ARBOR PRESS A R16-ZZ ROLLER BEARING (PRB085) AS07 INTO EACH OF (2) FRONT TOP PRESSURE PLATES (H20 042.4FT).
- 8) SECURE THE INNER AND OUTER ROLLER BEARING IN FRONT TOP PRESSURE

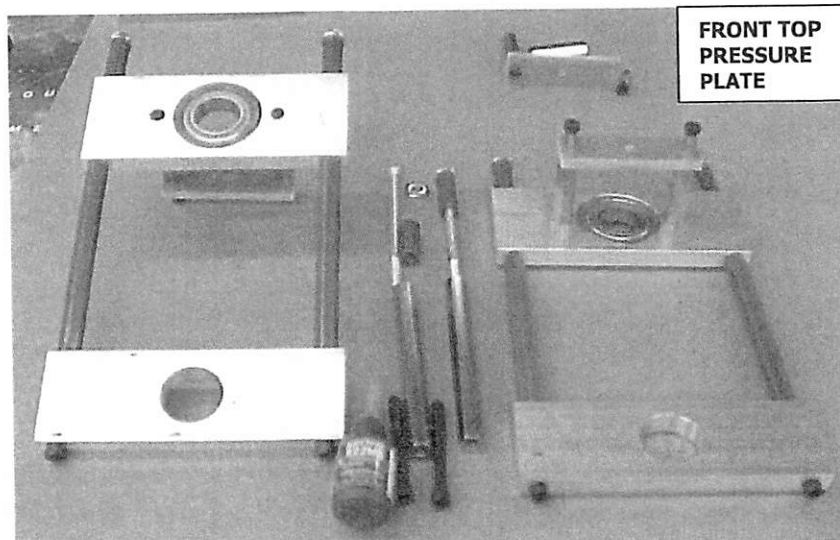
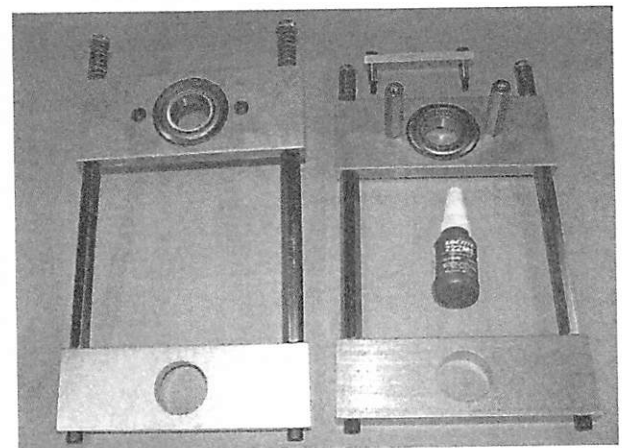


PLATES WITH (4) 10-32 X 3/8 THMS EACH, POSITIONED DIAGONALLY.

- 9) PLACE A 1/4 X 5/8 X 1/8 WASHER ON EACH OF (4) 1/4-20 X 4 1/2 HEX HEAD BOLTS. ADD A RED DANLY DIE SPRING (PRS062) RACK 7 TO EACH BOLT AND INSERT THROUGH BOTH FRONT TOP PRESSURE PLATES.
- 10) ADD LOCTITE TO THE HEX HEAD BOLT THREADS SHOWING AND THREAD A PRESSURE PLATE SPACER ONTO THREADS UNTIL THE SPRING JUST TOUCHES WASHER AND THE FRONT TOP PRESSURE PLATE.
- 11) INSERT (4) 1/4-20 X 2 1/2 SHCS THROUGH (2) FRONT BOTTOM PRESSURE PLATES (H20 042.4FB). ADD LOCTITE TO END THREADS AND SECURE TO PRESSURE PLATE SPACERS.
- 12) THREAD (2) 10-24 X 1 BHCS (.190CAB16) RACK 7 THROUGH BOTH FRONT TOP PRESSURE PLATES. LOCTITE EXPOSED THREADS AND SECURE TOP STANDOFFS (H20 047.4T) FACING OUTWARD ONTO EACH.
- 13) PLACE A 1/4 X 3/4 SHOULDER BOLT (.250IAC12) THROUGH THE OUTER OPENINGS ON (2) BOTTOM INSULATOR PLATES (PL27 049.4) RACK 7. LOOSELY SECURE BOTTOM INSULATOR PLATES TO TOP PRESSURE PLATE SPACERS. DO NOT USE LOCTITE.

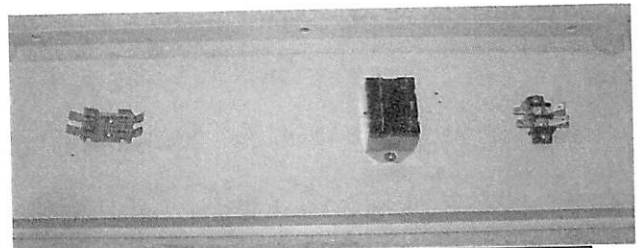


BOTTOM INSULATOR PLATE & TOP STANDOFFS WITH 1/4 X 3/4 SHOULDER BOLTS & 10-24 X 1 BHSH

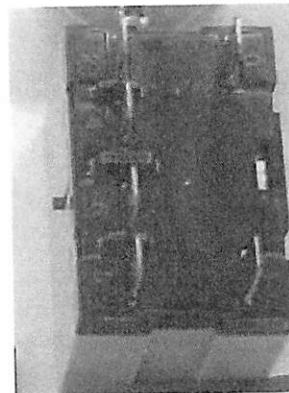


# H20 RIGHT HOUSING BOTTOM

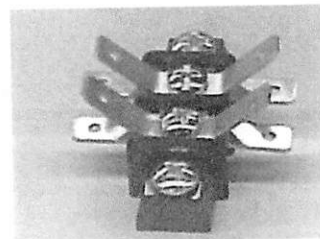
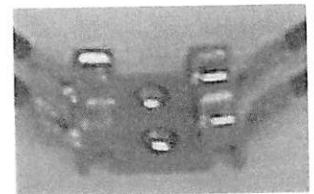
- 1) PREPARE THE RIGHT HOUSING BOTTOM (H20 094.4RB) BY ATTACHING (2) LITTLEFUSE FUSE HOLDERS (PRF126) AS07 POSTS FACING THE FRONT OF THE H20 LAMINATOR. USE (2) 6-32 X 1/4 PH.
- 2) INSERT (2) 3 AMP FUSES (PRF127) AS09 INTO THE LITTLEFUSE FUSE HOLDERS.
- 3) ORIENT A 5ZH39 OMRON TAB MOUNT RELAY (PRR231D) AS08 WITH THE DOUBLE TERMINAL POSTS FACING THE RIGHT, REAR OF THE LAMINATOR AND THE FOUR POSTS FACING THE FRONT. SECURE WITH (2) 8-32 X 1/4 PH.
- 4) FROM AS09 REMOVE SCREWS FROM A KULKA 2 COND. TERMINAL BLOCK (PRT304). ADD (2) KULKA 180 DEGREE TERMINALS (PRT306) AND (2) KULKA 45 DEGREE TERMINALS (PRT307). THIS ASSEMBLED TERMINAL BLOCK LOCATES TOWARD THE REAR OF THE RIGHT HOUSING BOTTOM. SECURE TERMINAL BLOCK TO THE RIGHT BOTTOM HOUSING WITH (2) 8-32 X 1/2 PH.
- 5) ATTACH THE ASSEMBLED RIGHT BOTTOM HOUSING TO THE RIGHT SIDE PANEL USING (4) 10-32 X 1/4 TH AND GROUND SCREW. USE A LONG SCREW DRIVER.



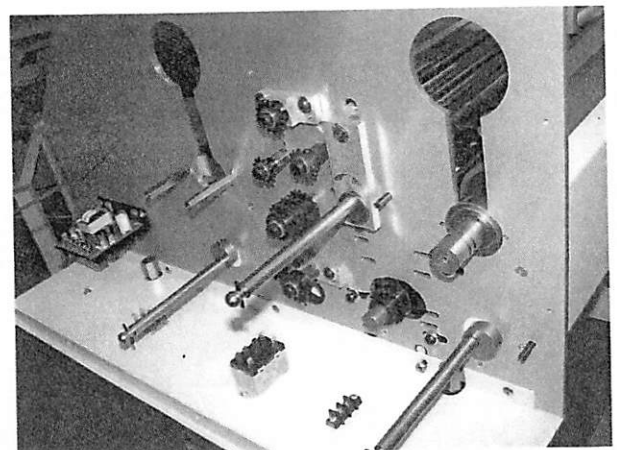
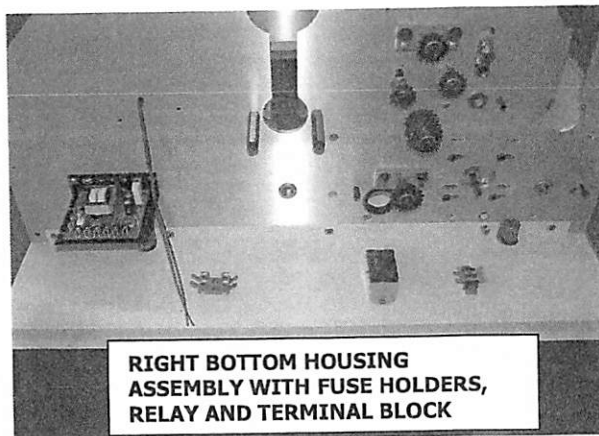
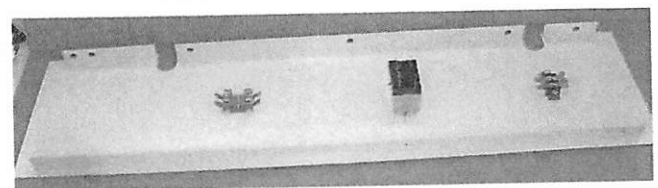
(2) LITTLEFUSE FUSE HOLDERS & 3 AMP FUSES



OMRON 220V RELAY WITH DOUBLE TERMINAL POSTS FACING THE REAR

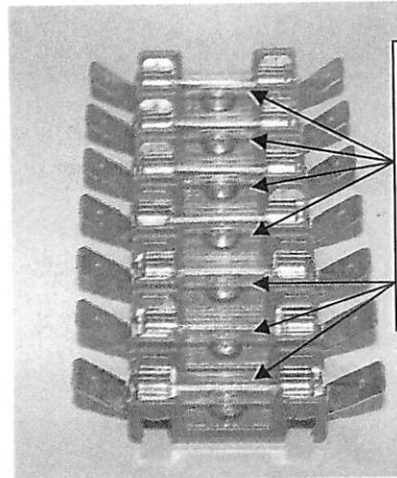


PRT304 TERMINAL BLOCK, 180 & 45 DEGREE POSTS

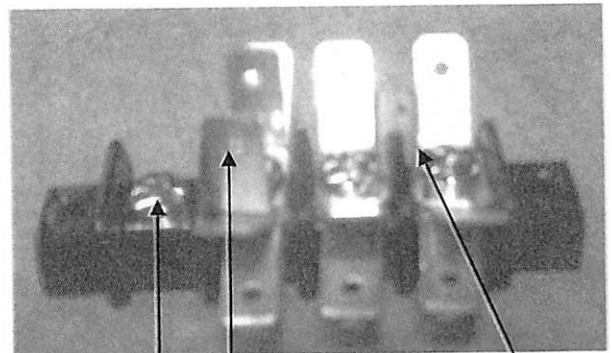


# H20 LEFT HOUSING BOTTOM

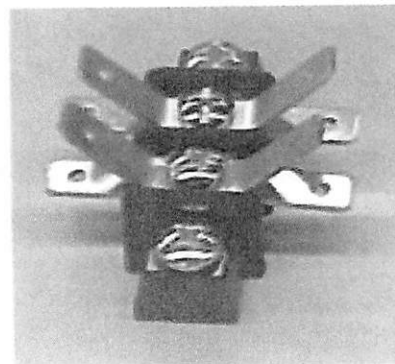
- 1) PREPARE THE LEFT HOUSING BOTTOM (H20 094.4LB) BY FIRST SECURING (7) LITTLEFUSE FUSE HOLDERS (PRF126) AS07 ORIENTED BETWEEN TERMINAL BLOCKS. USE (7) 6-32 X 1/4 PH.
- 2) FROM AS07 ON OUTER HOUSING WORKING INWARD INSERT (3) 1.5 AMP FUSES (PRF128) INTO FUSE HOLDERS. ON INNER FUSE HOLDERS INSERT (4) 4 AMP TIME DELAY FUSES (PRF129).
- 3) FROM AS09 REMOVE (3) CONSECUTIVE SCREWS FROM KULKA 4 CONDUCTOR TERMINAL BLOCK (PRT300). ADD (3) 180 DEGREE TERMINALS (PRT306) AND (3) 45 DEGREE TERMINALS (PRT307) WITH A JUMPER (PRT309) ON THE END PAIR. ON REMAINING TERMINALS ADD A 90 DEGREE TERMINAL (PRT308) AND TIGHTEN SCREWS. WITH EMPTY SCREW FACING THE REAR, SECURE ASSEMBLED TERMINAL BLOCK TO LEFT HOUSING BOTTOM WITH (2) 8-32 1/2 PH.
- 4) FROM AS09 REMOVE SCREWS FROM A KULKA 2 COND. TERMINAL BLOCK (PRT304). ADD (2) KULKA 180 DEGREE TERMINALS (PRT306) AND (2) KULKA 45 DEGREE TERMINALS (PRT307), THEN REPLACE SCREWS. THIS ASSEMBLED TERMINAL BLOCK LOCATES TOWARD THE FRONT OF THE LEFT HOUSING BOTTOM. SECURE THE TERMINAL BLOCK TO THE LEFT BOTTOM HOUSING, USE (2) 8-32 X 1/2 PH.
- 5) ATTACH ASSEMBLED LEFT BOTTOM HOUSING TO LEFT SIDE PANEL WITH (5) 10-32 X 1/4 TH.



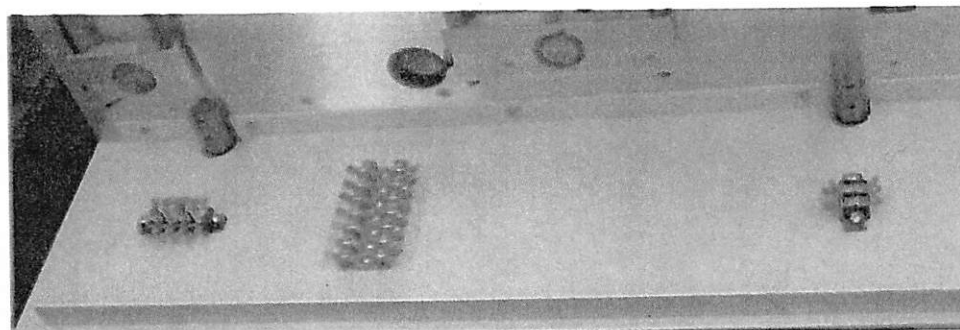
(7) LITTLEFUSE FUSE HOLDERS (PRF126)  
 (4) 4 AMP TIME DELAY (PRF129)  
 (3) 1.5 AMP (PRF128)



EMPTY SCREW, 90 DEGREE TERMINAL & JUMPER



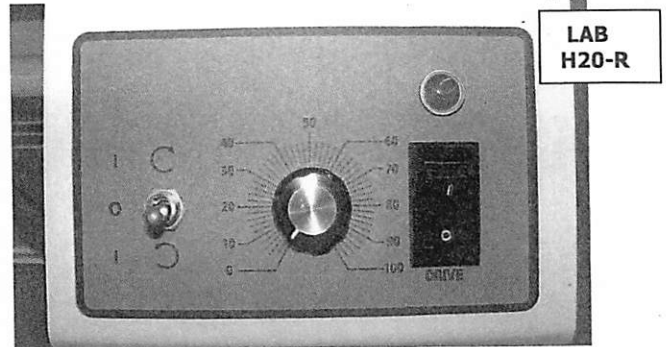
(PRT304) TERMINAL BLOCK WITH TERMINAL POSTS CONNECTED



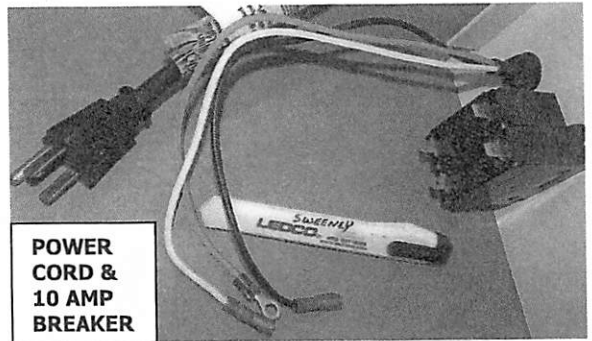


# H2O RIGHT HOUSING TOP 6/2015

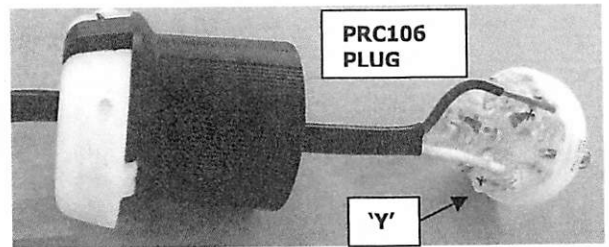
- 1) PLACE THE RIGHT HOUSING TOP (H20 094.4RT) ON A WORKTABLE WITH THE FRONT FACING YOU. ROTOBUR ROUND OPENINGS. CAREFULLY CENTER AND ADHERE THE H20 RIGHT CONTROL PANEL LABEL (LAB H20-R) TO A CLEANED SURFACE, ALIGNING THE OPENINGS IN LABEL OVER THE SWITCH OPENINGS IN THE HOUSING.



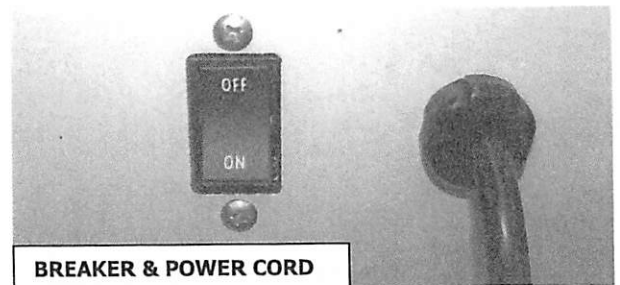
- 2) STRIP 5" OF BLACK SHEATHING OFF THE WIRE END OF A 16/3 POWER CORD SET (PRC119) RACK 8. DO NOT DAMAGE COATING ON WIRES. TERMINATE GREEN GROUND WIRE END WITH A BLUE RING (PRT294) AND (2) FIF BLUE FEMALES (PRT325) ON THE WHITE AND BLACK WIRE ENDS.



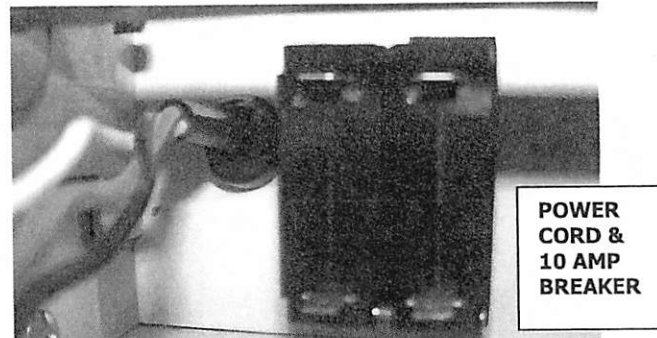
- 3) INSERT POWER CORD FROM H20 OUTER REAR HOUSING AND SECURE WITH A PLASTIC STRAIN RELIEF BUSHING (PRB065) AS07 SHOWING ABOUT 1" BLACK SHEATHING ON INNER HOUSING. **\*\*FOR POWER LAM OR JOB BOM ENDING IN "L", CUT OFF POWER CORD PLUG AND REPLACE WITH 20 AMP CORD PLUG (PRC106) LOFT 0. STRIP 1 1/2" SHEATHING, CONNECT WHITE WIRE TO "Y". REMOVE POWER CORD LABELS.**



- 4) INSERT THE 10 AMP BREAKER (PRS286) AS16 FROM THE INSIDE OF THE REAR HOUSING NEXT TO THE POWER CORD, ORIENTED WITH "LOAD" INDICATION ON THE BOTTOM. SECURE BREAKER ON THE OUTSIDE OF THE HOUSING WITH (2) 6-32 X 3/8 TH MS. THE "ON" INDICATION IS ON THE BOTTOM AND THE "OFF" INDICATION IS ON THE TOP.

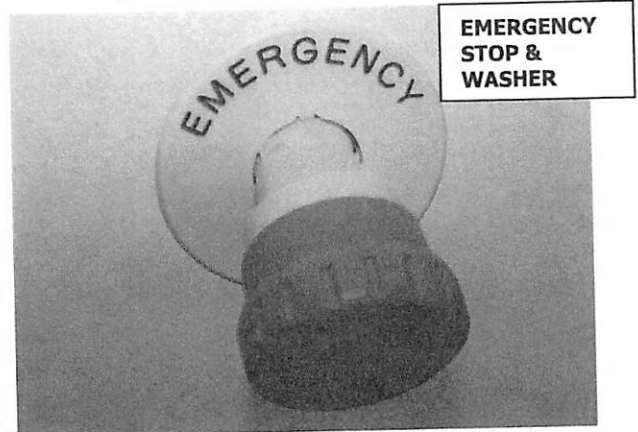
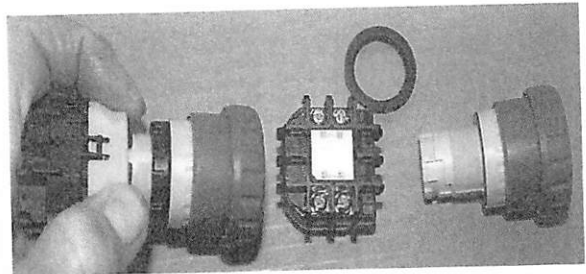


- 5) CRIMP A FULLY INSULATED RED MALE CONNECTOR (PRT330) ONTO THE RED AND BLACK WIRES ON THE RED LIGHTED INDICATOR LIGHT (PRL199) LOFT 0. INSERT THE RED LIGHTED INDICATOR LIGHT INTO THE HOUSING OPENING ABOVE THE DRIVE SWITCH OPENING. DEBUR THE OPENING, IF NEEDED.

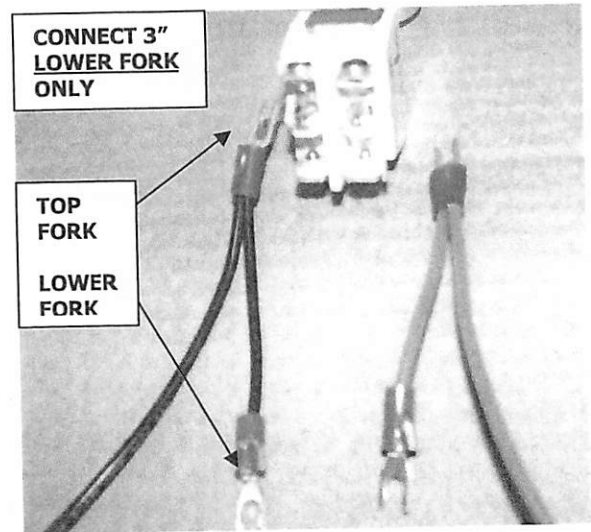


*Sand 1/16 off white studs*

- 6) REMOVE RED/YELLOW CAP ON AN EMERGENCY SWITCH (PRS374) AS08 AND SEPARATE THE TWO SECTIONS. UNTHREAD NUT AND SLIDE ON YELLOW DISC (PRS375) AS08 WITH "TOP" INDICATION UPWARD. INSERT CAP THROUGH UPPER RIGHT HOUSING. CHECK THE "TOP" INDICATION AND KEEP "EMERGENCY/STOP" ON WASHER STRAIGHT. THREAD THE NUT BACK ON FROM THE INSIDE. TIGHTENING WITH LARGER CASTLE TOOL.

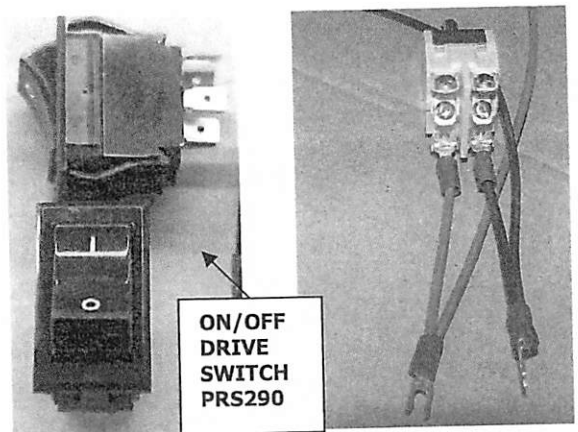


- 7) THE FORWARD/REVERSE SWITCH (PRS270) RACK 21 USES THE RED AND BLACK FORKED WIRES IN WIRING HARNESS PRW363 H-20 LOFT 0 SMALL BAG WIRE. CONNECT THE 3" FORKED WIRES FROM SEPARATE BAG BEFORE INSERTING THE FORWARD/REVERSE SWITCH INTO THE HOUSING. HOLD FORWARD/REVERSE SWITCH WITH TERMINALS FACING YOU AND KEYWAY DOWNWARD. ATTACH LOWER FORK CONNECTORS AS FOLLOWS:  
 BOTTOM RIGHT ..... 3" BLACK  
 BOTTOM LEFT ..... 3" RED  
 \*AFTER HARNESS IS IN CHASSIS SECURE HARNESS RED AND BLACK FORKED WIRES WITH RED ON MIDDLE LEFT SCREW AND BLACK ON MIDDLE RIGHT SCREW. THE RED AND BLACK DOUBLED WIRES CROSS EACH OTHER DIAGONALLY. THE DOUBLED BLACK AND RED WIRES ARE ATTACHED TO A SINGLE SCREW ON THE UPPER SECTION OF THE SWITCH: RED ON TOP RIGHT AND BLACK ON TOP LEFT.



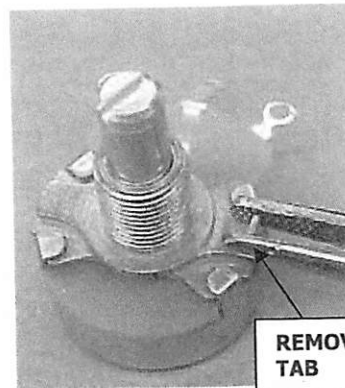
- 8) ALIGN THE FORWARD/REVERSE SWITCH WITH THE KEYWAY DOWNWARD AND PLACE THE ROUND WASHER ON THE INSIDE OF THE HOUSING AND THE HEX NUT ON THE OUTSIDE OF THE HOUSING. TIGHTEN THE HEX NUT WITH A WRENCH. BE CAREFUL NOT TO SCRATCH THE LABEL.

- 9) UNLIKE MOST OTHER LEDCO MACHINES, THE H20 LAMINATOR DOES NOT REVERSE THE "INHIBIT: FLOW ON THE BLACK ROCKER ON/OFF SWITCH (PRS290) AS08. THEREFORE, INSERT THE ON/OFF SWITCH INTO THE HOUSING SO THAT THE "O" INDICATION

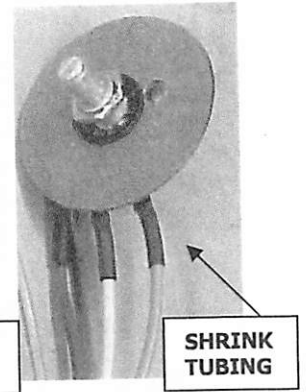


FOR "OFF" IS DOWN AND "I" INDICATION IS UPWARD. THE TERMINAL POSTS ON THE INNER HOUSING WILL BE DOWNWARD.

- 10) PLACE  $\frac{3}{4}$ " OF 3/16 INSULATION TUBING (PRI165) ON THE 11" ORANGE, YELLOW AND GRAY WIRES FROM HARNESS BAG (PRW363). SOLDER THESE WIRES TO POTENTIOMETER FROM MINARIK SPEED CONTROL MM23011C KIT (PRM218A) AS08 IN THE ORDER PICTURED.



REMOVE TAB

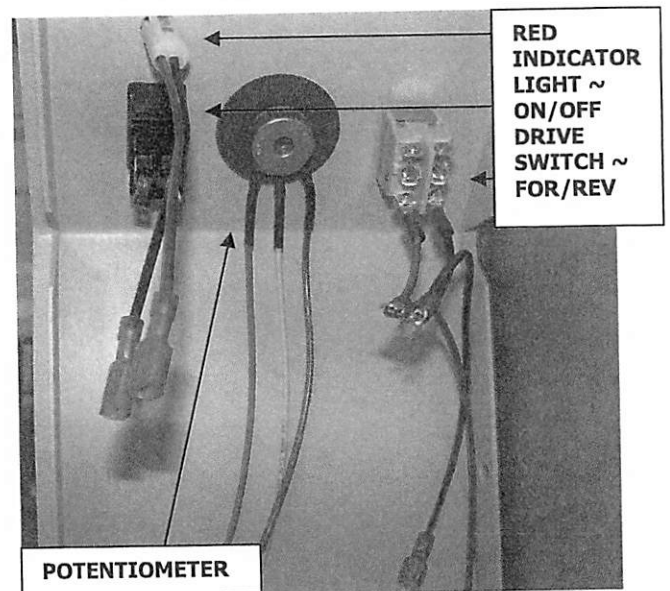


SHRINK TUBING

- 12) BREAK OFF AND DISCARD THE TAB FROM THE POTENTIOMETER, THREADED SIDE.

- 13) COVER AS MUCH OF TERMINAL POST AS POSSIBLE AND HEAT SHRINK INSULATION TUBING.

- 14) PLACE THE PAPER WASHER ON THE POTENTIOMETER STEM AND INSERT INTO HOUSING OPENING FROM THE INSIDE, WITH TERMINAL POSTS FACING *DOWNWARD*. THE ORANGE WIRE FACES THE ON/OFF SWITCH, THE YELLOW IS IN THE MIDDLE AND THE GRAY FACES THE FORWARD/REVERSE SWITCH.

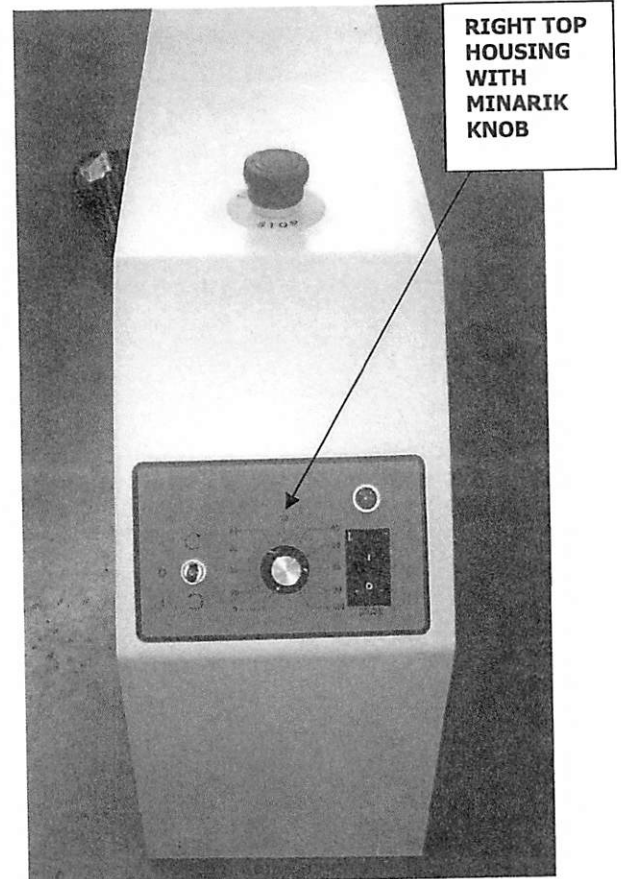


RED INDICATOR LIGHT ~ ON/OFF DRIVE SWITCH ~ FOR/REV

POTENTIOMETER

- 15) ON THE OUTER HOUSING ADD THE TOOTHED WASHER TO THE STEM AND THEN CAREFULLY TIGHTEN THE HEX NUT ON THE STEM. THE HEX NUT SHOULD BE SNUG BUT IF YOU TIGHTEN IT TOO MUCH YOU WILL DAMAGE THE LABEL.

- 16) WITH POTENTIOMETER STEM FULL COUNTERCLOCKWISE, ALIGN THE MINARIK KNOB (PRM221A) AS08 INDICATION MARK WITH THE PANEL LABEL "0" INDICATION AND SECURE KNOB ONTO THE POTENTIOMETER STEM WITH THE SET SCREW.



RIGHT TOP HOUSING WITH MINARIK KNOB

## H2O LEFT HOUSE TOP: 6/2015

1) PLACE THE LEFT HOUSING TOP (H2O 094.4LT) ON A WORKTABLE WITH THE FRONT FACING YOU. USE A ROTOBUR TO CLEAN AND OPEN THE ROUND APERTURES.

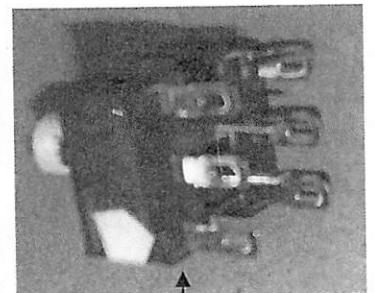
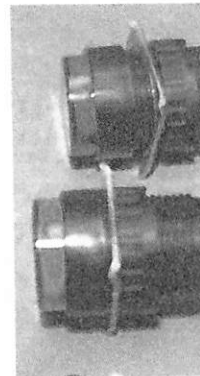
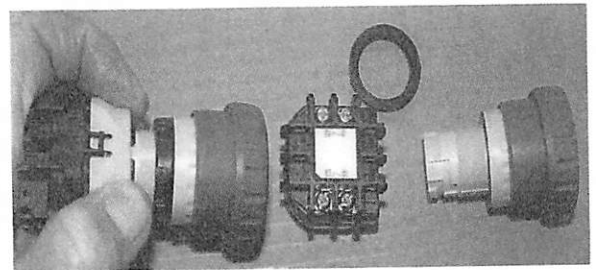
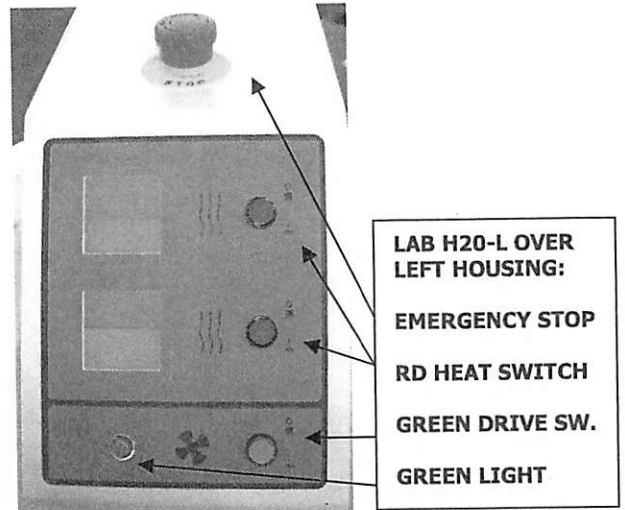
2) CAREFULLY CENTER AND ADHERE THE H2O LEFT CONTROL PANEL LABEL (LAB H20-L) OVER THE CLEANED SURFACE, ALIGNING OPENINGS IN LABEL AROUND SWITCH OPENINGS IN HOUSING.

3) INSTALL THE EMERGENCY STOP SWITCH (PRS374) AS08 REMOVE THE RED/YELLOW CAP AND SEPARATE THE TWO SECTIONS. UNTHREAD THE NUT AND SLIDE THE YELLOW WASHER (PRS375) AS08 ONTO THE CAP. INSERT CAP AND WASHER THROUGH THE TOP OF THE HOUSING. ALIGN SO "EMERGENCY" INDICATION IS CENTERED. THREAD THE NUT FROM THE INSIDE, HOLD THE OUTER STOP TO KEEP PRINTING CENTERED AND TIGHTEN WITH CASTLE TOOL. SNAP THE INNER SECTION OF THE SWITCH BACK ONTO THE CAP.

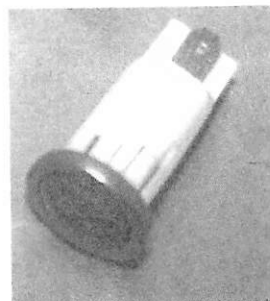
4) INSERT (2) OMRON POS RED HEAT SWITCHES (PRS079) RACK 1 FROM THE OUTER HOUSING, LOCATED RIGHT OF THE HEAT CONTROLLER APERTURES. ORIENT RED LIGHT SECTION WITH WHITE TAB UPWARD. THE RED HEAT SWITCHES HAVE EIGHT (8) TERMINAL POSTS. SECURE WITH CASTLE TOOL. SNAP IN TERMINAL SECTION WITH 'C' COMMON DOWNWARD.

5) BELOW THE RED HEAT SWITCHES, INSERT A POS GREEN DRIVE SWITCH (PRS080) RACK 1, THE SAME WAY WITH WHITE TAB UPWARD. SECURE WITH CASTLE TOOL. SNAP IN TERMINALS WITH 'C' DOWN.

6) BELOW THE HEAT CONTROLLER APERTURES INSERT A DOMED GREEN LIGHT (PRL200) LOFT 0 WHICH HAS (2) TERMINAL POSTS, ORIENTED WITH THE POST ON TOP AND BOTTOM. THIS IS A SIMPLE SNAP IN LIGHT. NOTE WIRED PICTURE OF TWO TERMINAL POSTS.



IDENTIFY 'C' COMMON POST

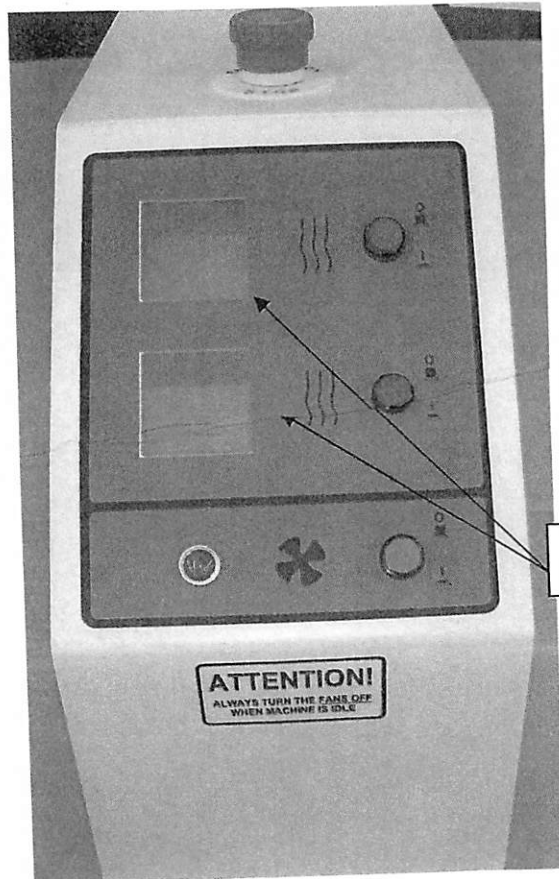
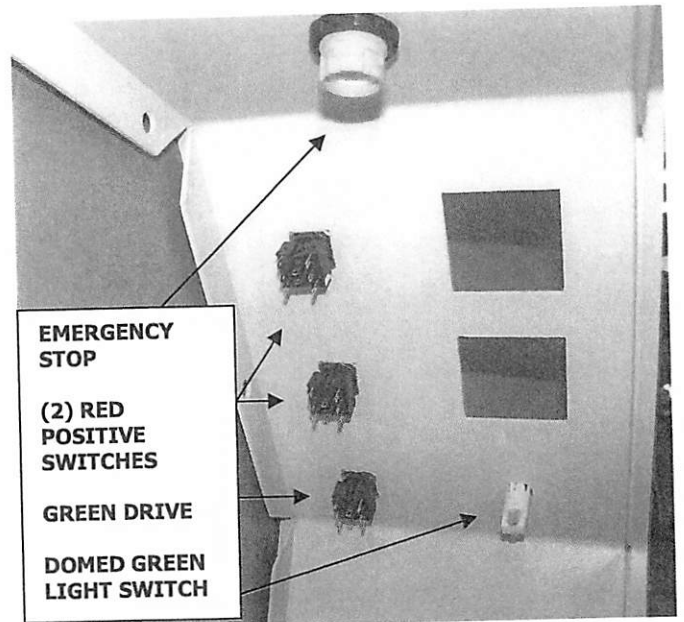


GREEN DOMED LIGHT

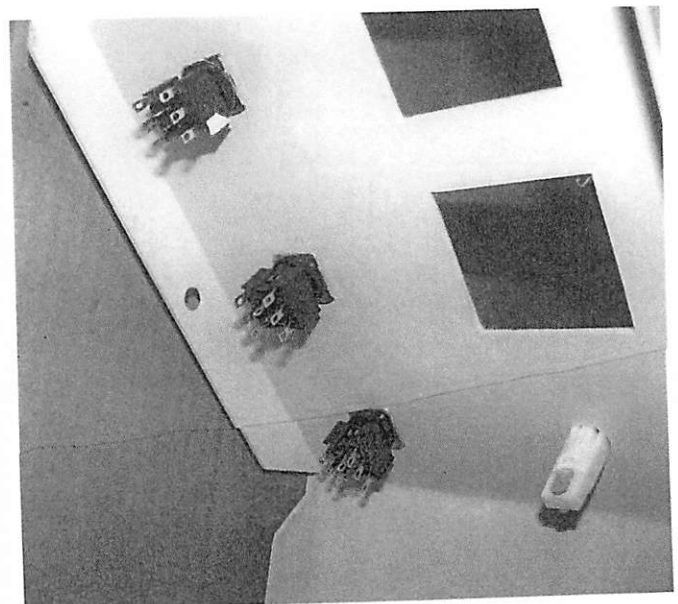




- 7) *INSTALL AFTER HOUSING IS ON SIDE PANEL. EACH HEATER IS CONTROLLED BY A CHROMALOX 1/16 DIN HEAT CONTROLLER (PRH1391A) AS08. THE RUBBER GROMMET SLIDES OVER THE CHROMALOX BODY AND INSERT CHROMALOX INTO THE LEFT HOUSING TOP. THE KEEPER SLIDES UP THE INSIDE OF THE HOUSING. BE CERTAIN CHROMALOX IS INSERTED IN THE UPRIGHT POSITION WHEN INSERTED.*
- 8) CENTER AND ADHERE THE YELLOW "TURN OFF FAN" DECAL (LAB104) RACK 7 ON THE FRONT OF THE LEFT HOUSING, BELOW THE LEFT CONTROL PANEL DECAL.
- 9) ATTACH THE ASSEMBLED LEFT TOP HOUSING TO THE LEFT SIDE PANEL USING (7) 10-32 X 1/4 THMS.



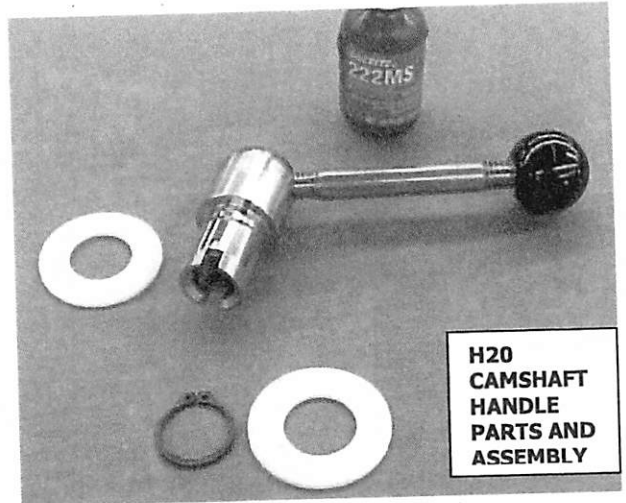
YELLOW ATTENTION LAB104  
"TURN OFF FAN" DECAL



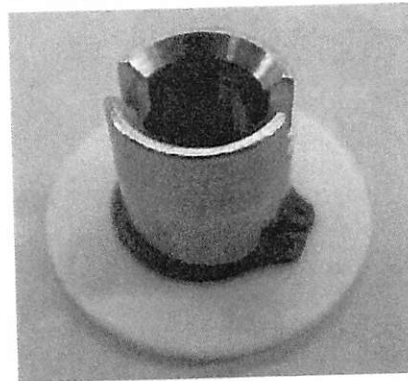
CHROMALOX HEATER

# H2O HOUSING COVER ASSEMBLIES

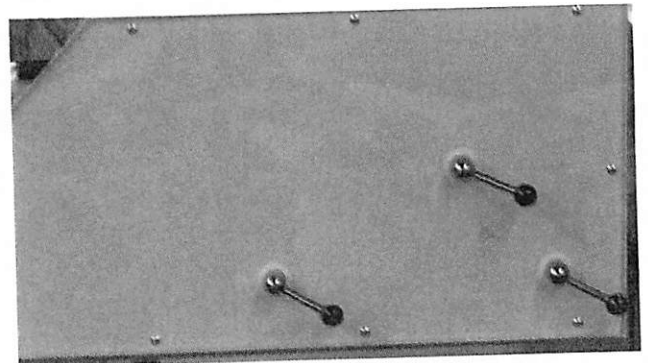
- 1) THE H2O HAS RIGHT AND LEFT STATIONARY COVERS.
- 2) **ROTOBUR THE RIGHT HOUSING COVER (H2O 097.4R) OPENINGS AND ASSEMBLE BY PLACING (3) TEFLON FRICTION WASHERS (EP25 004.4) RACK 9 ONE EACH ON (3) CAMSHAFT DRIVERS (I30 131.4) RACK 16. FROM OUTER COVER SLIDE THE CAMSHAFT DRIVERS THROUGH THE COVER APERTURES. ON INNER COVER ADD ANOTHER (3) TEFLON FRICTION WASHERS OVER THE CAMSHAFT. SECURE WASHERS WITH A  $\frac{3}{4}$ " RETAINING RING (PRR192) AS08.**
- 3) **LOCTITE A THREADED END OF (3) KNOB EXTENSIONS (I30 132.4) RACK 16 AND THREAD INTO CAMSHAFT DRIVERS.**
- 4) **LOCTITE AND THREAD (3) 1" DIA. BLACK REID TOOL KNOBS (PRK140) RACK 16 ONTO KNOB EXTENSIONS.**
- 5) **CREATE A SPARE FUSE KIT (SPFH20) FROM AS09 INCLUDING THESE FUSES: INDIVIDUALLY BAG AND LABEL (1) 1.5 AMP (PRF128), (1) 3 AMP (PRF127) AND (2) 4 AMP SLO-BLO (PRF129).**
- 6) **ON THE INNER LEFT HOUSING COVER (H2O 097.4L) ADHERE THE FUSE LABEL DIAGRAM (LAB131) AS09 TOWARD THE FRONT AND THE BAGGED SPARE FUSE KIT TOWARD THE REAR OF THE LABEL.**



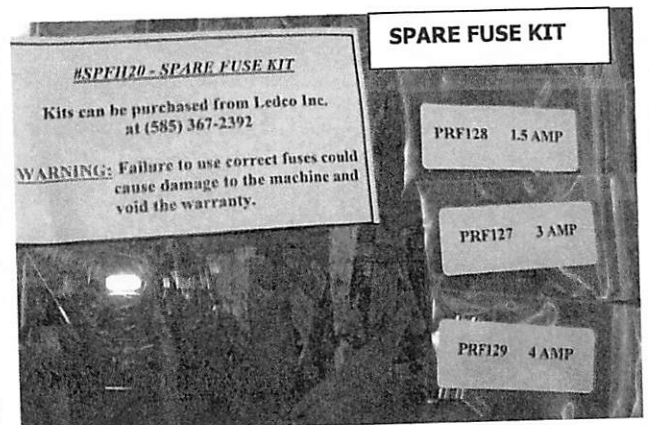
H2O CAMSHAFT HANDLE PARTS AND ASSEMBLY



INNER COVER VIEW OF CAMSHAFT DRIVER, TEFLON WASHER & RETAINING RING



INNER LEFT COVER: FUSE LABEL & SPARE FUSE KIT



SPARE FUSE KIT

## #SPFH20 - SPARE FUSE KIT

Kits can be purchased from Ledco Inc.  
at (585) 367-2392

**WARNING:** Failure to use correct fuses could cause damage to the machine and void the warranty.

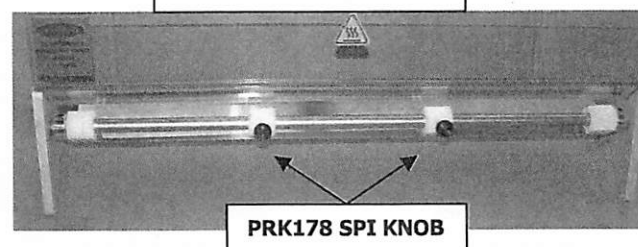
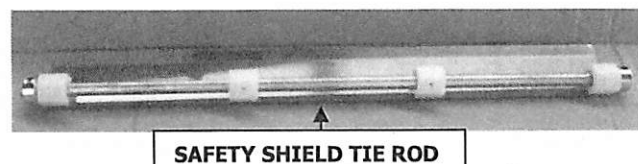
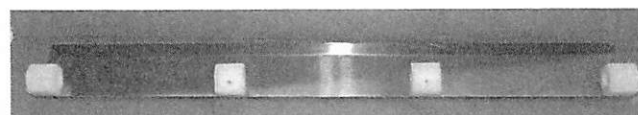
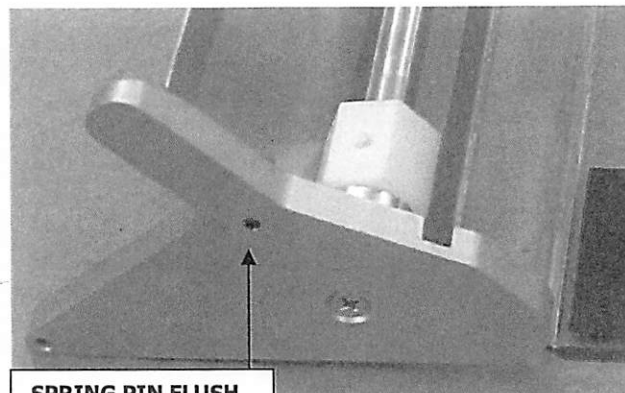
PRF128 1.5 AMP

PRF127 3 AMP

PRF129 4 AMP

# H20 SAFETY SHIELD

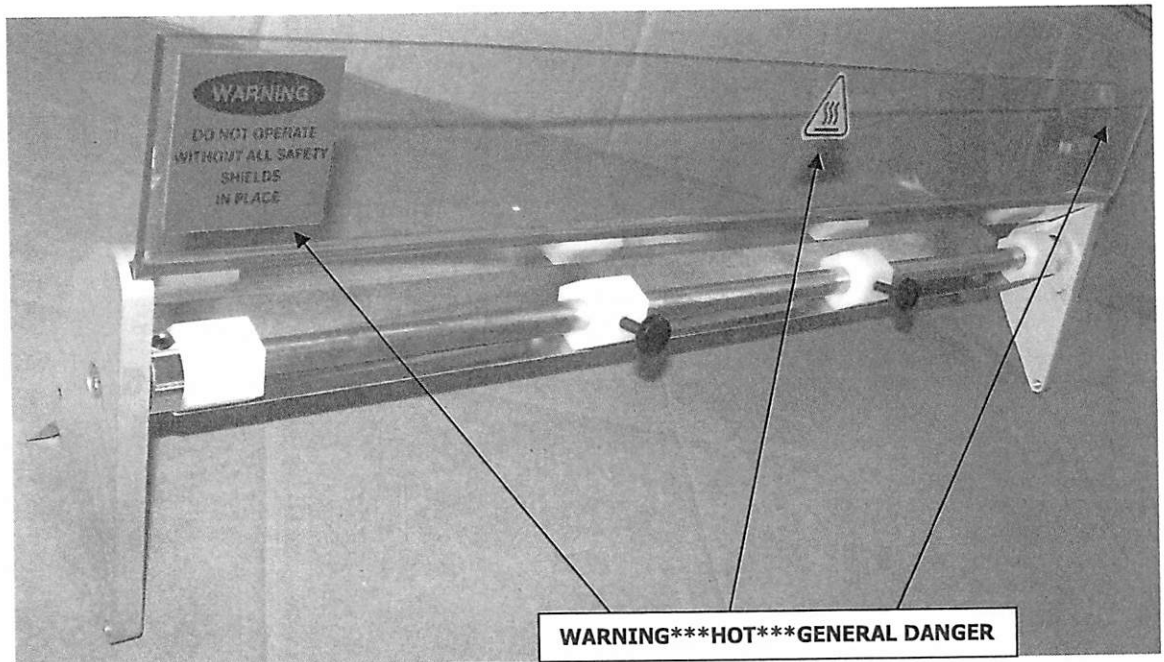
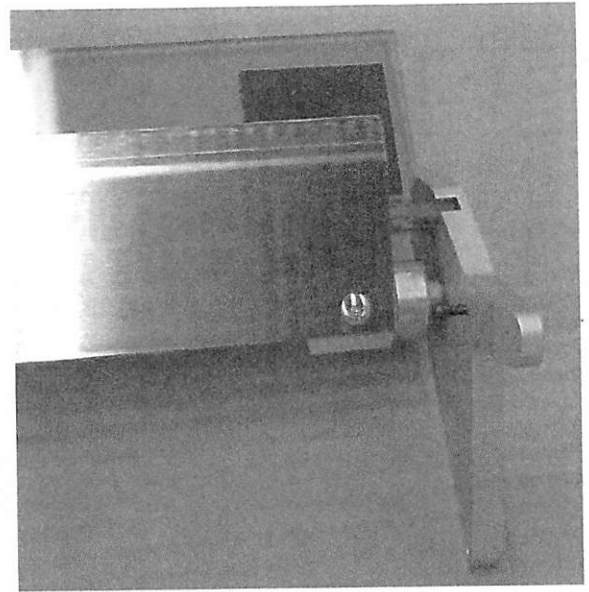
- 1) ARBOR PRESS A 1/8 X 3/4 SPRING PIN (.125J0012) INTO THE PIVOTING SAFETY SHIELD BRACKET, RIGHT (D105 091.4R) AS13 AND ANOTHER 1/8 X 3/4 SPRING PIN INTO THE PIVOTING SAFETY SHIELD BRACKET, LEFT (D105 091.4L) AS13 FROM GROOVED SIDE, SO PIN IS FLUSH ON THE OUTSIDE OF BOTH SAFETY SHIELD BRACKETS.
- 2) ARRANGE (4) ANTI-CURL STRIP MOUNTING BUSHINGS (D105 099.4) AS13 ON THE LAY DOWN STRIP (H20 075.4) ORIENTED WITH LARGER (#10 TAPPED) HOLES (*MIDDLE PAIR*) TOWARD THE FRONT OF THE LAY DOWN STRIP AND OUTER PAIR OF ANTI-CURL STRIP MOUNTING BUSHINGS WITH #10 TAPPED HOLES FACING THE REAR, UPWARD BENT SECTION OF LAY DOWN STRIP. SECURE WITH 8-32 X 1/4 TH.
- 3) INSERT AND CENTER THE SAFETY SHIELD TIE ROD (H20 103.4) THROUGH THE ANTI-CURL STRIP MOUNTING BUSHINGS.
- 4) SECURE (2) 1/2" STOP COLLAR (PRC096) AS07 EVENLY SPACED ON BOTH ENDS OF THE SAFETY SHIELD TIE ROD ALLOWING ABOUT A QUARTER INCH MOVEMENT BACK AND FORTH OF LAY DOWN STRIP.
- 5) THREAD (2) SPI KNOBS (PRK178) AS08 INTO #10 TAPPED HOLES ON CENTER PAIR OF ANTI-CURL BUSHINGS.
- 6) PEEL PLASTIC COVERING BACK FROM ENDS OF 1/4" POLYCARBONATE SAFETY SHIELD (H20 102.4). PEEL OFF INSIDE PLASTIC COVERING FROM SAFETY SHIELD AND DISCARD.
- 7) ATTACH RIGHT SAFETY SHIELD BRACKET TO SAFETY SHIELD TIE ROD END WITH 10-32 X 3/4 FSH, USE LOCTITE ON





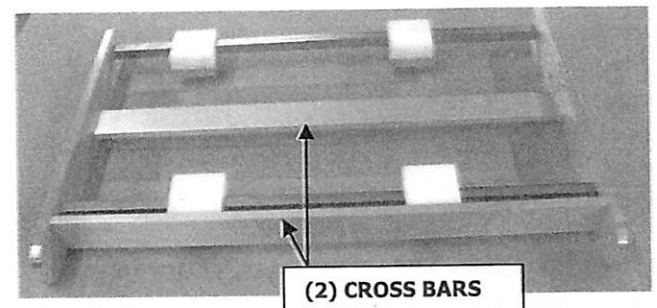
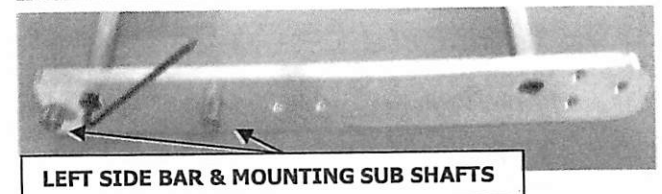
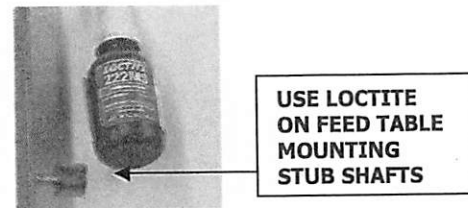
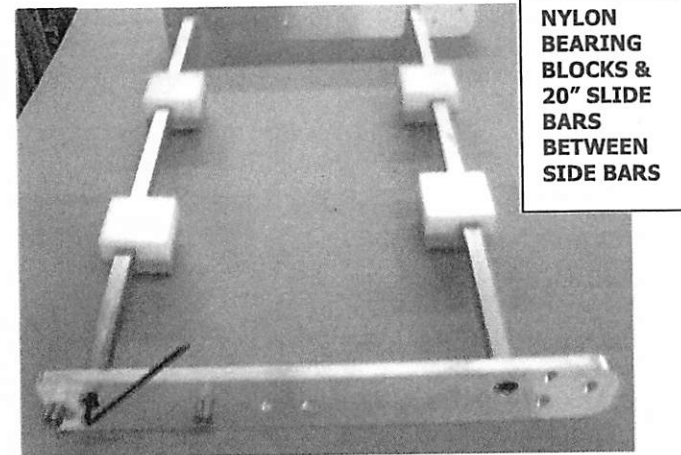
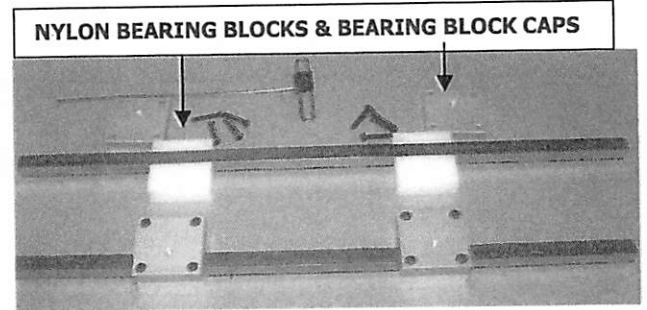
**THREADS. SET SAFETY SHIELD INTO THE GROOVES OF BOTH BRACKETS BEFORE SECURING TIE ROD ON LEFT SIDE WITH ANOTHER 10-32 X 3/4 FHSB AND LOCTITE.**

- 8) ADHERE A RED "WARNING" LABEL (LAB21) RACK 7 TO THE UPPER LEFT OUTSIDE END OF THE SAFETY SHIELD.**
- 9) ADHERE A "HOT" LABEL (LAB100) AS09 CENTERED BETWEEN INNER ANTI-CURL BUSHINGS.**
- 10) ADHERE A YELLOW "GENERAL DANGER" (LAB52) AS09 TO THE UPPER RIGHT END OF THE SAFETY SHIELD.**



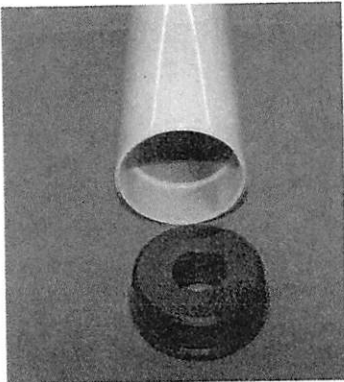
# H2O FEED TABLE ASSEMBLY

- 1) FROM LOFT 0 PLACE (4) WHITE NYLON BEARING BLOCKS (PFT20 005.4) ON THE WORKTABLE, WITH THE CHANNELLED SIDE UPWARD. LAY A 20" SLIDE BAR (PFT20 002.4) INTO EACH PAIR OF GUIDE BLOCK CHANNELS. ORIENT THE 20" SLIDE BARS PARELLEL, WITH THE *LARGER SECTION* OF THE BEARING BLOCKS FACING THE OPPOSITE PAIR, INWARD.
- 2) PLACE A BEARING BLOCK CAP (PFT20 006.4) OVER EACH BEARING BLOCK, WITH THE 20" SLIDE BAR BETWEEN THEM. THE 1/4-20 THREADED OPENING ON THE BEARING BLOCK CAPS SHOULD LOCATE *OVER THE 20" SLIDE BARS*. CONNECT THE BEARING BLOCK CAPS TO BEARING BLOCKS WITH (16) 8-32 X 1 BHCS (.1640AA16) AS13. TURN SLIDE BARS OVER SO THE WHITE NYLON BEARING BLOCKS ARE FACING UPWARD.
- 3) ORIENT THE RIGHT SIDE BAR (PFT20 001.4R) WHICH HAS THE MAGNET INDENTATION, ON THE OUTER REAR AND THE LEFT SIDE BAR (PFT20 001.4L) PARALLEL, WITH THE ROUNDED ENDS FACING FORWARD, OR TOWARD FRONT OF THE H2O LAMINATOR. ATTACH (2) FEED TABLE MOUNTING STUB SHAFTS (D105 101.4) AS13 TO EACH OUTER REAR, STRAIGHT END OF THE SIDE BARS, THROUGH THE INNER COUNTERSUNK OPENINGS. *LOCTITE* AND USE (4) 10-32 X 3/4 FHMS.
- 4) LOOSELY CONNECT BOTH 20" SLIDE BARS BETWEEN THE SIDE BARS USING (4) 1/4-20 X 3/4 FHSH. REMEMBER THE LARGER SECTION OF THE BEARING BLOCKS FACE INWARD.
- 5) LOOSELY CONNECT (2) CROSS BARS (PFT20 007.4) BETWEEN SIDE BARS. THE REAR CROSS BAR IS HORIZONTAL AND THE FRONT CROSS BAR, VERTICAL. *LOCTITE* AND USE (8) 10-32 X 3/4 FHMS.



Also ?

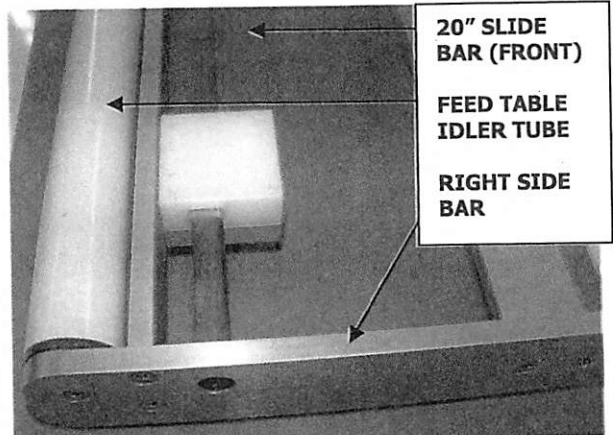
AS09  
6) TAP (2) NYLATRON STYLE IDLER BEARINGS (PRB086A) <sup>AS13</sup> INTO THE ENDS OF THE SHORTER, FEED TABLE IDLER TUBE (PFT20 009.4). INSERT A FEED TABLE IDLER SHAFT (PFT20 008.4).



FEED TABLE IDLER TUBE AND NYLATRON BEARING

7) CONNECT THE FEED TABLE IDLER TUBE ASSEMBLY BETWEEN THE FRONT, ROUNDED ENDS OF SIDE BARS USING (2) 10-32 X 3/4 FHMS WITH LOCTITE.

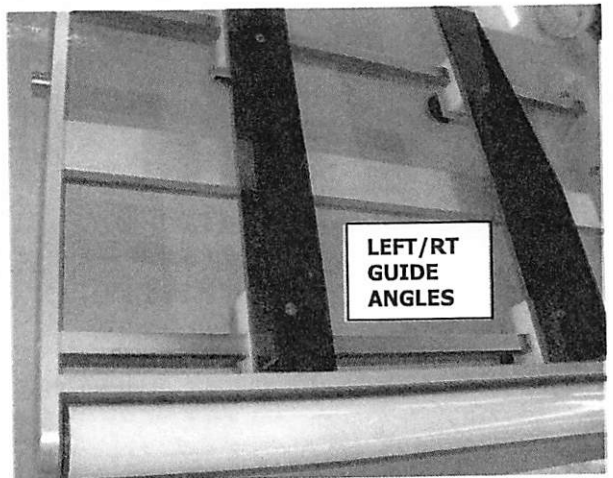
8) CONNECT THE RIGHT GUIDE ANGLE (PFT20 003.4R) AND THE LEFT GUIDE ANGLE (PFT20 003.4L) TO THE COUNTERSUNK OPENINGS ON THE WHITE NYLON BEARING BLOCKS. ORIENT WITH THE HIGHER GUIDE ANGLE EDGES OUTWARD, CLOSER TO THE IDLER TUBE. **DO NOT OVER TIGHTEN.** USE (2) 8-32 X 5/8 FHMS ON EACH GUIDE ANGLE. BE CAREFUL NOT TO SCRATCH TEFLON ON GUIDE ANGLES.



20" SLIDE BAR (FRONT)  
FEED TABLE IDLER TUBE  
RIGHT SIDE BAR

9) TIGHTEN SIDE BARS SCREWS. **SNUG 20" SLIDE BAR SCREWS, KEEP BARS STRAIGHT.**

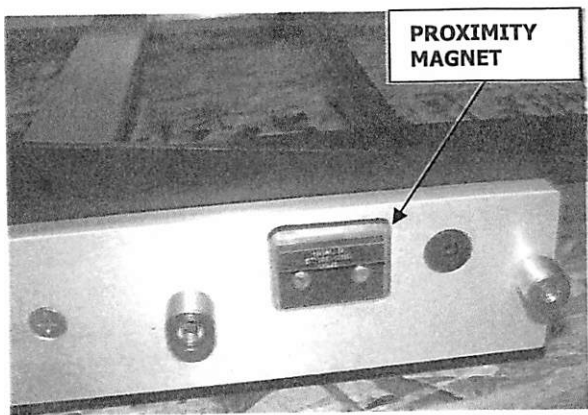
10) THREAD (4) DIAMOND CUT KNURLED KNOBS (PRK142) INTO THE FRONT BEARING BLOCK CAPS ON THE UNDERSIDE, TIGHTENING ON THE 20" SLIDE BARS.



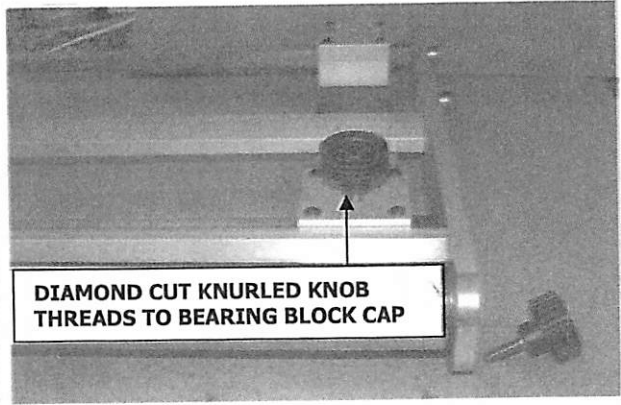
LEFT/RT GUIDE ANGLES

11) SECURE PROXIMITY SWITCH MAGNET (PRS352) RACK 1 ON OUTER RIGHT SIDE BAR, USE (2) 4-40 X 1/4 PH RACK 2.

12) SHIP WITH (4) FEED TABLE PLATES (PFT20 004.4).



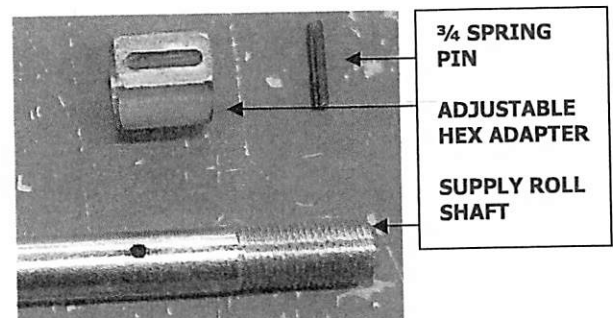
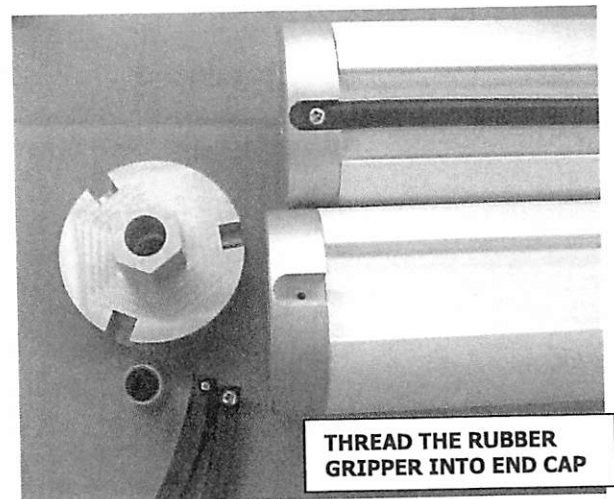
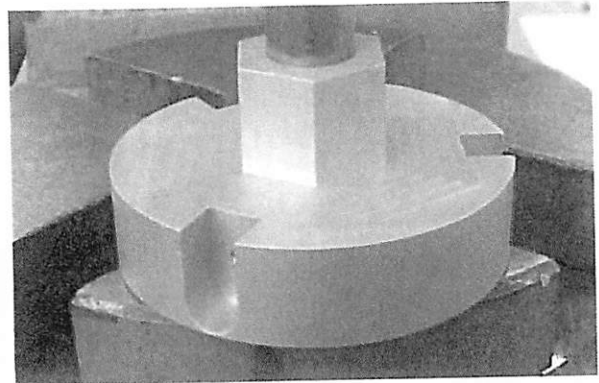
PROXIMITY MAGNET



DIAMOND CUT KNURLED KNOB THREADS TO BEARING BLOCK CAP

# H20 SUPPLY ROLL ASSEMBLY

- 1) THE H20 LAMINATOR USES TWO IDENTICAL SUPPLY ROLL ASSEMBLIES. THE ASSEMBLIES ARE PREPARED AS FOLLOWS.
- 2) THE MACHINE SHOP WILL ARBOR PRESS (4)  $\frac{1}{2}$  X  $\frac{5}{8}$  X 1 SLEEVE BEARINGS (PRB042), ONE EACH INTO THE HEX HUB OF (4) SUPPLY ROLL END CAPS (I30 008.4) FROM AS08. OPEN BEARINGS WITH A .505 REAMER IF NECESSARY.
- 3) INSERT A 6-32 X  $\frac{1}{2}$  PH INTO BOTH ENDS OF THE (6) RUBBER SUPPLY ROLL GRIPPERS (H20 003.4) LOFT 0. SET THE GRIPPERS ASIDE FOR NOW.
- 4) ALIGN THE END CAP THREADS FOR THE GRIPPER SCREWS WITH THE RECESSED SECTIONS OF THE (2) SUPPLY ROLL EXTRUSIONS (H20 002.4) LOFT 0 AND TAP THE END CAP HEXES INTO THE SUPPLY ROLL EXTRUSION CORES.
- 5) SECURE THE GRIPPERS TO THE THREADED END CAPS USING THE 6-32 X  $\frac{1}{2}$  PH ALREADY IN GRIPPER ENDS.
- 6) PREPARE (2) SUPPLY ROLL SHAFTS (H20 011.4) LOFT 0 BY SLIDING AN ADJUSTABLE HEX ADAPTER (D105 022.4) AS08 OVER SHAFT APERTURES.
- 7) USING THE STARTER TOOL INSTERT A  $\frac{1}{8}$  X  $\frac{3}{4}$  SPRING PIN (.125J0012) THROUGH THE ADJUSTABLE HEX GROOVE INTO SHAFT APERTURE. REMOVE TOOL, TAP PIN UNTIL IT IS FLUSH WITH HEX ON BOTH SIDES.
- 8) 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 ADAPTER SHOULD LOCATE BETWEEN RECESS ON PRESSURE PLATES.



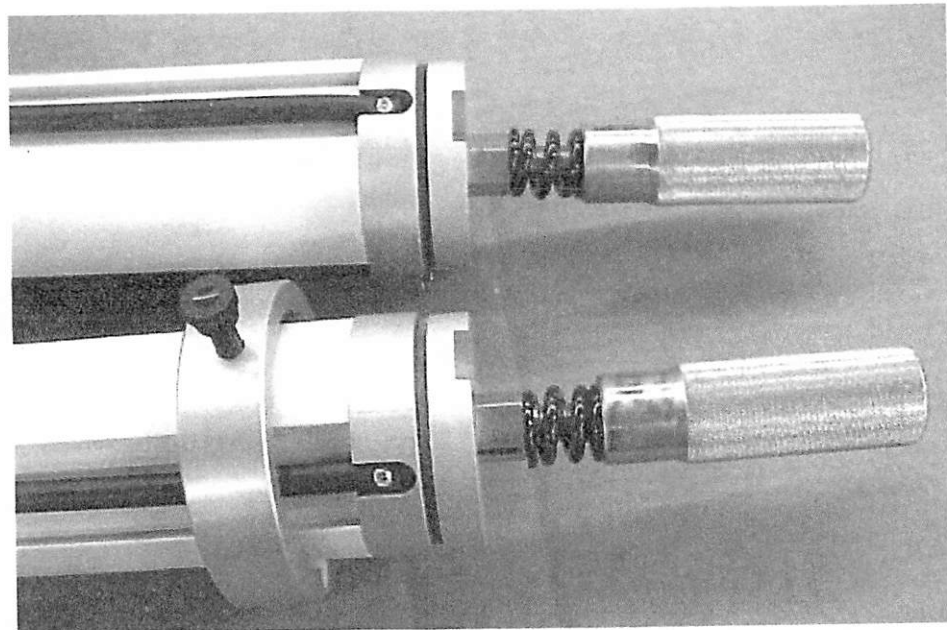
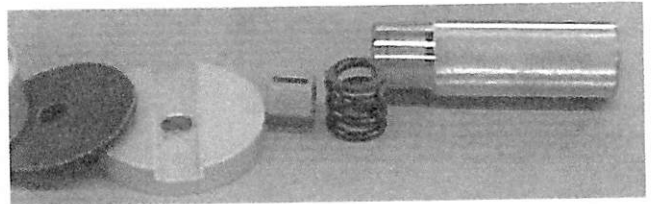
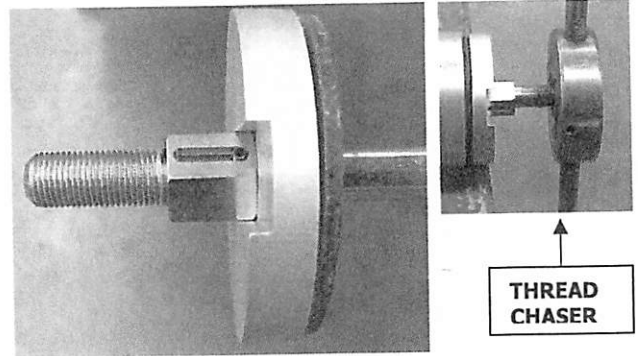


9) SLIDE A 1/8 X 1/2 ID X 2 3/4 OD LEATHER DISC (H380 004.4) AS08 ONTO EACH SUPPLY ROLL SHAFT NEXT TO THE PRESSURE PLATE. INSERT SHAFT WITH THIS ASSEMBLY THROUGH THE SLEEVE BEARINGS ON THE SUPPLY ROLL END CAPS.

10) DUPLICATE THE OTHER END OF THE SUPPLY ROLL WITH ANOTHER LEATHER DISC, PRESSURE PLATE AND SUPPLY ROLL HEX ADAPTER (LC38 023.4) AS08 FITTING INTO PRESSURE PLATE RECESS.

11) BRUSH LOCTITE ANTI-SEIZE ONTO END THREADS OF BOTH SUPPLY ROLL SHAFTS. SLIDE ON SUPPLY ROLL TENSION SPRING (PRS222) AS08 AND THREAD ON KNURLED SUPPLY ROLL TENSION KNOB (D105 001.4) AS13. IF SUPPLY ROLL SHAFTS' THREADS ARE OVER PLATED, TRIM THEM WITH DIE/THREAD CHASER. TIGHTEN KNOB UNTIL SPRING IS SNUG.

12) THREAD (2) 5/16-18 X 1 PLASTIC MOLDED THUMBSCREWS (PRK184) AS09 INTO (2) STOP COLLAR-CORE CHUCK STYLE (D105 004.4) AS09. SECURE THIS ASSEMBLY TO THE SUPPLY ROLLS AND STORE UNTIL NEEDED.

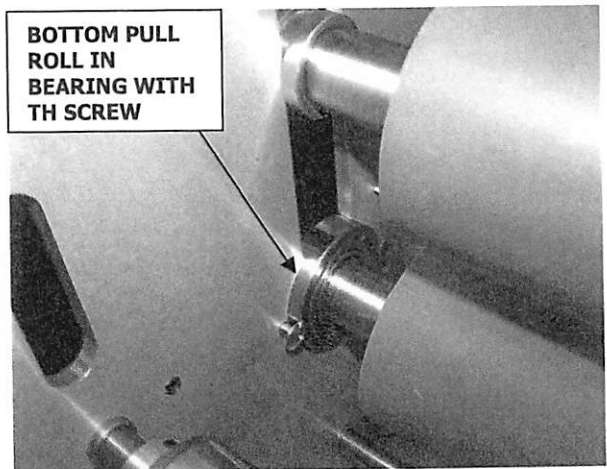


# H20 CHASSIS ASSEMBLY

- 1) **NOTE THE SOLID JOURNAL ON THE PULL ROLLS. INSERT THE BOTTOM PULL ROLL (H20 035.4) BETWEEN THE SIDE PANELS INTO THE REAR RUBBER ROLL APERTURES. HOLD AND INSERT ONE END OF THE PULL ROLL THROUGH THE LARGER RIGHT SIDE PANEL OPENING AND INSERT THE OPPOSITE JOURNAL INTO THE SMALLER OPENING ON THE LEFT SIDE PANEL. BE CAREFUL NOT TO DAMAGE THE PULL ROLL RUBBER ON THE TRUSS HEAD SCREWS EXPOSED ON THE INNER SIDE PANELS. ROLL OVER REAR HOUSING LIP.**



- 2) **TAP AN R16-ZZ ROLLER BEARING (PRB085) AS07 OVER THE RIGHT AND LEFT JOURNAL, FLUSH WITH THE OUTSIDE OF THE SIDE PANELS. THE ROLLER BEARING IS SUPPORTED ON THE INSIDE WITH THE 10-32 x 1/2 TH IN SIDE PANEL. ON THE OUTER SIDE PANEL SECURE WITH A 1" EXTERNAL SNAP RING (PRR195) RACK 19 ON EACH SIDE.**

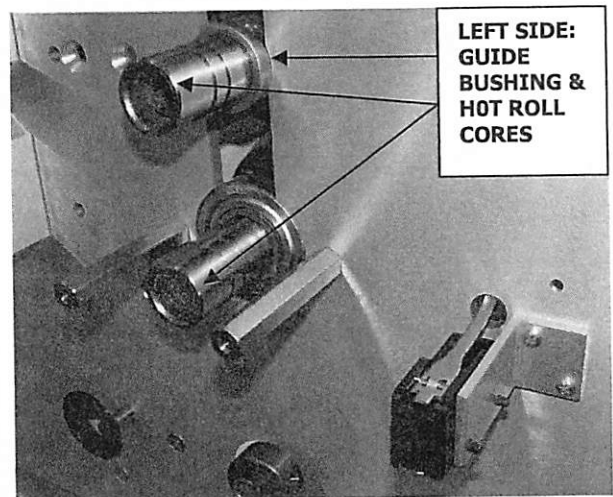


- 3) **INSERT THE TOP PULL ROLL OVER THE BOTTOM PULL ROLL BETWEEN THE SIDE PANELS. ALIGN RUBBER ENDS.**

- 4) **SLIDE A GUIDE BUSHING (H20 044.4) OVER BOTH TOP PULL ROLL JOURNAL ENDS AND FIT BUSHING CHANNEL INTO SIDE PANELS.**

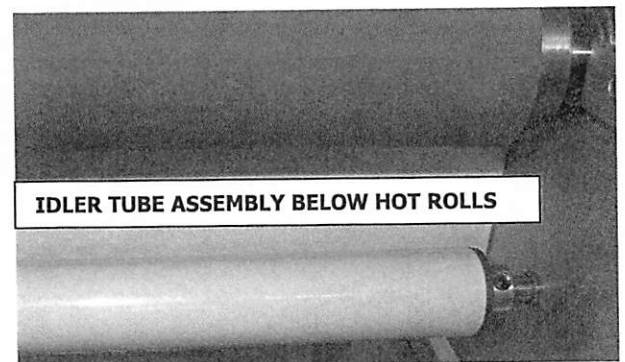
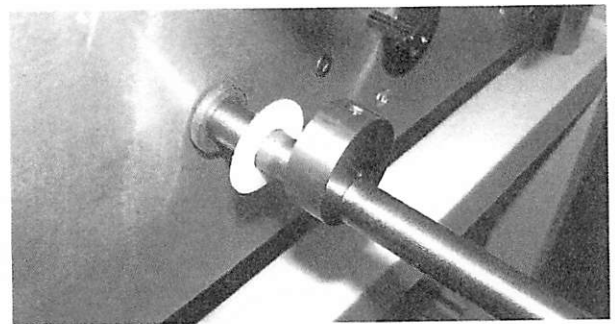
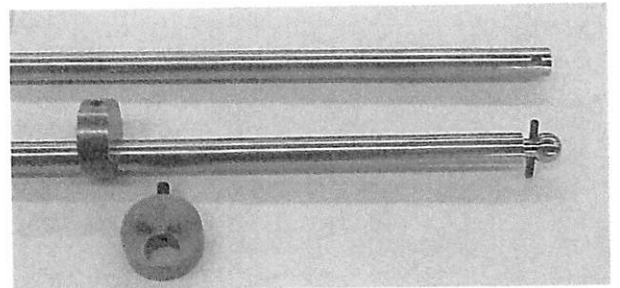
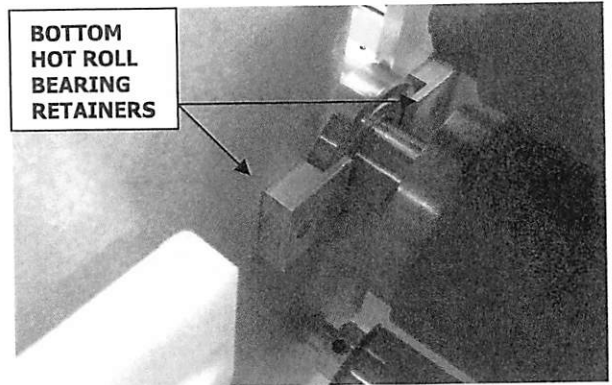
- 5) **INSERT THE BOTTOM HOT ROLL COMPLETE (H20 040.4) BETWEEN THE FRONT SIDE PANEL APERTURES.**

- 6) **TAP AN R16-ZZ ROLLER BEARING (PRB085) AS07 OVER BOTH BOTTOM HOT ROLL JOURNAL ENDS, FITTING THE ROLLER BEARING INTO THE SIDE PANEL, FLUSH ON THE OUTSIDE. THE BEARING RETAINERS WILL SUPPORT THE ROLLER BEARING ON THE INNER SIDE PANEL AND SECURE THE ROLLER BEARING ON**

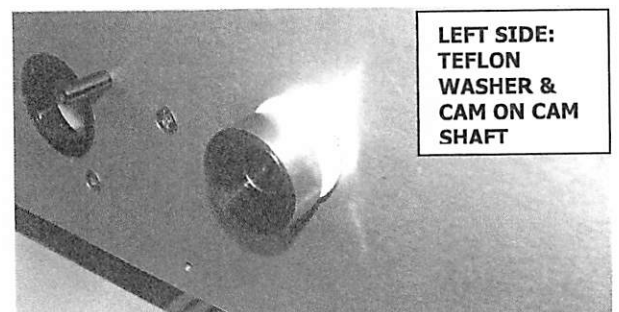


THE OUTER SIDE PANEL WITH A 1" EXTERNAL SNAP RING (PRR195) RACK 19 ON EACH SIDE.

- 7) INSERT TOP HOT ROLL AND SLIDE ANOTHER GUIDE BUSHING OVER BOTH TOP HOT ROLL JOURNALS, FITTING THE GUIDE BUSHING CHANNELS INTO THE SIDE PANELS. ALIGN TOP AND BOTTOM RUBBER ROLL ENDS.
- 8) PREPARE (3) CAM SHAFTS (H20 130.4): (2) FOR THE PRESSURE PLATE ASSEMBLIES AND ONE FOR THE SLITTER ASSEMBLY. TAP A 1/8 X 1 SPRING PIN (.125J0016) THROUGH THE BALL END OF THE CAM SHAFTS AND CENTER EXPOSED SPRING PIN. SECURE A CAM (H850 133.4) AS08 TO THE BALL/SPRING PIN END OF EACH CAM SHAFT USING A 10-32 X 3/4 SS ON EACH CAM. LOCTITE THREADS ON SET SCREW.
- 9) SLIDE A WHITE TEFTON WASHER (PRW337) RACK 8 DOWN EACH OF THE (3) CAM SHAFTS, FLUSH WITH THE CAM.
- 10) INSERT A CAM SHAFT FROM THE RIGHT SIDE PANEL THROUGH THE OILITE BEARING LOCATED UNDER THE BOTTOM HOT ROLL. THE TEFLON WASHER IS BETWEEN THE CAM AND THE OILITE BEARING. SLIDE A 1/2" STOP COLLAR (PRC096) AS07 ONTO THE CAM SHAFT. SLIDE AN IDLER TUBE (H20 052.4) WITH (2) NYLATRON STYLE IDLER BEARINGS (PRB086A) AS13 ONTO THE CAM SHAFT AND THEN ANOTHER 1/2" STOP COLLAR. EXIT THE CAM SHAFT OUT THE LEFT SIDE PANEL OILITE BEARING. ADD ANOTHER WHITE TEFLON WASHER AND SECURE THE CAM SHAFT WITH A CAM AND 10-32 X 3/4 SS, USE LOCTITE ON SET SCREW.
- 11) CENTER THE DISTANCE OF THE 1/2" STOP COLLARS FROM THE SIDE PANELS. LEAVE ABOUT 1/32" SIDE-TO-SIDE MOTION ON THE IDLER TUBE AND TIGHTEN BOTH STOP COLLARS.
- 12) FROM THE RIGHT SIDE PANEL INSERT A SECOND CAM SHAFT THROUGH OILITE BEARING LOCATED UNDER SLITTER BAR OPENINGS. SLIDE ON A 1/2" STOP COLLAR, IDLER TUBE WITH NYLON



IDLER TUBE ASSEMBLY BELOW HOT ROLLS

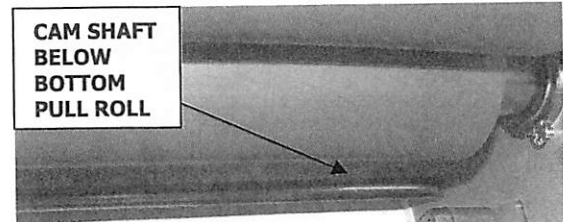
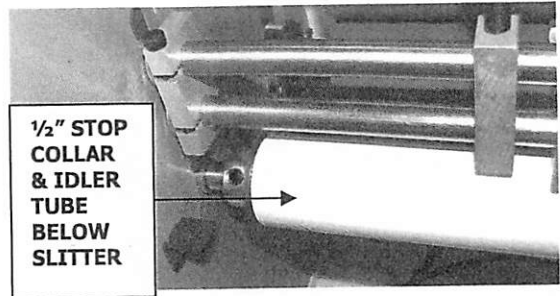


LEFT SIDE: TEFLON WASHER & CAM ON CAM SHAFT

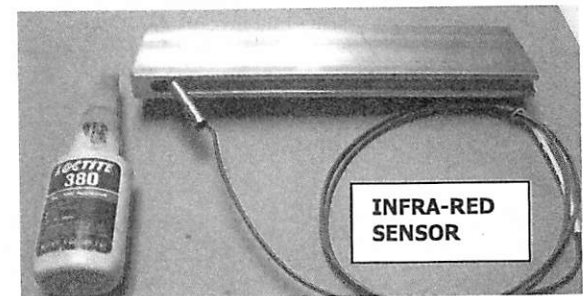


BEARINGS AND ANOTHER 1/2" STOP COLLAR. EXIT CAM SHAFT THROUGH LEFT SIDE PANEL. ADD A WHITE TEFLON WASHER, SECURE CAM WITH 10-32 X 3/4 SET SCREW. SECURE 1/2" STOP COLLARS.

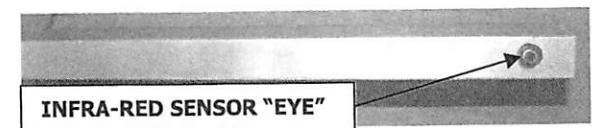
- 13) INSERT THE THIRD CAM SHAFT FROM THE RIGHT SIDE PANEL THROUGH THE OILITE BEARINGS BELOW THE PULL ROLLS. THIS CAM SHAFT GOES DIRECTLY THROUGH THE BOTTOM MOTOR COVER AND EXITS THE LEFT SIDE PANEL WITH NO IDLER TUBE. ADD A TEFLON WASHER AND SECURE CAM SHAFT ON LEFT SIDE WITH A CAM AND 10-32 X 3/4 SS. USE LOCTITE.



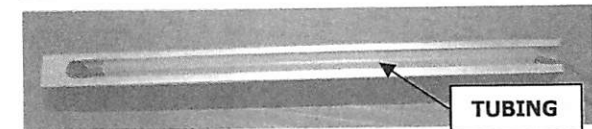
- 14) CHECK THE FIT OF THE INFRA-RED SENSOR (PRC300S) AS07 INTO END OPENING ON UPPER SENSOR BAR (H20 061.4). REAM WITH "F DRILL."



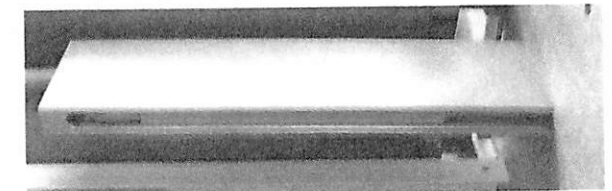
- 15) PLACE A SMALL DROP OF BLACK LOCTITE 380 INSTANT ADHESIVE, CENTERED ON THE MIDDLE OF THE SENSOR. INSERT THE SENSOR INTO UPPER SENSOR BAR SO THE SENSOR "EYE" IS FLUSH WITH THE COUNTERSUNK SIDE OF THE SENSOR BAR. ALLOW LOCTITE ENOUGH TIME TO SET.



- 16) CUT 6" FROM THE AIR TUBING 1/4" NATURAL (PRA027) LOFT 2. SLIDE INFRA-RED SENSOR WIRES THROUGH THE AIR TUBING. CENTER THE AIR TUBING IN UPPER SENSOR BAR CHANNEL AND SNAP INTO CHANNEL. STAKE IF NECESSARY.

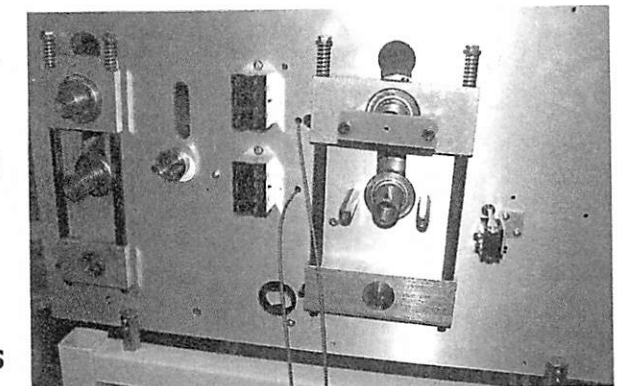


- 17) CAREFULLY EXIT THE SENSOR WIRES THROUGH THE REAR OPENING AND SECURE THE UPPER SENSOR BAR TO THE COUNTERSUNK LEFT SIDE PANEL WITH THE SENSOR "EYE" FACING THE TOP HOT ROLL. USE (2) 1/4-20 X 3/4 FHS.

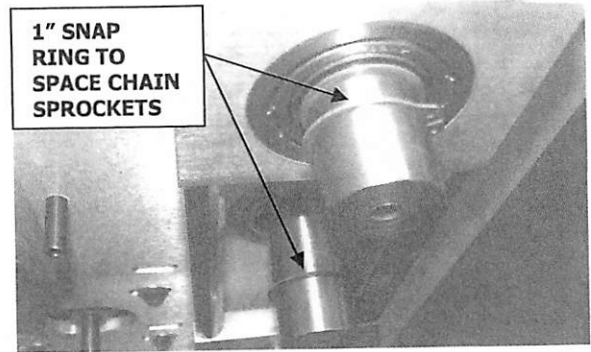


- 18) BRUSH A SMALL AMOUNT OF ANTI-SEIZE LUBRICANT ONTO THE CIRCUMFERENCE OF ALL FOUR LOWER CAMS FOR THE FRONT AND REAR PRESSURE PLATES.

- 19) FROM THE RIGHT SIDE FIRST, SLIDE ON THE FRONT AND REAR PRESSURE PLATES OVER THE TOP RUBBER ROLL JOURNALS

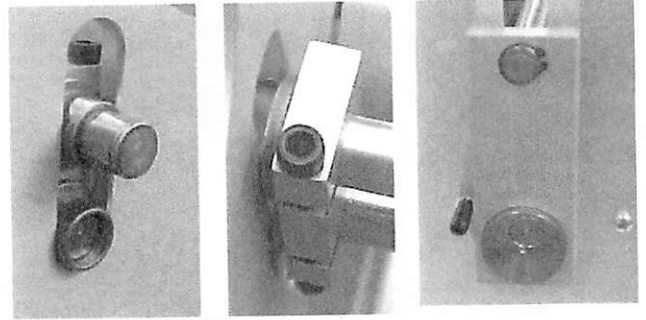


AND THE LOWER CAMS. SECURE THE PRESSURE PLATE ROLLER BEARINGS TO THE JOURNALS WITH (4) 1" EXTERNAL SNAP RINGS (PRR195) RACK 19 ON THE INNER GROOVES.

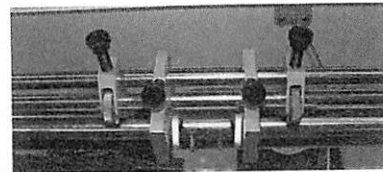


- 20) ON THE RIGHT SIDE ADD AN ADDITIONAL (4) 1" EXTERNAL SNAP RINGS TO THE OUTER SNAP RING GROOVES ON THE TOP AND BOTTOM JOURNALS. THESE WILL SPACE THE CHAIN SPROCKETS FROM THE PANEL.

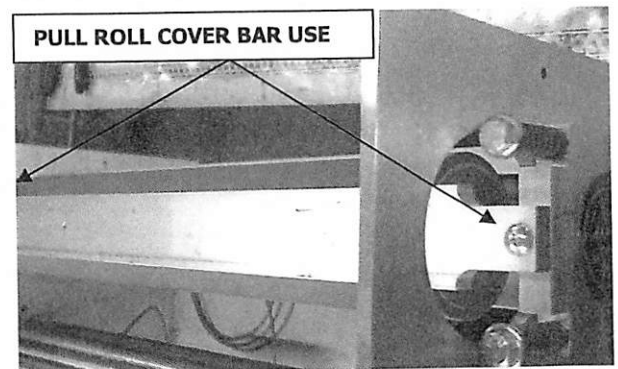
- 21) THE SLITTER ASSEMBLY IS ALREADY INSTALLED WITH BOTH FINE ADJUSTING NUTS TOWARD THE REAR, ALONG WITH THE OPEN ADJUSTABLE ENDS OF THE SLITTER BAR SUPPORTS.



- 22) TEST THE SLITTER ASSEMBLIES BY SLIDING THE SLITTERS UNITS BACK AND FORTH ALONG THE SLITTER BARS. IF THE SLITTERS ARE TIGHT OR CATCH AT THE ENDS OF THE SLITTER BARS, LOOSEN THE UPPER SOCKETHEAD SCREWS ON SLITTER BAR SUPPORTS.



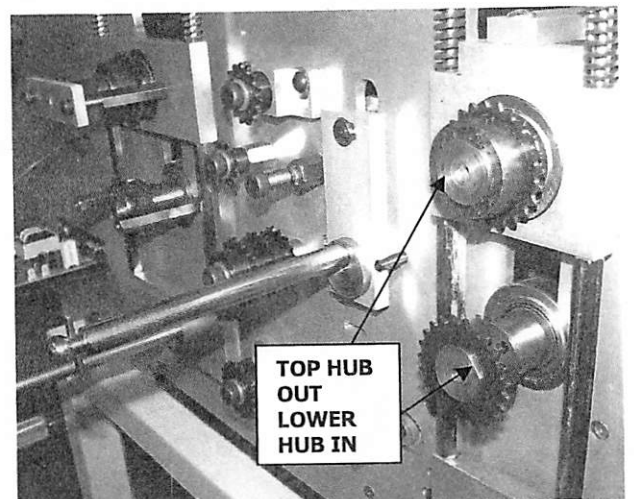
- 23) BRUSH ANTI-SEIZE LUBRICANT ON THE CIRCUMFERENCE OF THE SLITTER CAMS BELOW THE SLITTER ASSEMBLY. SECURE THE EXPOSED TOP SLITTER BAR AND THE CAM BY SLIDING THE SLITTER ACTUATING BLOCK (I30 192.4) RACK 16 OVER BOTH OF THEM. ADD A RETAINING RING (PRR191) LD04 ON EACH END OF THE TOP SLITTER BARS.



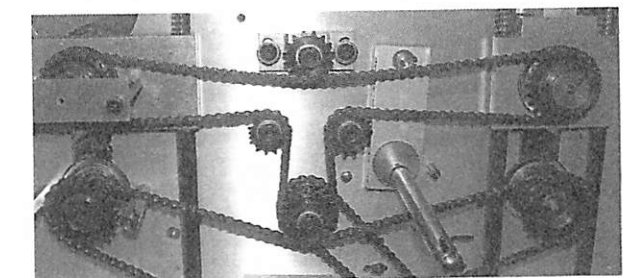
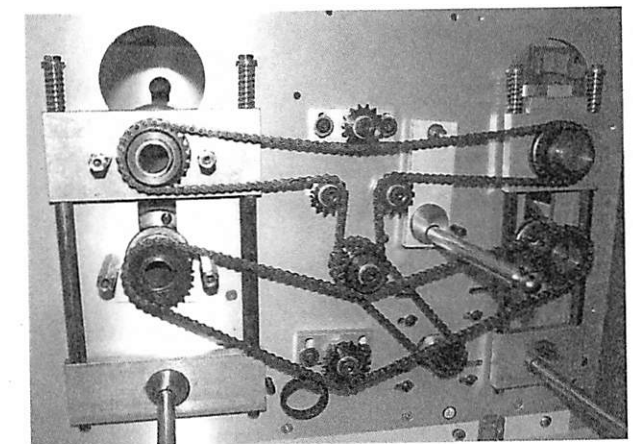
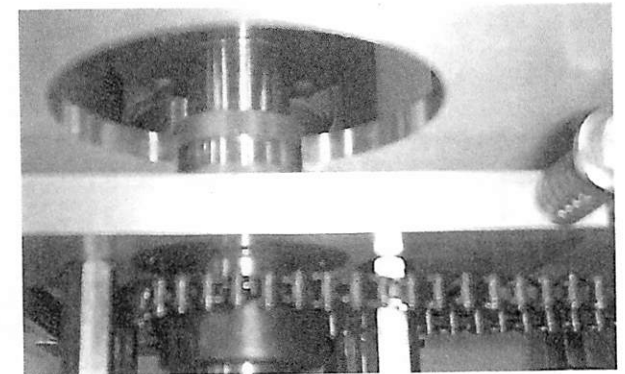
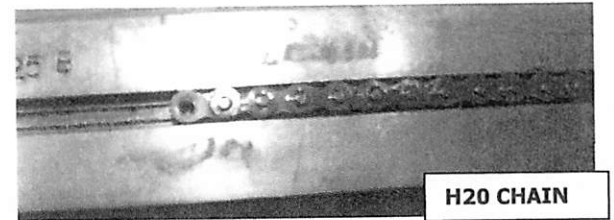
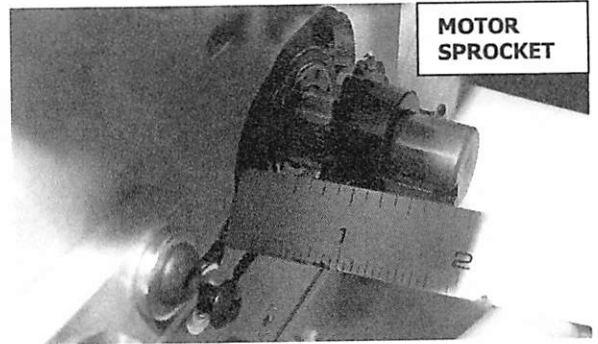
- 24) PLACE THE PULL ROLL COVER BAR (H20 013.4) OVER THE TOP PULL ROLL. SECURE BOTH ENDS TO THE THREADS IN THE REAR TOP PRESSURE PLATES. USE (2) 10-32 X 3/4 TH.

- 25) USE 10-32 X 3/8 SET SCREW IN EACH OF (4) 1" BORE 25B23 SPROCKETS (PRS326) RACK 7 FOR THE RIGHT SIDE CHAINS.

- 26) ORIENT TWO OF THESE SPROCKETS WITH TEETH INWARD, HUB OUTWARD AND SLIDE THE SPROCKETS OVER THE RIGHT TOP HOT ROLL JOURNAL AND RIGHT TOP PULL ROLL JOURNAL BOTH FLUSH WITH THE SNAP RING AND TIGHTEN THE SET SCREW ON THE FLAT OF THE JOURNAL.



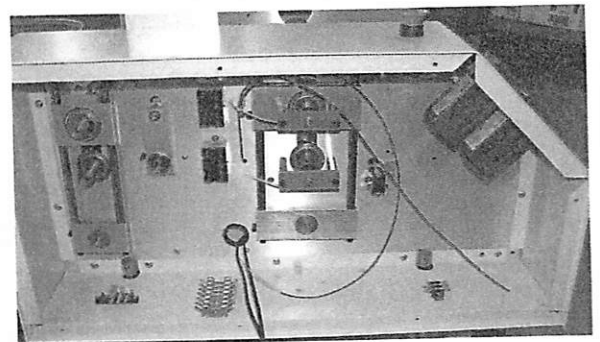
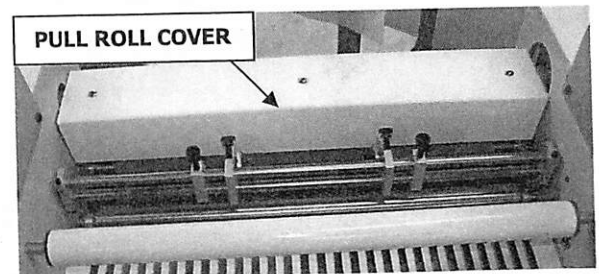
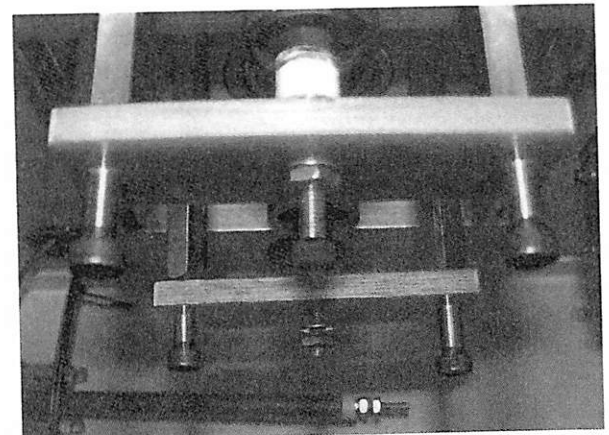
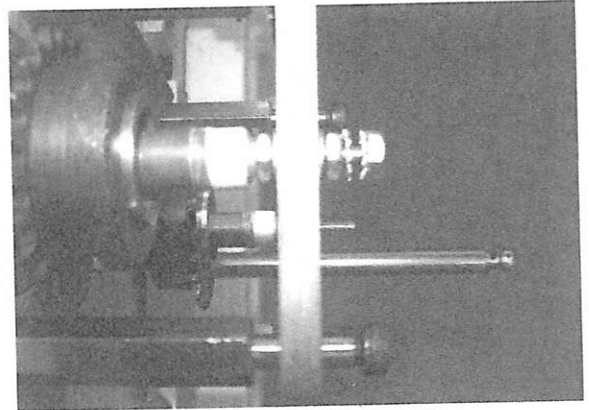
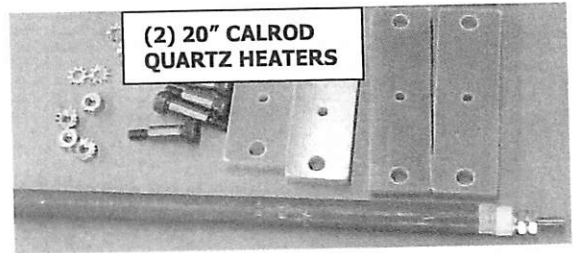
- 27) ORIENT THE REMAINING TWO 25B23 SPROCKETS WITH TEETH OUTWARD AND HUB INWARD. ADD THESE SPROCKETS OVER THE BOTTOM HOT ROLL AND PULL ROLL, FLUSH WITH THE SNAP RING. TIGHTEN ON JOURNAL FLATS.
- 28) ORIENT A 25B18  $\frac{3}{4}$  BORE SPROCKET (PRS250A.4) WITH TEETH INWARD AND HUB OUTWARD. SLIDE SPROCKET WITH 10-32 X  $\frac{1}{4}$  SS ONTO MOTOR SHAFT. MEASURE SPROCKET TEETH TO EQUIL INNERMOST CLUSTER SPROCKET TEETH USE STRAIGHT EDGE RULE.
- 29) CUT (3) #25 CHAINS (PRC083.1) CCB AT INDICATIONS ON CHAIN BAR. CUT 13  $\frac{1}{2}$ " OF CHAIN FOR PRIMARY DRIVE ON MOTOR, INDICATED BY SEVERAL DOTS IN "RELEASE LINER" SECTION. ADD AN OFFSET LINK (PRC085) AS07 TO MOTOR CHAIN. CUT 37" OF CHAIN FOR TOP ROLL DRIVE, INDICATED BY LINE. CUT 32  $\frac{1}{2}$ " FOR THE BOTTOM ROLL DRIVE CHAIN, INDICATED BY LINE.
- 30) FIRST LAY THE PRIMARY DRIVE CHAIN OVER THE MOTOR SPROCKET TEETH AND THE INNER CLUSTER SPROCKET TEETH. SECURE WITH #25 CHAIN CONNECTING LINK (PRC084) AS07. ADJUST PRIMARY MOTOR CHAIN BY LOOSENING MOTOR SCREWS AND SLIDING MOTOR TOWARD THE REAR THROUGH SLOTS. CHAIN SHOULD BE FAIRLY TIGHT. SECOND LAY THE LONGER TOP ROLL DRIVE CHAIN OVER THE TOP HOT AND PULL ROLLS, UNDER THE TOP CHAIN ADJUSTING BLOCK, ON THE INSIDE OF THE (2) STAND OFF SPROCKETS AND AROUND THE MIDDLE CLUSTER SPROCKET. SECURE WITH CHAIN CONNECTING LINK. THIRD LAY THE BOTTOM ROLL DRIVE CHAIN OVER BOTTOM HOT AND PULL ROLL SPROCKETS, UNDER THE LOWER CHAIN TENSIONER SPROCKET AND UNDER THE OUTER CLUSTER SPROCKET TEETH. SECURE WITH #25 CHAIN CONNECTING LINKS. RAISE RUBBER ROLLS. TIGHTEN BOTTOM RUBBER ROLL CHAIN BY LOWERING BOTTOM CHAIN ADJUSTER. CHAIN IS FAIRLY TIGHT. ADJUST TOP RUBBER





**ROLL CHAIN BY MOVING SPROCKET ON SLOTTED HEX STANDOFF. THIS IS SOMEWHAT LOOSE. LOWER RUBBER ROLLS AND FURTHER SECURE WITH TOP CHAIN ADJUSTER BLOCK.**

- 31) **INSERT A CALROD GLO-QUARTZ HEATER (PRH203) THROUGH THE TOP AND BOTTOM HOT ROLL CORES. ON ONE SIDE UNTHREAD THE OUTER NUT AND REMOVE NUT AND ONE OF THE WASHERS. THE INSULATOR PLATE ON THE TOP RUBBER ROLL PRESSURE PLATE MUST BE OFF ONE SIDE. SLIDE AN INSULATOR PLATE (PL27 049.4) RACK 7 OVER THE CALROD HEATER THREADS ON TOP AND BOTTOM. #11 DRILL OPENS PLATE. RETHREAD WASHER AND NUT WITH WASHER ON BOTH SIDES OF INSULATOR PLATE. SECURE THE TOP AND BOTTOM INSULATOR PLATES TO THE TOP AND BOTTOM STANDOFFS USING  $\frac{1}{4}$  X  $\frac{3}{4}$  SHOULDER BOLTS.**
- 32) **REPEAT THIS PROCEDURE ON THE OPPOSITE SIDE. SECURE THE CALROD HEATERS OUTSIDE THE BOTTOM INSULATOR PLATES WITH THE WASHER AND #8 OR #10 HEX NUT. LOOSELY THREAD A #8 OR #10 HEX NUT WHICH WILL SECURE THE HEATER WIRE WHEN IT IS ADDED.**
- 33) **SET THE PAINTED PULL ROLL COVER (H20 012.4) OVER THE PULL ROLL COVER BAR, WITH THE STRAIGHT ANGLE FACING FORWARD. SECURE BY THREADING THE PULL ROLL COVER INTO THE PULL ROLL COVER BAR WITH (3) 10-32 X  $\frac{1}{4}$  THMS.**
- 34) **CONNECT THE RIGHT BOTTOM HOUSING ASSEMBLY USING (4) 10-32 X  $\frac{1}{4}$  THMS AND SETTING THE HOUSING OVER THE THREADS OF THE SCREW FOR THE GROUND WIRE.**
- 35) **CONNECT THE LEFT BOTTOM HOUSING ASSEMBLY USING (5) 10-32 X  $\frac{1}{4}$  THMS.**
- 36) **FROM LEFT SIDE INSERT THE WIRING HARNESS (PRW363) BETWEEN THE FANS AND THE FRONT MOTOR COVER RUNNING WHITE, BLACK AND RED WIRES THROUGH SNAP BUSHINGS. THE**





MAJORITY OF WIRES ARE ON THE LEFT SIDE. THIS SIDE HAS THE YELLOW AND ORANGE WIRES WITH RED COVERED FEMALE ENDS FOR THE FUSES.

37) CONNECT THE RIGHT TOP HOUSING ASSEMBLY USING (7) 10-32 X 1/4 THMS.

38) CONNECT THE LEFT TOP HOUSING ASSEMBLY USING (6) 10-32 X 1/4 THMS. THERE IS NO SCREW BEHIND THE CHROMALOX HEAT CONTROLLERS.

39) REFER TO WIRING PAGES AND DIAGRAMS BEFORE CONTINUING. TEST SWITCHES FOR FUNCTION AFTER WIRING, THEN CONTINUE CHASSIS.

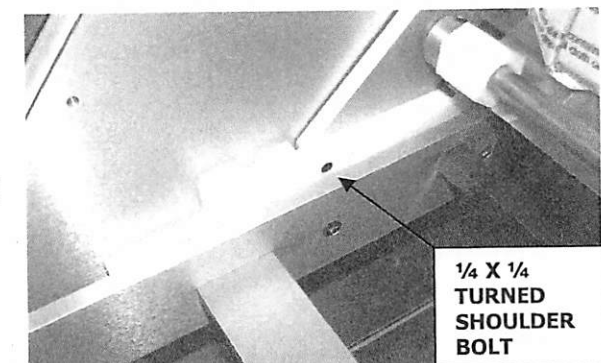
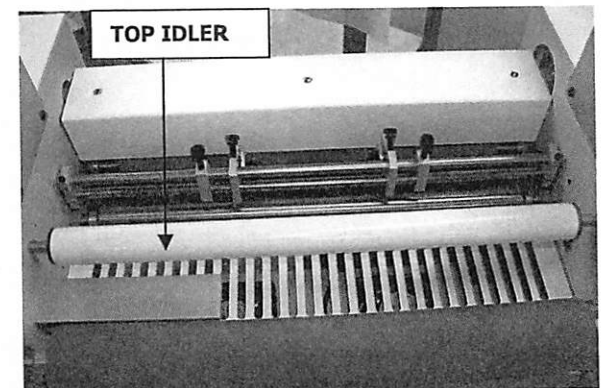
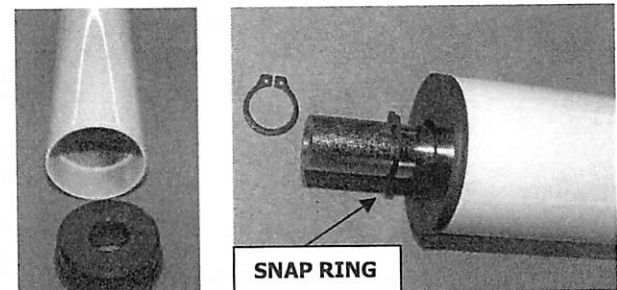
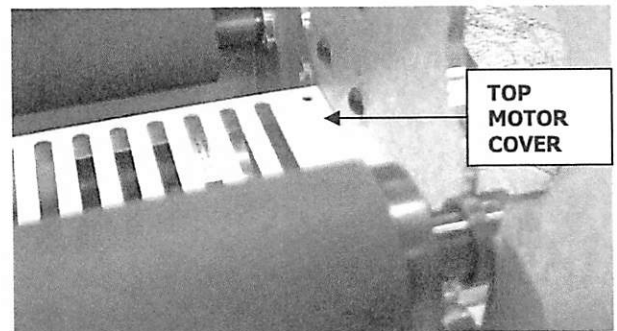
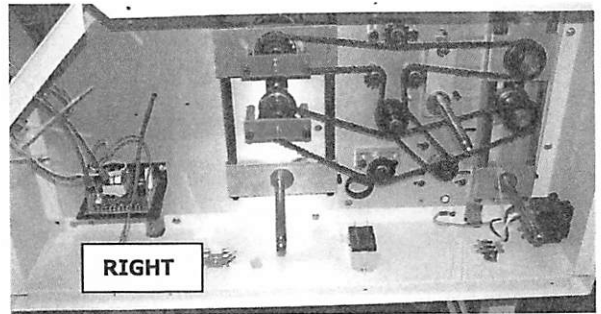
40) CHECK THE BOTTOM MOTOR COVER WIRING FOR THE MOTOR, FANS, HEAT SENSOR AND SIDE-TO-SIDE WIRES AND TIED DOWN WITH PRESS CLIPS AND CABLE TIES. THE RUBBER ROLLS AND SLITTER ASSEMBLY MUST BE IN THE UP POSITION. FROM THE REAR OF THE LAMINATOR, PLACE SLOTTED, PAINTED TOP MOTOR COVER (H20 092.4) OVER BOTTOM MOTOR COVER, LIP TO THE REAR. SLIDE THE FRONT SECTION WELL BETWEEN THE RAISED RUBBER ROLLS, THEN BACK UNDER LARGE BUTTONHEAD SCREWS. SECURE USING (4) 10 X 3/8 PH SMS, THERE ARE (2) CONNECTING TO THE TINNEMAN BRACKETS AND (2) IN THE FRONT, NONE UNDER SENSOR BAR.

41) TAP (2) NYLATRON STYLE BEARINGS INTO ENDS OF AN IDLER TUBE (H20 052.4). INSERT AN IDLER TUBE SHAFT (H20 053.4). SECURE IDLER TUBE SHAFT BETWEEN BEARINGS USING (2) SNAP RINGS (PRR191) LD05 WITH INSERTION TOOL.

42) SECURE TOP IDLER TUBE ASSEMBLY ABOVE TOP MOTOR COVER, WITH LOCTITE ON (2) 10-32 X 3/4 THMS.

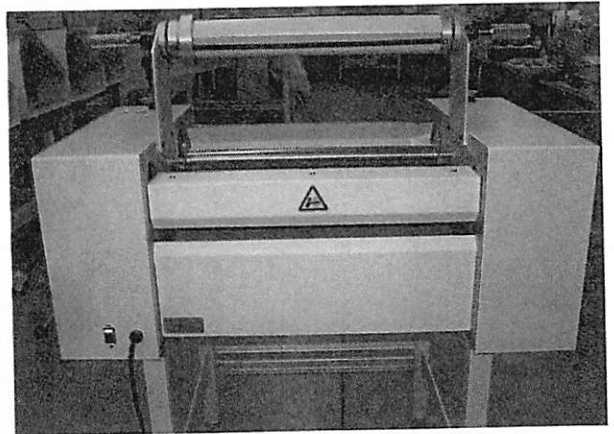
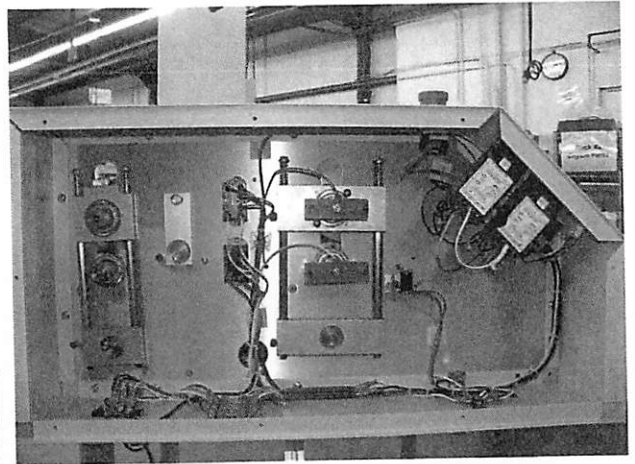
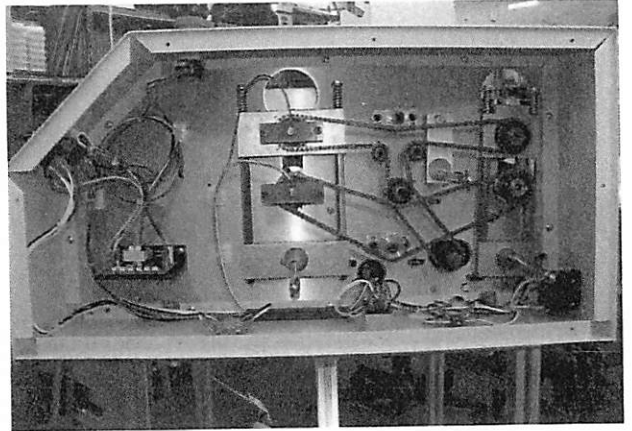
43) SECURE THE SAFETY SHIELD ASSEMBLY TO THE WHITE FEED TABLE BRACKETS IN THE FRONT USING (2) 1/4 X 1/4 TURNED SHOULDER BOLTS (.250IAC04A) AS13.

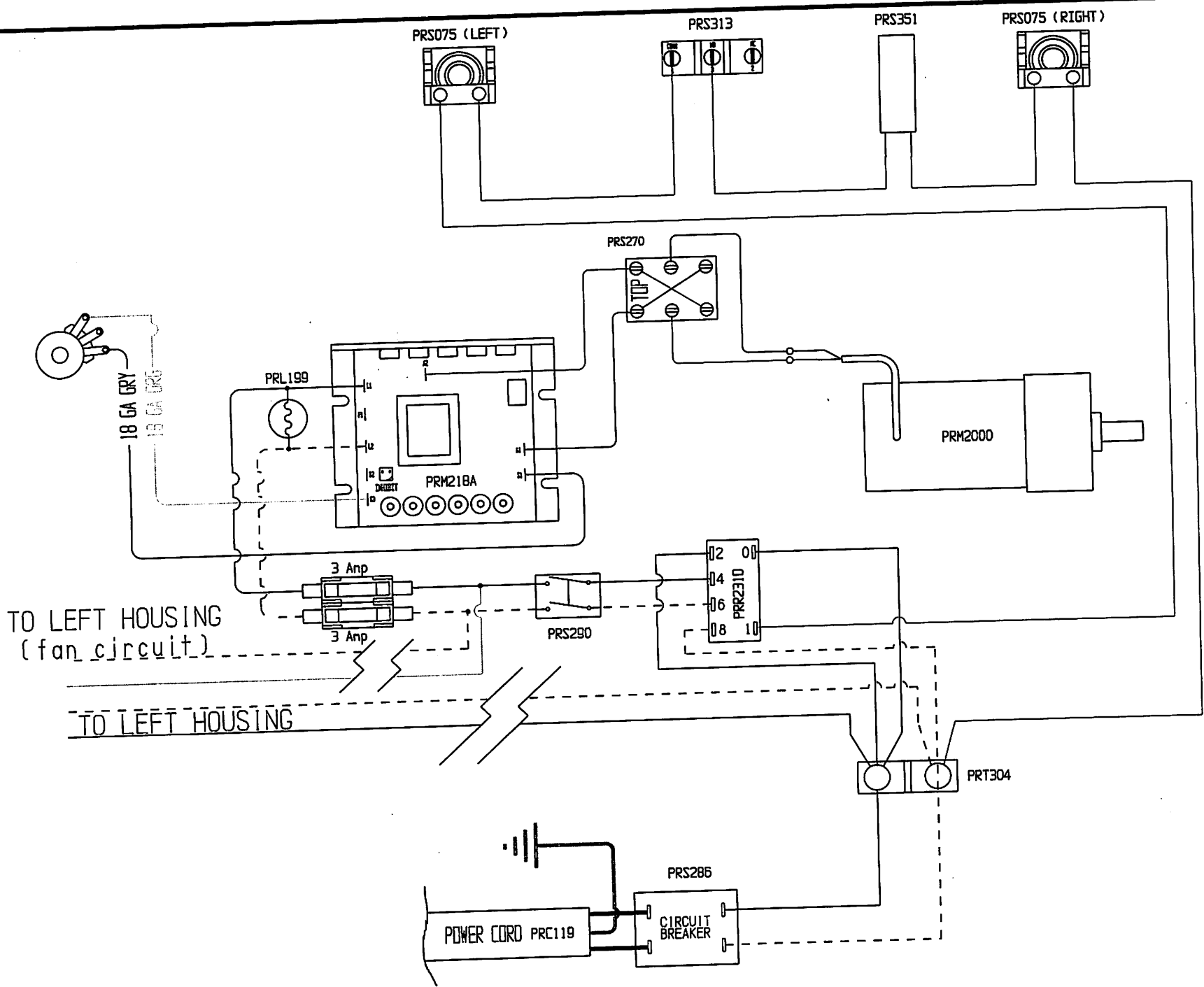
44) INSERT THE ASSEMBLED FEED TABLE. THIS WILL CONNECT THE PROXIMITY

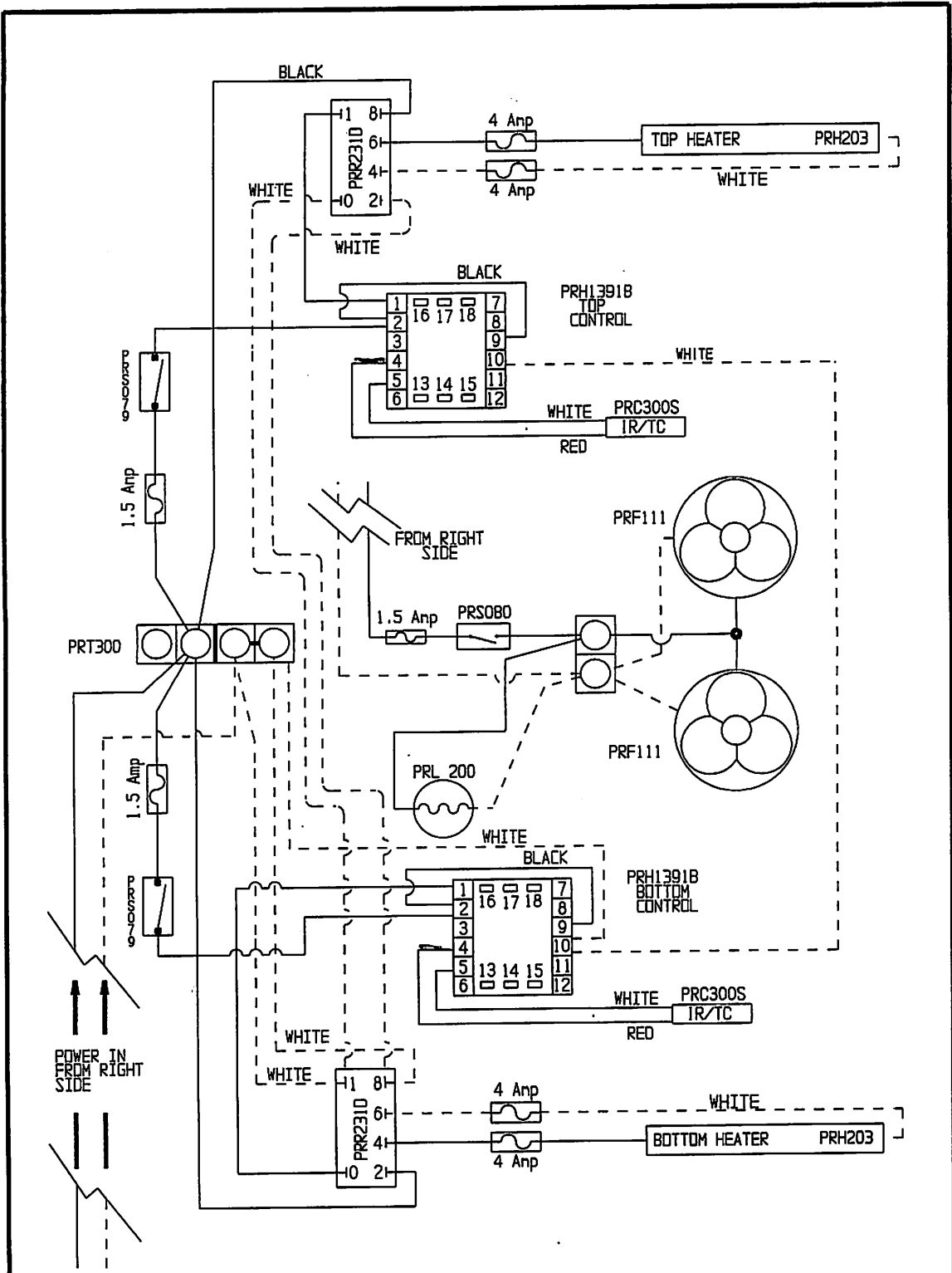


**SWITCH MAGNETS. THE MACHINE WILL NOT TURN ON WITH OUT THE SAFETY SHIELD AND FEED TABLE IN PLACE.**

- 45) **NOTE THE PHOTOGRAPHS OF THE COMPLETED H2O LAMINTOR, BOTH FRONT AND REAR IS SHOWN. NOTE SUPPLY ROLLS IN UPPER AND LOWER SUPPLY ROLL BRACKETS. THE FEED TABLE AND SAFETY SHIELD ARE IN POSITION.**



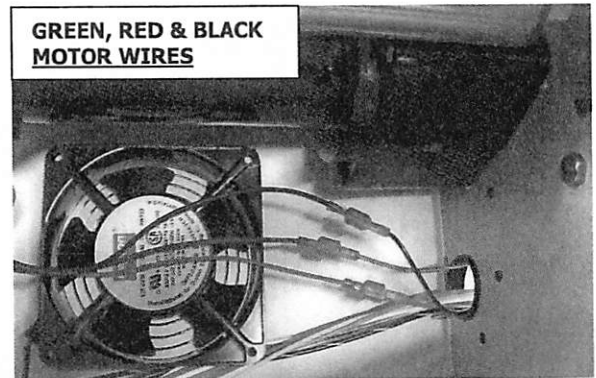






# H2O WIRING UPDATE: APRIL 2016

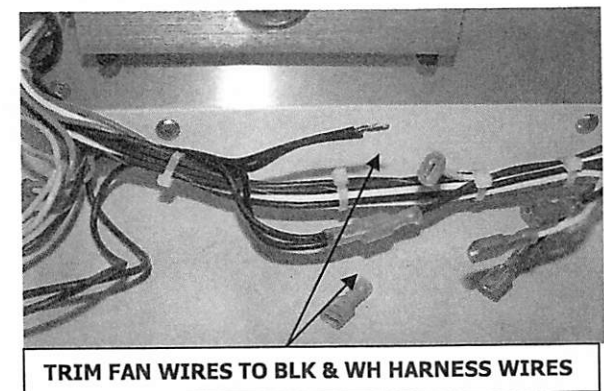
- 1) INSERT THE H2O WIRING HARNESS (PRW 363) FROM THE LEFT SIDE PANEL, DOUBLE WHITE AND BLACK WIRES EXIT RIGHT PANEL. WIRE BUNDLE RUNS BETWEEN FANS AND FRONT MOTOR COVER. TWIST THE MOTOR WIRES AND CRIMP (3) RED FULLY INSULATED MALE CONNECTORS (PRT330) ONTO THE RED, BLACK, AND GREEN GROUND WIRES. CONNECT THE RED AND BLACK WIRES TO THE RED AND BLACK HARNESS WIRES WITH FEMALE CONNECTORS AND CONNECT THE GREEN GROUND MOTOR WIRE TO A 12" GREEN GROUND JUMPER, 16 GAUGE. EXIT THE MOTOR WIRES THROUGH THE RIGHT SIDE PANEL.



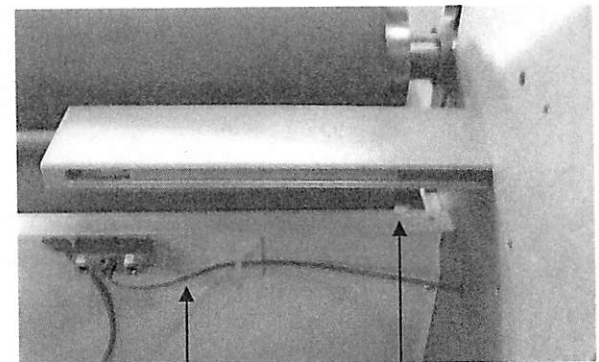
- 2) LOOSELY SECURE THE WIRE BUNDLE TO BOTTOM COVER WITH A CABLE TIES AND PRESS CLIPS BETWEEN SNAP BUSHINGS. AFTER BOTH SIDES ARE WIRED, THIS BUNDLE WILL BE TIGHTENED.



- 3) ORIENT FAN WIRES BETWEEN FRONT MOTOR COVER AND FANS. EXIT FAN WIRES THROUGH LEFT SIDE PANEL. MEASURE WIRES EVENLY TO MEET MALE HARNESS CONNECTIONS ON WHITE AND BLACK WIRES. SNIP EXTRA FAN WIRE OFF. SPLIT BOTH FAN WIRES AND TWIST ONE SPLICE FROM EACH FAN WIRE TOGETHER. CRIMP BOTH WIRE TWISTS WITH A BLUE INSULATED FEMALE. CONNECT TO HARNESS WHITE AND BLACK WIRES.



- 4) THE LOWER BROWN SENSOR WIRE EXTENDS ACROSS THE MOTOR COVER AND THROUGH THE OPENING IN THE LEFT SIDE PANEL. ADHERE A PRESS CLIP BELOW THE BOTTOM COVER LIP AND CABLE TIE THE SENSOR WIRE.

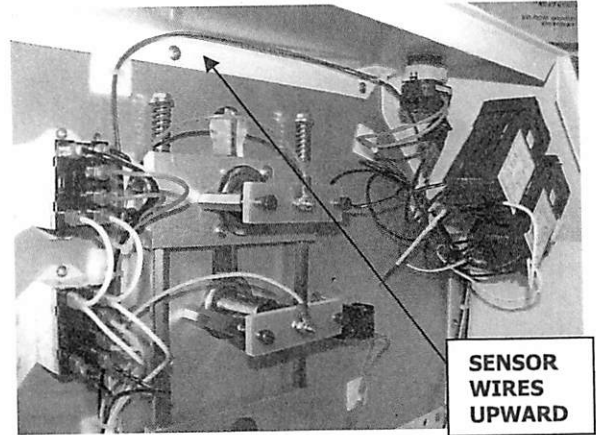


- 5) THE UPPER BROWN SENSOR WIRE ALREADY EXITS THE LEFT SIDE PANEL.

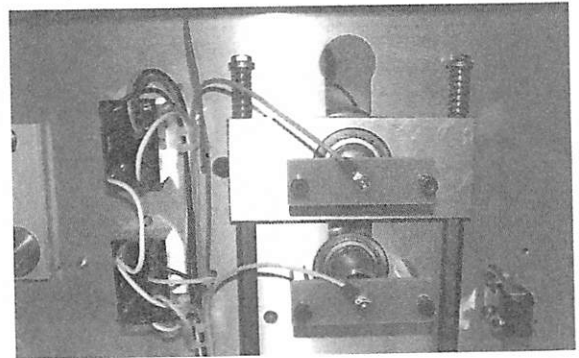
- 6) POSITION SENSOR WIRES UPWARD AND ACROSS THE TOP OF THE HOUSING, TO THE CHROMALOX HEAT CONTROLLERS. USE PRESS CLIPS AND CABLE TIES TO

SECURE TO THE HOUSING. DO NOT STRESS THE WIRES BY PULLING TOO TIGHTLY OR RUBBING ON SIDE PANEL.

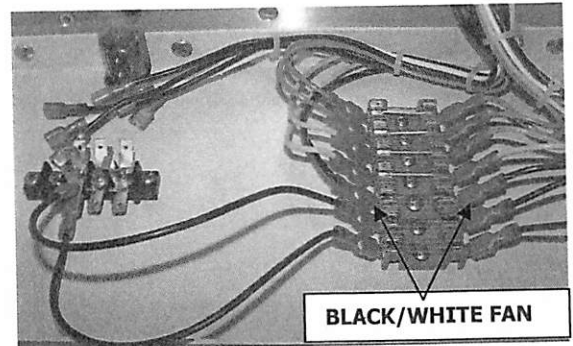
- 7) REMOVE #8/#10 HEX NUT ON TOP AND BOTTOM LEFT SIDE HEATERS. A FLAT WASHER REMAINS ON THE HEATER THREADS. ADD THE ORANGE WIRE WITH A BLUE RING CONNECTOR TO THE TOP HEATER. POSITION THE WIRE UPWARD AND SECURE WITH (2) #8/#10 HEX NUTS. USE A NUT DRIVER TO TIGHTEN. THE OTHER ORANGE END CONNECTS TO LEFT SIDE 4 AMP FUSE.



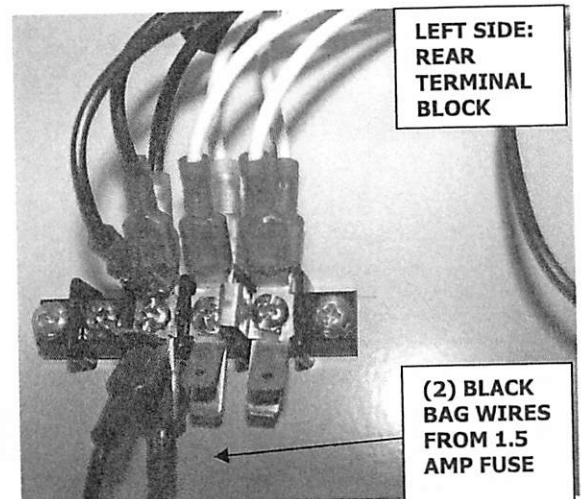
- 8) REPEAT THIS PROCEDURE WITH THE YELLOW RING WIRE CONNECTING IT TO THE BOTTOM HEATER, ON THE OUTSIDE OF THE BOTTOM INSULATOR PLATE ~~USING 10-24 X 1 SHCS RACK 7~~. A FLAT WASHER ON THE INSIDE OF THE RING CONNECTOR. POSITION WIRE UPWARD AND SECURE WITH (2) #8/#10 HEX NUTS. A PRESS CLIP AND CABLE TIE SHOULD HOLD THE WIRE BUNDLE LOCATED RIGHT OF THE TWO RELAYS.



- 9) THE RIGHT SIDE HEATER WIRES ARE CONNECTED THE SAME WAY. THEIR WIRES RUN THROUGH THE BOTTOM MOTOR COVER AND ARE CONNECTED TO THE LEFT SIDE 4 AMP FUSES.



- 10) LEFT SIDE FROM HARNESS WIRE FUSES; INNER (2) 4 AMP FUSES WITH ORANGE, NEXT (2) 4 AMP FUSES WITH YELLOW, BLACK/WHITE WIRES TO BOTH SIDES OF THE INNER 1.5 AMP FUSE, BY YELLOW WIRES. CONNECT (2) BLACK HARNESS WIRES TO RIGHT/FRONT 1.5 AMP FUSES CONTINUING TO HEAT SWITCH POSTS.

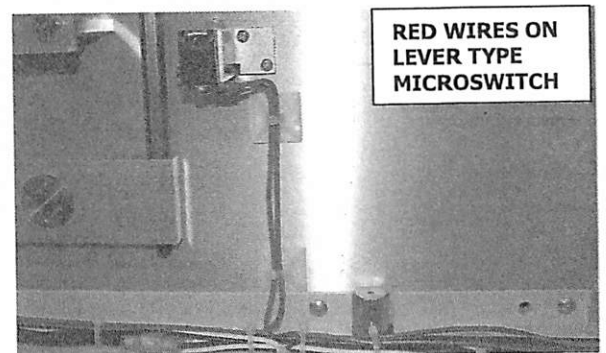
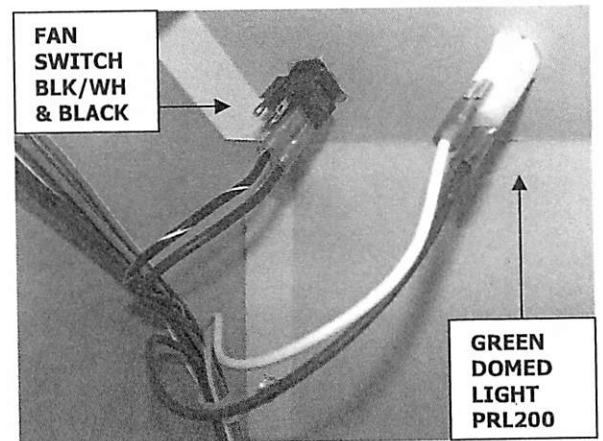
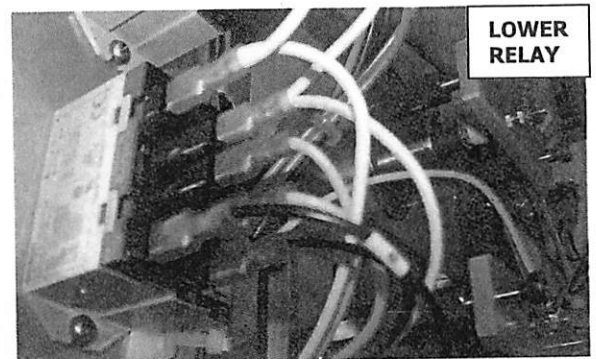
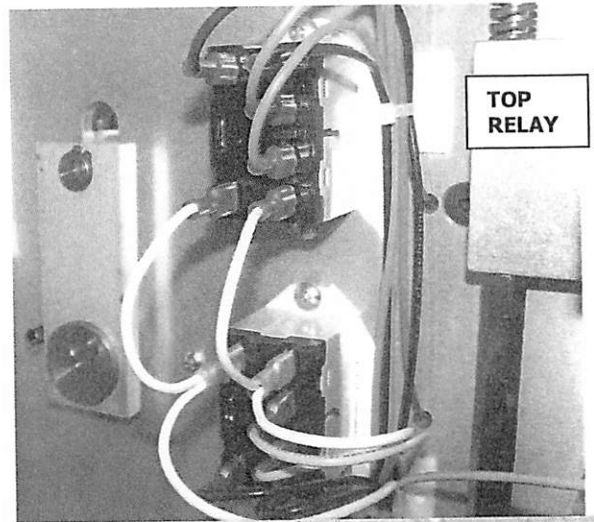


- 11) FROM A SEPARATE BAG CONNECT THE (2) BLACK WIRES WITH RED FEMALE CONNECTORS BETWEEN THE (2) REAR FACING 1.5 AMP FUSES AND THE OUTER REAR 180 AND 45 DEGREE TERMINAL POSTS ON TERMINAL BLOCK.

- 12) COMPLETE REAR TERMINAL BLOCK WITH HARNESS WIRES. THE (3) BLACK WIRES CONNECT TO REAR, INNER 180, 45 AND 90 DEGREE POSTS AND THE (4) WHITE

WIRES CONNECT TO POSTS WITH  
TERMINAL BLOCK JUMPER.

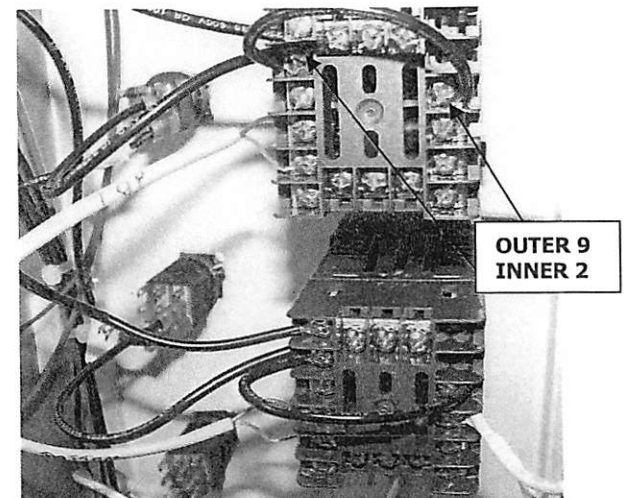
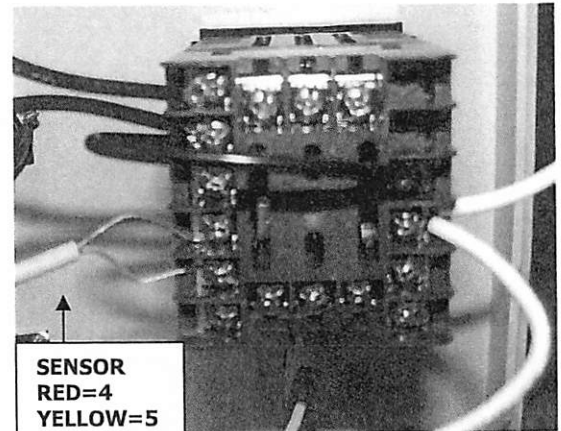
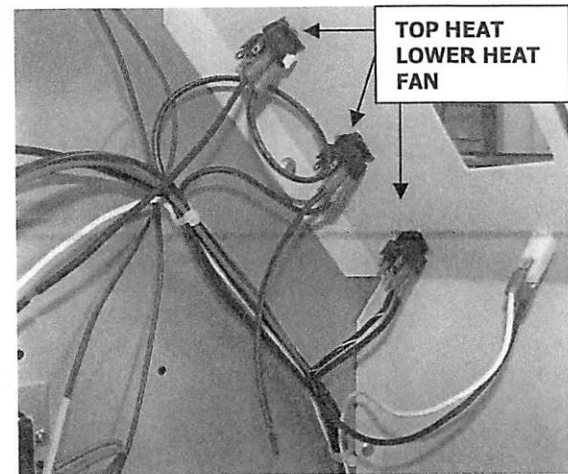
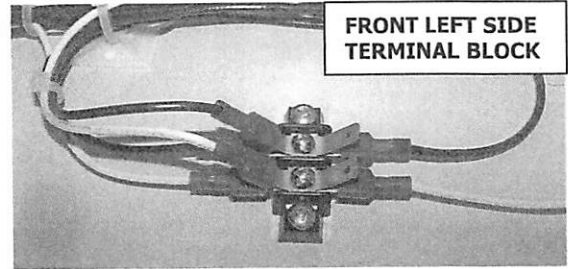
- 13) **LEFT SIDE** USE MULTIMETER "BEEP" TO IDENTIFY WIRES. WIRE THE TOP RELAY #8 WITH BLACK HARNESS WIRE WHICH CONTINUES TO REAR TERMINAL BLOCK. CONNECT (2) ORANGE WIRES ON THE MIDDLE RIGHT SIDE POSTS #6 & #4. RELAY #2 AND #0 POSTS TERMINATE WITH THE WHITE JUMPER FROM LOWER RELAY. UPPER RELAY #1 CONNECTS TO BLACK OPEN END HARNESS WIRE THAT CONTINUES TO TOP CHROMALOX #1.
- 14) **LOWER RELAY** HAS (2) YELLOW HEATER WIRES ON MIDDLE POSTS #6 AND #4. RELAY #2 CONNECTS WITH BLACK HARNESS WIRE GOING TO TERMINAL BLOCK. RELAY #0 IS BLACK OPEN END WIRE GOING TO BOTTOM CHROMALOX #1. RELAY #8 AND #1 HAVE DOUBLED WHITE WIRES WITH JUMPER TO TOP RELAY & REAR TERMINAL BLOCK.
- 15) **LEFT SIDE** ON FRONT HOUSING FROM 1.5 AMP FUSE CONNECT HARNESS BLACK/WHITE WIRE WITH A SMALL FEMALE END TO THE **MIDDLE OUTER** GREEN FAN SWITCH POST (PRS808). CONNECT BLACK HARNESS WIRE WITH IT FROM FRONT TERMINAL BLOCK TO THE **LOWER OUTER** FAN SWITCH POST.
- 16) FROM FRONT TERMINAL BLOCK; CONNECT HARNESS WHITE AND BLACK WIRES WITH RED FEMALE (PRT339) ENDS TO GREEN DOMED LIGHT (PRL200), WHITE WIRE IS UPWARD.
- 17) **LEFT SIDE** ON THE WIRING HARNESS ARE (2) FORKED RED WIRES THAT CONNECT TO THE LEVER TYPE MICROSWITCH. USE OUTER THE AND MIDDLE SCREW ON UNDERSIDE OF THE LEVER TYPE MICROSWITCH. PLACE (2) PRESS CLIPS ON SIDE PANEL TO FORM A CLEAN LINE FOR RED WIRES FROM HARNESS BUNDLE.
- 18) FROM THE HARNESS, CONNECT THE BLACK AND WHITE WIRES THAT MEASURE TO THE FRONT TERMINAL





BLOCK LOCATED UNDER THE CHROMALOX HEAT CONTROL. THE (3) WHITE WIRES ARE OUTWARD, (3) BLACK WIRES ARE INWARD.

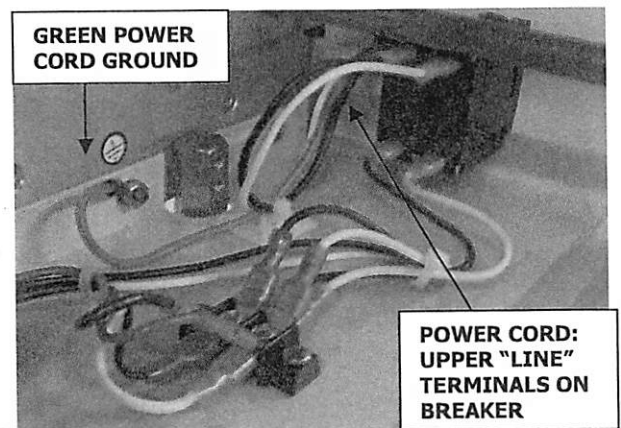
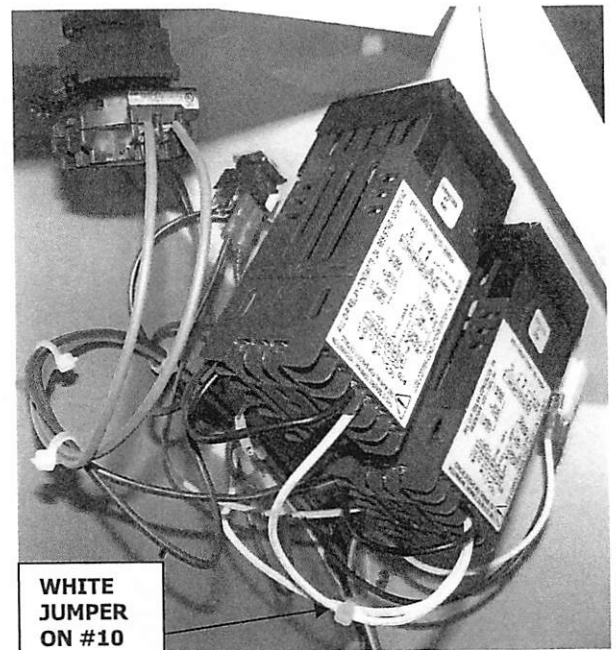
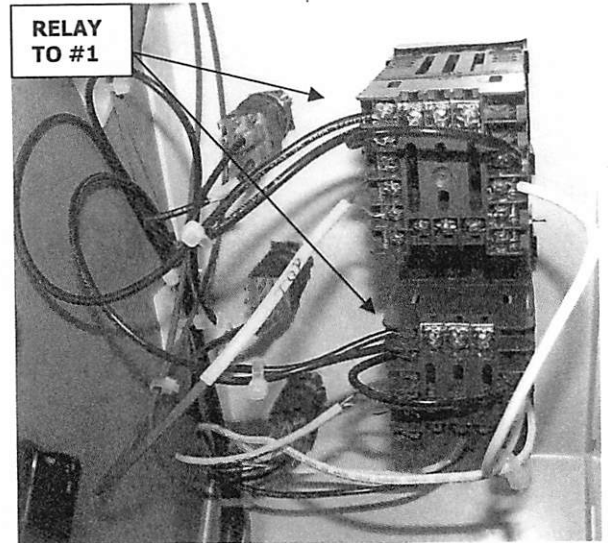
- 19) CONNECT BOTH OPEN ENDED RED WIRES TO THE LEFT SIDE EMERGENCY STOP. ONE WIRE IS FROM THE LEVER TYPE MICROSWITCH, AND THE OTHER FROM RIGHT SIDE RELAY #1 ON THE BOTTOM HOUSING. LOOSEN SCREWS ON EMERGENCY STOP AND INSERT THE OPEN WIRES UNDER SCREW PANEL, TIGHTENING SCREWS AND PANEL ON OPEN WIRES. EITHER WIRE CAN CONNECT TO EITHER SCREW. REPLACE YELLOW CAP ON LEVER.
- 20) FROM 1.5 AMP FUSES CONNECT BLACK HARNESS WIRES WITH SMALL FEMALES TO TOP AND BOTTOM HEAT SWITCHES LOWER, OUTER POSTS ON BOTH.
- 21) ALIGN (2) CHROMALOX HEAT CONTROL 6040 AND INSERT INTO LEFT HOUSING. LOOSEN CHROMALOX INNER SCREWS #4 AND #5. TWIST LOWER HEATER RED SENSOR WIRE CLOCKWISE. INSERT RED WIRE BENEATH SCREW PANEL ON NEGATIVE TERMINAL #4, TIGHTEN SCREW. TWIST YELLOW SENSOR WIRE CLOCKWISE AND INSERT BENEATH PANEL ON POSITIVE TERMINAL #5. REPEAT THIS PROCEDURE WITH UPPER HEATER SENSOR WIRES AND THE UPPER CHROMALOX SCREWS #4 AND #5.
- 22) FROM SEPARATE BAG CONNECT A 4" BLACK OPEN ENDED JUMPER TO OUTER CHROMALOX SCREW #9. THE OTHER JUMPER END DOUBLES WITH A BLACK 5 1/2" OPEN ENDED AND FEMALE JUMPER ON INNER #2. SECURE BOTH WIRES BENEATH PANEL #2. THE FEMALE JUMPER END ON #2 CONNECTS TO TOP RED HEAT SWITCH MIDDLE OUTER POST. REPEAT THIS PROCEDURE WITH LOWER CHROMALOX AND BLACK JUMPERS. LOWER CHROMALOX #2 DOUBLES AND 5 1/2" JUMPER CONNECTS TO LOWER RED HEAT SWITCH MIDDLE OUTER POST.
- 23) CONNECT OPEN ENDED BLACK HARNESS WIRE FROM TOP RELAY #1 TERMINAL



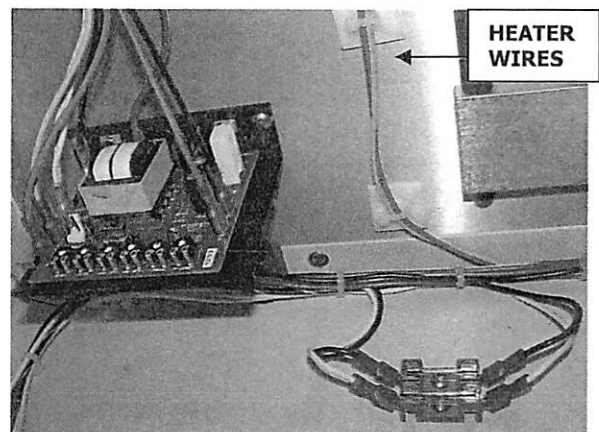
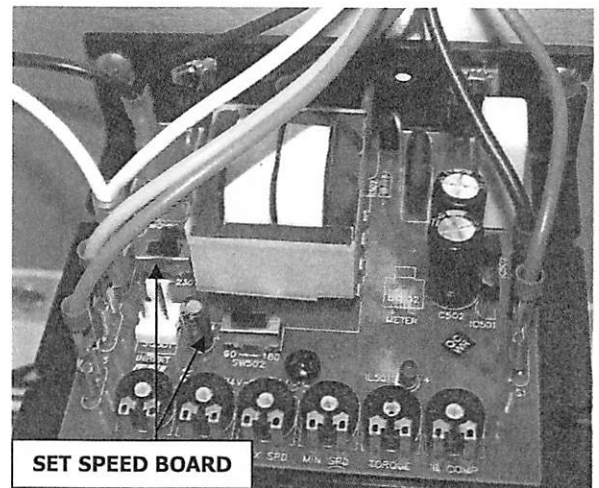
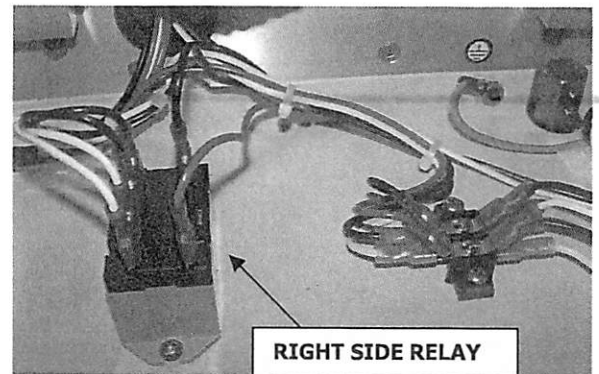
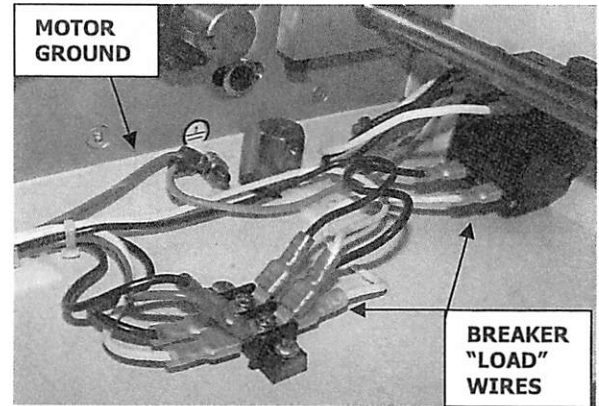


POST UNDER PLATE OF CHROMALOX #1 SCREW ON TOP CHROMALOX AND OPEN ENDED BLACK WIRE FROM LOWER RELAY #0 UNDER PLATE ON BOTTOM CHROMALOX SCREW #1.

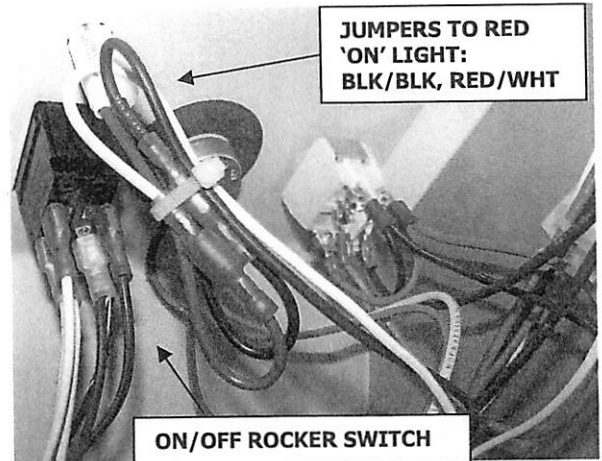
- 24) FROM SEPARATE BAG CONNECT OPEN ENDED WHITE WIRE UNDER UPPER HEAT CHROMALOX #10 SCREW. CONNECT THE OTHER OPEN END OF THIS WIRE TO THE LOWER HEAT CHROMALOX #10 SCREW, ***DOUBLED*** WITH AN OPEN ENDED WHITE HARNESS WIRE. SECURE BOTH OF THESE WHITE WIRES BENEATH LOWER CHROMALOX #10 SCREW.
- 25) CAREFULLY POSITION CHROMALOX WIRES. THE 6040 CHROMALOX HAS NO DOORS COVERING SCREW PANELS, SCREWS REMAIN VISABLE.
- 26) CAREFULLY ARRANGE THE WIRES IN A WAY THAT DOES NOT STRESS ANY CONNECTIONS. ALSO AVOID ALL MOVING PARTS FROM THE PRESSURE PLATES, TO AVOID WEAR ON WIRES. THIS CONCLUDES THE LEFT SIDE WIRING PROCESS.
- 27) INSERT PRESS CLIPS ALONG THE INNER HOUSING AND NEATLY CABLE TIE LEFT SIDE WIRES.
- 28) WIRE THE ***RIGHT SIDE*** HOUSING AS FOLLOWS. PLACE A PRESS CLIP BETWEEN THE BOTTOM HOUSING INNER LIP AND THE BREAKER. CONNECT THE GREEN POWER CORD GROUND WIRE TO THE BOTTOM HOUSING LIP IN FRONT OF REAR MOUNTING LEG WITH A #10 STAR WASHER, THE RING CONNECTOR AND A #10 KEPS NUT. ARRANGE THE EXCESS GROUND WIRE TO TIE COMFORTABLY.
- 29) THE BREAKER IS WIRED WITH BLUE FULLY INSULATED CONNECTORS ON 16 GAUGE WIRE. THE BLACK AND WHITE POWER CORD WIRES CONNECT TO THE UPPER "LINE" TERMINALS. THE WHITE TO THE OUTER "LINE" TERMINAL AND BLACK TO "INNER" LINE TERMINAL.



- 30) THE LOWER TERMINAL POSTS ON THE BREAKER CARRY THE "LOAD." FROM A SEPARATE BAG CONNECT THE BLACK 16 GAUGE WIRE WITH BLUE FEMALE CONNECTORS BETWEEN THE LOWER INNER BREAKER "LOAD" TERMINAL AND THE INNER 180 DEGREE TERMINAL POST. THE WHITE 16 GAUGE WIRE CONNECTS THE OUTER BREAKER "LOAD" TERMINAL POST WITH THE OUTER 180 DEGREE TERMINAL BLOCK POST.
- 31) SECURE GREEN MOTOR GROUND JUMPER OVER POWER CORD GROUND WITH #10 STAR AND #10 HEX NUT.
- 32) FINISH REAR 2-POLE TERMINAL BLOCK. BLACK HARNESS WIRES (3): RELAY # 0, #2 & FRONT CONNECT INWARD. WHITE WIRES (2) OUTWARD. RED HARNESS WIRE CONNECTS TO THE OUTER, FRONT 45 DEGREE POST, ON RELAY SIDE.
- 33) RELAY: CONNECT #4 WITH BLACK HARNESS WIRE FROM ON/OFF AND (2) BLACK WIRES FROM RIGHT/REAR TO RELAY #0, #2. CONNECT (2) WHITE WIRES ON RELAY #6 AND #8. RED WIRE FROM LEFT SIDE ONTO RELAY #1.
- 34) CHECK THE SETTING ON THE MINARIK SPEED CONTROL BOARD SWITCHES: SET AT 230 AND 180 POSITION.
- 35) ARRANGE HARNESS BUNDLE UNDER SPEED BOARD, WITH ONLY YELLOW AND ORANGE HEATER WIRES UP SIDE PANEL.
- 36) CONNECT THE (3) POTENTIOMETER WIRES TO THE SPEED CONTROL AS FOLLOWS: ORANGE WIRE CONNECTS TO "S3" YELLOW TO "S2" GRAY TO "S1".
- 37) TERMINATE WHITE DOUBLED WIRE WITH 11" JUMPER AND BLUE FIF CONNECTOR ON THE MINARIK SPEED CONTROL POST "L2." CONNECT THE 11" WHITE JUMPER WIRE TO THE RED WIRE FROM THE RED "ON" LIGHT (PRL199) LOCATED ON THE FRONT UPPER HOUSING. TERMINATE THE BLACK DOUBLED WIRE WITH A 11" JUMPER AND A BLUE FIF CONNECTOR ONTO SPEED CONTROL POST "L1." CONNECT



THE BLACK JUMPER WIRE TO THE BLACK WIRE FROM THE RED "ON" LIGHT.

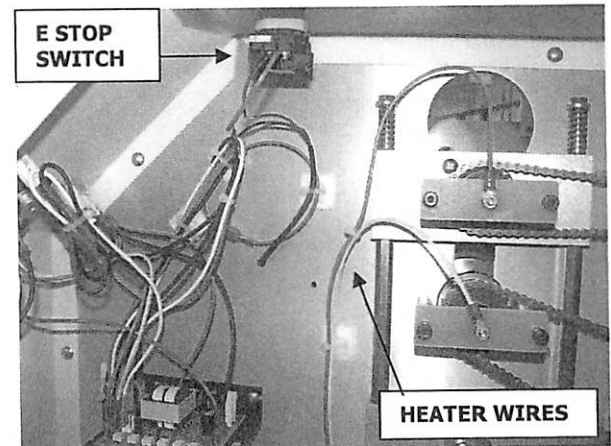


ON/OFF  
h1 & h2

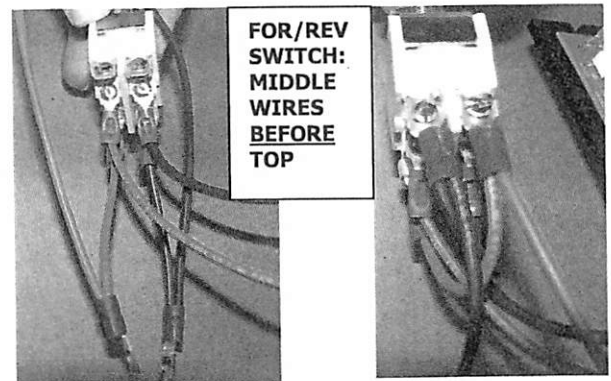
38) TERMINATE THE RIGHT SIDE INNER 3 AMP FUSE WITH (2) BLACK HARNESS WIRES AND THE OUTER 3 AMP FUSE WITH (2) WHITE HARNESS WIRES.

39) TERMINATE ON/OFF SWITCH (PRS290): LOWER, INNER TERMINAL POST WITH DOUBLED BLACK AND BLACK/WHITE WIRES. TERMINATE THE LOWER, OUTER POST WITH DOUBLED WHITE WIRES. TERMINATE THE UPPER INNER POST WITH BLACK HARNESS WIRE AND THE UPPER OUTER POST WITH WHITE WIRE.

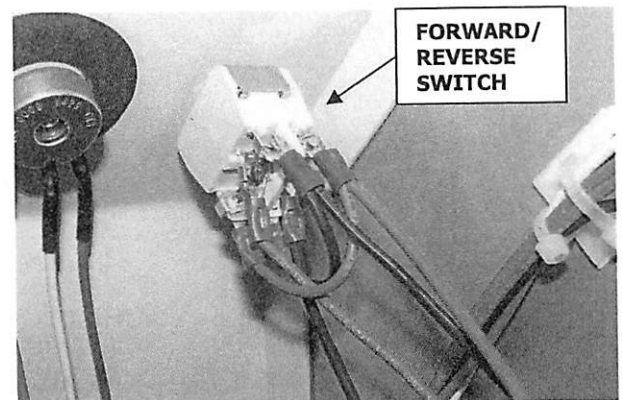
40) CONNECT THE TOP ORANGE HEATER WIRE WITH A RING CONNECTOR AND THE BOTTOM YELLOW HEATER WIRE WITH A RING CONNECTOR USING: FLAT WASHERS, WIRE RING AND (2) #8 OR #10 HEX NUTS ON EACH END. USE (2) PRESS CLIPS ON SIDE PANEL AND TIE.



41) RUN THE RED PROXIMITY SWITCH MAGNET WIRES, WITH INSULATION TUBING ON THEM UPWARD ON THE SIDE PANEL. SECURE WITH PRESS CLIP AND CABLE TIE. INSERT ONE OF THE PROXIMITY SWITCH RED WIRES INTO THE EMERGENCY SWITCH ACTUATOR. CRIMP A RED FIF CONNECTOR ONTO THE OTHER PROXIMITY SWITCH WIRE AND CONNECT IT TO THE RED HARNESS WIRE WITH A RED FIF MALE CONNECTOR. CONNECT THE RED OPEN ENDED HARNESS WIRE TO THE REMAINING EMERGENCY SWITCH SCREW. LOOP AND SECURE THE RED PROXIMITY SWITCH AND EMERGENCY SWITCH WIRES. TIE AND PRESS CLIP WIRES, BUT DO NOT STRESS THE CONNECTIONS.

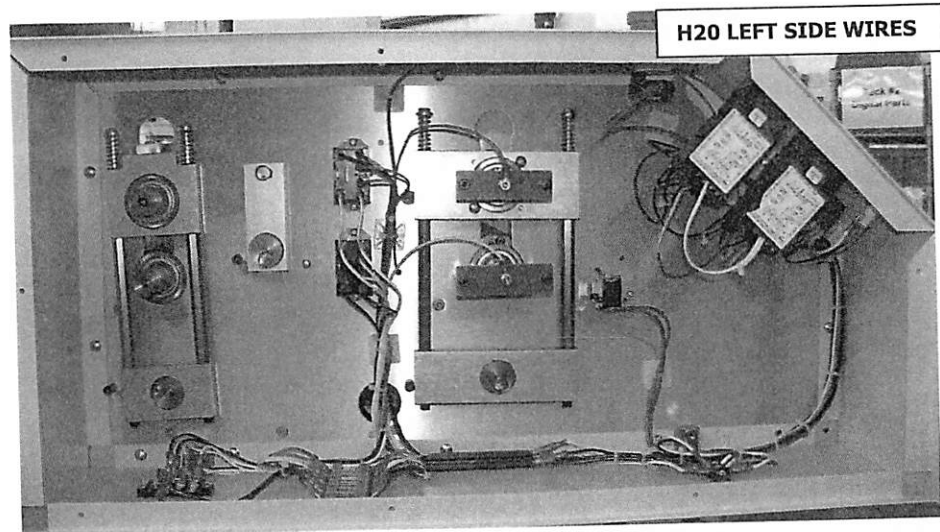
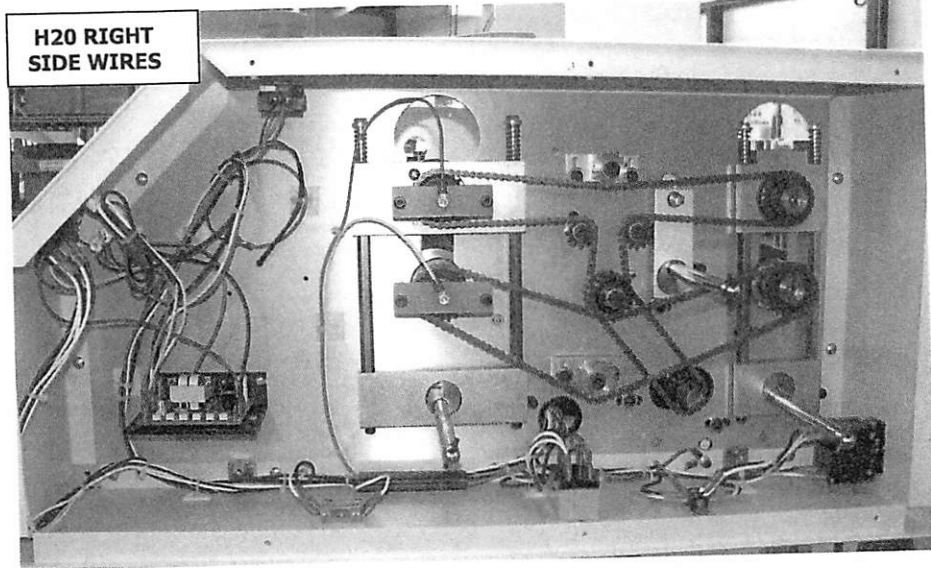
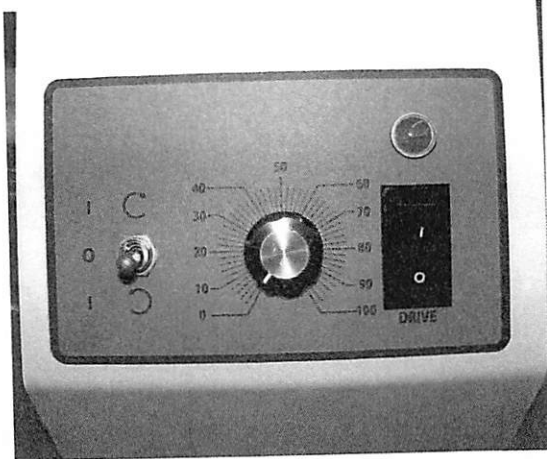
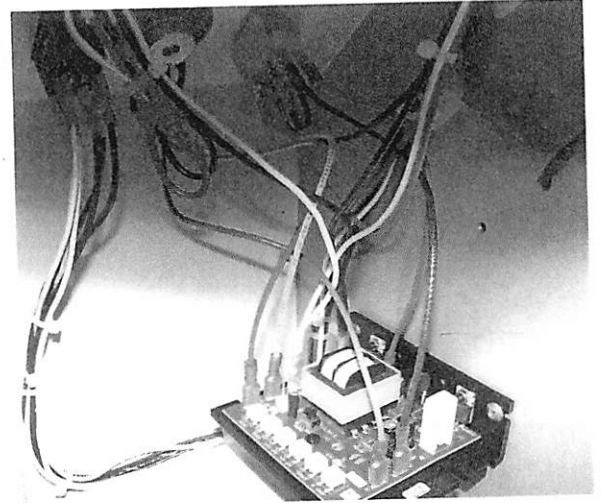


42) KEYWAY DOWNWARD, USE FORKED RED AND BLACK HARNESS WIRES TO CONNECT \*\*MIDDLE SCREWS ON THE FORWARD/REVERSE SWITCH; RED WIRE OUTWARD, BLACK BY SIDE PANEL. DIAGONALLY, CONNECT THE INNER TOP DOUBLED RED SWITCH WIRES, THEN THE RED JUMPER TO MINARIK SPEED CONTROL POST "A2." DIAGONALLY CONNECT THE OUTER TOP BLACK





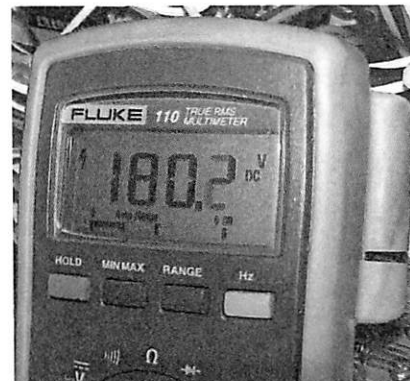
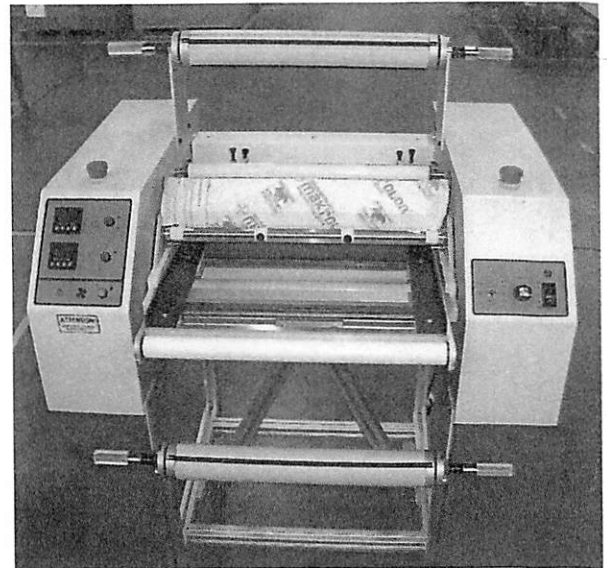
**DOUBLED FORWARD/REVERSE SWITCH WIRES, THEN THE BLACK JUMPER TO MINARIK SPEED CONTROL POST "A1." SECURE FORWARD/REVERSE SWITCH ON OUTER HOUSING WITH LARGER HEX NUT INSIDE, SMALLER OUTSIDE.**



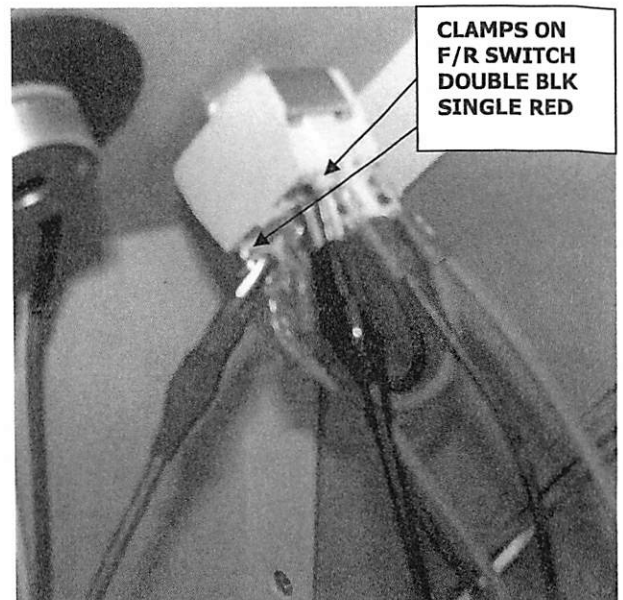


## H2O TESTING: UPDATED APRIL 2016

- 1) THE SAFETY SHIELD AND FEED TABLE MUST BE IN PLACE BEFORE PLUGGING H2O POWER CORD INTO 220V POWER CIRCUIT. THIS WILL ACTIVATE THE LEVER TYPE MICROSWITCH AND PROXIMITY SWITCH MAGNETS.
- 2) CHECK THAT *ALL SWITCHES ARE OFF*. WHEN YOU PLUG IN THE H2O YOU WILL HEAR THE RELAY TAB CLICK IN.
- 3) SNAP (4) FEED TABLE PLATES (PFT20 004.4) BETWEEN EDGE GUIDES.
- 4) ENGAGE BREAKER, DRIVE SWITCH, F/R AND SPEED. TEST FUNCTION OF RIGHT AND LEFT SIDE EMERGENCY STOPS TO SEE THAT THEY HALT THE RELAY.
- 5) LIFT UP SAFETY SHIELD TO DISCONNECT MAGNETS AND CHECK FUNCTION.
- 6) REMOVE FEED TABLE TO DISCONNECT PROXIMITY SWITCH MAGNET.
- 7) CHECK ROLL MOVEMENT DIRECTION BACKWARD AND FORWARD. CHECK SPEED. ALWAYS TURN DRIVE SWITCH OFF WHEN ADJUSTING DIRECTION.
- 8) DEPRESS GREEN FAN SWITCH, CHECK FAN FUNCTION AND DIRECTION.
- 9) TO SET THE MAXIMUM MOTOR SPEED OF 180: HAVE THE BREAKER & DRIVE SWITCH OFF, THE POTENTIOMETER DOWN, AND THE FORWARD/REVERSE SWITCH IN THE NEUTRAL POSITION. CLAMP RED AND BLACK ALLEGATOR CLIPS ONTO LIKE COLOR UPPER, DOUBLE BLACK & LOWER, SINGLE RED FOR/REV WIRE SCREWS. CONNECT BLACK AND RED TEST LEADS TO LIKE COLOR ALLEGATOR CAMPS. TURN ON BREAKER & DRIVE SWITCH. PUSH FOR/REV SWITCH INTO *FORWARD* POSITION, INCREASE THE POTENTIOMETER TO FULL SPEED. SET VOLT METER ON DC (DIRECT CURRENT).



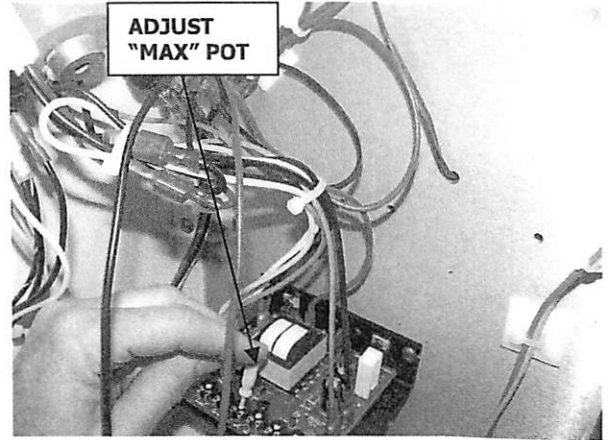
USE MULTI-METER TO SET MOTOR SPEED AT 180



CLAMPS ON F/R SWITCH DOUBLE BLK SINGLE RED

ALLIGATOR CLIPS MUST NOT TOUCH EACH OTHER. THE VOLT METER OPTIMUM READING IS 180 VOLT. AN ACCEPTABLE RANGE IS 180. TO 180.4. THE 180 EQUILS 13' PER MINUTE. DO NOT LET JEWELRY TOUCH METAL INSIDE HOUSING AS YOU TEST. SHOCKING!!

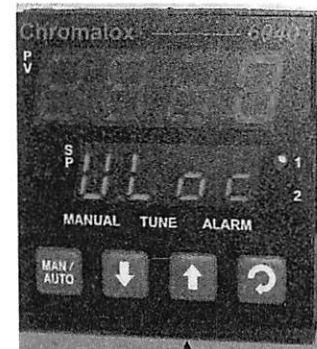
- 10) **TO ADJUST MOTOR SPEED:** USE "MAX" POT WITH TRIMMING TOOL. DO NOT ALLOW ANY METAL TO TOUCH YOUR SKIN!!! ADJUST UNTIL YOU HAVE REACHED ACCEPTABLE RANGE 180V.



- 11) **TO SET THE CHROMALOX 6040 HEAT CONTROLS WITH A K-TYPE SENSOR:** RUBBER ROLLS IN 'DOWN' POSITION. FIRST DEPRESS THE TOP RED HEAT SWITCH BUTTON TO TURN ON CHROMALOX TOP HEAT CONTROL. THE CHROMALOX SCREENS WILL LIGHT UP WITH RED AND GREEN "8.8.8.8" APPEARING. AFTER CHROMALOX CONFIGURES "Goto" IN RED AND "ConF" IN GREEN APPEAR IN SCREEN. H2O'S HAVE K-TYPE SENSORS.



- 12) DEPRESS *SELECT* BUTTON ON LOWER RIGHT, WHICH HAS A CLOCKWISE ROTATION SYMBOL. THIS WILL TAKE YOU TO GREEN "ULoc" AND RED "0".



- 13) DEPRESS THE *ARROW UP* KEY UNTIL YOU REACH "20" WHICH IS A SECURITY LOCK CODE NUMBER. NUMBER "20" WILL UNLOCK THE CODE AND ALLOW YOU TO CHANGE INPUT.

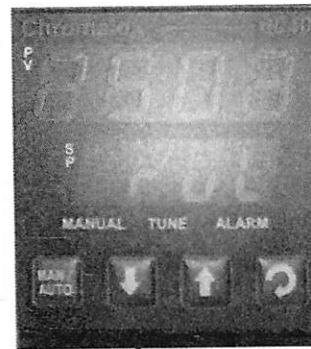
- 14) DEPRESS *SELECT* BUTTON. NOW YOU ARE IN THE MENU. GO TO INPUT MODE WHICH IS REPRESENTED BY RED "Pt.F" AND "InPt" IN THE GREEN SCREEN.



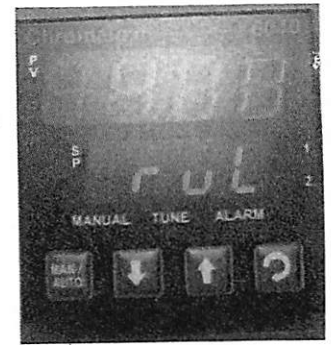
- 15) ARROW UP TO "KF" IN RED SCREEN. DO NOT GO PAST "KF" OR YOU REACH "K.F" WHICH WILL SHOW DECIMAL POINTS. THE K IS FOR A K-TYPE SENSOR AND IT LOOKS LIKE A BACKWARDS 4. THE SCREEN WILL BE FLASHING, DEPRESS *MAN/AUTO* TO ENTER AND SAVE "KF".

- 16) TO SET THE MAXIMUM TEMPERATURE FROM 2503 TO 400 F: DEPRESS THE

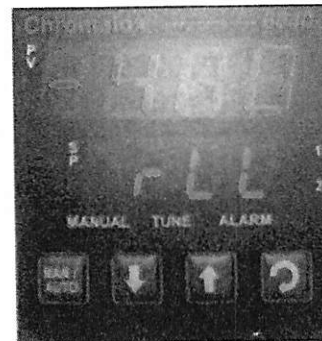
- SELECT** button, "2503" shows in red and "ruL" shows in green. Then depress the **ARROW DOWN** key until 400 is reached in the red screen. The numbers move quickly. "400" will be flashing and to set/enter the high temperature at 400 depress the **MAN/AUTO** button on the lower left.
- 17) **TO CHECK THE LOWER HEAT LIMIT OF THE 6040 CHROMALOX HEAT CONTROLS:** DEPRESS LOWER RIGHT **SELECT** button. IF IT READS -400 RAISE TO "0" DEPRESS **MAN/AUTO**, THEN **SELECT** button AGAIN. \*\* DEPRESS **MAN/AUTO** ENTER KEY ONLY IF YOU CHANGE A READING.
  - 18) IF THE CONTROL DOES NOT GO TO THE LOWER LIMIT OF -400, CHECK THE UPPER/LOWER CONFIGURATIONS ACCORDING TO MANUAL DIAGRAM.
  - 19) TO CHANGE MODES ON HEAT CONTROL, DEPRESS AND HOLD **SELECT** button, THEN DEPRESS **ARROW UP** button. THE SCREEN GOES TO "ConF SLct". DEPRESS **ARROW UP** TO 'OPtr SLct" IN RED & GREEN SCREEN.
  - 20) DEPRESS **SELECT** TWICE. USE **UP/DOWN ARROW** TO REACH TEMPERATURE OF 240 FAHRENHEIT (CELCIUS 100.). DEPRESS **SELECT** TO SAVE 240 IN **SP** (SET POINT).
  - 21) LET BOTH HOT ROLLS REACH TEMPERATURE AND STABILIZE. USE PYROMETER ON TOP ROLL **BY UPPER SENSOR**. CALCULATE TEMPERATURE DIFFERENCE BETWEEN RED DISPLAY AND PYROMETER READING. ADJUST DISPLAY TO MATCH ROLL READING.
  - 22) **TO ADJUST HOT ROLL TEMPERATURE:** CHANGE MODES BY DEPRESSING AND HOLDING **SELECT**, AS YOU DEPRESS **ARROW UP** button. CONTINUE TO SCROLL THROUGH OPTIONS UNTIL "OPtr SLct" THEN **ARROW UP** UNTIL SCREEN READS SET UP "SEtP" IN RED AND "SLct" IN GREEN". DEPRESS THE **SELECT** button TO REACH "ULoc" IN THE GREEN SCREEN.



ARROW DOWN TO 400



MAN/AUTO=SAVE/ENTER



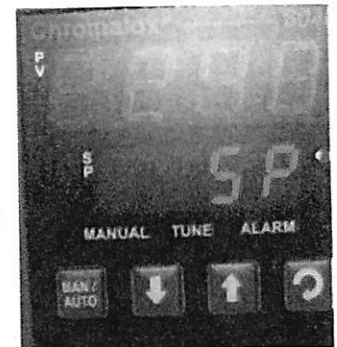
SELECT LOW == -400



CHANGING MODE



ARROW UP, SELECT



(SP) SET TEMP IN RED



SAVE (SP) IN GREEN



GO TO "ULoc" BY SELECT



23) ONCE IN THE "ULoc" SCREEN, **ARROW UP** TO "10" IN THE RED DISPLAY ABOVE "ULoc." NUMBER "10" UNLOCKS MENU FOR TEMPERATURE CHANGES. DEPRESS **SELECT** BUTTON TO ENTER '10'.



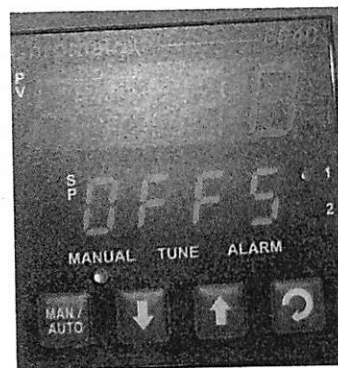
ENTER "10" WITH SELECT



DEPRESS SELECT

24) DEPRESS **SELECT** AGAIN. THE DISPLAY READS IN GREEN SCREEN "FilT" AND "2.0" IN RED SCREEN. DEPRESS **SELECT** AGAIN AND SCREEN READS "0" IN RED AND "OFFS" IN GREEN. \*\*\*AFTER THE FIRST CHANGE, SCREEN WILL READ PREVIOUS CHANGE NUMBER.

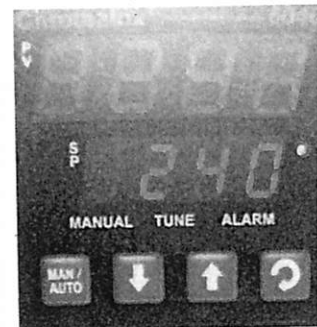
25) CHANGE CALCULATED TEMPERATURE VARIANCE WITH **ARROW UP/DOWN**. TO INCREASE TEMPERATURE OF HOT ROLL, DECREASE DISPLAY READING. DEPRESS **SELECT** AGAIN. THEN DEPRESS BOTH **SELECT** AND **ARROW UP** UNTIL SCREEN READS "ConF/SLCt" THEN (3) **ARROW UP** TO "OPtr SLCt". DEPRESS **SELECT** AND THE TEMPERATURE SCREENS RETURN.



ARROW - OR + AMOUNT

26) LET ROLLS STABILIZE AGAIN AND RECHECK WITH PYROMETER. A FIVE DEGREE DIFFERENCE IN EITHER DIRECTION IS ACCEPTABLE. THE GOAL IS AMBIENT RED CONTROL ON THE RUBBER ROLL TO MATCH DISPLAY.

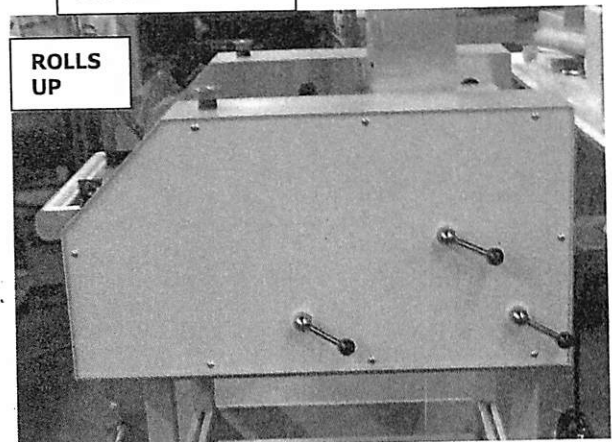
27) STABILIZE HEAT, USE PYROMETER TO RECHECK ROLL TEMPERATURE AGAINST AMBIENT DISPLAY READING. CALCULATE DIFFERENCE AND WRITE IT DOWN. DEPRESS **ARROW UP/DOWN** TO MATCH PYROMETER READING. USUALLY IT IS **ARROW DOWN**. TEMPERATURE VARIES A FEW DEGREES.



DEPRESS SELECT

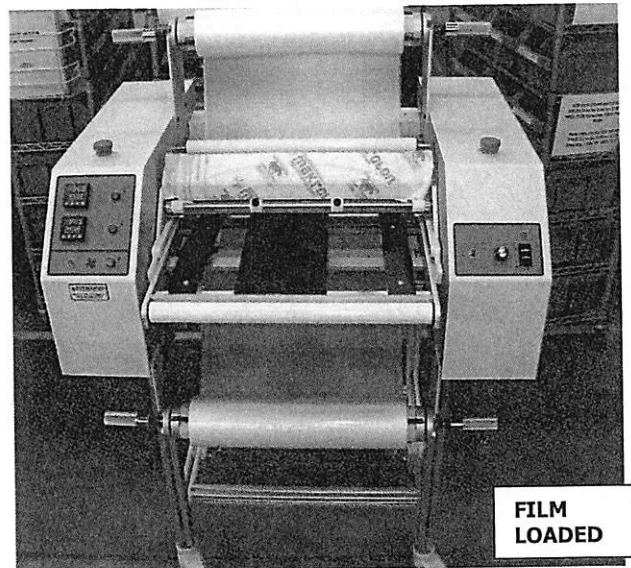
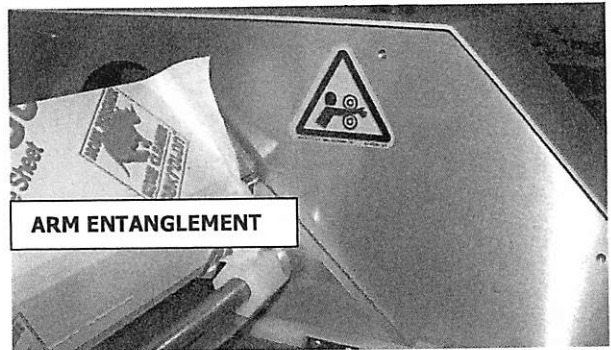
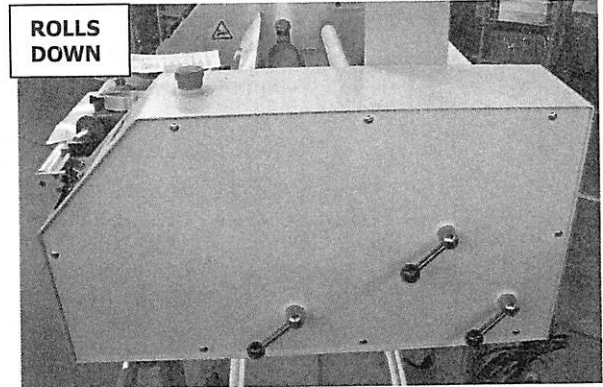
28) REPEAT COMPLETE PROCEDURE FOR BOTTOM CHROMALOX HEAT CONTROL.

29) HEAT TO TESTING TEMPERATURE OF 240 DEGREES. FILL OUT CUSTOMER'S LEDCO TEST -LAMINATION SHEET, JOB SHEET, FINAL TEST AND INSPECTION REPORT. LOAD AND TEST WITH 3 OR 10 MIL FILM WITH CAM SHAFT HANDLES DOWN AND LOCKED. RUN FILM VERY SLOWLY. LAMINATE THE CUSTOMER'S SAMPLE SHEET AND TRIM.

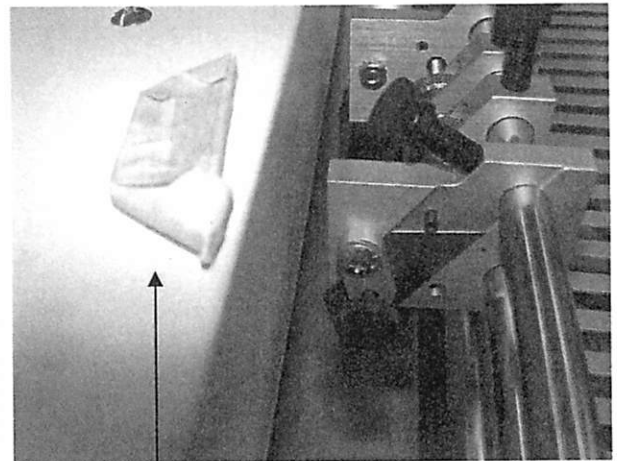
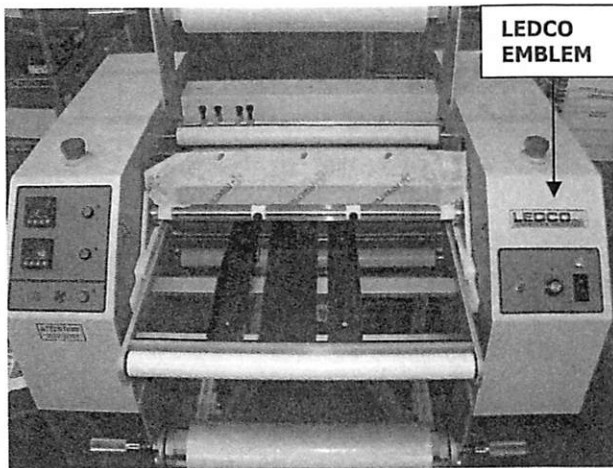




- 30) LIGHTLY ADD STP OIL ON ALL CHAINS WHILE THEY ARE IN MOTION.
- 31) WITH RUBBER ROLLS UP, ATTACH LEFT HOUSING COVER AND RIGHT HOUSING ASSEMBLY WITH (8) 10-32 X 1/4 TH PER SIDE. THE HANDLES ARE TO THE REAR. TO PUT ROLLS DOWN, HANDLES OVER TO THE FRONT.
- 32) CHECK THAT ALL LABELS ARE ADHERED, NAMELY; THE RED SMALL WARNING LABEL ON THE SAFETY SHIELD ALONG WITH THE INTERNATIONAL "HOT" WARNING.
- 33) THE YELLOW "TURN OFF FAN" LABEL (LAB104) RACK 7 CENTERED ON THE FRONT OF THE LEFT HOUSING.
- 34) ADHERE (3) "ARM ENTANGLEMENT LABELS" (LAB51) AS09, ONE CENTERED ON THE REAR PULL ROLL COVER AND ONE ABOVE EACH FEED TABLE BRACKET. NOTE THE HEIGHT OF THE LABELS BY THE FEED TABLE BRACKET.
- 35) ADHERE A LEDCO DOMED EMBLEM (LAB05A) AS09 CENTERED ABOVE RIGHT SIDE CONTROL DECAL. \*\*\*ON LEDCO H20, NOT ON MIG.
- 36) ADHERE SERIAL LABEL, GRAY/BLACK PRINT (LAB01) WITH JOB PRINTED FOR "POWERLAM" OR "H20 LAMINATOR." LOCATE SERIAL TAG ABOVE POWER CORD ON REAR RIGHT HOUSING.
- 37) ADHERE (4) "HAND CRUSH" LABELS (LAB35) AS09 TO OUTER SUPPLY ROLL BRACKETS.
- 38) ADHERE (2) "GENERAL DANGER" LABELS; ONE BY SERIAL TAG AND ONE ON RIGHT SIDE SAFETY SHIELD.
- 39) SHIP (2) STOP COLLAR CORE CHUCKS STYLE (D105 004.4) AS09 WITH A THREADED THUMBSCREW (PRK184) AS09 WITH THE SUPPLY ROLLS. PLACE (2) SUPPLY ROLLS INTO TOP AND BOTTOM SUPPLY ROLL BRACKETS.



- 40) **THREAD A 1/2-13 HEX NUT (.500LDF00) AS13 ONTO EACH OF (4) 1/2-13 X 1 1/2 STEM CASTERS (PRC210) AS06. PLACE CASTERS ON FEED TABLE.**
- 41) **BAG (5) STRAIGHT BLADES (PRB032) CAB1.**
- 42) **ADD ORANGE 'SAFETY PRECAUTIONS' (LIT011) AS02 TO FEED TABLE AND CONDUCT A HIGH POT TEST.**

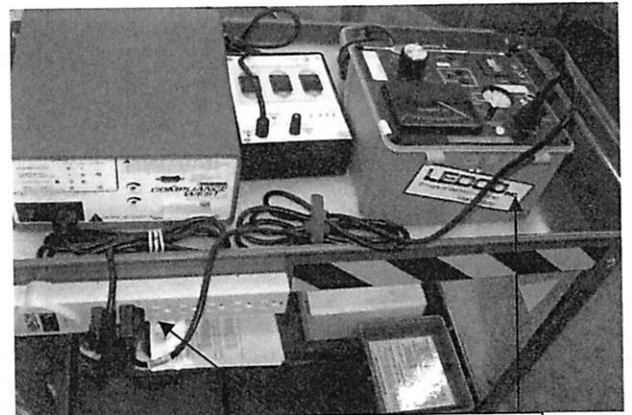


# H2O HIGH POT TESTING

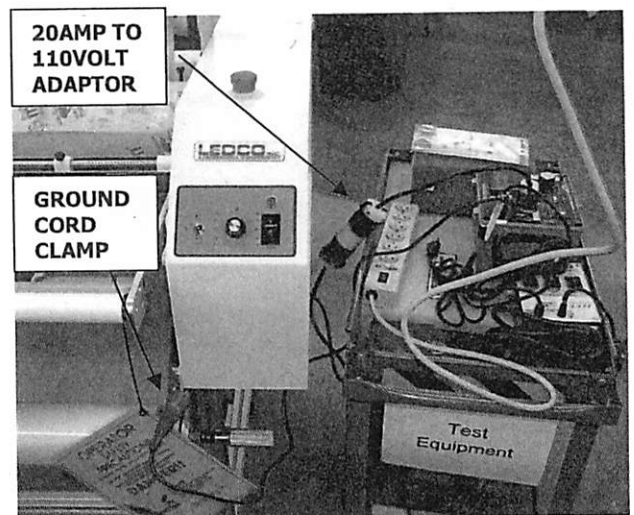
- 1) BEFORE THE H2O LAMINATOR IS SENT TO SHIPPING, A HIGH POT TEST MUST BE COMPLETED. THE LAMINATOR MUST PASS A POWER LEAKAGE AND GROUND TEST.
- 2) SECURE THE H2O IN AN AREA LARGE ENOUGH TO WALK AROUND THE MACHINE. ***YOU SHOULD NOT TOUCH THE MACHINE OR CORD DURING HIGH POT TESTING. A SEVERE SHOCK MAY OCCUR IF THE TEST FAILS.***
- 3) ROLL THE TEST EQUIPMENT CART NEXT TO THE RIGHT, POWER SIDE, HOUSING.
- 4) A) WITH HIGH POT ROCKER POWER SWITCH IN "OFF" POSITION, CONNECT THE BLACK **TESTER** POWER CORD BETWEEN THE TESTER "INPUT" INLET AND THE POWER BAR ON THE TEST TABLE.
- 5) B) WITH THE "GROUND CHECK" SWITCH IN THE **UPWARD** POSITION, PLUG THE **TESTER** GROUND CORD, WHICH HAS A TOOTHED CLAMP ON ONE END, BETWEEN THE "RETURN" INLET ON THE **TESTER** AND CLAMP THE TOOTHED END ONTO AN H2O SUPPLY ROLL BRACKET OR LOOSEN THE UPPER SUPPLY ROLL BUTTONHEAD ON THE INNER RIGHT SIDE PANEL AND CLAMP TO THAT. GOOD GROUNDING LOCATIONS VARY WITH MACHINES.
- 6) C) TO CONNECT THE POWER SOURCE TO THE TEST UNIT USE THE TAN CORD ON THE POWER BAR (DOUBLE CHECKING THAT THE SWITCH IS 'OFF') AND PLUG THE TAN CORD INTO A 110 POWER SOURCE. TURN ON THE POWRE BAR SWITCH. 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



HIGH POT



TESTER POWER CORD ON POWER BAR



UNSUITABLE, DO NOT CONTINUE. IF LAMP LIGHTS UP, CONTINUE.

- 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 "VOLTAGE CONTROL" DIAL ON ZERO/START, PRESS THE BLACK "RESET" BUTTON ON THE HIGH POT TESTER.
- 10) G) PRESS BLACK "CONT" (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, TEST IS GOOD.
- 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.

