

READ CAREFULLY BEFORE OPERATING MACHINE

# Instructions for Operating Circular Saw Guards

N O ONE saw guard is suitable for all types of work, consequently it is important that a customer obtain that type of guard best suited for his particular work. The No. 1450 Unisaw was designed with that end in view, therefore, provisions were made for mounting splitters, splitter guards, basket swing guard, solid hood guard, and combinations of the above. In order to give the customer a clear picture of the different units available, they will be described separately as follows:

#### Splitter and Anti-Kick Back Device

The No. 1473 Splitter and Anti-Kick Back Device shown in Fig. 1 consists of the splitter blade, which is fastened to the rear trunnion of the No. 1450 saw. Due to this mounting the splitter tilts with the saw blade. Upon removing the saw table insert, there will be found a bracket LTA-435 immediately behind the blade. A clamp plate LTA-436 which clamps the splitter against the bracket by means of SP-608 hex, head cap screw is guided on the bracket by two pins engaged in holes in the clamp plate. These pins straddle lugs on the lower end of the splitter, which is slotted to

clear the clamp bolt. It is unnecessary to remove the clamp plate, but merely loosen it sufficiently to allow the splitter to slip between. Be sure the splitter is pushed way down, when inserting to assure proper positioning. By straddling the lock screw and fitting between the guide pins, the splitter is held in the right position. Consequently the lock screw SP-608 does not need to be drawn extremely tight.

The splitter has the leading edge tapered to a blunt knife edge so as to enter the saw kerf without interference.

The No. 1473 splitter and kick back fingers can be removed in one minute by loosening one screw, in case dado head work or tenoning is to be done on the machine.



The anti-kick back device consists of six fingers saw toothed at the bottom and pivoted so as to swing clear, and rest on top of the work. The fingers are so shaped so the work can be pushed forward without interference, however, any slight backward movement of the work immediately causes one or more of the fingers to lock the work in place. This prevents the work from being thrown out toward the operator, if it should pinch on the blade.

The splitter itself tends to prevent pinching; however, when cutting green lumber, a severe twist occasionally occurs which no splitter can prevent, and it is, therefore, essential that a splitter and the anti-kick back device be used together.

# No. 1457 Splitter Guard

No. 1457 Splitter mounted guard shown in figure 2 is to be used for general purposes. Being mounted on the splitter, it tilts with the saw blade. It is equipped with the same kick finger described above. This guard, when left loose, rides up and over the work practically covering all exposed parts of the blade. The guard may also be clamped on the splitter with a thumb nut to hold it in







FIG. NO. 2

any position above the table. While this exposes more of the saw, it eliminates the necessity of raising the guard with the work.

Number	Name of Part	No. Req'd	Price Each
LTA-494	Guard	. 1	\$2.00
LTA-495	Splitter for 1459	1	.45
LTA-503	Splitter for 1473	. 1	.50
LTA-519	Spring Washer 3/4 x 21/64 x 1/32.	1	.10
TCS-250	Stop Pin	. 1	.10
TCS-251	Shoulder Bolt	. 1	.10
TCS-252	Kickback Finger	. 1	.10
TCS-253	Kickback Finger	. 1	.10
TCS-254	Kickback Finger	. 1	.10
TCS-255	Kickback Finger	. 1	.10
TCS-256	Kickback Finger	. 1	.10
TCS-258	Special Washer 21/32 x 21/64 x .010	) 5	.10
TCS-259	Kickback Finger	. 1	.10
TCS-295	Guard Nameplate (Delta)	. 1	.10
TCS-296	Guard Nameplate (Tauco)	. 1	.10
SP-602	5/16-18 x 1 <sup>1</sup> / <sub>4</sub> Hex. Hd. Cap Screw.	. 1	.10
SP-1204	#8-32 Hex. Nut	. 1	.10
SP-1209	<sup>1</sup> / <sub>4</sub> -28 Hex. Nut	1	.10
SP-1403	5/16 Wing Nut	. 1	.10
SP-2250	#4 x 3/16 Drive Screw	2	.10

#### No. 1472 Swing-back Guard

The No. 1472 Swing-back Guard shown in Fig. 3 is similar to the No. 1165, and being fastened to the table it does not tilt with the blade. This limits the guard to use on square cuts or cuts at a slight angle. The No. 1472 can be used in combination with the No. 1473 splitter and kickback fingers. The maximum angle of cut for which this guard can be used depends on the clearance inside the guard. The guard can be adjusted to a position to give maximum clearance by loosening the collars TCS-249 and shifting to suit. Do not allow splitter or blade to come closer than 1/8" to the inside of the guard. This guard, being mounted independently of the splitter, can be used for dadoing or routing by removing the splitter, and can be swung back, out of the way, by merely loosening ball handle lock screw TCS 247-S allowing the guard and bent arm bracket to pivot, as shown in Fig. 4. Due to the solid mounting. this guard is more rigid than any splitter type guard, and we recommend its use for all average straight work. When a considerable amount of angular work is to be done, we recommend our No. 1471 Super Safe guard shown in Fig. 5.

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LTA-438 SP-1708 SP-675-

#### No. 1471

#### Super Safe Guard

The No. 1471 is designed to overcome the objections that exist in all splitter mounted guards. Due to the unique method of mounting the splitter, together with the re-enforcing bars at the top, it is possible to make the splitter rigid enough to support a guard properly. In addition to this,

> NCS-37-TCS-249-TCS-240-SP-1001-

SP-607-SP-201-LTA-551-TCS-247-S



the re-enforcing bars extend forward from the splitter and support a guide shoe, which guides the guard basket, preventing side movement of the guard.

The splitter also has four kickback fingers similar to those on the No. 1473. These fingers, however, can be released at will without the necessity of having the operator's hands come close to the blade. A small hook shaped part extends upward thru the guard, which can be tripped without danger, as shown in Fig. 5.

Due to the fact that this guard raises and lowers by pivoting around a point well back of the table, it is possible to make the guard ride the work with very little effort. Even when the saw is tilted to 45 degrees it raises and lowers without cramping or crowding against the blade. We believe the No. 1471 to be the safest saw guard on the market.

The splitter for the No. 1471 guard is mounted to the rear trunnion of the saw, being fastened to the same bracket as used for the No. 1473 splitter; however, to obtain additional rigidity, it is also fastened to an additional bracket behind the saw table. This bracket LTA-525 is clamped to

> SP-2102 TCS-257 SP-2250 TCS-295 (DELTA) TCS-296 (TAUCO) LTA-502

a post LTA-539 which is mounted into the rear trunnion of the saw. An opening in the saw cabinet in the rear is provided.

To mount the No. 1471 splitter guard, proceed as follows: Remove the saw blade and mounted splitter bracket post LTA-539 into rear trunnion, tightening nut FJ-313 securely. Assemble splitter bracket LTA-525 to post, and tighten so that the vertical face of the adjust-



Number	Name of Part	No. Req'd	Price Each	Number	Name of Part	No. Req`d	Price Lach
LTA-438	Bracket	1	\$1.50	TCS-295	Name Plate (Delta)	1	.10
LTA-502	Guard Support Bent Arm	1	3.25	TCS-296	Name Plate (Tauco)	1	.10
LTA-551	1 <sup>1</sup> / <sub>2</sub> x 1 x 7/16 Thk. Collar	2	.20	SP-201	5/16-18 x 5/16 Allen Set Screw	. 2	.10
NCS-37	5/16-18 x 17/64 Allen Set Screw	2	.10	SP-607	5/16-18 x 3/4 Hex. Hd. Cap Screw.	. 1	.10
TCS-240	Guard Basket Bracket	1	2.50	SP-675	7/16-20 x 3 Hex. Hd. Cap Screw	. 1	.10
TCS-241	Guard Basket	1	2.75	SP-1001	5/16-18 Hex. Nut	. 1	.10
TCS-247-S	Ball Pin Lock Bolt	1	.40	SP-1708	7/16 Lockwasher	. 2	.10
TCS-249	1 <sup>1</sup> / <sub>2</sub> x 1 x <sup>1</sup> / <sub>2</sub> Thk. Collar	3	.20	SP-2102	1/16 x 1/2 Cotter Pin	. 1	.10
TCS-257	Pivot Pin	1	.10	SP-2250	#4 x 3/16 Drive Screw	. 2	.10

able bracket LTA-525 is parallel to the saw arbor flange, and so that both the front and rear clamp screws fit in splitter slots.

Clamp splitter in place both front and rear by tightening hexagon head cap screws SP-608. Before using the splitter be sure to check the alignment. It is necessary that the splitter be aligned perfectly with the blade in order to avoid cramping. It is also important that the rip gage be perfectly parallel to the saw blade and splitter. If any misalignment occurs, make the necessary adjustments to prevent the work from leading away from the rip fence or binding against it. Most splitters are flexible enough or floating to follow







Number	Name of Part Req		Number	No. Name of Part Reg'd	Price Each
LTA-436	Splitter Bracket Clamp Plate 1	\$ .10	LTA-550	Kickback Finger 1	\$ .15
LTA-525	Splitter Bracket, Lower Half 1	.35	LTA-552	Coil Spring 1	.10
LTA-526	Splitter Bracket, Upper Half 1	.25	TCS-258	Shim Washer 2	.10
LTA-531	Splitter 1	.80	TCS-295	Nameplate (Delta) 1	.10
LTA-534-5	Guard Basket 1	2.75	TCS-296	Nameplate (Tauco) 1	.10
LTA-536	Guard Hinge 1	.85	LBS-63	Rivet 2	.10
LTA-537	Pivot Bar 2	.20	FJ-313	5%-18 Hex. Half Nut 1	.10
LTA-538	Guide Block 1	.20	DDL-150	21/32 x 21/64 x 1/16 Steel Washer. 1	.10
LTA-539	Support Post 1	.35	DSS-41-S	Socket Wrench 1	.30
LTA-540	Kickback Finger Spacer 2	.10	NCS-160-A	Miter Gauge Body with Stop Screws 1	1.95
LTA-541	Guard Support Bar 1	.25	SP-401	1/4-2) x 1/2 Fl. Hd. Mach. Screw 2	.10
LTA-541-B	Guard Support Bar 1	.25	SP-455	#10-32 x 7/16 Fl. Hd. Mach. Screw 3	.10
LTA-542	Threaded Clamp Button 1	.10	SP-502	<sup>1</sup> / <sub>4</sub> -20 x <sup>1</sup> / <sub>4</sub> Rd. Hd. Mach. Screw 4	.10
LTA-543	Plain Clamp Button 1	.10	SP-559	#10-32 x 1/2 Rd. Hd. Mach. Screw. 2	.10
LTA-544	Pivot Pin 1	.10	SP-602	5/16-18 x 11/4 Hex. Hd. Cap Screw. 1	.10
LTA-545	Stop Spacer 1	.10	SP-608	5/16-18 x 7/8 Hex. Hd. Cap Screw. 3	.10
LTA-546	Stop Pin 1	.10	SP-707	5/16-18 x 1 Fil. Hd. Cap. Screw 1	.10
LTA-547	Kickback Finger 1	.15	SP-1203	#10-32 Hex. Nut 3	.10
LTA-548	Kickback Finger 1		SP-1604	3/4 x 5/16 x 1/16 Steel Washer 1	.10
LTA-549	Kickback Finger 1	.15	SP-1754	<sup>3</sup> / <sub>3</sub> x 7/32 Shakeproof Lockwasher 2	.10







FIG. NO. 6

FIG. NO. 7

FIG. NO. 8

the saw cut without difficulty; however, the splitter on the No. 1471 is made rigid and any slight misalignment will cause difficulty. Therefore, be sure to adjust properly. THIS IS IMPORTANT.

Both the front splitter bracket LTA-435, which comes with the No. 1450 saw, and the rear splitter bracket LTA-526 are adjustable. The LTA-435 front bracket is adjusted by loosening the two hexagon head cap screws which hold it to the rear trunnion. Oversize holes in this bracket allow sufficient lateral movement to assure proper adjustment. The rear bracket LTA-526 can be shifted laterally on its ways by loosening the one hexagon head cap screw SP-602 shown in Fig. 7.

The addition of the No. 1471 Super Safe Guard has made necessary a slight change to our miter gauge body to provide clearance for the guard when the saw is tilted, and the miter gauge is used on the right hand side. Miter gauge body with clearance at "A" shown in lower left hand corner of repair parts drawing. This part can be purchased if desired (see parts price list).

The operation of the No. 1471 Super Safe Guard is shown in Figs. 6 and 8. Fig. 6 shows the position the guard takes when the saw is tilted and the work is being fed in. Notice how the rear of the guard remains down on the table, giving complete protection. Fig. 8 shows how the front of the guard drops to the table as soon as the work has passed the center of the saw blade. The guard pivot bar hinge is so constructed that a coil spring rests on top of the splitter. This counteracts the weight of the guard basket assembly, making the guard easy to operate.

Number	Name of Part	No. Req'd	Price Each
TCS-293	Guard Link	1	\$1.75
TCS-294	Guard	1	1.50
SP-679	36 -24 x 2 Hex. hd. cap screw	2	.10
SP-684	<sup>1</sup> / <sub>2</sub> -20 x 2 <sup>3</sup> / <sub>4</sub> Hex. hd. cap screw	1	.10
SP-1207	38-24 Hex. Nut	2	.10
SP-1208	1/2-20 Hex. nut	1	.10
SP-1607	1 <sup>1</sup> / <sub>4</sub> x <sup>1</sup> / <sub>2</sub> x 5/64 Steel washer	1	.10

# No. 1155 Abrasive Wheel Guard

The No. 1155 Abrasive wheel guard hood and cast link is mounted on a bent arm bracket No. 1470 for the No. 1450 saw. This bent arm bracket is the same as used for the No. 1472 swing back guard.

The functions of No. 1155 Abrasive wheel guard in addition to protecting the operator's hand is to prevent injury from sparks and from flying pieces due to wheel breakage. Due to its mounting, this guard does not tilt with the saw blade, but can be swung out of the way when not needed.

In operation the guard may either be allowed to rest on the table, be raised by the work or it may be clamped in any position allowing the work to pass under it.



FIG. NO. 9



IMPORTANT: To avoid possible errors, be sure to include the serial number of the machine when ordering parts for repair or replacement. NOTE: Prices in this list apply only to parts ordered for repair and replacement. They cannot be used for computing allowance values if a machine is ordered "less" certain parts.

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# Instructions for Adjusting and Operating No. 1450 Tilting Arbor Saw

THE No. 1450 Tilting Arbor Circular Saw comes packed with the table assembled to the cabinet. The Miter Gage, Rip Gage, Guide Tubes and Miscellaneous parts are packed in a separate carton. The saw

blade is packed in an envelope which is fastened to the table top packing. 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 handweels and lock knobs are disassembled from the machine to reduce the size of the crate. A Hex head cap screw is screwed into the end of the handwheel shaft to prevent loss of the wedge lock pin. Upon assembly of machine, remove these hex head cap screws and discard. 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 Motor**

Fasten the motor pulley on the motor shaft. Care should be taken that the key fits properly into the keyway of the pulley so that the pulley slides 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. Figure 1 shows the proper position of the motor pulley on the shaft, 3<sup>3</sup>/<sub>4</sub> inches from the outer face of the pulley to the top of the ear on the motor frame. Figure 2 shows the easiest method of holding the motor for assembly into the cabinet.

The most convenient position in which to have the cabinet for installing the motor is shown in Figure 3. Put a block under the edge of the table approximately 10" high to make the tilting handwheel clear the floor. Hold the motor as shown in Figure 2, lower it into cabinet as shown in Figure 4 by swinging it in line with the hole in the cabinet, to allow hands to clear. After motor is lowered to proper position swing to make ears straddle motor bracket. The best position for the motor bracket is that which it has when the arbor is adjusted halfway between the high and low position.

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. This leaves the left hand free to insert motor pivot pin Figure 5. 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 Figure 6. 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 Figure 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, then lower until the proper belt tension is obtained. The belts should operate fairly loose. Do not

hang weight of motor on belts. After proper belt tension is obtained insert cap screw as shown in Figure 8 and tighten.

The final operation in assembling the motor is to mount the switch. This is done in the following manner. Having removed the switch plate with which the switch hole in the cabinet is covered, pass the switch through the hole from the inside as shown in Figure 9. It is necessary to have the toggle lever in the ON position, and to bend the rubber covered cords sharply into the corner on the inside of the cabinet wall. When switch has been passed completely through the hole in the cabinet, pull the power cord and plug through after it, as in Figure 10. The switch may now be fastened against the cabinet wall with the screws provided, and the switch hole cover plate is mounted on the switch box.

## Rip Gage Tubes

The Rip Gage Guide Tubes can next be assembled. The tube with the graduations and rack, is fastened to



the front of the table with the graduations up. Slip the screws extending from the tube through the drilled holes on the front flange and fasten with SP-1207 Hexagon Nuts. The rear tube is fastened to the rear flange of the table using the spacer (TCS-281) and shouldered screw (LTA-455) screwed into the tapped holes in the rear table flange.

# Saw Blade

The saw blade is slipped onto the arbor with the teeth pointing toward the front and placed firmly against the arbor flange, after which the clamp flange (LTA-411) is placed against the saw blade. The left hand nut (BG-23) is tightened using the wrench (LTA-430), which is furnished, on the flats behind the arbor flange to prevent the saw arbor from turning, while the nut is being drawn up tight.

# **Table Adjustment**

After saw blade is put in place, it is best to check the alignment of the miter gage slot on table to the saw blade. 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. If there should be an occasion for removing the table upon replacement the same procedure should be followed. Figure No. 11 shows a simple method of checking the alignment. Be sure to make the test on the same tooth in both front and rear position, because there might be a variation in the set of different teeth. Loosen the 4 Hexagon head cap screws (SP-680) which hold the table to the top gusset of the cabinet, and shift table at front or rear until a position is found which brings the saw in the center of the insert slot and parallel to the miter gage slot. Tighten screws securely to prevent the table from shifting.

# **Rip Gage Adjustment**

The Rip Gage is assembled to the saw by sliding the front block and the rear slide block over the end of the guide tubes. Be sure to release rear clamp hook by loosening the rear lock thumb nut (NCS-272) and raising the front clamp lever, releasing the pressure on the front clamp shoe. While the rip fence can be used on either side of the saw, the most common position is on the right hand side of the saw blade. To align the rip gage, loosen the two front cap screws (SP-677) on top of the bar, clamp the front block to the guide bar by pressing down the clamp lever, and see that the rear clamp is loose. Measure from a tooth on the front of the saw to the rip gage bar, and then turning the saw backwards, from the same tooth to the rip gage at the rear of the table slot. Move the rear end of the gage bar to one side or the other until the measurements are alike, then re-tighten the cap screws.

Set and tighten the rip gage after adjustment so that it just touches the right hand side of the saw blade, then set the pointer (TCS-271) on the zero mark and tighten it securely.

# Raising and Lowering Saw Blade

The saw is raised and lowered with the front handwheel. The pitch of the raising worm is such that one turn on the handwheel equals  $\frac{1}{4}$  movement of the saw blade. The saw blade is locked at any height by turning the hand knob extending from the front handwheel shaft. 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.

The stops for raising and lowering are permanently built into the mechanism and no adjustment need be made.

## **Tilting Stop Adjustment**

The saw blade is tilted by turning the handwheel at the left hand side of the cabinet. Each turn on the handwheel equals approximately one and one-half degrees tilt. The limit stops for tilting are adjustable, and consist of square head set screws (SP-351) and lock nuts (SP-1228) mounted on front trunnion (LTA-405S) and stopping against lugs on front trunnion bracket (LTA-403). In checking, set saw in vertical position, using a steel square. Adjust setscrew on right hand side trunnion to bear against lug and tighten locknut. Check tilt indicator pointer so that it points to zero, adjust if necessary. Tilt saw to 45 degrees again checking with combination square and adjust stop set screw on left hand side of trunnion.

#### Table Insert Adjustment

The table insert is adjustable so as to make it come flush with the top of the table. The adjustment is made with the 4 headless set screws (NCS-177). The metal around these set screws is tensioned to keep the screws from turning therefore these screws turn with a slight drag.

#### Lubrication

Lubrication of the machine is simple due to the fact that the arbor bearings are sealed and lubricated for the life of the bearing, and no additional lubrication is necessary. It is best, however, to lubricate the tilting and raising worms and shaft bearings occasionally with a few drops of oil in order to keep them working freely.

#### Power and Speed

For the average run of small work and for small cabinet-shop work a  $\frac{3}{4}$ -H.P. repulsion-induction motor will furnish ample power. Where the full  $\frac{31}{8}$  capacity of the saw is to be used, it should be equipped with a 1 H.P. motor.

In commercial and industrial shops it is recommended that a three phase 1 H.P. or  $1\frac{1}{2}$  H.P. motor be installed, especially if the machine is to be placed in a permanent position. The saw is built to operate at a speed of 3200 R.P.M. which gives a cutting speed of 8400 feet per minute with a 10" saw blade. It is important that the saw blade be kept sharp at all times, as a dull blade requires from two to five times as much power as a sharp one. It takes only a few minutes to touch up a dull saw with a file, following the original shape of the teeth carefully, and the result is worthwhile in making better work, and saving power.

# Saw Motors

The motor furnished with the No. 1450 saw is of the special totally enclosed type, not depending upon the circulation of cool outside air to prevent excessive heating. An air cooled motor operating in a position such as a saw cabinet is subject to too much dust, which being drawn into the cooling air passages of the motor would soon clog these passages, and prevent air circulation. This would cause over heating and burning out of a motor which depended on the air cooling. The totally enclosed motors built to operate without air cooling naturally operate at a higher temperature than air cooled motors. A temperature rise of 55° C is normal for this type of motor and will do no harm even though the motor feels hot to the hand.

# Choice of Saw Blades

The No. 1015 blade furnished with the machine is a combination blade, suitable for either ripping or crosscutting, and saves a great deal of time in the general shop, where the amount of ripping and crosscutting is about equal.

A 10" smooth cutting blade of the hollow-ground type No. 1016 should be used only for fine, exact work in comparatively thin material, say up to 2" thick. When doing work using heavy material up to  $3\frac{1}{4}$ " which is the full capacity of the 10" blade, the No. 1015 combination blade furnished with the machine is recommended ... or ... when the saw is used almost exclusively for either ripping or crosscutting it is advisable to purchase a standard ripping table No. 1017 or a cross-cut blade No. 1018.

# Moulding Cutter Head

When using the moulding cutter head on the No. 1450 saw, it is necessary to put a wood facing on each side of the fence due to the fact that no cutout is provided in the fence. These facings should be 1" thick and  $2\frac{1}{2}$ " wide, planed straight and true and fastened on each side of the fence with screws through the holes in the fence. Each face should be cut out as indicated in Figure 12. Care should be taken in adjusting the fence that the bar does not strike the revolving cutter.



# **Extension Tables**

Cast iron Extension Tables are available for increasing the width of the table. These extensions are each 8" wide, therefore, using one extension, the table width is increased from 20" to 28" or if one is used on each side, the width is increased to 36". Clips are provided on the rip gage tubes on the right-hand side, and it is possible to use these for mounting a  $\frac{3}{4}$ " thick plywood extension table to any width desired. The wood extension table is not available as an accessory because it can easily be made.



Fig. 13

Fig. 14

# **Arbor Bracket Adjustment**

The arbor support bracket is adjusted at the factory so that the face of the saw arbor flange is in line with the face of the splitter support bracket, as shown in Figure 13. If a misalignment should occur, the arbor bracket can be adjusted as follows:

Tilt the saw blade to 45 degrees and drop the arbor to the lowest position. By removing the saw blade it is possible to make the adjustment through the insert hole in the saw table. The saw arbor bracket is held in place on the pivot shaft with a key to prevent

rotation on the shaft, and a hexagon head cap screw clamping the split hub of the bracket around the shaft. By loosening this cap screw as shown in figure 14, it is possible to shift the arbor bracket endwise on the shaft to bring it into alignment with the splitter bracket. After proper alignment is made, tighten cap screw securely.

# **Arbor Pulleys**

The standard Arbor Pulley furnished with the saw is LTA-432 which is 3 3/32 in. diameter and gives a speed of 3200 R.P.M. with a 60 cycle motor and 2600 R.P.M. with a 50 cycle motor. We also have a smaller Arbor Pulley LTA-469 which is 2 11/16 in. diameter and gives a speed of 3700 with a 60 cycle motor and 3100 with a 50 cycle motor. The standard belt furnished is No. 291. If the smaller Arbor Pulley is ordered a shorter belt No. 281 is required to maintain pulley centers.

NOTE: When ordering any parts for Motors, please give all of the data as shown on the motor nameplate. This is very important.



SINGLE PHASE REP. INDUCTION MOTOR PARTS

Part Number	Name of Part	No. Reqd.	Price Each	Part Number	Name of Part	No. Reqd.	Price Each
						· · · · · · · · · · · · · · · · · · ·	
M-1001	Stator and Frame, 1725 R.P.M.,	<sup>1</sup> / <sub>2</sub> H.P 1	14.00	87504	N. D. Ball Bearing	2	2.00
M-1002	Stator and Frame, 1725 R.P.M.,		16.00	M-1021	Loading Spring	1	.10
M-1003	Stator and Frame, 1725 R.P.M.,	Î H.P 1	18.00	M-1022	Steel Washer	2	.10
M-1004	Stator and Frame, 1425 R.P.M.,	1/2 H.P 1	16.00	M-1023	Felt Washer	2	.10
M-1005	Stator and Frame, 1425 R.P.M.,	3⁄4 H.P 1	18.00	M-1024	Stud Bolts for 1/2 H.P.	4	.50 set of 4
M-1006	Stator and Frame, 1425 R.P.M.,		20.00	M-1025	Stud Bolts for 3/4 H.P		.60 set of 4
M-1007	Armature Comp., 1725 R.P.M.,	<sup>1</sup> / <sub>2</sub> H.P 1	18.00	M-1026	Stud Bolts for 1 H.P	4	.70 set of 4
M-1008	Armature Comp., 1725 R.P.M.,	4 H.P 1	20.00	M-1027	Stud Nuts		.50 set of 8
M-1009	Armature Comp., 1725 R.P.M.,	Î H.P 1	22.00	M-1028	Brush Ring Clamps	2	.10 set of 2
M-1010	Armuture Comp., 1425 R.P.M.,	/2 H.P 1	19.00	SP-559	No. 10-32x1/2 Rd. Hd. Mach. Sc	2	.10
M-1011	Armature Comp., 1425 R.P.M.,	<b>¾ H.P.</b> 1	21.00	M-1035	3/16"x3/16"x11/2" Straight Key	2	.10
M-1012	Armature Comp., 1425 R.P.M.,	1 H.P 1	23.00	M-1029	No. 14 Rubber Covered Cord, 3" long	1	.60
M-1013	Outlet Fitting		.30	M-1030	No. 14 Rub. Covered Cord & Plug, 8" lo	ng 1	1.50
M-1014	Short Circuiting Device	1	3.00	M-1031	Conduit Box		.50
M-1015	Commutator only		4.00	M-1032	Conduit Box Cover	1	.10
M-1016	Snap Ring		.20	SP-569	No. 8-32x3/16" Rd. Hd. Mach. Sc	2	.10
M-1917	Front Bracket		3.50	M-1033	Inspection Cover	2	.10
M-1018	Rear Bracket		2.50	SP-551	No. 10 32x1/4" Rd. Hd. Mach. Sc	4	.10
M-1019	Brush Rigging (less Brushes) .	1	1.50	M-1034	Brush Pressure Spring	4	.10
M-1020	Brushes		.40 per pair	SP-2458	C. H. 2 Pole Toggle Switch	1	1.00

[4]

# **Extension Tables**

Cast iron Extension Tables are available for increasing the width of the table. These extensions are each 8" wide, therefore, using one extension, the table width is increased from 20" to 28" or if one is used on each side, the width is increased to 36". Clips are provided on the rip gage tubes on the right-hand side, and it is possible to use these for mounting a  $\frac{3}{4}$ " thick plywood extension table to any width desired. The wood extension table is not available as an accessory because it can easily be made.



Fig. 13

Fig. 14

# **Arbor Bracket Adjustment**

The arbor support bracket is adjusted at the factory so that the face of the saw arbor flange is in line with the face of the splitter support bracket, as shown in Figure 13. If a misalignment should occur, the arbor bracket can be adjusted as follows:

Tilt the saw blade to 45 degrees and drop the arbor to the lowest position. By removing the saw blade it is possible to make the adjustment through the insert hole in the saw table. The saw arbor bracket is held in place on the pivot shaft with a key to prevent

rotation on the shaft, and a hexagon head cap screw clamping the split hub of the bracket around the shaft. By loosening this cap screw as shown in figure 14, it is possible to shift the arbor bracket endwise on the shaft to bring it into alignment with the splitter bracket. After proper alignment is made, tighten cap screw securely.

# **Arbor Pulleys**

The standard Arbor Pulley furnished with the saw is LTA-432 which is 3 3/32 in. diameter and gives a speed of 3200 R.P.M. with a 60 cycle motor and 2600 R.P.M. with a 50 cycle motor. We also have a smaller Arbor Pulley LTA-469 which is 2 11/16 in. diameter and gives a speed of 3700 with a 60 cycle motor and 3100 with a 50 cycle motor. The standard belt furnished is No. 291. If the smaller Arbor Pulley is ordered a shorter belt No. 281 is required to maintain pulley centers.

NOTE: When ordering any parts for Motors, please give all of the data as shown on the motor nameplate. This is very important.



SINGLE PHASE REP. INDUCTION MOTOR PARTS

Part Number	Name of Part	No. Reqd.	Price Each	Part Number	Name of Part	No. Reqd.	Price Each
						· · · · · · · · · · · · · · · · · · ·	
M-1001	Stator and Frame, 1725 R.P.M.,	<sup>1</sup> / <sub>2</sub> H.P 1	14.00	87504	N. D. Ball Bearing	2	2.00
M-1002	Stator and Frame, 1725 R.P.M.,		16.00	M-1021	Loading Spring	1	.10
M-1003	Stator and Frame, 1725 R.P.M.,	Î H.P 1	18.00	M-1022	Steel Washer	2	.10
M-1004	Stator and Frame, 1425 R.P.M.,	1/2 H.P 1	16.00	M-1023	Felt Washer	2	.10
M-1005	Stator and Frame, 1425 R.P.M.,	3⁄4 H.P 1	18.00	M-1024	Stud Bolts for 1/2 H.P.	4	.50 set of 4
M-1006	Stator and Frame, 1425 R.P.M.,		20.00	M-1025	Stud Bolts for 3/4 H.P		.60 set of 4
M-1007	Armature Comp., 1725 R.P.M.,	<sup>1</sup> / <sub>2</sub> H.P 1	18.00	M-1026	Stud Bolts for 1 H.P	4	.70 set of 4
M-1008	Armature Comp., 1725 R.P.M.,	4 H.P 1	20.00	M-1027	Stud Nuts		.50 set of 8
M-1009	Armature Comp., 1725 R.P.M.,	Î H.P 1	22.00	M-1028	Brush Ring Clamps	2	.10 set of 2
M-1010	Armuture Comp., 1425 R.P.M.,	/2 H.P 1	19.00	SP-559	No. 10-32x1/2 Rd. Hd. Mach. Sc	2	.10
M-1011	Armature Comp., 1425 R.P.M.,	<b>¾ H.P.</b> 1	21.00	M-1035	3/16"x3/16"x11/2" Straight Key	2	.10
M-1012	Armature Comp., 1425 R.P.M.,	1 H.P 1	23.00	M-1029	No. 14 Rubber Covered Cord, 3" long	1	.60
M-1013	Outlet Fitting		.30	M-1030	No. 14 Rub. Covered Cord & Plug, 8" lo	ng 1	1.50
M-1014	Short Circuiting Device	1	3.00	M-1031	Conduit Box		.50
M-1015	Commutator only		4.00	M-1032	Conduit Box Cover	1	.10
M-1016	Snap Ring		.20	SP-569	No. 8-32x3/16" Rd. Hd. Mach. Sc	2	.10
M-1917	Front Bracket		3.50	M-1033	Inspection Cover	2	.10
M-1018	Rear Bracket		2.50	SP-551	No. 10 32x1/4" Rd. Hd. Mach. Sc	4	.10
M-1019	Brush Rigging (less Brushes) .	1	1.50	M-1034	Brush Pressure Spring	4	.10
M-1020	Brushes		.40 per pair	SP-2458	C. H. 2 Pole Toggle Switch	1	1.00

[4]

#### **DIRECT CURRENT MOTOR PARTS**



E	5	]

17.00

14.00

16.00

18.00 3.50 2.50 3.00

2.00

12

M-3009 M-3010 M-3011

M-3012 M-3013 M-1018

M-3014

87504

M-1035

M-1035 M-3015 M-1031 M-1032 SP-569 M-1033 M-3016

SP-551

.10

.10 .10 .20 .10

222

2.00 .50

# REPLACEMENT PARTS IMPORTANT:-To avoid possible errors, be sure to include the serial number of the machine when ordering parts for repair or replacement.

	I. Each	No. Part No. Name of Part Req.	Each	Part No. Name of Part Req.	Eac
TABLE PARTS		SP-554 No. 8-32x1/2" Rd. Hd. Mach. Sc. 4	.10	LTA-451-S Rip Fence 1	2.7
TA-401 Table 1	13.00	SP-558 No. 8-32x1/4" Rd. Hd. Mach. Sc. 2	.10	LTA-455 Shouldered Screw 4	.1
CS-177 1/4"-28x1/4" Hdles Set Screw. 4	.10	SP-563 No. 8-32x3/4" Rd. Hd. Mach. Sc. 2	.10	LTA-465 Clamp Hook Spring 1	.1
DL-174 Steel Washer, 1"x29/64"x1/8" 4	.10 .10	SP-577 No. 10-32x3/16" Rd. Hd.	10	LTA-468 Rear Clamp Rod 1	.2
P-680 7/16"-203⁄4" Hex. Hd. Cap Sc. 4 1451 Std. Insert for Saw Blade 1	.10	Mach. Sc 2 SP-2458 C. H. 2 Pole Toggle Switch1	.10 1.00	LTA-488 Clamp Shoe 1 LTA-489 Special Screw	.4
				9/16"-27x13/16" 1	.1
TRUNNION & YOKE PARTS	3.25	MISCELLANEOUS PARTS		LTA-490 Clamp Eccentric 1	.2
A-405-S Front Trunnion Assem 1 A-406-S Rear Trunnion Assem 1	1.50	LTA-431 Motor Pulley 1	2.25	LTA-491 Clamp Spring 1	.1
rA-407 Trunnion Yoke	2.85	SP-2 5/16" Allen Wrench 1	.10	LTA-492 Eccentric Pin 2	.1
TA-419-R Raising Worm Shaft		SP-201 5/16"-18x5/16" Allen Set Sc. 1	.10	NCS-272 Knurled Nut (1/4"-20 Th.) 1	.1
Assem 1	2.25	#281 (28" Out. Circ.) Vee Belt 3		TCS-261 Rear Slide Block 1	.4
TA-420-S Handwheel Complete 1	1.50	#291 (29" Out. Circ.) Vee Belt 3 #1015 Saw Blade 1		TCS-263 Rear Clamp Hook 1	.1
A-429 Pointer 1	.10	#1013 Saw Blade 1 #1525 Arbor Wrench 1		TCS-264 Rear Clamp Lever 1 TCS-265 Clamp Lever Pin 1	1.1
A-457 Wedge Lock Pin 1	.20			TCS-270 Clamp Handle Stud 1	.1
A-458 Wedge Key 2	.10	THREE PHASE SWITCH PARTS		TCS-271 Rip Gage Pointer 1	.1
A-459 Pointer Bracket 1	.45	LTA-512 Mounting Plate 1	1.50	TCS-273-S Micro-Set Knob & Pinion 1	.5
FA-461 Fiber Washer,	10	SF-16 Washer 1 1/16"x3%8"x3/32" 2	.10	TCS-281 Guide Rail Spacer	.1
15%8″-49/64″x3/64″ 1	.10	SP-507 5/16"-18x3/4" Rd. Hd. Mach. Sc. 2	.10	TCS-283 Aux. Table Support Clip 4	.1
A-462 Fiber Washer, 1 5/16"-	10	SP-577 No. 10-32x3/16" Rd. Hd.	10	TCS-284 Guide Rail Plug 4	.1
49/64"x3/64" 2	.10	Mach. Sc	.10	NJ-247 Clamp Handle Ball 1	
TA-466 Oilite Bushing,	.20	SP-578 No. 10-32x1/8" Rd. Hd. Mach. Sc. 2 SP-1001 5/16"-18 Hex. Nut	.10 .10	SBS-55 Washer 11/16"x25/64"x1/16". 2	.1
15/16" $x''_1x''_2$ " 1 FA-467 Oilite Bushing,	.20	SP-1601 5/16 -18 Hex. Nut	.10	SP-104 1/4"-20x1/2" Hdls. Set Sc 1	.1
15/16"x <sup>3</sup> /4"x <sup>1</sup> 3/16" 1	.15	SP-2457 90° Angular Fitting Comp 1	.30	SP-502 1/4"-20x1/4" Rd. Hd. Mach. Sc 4	
A-514-S Lock Knob Assembly 1	.30	and the second s	8	SP-551 No. 10-32x1/4" Rd. Hd. Mach. Sc. 1	
A-518 Coil Spring 1	.10	TRUNNION BRACKET PARTS		SP-569 No. 8-32x3/16" Rd. Hd.	
A-522 Dust Deflector	1.00	LTA-403 Front Trunnion Bracket 1	3.90	Mach. Sc 1 SP 629 5/16//	•1
A-523 Spacer Tube 2	.10	LTA-404 Rear Trunnion Bracket l	1.70	SP-629 5/16"x183%" Hex. Hd. Cap Sc. 2 SP-677 3%" 24x16" How Hd. Cap Sc. 2	
5 Collar 1	.20	LTA-418-R Tilting Worm Shaft Assem. 1	2.10	SP-677 3%"-24x1/2" Hex. Hd. Cap Sc. 2 SP-1207 3%"-24x5/16" Th. Hex. Nut. 2	
170 5/16"x1" Dowel 4	.10	LTA-420-S Handwheel Complete l	1.50	SP-1603 Washer 9/16"x1/4"x3/64" 1	.1
C-10 Spec. Fill. Hd. Sc.		LTA-424 Guide Block l	.20	SP-1604 Washer 3/1° x1/16″ x1/16″ 2	
No. 8-32x2 <sup>3</sup> /4" 2	.10	LTA-457 Wedge Lock Pin 1	.20	SP-1610 Washer 3/8"x15/64"x.035 1	
2-201 5/16"-18x5/16" Allen Set Sc. 2	.10	LTA-458 Wedge Key 2	.10		••
-351 5/16"-24x <sup>3</sup> /4" Sq. Hd. Set Sc. 2	.10	LTA-460 Shield Plate 1	.20		
-520 5/16"-18x <sup>3</sup> /8" Rd. Hd. Mach. Sc. 1	.10	LTA-461 Fiber Washer,	10	SPLITTER BRACKET PARTS	
-650 3/8"-16x7/8" Hex. Hd. Cap Sc. 4	.10	15%"x49/64"x3/64" 1 LTA-462 Fiber Washer,	.10	LTA-435 Splitter Bracket 1	
-717 5/16"-18x <sup>3</sup> /8" Fill. Hd. Mach. Sc. 2	.10	1 5/16"x49/64"x3/64" 2	.10	LTA-436 Clamp Plate 1	.1
-1228 5/16"-24 Hex. Nut 2 -1704 3/8" Lockwasher (Med.) 4	.10	LTA-514-S Lock Knob Assembly 1	.30	LTA-520 Washer 11/16"x21/64"x1/8" 2 SD-509 5/16" 19:7/" How Hd Car 5 2	-
	.10	LTA-518 Coil Spring 1	.10	SP-608 5/16"-18x7%" Hex. Hd. Cap Sc. 2 SP-635 5/16"-18x2" Hex. Hd. Cap Sc. 1	1
2-2429 No. 4x1 <sup>1</sup> / <sub>8</sub> " Taper Pin 2 2-2650 3/16"x3/16"x1 <sup>3</sup> / <sub>8</sub> " St'ght Key 1	.10	DDL-174 Steel Washer, 1"x29/64"x1/8" 1	.10	SP-1603 5/16 -1622 Hex. Hd. Cap Sc. 1 SP-1604 Washer 3/4"x5/16"x1/16" 2	 
	1.00	SP-201 5/16"-18x5/16" Allen Set Sc 1	.10		21
ARBOR BRACKET PARTS		SP-681 7/16"-20x11/2" Hex. Hd. Cap Sc. 1	.10		
A-408 Arbor Bracket 1	2.80	SP-682 3/8"-24x11/2" Hex. Hd. Cap Sc 5	.10	GUARD AND SPLITTER PARTS	
FA-408-R Complete Arbor Bracket		SP-707 5/16"-18x1" Fill. Hd. Cap Sc 2	.10	LTA-494 Guard 1	2.0
Assembly l	10.95	SP-1207 3/8"-24" Hex. Nut 5	.10	LTA-495 Splitter 1	4
A-410 Arbor 1	2.40	SP-1704 3/8" Lockwasher (Med.) 5	.10	LTA-519 Spring Washer	
A-411 Arbor Flange 1	.20	SP-2429 No. 4x11/8" Taper Pin 2	.10	3/4"x21/64"x1/32" 1	
A-412 Bearing Spacer	.25 1.45	SP-2650 3/16"x3/16"x13%" St'ght Key. 1	.10	TCS-250 Pin 1	•1
A-432 (3 3/32 Dia.) Arbor Pulley 1 A-469 (2 11/16" Dia.) Arbor Pulley 1	1.35	CABINET PARTS	8 .	TCS-251 Shoulder Bolt 1	
TA-516 Bearing Loading Spring 1	.10	LTA-427 Tilt Indicator Scale (Delta) 1	.15	TCS-252 Kick Back Finger 1	
A-554 Bearing Clamp Nut		LTA-445 Switch Nameplate (Delta) l	.15	TCS-253 Kick Back Finger 1	
(in arbor bracket) l	.15	LTA-448 Door Nameplate (Delta) l	.15	TCS-254 Kick Back Finger	
3-23 5/8"-12 Thr. Arbor Flange Nut. 1	.10	LTA-454 Door Nameplate (Tauco) l	.15	TCS-256 Kick Back Finger 1	.1
M-23 679-28 Thr. Spec. Bear. Nut. 1	.10	LTA-470-S Cabinet (Welded) 1	18.50	TCS-258 21/32"x21/64"x.010 Washer 5	
2-722 Lockwasher, 1 3/16"-19/32"		LTA-478 Bottom Pan 1	1.10	TCS-259 Kick Back Finger 1	
x1/32" 1	.10	LTA-480-A Door Complete 1	1.10	TCS-295 Guard Nameplate (Delta) 1	
D-88503 Ball Bearing 2	2.00	LTA-483-S Door Knob Stud 1	.35	TCS-296 Guard Nameplate (Tauco) l	.1
P-1704 3/8" Lockwasher (Med.) 1	.10	LTA-484 Lock Cam 1	.20	SP-602 5/16"-18x11/4" Hex. Hd. Cap Sc. 1	.1
-2650 3/16"x3/16"x13%" St'ght Key. 1	.10	LTA-500 Tilt Indicator Scale (Tauco). 1	.15	SP-1204 No. 8-32 Hex. Nut 1	
-2653 1/4"x1/4"x1 15/16" St'ght Key. 1	.10	LTA-501 Switch Nameplate (Tauco) 1	.15	SP-1209 1/4"-28 Hex. Nut 1	
-3102 3⁄4"-16x13⁄4" Hex. Hd. Cap Sc. 1	.10	LSR-49 Cabinet Base 1	7.40	SP-1403 5/16" Wing Nut 1	•
TABLE EXTENSION		SP-103 5/16"-18x1/4" Hdls. Set Sc 1	.10	SP-2250 No. 4-3/16" Drive Screw 2	
A-402 Table Extension	6.00	SP-577 No. 10-32x3/16" Rd. Hd. Mαch. Sc 2	.10		
-664 3/8"-20"x1" Hex. Hd. Cap Sc. 6	.10	SP-808 5/16"-18x1" Carriage Bolts16	.10	ACCESSORIES	
-1708 7/16" Lockwasher 6	.10	SP-1030 5/16" Hex. Nut	.10	#326 8" Hollow Ground Blade	
MOTOR BRACKET PARTS		SP-1703 5/16" Lockwasher	.10	#333 Dado Head complete	
A-409-S Motor Bracket & Shaft		SP-2250 No. 4x3/16" Drive Screw 3	.10	#865 Miter Gage Clamp Attach	
Assem 1	2.65	SP-3000 No. 6x1/4" Drive Screw 2	.10	#873 Extra Clamp for above	
<b>TA-416</b> Pin $\frac{1}{2}''$ Dia. x 43%'' long 1	.15			#1016 10" Hollow Ground Blade	
DL-174 Washer 1"x29/64"x1/8" 1	.10	RIP GAGE PARTS	2 10	#1017 10" Special Rip Blade	
P-664 7/16"-2Cx1" Hex. Hd. Cap Sc. 1	.10	LTA-439 Rip Gage Tube (front) 1	2.10	#1018 10" Spec. Cross Cut Blade	
P-2111 3/32"x11/2" Cotter Pin 2	.10	LTA-440 Rip Gage Tube (rear) 1	1.90	#1170 Tenoner, without Plate	
P-2430 No. 5x2" Taper Pin 1	.10	LTA-450 Front Rip Gage Block 1 LTA-450-R Front Rip Gage Block,	1.75	#1172 Tenoner, with Sliding Plate	
	.10	complete with clamp,		#1452 Insert for Dado Head #1453 Insert for Moulding Cutter	
P-2654 1/4"x1/4"x3 3/32" Straight Key 1			_	#1453 Insert for Moulding Cutter	
P-2654 1/4"x1/4"x3 3/32" Straight Key 1 SINGLE PHASE SWITCH PARTS			3.80		
SINGLE PHASE SWITCH PARTS	.50	knob and pointer l	3.80	#1454 Motor Cover	
	.50 .10		3.80		



# Accessories available for use with No. 1450 Circular Saw

depth of 11/8".







No. 1172 and No. 1170 Tenoner shown above are ideal for making tenons quickly, easily and accurately and makes an otherwise dangerous operation safe.





No. 1458 Heavy Duty Moulding Cutter Set for use on the No. 1450 Circular

Saw. This cutter head is machined from a solid steel bar and is built for production service. Cutter set consists of cutterhead and four sets of cutters type A, B, C and D, also No. 1453 Table Insert and special wrench.

No. 865 Miter Gage Clamp Attachment assures accurate cutting and prevents spoilage. This attachment holds work firmly against the miter gage head. Especially useful for work on long stock.

No. 1457 Splitter type guard w

No. 333 6" Dia. Dado Head consisting of two outer blades  $\frac{1}{8}$ " thick, two inside cutters  $\frac{1}{8}$ " thick, one inside cutter  $\frac{1}{4}$ " thick and one  $\frac{1}{16}$ " thick, with  $\frac{5}{8}$ " holes. To cut grooves from  $\frac{1}{8}$ " to  $\frac{1}{6}$ " wide advancing by  $\frac{1}{16}$ " and to a

> No. 1457 Splitter type guard with aluminum basket and six anti-kick back fingers mounted on splitter. The safest guard of this type ever built.



No. 1452 Table insert for use with Dado Cutter.

No. 1453 Table insert for use with moulding cutter.

These inserts are necessary for efficient cutting due to the support they give the work in these heavy operations.



No. 1016 10" Hollow Ground Blade.

No. 326 8" Hollow Ground Blade.

No. 1017 10" Special Rip Blade.

No. 1018 10" Special Cross Cut Blade.

Available for use on No. 1160 and No. 1450 Saws.



No. 1455 Cast iron extension tables 8" wide and 27" long increase the saw table width from 20" to 36". This makes the saw more convenient for large work due to the fact that the work is supported better.

600-634 E. Vienna Ave., Milwaukee, Wis.

NOTE: Prices in this list apply only to parts ordered for repair and replacement. They cannot be used for computing allowance values if a machine is ordered "less" certain parts.

FOR PRICES ON ACCESSORIES SEE PARTS PRICE LIST, PAGE 4

MILWAUKEE

# THE DELTA MANUFACTURING CO.

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