



Rockwell

MANUFACTURING COMPANY

The Rockwell Building • Pittsburgh, Pa.

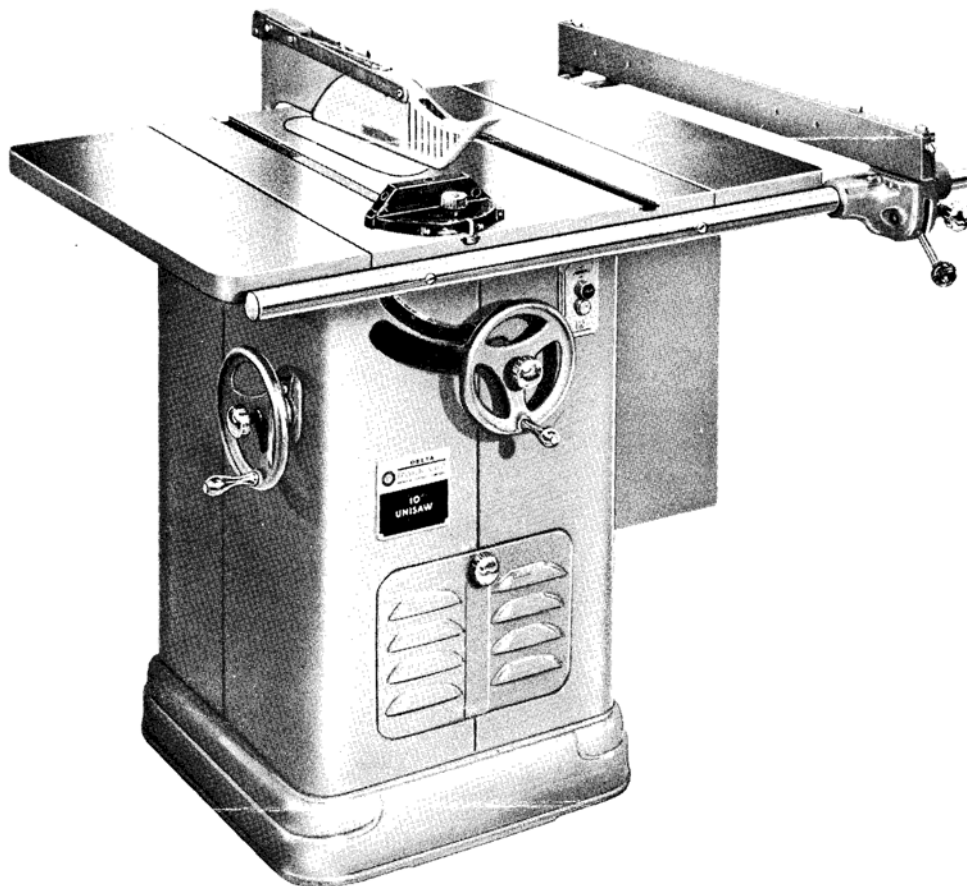
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ROCKWELL-DELTA 10" TILTING ARBOR UNISAW



INTRODUCTION

The saw you have just purchased is a quality-built machine, capable of dependable, precision performance throughout its lifetime. In order to take full advantage of these capabilities, you should thoroughly understand the construction and assembly of the saw and the proper technique for operating it. Therefore, we suggest you read this manual before assembling the saw and also that you save it for future reference.

It is well to assemble the saw completely, immediately upon unpacking, and care should be taken that no small parts remain in the wrapping. The handwheels and lock knobs are disassembled from the machine to reduce the size of the crate. The motor is packed in a separate carton for convenience in shipping and we suggest that you assemble the motor first in the following manner.

INSTALLING THE MOTOR

1. Fasten the motor pulley on the motor shaft. Care should be taken that the key fits properly into the keyway of the pulley in order that the pulley will slide onto the shaft freely. Do not drive the pulley in place because this makes it difficult to remove, and a heavy blow on the shaft may destroy the smoothly ground surfaces of the ball bearings, causing noise or bearing failure.

2. The proper position of the motor pulley on the shaft is $3 \frac{3}{4}$ " from the outer face of the pulley to the top of the ear on the motor frame, as shown in Fig. 1.

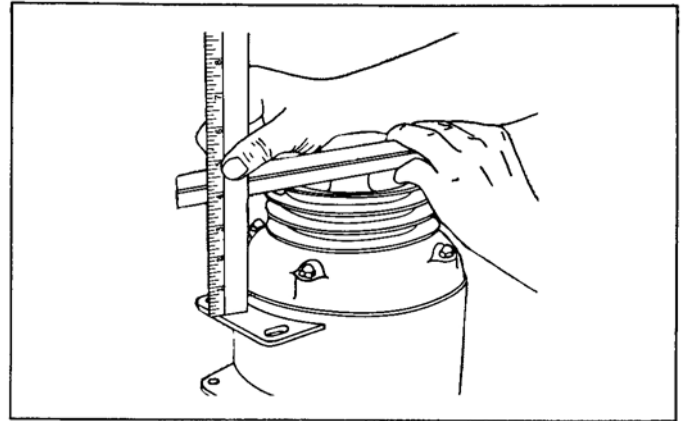


Fig. 1.

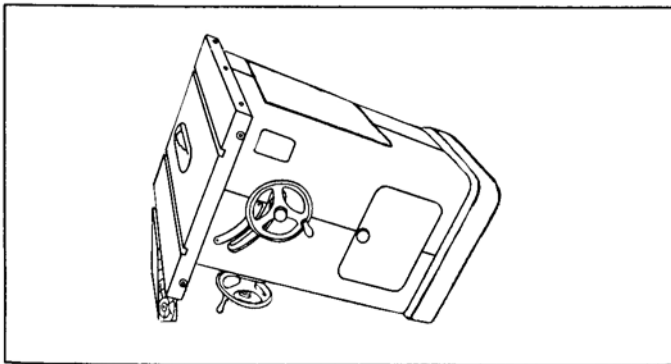


Fig. 2.

3. Tilt the cabinet as shown in Fig. 2. Place a block of wood under the edge of the table, approximately 10" high in order that the tilting hand-wheel clears the floor, as shown in Fig. 2.

4. When lifting the motor, hold it as shown in Fig. 3.

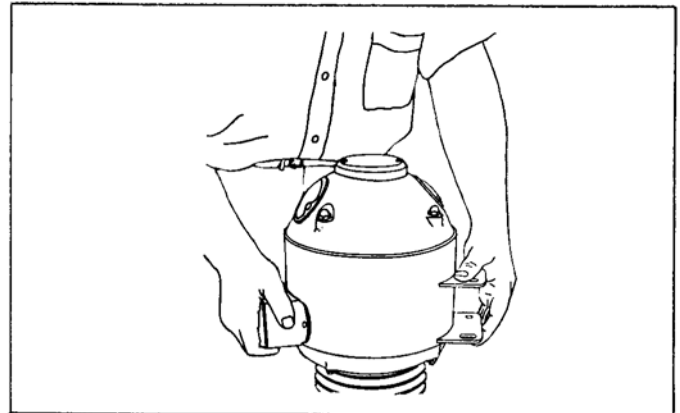


Fig. 3.

5. Lower the motor into the cabinet, as shown in Fig. 4, by swinging it into line with the hole in the cabinet to allow hands to clear.

6. After the motor is lowered to its proper position, swing the motor so that the ears of the motor straddle the motor bracket. The best position for the motor bracket is that which has the arbor halfway between the high and low position.

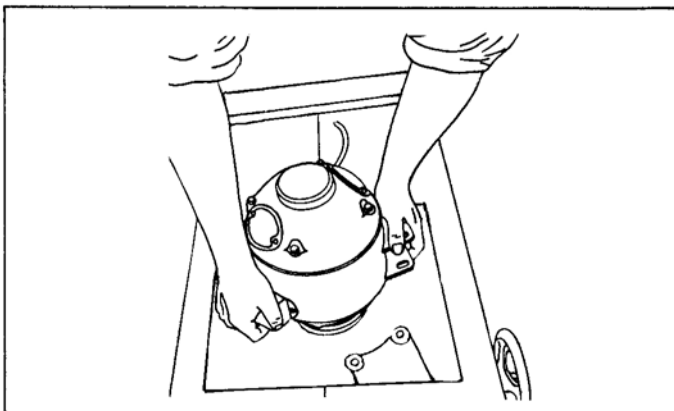


Fig. 4.

7. After the ears on the motor frame are engaged with the motor bracket, it is possible to hold the motor in position with the right hand only. Then insert the motor pivot pin as shown in Fig. 5.

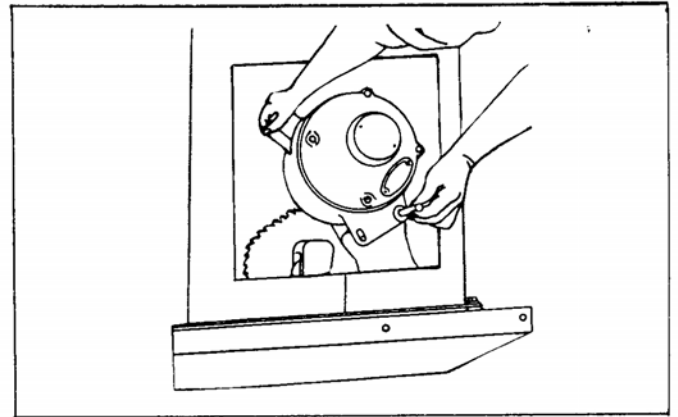


Fig. 5.

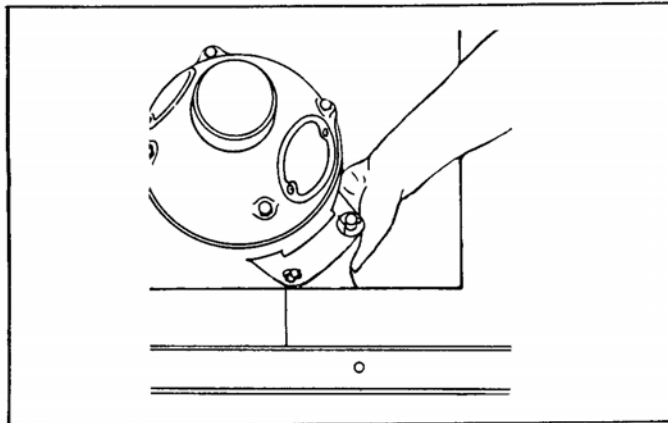


Fig. 6.

8. When the pivot pin is in place with the front washer and cotter pin, tilt the saw arbor up to the highest position which brings the motor to a convenient position for inserting the rear cotter pin as shown in Fig. 6.

9. Place the saw in the upright position.

10. To make the installation of the belts easier, it is best to take the weight of the motor on a block of wood as shown in Fig. 7. Hang all three belts on motor pulley in their respective grooves. Then taking the belt in the groove furthest from the motor and slipping it over the outboard arbor bearing, into the corresponding groove on the arbor pulley, follow the same procedure with the belt in the center groove and finally with the inside belt. Raise the saw arbor until the belts lift the motor from the block, remove block, then lower until the proper belt tension is obtained. The belts should operate fairly loose. Do not hang weight of motor on belts.

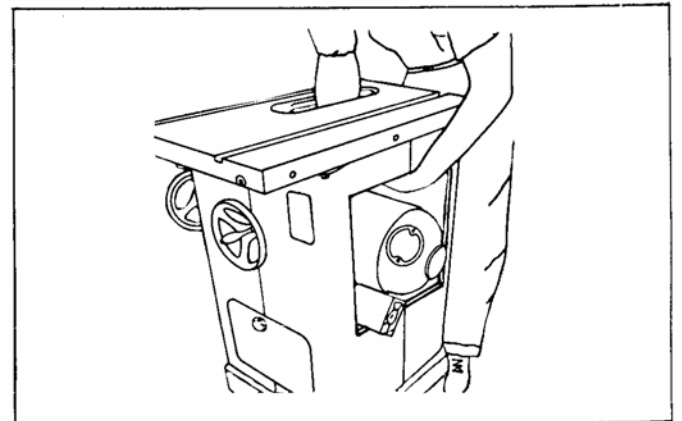


Fig. 7.

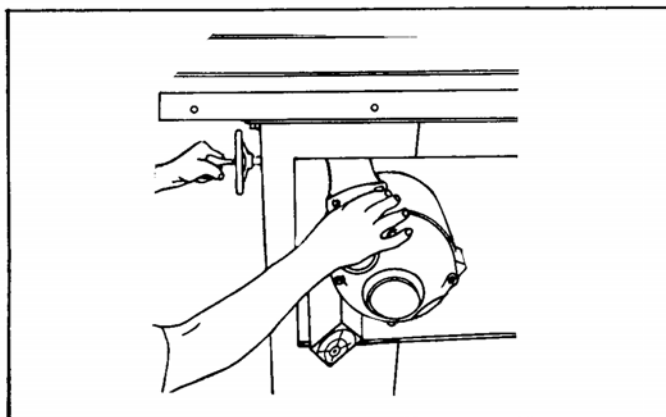


Fig. 8.

11. After proper belt tension is obtained, insert cap screw and washer as shown in Fig. 8, and tighten.

12. Make all necessary wiring connections between the switch and motor junction box and mount the switch to the cabinet.

ASSEMBLING GUIDE RAILS

Assemble the front and rear guide rails to the saw table as shown in Fig. 9. The guide rail with the graduations and rack, is fastened to the front of the table with the graduations up. Slip the screws (A) Fig. 9, through the holes in the front rail, the drilled holes in the spacers (B), and on through the holes in the front of the table. Fasten with the hexagon nuts (C) Fig. 9. The rear guide rail is fastened to the table by inserting the screws (D) through the holes in the guide rail, the holes in the spacer (E) and into the tapped holes in the rear of the table.

EXTENSION TABLES

Cast iron extension tables are available as an accessory, Cat. No. 1455. They increase the width of the table 16".

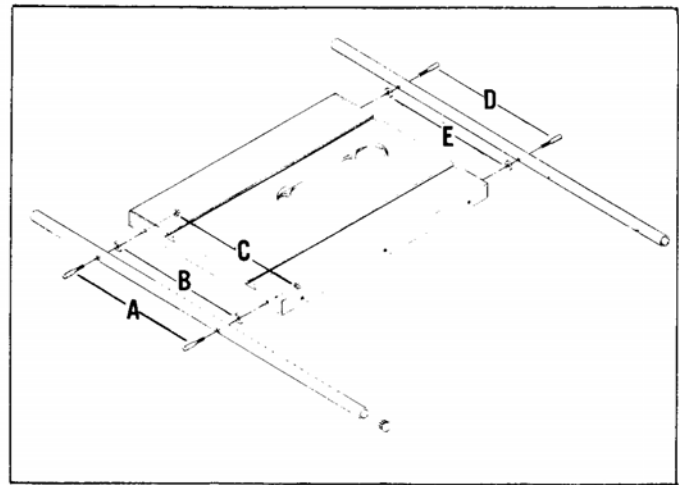


Fig. 9.

BLADE RAISING MECHANISM

The saw blade is raised and lowered with the front handwheel (A) Fig. 10. With the exception of hollow ground blades, the blade should be raised $1/8''$ to $1/4''$ above the top surface of the material being cut. With hollow ground blades the blade should be raised the maximum to provide greater clearance.

The saw blade is locked at any height by turning the hand knob (B) Fig. 10. Due to the wedge action of this locking device, only a small amount of force is required to lock securely. Any added force merely puts unnecessary strain on the locking device.

Limit stops for raising and lowering are permanently built into the mechanism and need no further adjustment.

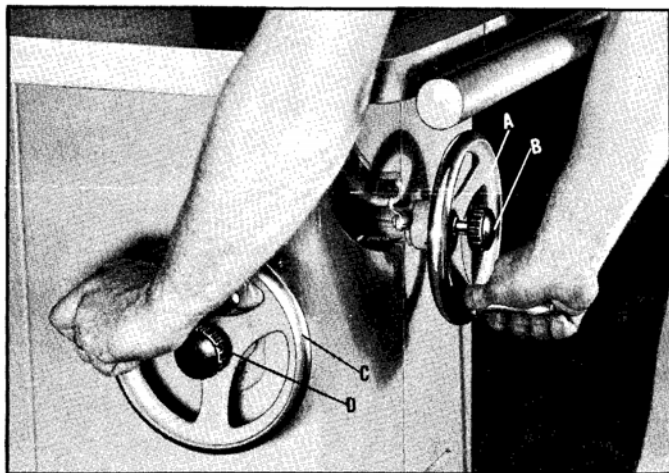


Fig. 10.

BLADE TILTING MECHANISM

The saw blade is tilted by turning the handwheel (C) Fig. 10, at the left side of the cabinet. Each turn of the handwheel equals approximately one and one-half degrees tilt. The tilting handwheel can be locked at any angle by turning the hand knob (D) Fig. 10. Only a small amount of force is necessary to lock the handwheel securely.

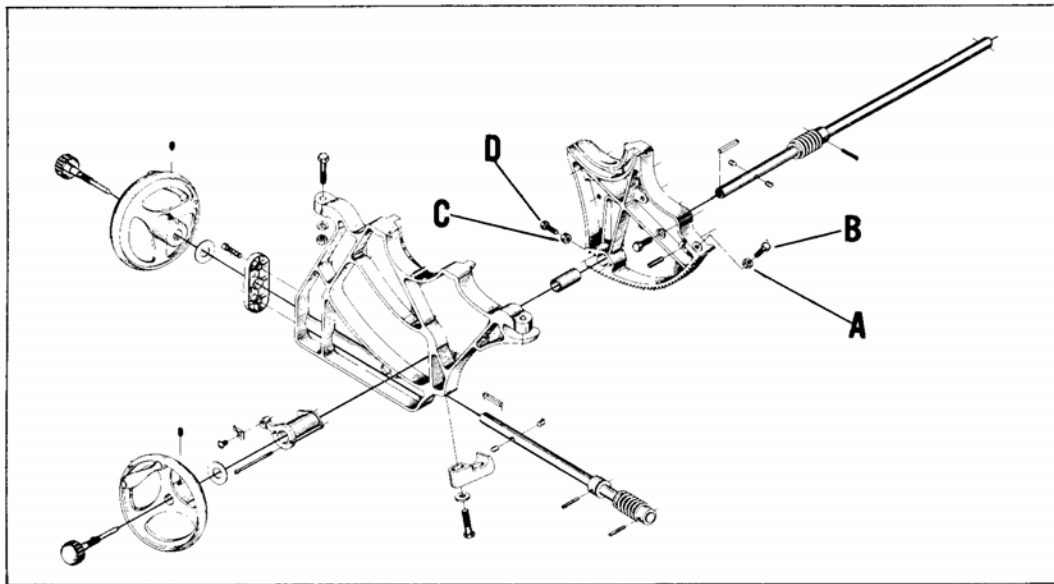


Fig. 11.

Adjustable limit stops for 90 degrees and 45 degrees are available on your Unisaw. To adjust the limit stops to insure that the blade will stop at a 90 degree or 45 degree angle proceed as follows:

1. Raise the saw blade as far as it will go and set the blade at 90 degrees to the table by turning the tilting handwheel.
2. Place a steel square on the table and check to see if the blade is at 90 degrees to the table.

If an adjustment is necessary, loosen locknut (A) Fig. 11, and turn adjusting screw (B) against the lug on the front trunnion when the blade is at 90 degrees to the table. Then tighten locknut (A).

3. Check tilt indicator pointer so that it points to zero and adjust if necessary.
4. Tilt the saw to 45 degrees and check with a combination square. If an adjustment is necessary, loosen locknut (C) and adjust screw (D) Fig. 11.

TABLE ADJUSTMENT

While all saws are lined up at the factory, it is best to check before operating, in order to obtain the best results from the saw.

Fig. 12 shows a simple method of checking the alignment. Be sure to make the test on the same tooth in both front and rear position. If an adjustment is necessary, loosen the four hexagon head cap screws (A) Fig. 12, which hold the table to the top of the gusset of the cabinet, and shift table at front or rear until a position is found which brings the saw blade in the center of the insert slot and parallel to the miter gage slot. Tighten the screws securely to prevent the table from shifting.

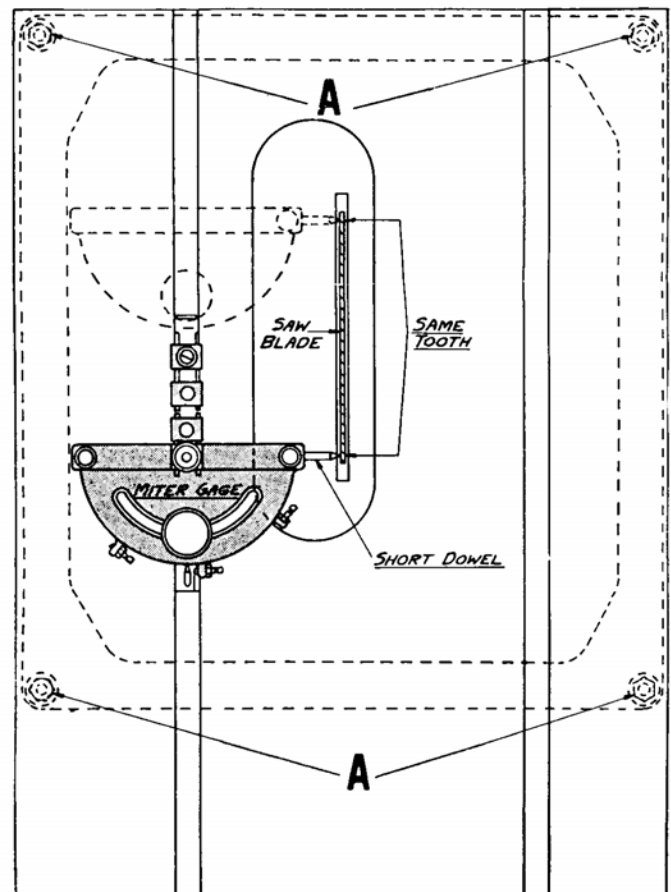


Fig. 12.

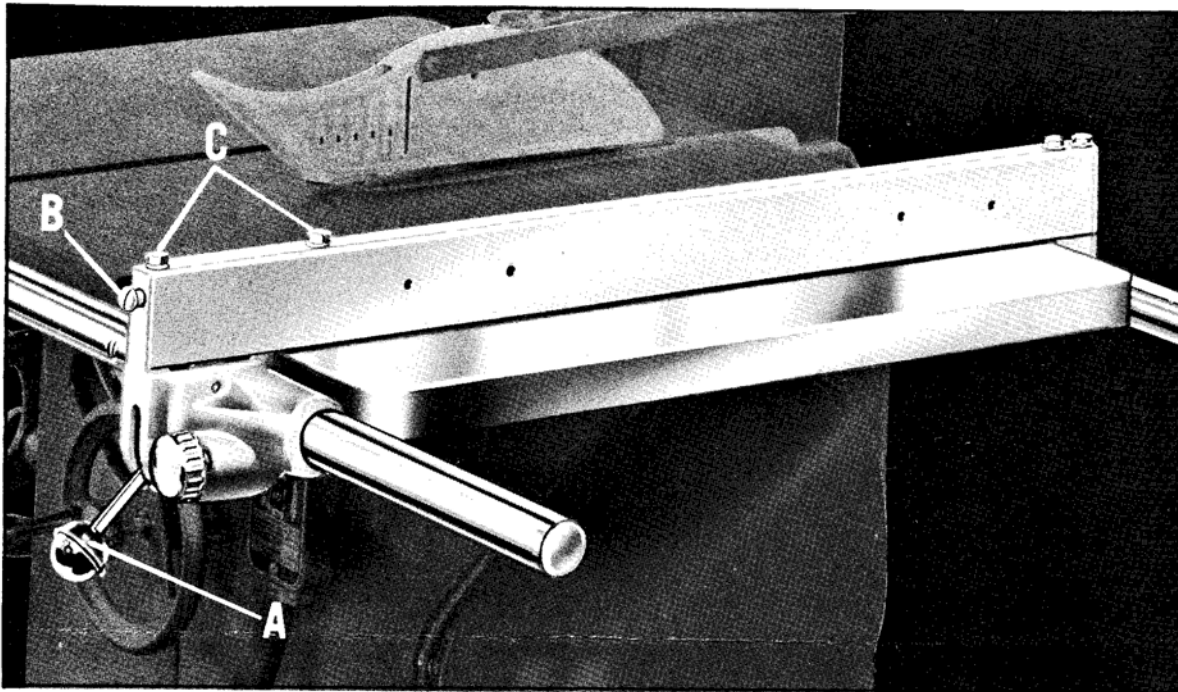


Fig. 13.

RIP FENCE ADJUSTMENTS

The rip fence is guided by means of guide rails fastened to the front and rear of the table. The front guide rail is calibrated to show the distance the fence is set from the saw blade.

To move the rip fence, raise the clamp lever (A) Fig. 13, as far as it will go.

When the clamp lever (A) Fig. 13 is all the way down, clamping action on the front and rear guide rails should be equal. If clamping action on the rear guide rail is more or less than clamping action of front guide rail, an adjustment of the rear clamp hook is made by turning sleeve (B). Turning the sleeve clockwise will increase tension and turning it counter-clockwise will decrease tension.

When lowering clamp lever slowly, you will notice clamp action on front guide rail first and as lever is moved downward to its lowest position, clamp action will take place on rear guide rail.

The rip fence can be used on either side of the blade. The most common location is on the right hand side. The fence should be adjusted so it is parallel to the miter gage slots. To check the rip fence set it at one of the miter gage slots, and tighten the clamp lever (A) Fig. 13. If an adjustment is necessary, loosen the two front cap screws (C) Fig. 13, and raise the clamp lever (A). Move the rear end of the fence body to one side or the other until it is parallel with the miter gage slot. Then lock the clamp lever (A), by pushing it down, and tighten the two clamp screws (C).

TABLE INSERT ADJUSTMENT

The table insert should always be flush with the table top. To adjust the table insert, turn the adjusting screws (A) Fig. 14, in or out.

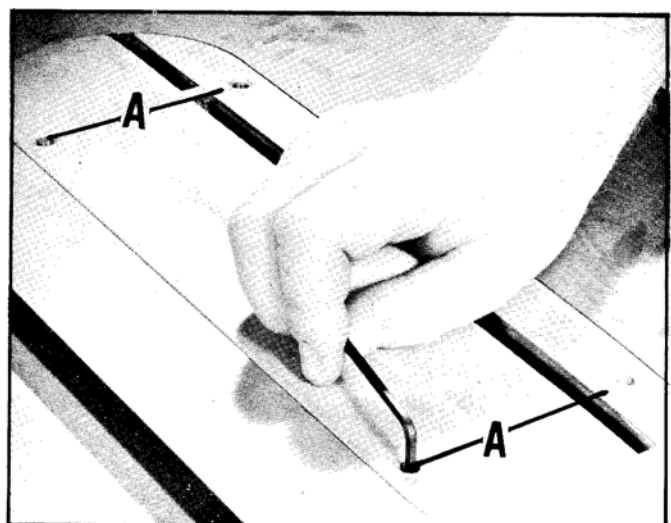


Fig. 14.

REMOVING SAW BLADE

To remove saw blades from your saw, first disconnect the saw from the power source. Remove the table insert, place a block of wood against the front of the saw blade and using the arbor nut wrench, turn the arbor nut toward you, as shown in Fig. 15.

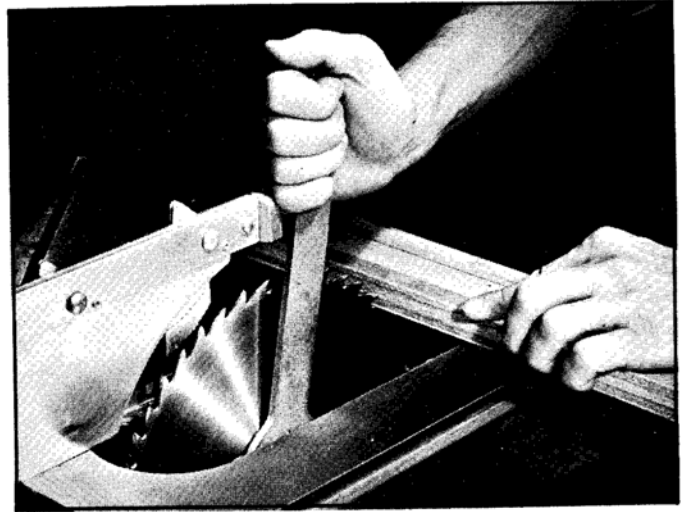


Fig. 15.

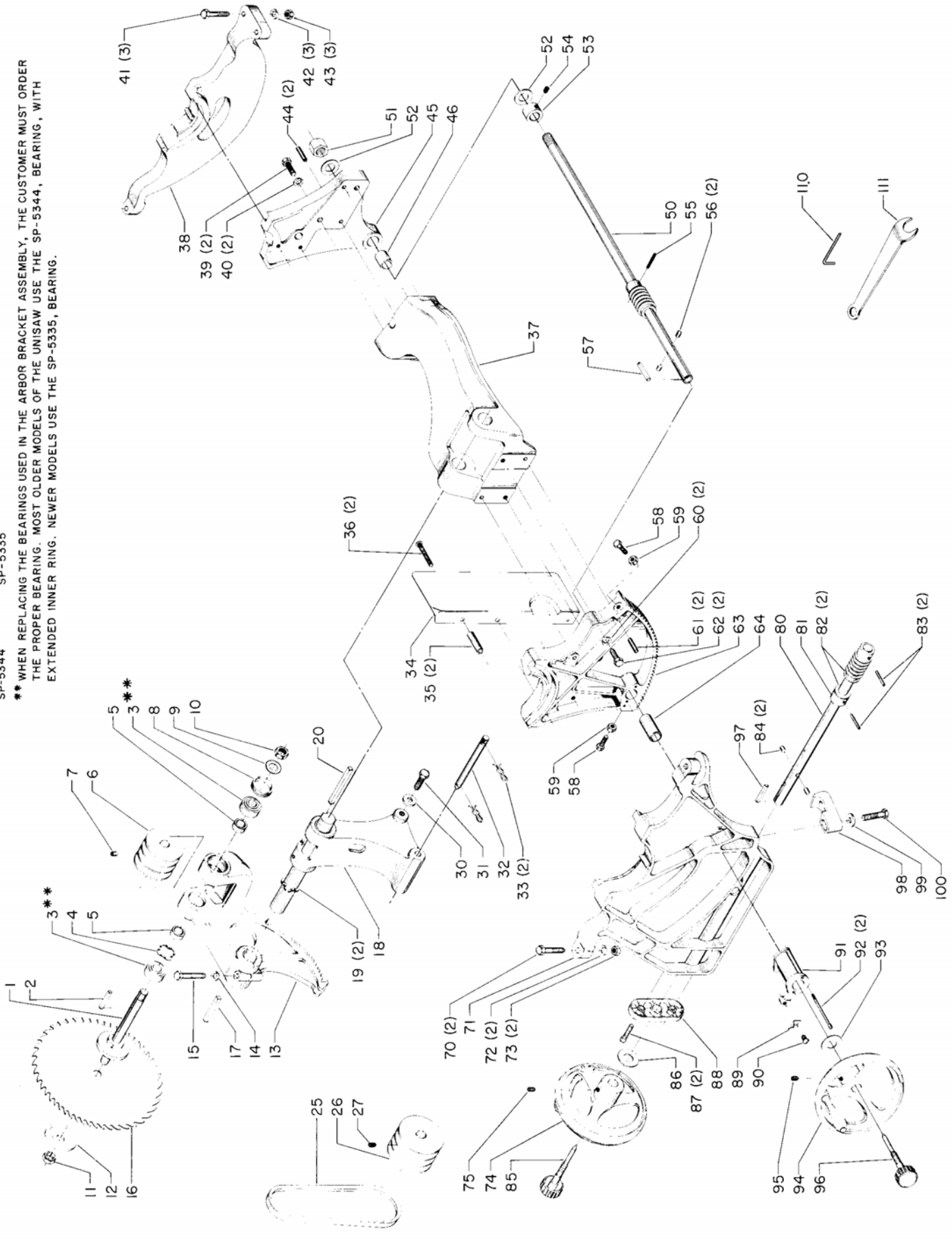
SAFETY RECOMMENDATIONS

Plain sawing includes ripping and cross-cutting, plus a few other standard operations of a fundamental nature. We strongly suggest that you make use of all the conventional safety guards provided for your saw. The following safety suggestions should be followed at all times.

1. Remove tie, rings, watch, and roll up sleeves.
2. Keep saw blade sharp and free of all rust and pitch.
3. Always disconnect the saw from the power source before making adjustments.
4. Always hold the work firmly against the miter gage or fence.
5. When finished, shut the power off and do not leave the machine until the blade has come to a complete stop.
6. Taking a chance is foolhardy; always follow good safety rules when operating your saw.

SP-5344
 SP-5335

** WHEN REPLACING THE BEARINGS USED IN THE ARBOR BRACKET ASSEMBLY, THE CUSTOMER MUST ORDER THE PROPER BEARING. MOST OLDER MODELS OF THE UNISAW USE THE SP-5344, BEARING, WITH EXTENDED INNER RING. NEWER MODELS USE THE SP-5335, BEARING.



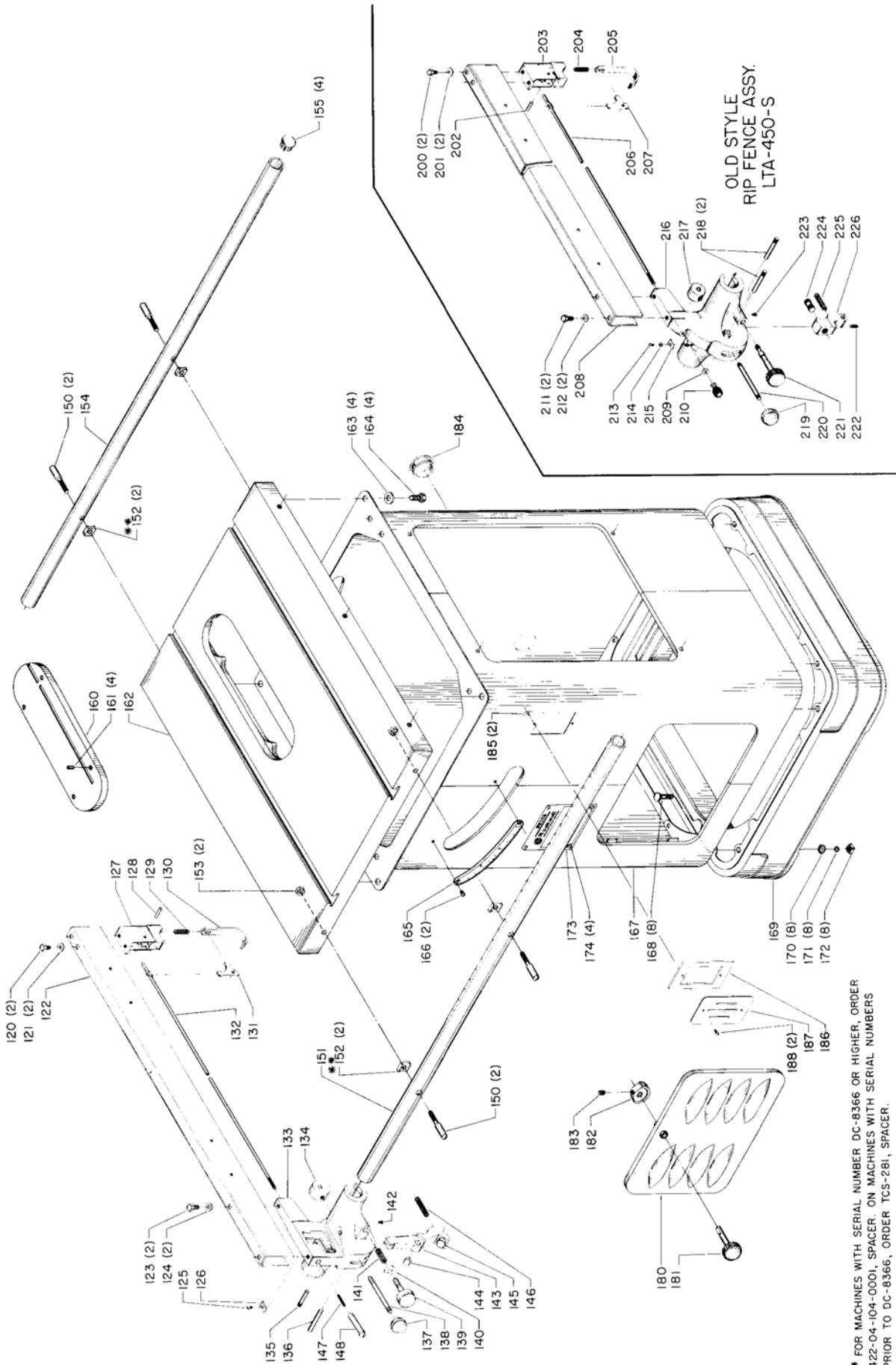
Replacement Parts

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
*	LTA-408-S	Arbor Bracket, consisting of:	53	H-5-S	Collar, incl.:
1	LTA-428-A	Arbor and Flange	54	SP-201	5/16-18x5/16 Hex. Soc. Set Screw
2	SP-2650	3/16x3/16x1-3/8 Key	55	SP-2715	3/16x1-1/8 Roll Pin
** 3	SP-5344	.6693 x 1.5748 x .563 Bearing w/Extended Inner Ring	56	TAM-181	Lock Pin
** 3	SP-5335	.6693 x 1.5748 x .4724 Bearing	57	SP-2650	3/16x3/16x1-3/8 Key
4	LTA-516	Bearing Load Spring	58	SP-663	5/16-24x3/4 Hex. Hd. Cap Screw
5	422-04-104-0002	Bearing Spacer	59	SP-1228	5/16-24 Hex. Nut
6	LTA-560-S	Arbor Pulley, incl.:	60	SP-1704	3/8 Lockwasher
7	SP-206	5/16-18x5/16 Hex. Soc. Set Scr.	61	SP-2734	5/16x1 Roll Pin
8	BG-12	Spanner Nut	62	SP-650	3/8-16x7/8 Hex. Hd. Cap Scr.
9	DP-722	Lockwasher	63	LTA-405-S	Front Trunnion, incl.:
10	BM-23	Bearing Nut	64	LTA-466	Bearing
11	BG-23	5/8"-12 Arbor Flange Nut	70	SP-682	3/8-24x1-1/2 Hex. Hd. Cap Scr.
12	LTA-411	Arbor Flange	71	LTA-403	Front Trunnion Bracket
13	LTA-408-A	Arbor Bracket, incl.:	72	SP-1704	3/8 Lockwasher
14	SP-1704	3/8 Lockwasher	73	SP-1207	3/8-24 Hex. Nut
15	SP-3102	3/8-16x1-3/4 Hex. Hd. Cap Scr.	74	LTA-420-S	Handwheel, incl.:
16	Cat. #1015	10" Combination Saw Blade	75	SP-201	5/16-18x5/16 Hex. Soc. Set Scr.
17	SP-2653	1/4x1/4x1-15/16 Key	80	LTA-418-R	Tilting Shaft, incl.:
18	LTA-409-R	Motor Bracker w/shaft, incl.:	81	LTA-456	Collar
19	NL-306	Bearing Load Spring	82	LTA-462	Fiber Washer
20	SP-2657	1/4x1/4x2-15/16 Key	83	SP-2715	3/16x1-1/8 Roll Pin
25	Cat. #49-124	Matched Set of Three V-Belts	84	TAM-181	Lock Pin
26	Cat. #41-644	Motor Pulley, incl.:	85	LTA-561-S	Lock Knob
27	SP-225	5/16-18x1/4" Hex. Soc. Set Scr.	86	LTA-461	Fiber Washer
30	DDL-174	Special Steel Washer	87	SP-707	5/16-18x1 Fil. Hd. Cap Screw
31	SP-664	7/16-20x1 Hex. Hd. Cap Screw	88	LTA-460	Shield Plate
32	LTA-416	Pin	89	LTA-429	Pointer
33	LTA-515	Spring Clip	90	SP-520	5/16-18x3/8 Rd. Hd. Mach. Scr.
34	LTA-522	Dust Deflector	91	LTA-459	Pointer Bracket
35	LTA-523	Spacer	92	NC-10	#8-32x2-3/4 Fil. Head Screw
36	SP-522	5/16-18x1-3/4 Rd. Hd. Mach. Scr.	93	LTA-461	Fiber Washer
37	LTA-407	Yoke	94	LTA-420-S	Handwheel, incl.:
38	LTA-404	Rear Trunnion Bracket	95	SP-201	5/16-18x5/16 Hex. Soc. Set Screw
39	SP-650	3/8-16x7/8 Hex. Hd. Cap Screw	96	LTA-561-S	Lock Knob
40	SP-1704	3/8 Lockwasher	97	SP-2650	3/16 x 3/16 x 1 3/8 Key
41	SP-682	3/8-24x1-1/2 Hex. Hd. Cap Scr.	98	LTA-424	Guide Block
42	SP-1704	3/8 Lockwasher	99	DDL-174	Special Steel Washer
43	SP-1207	3/8-24 Hex. Nut	100	SP-681	7/16-20 x 1 1/2 Hex. Hd. Cap Scr.
44	SP-2734	5/16x1 Roll Pin	110	Cat. #194	5/32 Hex. Wrench
45	LTA-406-S	Rear Trunnion, incl.:	111	Cat. #1525	Wrench
46	LTA-467	Bearing			
50	422-04-406-0001	Raising Shaft w/worm, incl.:			
51	SP-1036	3/4-16 Hex. Nut			
52	LTA-462	Fiber Washer			
				Cat. #291	Matched Set of Three V-Belts
				Cat. #1449	Motor Pulley

NOTE: For 1725 RPM operation, use the following V-Belts and Motor Pulley.

* Not Shown Assembled

** When replacing the bearings used in the arbor bracket assembly, the customer must order the proper bearing. Most older models of the unisaw use the SP-5344, bearing, with extended inner ring. New models use the SP-5335, bearing



OLD STYLE
 RIP FENCE ASSY.
 LTA-450-S

** FOR MACHINES WITH SERIAL NUMBER DC-8366 OR HIGHER, ORDER 422-04-104-0001, SPACER. ON MACHINES WITH SERIAL NUMBERS PRIOR TO DC-8366, ORDER TCS-281, SPACER.