20″ Planer
(Model RC-51)

INSTRUCTION MANUAL

DATED 1-20-92

PART NO. 1345297

DELTA

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SAFETY RULES

As with all machinery there are certain hazards involved with operation and use of the machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the machine until you have written Delta Machinery and we have advised you.

DELTA INTERNATIONAL MACHINERY CORP.
MANAGER OF TECHNICAL SERVICES
246 ALPHA DRIVE
PITTSBURGH, PENNSYLVANIA 15238
(IN CANADA: 644 IMPERIAL ROAD, GUELPH, ONTARIO N1H 6M7)

WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

1. FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL. Learn the tool's application and limitations as well as the specific hazards peculiar to it.

2. KEEP GUARDS IN PLACE and in working order.

3. ALWAYS WEAR EYE PROTECTION.

4. GROUND ALL TOOLS. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.

5. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it "on."

6. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

7. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

8. KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept a safe distance from work area.

9. MAKE WORKSHOP CHILDPROOF - with padlocks, master switches, or by removing starter keys.

10. DON'T FORCE TOOL. It will do the job better and be safer at the rate for which it was designed.

11. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

12. WEAR PROPER APPAREL. No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip foot wear is recommended. Wear protective hair covering to contain long hair.

13. ALWAYS USE SAFETY GLASSES. Wear safety glasses (must comply with ANSI Z87.1). Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty.

14. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

15. DON'T OVERREACH. Keep proper footing and balance at all times.

16. MAINTAIN TOOLS IN TOP CONDITION. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

17. DISCONNECT TOOLS before servicing and when changing accessories such as blades, bits, cutters, etc.

18. USE RECOMMENDED ACCESSORIES. The use of improper accessories may cause hazards.

19. AVOID ACCIDENTAL STARTING. Make sure switch is in "OFF" position before plugging in power cord.

20. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

21. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function - check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

22. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

23. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.

24. DRUGS, ALCOHOL, MEDICATION. Do not operate tool while under the influence of drug, alcohol or any medication.

25. MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY while motor is being mounted, connected or reconnected.

26. WARNING: The dust generated by certain woods and wood products can be injurious to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

ADDITIONAL SAFETY RULES FOR PLANERS

1. **IF YOU ARE NOT** thoroughly familiar with the operation of planers, obtain advice from your supervisor, instructor or other qualified person.

2. **MAKE SURE** wiring codes and recommended electrical connection instructions are followed, and that the machine is properly grounded.

3. **MAKE** all adjustments with the power off.

4. **DISCONNECT** machine from power source when making repairs.

5. **KEEP** fingers and hands away from chip exhaust opening. The cutterhead rotates at extremely high speeds.

6. **NEVER** feed the work into the outfeed end of machine.

7. **ADEQUATELY** support the workpiece at all times.

8. **NEVER** start the machine with the workpiece in contact with the cutterhead.

9. **MAKE SURE** the workpiece is free from nails and other foreign objects which could cause injury or damage to the blades.

10. **MAKE SURE** the blades are properly secured in the cutterhead, as explained in the instruction manual, before turning on power.

11. **ALWAYS** allow the cutterhead to reach full speed before using.

12. **DO NOT** perform planing operations on material shorter than 14 inches, or wider than 20 inches.

13. **ADDITIONAL INFORMATION** regarding the safe and proper operation of this product is available from the National Safety Council, 444 N. Michigan Avenue, Chicago, IL 60611 in the Accident Prevention Manual for Industrial Operation and also in the Safety Data Sheets provided by the NSC. Please also refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machine and the U.S. Department of Labor OSHA 1910.213 Regulations.

UNPACKING AND CLEANING THE MACHINE

Carefully remove the planer from the shipping crate. The planer is shipped complete with motor, motor pulley and belts assembled to the machine.

IN ORDER TO PROPERLY CLEAN THE MACHINE, PROCEED AS FOLLOWS:

1. Turn lock knob (A) Fig. 2, counterclockwise. **NOTE:** If it is necessary to lower the table to facilitate cleaning, turn handwheel (B) counterclockwise until table is at the desired height for cleaning.

2. Completely loosen and remove lock knob (A) Fig. 2, and handwheel (B) from the planer.

3. Loosen two screws (C) Fig. 2, and swing open side covers (D).

4. Remove two screws (E) Fig. 3, from the rear of the machine and carefully lift off top cover (F), exposing the feed rolls, cutterhead, and cutterhead knives as shown in Fig. 4.

5. Remove the protective coating from the table, bed rollers, infeed roller, anti-kickback fingers, cutterhead and cutterhead knives. This coating may be removed with a soft cloth moistened with kerosene. **(DO NOT USE GASOLINE, ACETONE OR LACQUER THINNER FOR THIS PURPOSE.) CAUTION: EXTREME CARE MUST BE TAKEN WHEN CLEANING THE CUTTERHEAD BECAUSE THE CUTTING KNIVES ARE POSITIONED IN THE CUTTERHEAD AND ARE VERY SHARP!**

6. After cleaning, cover the table surface with a good quality paste wax.

7. Replace top cover, handwheel and lock knob which were removed in **STEPS 2** and **4.**

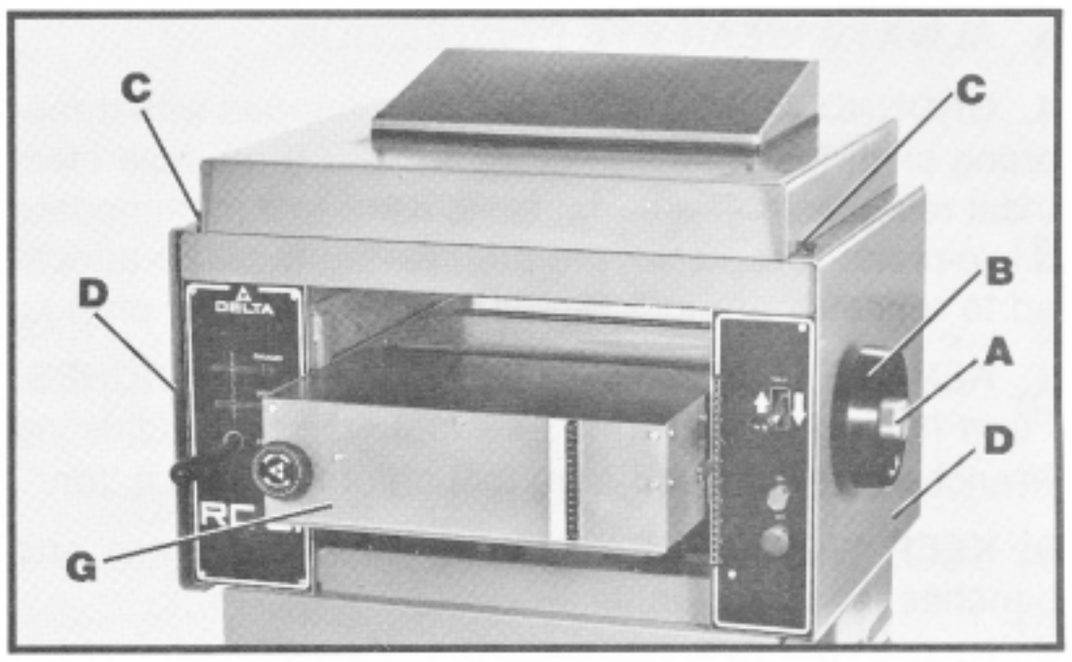


Fig. 2

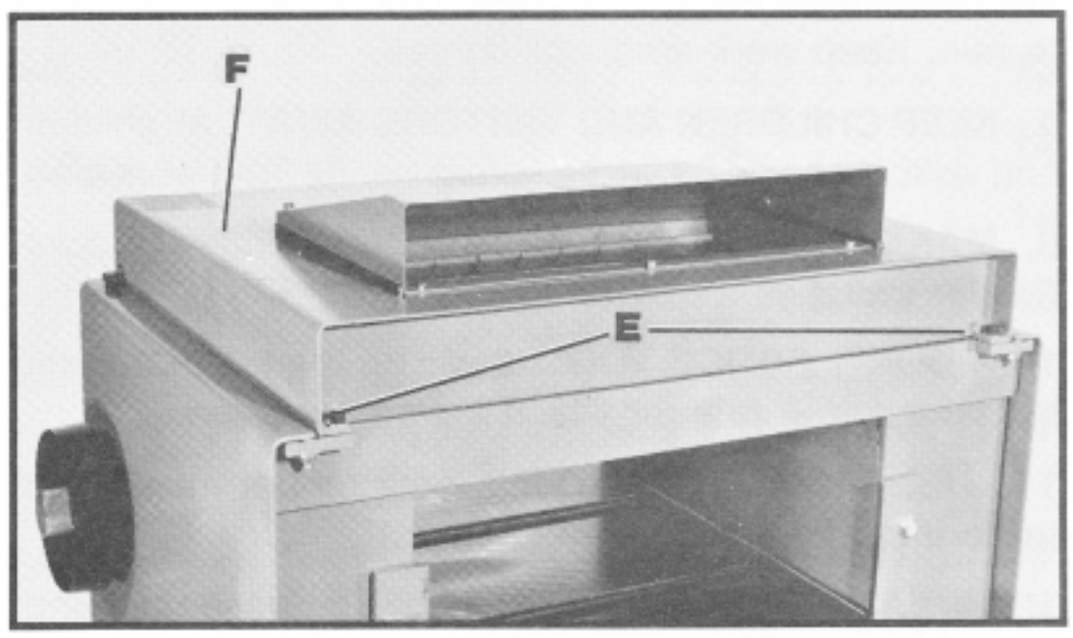


Fig. 3

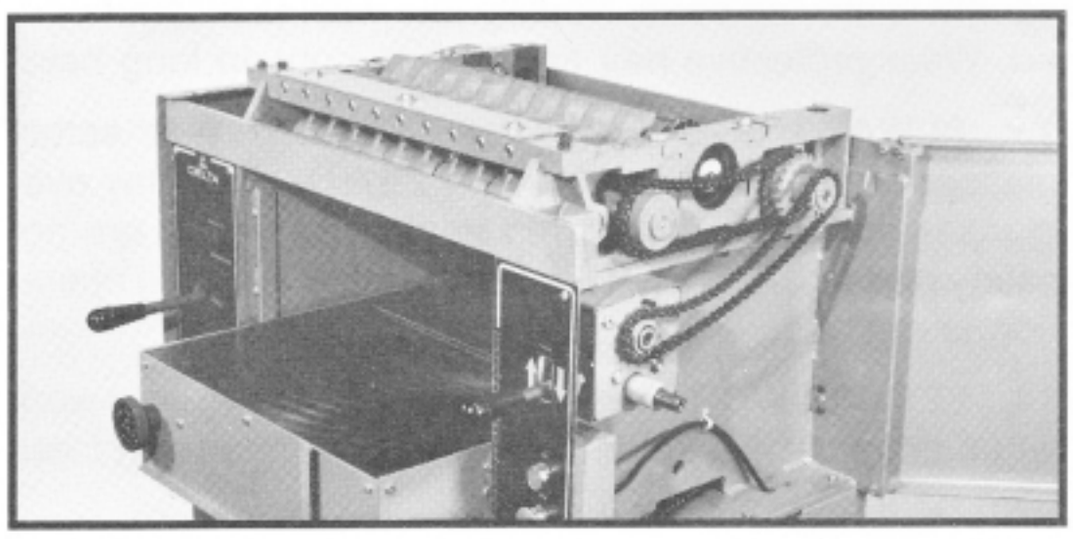


Fig. 4

ASSEMBLING DUST CHUTE

To assemble the dust chute to your planer, remove the three screws (A) Fig. 5, from the rear of the planer. The dust chute is then assembled to the rear of the planer, as shown in Fig. 6, and fastened in place using the three screws (A) Fig. 5.

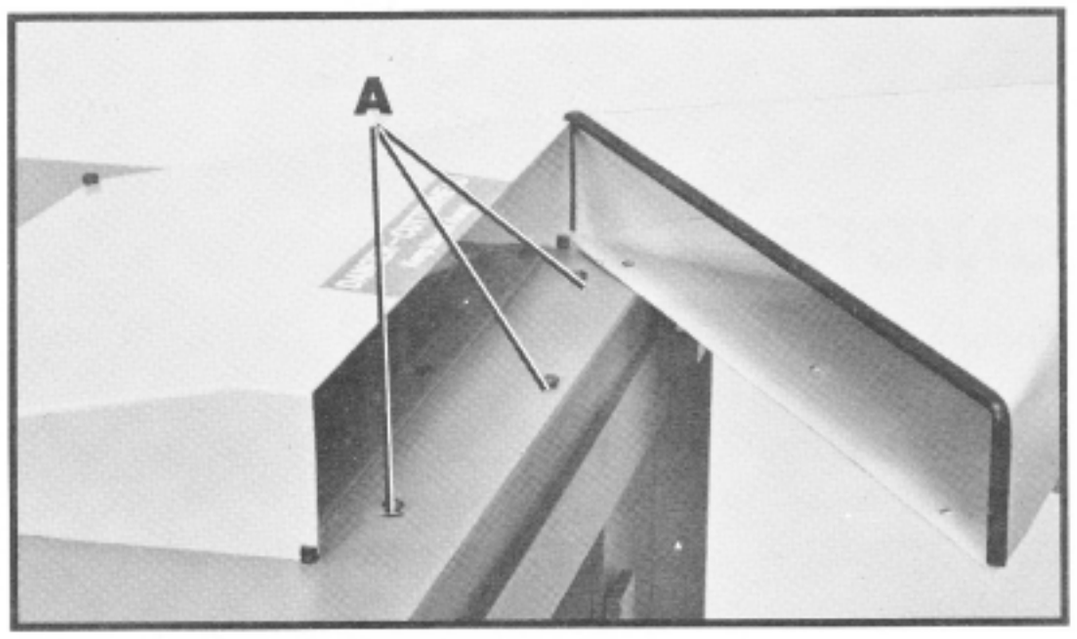


Fig. 5

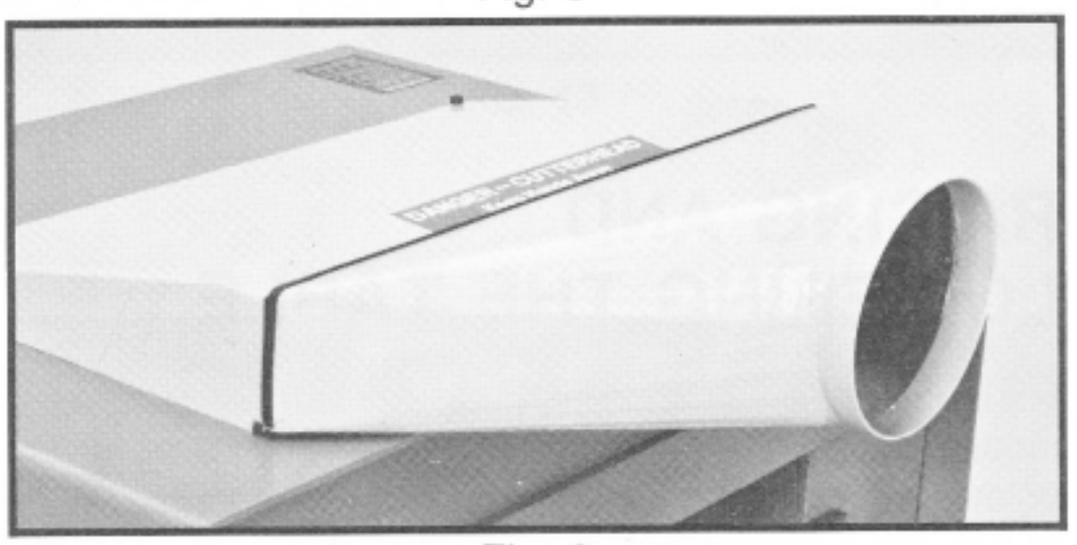


Fig. 6

ELECTRICAL CONNECTIONS

Before connecting your machine to an electrical power system, make sure the motor rating agrees with the electrical system it is to be connected to. The single phase planer is shipped wired for 230 volts only and the three phase planer is shipped wired for 230 volts unless 460 volts was specified. In all cases remove the black terminal strip cover (A) Fig. 7, located on the rear of the machine. Bring the power line up through the connector located on bottom of the terminal strip cover and proceed as follows:

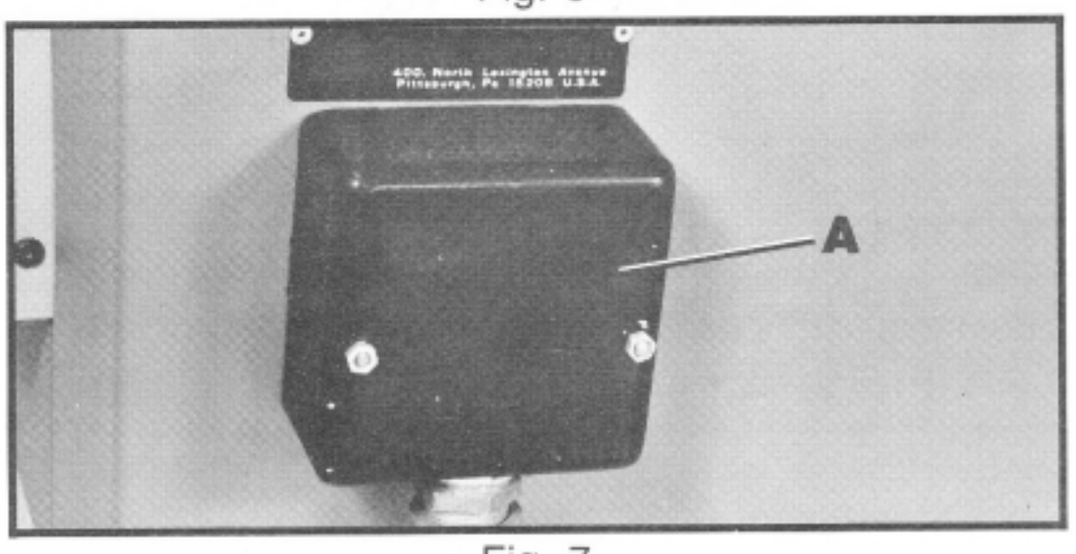


Fig. 7

If single phase, connect the two power lines to terminals L1 and L2 and the green ground line to the ground terminal, as shown in Fig. 8.

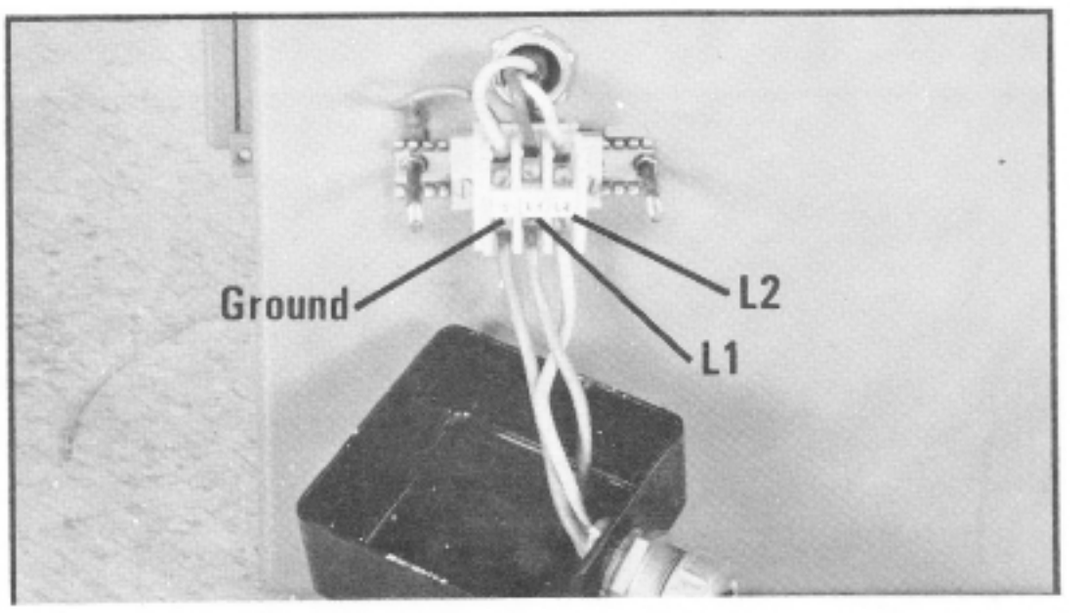


Fig. 8

If three phase, connect the three power lines to terminals L1, L2 and L3 and the green ground line to the ground terminal, as shown in Fig. 9. **IMPORTANT - THREE PHASE MACHINE ONLY.** If after the machine is in operation the cutterhead revolves in the wrong rotation, simply interchange any two of the three power lines that are connected to terminals L1, L2 and L3.

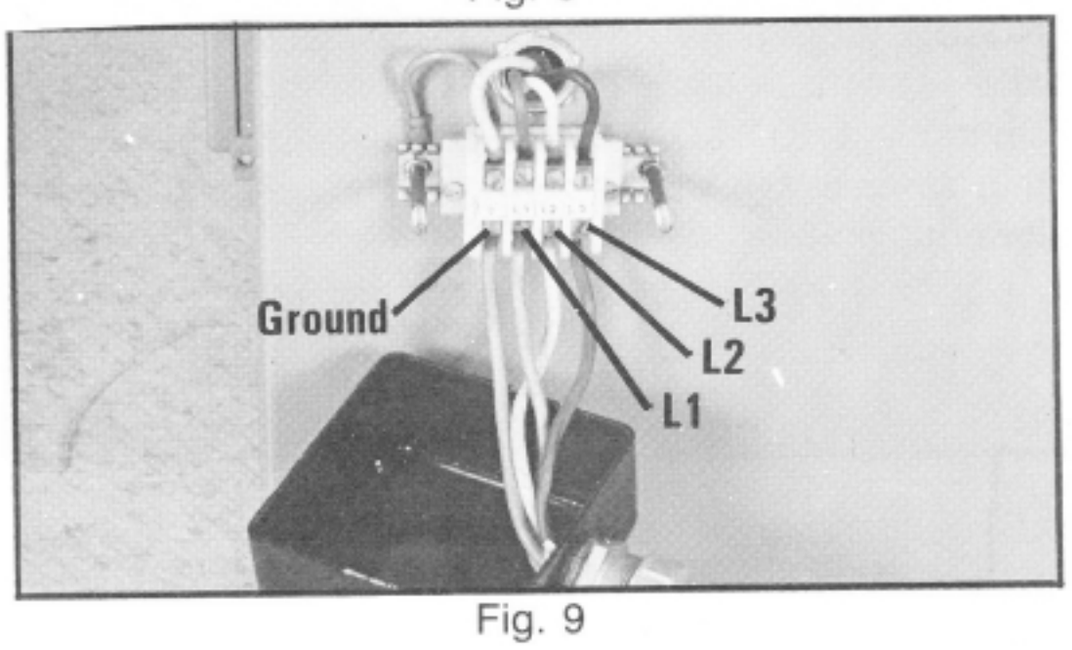


Fig. 9

OPERATING CONTROLS

ON/OFF CONTROLS

The machine is started by pressing the green (shrouded) ''ON'' button (A) Fig. 10. To stop the machine, push red (mushroom type) ''OFF'' button (B).

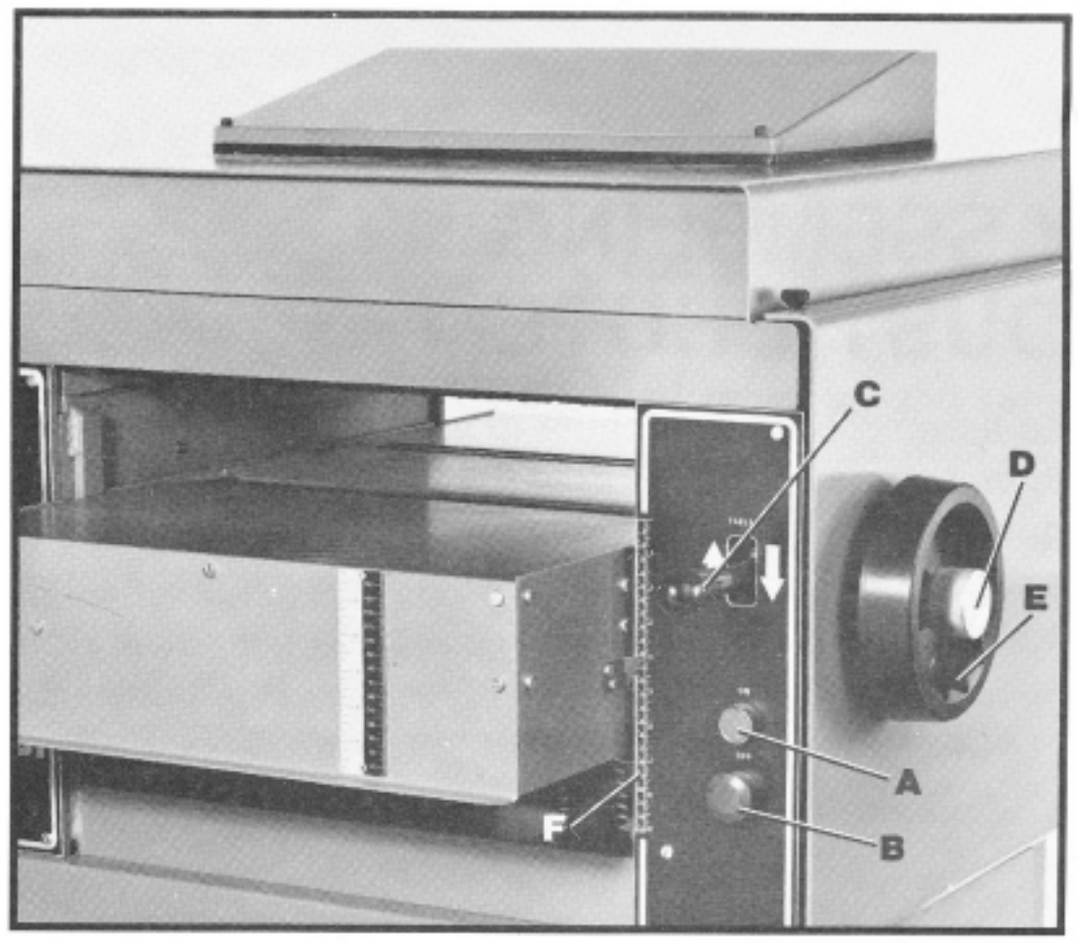


Fig. 10

RAISING AND LOWERING THE TABLE

For fast and easy changes in thickness settings to accommodate thick or thin stock, the table can be rapidly raised or lowered by pulling up or pushing down on table raising and lowering control lever (C) Fig. 10. **NOTE:** The machine must be turned ''ON'' and feed roll lever (H) Fig. 11, engaged when doing this.

Fine adjustment to the table height can be accomplished by loosening lock knob (D) Fig. 10, and turning table raising and lowering handwheel (E). Tighten lock knob (D) after table height adjustment is made. The English/Metric scale (F) Fig. 10, indicates the table height setting.

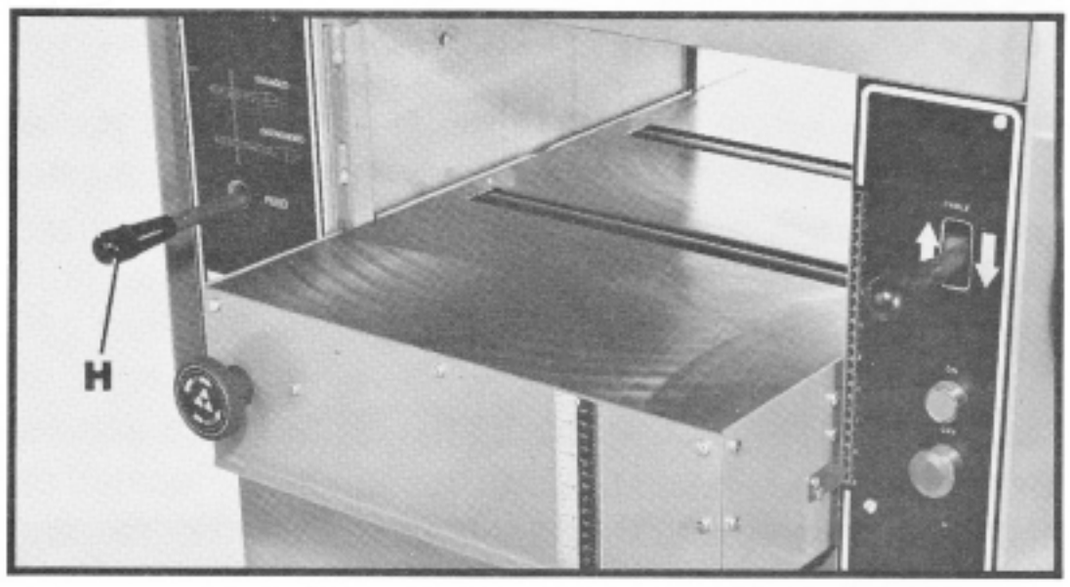


Fig. 11

The English/Metric scale and shelf (G) Fig. 12, located on the front of the table is used to quickly determine the thickness of stock, before or after planing, by simply placing the stock on the shelf as shown in Fig. 12. This enables you to quickly position the table for the next cut.

NOTE: The setting of the table to its final position should always be made by **RAISING THE TABLE** to the desired setting and **NOT LOWERING THE TABLE**. This insures that all backlash will be removed from the raising and lowering screws.

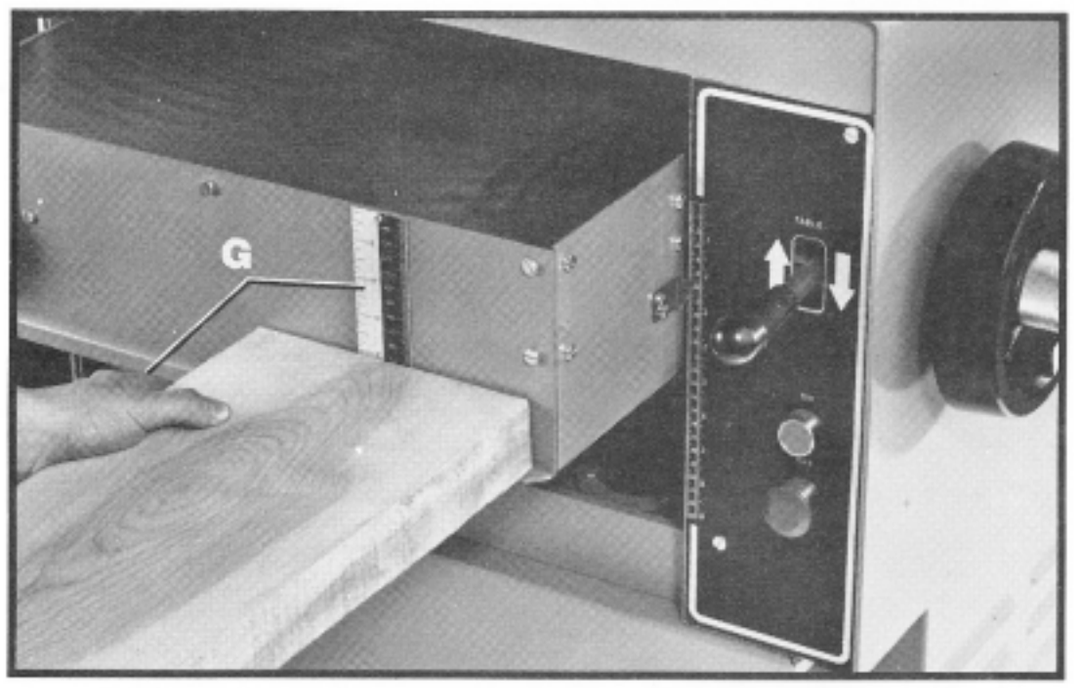


Fig. 12

FEED ROLL SPEEDS

Your planer is supplied with feed roll speeds of 16 and 28 feet per minute if it is a single phase machine and 25 and 46 feet per minute if it is a three phase machine. When feed roll engagement lever (A) Fig. 13, is all the way in the "OUT" position, as shown, the feed rolls are disengaged and the planer will not feed. When feed roll engagement lever (A) is in the "IN" position, as shown in Fig. 14, and notch (B) Fig. 13, is engaged with the front of the casting, the feed rolls are engaged and the planer will feed. To disengage the feed rolls, simply lift up on engagement lever (A) Fig. 14.

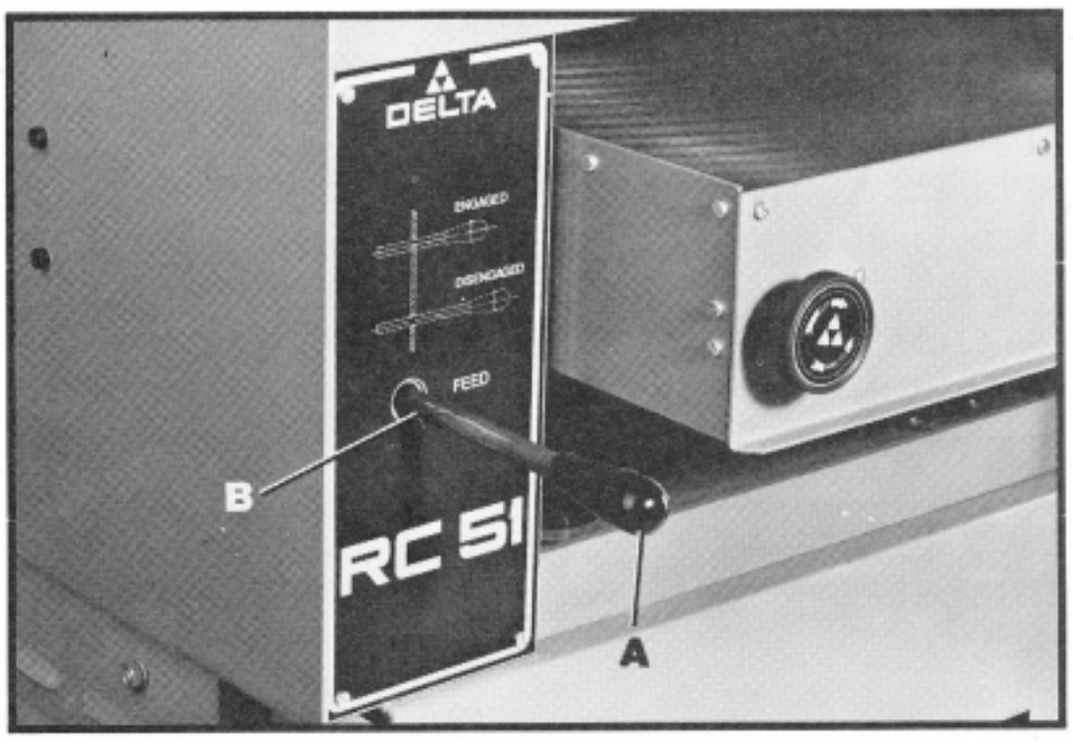


Fig. 13

Fig. 14

To change feed roll speeds, make sure the feed roll engagement lever (A) Fig. 15, is disengaged (in the out position) and open the left side door of the machine. When belt (C) Fig. 15, is on the smallest step of motor pulley (D) and the largest step of gearbox pulley (E) the feed roll speed will be 16 feet per minute on single phase machines and 25 feet per minute on three phase machines. When belt (C) is on the largest step of motor pulley (D) and the smallest step of gearbox pulley (E) the feed roll speed will be 28 feet per minute on single phase machines and 46 feet per minute on three phase machines.

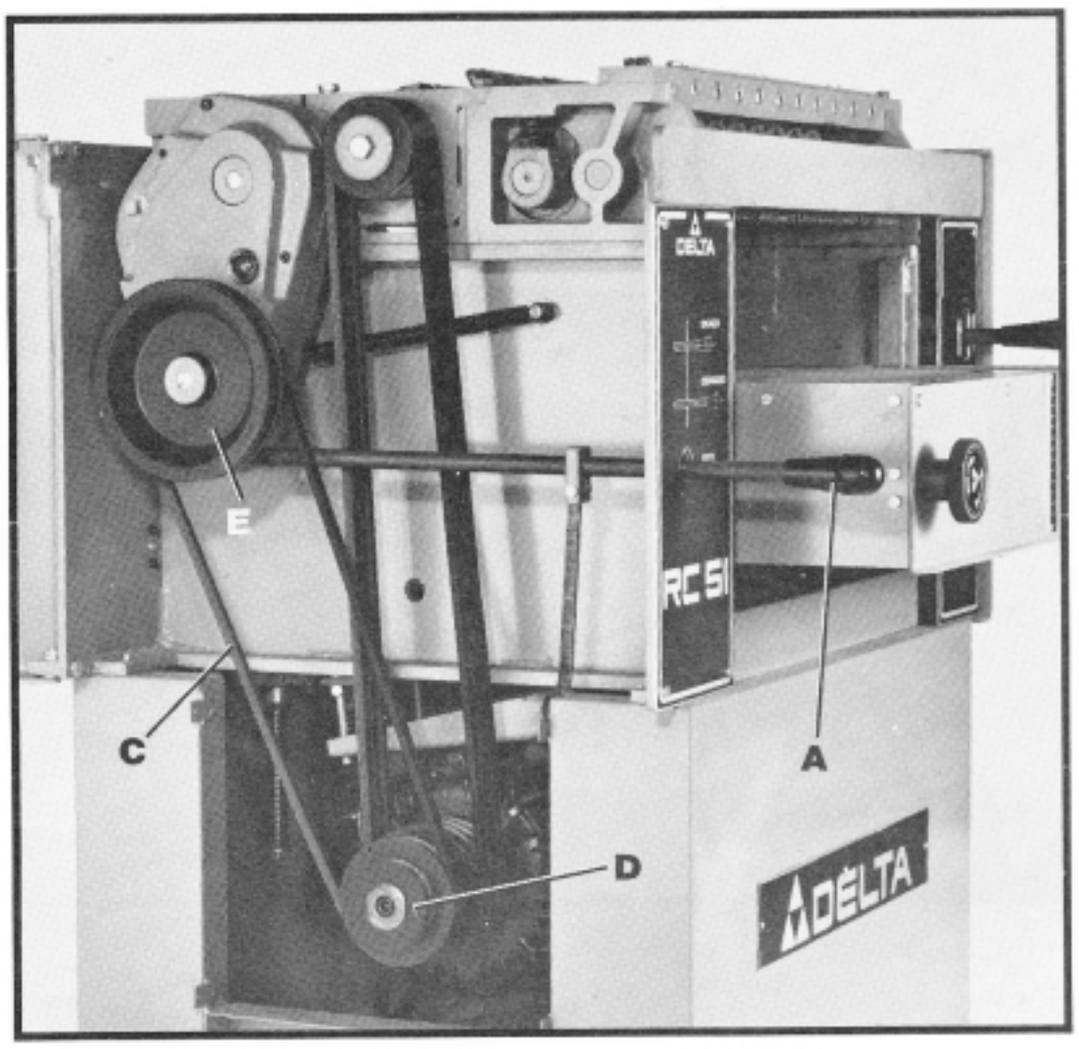


Fig. 15

TABLE ROLLERS

Your planer is supplied with two table rollers (A) Fig. 16, which aid in feeding the stock by reducing friction and turn as the stock is fed through the planer. It is not possible to give exact dimensions on the proper height setting of the table rollers because each type of wood behaves differently. As a general rule, however, when planing rough stock the table rollers should be set **HIGH** and when planing smooth stock the table rollers should be set **LOW**.

To raise table rollers (A) Fig. 16, turn adjustment knob (B) clockwise. To lower table rollers (A) turn adjustment knob (B) counterclockwise.

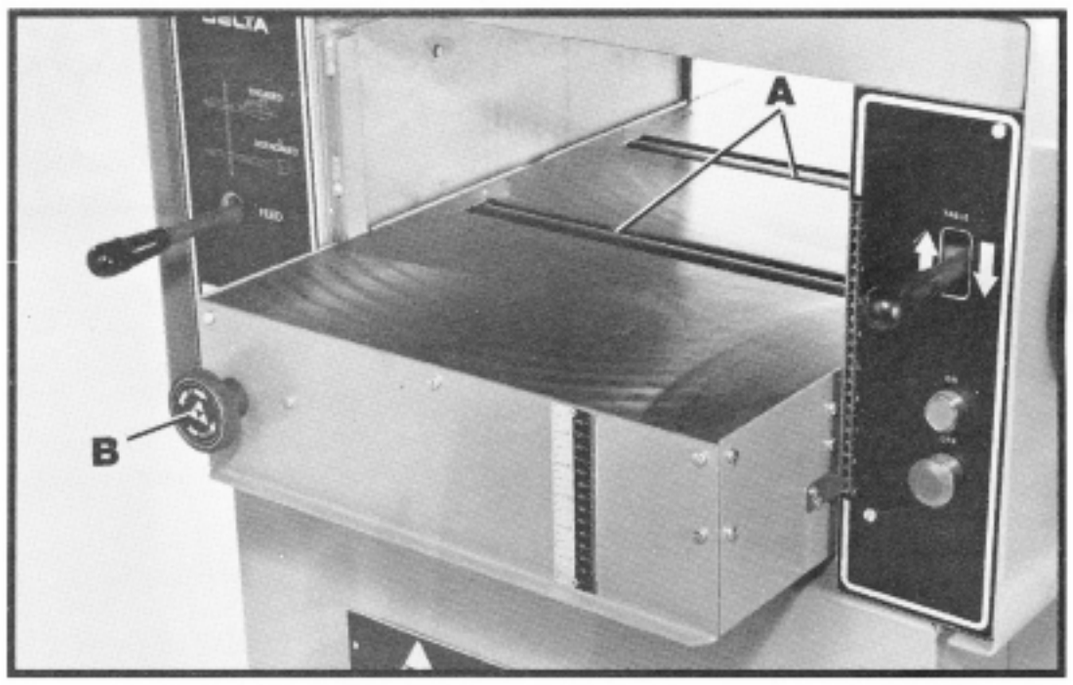


Fig. 16

ANTI-KICKBACK FINGERS

Anti-kickback fingers (A) Fig. 17, are provided on your planer to prevent kickback. These fingers operate by gravity and it is necessary to inspect them occasionally as shown in Fig. 17, to make sure they are free of gum and pitch so they move independently and operate correctly.

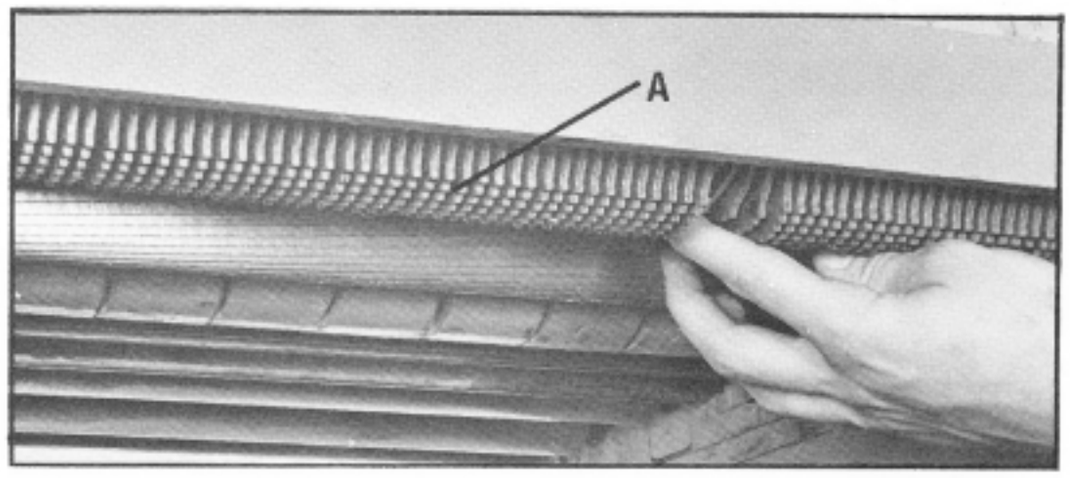


Fig. 17

ADJUSTMENTS

Although your planer was carefully adjusted at the factory, it should be checked before being put into operation. Any inaccuracies due to rough handling in transit can easily be corrected by following these directions. In order to check the adjustments you will need a feeler gage and a gage block. **WHEN CHECKING ADJUSTMENTS, ALWAYS MAKE SURE THE PLANER IS DISCONNECTED FROM THE POWER SOURCE.**

CHECKING AND ADJUSTING DRIVE BELT TENSION

Proper drive belt tension is obtained when there is 1/4″ deflection, using light finger pressure on drive belts (A) Fig. 18, midway between pulleys. If an adjustment is necessary proceed as follows:

1. **MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.**

2. Disengage feed roll lever (D).

3. Loosen two hex nuts (B) Fig. 19, and move motor plate (C) up or down as necessary to adjust tension.

4. Tighten two hex nuts (B) Fig. 19, after adjustment is made.

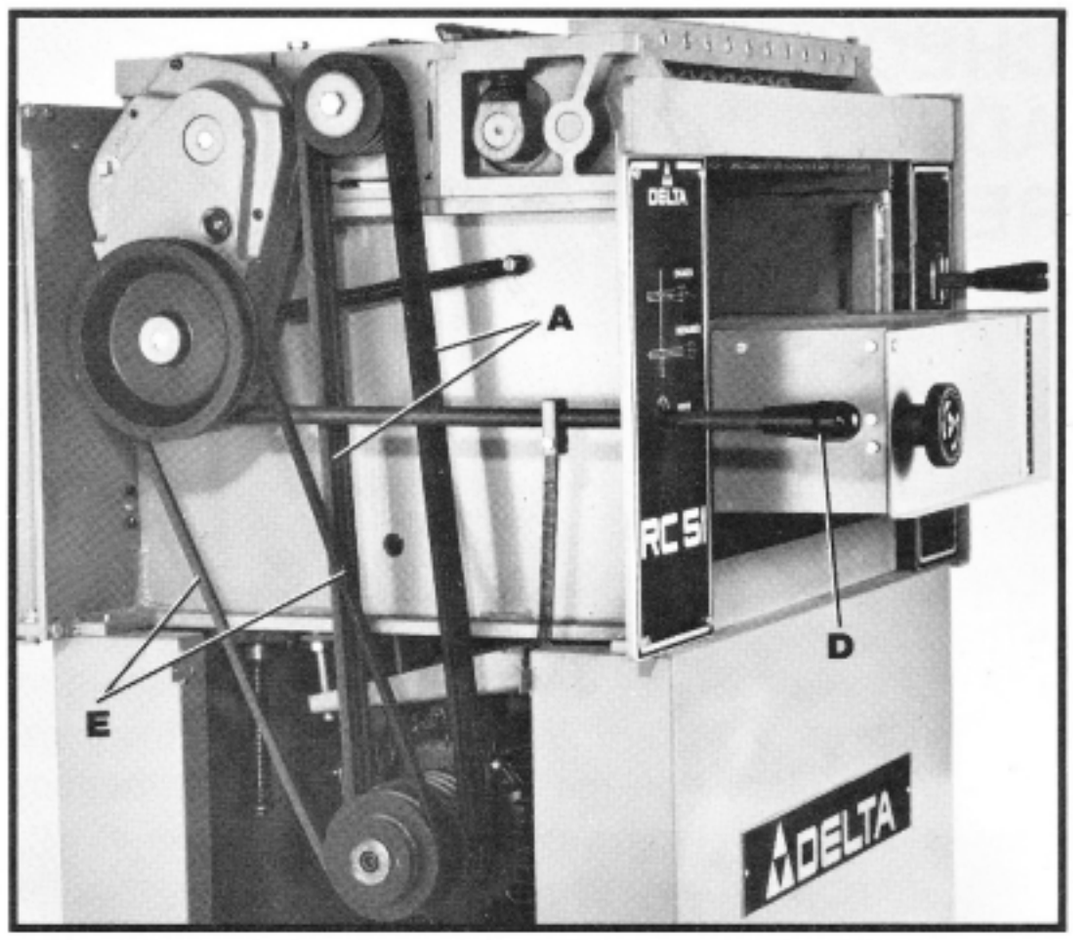


Fig. 18

CHECKING AND ADJUSTING FEED ROLL BELT TENSION

Proper tension on the feed roll belt is obtained when there is approximately 1″ deflection, using light finger pressure on feed roll belt (E) Fig. 18, midway between pulleys with the feed roll lever (D) engaged (“IN” POSITION).

If an adjustment is necessary:

1. **MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.**

2. Change position of rod (D) Fig. 20, in stud (F) by tightening and loosening two nuts (G) until correct belt tension is obtained. Both hex nuts (G) should be tight against stud (F) as shown in Fig. 20, after adjustment is made.

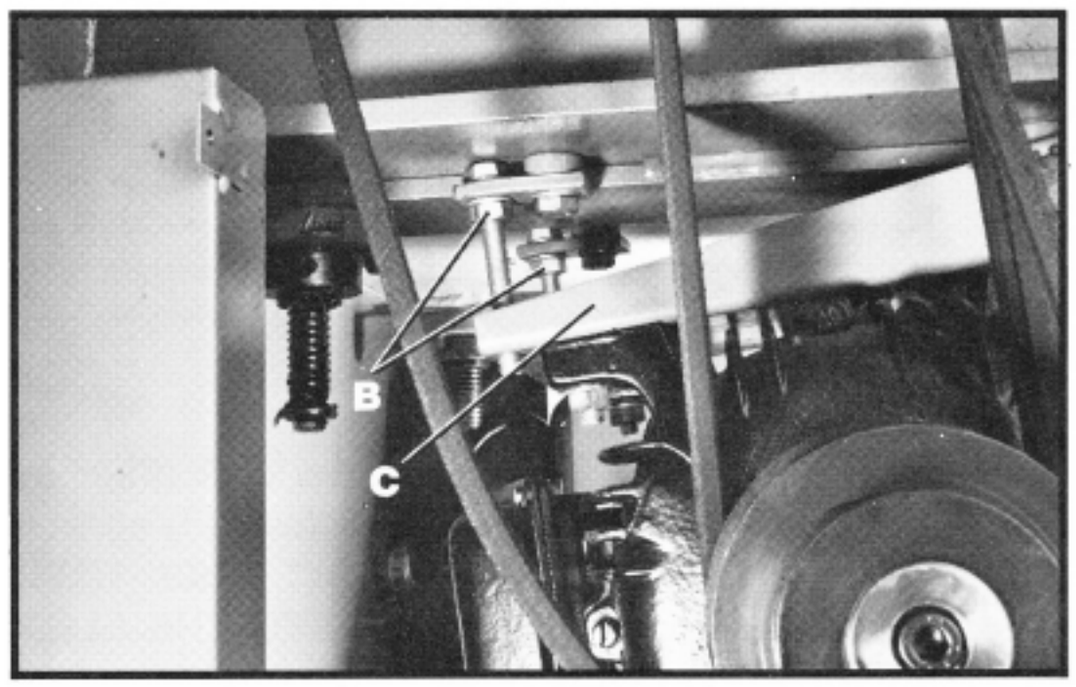


Fig. 19

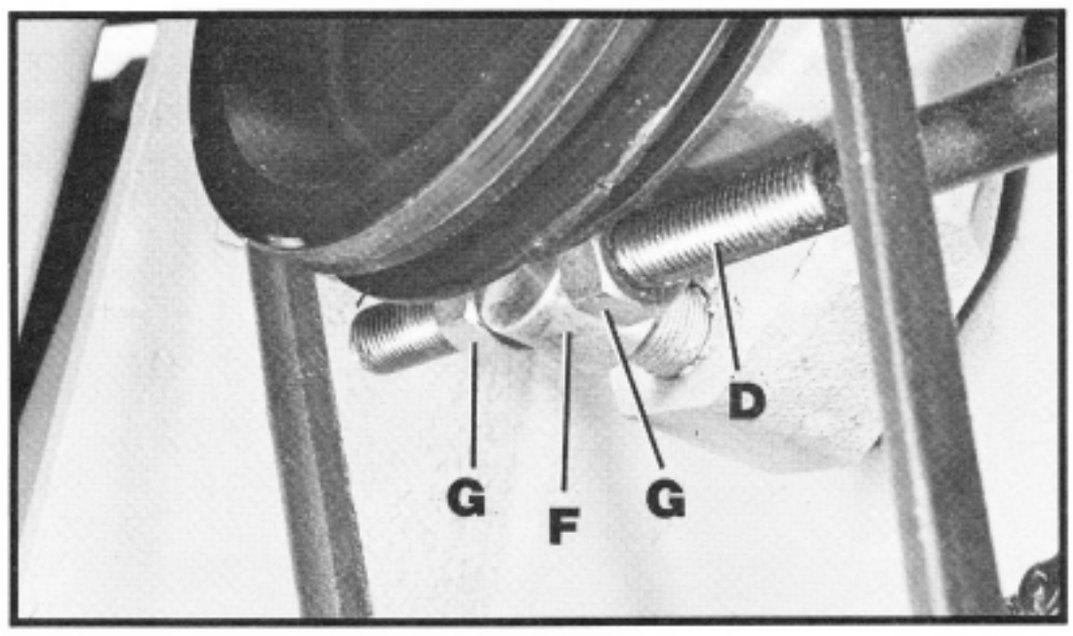


Fig. 20

CHECKING, ADJUSTING AND REPLACING KNIVES

When checking, adjusting or replacing the cutterhead knives on the 20″ Planer, proceed as follows:

1. **DISCONNECT THE MACHINE FROM THE POWER SOURCE AND REMOVE THE TOP COVER OF THE PLANER EXPOSING THE CUTTERHEAD.**

A. Check all four knives for proper setting using the knife gage (A), as shown in Fig. 21. When the gage (A) is placed on the cutterhead and the bottom of the two roll pins, one of which is shown at (B), are against the edge of the slot (C) opposite the knife, the knife should just contact the bottom of the gage (D).

B. If any of the knives require an adjustment, slightly loosen the knife locking bar of each of the four knives by turning the knife locking screws, four of which are shown at (E) Fig. 21, into the locking bar just enough to relieve stress in the cutterhead but not disturb the setting of the four knives.

C. To adjust the knife that must be reset, loosen all of that knife's locking screws (E) Fig. 21, by turning them into the locking bar. As the knife locking bar becomes loose, lifter springs under the knife will raise the knife until it contacts the bottom of the gage (D). Then snug up the knife locking bar by lightly backing out the locking screws (E) against the knife slot. **IMPORTANT: AT THIS TIME, ONLY TIGHTEN THE KNIFE INTO THE SLOT ENOUGH TO HOLD IT IN POSITION.**

D. If additional knives must be reset, repeat **STEP C**.

E. After all four knives are set with the screws just snug, back out and tighten the locking screws, four of which are shown at (E) Fig. 21, against the slot. Start with the end screws first and proceed on alternate sides toward the center screws until the knife is securely held in the cutterhead. Tighten the remaining three knives in the same manner.

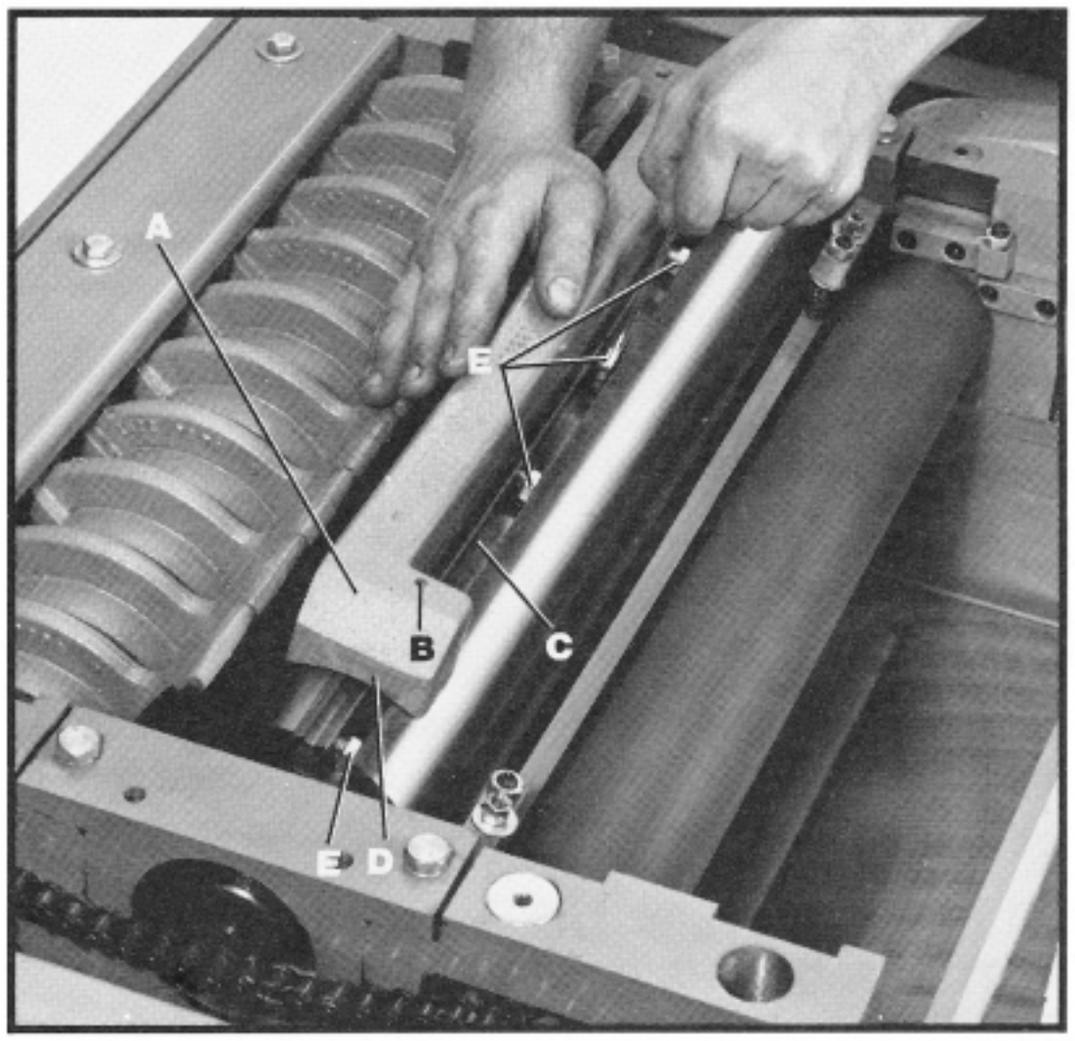


Fig. 21

2. If the knives are removed for sharpening, care must be exercised in replacing and resetting them, as follows:

A. To remove each knife, loosen the knife locking bar, by turning the locking screws, four of which are shown at (E) Fig. 21, into the knife locking bar and remove the locking bar, knife and springs located under the knife.

B. Remove the remaining three knives in the same manner.

C. Thoroughly clean the knife slots, knife bars, springs and screws. If the threads appear worn or stripped or if the heads are becoming rounded, replace them.

D. Inspect the cutting edge of the knives for nicks or dull wire edges. Hone the knives slightly using a stone or if the knives are to be sharpened, maintain a cutting angle of 40 degrees.

E. Insert springs, knives and knife locking bars into all four slots in the cutterhead. Push knives down as far as possible and back out locking screws, four of which are shown at (E) Fig. 21, just enough to hold all four knives in the cutterhead.

F. Adjust all four knives as explained in **STEP 1** above.

ADJUSTING SPRING TENSION ON FEED ROLLERS

The outfeed roll (A) Fig. 22, and infeed roll (not visible) are those parts of your planer that feed the stock while it is being planed. The feed rolls are under spring tension and this tension must be sufficient to feed the stock uniformly through the planer without slipping but should not be too tight that it causes damage to the board. The tension should be equal at both ends of each roll.

To adjust spring tension on the infeed roll, turn screws (B) Fig. 22, right or left until they are flush with top of casting (C). To adjust spring tension on the outfeed roll (A), turn screws (D) until they are 2 to 3 complete turns below surface of casting (C).

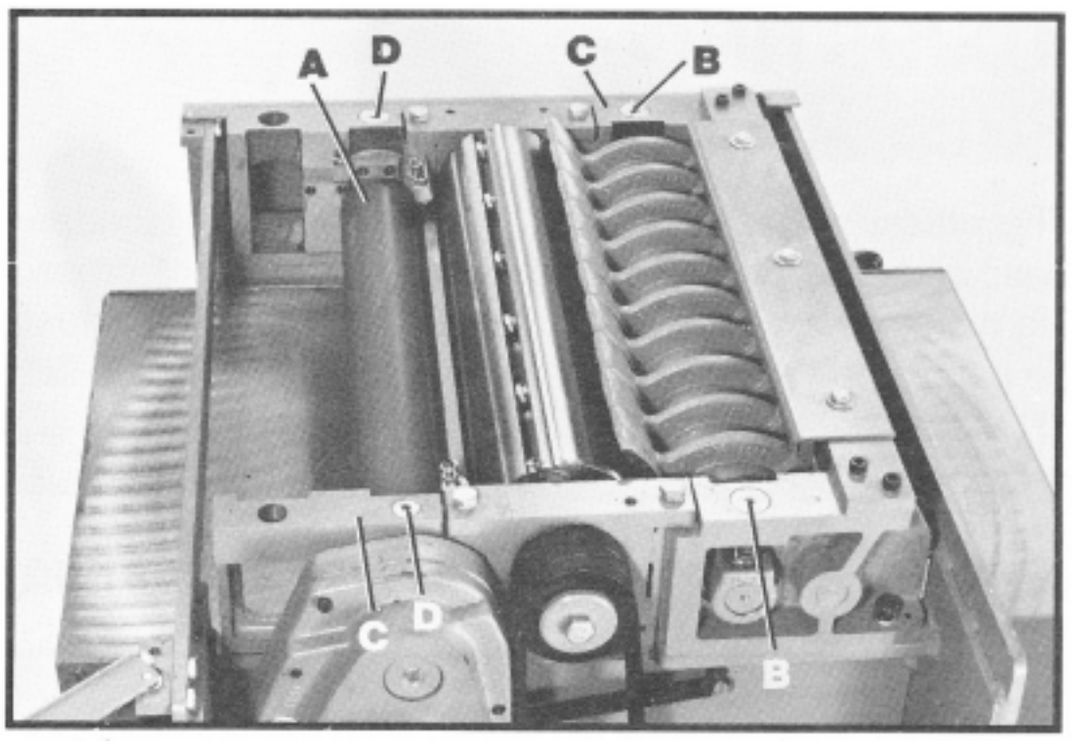


Fig. 22

ADJUSTING CHIPBREAKERS

The chipbreakers are located on top of the planer and extend down around the front of the cutterhead. The chipbreakers raise as stock is fed through and "breaks or curls" the chips the same as a plane iron cap on a hand plane. The bottom of the chipbreakers must be parallel to the knives and set .011" below the cutting circle. To check and adjust the chipbreakers, proceed as follows:

1. **DISCONNECT MACHINE FROM THE POWER SOURCE.**

2. Make certain the knives are adjusted properly as previously explained under **CHECKING, ADJUSTING AND REPLACING KNIVES**.

3. Place gage block (A) Fig. 23, on the table directly underneath the cutterhead, as shown. Using a .011" feeler gage (B) Fig. 23, placed on top of the gage block, raise or lower the table until the knife just touches the feeler gage when the knife is at its lowest point. Do not move the table any further until the adjustment is completed.

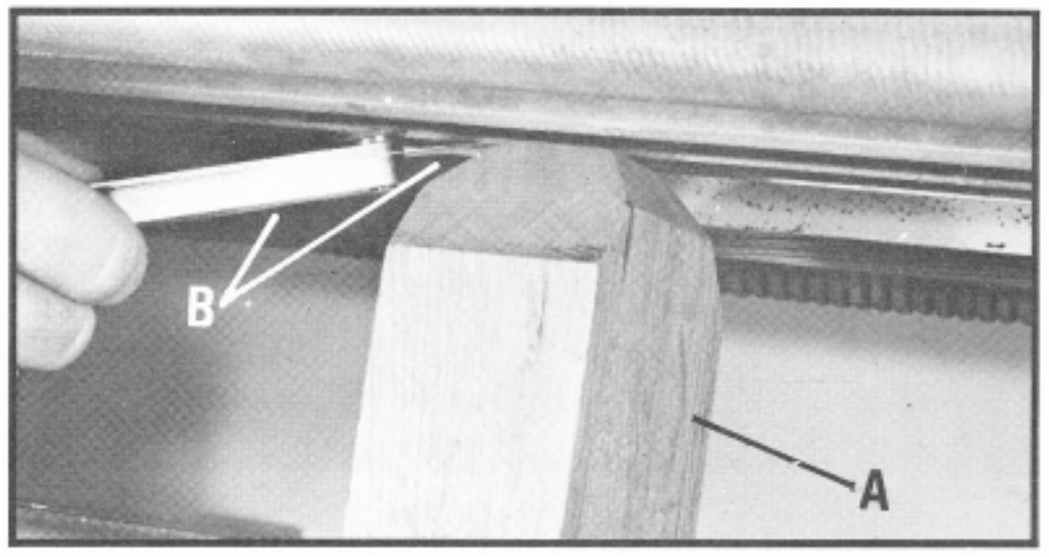


Fig. 23

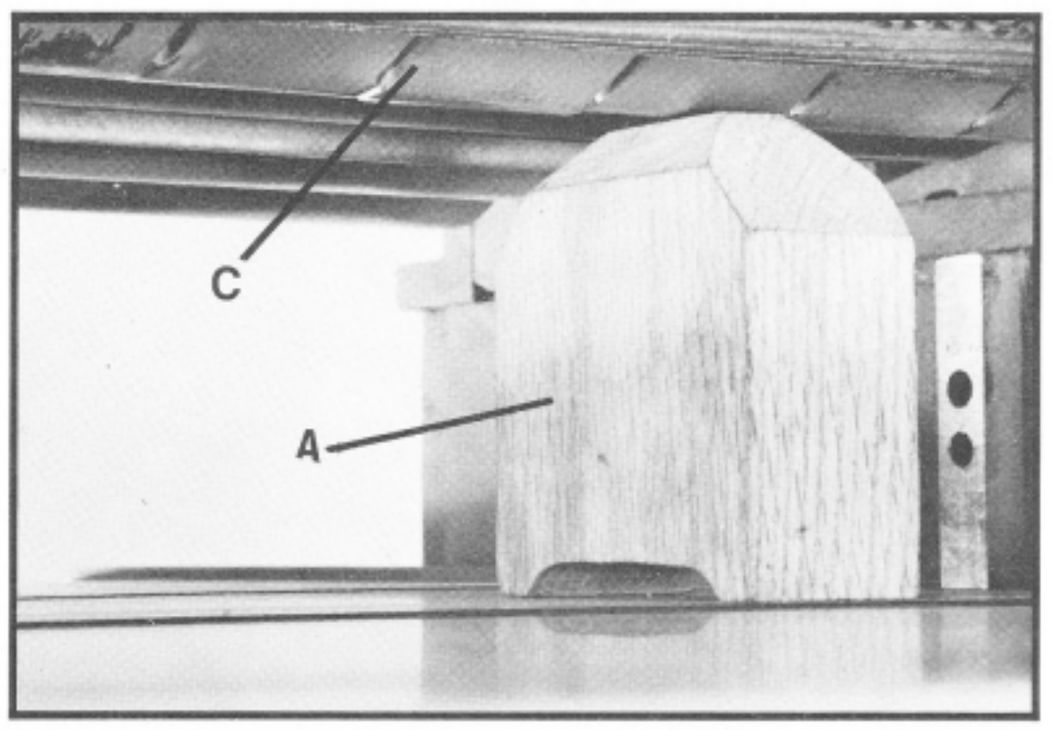


Fig. 24

4. Move the gage block (A) underneath the chipbreakers (C) as shown in Fig. 24. The bottom of the chipbreakers should just touch the top of the gage block. Check opposite end of chipbreakers in the same manner.

5. If an adjustment to the chipbreakers is necessary, loosen three screws (D) Fig. 25, and move chipbreaker bracket (E) until bottom of chipbreakers just touch gage block at both ends.

6. The spring tension of the individual chipbreakers can be adjusted by tightening or loosening the ten adjusting screws (F) Fig. 25.

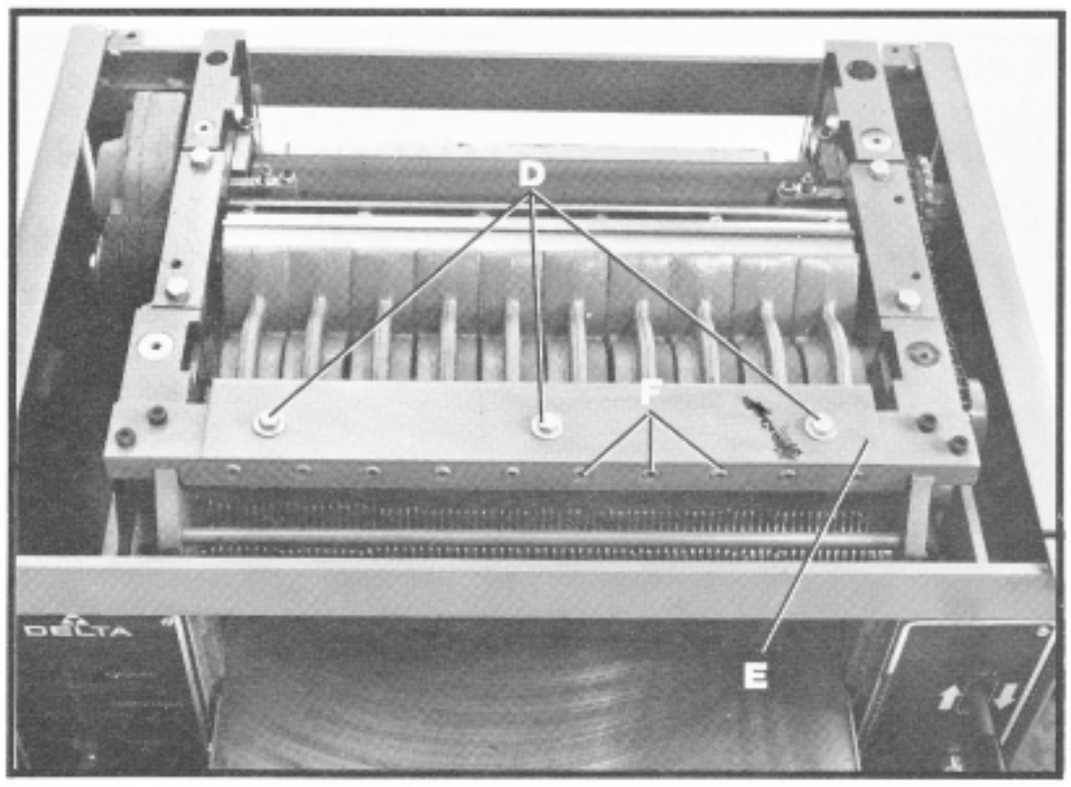


Fig. 25

ADJUSTING PRESSURE BAR

The pressure bar is located directly behind the cutterhead and rides on the planed surface of the stock pressing the stock down on the table. The pressure bar must be parallel to the knives and tangent to the table and set .011″ below the cutting circle. To adjust the pressure bar, proceed as follows:

6. Repeat **STEPS 1, 2** and **3** under **ADJUSTING CHIPBREAKERS**.

7. Move the gage block (A) underneath the pressure bar (B), as shown in Fig. 26. The bottom of the pressure bar (B) should just touch the top of the gage block. Check the opposite end of the pressure bar in the same manner.

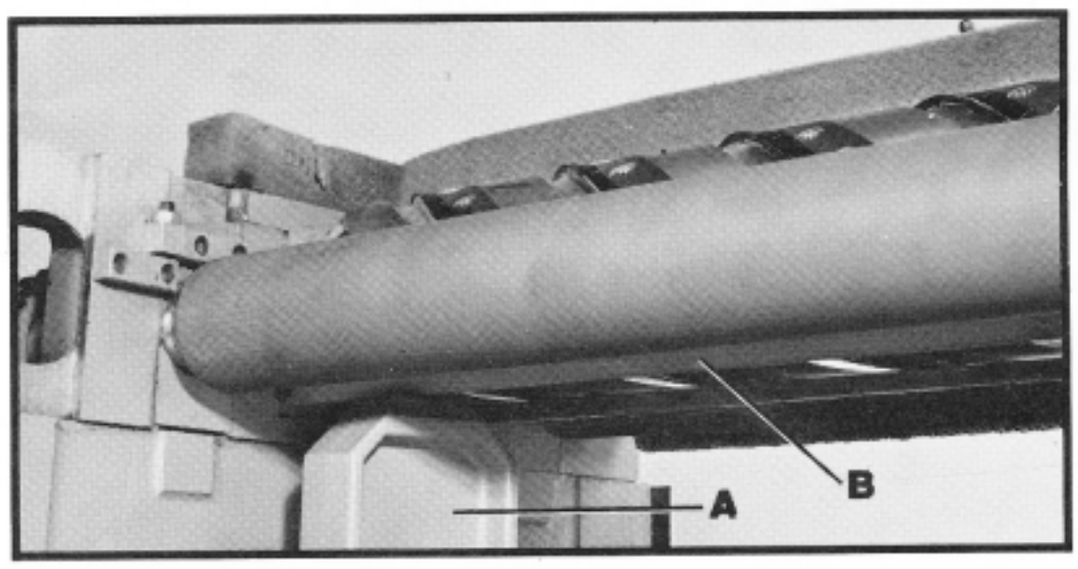


Fig. 26

8. If an adjustment to the height of the pressure bar is necessary, loosen locking nut (C) Fig. 27, and turn adjusting nut (D) until the bottom of the pressure bar just touches the gage block. Repeat at opposite end of pressure bar.

9. The spring tension of the pressure bar can be adjusted by loosening locking nut (E) Fig. 27, and turning adjusting screw (F) on both ends of the pressure bar until desired spring tension is obtained. Tighten lock nuts (C) and (E) after adjustments are made.

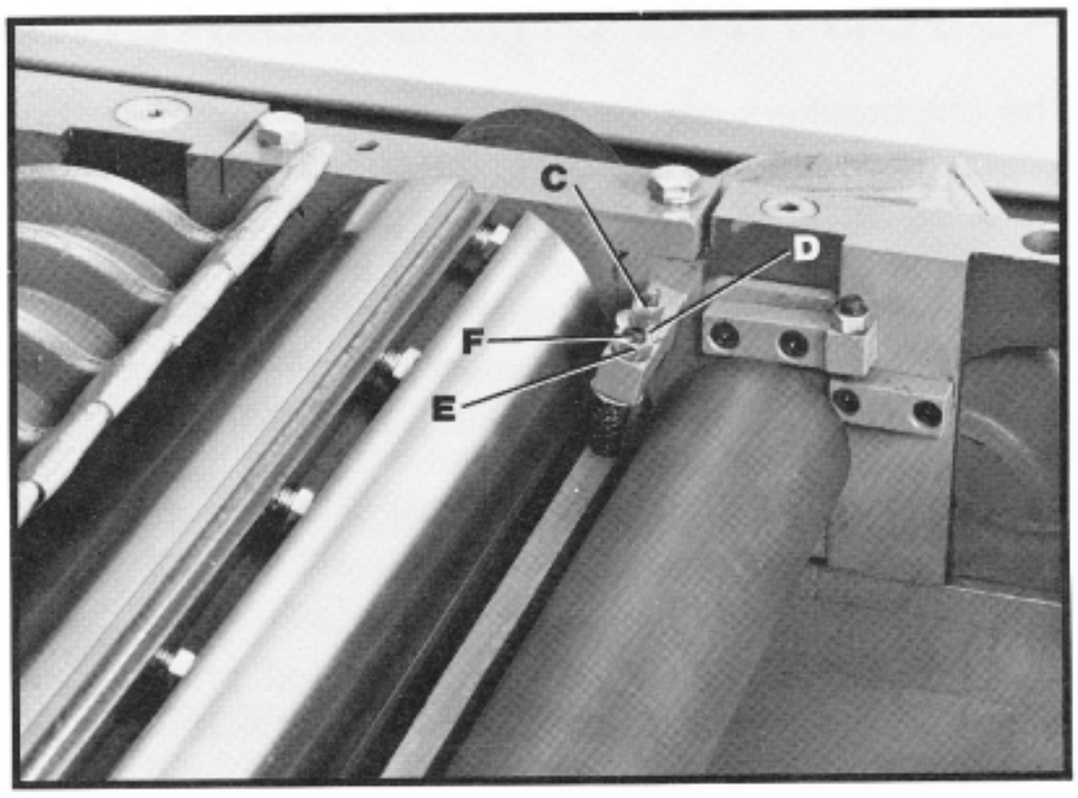


Fig. 27

ADJUSTING OUTFEED ROLLER

The outfeed roll has been set at .035″ below the cutting circle prior to shipment and an adjustment should not be necessary.

To check the setting of the outfeed roll:

1. **MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.**

2. Make certain the knives are adjusted properly as explained in section "**CHECKING, ADJUSTING AND REPLACING KNIVES**."

3. Place gage block (A) Fig. 28, on the table directly underneath the cutterhead as shown. Using a .035″ feeler gage (B) placed on top of gage block (A), raise or lower table until the knife just touches the feeler gage (B), when the knife is at its lowest point. Do not move the table any further until the adjustment is completed.

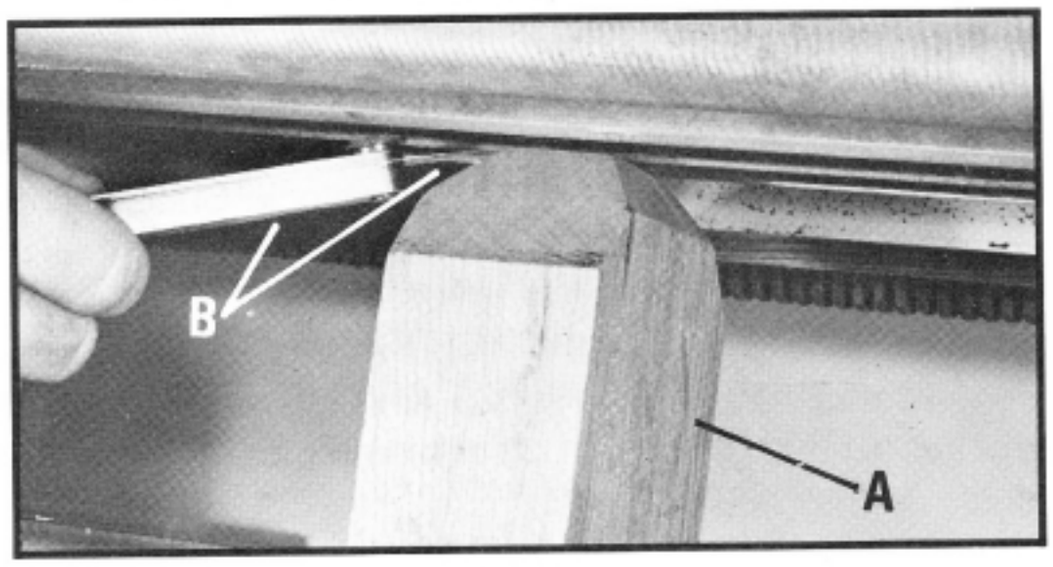


Fig. 28

4. Place the gage block (A) Fig. 29, underneath outfeed roll (C). The bottom of outfeed roller (C) should just touch the top of gage block (A) which would be .035″ below the cutting circle.

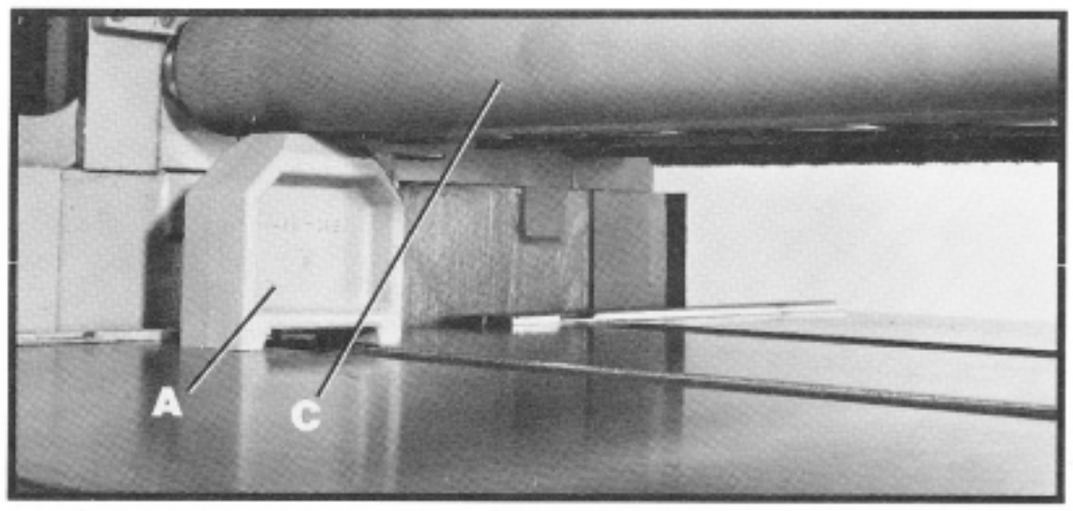


Fig. 29

5. If an adjustment is necessary, loosen locknut (D) Fig. 30, and turn adjustment screw (E) until the outfeed roll just touches the top of gage block.

6. Repeat the adjustment at the opposite end of outfeed roller. Tighten lock nut (D) Fig. 30, after adjustment is made.

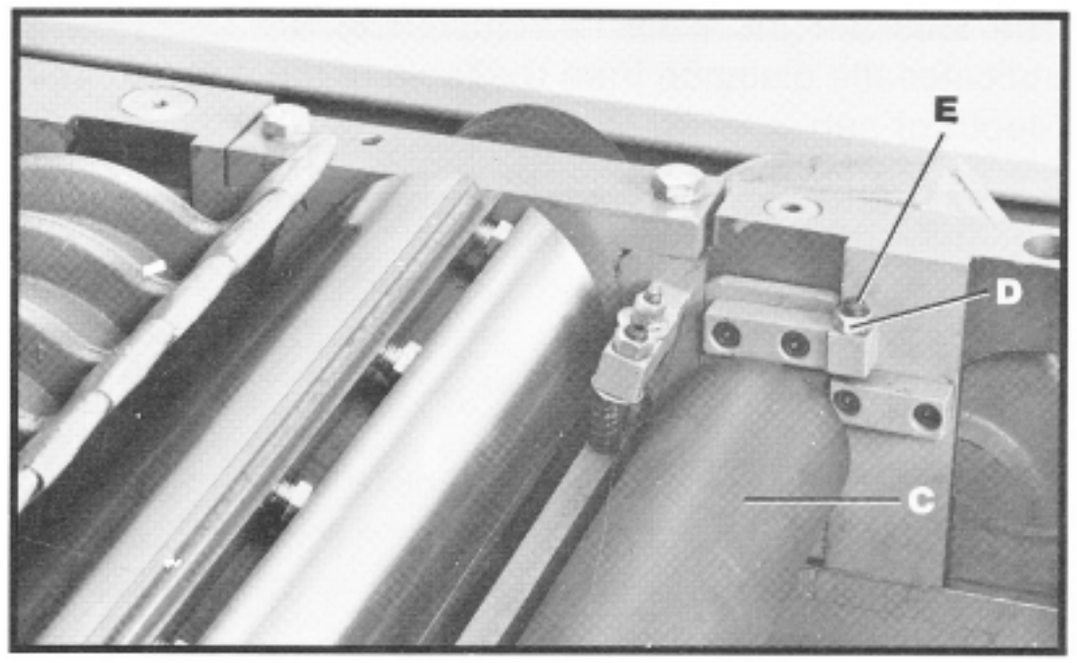


Fig. 30

ADJUST CHIP DEFLECTOR

1. **DISCONNECT MACHINE FROM THE POWER SOURCE.**

2. Remove two screws (A) Fig. 31, and lift up on chip chute (B).

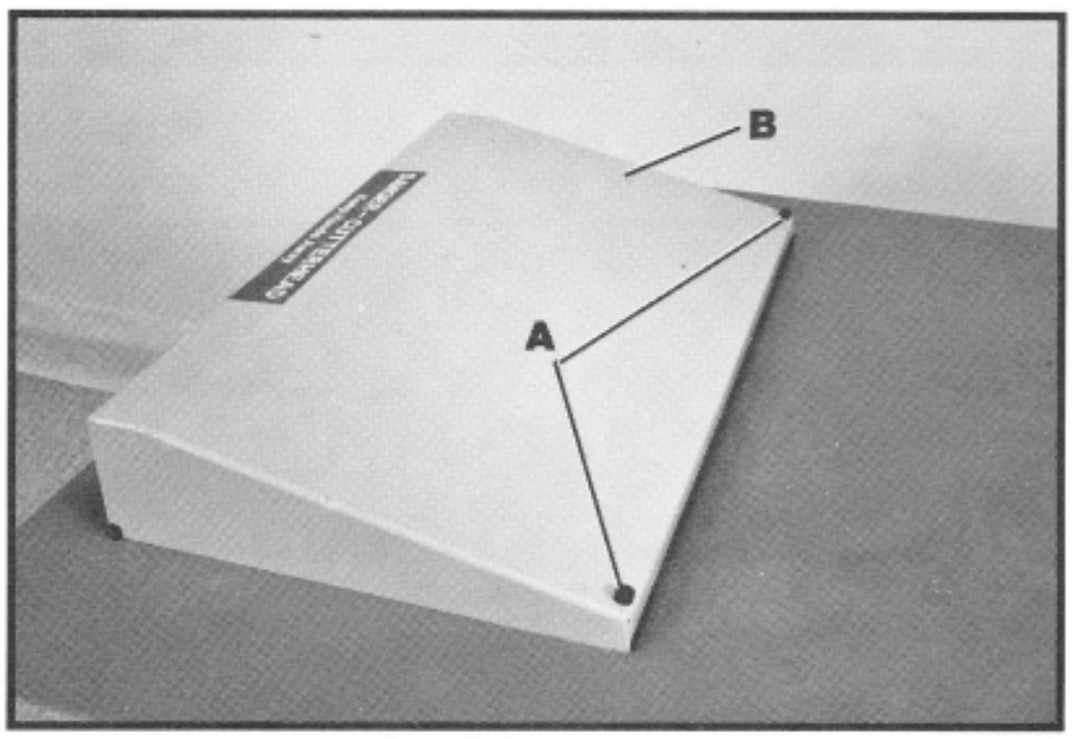


Fig. 31

3. The edge (C) of the chip deflector (D) Fig. 32, should be adjusted so it is a minimum of .040″ and a maximum of .080″ away from the cutting circle. Place a feeler gage between the knife and the edge of the chip deflector as shown in Fig. 32. If an adjustment is necessary loosen three screws (E) and move chip deflector.

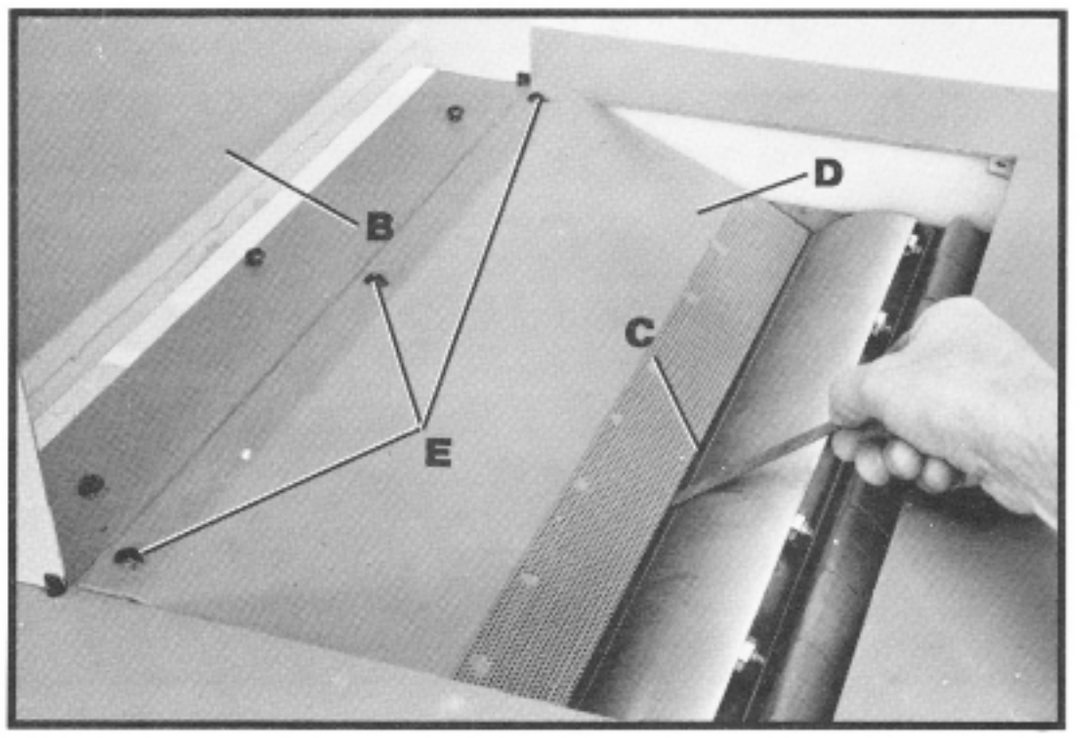


Fig. 32

ADJUSTING TABLE HEIGHT SCALE

The table height scale is adjusted at the factory and indicates the distance from the table to the cutting circle (depth of cut).

To check and adjust the pointer, proceed as follows:

1. Run a piece of wood part way through the planer and stop the machine.

2. Measure the thickness of the finished piece, as shown in Fig. 33. If necessary, loosen two screws (A) Fig. 34, adjust pointer (B) and retighten screws (A).

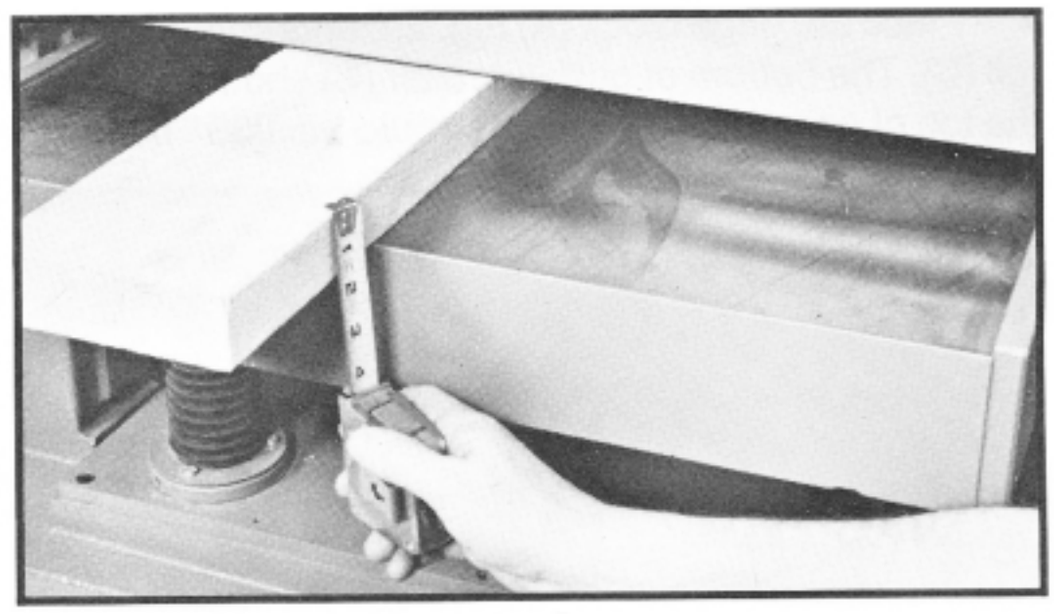


Fig. 33

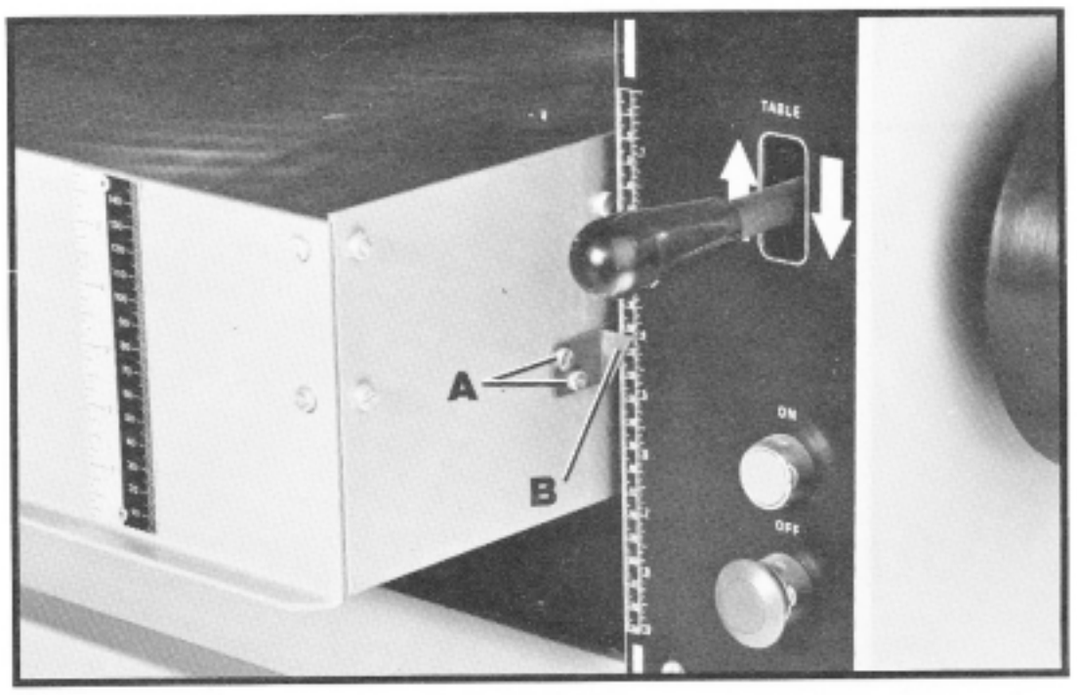


Fig. 34

CHECKING AND ADJUSTING BED ROLL HEIGHT

The height of the bed rolls (A) Fig. 35, should be set between .002″ and .004″ above the table surface, with the bed rolls at their lowest position. To check the infeed bed roller height setting, proceed as follows:

1. **MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.**

2. Turn height adjustment knob (B) Fig. 35, counterclockwise as far as it will go.

3. Place a straight edge (C) Fig. 35, across the infeed and outfeed rollers on the left side of the table as shown.

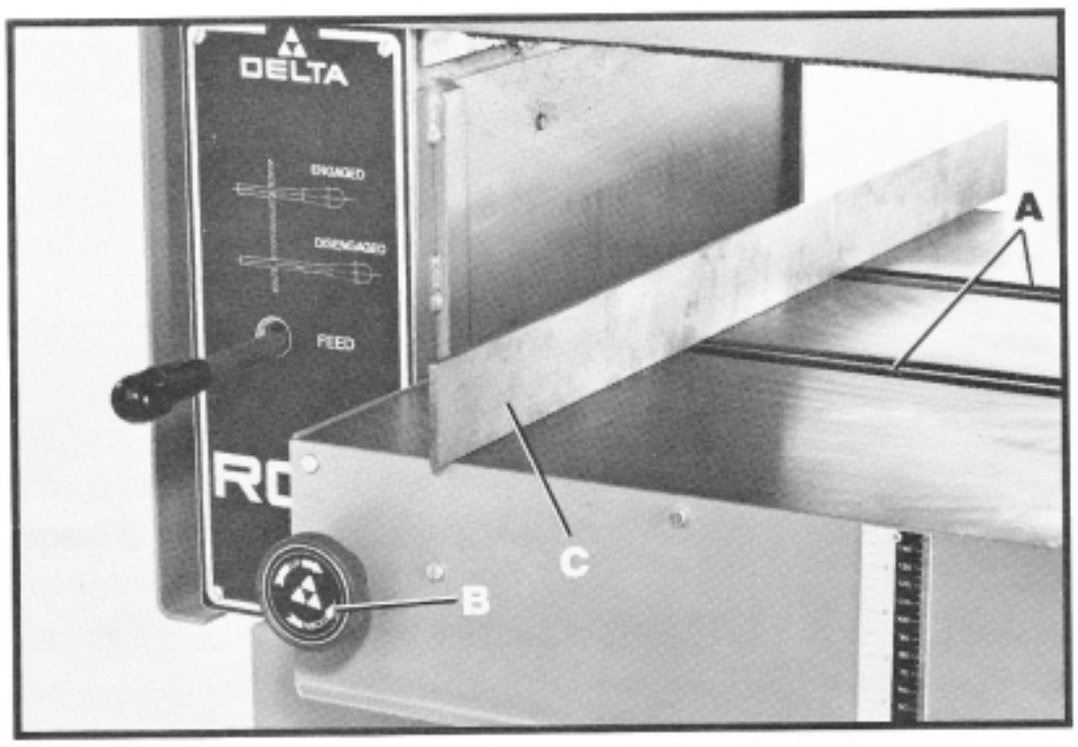


Fig. 35

4. With a feeler gage (D) Fig. 36, measure the gap between the table surface and the straight edge (B) near the infeed roll (E).

5. If an adjustment to the infeed roller (E) Fig. 36, is necessary, loosen set screw (F) Fig. 37, located underneath the left front end of the table.

6. Turn adjustment collar (G) Fig. 37, left or right as needed to attain proper height adjustment.

7. Tighten set screw (F) Fig. 37, after adjustment is made.

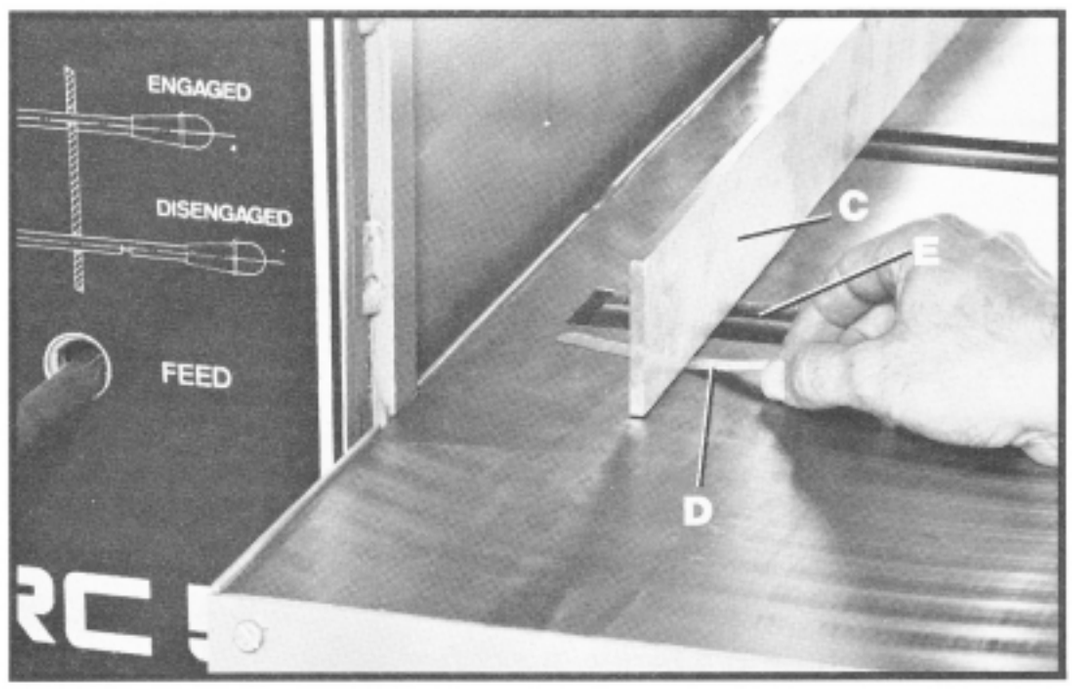


Fig. 36

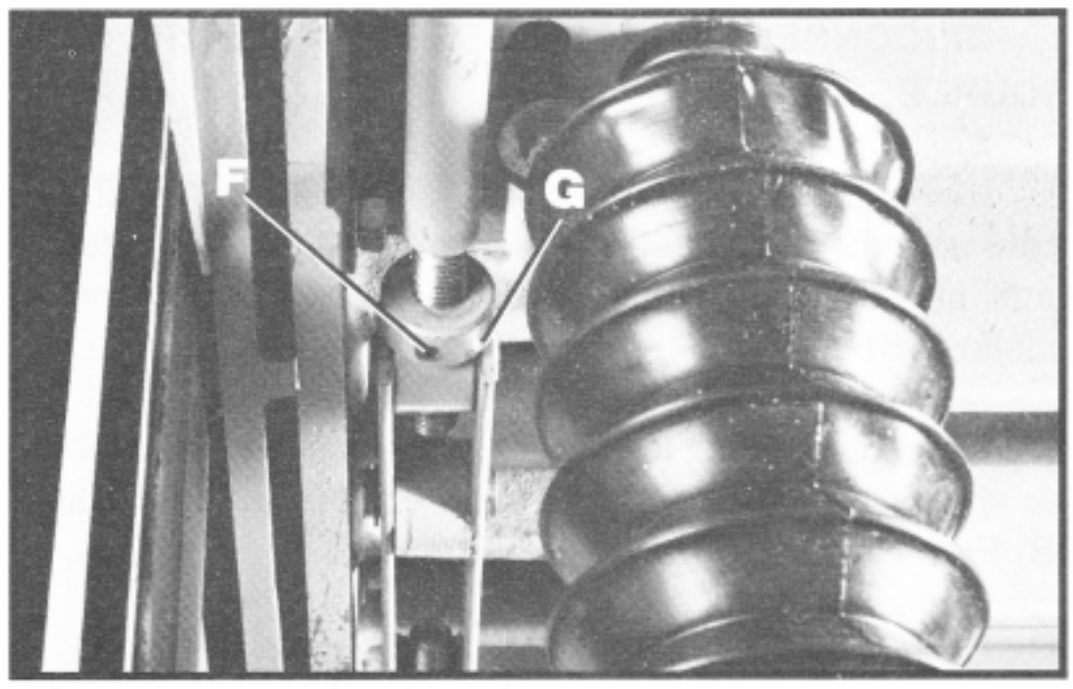


Fig. 37

To check the outfeed roller height setting, proceed as follows:

1. With a feeler gage (H) Fig. 38, measure the gap between the table surface and the straight edge (B) near the outfeed roller (J).

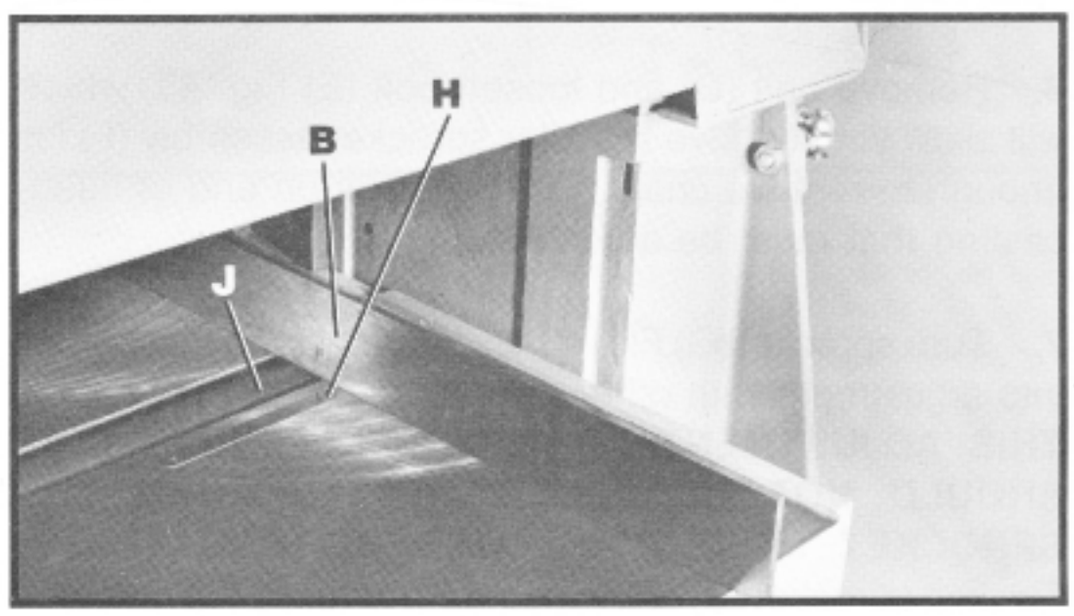


Fig. 38

2. If an adjustment to the outfeed roller is necessary, loosen jam nut (K) Fig. 39, located on the left side of machine under the table, and turn collar (L) right or left as needed until the outfeed roller is adjusted properly.

3. Tighten jam nut (K) Fig. 39.

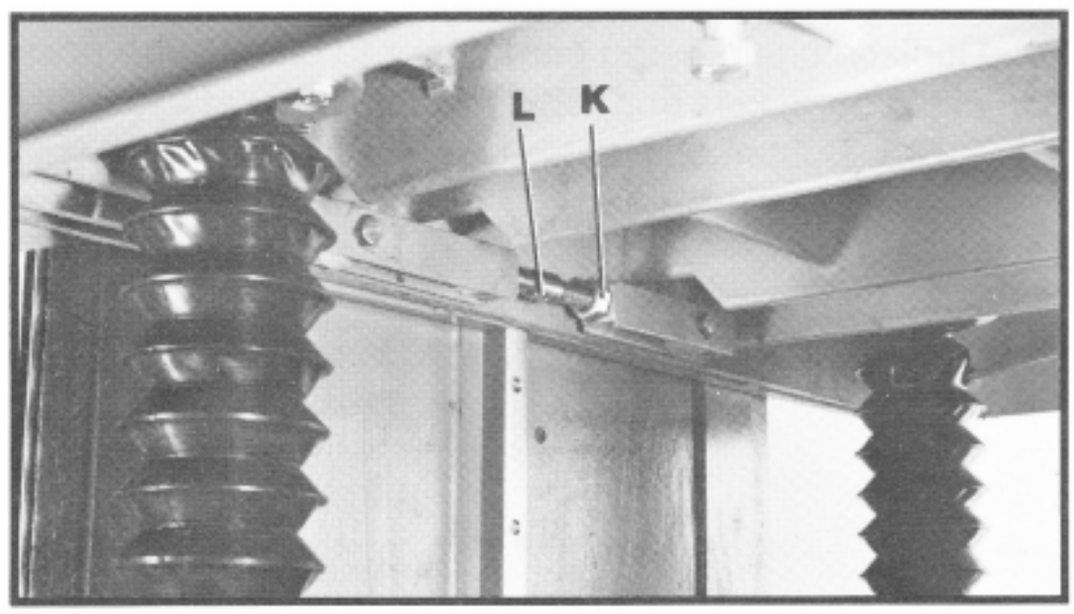


Fig. 39

LEVELING THE TABLE

The table is set parallel to the cuttinghead at the factory and no further adjustment should be necessary. If your machine is planing a taper, first check to see if the knives are set properly in the cutterhead. Then check to see if the table is set parallel to the cuttinghead as follows:

1. **DISCONNECT MACHINE FROM THE POWER SOURCE.**

2. Place gage block (A) Fig. 40, on table directly under front edge of head casting (B) as shown. Raise the table until gage block (A) just touches lower edge of head casting (B).

3. Move gage block (A) Fig. 41, to opposite side of table, as shown. Distance from table to edge of head casting (B) Fig. 41, should be the same.

4. Repeat **STEPS 2** and **3** on outfeed end of table.

5. If head casting is not parallel to table, raise chain and sprocket covers (C) Fig. 42.

6. Remove bolt (D) and loosen bolt (E) Fig. 43, which will allow you to move the idler sprocket assembly (F) far enough to remove chain from sprocket on end of head-casting that must be adjusted.

7. Turn sprocket (G) Fig. 43, by hand to bring that corner into adjustment with other three corners. **IMPORTANT: THIS ADJUSTMENT IS VERY SENSITIVE AND IT SHOULD NOT BE NECESSARY TO TURN THE SPROCKET MORE THAN ONE OR TWO TEETH.** Turning sprocket (G) clockwise will decrease the distance between the table and headcasting. Counter-clockwise will increase the distance.

8. Replace chain being careful not to disturb the position of the sprockets and replace idler sprocket assembly (F) Fig. 43. Tighten bolt (E) and replace bolt (D) which was removed in **STEP 6**.

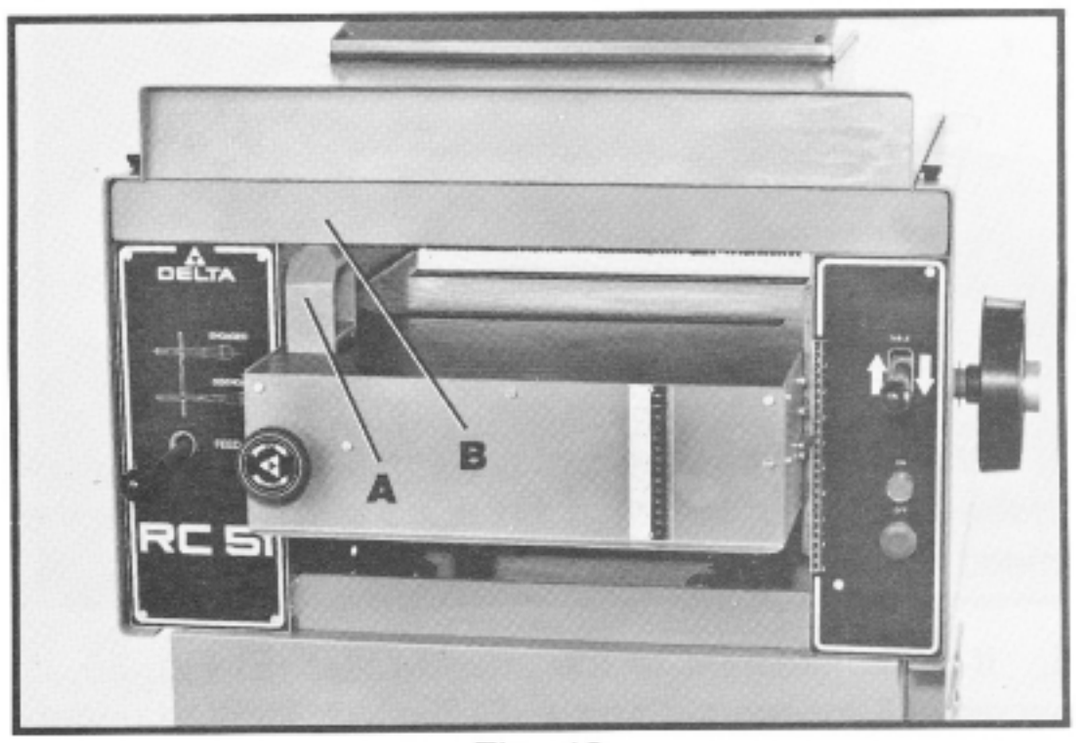


Fig. 40

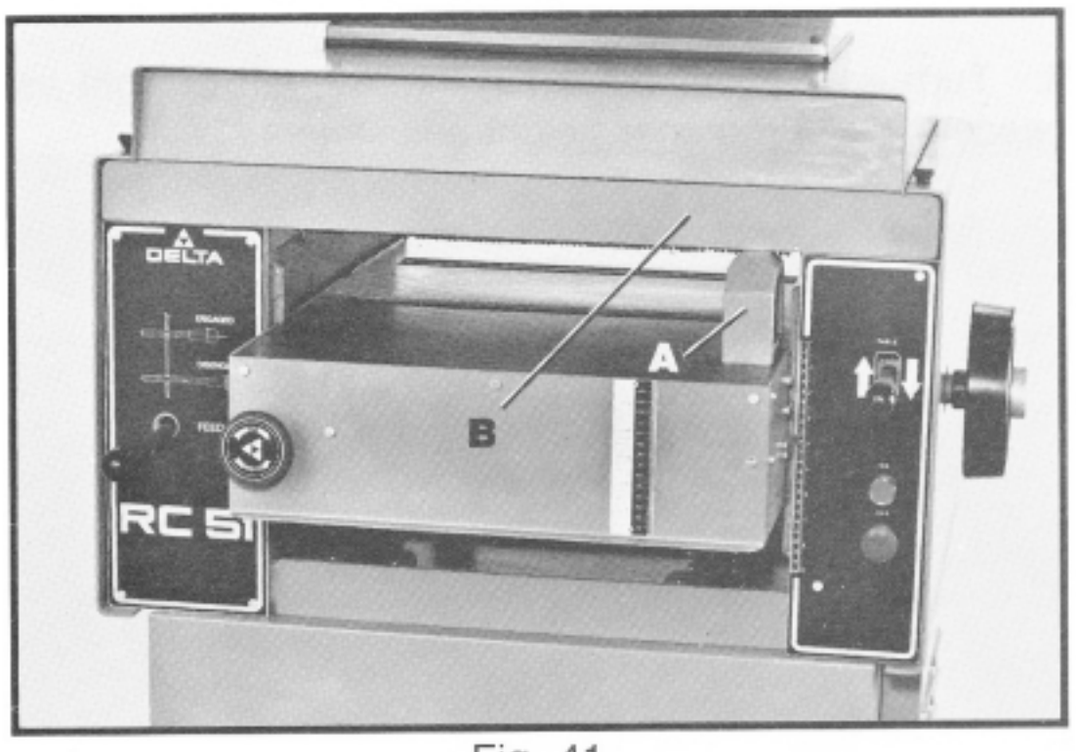


Fig. 41

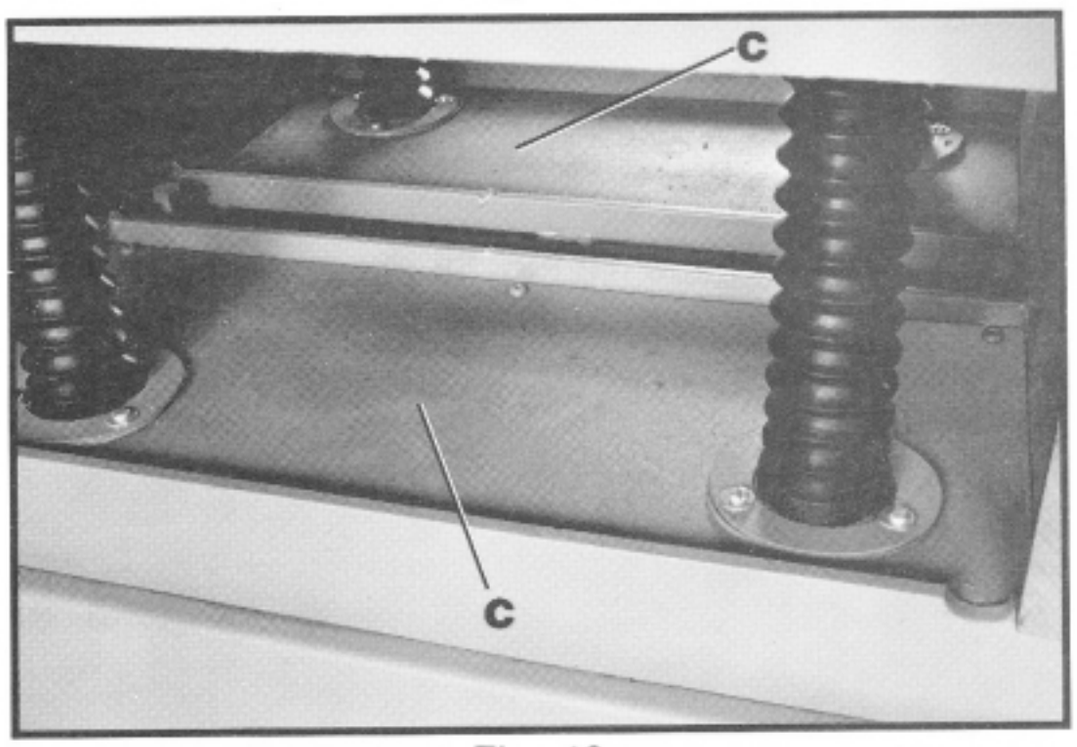


Fig. 42

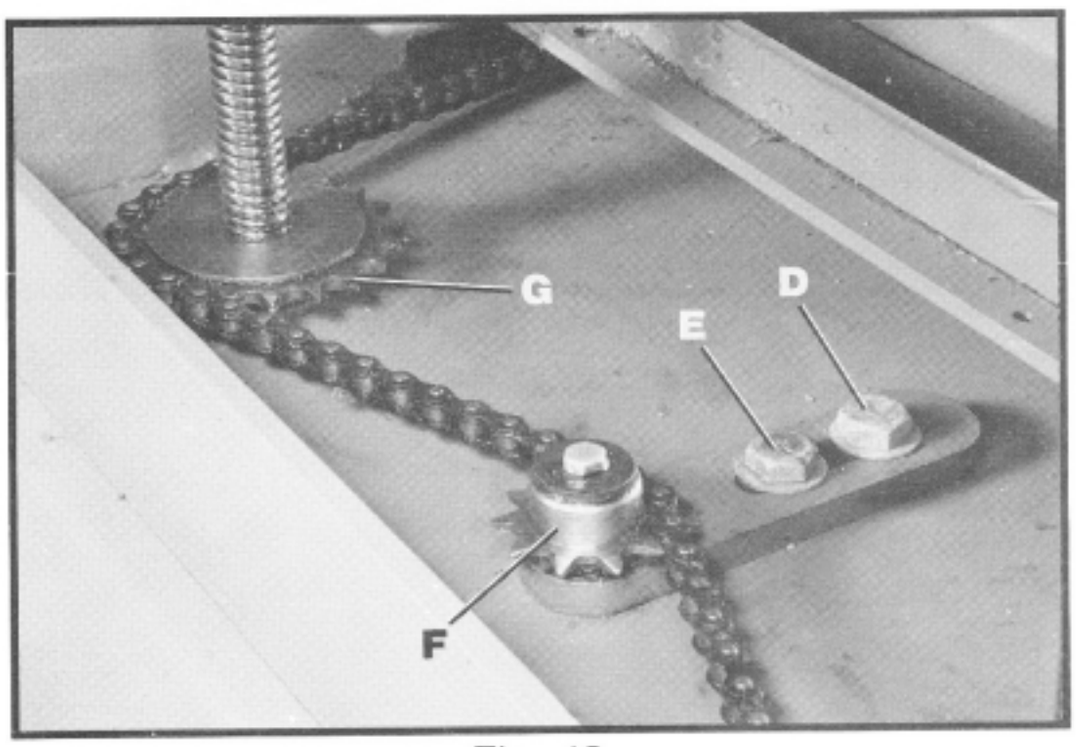


Fig. 43

LUBRICATION

The gear box oil should be changed once a year using extreme pressure gear oil, available from Delta in one pint cans under part number 999-01-013-1210. The gear box drain plug is shown at (C) Fig. 44. The oil fill screw is shown at (B) and the oil level indicator is shown at (A) Fig. 44.

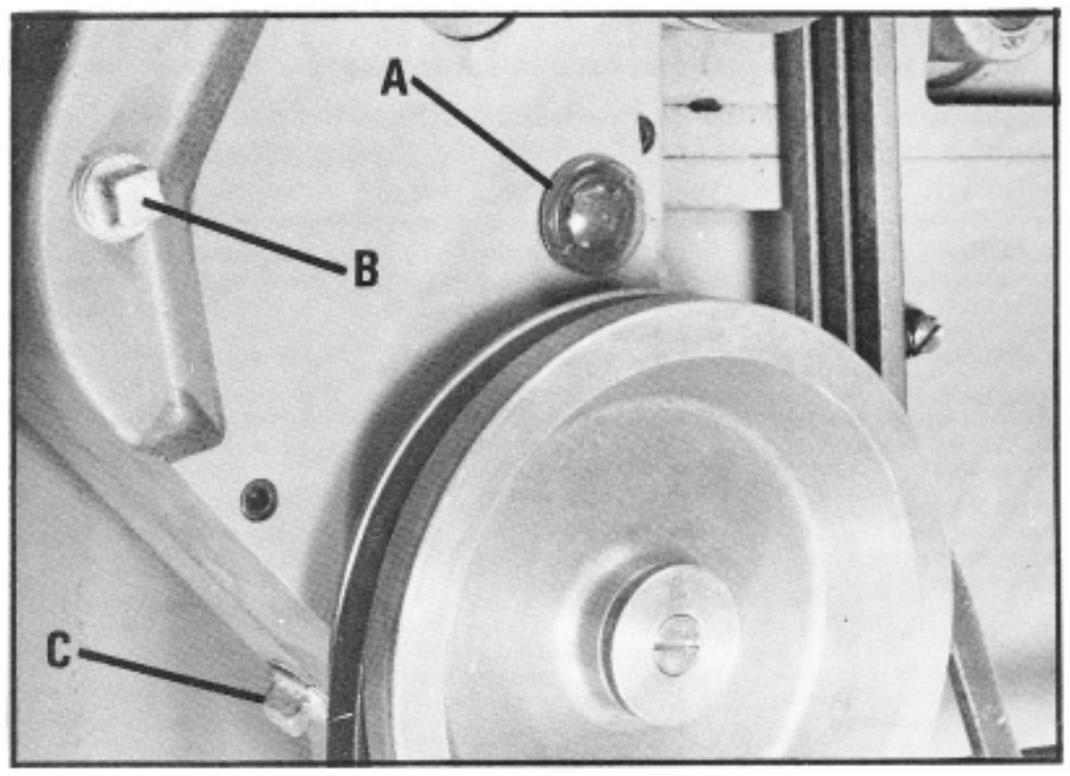


Fig. 44

GAGE BLOCK

A gage block has been supplied with your planer; however, if it is ever necessary to make a gage block out of hardwood, follow the instructions shown in Fig. 45.

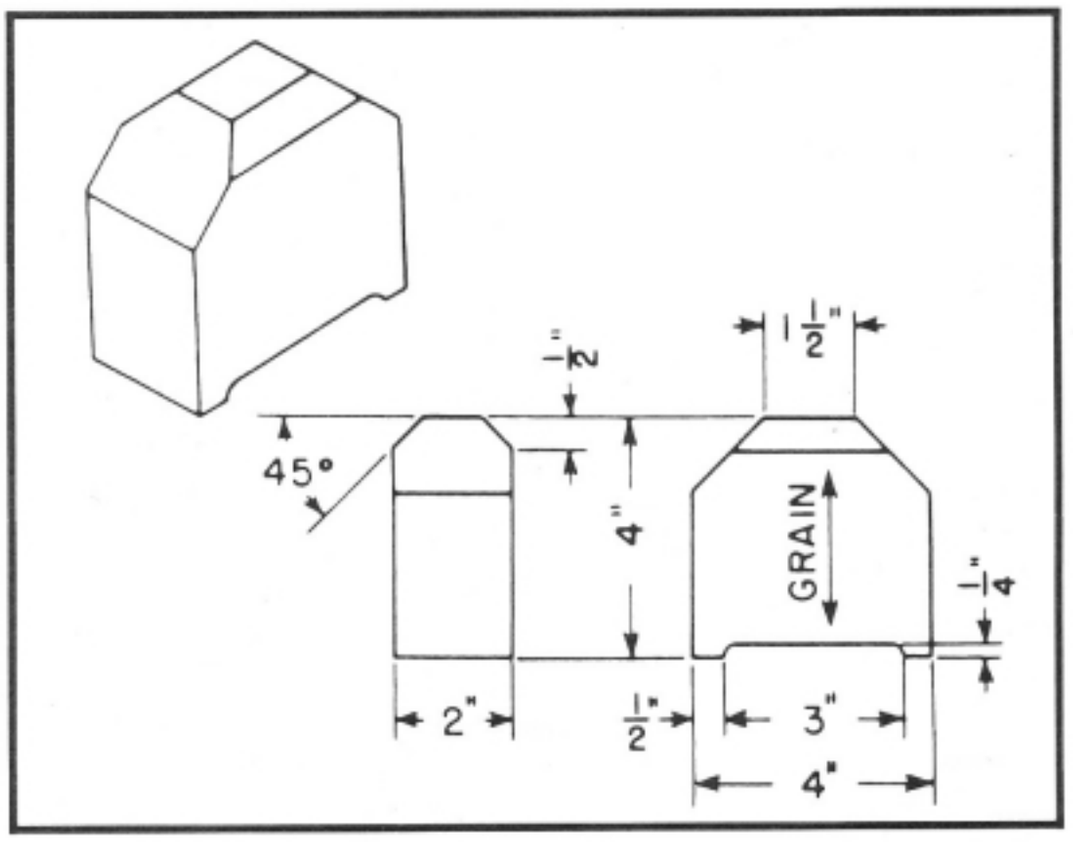


Fig. 45

DELTA

PARTS, SERVICE OR WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of factory service centers and authorized service stations listed in your owner's manual. To obtain additional information regarding your Delta quality product or to obtain parts, service or warranty assistance, please call or fax Delta's toll-free 'hotline' number.

Delta maintains a modern, efficient Parts Distribution Center, maintaining an inventory of over 15,000 parts located in Memphis, Tennessee.

Highly qualified and experienced Customer Service Representatives are standing by to assist you on weekdays from 8:00 A.M to 5:00 P.M. Memphis time.

Memphis, TN 38118
4290 Raines Road
Phone: (901) 363-8800

HOTLINE
800-223-PART
FAX: 800-535-6488

DELTA

Two Year Limited Warranty

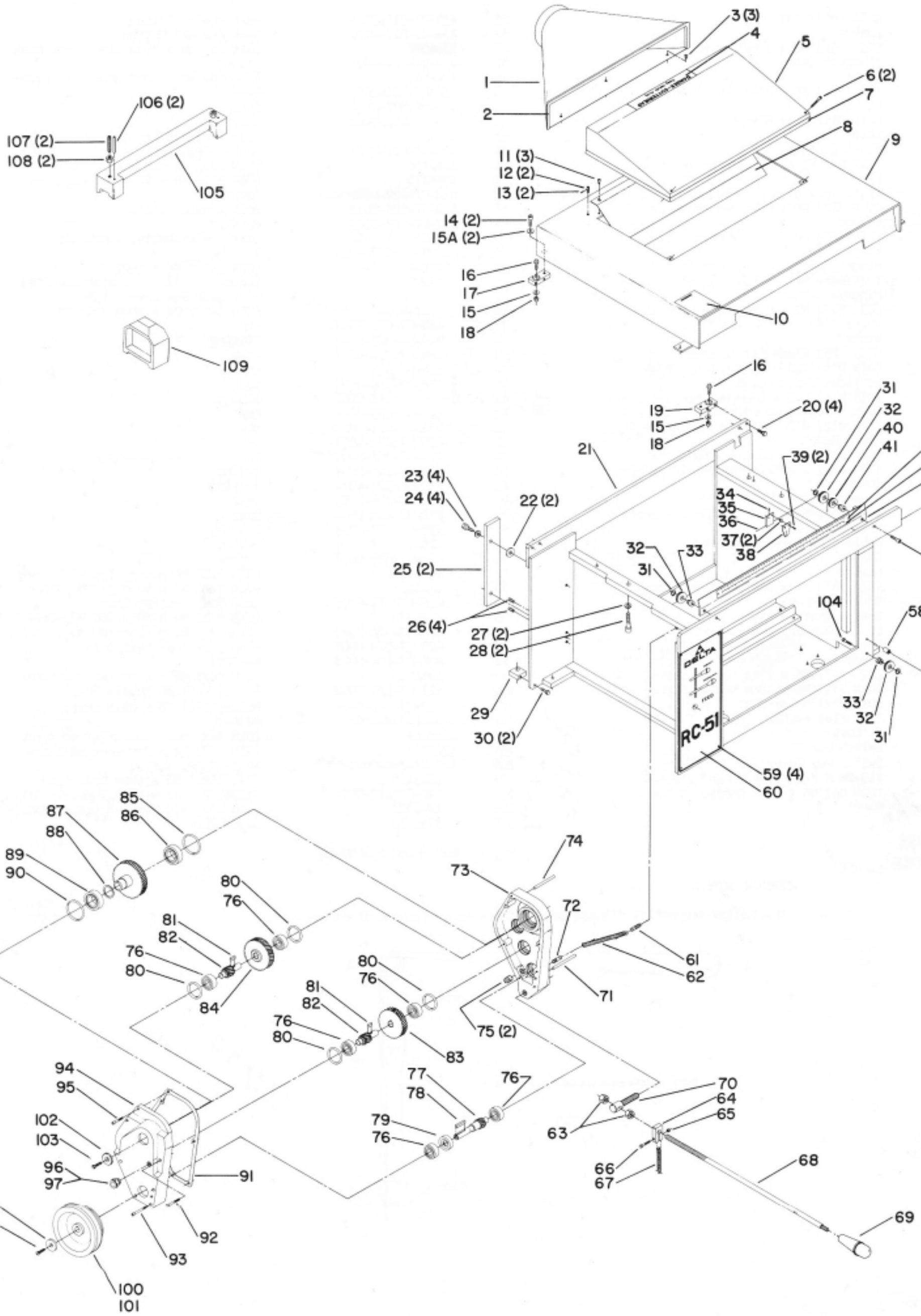
Delta Machinery

Delta will repair or replace, at its expense and at its option, any Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer notifies his supplying distributor of the alleged defect within two years from the date of delivery to him, of the product and provides Delta Machinery with reasonable opportunity to verify the defect by inspection. Delta Machinery may require that electric motors be returned prepaid to the supplying distributor or authorized service center for inspection and repair or replacement. Delta Machinery will not be responsible for any asserted defect which has resulted from misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta service facility or representative. Under no circumstances will Delta Machinery be liable for incidental or consequential damages resulting from defective products. This warranty is Delta Machinery's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.

MODEL RC-51
22-460 &22-461 20" PLANER
For Units w/Serial No 3428 and Lower

Part No 428-07-651-0004

Revised 3-31-92



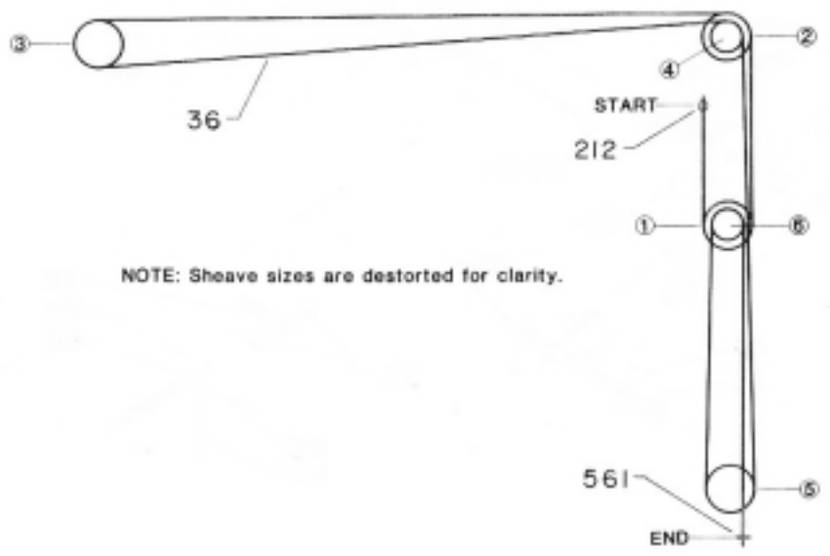
REPLACEMENT PARTS

Ref No.	Part No.	Description
1	428-07-026-0001	Dust Collector
2	428-07-116-0006	Gasket
3	1243379	(DIN 912) M6 x 10mm Soc Hd Screw
4	1085187	"Danger" Label
5	428-07-031-0020	Cover
6	1243567	(DIN 912) M6 x 35mm Soc Hd Screw
7	428-07-116-0005	Gasket
8	428-07-072-0009	Chip Deflector Plate
9	428-07-031-0011	Cover
10	1330433	Warning Label
11	1246045	(DIN 84) M6 X 10mm Cheese Hd Screw
12	428-07-071-0012	Pin
13	1246182	(DIN 1481) Ø3 x 8mm Roll Pin
14	1246054	(DIN 912) M8 x 20mm Soc Hd Screw
15	422-29-079-0001	Washer
15A	1243526	(DIN 125) Ø8mm Flat Washer
16	428-07-071-0013	Hinge Pin
17	428-07-059-0007	Hinge - Left
18	1243398	(DIN 934) M8 Hex Nut
19	428-07-059-0006	Hinge - Right
20	1246034	(DIN 933) M8 x 20mm Hex Hd Screw
21	428-07-005-0003	Upper Base
22	422-29-079-0015	Washer
23	1243502	(DIN 125) Ø10mm Flat Washer
24	1246018	(DIN 933) M10 x 25mm Hex Hd Screw
25	428-07-055-0005	Vertical Table Guide
26	1246149	(DIN 913) M10 x 16mm Hex Soc Set Screw
27	1246179	(DIN 7980) Ø12mm Lockwasher
28	1246172	(DIN 912) M12 x 45mm Soc Hd Screw
29	428-07-059-0008	Lower Hinge
30	1246034	(DIN 933) M8 x 20mm Hex Hd Screw
31	1243301	(DIN 471) 16e External Retaining Ring
32	428-07-130-0004	Sheave
33	428-07-106-0013	Sheave Shaft - Left
34	1246007	(DIN 913) M4 x 8mm Hex Soc Set Screw
35	428-07-089-0017	Cursor Support
36	428-07-081-0001	Cable (See Service Note A)
37	428-07-104-0025	Spacer
38	428-07-075-0002	Cursor
39	1246117	(DIN 963) M4 x 10mm Flat Hd Screw
40	428-07-130-0005	Sheave - Minor
41	428-07-106-0012	Sheave Shaft - Right
42	428-07-389-0001	Scale Support, Incl.:
43	428-07-132-0002	Scale
44	422-28-079-0015	Rivet
45	1246053	(DIN 912) M8 x 25mm Soc Hd Screw
46	1246013	(DIN 933) M6 x 12mm Hex Hd Screw
47	1243456	(DIN 934) M6 Hex Nut
48	904-01-010-1604	1/4" Flat Washer
49	428-07-089-0015	Support
50	428-07-013-0001	Switch Box
51	428-07-031-0017	Switch Box Cover
52	901-06-133-1263	#10-24 X 3/8" Type F Pan Hd Screw
53	1246130	(DIN 84) M6 x 16mm Cheese Hd Screw
54	428-07-123-0002	Panel
55	438-01-017-0173	Switch w/On Button
56	438-01-017-0172	Switch w/Off Button
57	1246090	(DIN 84) M6 x 30mm Cheese Hd Screw
58	428-07-104-0023	Spacer
59	1246045	(DIN 84) M6 x 10mm Cheese Hd Screw
60	428-07-123-0001	Panel
61	428-07-071-0004	Spring Pin
62	428-07-122-0006	Spring
63	1246114	(DIN 934) M16 Hex Nut
64	428-07-027-0001	Spring Regulator
65	1243456	(DIN 934) M6 Hex Nut
66	1246175	(DIN 931) M6 x 30mm Hex Hd Screw
67	428-07-122-0009	Spring
68	428-07-106-0015	Belt Tension Shaft
69	432-07-138-0005	Handle
*	428-07-351-0001	Gear Box Assembly, Const of:
70	428-07-112-0006	Tilt Nut
71	428-07-071-0003	(DIN 1481) Ø8 x 60mm Roll Pin
72	428-07-071-0004	Spring Pin (Install with Loctite)
73	428-07-031-0004	Rear Gear Box Cover
74	1246143	(DIN 1481) Ø8 x 40mm Roll Pin
75	428-07-074-0003	Plug
76	920-04-020-5348	Bearing
77	428-07-051-0005	Gear
78	428-07-079-0005	Key
79	428-07-116-0003	Seal
80	428-07-116-0002	O-Ring
81	428-07-079-0004	Key
82	428-07-051-0003	Gear
83	428-07-051-0004	Gear
84	428-07-051-0002	Gear
85	428-07-116-0004	O-Ring
86	920-04-022-4014	Bearing
87	428-07-051-0001	Gear
88	428-07-104-0004	Spacer
89	428-07-017-0004	Bearing
90	428-07-116-0001	O-Ring
91	428-07-056-0001	Gasket
92	1243331	(DIN 912) M6 x 40mm Soc Hd Screw
93	1246055	(DIN 912) M6 x 50mm Soc Hd Screw
94	428-07-031-0003	Gear Box - Pulley Side
95	1246070	(DIN 912) M6 x 30mm Soc Hd Screw
96	428-07-074-0002	Oil Level Plug (For 30 Models Only)
97	428-07-074-0005	Plug (For 10 Models Only)
98	428-07-104-0003	Washer
99	1246048	(DIN 963) M8 x 20mm Flat Hd Screw
100	428-07-130-0002	Pulley (For 30 Models Only)
101	428-07-130-0006	Pulley (For 10 Models Only)
102	428-07-104-0005	Washer
103	1246049	(DIN 963) M8 x 25mm Flat Hd Screw
104	1246016	(DIN 933) M8 x 25mm Hex Hd Screw
105	428-07-350-0001	Knife Gage, Incl.:
106	1246185	(DIN 1481) Ø5 x 40mm Roll Pin
107	428-07-112-0022	Adjusting Screw (Early Models Only)
108	1243476	(DIN 934) M12 Hex Nut (Early Models Only)
109	1330270	Gage Block

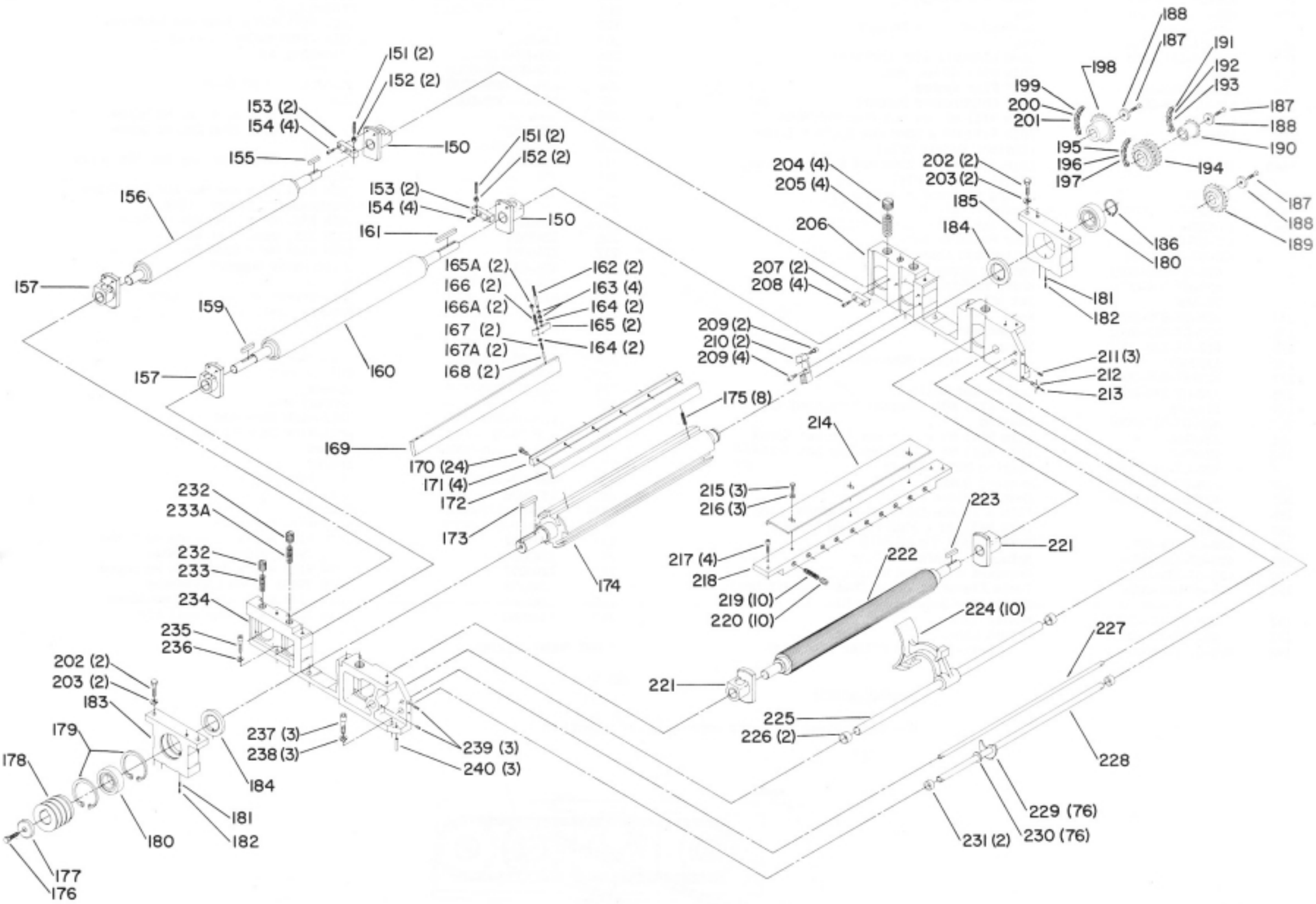
* NOT SHOWN ASSEMBLED

SERVICE NOTES:

A - Follow sequential diagram below for correct tracking of cable.



NOTE: Sheave sizes are destorted for clarity.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240 (3)

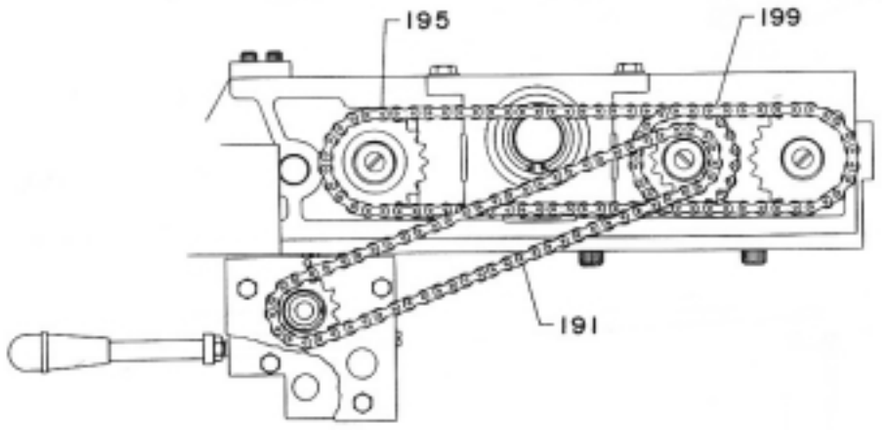
REPLACEMENT PARTS

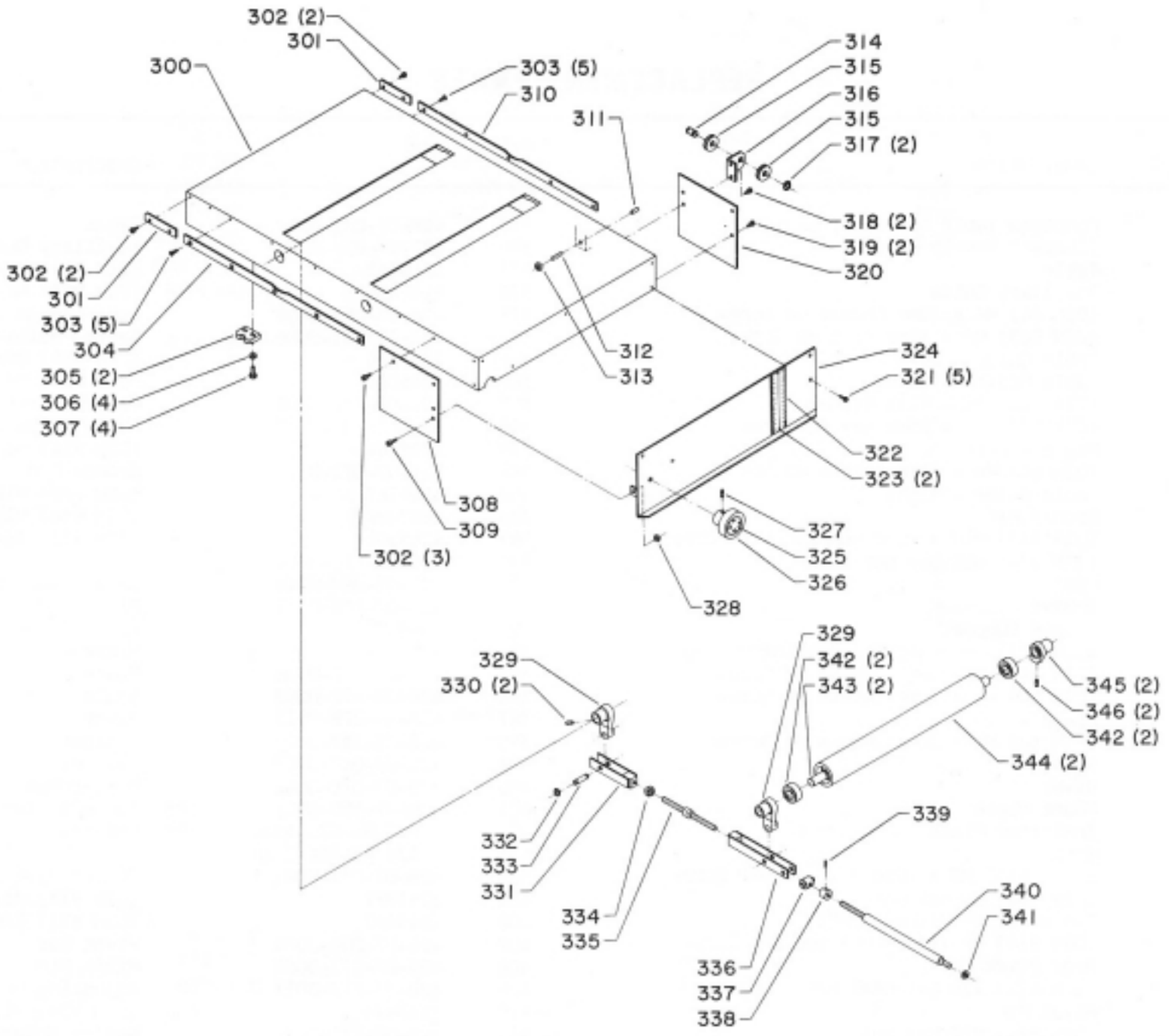
Ref No.	Part No.	Description
150	428-07-010-0003	Right Block w/Bushing
151	1246044	(DIN 913) M8 x 30mm Hex Soc Set Screw
152	1243398	(DIN 934) M8 Hex Nut
153	428-07-088-0002	Limiter
154	1246056	(DIN 912) M16 x 12mm Soc Hd Screw
155	428-07-079-0002	Key
156	428-07-080-0005	Outfeed Roller - Outboard
157	428-07-010-0005	Block w/Bushing
159	428-07-079-0001	Key
160	428-07-080-0004	Outfeed Roller - Inboard
161	428-07-079-0010	Key
162	428-07-111-0003	Stud (Install with Loctite)
163	1243456	(DIN 934) M6 Hex Nut
164	904-01-010-1604	1/4" Flat Washer
165	428-07-089-0019	Rear Chipbreaker Support
165A	1243398	(DIN 934) M8 Hex Nut (Current Models Only)
166	1246044	(DIN 913) M8 x 30mm Hex Soc Set Screw (Current Models Only)
166A	1246168	(DIN 915) M10 x 25mm Hex Soc Set Screw (Early Models Only)
167	1330697	Spring (Current Models Only)
167A	432-07-122-0003	Spring (Early Models Only)
168	1246109	(DIN 1481) Ø5 x 16 mm Roll Pin
169	428-07-004-0005	Rear Pressure Bar
*	428-07-312-0003	Cutterhead Assembly, Const of:
170	428-07-112-0001	Locking Screw
171	428-07-004-0006	Knife Locking Bar
172	22-466	Set of Four (4) Knives
173	428-07-079-0003	Key
174	428-07-012-0002	Cutterhead
175	428-07-122-0001	Spring
176	1330667	(DIN 933) M12 x 30mm Hex Hd Screw
177	428-07-104-0009	Washer
178	428-07-130-0001	Cutterhead Pulley
179	1246068	(DIN 472) 80i Internal Retaining Ring
180	428-07-017-0001	Bearing
181	1246166	(DIN 914) M5 x 12mm Hex Soc Set Screw
182	1246043	(DIN 916) M5 x 10mm Hex Soc Set Screw
183	428-07-010-0002	Bearing Block - Left
184	428-07-054-0002	Bearing Guard
185	428-07-010-0001	Bearing Block - Right
186	1246069	(DIN 471) 40e External Retaining Ring
187	1246049	(DIN 963) M8 x 25mm Flat Hd Screw
188	428-07-104-0002	Washer
189	428-07-134-0005	Sprocket - Infeed Roller
190	428-07-134-0008	Sprocket - Outfeed Roller (Inboard)
191	428-07-023-0006	Table Elevating Drive Chain (65 Pitches), Incl: (See Service Note B)
192	428-07-135-0003	Master Link
193	428-07-135-0005	Offset Link
194	428-07-134-0006	Sprocket - Outfeed Roller (Inboard)
195	428-07-023-0003	Infeed Roller Drive Chain (59 Pitches), Incl.: (See Service Note B)
196	428-07-135-0007	Master Link
197	428-07-135-0001	Offset Link
198	428-07-134-0007	Sprocket - Outfeed Roller (Outboard)
199	428-07-023-0004	Outfeed Roller Drive Chain (35 Pitches), Incl.: (See Service Note B)
200	428-07-135-0007	Master Link
201	428-07-135-0001	Offset Link
202	1246019	(DIN 933) M10 x 35mm Hex Hd Screw
203	1243360	(DIN 7980) Ø10mm Lockwasher
204	428-07-112-0003	Adjusting Nut
205	428-07-122-0003	Spring
206	428-07-089-0008	Support - Right Side
207	428-07-088-0003	Stop
208	1246056	(DIN 912) M6 x 12mm Soc Hd Screw
209	1246122	(DIN 912) M8 X 15mm Soc Hd Screw
210	428-07-089-0020	Support
211	1246144	(DIN 914) M6 x 12mm Hex Soc Set Screw
212	428-07-104-0024	Cable Lock
213	1246137	(DIN 912) M5 x 8mm Hex Soc Set Screw
214	428-07-072-0005	Chipbreaker Limiter Plate
215	1246078	(DIN 933) M8 x 12mm Hex Hd Screw
216	1243526	(DIN 125) Ø8mm Flat Washer
217	1246053	(DIN 912) M8 x 25mm Soc Hd Screw
218	428-07-089-0010	Chipbreaker Support
219	428-07-122-0010	Spring
220	428-07-112-0021	Chipbreaker Adjusting Screw
221	428-07-312-0002	Block w/Bushing
222	428-07-080-0003	Infeed Roller
223	428-07-079-0002	Key
224	429-07-036-0002	Chipbreaker
225	428-07-106-0007	Chipbreaker Shaft
226	428-07-104-0028	Spacer
227	428-07-108-0004	Support Rod
228	428-07-108-0005	Anti-Kick Back Rod
229	428-06-047-0001	Anti-Kick Back Finger
230	428-06-104-0006	Washer
231	428-07-104-0027	Spacer
232	428-07-112-0001	Adjusting Nut
233	1330696	Spring
233A	428-07-122-0002	Spring
234	428-07-089-0009	Support - Left Side
235	1246052	(DIN 912) M10 x 35mm Soc Hd Screw
236	1243360	(DIN 7980) Ø10mm Lockwasher
237	1246057	(DIN 912) M12 x 35mm Soc Hd Screw
238	1246179	(DIN 7980) Ø12mm Lockwasher
239	1246144	(DIN 914) M6 x 12mm Soc Hd Screw
240	1246060	(DIN 1481 Ø8 x 30mm Roll Pin

* NOT SHOWN ASSEMBLED

SERVICE NOTES:

B - See diagram below for correct chain selection.





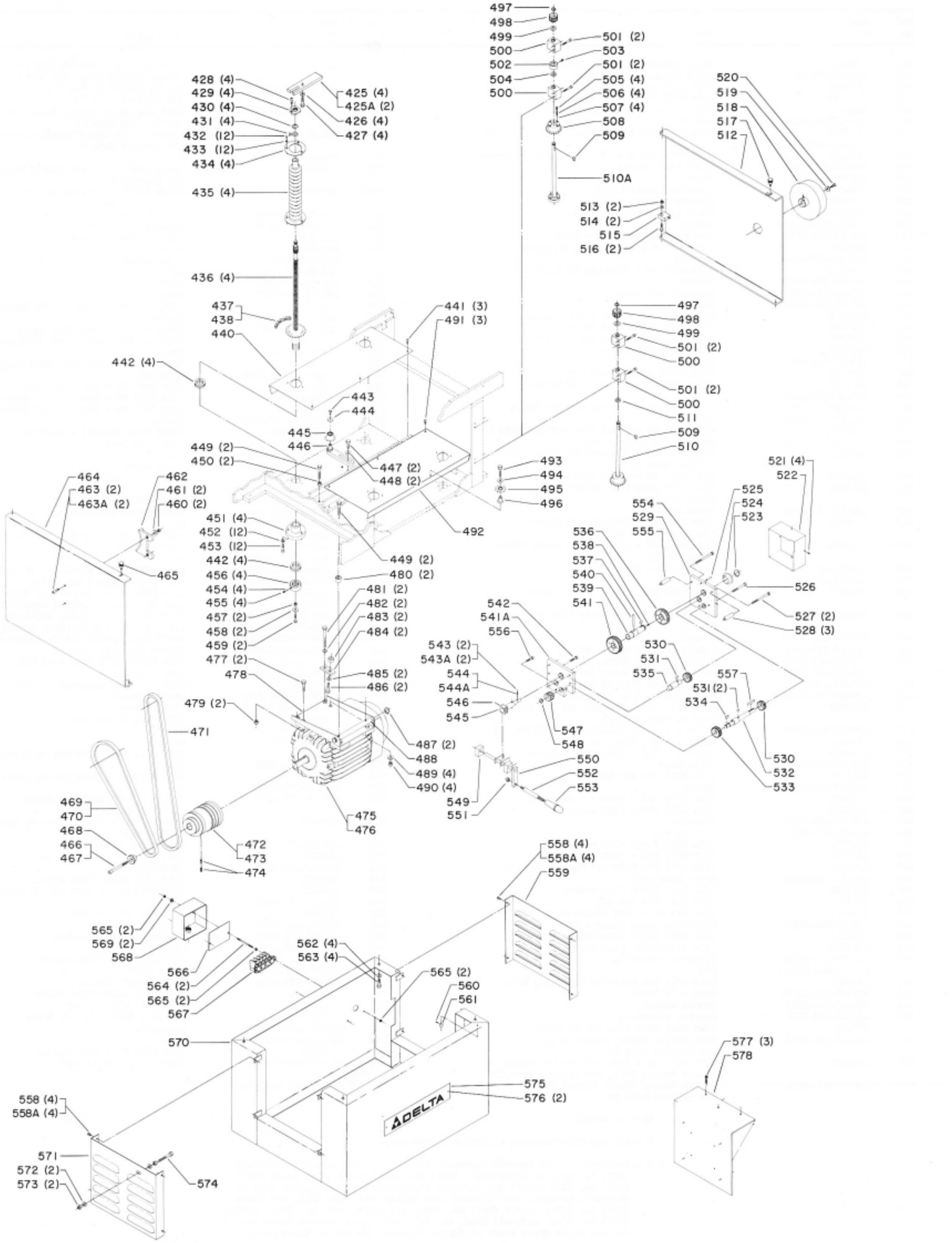
CURRENT MODELS ONLY

EARLY MODELS ONLY

REPLACEMENT PARTS

Ref No.	Part No.	Description
*	1330690	Complete Table Assembly, Const of: (Current Models Only)
300	1330446	Table
301	428-07-055-0009	Auxiliary Guide
302	1246045	(DIN 84) M6 x 10mm Cheese Hd Screw
303	1246155	(DIN 963) M6 x 12mm Flat Hd Screw
304	428-07-055-0008	Table Guide - Left
305	428-07-055-0006	Table Position Guide
306	1243526	(DIN 125) Ø8mm Flat Washer
307	1246016	(DIN 933) M8 x 25mm Hex Hd Screw
308	1330483	Plate - Left
309	1246002	(DIN 84) M6 x 12mm Cheese Hd Screw
310	428-07-055-0007	Table Guide - Right
311	428-07-071-0015	Bronze Pin
312	1246167	(DIN 913) M10 x 25mm Hex Soc Set Screw
313	1243496	(DIN 934) M10 Hex Nut
314	428-07-071-0011	Pin
315	428-07-130-0004	Sheave
316	428-07-089-0016	Sheave Support
317	1243301	(DIN 471) 16e External Retaining Ring
318	1246130	(DIN 84) M6 x 16mm Cheese Hd Screw
319	1246045	(DIN 84) M6 x 10mm Cheese Hd Screw
320	428-07-072-0007	Plate - Right
321	1246045	(DIN 84) M6 x 10mm Cheese Hd Screw
322	428-07-132-0003	Scale
323	422-28-079-0015	Rivet
324	1330449	Front Plate
325	1330450	Indicator Plate
326	1330458	Knob
327	1246009	(DIN (913) M8 x 10mm Hex Soc Set Screw
328	1243456	(DIN 934) M6 Hex Nut
329	1330448	Table Roller Pivot - Left
330	1246041	(DIN 914) M8 x 15mm Hex Soc Set Screw
331	1330454	Rear Pivot Bar
332	1243497	(DIN 471) 12e External Retaining Ring
333	428-07-071-0006	Pivot Pin
334	1243476	(DIN 934) M12 Hex Nut
335	1330453	Adjusting Screw
336	1330455	Pivot Bar - Front
337	1330456	Adjusting Nut
338	1330457	Lock Nut
339	1246137	(DIN 913) M5 x 8mm Hex Soc Set Screw
340	1330452	Roller Adjustment Lever
341	1330459	Washer
342	1320106	Bearing
343	1330451	Table Roller Shaft
344	1330481	Table Roller
345	1330447	Table Roller Pivot - Right
346	1246009	(DIN 913) M8 x 10mm Hex Soc Set Screw
375	428-07-091-0002	Table
376	428-07-055-0009	Auxiliary Guide
377	1246045	(DIN 84) M6 x 10mm Cheese Hd Screw
378	1246155	(DIN 963) M6 x 12mm Flat Hd Screw
379	428-07-055-0008	Table Guide - Left
380	428-07-055-0006	Table Position Guide
381	1243526	(DIN 125) Ø8mm Flat Washer
382	1246016	(DIN 933) M8 x 25mm Hex Hd Screw
383	428-07-072-0008	Plate - Left
384	428-07-055-0007	Table Guide - Right
385	1246144	(DIN 914) M6 x 12mm Hex Soc Set Screw
386	428-07-071-0015	Bronze Pin
387	1246167	(DIN 913) M10 x 25mm Hex Soc Set Screw
388	1243496	(DIN 934) M10 Hex Nut
389	1243301	(DIN 471) 16e External Retaining Ring
390	428-07-130-0004	Sheave
391	428-07-089-0016	Sheave Support
392	428-07-071-0011	Pin
393	1246130	(DIN 84) M6 x 16mm Cheese Hd Screw
394	428-07-072-0007	Plate - Right
395	428-07-072-0006	Plate
396	428-07-132-0003	Scale
397	422-28-079-0015	Rivet
398	428-07-137-0002	Indicator Plate
399	428-07-067-0003	Ball Handle
400	428-07-017-0006	Roller Bushing
401	428-07-380-0001	Table Roller Assembly, Incl.:
402	920-04-020-5348	Bearing
403	428-07-106-0014	Table Roller Shaft
404	428-07-089-0004	Roller Pivot
405	1243321	(DIN 913) M6 x 10mm Hex Soc Set Screw
406	1243497	(DIN 471) 12e External Retaining Ring
407	428-07-004-0004	Pivot Bar
408	428-07-071-0006	Pivot Pin
409	428-07-112-0011	Adjusting Nut Screw
410	1243476	(DIN 934) M12 Hex Nut
411	428-07-112-0020	Roller Adjusting Screw

* NOT SHOWN ASSEMBLED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REPLACEMENT PARTS

Ref No.	Part No.	Description
425	1330411	Table Support (Current Models Only)
425A	428-07-089-0011	Table Support (Early Models Only)
426	1243502	(DIN 125) Ø10mm Flat Washer
427	1246035	(DIN 933) M10 x 30mm Hex Hd Screw
428	1246122	(DIN 912) M8 x 15mm Soc Hd Screw
429	428-07-088-0004	Lock Ring
430	1246028	(DIN 6799) RS-15 External Retaining Ring
431	428-07-088-0005	Lock Ring
432	1246164	(DIN 7971) Ø4.2 x 13mm Pan Hd Metal Screw
433	904-01-010-1603	3/16" Flat Washer
434	428-07-104-0011	Plate
435	428-07-031-0021	Elevating Screw Cover
436	1330486	Elevating Screw w/Gear
437	428-07-023-0005	Chain (172 Pitches), Incl.:
438	428-07-135-0003	Master Link
440	428-07-054-0004	Elevating Screw Guard - Rear
441	1246130	(DIN 84) M6 x 16mm Cheese Hd Screw
442	920-41-013-1442	Bearing
443	1246013	(DIN 933) M6 x 12mm Hex Hd Screw
444	428-06-104-0002	Washer
445	428-06-134-0002	Sprocket w/Bushing
446	428-06-084-0001	Idler
447	1246018	(DIN 933) M10 x 25mm Hex Hd Screw
448	1243502	(DIN 125) Ø10mm Flat Washer
449	1246099	(DIN 931) M10 x 50mm Hex Hd Screw
450	1243496	(DIN 934) M10 Hex Nut
451	428-07-103-0002	Flange
452	1246157	(DIN 7980) Ø8mm Lockwasher
453	1243530	(DIN 912) M8 x 30mm Soc Hd Screw
454	428-07-074-0004	Plug
455	1246133	(DIN 913) M8 x 8mm Hex Soc Set Screw
456	428-07-079-0011	Nut
457	1243398	(DIN 934) M8 Hex Nut (See Service Note C)
458	422-30-079-0006	Washer (See Service Note C)
459	1246017	(DIN 933) M8 x 30mm Hex Hd Screw (See Service Note C)
460	1243398	(DIN 934) M8 Hex Nut (Early Models Only)
461	1243526	(DIN 125) Ø8mm Flat Washer (Early Models Only)
462	428-07-315-0001	Brake Assembly
463	1246122	(DIN 912) M8 x 15mm Soc Hd Screw (Current Models Only)
463A	1246054	(DIN 912) M8 x 20mm Soc Hd Screw (Early Models Only)
464	428-07-031-0013	Cover Left - Side
465	428-07-138-0001	Knob
466	1246072	(DIN 912) M10 x 80mm Soc Hd Screw (For 30 Models Only)
467	901-03-010-0777	3/8-16 x 3" Soc Hd Screw (For 10 Models Only)
468	428-07-104-0017	Washer
469	428-07-133-0001	V-Belt (For 30 Models Only)
470	428-07-133-0003	V-Belt (For 10 Models Only)
471	428-07-133-0002	Matched Set of Three (3) V-Belts
472	428-07-130-0003	Motor Pulley (For 30 Models Only)
473	428-07-130-0007	Motor Pulley (For 10 Models Only)
474	1246009	(DIN 913) M8 x 10mm Hex Soc Set Screw (For 30 Models Only)
475	438-02-314-0932	Motor - 7.5 HP, 200-220/440V, 60 Hz, 30
476	83-004	Motor - 5 HP, 230V, 60 Hz, 10
477	1246019	(DIN 933) M10 x 35mm Hex Hd Screw
478	428-07-005-0005	Motor Base
479	1243496	(DIN 934) M10 Hex Nut
480	428-07-104-0029	Spacer
481	1246020	(DIN 933) M10 x 80mm Hex Hd Screw
482	1243502	(DIN 125) Ø10mm Flat Washer
483	428-07-104-0030	Spacer
484	428-07-072-0010	Limiter Plate
485	1243502	(DIN 125) Ø10mm Flat Washer
486	1246035	(DIN 933) M10 x 30mm Hex Hd Screw
487	1246180	(DIN 471) 22e External Retaining Ring
488	428-07-106-0008	Motor Base Shaft
489	1243502	(DIN 125) Ø10mm Flat Washer
490	1243496	(DIN 934) M10 Hex Nut
491	1246045	(DIN 84) M6 x 10mm Cheese Hd Screw
492	428-07-054-0003	Elevating Screw Guard - Front
493	1246019	(DIN 933) M10 x 35mm Hex Hd Screw
494	1243502	(DIN 125) Ø10mm Flat Washer
495	428-06-134-0002	Sprocket w/Bushing
496	428-07-071-0014	Pin
497	1243301	(DIN 471) 16e External Retaining Ring
498	428-07-051-0013	Gear - 12 Teeth
499	428-07-104-0026	Bronze Washer
500	428-07-014-0001	Bracket w/Bushing
501	1330147	(DIN 912) M8 x 40mm Soc Hd Screw
502	428-07-088-0006	Stop Collar (Early Models Only, See Service Note D)
503	1246039	(DIN 913) M8 x 12mm Hex Soc Set Screw (Early Models Only, See Service Note D)
504	428-07-071-0016	Bronze Washer (Early Models Only, See Service Note D)
505	1246133	(DIN 913) M8 x 8mm Hex Soc Set Screw (Early Models Only, See Service Note D)
506	428-07-122-0012	Spring (Early Models Only, See Service Note D)
507	921-01-010-0028	1/4" Dia. Ball (Early Models Only, See Service Note D)
508	428-07-134-0009	Sprocket w/Bushing (Early Models Only, See Service Note D)
509	428-06-079-0003	Key
510	1330695	Drive Shaft (Current Models Only, See Service Note D)
510A	428-07-051-0014	Drive Shaft (Early Models Only, See Service Note D)
511	428-07-104-0026	Washer (Current Models Only)
512	428-07-031-0012	Cover Right - Side
513	1243398	(DIN 934) M8 Hex Nut
514	422-29-079-0001	Washer
515	428-07-059-0008	Lower Hinge
516	428-07-071-0013	Hinge Pin
517	428-07-138-0001	Knob
518	428-07-100-0002	Wheel
519	1246078	(DIN 933) M8 x 15mm Hex Hd Screw
520	422-30-079-0006	Washer
*	428-07-333-0001	Table Raising Assembly, Const of:
521	1246177	(DIN 84) M4 x 6mm Cheese Hd Screw
522	428-07-031-0014	Cover
523	1246181	(DIN 471) 25e External Retaining Ring
524	428-07-134-0004	Sprocket
525	1246110	(DIN 1481 Ø6 x 24mm Roll Pin
526	1246176	(DIN 931) M8 x 80mm Hex Hd Screw
527	1246131	(DIN 933) M8 x 60mm Hex Hd Screw
528	428-07-104-0020	Spacer
529	428-07-089-0013	Front Gear Support w/Bushings
530	428-07-051-0012	Gear - 20 Teeth
531	428-07-079-0008	Key
532	428-07-106-0010	Wheel Shaft
533	428-07-051-0011	Gear - 22 Teeth
534	428-06-079-0003	Key
535	428-07-106-0011	Intermediate Shaft
536	428-07-051-0009	Gear w/Pins and Bushing - 35 Teeth
537	428-07-079-0007	Key
538	1246092	(DIN 914) M6 x 6mm Hex Soc Set Screw
539	428-07-106-0009	Clutch Shaft
540	428-07-071-0009	Pin
541	428-07-051-0008	Gear w/Pins and Bushing - 39 Teeth
541A	428-07-089-0012	Rear Gear Support w/Bushing
542	1246016	(DIN 933) M8 x 25mm Hex Hd Screw
543	1243446	1/4" Dia. Ball (Current Models Only)
543A	921-01-010-0029	3/16" Dia. Ball (Early Models Only)
544	428-07-122-0012	1/4" Dia. Spring (Current Models Only)
544A	428-07-122-0011	3/16" Dia. Spring (Early Models Only)
545	428-07-328-0001	Clutch Assembly, Incl.:
546	1246184	(DIN 1481) Ø3 x 20mm Roll Pin
547	428-07-051-0013	Gear - 12 Teeth
548	1243301	(DIN 471) 16e External Retaining Ring
549	428-07-089-0014	Lever Support
550	428-07-067-0009	Clutch Lever
551	1243398	(DIN 934) M8 Hex Nut
552	428-07-067-0010	Lever
553	432-07-138-0005	Knob
554	1246176	(DIN 931) M8 x 80mm Hex Hd Screw
555	428-07-104-0020	Spacer
556	1246016	(DIN 933) M8 x 25mm Hex Hd Screw
557	428-07-079-0009	Key
558	901-06-133-1263	#10-24 x 3/8" Self Tap Screw (Current Models Only)
558A	1246045	(DIN 84) M6 x 10mm Cheese Hd Screw (Early Models Only)
559	428-07-031-0015	Electrical Box Cover
560	1246007	(DIN 913) M4 x 8mm Hex Soc Set Screw
561	428-07-104-0021	Cable Lock
562	1243502	(DIN 125) Ø10mm Flat Washer
563	1246115	(DIN 933) M10 x 20mm Hex Hd Screw
564	428-07-111-0002	Stud
565	1243395	(DIN 934) M5 Hex Nut
566	438-01-011-0060	Insulation Paper
567	438-01-018-0056	Terminal Strip Assembly
568	438-01-008-0051	Cover
569	1246102	(DIN 125) Ø5mm Flat Washer
570	428-07-005-0004	Lower Base
571	428-07-031-0016	Motor Cover, Incl.:
572	1243502	(DIN 125) Ø10mm Flat Washer
573	1243496	(DIN 934) M10 Hex Nut
574	901-06-133-1263	#10-24 x 3/8" Self Tap Screw
575	428-07-137-0001	Nameplate
576	422-28-079-0015	Rivet
577	1246153	(DIN 933) M6 x 25mm Hex Hd Screw
578	428-07-089-0018	Electrical Box Support

* NOT SHOWN ASSEMBLED

SERVICE NOTES:

C - For use with outboard elevating screws only.

D - When replacement becomes necessary for early style sprocket w/bushing (Ref. No. 508) or drive shaft (Ref. No. 510A) a new style drive shaft (Ref. No. 510) (shaft and sprocket incorporated as one piece) will be shipped. Customer MUST discard stop collar (Ref. No. 502), set screw (Ref. No. 503), washer (Ref. No. 504), set screw (Ref. No. 505), spring (Ref. No. 506), and ball (Ref. No. 507) for proper machine operation, as the new style drive shaft no longer requires the use of these parts.

This parts list is provided to aid in obtaining service parts. Operational and maintenance information is contained in a separate owner's manual which is available through your local service outlet.