CRAFTSMAN 10" RADIAL ARM SAW

FIELD SERVICE MANUAL

X246

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PROBLEM

Problem 1) Brake is constantly engaged
2) Short circuited rectifier causing fuse to blow

Problem 1) Brake chatters

Notes

Problem: (1) Yoke index sticks or
(2) Yoke index does not work

CORRECTION:

1. Remove power cord from the receptacle.

2. Remove two screws holding left side carriage cover.

3. Loosen two 1/2" Bolts in the center of the carriage which clamp the swivel latch pin housing.

4. Try index (swivel latch pin) to see if it will now work freely and index.

5. If index works freely, tighten screws. Skip to item #10. If this does not correct the problem, proceed as follows.

6. Remove the two 1/2" Bolts and the housing that hold the swivel latch pin in place.

7. Inspect the swivel latch pin to see if it is bent. If it is bent, remove housing , spring and knob by unscrewing the knob in a counter-clockwise direction.

8. Attach spring, housing and knob to a new swivel latch pin and install new pin in carriage.

9. Insert screws through swivel latch pin housing, tighten.

10. Plug power cord in and check saw blade for heel. If the blade does not heel, replace carriage cover and two screws. If the blade heels, correct this as outlined in instruction sheet which discusses the correction of this problem.

Problem (1) Saw will not cut true 45° compound miter
(2) Cannot level table

Source of problem: Bent saw base. Saw will not cut true if table has not or cannot be leveled.

CORRECTION:

1. Remove power cord from receptacle.

2. Remove two table clamps.

3. Remove rear table, rip fence, and spacer board.

4. Inspect junction of column support and base --- primarily in area where two front bolts attach column support to base. If base does not show damage, replace table boards and table clamps and level table with respect to arm (carriage travel) as outlined in Operating Instructions and Parts List.

5. If base has been slightly damaged, loosen two Sears bolts holding column support to base and remove two front bolts.

6. Insert washers between column support and base to lift front of column support to its normal position.

7. Replace front bolts and clamp column support, washers, and base together.

8. Replace table boards and table clamps and level table with respect to arm (carriage travel) as outlined in Operating Instructions and Parts List.

Problem: (1) Table is not parallel to radial arm

CORRECTION:

Instructions for leveling table and removing warp.

1. Loosen 4 channel clamping bolts and lower channels so that they are below the top of base frame. (Fig. 2)

2. Lay table on top of base frame and bolt table to channels.

3. Insert set screws in leveling nuts from top side until they just touch top of base.

4. Tighten both channel clamping bolts at front of base until they are snug (use wrench but do not pull up solid). Tighten channel clamping bolts at back of base only to a finger tightness. (Fig. 2)

5. Release arm latch and carriage lock for easy movement of blade during leveling operation. Lower blade and move to points 1, 2, 3, and 4 to find at which of these points the blade first touches the top of the table. Spin blade by hand and listen for pinging sound to pick up this high point.

6. High point must be at one of the front leveling screw holes before continuing leveling procedure. If it is not at the front, adjust screw at point 1 or 2 so that high point is created at the front near point 1 or 2. Raise blade slightly to pick up pinging sound at this new high point. (Fig. 3 or Fig. 4).

7. DO NOT CHANGE ELEVATION OF BLADE FOR REMAINDER OF LEVELING OPERATION.

8. Move blade to back of table directly behind the high point. Raise table to blade height at this point by adjusting leveling screw in this area. Tighten both channel clamping bolts on leveled side.

9. Return blade to front of table and make slight adjustment in leveling screw in this area if necessary.

10. Swing blade to front side of table on opposite side of base. Adjust screw in this area to bring table to blade height.

11. Move blade to back of table on this side. Adjust screw in this area.

12. Tighten all channel clamping bolts.

13. Move blade to all four leveling screw positions to recheck. Blade should ping at all position. Make slight adjustments if necessary.

14. Move blade to center of table. If table is low at this point, take low spot out by adjusting screw #5.

Problem: (1) Saw runs backwards,
(2) Motor hums but will not run, or
(3) Motor does not work.

CORRECTION:

1. Check power cord to saw. The saw will not function properly if it is connected to a long length of extension cord or other inadequate power line. The following wire sizes are recommended.

When Used on 115 Volts

Distance from fuse box	Wire Size to Use
50 feet or less	#12
50 - 100 feet	#10
100 - 150 feet	#8
150 - 200 feet	#6
200 - 400 feet	#4

When Used on 230 Volts

Distance from fuse box	Wire Size to Use
50 feet or less	#14
50 feet 100 feet	#12
100 - 150 feet	#10
150 - 200 feet	#8
200 - 400 feet	#6

This table is based on a supply voltage of either 115 volts or 230 volts. If your voltage is a few volts less than this use the size of conductor one bracket lower in the table. If your voltage is substantially lower than either 115 or 230 volts, contact

your power company.

2. If item 1 does not correct the problem, disconnect the power cord from the receptacle.

3. Tilt the motor to a vertical position and remove the four screws which secure the lid of the box on which the nameplate appears. Remove the lid.

4. Remove the three terminals connected to the relay.

5. Remove the two screws which secure the relay.

6. Check relay for continuity as follows:

   a. Check from terminal #4 to #2. If relay is good, this should show "open".
   b. Check from terminal #4 to #3. If relay is good, this should show that a circuit exists.

7. If relay is defective, install new relay and secure with two screws. If relay was not defective, proceed as follows and consult our instruction sheets.

8. Reconnect leads to relay as follows:

   a. Red lead to terminal #4 on the relay.
   b. Blue lead from motor (which comes through the hole in stator shell) to terminal #3 on the relay.
   c. Gray lead from motor (through hole in stator shell) to terminal #3 on the relay.

9. Check all leads to make sure none are touching.

10. Replace lid and four screws.

11. Return motor back to a horizontal position.

Problem: (1) Oil in box on top of motor, or
(2) Motor will not run.

CORRECTION:

1. Remove power cord from the receptacle.

2. Turn the motor to a vertical position.

3. Remove four screws securing the lid of the box on which the nameplate is and remove lid.

4. Remove the sheet metal clamp holding the capacitor.

5. Remove the two black leads connected to the capacitor and remove the capacitor.

6. Using a new capacitor reconnect the two black leads to the capacitor. The order of connection of the black leads to the capacitor terminals does not matter.

7. Reclamp the capacitor in the box with the sheet metal clamp.

8. Make sure all leads are not touching.

9. Replace lid and secure with the four screws.

10. Return motor to a horizontal position.

Problem: (1) Protector is defective, or
(2) Motor does not run.

CORRECTION:

1. Remove power cord from the receptacle.

2. Turn motor to a vertical position.

3. Remove four nameplate screws and remove lid.

4. Remove two screws securing protector.

5. Disconnect brown lead from wire nut (if it is connected) and remove black lead that runs from the protector to the capacitor by disconnecting at the capacitor.

6. Unsolder black line lead and yellow lead from motor.

7. After pushing the red button on the protector down to make sure the protector is set, check protector continuity as follows:

   a. Terminal #1 to terminal #2 (brown lead) should show a circuit. If it does not, once again try to reset the protector as above. If you cannot make a permanent circuit, the protector is defective.

   b. Terminal #1 to terminal #3 (black lead) should show a circuit. If there is no circuit, the protector is defective.

   c. Terminal #1 to terminal #4 (yellow lead) should show a circuit. If there is no circuit, the protector is defective.

8. If the protector is defective, replace it. If it is not defective, proceed as follows, and then consult other instruction sheets.

9. Connect any leads that have been unsoldered as follows:

   a. Black line lead to terminal #1.
   b. Brown lead to terminal #2.
   c. Black capacitor lead to terminal #3.
   d. Yellow motor lead to terminal #4.

10. Secure protector to its mount with two screws.

11. Reconnect black lead to capacitor and check connector diagram to make sure other leads are correct for the live voltage to be used.

12. Make sure there are no terminals touching each other nor other metal parts.

13. Replace lid and secure with four screws.

14. Return motor to a horizontal position.

Problem: (1) Broken bevel index handle.

CORRECTION:

1. Remove power cord from receptacle.

2. Remove guard and blade.

3. Place a board on the table and lower saw until the motor rests on the board .

4. Remove four socket head screws from the bevel index handle.

5. Loosen bevel lock knob.

6. Hold bevel index pin up and remove bevel index handle by pulling on the bevel lock knob.

7. Remove bevel lock knob, two brake shoes (fiber), two expanders (steel) and one pressure pad from the defective bevel index handle. (See figure 3, page 5, of the Operating Instructions and Parts List).

8. Assemble two expanders (steel) into the replacement handle so that the tapered ends of the expanders are touching and are in the middle of the cross hole in the handle.

9. Insert one brake shoe (fiber) and from each end of the cross hole so that the curved surface is out and blends with outside diameter of the handle.

10. Hold bevel index pin up and insert bevel index handle in yoke. Once the handle has

10. started, rotate it until the bevel index pointer is approximately at 20°. Then the bevel index handle can be released.

11. Push on bevel index handle and slightly wiggle motor to start the pilot on the bevel index handle into the motor.

12. Start four socket head screws in bevel index handle and tighten until "finger tight".

13. Raise saw and with a square on the table, square blade with the table top and tighten four screws.

14. Insert pressure pad in the yoke clamp knob hole so that tapered sides are in a vertical position.

15. Insert Yoke clamp knob.

16. Check operation of index pin and bevel clamp to make sure both are functioning properly.

17. Replace guard and blade.

Problem: (1) Blade heels.

CORRECTION:

1. Remove power cord from receptacle.

2. Remove guard.

3. Place square against rip fence and saw blade. (Do not position square at blade teeth as they are offset).

4. If there is clearance (daylight) between the blade, proceed as follows.

5. Remove left hand carriage cover by removing two screws.

6. Loosen the two screws that secure the swivel latch pin housing.

7. Adjust blade until it is square with fence.

8. Tighten screws clamping swivel latch pin housing in place.

9. Replace carriage cover and screws.

10. Replace guard.

Problem: (1) Blade not square with table top

CORRECTION:

1. Remove power ford from receptacle.
2. Remove guard.
3. Place square on table top and check squareness of saw blade. Do not position square at blade teeth as they are offset.
4. If blade is not square, loosen four socket head screws in bevel index handle.
5. Square blade to table top and retighten four socket head screws.
6. Replace guard.

Problem: (1) Blade does not run true*

* Note: Saw blade may run as much as .018" out of true when turned by hand but the blade will flatten out and run true with the motor on. Therefore, the solution below is only for blades that are running more than .018" out of true.

CORRECTION:

1. Replace saw blade.

2. If (1) does not correct problem, replace collars.

Problem: (1) Bad motor bearings.

3.
CORRECTION: Replace motor bearings.

1. Remove power cord from receptacle.

2. Remove guard and blade.

3. Remove nuts that hold brake cover in position.

4. Remove retaining ring and end play washers from rotor shaft.

5. Remove brake shoe, brake disk and brake spring.

6. Remove woodruff key that positioned brake shoe.

7. Remove spacer washers that positioned brake shoe axialy on the rotor shaft.

8. Remove nuts from stator.

9. Remove stator screws.

10. Tap on end of shaft on 1/2" extension end with a piece of wood so that the opposite. end shield comes loose from the stator housing.

11. Remove assembly consisting of the end shield and the rotor assembly, by sliding entire unit out of blade end of stator.

12. Do not remove rear end shield unless tha spring washer is removed with the rotor assembly.

13. If the spring washer is removed with the rotor, carefully remove rear end shield so that the orange brake leads remain intact.

14. Replace spring washer into the bearing seat so that the flat side of the washer rests on the bottom of the bearing seat.

15. Replace rear end shield and lightly tap it in place.

16. Remove baring clamping screws located in recess on the front of the end shield.

17. Remove baffle screws and baffle.

18. Slide rotor out of end shield.

19. Replace bearings by pressing shaft our of old bearings. Be careful not to damage threads on shaft. Press new bearings in place by pressing only on the I. D. of the bearings. Be sure bearing clamping plate is on shaft before front bearing is pressed on.

20. Slide replacement rotor into end shield.

21. Start bearing clamping screws and tighten.

22. Replace baffle and baffle screws.

23. Slide assembled end shield and rotor into stator from left side viewing stator from the front of the saw.

24. Hold rear end shield in place so that it is not pushed off the stator shell when the rotor assembly is replaced.

25. Replace stator screws.

26. Tighten nuts on stator screws.

27. Push on 5/8" shaft extension to check end play. Shaft should move slightly (.008") into end shield.

28. If end play is excessive, replace bearings following steps 16 through 22.

29. Replace rotor assembly according to the above procedure.

30. Turn shaft with fingers to make sure it turns freely and that no "strikes" are present.

31. Reassemble brake by reversing steps 4 through 7.

32. Hold brake disk assembly against brake coil assembly, as it would be when the coil is activated, the gap between the disk assembly and the brake shoe should be .020", if it is not, add or remove spacer washers until .020" gap is obtained.

33. Replace brake cover.

34. Replace blade and guard.

Problem: (1) Stripped Arbor Threads

CORRECTION: Replace Rotor Assembly in Motor.

1. Remove power cord from receptacle.
2. Remove guard and blade.
3. Remove nuts that hold brake cover in position.
4. Remove retaining ring and end play washers from rotor shaft.
5. Remove brake shoe, brake disk and brake spring.
6. Remove woodruff key that positioned brake shoe.
7. Remove spacer washers that positioned brake shoe axialy on the rotor shaft.
8. Remove nuts from stator.
9. Remove stator screws.
10. Tap on end of shaft on 1/2" extension end with a piece of wood so that the opposite end shield comes loose from the stator housing.
11. Remove assembly consisting of the end shield and the rotor assembly, by sliding entire unit out of blade end of the stator.
12. Do not remove rear end shield unless the spring washer is removed with the rotor assembly.
13. If the spring washer is removed with the rotor, carefully remove rear end shield so that the orange brake leads remain intact.
14. Replace spring washer into the bearing seat so that the flat side of the washer rests on the bottom of the bearing seat.
15. Replace rear end shield and lightly tap it in place.
16. Remove bearing clamping screws located in recess on the front of the end shield.
17. Remove baffle screws and baffle.
18. Slide rotor out of end shield.
19. Slide replacement rotor into end shield.
20. Start bearing clamping screws and tighten.
21. Replace baffle and baffle screws.
22. Slide assembled end shield and rotor into stator from left side viewing stator from the front of the saw.

23. Replace stator screws.

24. Tighten nuts on stator screws.

25. Push on 5/8" shaft extension to check end play. Shaft should move slightly (.008") into end shield.

26. If end play is excessive, remove rotor assembly and replace bearings according to procedure described on page 9.

27. Replace rotor assembly according to the above procedure.

28. Turn shaft with fingers to make sure it turns freely and that no "strikes" are present.

29. Reassembled brake by reversing steps 4 through 7.

30. Hold brake disk assembly against brake coil assembly, as it would be when the coil is activated, the gap between the disk assembly and the brake shoe should be .020", if it is not, add or remove spacer washers until .020" gap is obtained.

31. Replace brake cover.

32. Replace guard and blade.

Problem: (1) Blade not square with rip fence,
(2) Arm not square with rip fence, or
(3) Carriage travel not square with rip fence.

CORRECTION:

1. Remove power cord from receptacle.

2. Adjust height of saw so that blade just clears the table top.

3. With a pencil, mark one blade tooth.

4. Tighten arm lock handle until it is 1/2 turn from being tight.

5. Tap arm lock handle with hand to set arm lock pin tight on arm latch.

6. Place square against rip fence and check squareness of carriage travel to rip fence by moving the carriage along arm and observing the travel of the marked tooth with respect to the square.

7. If carriage travel is not square with the rip fence, loosen the six screws holding the table top to the base channels.

8. Adjust either right or left table clamping screw until the carriage travel is made square with the rip fence. When adjustment is correct, tighten the six table screws which hold the table to the base channels. If it is not possible to square the carriage travel to the rip fence, continue with steps 9 - 19.

9. Remove two screws from radial arm cap and remove radial arm cap.

10. Loosen two screws holding arm latch. Screws are located inside column tube.

11. Place square against rip fence and check squareness of carriage travel to rip fence by moving the carriage along arm and observing the travel of the marked tooth with respect to the square.

12. Adjust to right or left until carriage travel is square with the fence. If it is not readily possible to adjust the carriage travel perfectly square with rip fence, adjust the arm so that when the marked tooth is against the square at the rip fence it is no further than 1/16" from the square when the carriage is all the way out on the arm.

13. Tighten screws holding arm latch.

14. If carriage travel was not adjusted square with the rip fence, loosen the six screws holding the table top to the base channels.

15. Adjust either right or left table clamping screw until the carriage travel is made square with the rip fence.

16. Tighten six screws holding the table top to base channels.

17. Tighten other table clamp.

18. Replace cover plate and two screws.

19. Replace radial arm cap and two screws.

Problem: (1) Carriage is loose on arm.

1. Remove power cord from receptacle.

2. Remove two screws holding left hand carriage cover.

3. The two ball bearings are mounted to the carriage by two eccentric screws. Loosen the two locking nuts below the carriage while preventing the eccentric screws from turning.

4. Turn front eccentric screw until front bearing becomes snug.

5. Repeat step 4 for rear bearing.

6. Tighten the two locking nuts taking care not to allow the eccentric screws to turn.

7. Traverse the arm with the carriage.

8. The carriage should be snug but not so tight the movement is difficult.

Steps 3 through 7 may be repeated to obtain the desired feeling.

9. Replace carriage cover and two screws.

Problem: (1) Yoke Clamp will not clamp tightly.

CORRECTION:

1. Remove power cord from receptacle.

2. Remove guard and blade.

3. Place a board on the table under the motor. Lower the saw until the motor rests on the board.

4. With an offset screwdriver, remove the lock screw from the underside of the yoke.

5. Holding the yoke clamp handle to the front of the yoke (loosened position), turn the screw in the middle of the yoke clamp handle in a counterclockwise direction until it is right. Tighten screw as tight as possible.

6. Now look into the hole in the yoke from which the lock screw was removed. The hold should be unobstructed. If this is not true, turn the screw in the yoke clamp handle in a clockwise direction until the obstruction is removed.

7. Insert the lock screw. Screw should go in until head is seated on the yoke. If the screw does not go in all the way, adjust the screw in the yoke clamp handle until the lock screw does go in.

8. Push yoke clamp handle toward the rear of the saw. If the adjustment is correct, the handle should clamp tightly midway between the legs of the yoke.

9. Replace blade and guard.

Problem: (1) Radial Arm will not index.

Source of Problem: Either the arm latch or the arm latch pin, or both, have been damaged.

CORRECTION:

1. Remove power cord from receptacle.

2. Remove guard and blade.

3. Lock carriage near the column end of the radial arm.

4. Place board on table top.

5. Lower saw until motor rests on board.

6. Remove two screws from radial arm cap.

7. Remove radial arm cap.

8. Disengage arm latch pin by turning arm lock handle until it is all the way out.

9. Remove two screws from arm lock. The screws are located inside the column tube.

10. Turn elevation handle in a counter-clockwise direction to lower column tube while the arm remains stationary on the board.

12. If arm latch is broken, inspect end of arm latch pin to make sure sides have not been bent together. If pin is good, skip to step #31. If arm latch has not been broken, remove screw from arm lock handle and remove arm lock handle, spring washer and steel washers.

13. Remove two screws from trim cap and remove trim cap.

14. Remove two screws from switch cover.

15. Remove switch cover and switch from the radial arm.

16. Disconnect leads 1 and 3 from switch.

17. Remove grounding screw inside radial arm.

18. Unscrew hog ring from radial arm and remove motor cord.

19. Remove screw that secures trim to radial arm.

20. Remove trim fron arm by sliding it forward off the end of the arm.

21. The hole in the top of the arm is an access hole for the lock pin, note the relative position of the arm latch shaft and the lock pin.

22. Slowly pull forward on arm latch shaft until it no longer engages the arm lock screw.

23. Note that the arm lock pin is still on the end of arm latch shaft when arm latch shaft is disengaged from the arm lock screw.

24. Replace arm lock pin, or if arm lock pin has been slightly bent together, spread pin by inserting screwdriver in slot. The slot in the pin should be uniform at both ends.

25. Put heavy grease in slot on arm lock pin and place pin on collar of arm latch shaft.

26. Re-install arm lock pin and arm latch shaft. (Be sure spring washer and spring are on arm latch shaft.)

27. Replace trim, motor cord, switch and switch cover by reversing steps 14 through 21.

28. Replace trim cap and two screws.

29. Replace arm lock handle and screws.

30. Turn arm lock handle so that arm lock screw holds brake in a vertical position.

31. Replace arm latch on top of brake shoe.

32. Turn elevation handle in a clockwise direction to raise column tube into the arm.

    CAUTION: DO NOT PUT FINGERS IN COLUMN TUBE OPENING AS THEY WILL BE PINCHED BETWEEN THE ARM AND THE COLUMN TUBE AS THE TUBE IS RAISED.

33. Screw holes in latch should now be visible through holes in column tube into the arm.

34. Insert two screws into arm latch. Tighten until screws are "finger tight".

35. Raise saw so that blade can be replaced.

36. Adjust height of saw so that blade just clears the table top.

37. With a pencil, mark one blade tooth.

38. Tighten arm lock handle until it is 1/2 turn from being tight.

39. Tap arm lock handle with hand to set arm lock pin tight on arm latch.

40. Place square against rip fence and check squareness of carriage travel to rip fence by moving the carriage along arm and observing the travel of the marked tooth with respect to the square.

41. Adjust to right or left until carriage travel is square with the fence. If it is not readily possible to adjust the carriage travel perfectly square with rip fence, adjust the arm so that when the marked tooth is against the square at the rip fence it is no further than 1/16" from the square when the carriage is all the way out on the arm.

42. Tighten screws holding arm latch.

43. If carriage travel was not adjusted square with the rip fence, loosen the six screws holding the table top to the base channels.

44. Adjust either right or left table clamping screw until the carriage travel is made square with the rip fence.

45. Tighten six screws holding table top to base channels.

46. Tighten other table clamp.

47. Replace radial arm cap and two screws.

48. Replace guard.

PROBLEM: (1) Radial Arm will not lock between index positions.

Source of Problem: Brake shoe has moved out of position in arm.

CORRECTION:

1. Remove power cord from receptacle.
2. Remove guard and blade.
3. Lock carriage near column end of the radial arm.
4. Place board on table top.
5. Lower saw until motor rests on board.
6. Remove two screws from radial arm cap.
7. Remove radial arm cap.
8. Disengage arm latch pin by turning arm lock handle until it is all the way out.
9. Remove two screws from arm lock. The screws are located inside the column tube.
10. Turn elevation handle in a counter clockwise direction to lower column tube while the arm remains stationary on the board.
11. Remove arm latch from recess in arm.
12. Remove old brake shoe if possible. If it is not in view, let it remain in arm.
13. Install replacement brake shoe, service part number 30480, in recess between two cast-lugs. These lugs prevent shoe from moving out of position when arm is rotated.
14. Turn arm lock handle so that arm lock screw holds brake in a vertical position.
15. Place arm latch on top of brake shoe.
16. Turn elevation handle in a clockwise direction to raise column tube into arm.

    CAUTION: DO NOT PUT FINGERS IN COLUMN TUBE OPENING AS THEY WILL BE PINCHED BETWEEN THE ARM AND THE COLUMN AS THE TUBE IS RAISED.

17. Screw holes in latch should now be visible through holes in column tube.
18. Insert two screws into arm latch. Tighten until screws are "finger tight".
19. Raise saw so that blade can be replaced.
20. Adjust height of saw so that blade just clears the table top.
21. With a pencil, mark one blade tooth.

22. Tighten arm lock handle until it is 1/2 turn from being tight.

23. Tap arm lock handle with hand to set arm lock pin tight on arm latch.

24. Place square against rip fence and check squareness of carriage travel to rip fence by moving the carriage along arm and observing the travel of the marked tooth with respect to the square.

25. Adjust to right or left until carriage travel is square with the fence. If it is not readily possible to adjust the carriage travel perfectly square with rip fence, adjust the arm so that when the marked tooth is against the square at the rip fence it is no further than 1/16" from the square when the carriage is all the way out on the arm.

26. Tighten screws holding arm latch.

27. If carriage travel was not adjusted square with the rip fence, loosen the six screws holding the table top to the base channels.

28. Adjust either right or left table clamping screw until the carriage travel is made square with the rip fence.

29. Tighten six screws holding table top to base channels.

30. Tighten other table clamp.

31. Replace radial arm cap and two screws.

32. Replace guard.

Problem: (1) Radial arm will not index to same position.
(2) Column tube rotates in column support.

CORRECTION:

1. Remove power cord from receptacle.

2. Release arm latch pin by unscrewing arm latch handle at least five turns.

3. Pull out on arm latch handle and rotate arm to a position of approximately 15 degrees.

4. Turn arm latch handle until it is snug but not tight.

5. Move arm to O degree position and give arm latch handle a tap with your hand to set the arm latch pin tightly on the arm latch.

6. With one finger at the junction of the arm and the column tube, rock arm with other hand and see if you can feel any movement of the arm with respect to the tube. There should be none if the latch pin has been properly seated on the latch. If movement exists, go back to step 2, and reset arm latch pin .

7. Now place a finger at the junction of the column tube and the support tube. Once again rock arm with other hand and see if movement exists between column tube and column support.

8. If movement exists, column key must be adjusted in the keyway of the column support.

9. Tighten key plug, so that key is pressed into keyway, at the same time rock arm slightly from side to side to insure proper seating of the key.

10. Do not over-tighten, this will cause excessive wear on the key and column tube.

Problem: (1) Excessive Stopping Time

Source of Problem: (1) Brake Lining is worn.

(2) Air gap too great, allowing brake disk assembly to turn with brake shoe.

CORRECTION: Replace brake lining, check air gap

1. Remove power cord from receptacle.

2. Remove brake cover.

3. Note that there are two "ears" on the brake housing assembly.

4. Turn the rotor by hand, if the ears on the brake housing assembly do not engage the slots in the brake disk assembly proceed with the Steps 5 through 13.

5. Remove retaining ring and end play washers from rotor shaft.

6. Remove brake shoe, brake disk assembly, brake spring and woodruff key that positioned the shoe.

7. Remove several spacer washers that position the brake shoe axialy of the rotor shaft.

8. Replace the brake disk assembly and brake shoe.

9. Hold brake disk assembly against the brake coil assembly, as it would be when the coil is activated, and push the brake shoe as far onto the rotor shaft as it will go.

10. The gap between the disk assembly and the brake shoe should be .020 inches.

11. If the gap is not .020 inches, remove the brake disk assembly and the brake shoe and add or subtract spacer washers as is necessary.

12. Replace woodruff key, brake spring, brake disk assembly and brake shoe.

13. Replace end play washers and retaining ring.

14. If the "ears" on the brake housing assembly do engage the slots on the brake disk assembly (Step 4) then the brake disk assembly must be replaced.

15. Remove retaining ring and end play washers from rotor shaft.

16. Remove brake shoe and brake disk assembly.

17. Replace brake disk assembly with a new one.

18. Push brake shoe as far onto the rotor shaft as it will go.

19. Hold the brake disk assembly against the brake coil assembly, as it would be when the coil is activated, the gap between the disk assembly and the brake shoe should be .020 inches.

20. If the gap is not .020 inches add or subtract spacer washers as is necessary.

21. Replace end play washers and retaining ring.

22. Replace brake cover.

Problem: (1) Brake is constantly engaged.

(2) Short circuited rectifier causing fuse to blow.

CORRECTION: Replace brake coil or rectifiers.

1. Remove power cord from receptacle.

2. Remove guard and blade.

3. Tilt the motor to a vertical position and remove the four screws which secure the lid of the box on which the nameplate appears. Remove the lid.

4. Check the brake coil leads, (orange leads) if they are not secure, secure them.

5. Trial run the saw, if the brake is still constantly engaged, proceed with steps 6 through 12.

6. Remove power cord from receptacle.

7. Replace nameplate lid and return motor to horizontal position.

8. Remove brake cover.

9. Clip the two rectifier leads and the coil lead as close to the connector as possible.

10. Remove about 1/4 inch of both the insulation on the loose coil lead and the rectifier insulating tubing.

11. Extreme care must be taken when removing the insulation so that the coil lead is not pulled from the coil.

12. Check the resistance of the coil, if it does not read 330 ohms ± 5% the coil is defective.

13. If the coil is defective proceed with steps 14 through 27.

14. Remove retaining ring and end play washers.

15. Remove brake shoe, brake disk assem. and spring.

16. Remove the two screws and cleats that hold the brake coil assembly on to the end shields.

17. Remove the coil by clipping the rectifier lead, orange motor lead and the remaining coil lead as close to the connector as possible.

18. Replace coil assembly with a new one, replace cleats and mounting screws.

19. Remove about 1/4 in. of both the orange motor insulation and the rectifier insulating tubing.

20. Connect the adjacent leads of the two rectifiers and one coil lead together and solder the connection.

21. Do not subject the rectifiers to high soldering temperatures. Hold the rectifier lead with a pair of pliers between the rectifier and the connection while soldering. The pliers act as a heat sink and lessens the possibility of overheating the rectifier.

22. Connect the remaining rectifier lead, the orange motor lead and the remaining coil lead together and solder the connection.

23. Insulate all exposed leads with electrical tape.

24. Replace spring, brake disk asm.and brake shoe.

25. Replace end play washers and retaining ring.

26. Trial run saw.

27. Replace brake cover.

28. If coil is not defective, remove the screws and the cleats that secure the rectifiers to the end shield.

29. Remove both rectifiers by clipping all of the leads (the orange motor leads and coil lead) as close to the connectors as possible.

30. Remove about 1/4 inch of the insulation from the two orange motor leads and the remaining coil lead.

31. Extreme care must be taken, when removing the insulation, so that the coil lead is not pulled from the coil.

32. Replace both rectifiers with Sarkes Tarzian Silicone Rectifier #2F4.

33. Position the lower rectifier on the end shield first. (Note that the polarity of the rectifier is indicated by an arrow on the rectifier), so that the arrow points to the top of the motor.

34. Replace the cleat and screw that secure the rectifier to the end shield.

35. Position the upper rectifier so the arrow points to the bottom of the motor.

36. Replace the cleat and screw that secure the rectifier to the end shield.

37. Connect one coil lead and the adjacent rectifier leads together and solder the connection following the procedure recommended in Step 21.

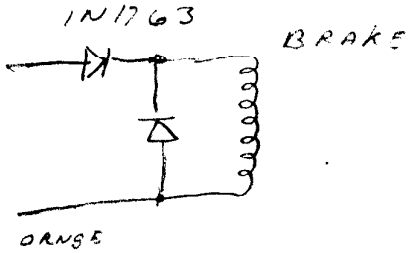
38. Connect the remaining coil lead, the longer of the two orange motor leads and the loose lead of the bottom rectifier together and solder the connection following the procedure recommended in Step 21.

39. Connect the remaining orange motor lead and loose lead of the top rectifier together and solder the connection following the procedure recommended in Step 21.

40. Insulate all exposed leads with electrical tape.

41. Trial run saw.

42. Replace brake cover.



Problem: Brake Chatters.

CORRECTION:

1. Remove power cord from receptacle.

2. Remove brake cover.

3. The defective rectifier is the lower rectifier the one which is connected across the coil.

4. Remove the screw and cleat which secure the defective rectifier to the end shield.

5. Clip the orange motor lead, the coil lead and the rectifier lead as close to the connector as possible.

6. Clip other coil lead and the rectifier leads as close to the connector as possible.

7. Remove about 1/4 inch of the insulation from the orange motor lead and the two coil leads.

8. Extreme care must be taken when removing the insulation so that the coil lead is not pulled from the coil.

9. Replace the defective rectifier with a Sarkes Tarzian Silicone Rectifier #2F4.

10. Position the rectifier on the end shield (Note that the polarity of the rectifier is indicated by an arrow on the rectifier), so that the arrow points to the rectifier which was not removed.

11. Replace cleat and screw which secure rectifier to end shield.

12. Connect the one coil lead and the adjacent rectifier leads together and solder the connection.

13. Do not subject the rectifiers to high soldering temperatures. Hold the rectifier lead with a pair of pliers between the rectifier and the connection while soldering. The pliers act as a heat sink and lessens the possibility of overheating the rectifier.

14. Connect the remaining coil lead, the orange motor lead and the remaining rectifier lead together and solder the connection as recommended in step #13.

15. Insulate all exposed leads with electrical tape.

16. Trial run saw.

17. Replace brake cover.