

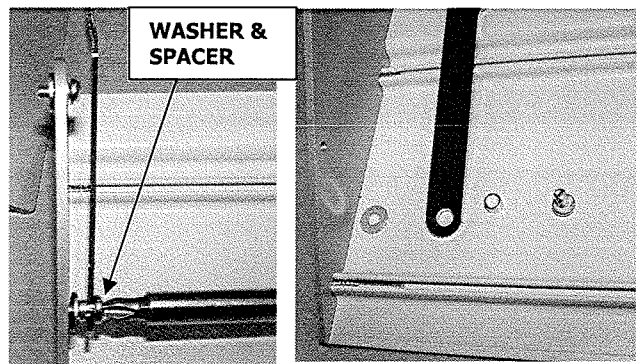
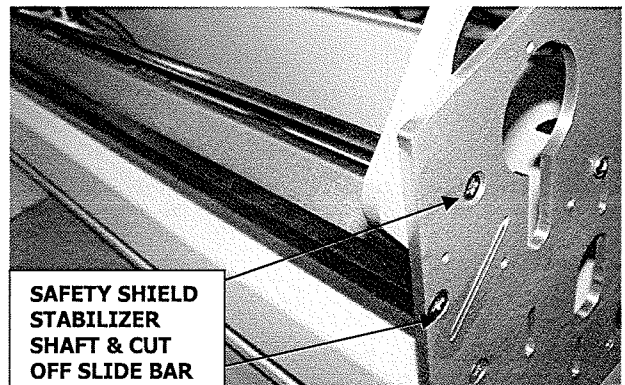
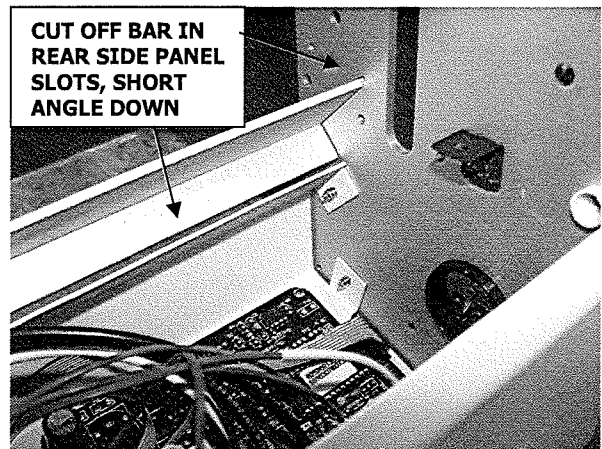
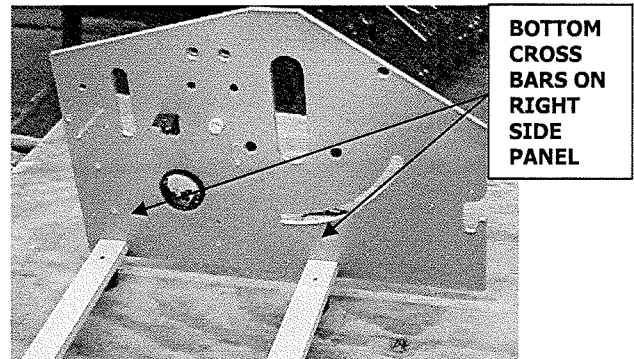
Changing Laminating Rolls in the LEDCO Professor

1. Unplug the machine and remove both side covers.
2. Label and remove the wires from the heater rods. Note the sequence of nuts and washers as that is critical. Remove the insulator plates from one side. The insulator plate is the phonelic piece that supports the heater.
3. Remove the heater rods.
4. Loosen the drive motor and remove the chain, remove the sprocket from the front roller.
5. Remove the snap rings from both sides of the front rollers and the stop collar from the rear top roller (Right side)
6. Loosen the pressure spring all the way (on both sides) Remove the spring mounting block. Be careful not to lose the spring and the small spring retainer.
7. Slide the suspension bars off of the top rollers on both sides. Remove the top rubber roll.
8. Remove the pillow block bearing assembly from both sides. Yup, it's really hard to get at the back screw. Take your time it will take a while.
9. Slide the pillow block bearings off of the bottom roll. Sometimes they come off hard. If you can get one off you can remove the roller and it makes it easier to get the other one off. You may have to file the roller shaft a bit to get it to slide off.
10. Reinstall in the reverse order. I have attached the assembly sheets in case you need to reference how to put certain things together.
11. When testing check the dwell line to confirm the roller pressure is correct. The dwell line is the line across the laminate that you get when you let the laminator sit for a couple of minutes. It should be the same width on each outside edge. Fold the laminate over and compare them. Adjust the roller pressure as needed. We test the machine at 230 degrees. Be sure the machine is in Fahrenheit. Reference the manual if you are unsure how to check that.

If you have any questions feel free to call
LEDCO Service @ 1-800-937-9293 X 309

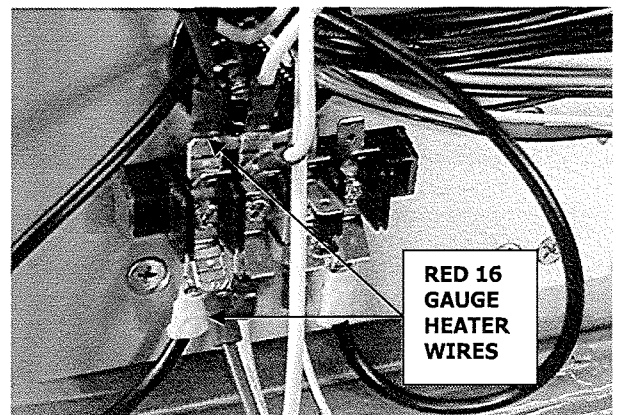
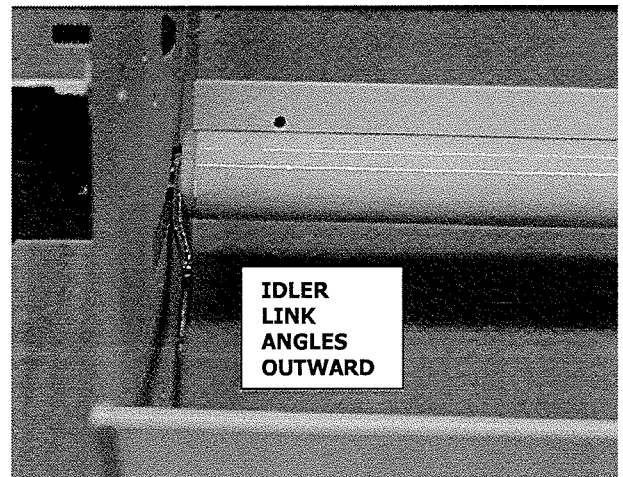
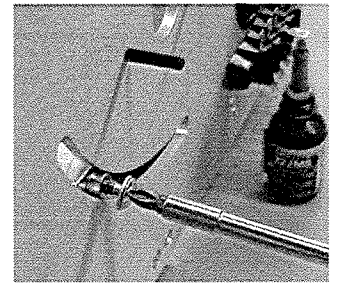
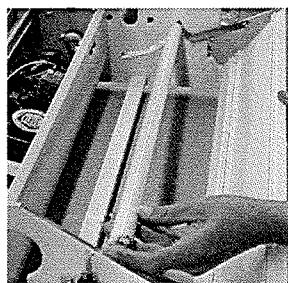
PLC CHASSIS ASSEMBLY

- 1) PLACE (2) BOTTOM CROSS BAR ASSEMBLIES PARALLEL ON WORKTABLE. ATTACH THE RIGHT SIDE PANEL ASSEMBLY TO THE CROSS BARS USING (4) 8-32 X $\frac{1}{2}$ FH. ATTACH THE LEFT SIDE PANEL TO THE OTHER END OF THE CROSS BARS, BUT LEAVE THE (4) 8-32 X $\frac{1}{2}$ FH SCREWS LOOSE.
- 2) SET THE BOTTOM MOTOR COVER ASSEMBLY BETWEEN SIDE PANELS WITH THE SENSOR FACING FRONT AND CONTROL BOARDS ON RIGHT. ATTACH TO RIGHT SIDE PANEL WITH (5) 10 X $\frac{1}{2}$ FHUC SMS. START THE LEFT SIDE PANEL WITH THE SAME HARDWARE, BUT DO NOT TIGHTEN.
- 3) INSERT THE CUT OFF BAR (PL27 172.4) AS04 BETWEEN RIGHT AND LEFT REAR SIDE PANEL SLOTS ABOVE BOTTOM MOTOR COVER. THE SHORTER BREAK FACES DOWN AND INWARD.
- 4) SLIDE THE STABILIZER SHAFT (BC27 110.4) AS04 THROUGH BACK HOLES ON SAFETY SHIELD RIGHT AND LEFT TOP COVER SIDE PLATES. SET SAFETY SHIELD OVER BOTTOM MOTOR COVER AND SECURE STABILIZER SHAFT WITH (2) 10-32 X $\frac{1}{2}$ FH TO UPPER BACK COUNTERSUNK SIDE PANELS.
- 5) SECURE THE SQUARE CUT OFF SLIDE BAR (BC27 173.4) AS04 TO THE RIGHT AND LEFT LOWER COUNTERSUNK HOLES ABOVE THE CUT OFF BAR, HOLDING TO KEEP IT STRAIGHT, WITH (2) 10-32 X $\frac{1}{2}$ FH. NOW TIGHTEN THE SCREWS ON THE SIDE PANELS.
- 6) LAY THE FEEDTABLE ASSEMBLY FLAT IN FRONT OF CHASSIS. PLACE A SPACER (PRS100) RACK 7 ON THE THREADS OF (2) 8-32 X $\frac{3}{8}$ PH AND INSERT FROM THE INSIDE INTO THE PEAK ON THE RIGHT AND LEFT FEEDTABLE BRACKETS. ADD A # 8 FLAT WASHER TO THE SCREW THREADS BETWEEN SPACER AND SIDE



PANEL. ALIGN REMAINING THREADS WITH THE THREADED HOLE ABOVE THE FRONT SUPPLY ROLL NOTCH ON THE SIDE PANELS AND SECURE FEEDTABLE BETWEEN THE SIDE PANELS.

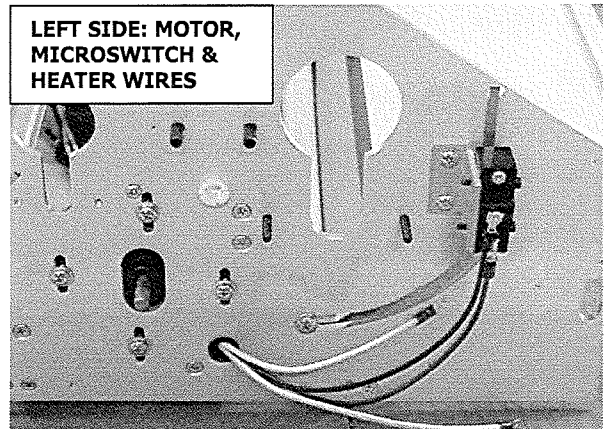
- 7) PLACE A SPACER (PRS100) RACK 7 ON EACH OF (2) 8-32 X 5/16 PH. INSERT THIS SPACER INTO THE LONG END OF A RIGHT AND LEFT IDLER CONNECTING LINK (BC27 180.4R AND BC27 180.4L) RACK 7. *THE SHORTER END OF THE CONNECTING LINK BENDS OUTWARD ON BOTH.* THEN ADD A #8 FLAT WASHER TO EACH THREAD. ATTACH THE IDLER CONNECTING LINKS TO THE INSIDE LOWER THREADS ON THE RIGHT AND LEFT FEEDTABLE BRACKETS, WASHER BY INNER FEEDTABLE BRACKET.
- 8) SNAP (2) WHITE IDLER BEARINGS (LC25 099.4) LD02 INTO ENDS OF LOWER IDLER TUBE (BC27 053.4) AS04. INSERT LOWER IDLER SHAFT (PL27 050.4) AS04 THROUGH BEARINGS AND TUBE. THE SHAFT WILL EXTEND PAST BEARINGS.
- 9) SLIDE IDLER CONNECTING LINKS ONTO ENDS OF LOWER IDLER SHAFT BEING CERTAIN LINKS ARE ANGLED TOWARD SIDE PANEL. FIT IDLER SHAFT INTO FLOATING IDLER SHAFT APERTURE IN SIDE PANELS AND CONNECT FROM OUTER SIDE PANEL USING (2) 10-32 X 3/8 TH WITH A #10 FLAT WASHER AND LOCTITE ON THREADS.
- 10) RUN WIRES FROM MOLEX THROUGH RIGHT SNAP BUSHING *EXCEPT* BLACK/WHITE STRIPED WIRE, WHICH RUNS TO LEFT SIDE. RUN HEAT BOARD WIRES THROUGH RIGHT SIDE PANEL: T4=WHITE, LOWER MIDDLE/FRONT 180, T6=BLACK, LOWER REAR 180, T7=BLACK, LOWER FRONT 180. CONNECT 12" RED HEATER WIRES ON TERMINAL BLOCK, FRONT UPPER 180 & LOWER 45. T3 DOES NOT CONNECT AT THIS TIME. BRING RIBBON WIRE THROUGH RIGHT SIDE BUSHING. RUN BOTH FAN WIRES THROUGH RIGHT BUSHING. TRIM LONGER FAN WIRE TO EQUIL SHORTER WIRE. RUN THE TWO LONGEST WHITE 16 GAUGE WIRES FROM HARNESS (FEMALE



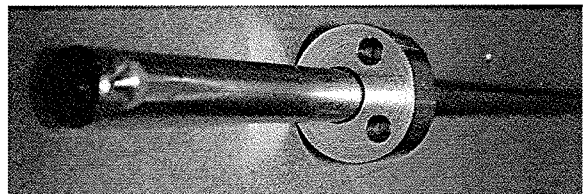
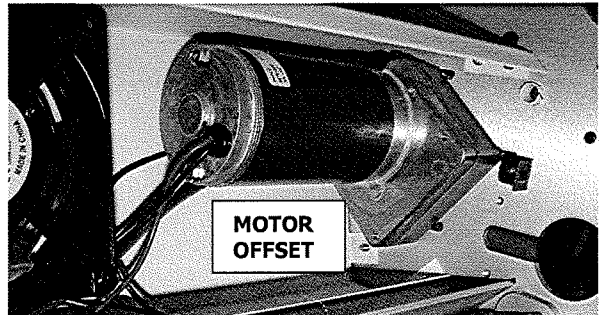
CONNECTORS ON RIGHT AND FORK CONNECTORS ON LEFT SIDE). CONNECT THE WHITE FEMALES TO MIDDLE/FRONT: TOP 180, BOTTOM 45. EXIT RED 18 GAUGE WIRE THROUGH BROWN BUSHINGS, FEMALE CONNECTOR ON RIGHT. LEAVE 4" OUTSIDE OF BUSHING WHICH LATER CONNECTS TO 3 AMP FUSE.

- 11) ON LEFT SIDE PANEL CONNECT RED 18 GAUGE WIRE WITH SPADE CONNECTOR TO BOTTOM SCREW ON MICROSWITCH. THE BLACK 18 GAUGE WIRE WITH SPADE CONNECTOR SPLICED WITH STRIPED WIRE FROM MOLEX CONNECTS TO MIDDLE SCREW ON MICROSWITCH.
- 12) WITH FLAT OF SHAFT ON MOTOR (PRM220) TOWARD NIPPLE ON MOTOR HOUSING AND WITH RED AND BLACK WIRES ATTACHED, INSERT MOTOR UPWARD IN CHANNEL WITH NIPPLE TOWARD BACK OF MACHINE. CONNECT TO SIDE PANEL WITH (4) 10-32 X 1/2 PH AND (4) #10 FLAT WASHERS. TIGHTEN ONLY ONE SCREW, AS MOTOR POSITION WILL BE USED TO SNUG CHAIN LATER.
- 13) FACING FRONT OF MACHINE RUN MOTOR WIRES THROUGH RIGHT SIDE BUSHING. LEAVE ENOUGH LEFT SIDE WHITE 16 GAUGE WIRE TO CONNECT TO HEATERS. PLACE BRADY PRESS CLIP BETWEEN TOP OF FANS AND CABLE TIE WIRES.
- 14) START (2) 10-32 X 3/4 SS INTO (2) CAMS (PL27 131.4) RACK 7. SLIDE FIRST CAM ONTO CAMSHAFT (PL27 130.4) AS04 AND INSERT SET SCREW THROUGH DEEPER SET SHAFT HOLE, FROM SIDE OPPOSITE DEPRESSION FOR CAMSHAFT HANDLE. THIS PLACES THE (2) CAM HOLES ON SIDE WITH HANDLE DEPRESSION. SLIDE 3/8 X 3/4 X 1/8 OILITE THRUST WASHER (PRB206) RACK 7 DOWN LONGER END OF CAM SHAFT.
- 15) INSERT CAMSHAFT WITH THRUST WASHER INTO WHITE NYLINER ON RIGHT SIDE, EXIT OPPOSITE WHITE NYLINER. ADD A REGULAR 3/8 FLAT WASHER ON LEFT SIDE CAMSHAFT OR IF THAT IS TOO SLOPPY ADD ANOTHER 3/8

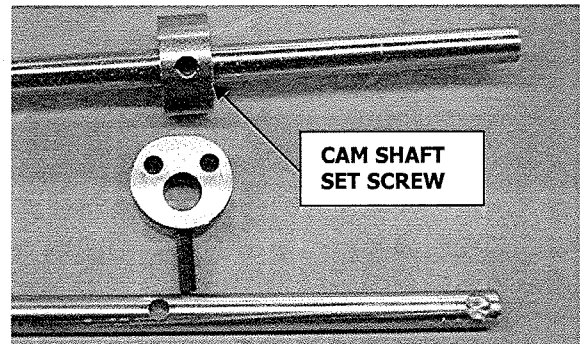
LEFT SIDE: MOTOR, MICROSWITCH & HEATER WIRES



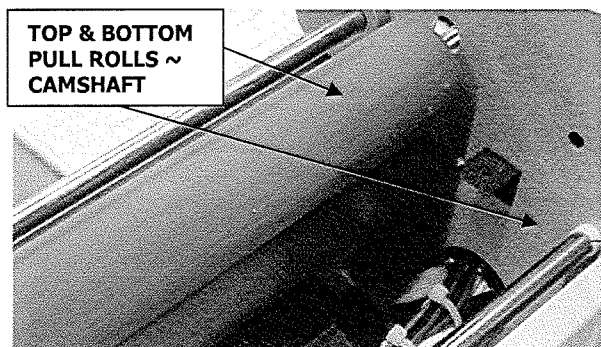
MOTOR OFFSET



CAM SHAFT SET SCREW

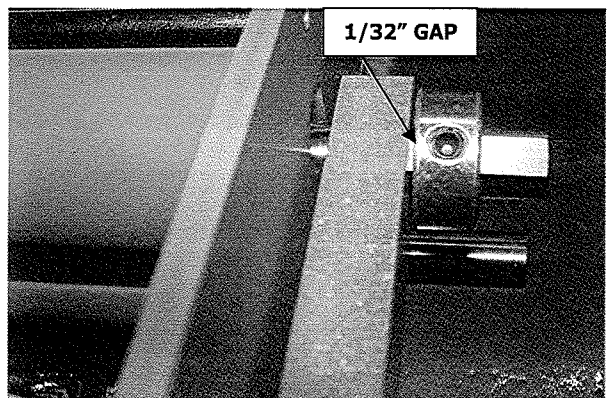
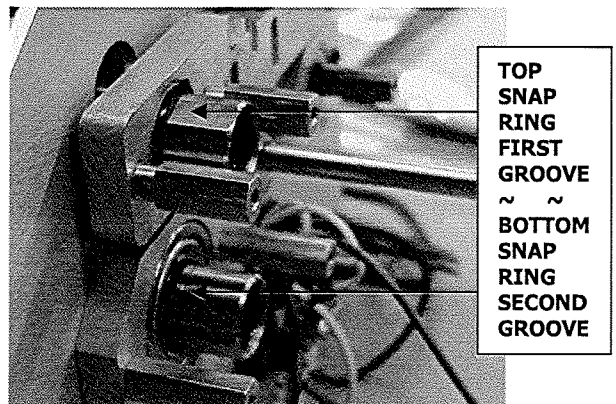
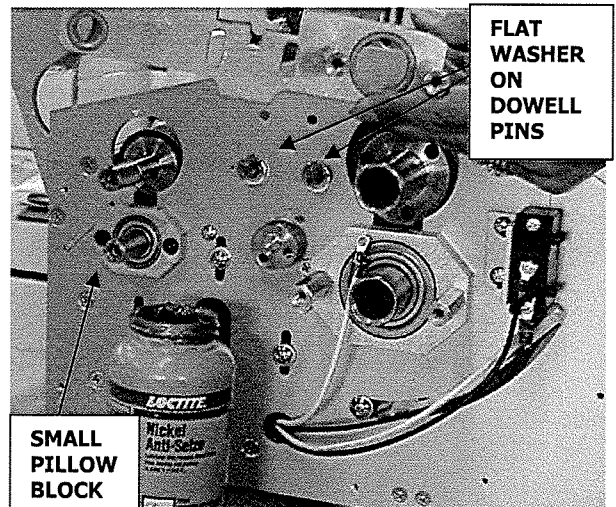
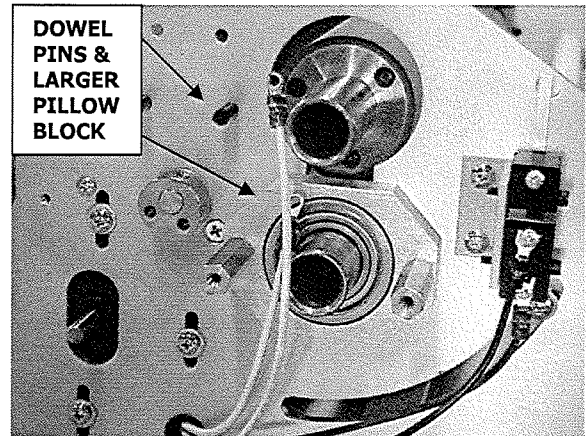


TOP & BOTTOM PULL ROLLS ~ CAMSHAFT

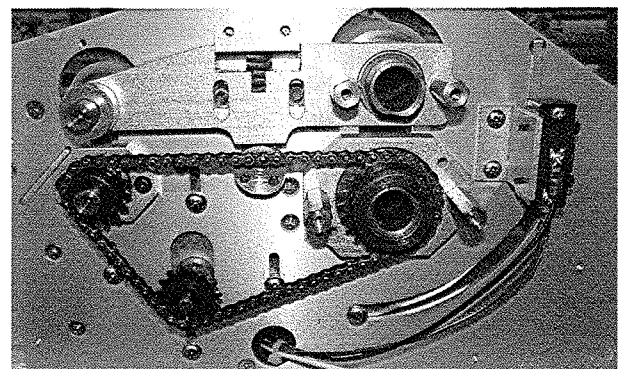
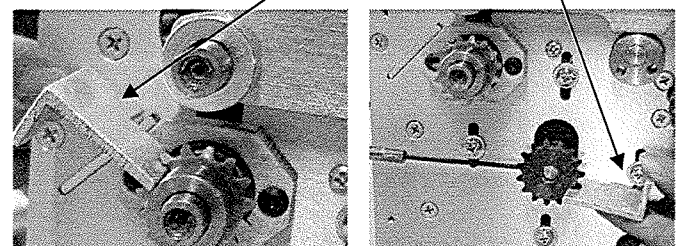
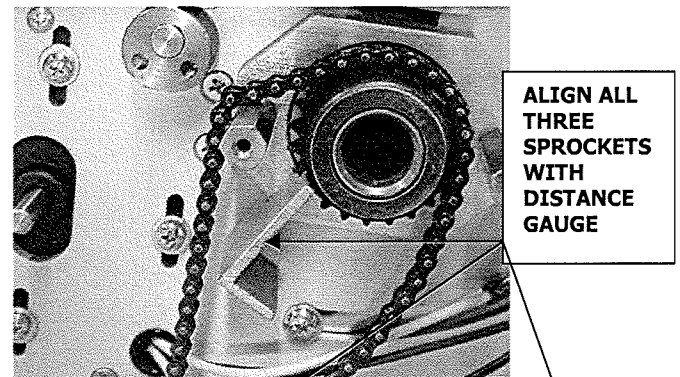
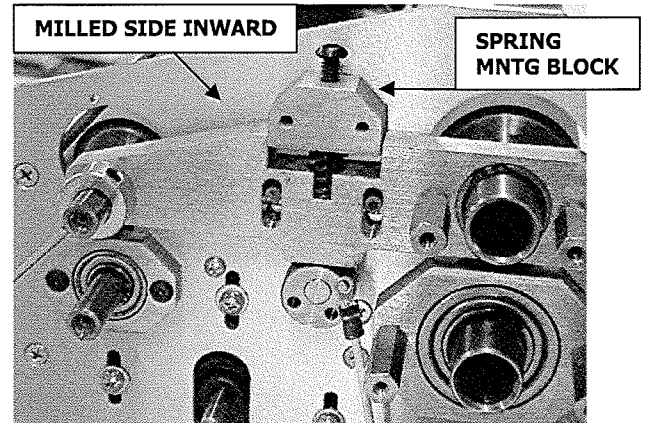
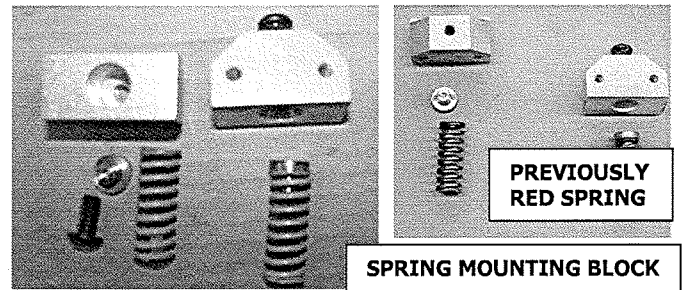


OILITE THRUST WASHER. SECURE SET SCREW ON CAM. **BE CERTAIN BOTH SET SCREWS FACE UPWARD ON CAMSHAFT AND FLATS ARE ON SAME SIDE.**

- 16) INSERT (2) PULL ROLLS (PL27 041.5) AS04 INTO SIDE PANELS ON BACK OF MACHINE.
- 17) INSERT (2) HOT ROLLS (PL27 040.5) AS04 INTO FRONT OF MACHINE.
- 18) SLIDE LARGER PILLOW BLOCK ASSEMBLIES OVER BOTTOM HOT ROLL JOURNALS AND EXPOSED THREADS. SECURE PILLOW BLOCKS WITH (4) BOTTOM STANDOFFS (PL27 047.4B) RACK 7. WRENCH TIGHTEN STANDOFFS.
- 19) THE (2) SMALL PILLOW BLOCK ASSEMBLIES SLIDE OVER BOTTOM PULL ROLL JOURNALS. ***FLUSH SIDE OF THE BALL BEARING IS OUTBOARD.*** SECURE SMALL PILLOW BLOCKS AND JOURNALS TO SIDE PANEL WITH (4) 10-24 X 5/8 BSHS LOCATED IN AS12.
- 20) SLIDE A $\frac{1}{4}$ X $\frac{5}{8}$ X $\frac{1}{8}$ FLAT WASHER OVER ALL (4) DOWEL PINS ON OUTER SIDE PANELS, ABOVE CAM SHAFT. BRUSH LOCTITE ANTI-SEIZE ON BOTH CAMS, (4) DOWEL PINS AND THE VERTICAL SIDES OF BOTH SUSPENSION BARS.
- 21) ***WITH CAM SET SCREW UPWARD,*** SLIDE SUSPENSION BARS OVER TOP HOT ROLL AND PULL ROLL JOURNALS. ADD (2) RETAINING RINGS (PRR191) LD05 INTO GROOVE ON JOURNALS OF BOTTOM PULL ROLL.
- 22) ATTACH (4) 1" EXTERNAL SNAP RINGS (PRR195) RACK 19 INTO HOT ROLL JOURNALS. *****ON THE BOTTOM HOT ROLL JOURNALS THE SNAP RINGS GO ON THE INNERMOST GROOVE. ON THE TOP HOT ROLL JOURNALS THE SNAP RINGS GO ON THE OUTERMOST GROOVE.***
- 23) ALIGN RUBBER ON TOP AND BOTTOM PULL ROLLS. SECURE TOP PULL ROLL JOURNALS WITH (2) $\frac{1}{2}$ " SHAFT COLLARS (PRC096) AS07. LEAVE A $\frac{1}{32}$ " GAP BETWEEN OILITE BEARING IN SUSPENSION BAR & $\frac{1}{2}$ " SHAFT COLLAR. TIGHTENED ON FLAT OF JOURNAL.



- 24) FROM RACK 7 CHECK THREADS ON SPRING MOUNTING BLOCK (PL27 045.4) BY RUNNING A $\frac{1}{4}$ -20 X $\frac{1}{2}$ BSH THROUGH THREADS, BACK OFF AGAIN. SET SPRING RETAINER (PL27 046.4) INTO END OF DIE SPRING (PRS062) AND FLAT END OF SPRING RETAINER INTO APERTURE ON SPRING MOUNTING BLOCK. INSERT DIE SPRING INTO SUSPENSION BAR WITH MILLED SIDE OF MOUNTING BLOCK INWARD BY SIDE PANEL TO ACCOMMODATE HOUSING. PUSH MOUNTING BLOCK DOWN, ALIGN WITH PANEL THREADS, SECURE WITH 10-32 X $\frac{3}{4}$ FHMS FROM INNER PANEL.
- 25) SET SPRING PRESSURE BY THREADING THE $\frac{1}{4}$ -20 X $\frac{1}{2}$ BSH UNTIL IT TOUCHES SPRING RETAINER, THEN TIGHTENING THREE HALF TURNS. TENSION CAN BE ADJUSTED AFTER DWELL LINE TEST.
- 26) ON LEFT SIDE PLACE A 1" BORE 25B23 SPROCKET (PRS326) RACK 7 ON BOTTOM HOT ROLL JOURNAL WITH HUB OUT, TEETH IN. SET DISTANCE WITH GAUGE AND TIGHTEN SPROCKET ON FLAT OF JOURNAL USING 10-32 X $\frac{3}{8}$ SET SCREW.
- 27) PLACE $\frac{1}{2}$ " BORE 25B15 SPROCKET (PRS2455) LD13 ON BOTTOM PULL ROLL JOURNAL WITH HUB OUT, TEETH IN AND SET WITH DISTANCE GAUGE. TIGHTEN SET SCREW ON JOURNAL FLAT.
- 28) PLACE $\frac{5}{16}$ " BORE 25B15 SPROCKET (PRS2455.1B) RACK 7 ON MOTOR SHAFT WITH *HUB IN*, TEETH OUT **THIS IS OPPOSITE DIRECTION OF OTHER TWO SPROCKETS. GAUGE AND TIGHTEN WITH 10-32 X $\frac{3}{8}$ SET SCREW ON FLAT OF SHAFT. THE GAUGE MEASURES APPROXIMATELY $\frac{7}{8}$ " FROM SIDE PANEL.
- 29) SET PL LAM DRIVE CHAIN (PRC083C) RACK 7 ON TEETH OF SPROCKETS, HOT ROLL FIRST, AS CHAIN GOES BETWEEN TEETH AND BOTTOM STAND OFF. TIGHTEN CHAIN BY ADJUSTING MOTOR POSITION DOWNWARD AND SECURING THE FOUR MOTOR SCREWS.
- 30) REVISED MAY 2014: REMOVE NUTS AND WASHERS ON BOTH ENDS OF (2) 27"



CALROD HEATERS (PRH200) AS05.
PLACE THIN HEATER WASHERS ASIDE.
**REPLACE AS FOLLOWS: #8 WASHER
BY CERAMIC, SPLIT LOCK WASHER,
ANOTHER #8 WASHER, TIGHTEN WITH
NUT. SLIDE HEATERS THROUGH TOP
AND BOTTOM HOT ROLL JOURNALS.**

- 31) ADD A #8 WASHER ON HEATER
THREADS. SLIDE A BOTTOM
INSULATOR PLATE (PL27 049.4) RACK
7 OVER BOTH ENDS OF CALROD
HEATER IN BOTTOM HOT ROLL.
SECURE INSULATOR PLATE TO
STANDOFFS WITH (4) $\frac{1}{4}$ X $\frac{5}{8}$
SHOULDER BOLTS (.250IAC10). ON
OUTER INSULATOR PLATE PLACE A
THIN HEATER WASHER AND TIGHTEN
WITH NUT.
- 32) USE THE SAME PROCEDURE FOR THE
TOP INSULATOR PLATES (PL27 048.4)
RACK 7 OVER THE ENDS OF CALROD
HEATER IN TOP HOT ROLL. SECURE
INSULATOR PLATE TO STANDOFFS
WITH (4) $\frac{1}{4}$ X $\frac{5}{8}$ SHOULDER BOLTS.
- 33) ON LEFT, SECURE THE LONGER WHITE
16 GAUGE WIRE RING ONTO THE TOP
HEATER THREADS AND THE SHORTER
WHITE 16 GAUGE WIRE RING SLIDES
ONTO THE BOTTOM HEATER THREADS,
USING (2) #8 HEX NUTS.
- 34) ON RIGHT SIDE REPEAT WIRING
PROCEDURE USING RED 16 GAUGE
WIRES ATTACHED TO TERMINAL
BLOCK. **CONNECT RED WIRE ON
UPPER TERMINAL BLOCK POST TO THE
BOTTOM HOT ROLL HEATER. THE RED
WIRE ON THE LOWER TERMINAL POST
CONNECTS TO TOP HOT ROLL HEATER.

