

28-714 (115 VOLT) AND 28-715 (230 VOLT) BLADE WELDER AND FLASH GRINDER

WARNING: The Delta Model 28-714 and 28-715 Blade Welder should be used for welding standard alloyed wood and metal bandsaw blades and similar bands and banding material only. They are not suitable for welding 2 and 3% tungsten alloy blades or high speed steel blades.

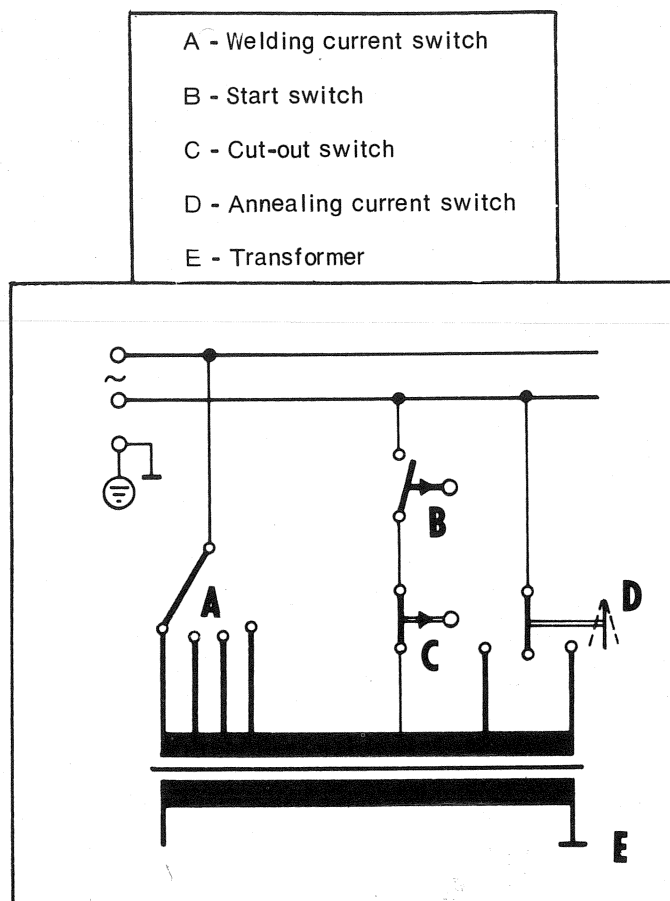
ELECTRICAL REQUIREMENTS

FUSE PROTECTION

115 Volts - 15 amp. delayed - action fuses. (Max. current consumption approximately 40 amps.)

230 Volts - 6 amp. delayed - action fuses. (Max. current consumption approximately 20 amps.)

WIRING DIAGRAM



ASSEMBLING 28-005 BLADE SHEAR TO WELDER

If you purchased the Accessory 28-005 Blade Shear, assemble it to the welder as follows:

1. Insert the pin (A) Fig. 1, into the hole (B) provided in the face of the welder.

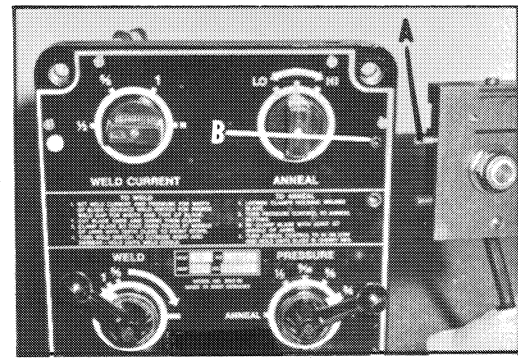


Fig. 1

2. Fasten the blade shear to the welder, using screw (C) Fig. 2.

3. Assemble the blade stop guide (D) Fig. 2, to the hole (E) provided in the face of the welder.



Fig. 2

PREPARING THE BLADE FOR WELDING

Before welding, clean band saw blade ends with emery cloth on both sides for a distance of one inch from each end. The jaws of the welder are designed to accommodate the set of the teeth of metal-cutting blades. However, with wood-cutting blades it is necessary to flatten the set of the teeth one inch from each end before welding.

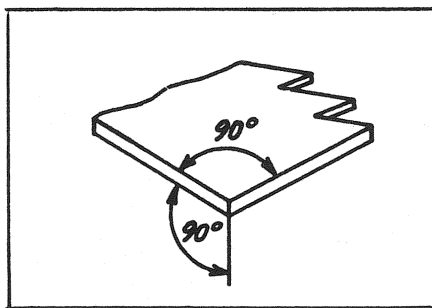


Fig. 3

Blade ends must be cut at an exact right (90 degree) angle as shown in Fig. 3. A flat, square cut is essential and can best be accomplished by using the accessory 28-005 blade shear. The exactness of the cut can be checked by placing the back of the blade against the stop (A) Fig. 4, as shown. After shearing, remove any burrs from both ends of the blade.

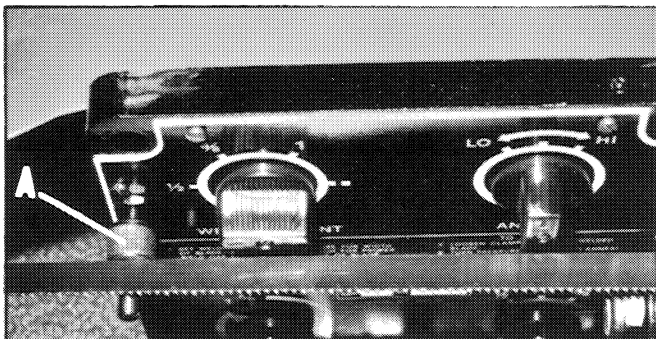


Fig. 4

The welding seam for wood-cutting blades should be in the center of a tooth. For uniform spacing of the teeth, allow half the tooth-spacing and half the up-setting way (loss of length during welding) as each end, as shown in Fig. 5. Length loss is indicated on scale above weld switch at lower left.

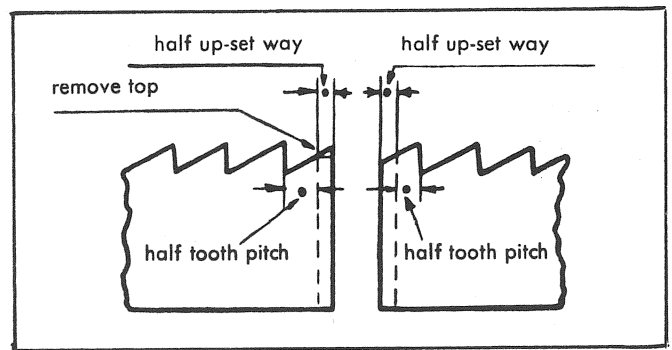


Fig. 5

ADJUSTMENT

Set the weld current switch (A), weld switch (B), and pressure switch (C) Fig. 6, to the width of the blade to be welded. Switch settings are calibrated to blades .025" thick. If thickness varies, make trial welds. For thinner blades, weld with short upsetting way, high current and weak upsetting pressure.

CLAMPING

The blade ends should be placed in the clamps so that the joint is in the exact center, with the blade ends butting together without overlapping. Teeth should be aligned at the front stops (align bands without teeth at rear stops).

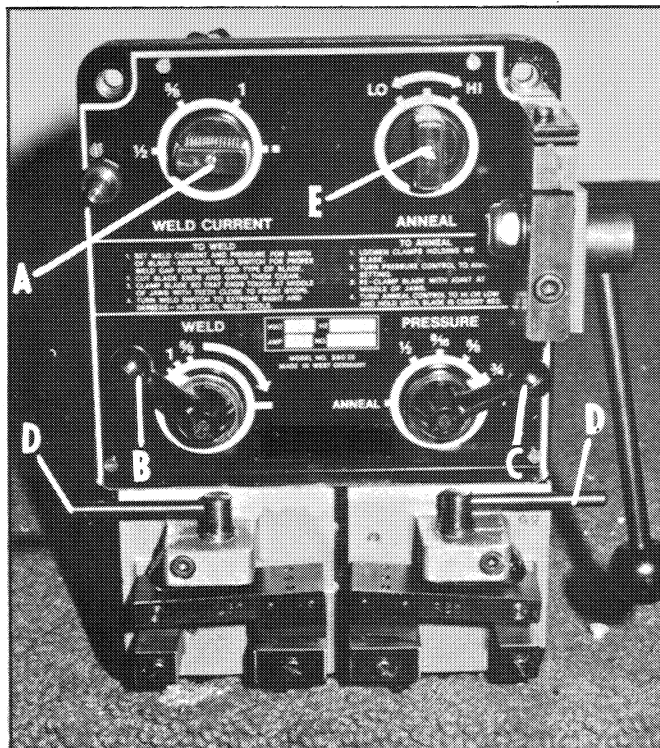


Fig. 6

WELDING

Turn the weld switch (B) Fig. 6 clockwise to stop and hold for three seconds. Current is automatically switch off. Stand aside to avoid sparks.

ANNEALING

Mild steel blades do not require annealing, but for carbon steel blades, proper annealing is critical. To anneal after welding, loosen the clamps (D) Fig. 6, and widen the jaws by turning the pressure switch (C) counterclockwise. Re-clamp the band with the weld in the center. Hold the annealing switch (E) on high until the weld becomes cherry red. Retain temperature for a few seconds by turning the switch ON and OFF from the high position and then allow the joint to cool gradually, using the same ON and OFF process from the low position. Turn off when the color has completely faded from the weld seam area. The entire process should take from 10 to 15 seconds. High alloy steel bands, including those with low tungsten content, should be annealed for a longer time at lower temperatures.

FINISHING

File or grind off the welding burr, working along the length of the blade. Filing or grinding across the blade may cause fractures. After a smooth finish on both sides has been achieved, you may return the blade to the welder in the annealing position and re-heat by alternately turning the annealing switch on and off from the low position until the welded area acquires a blued-steel appearance. This will assure maximum weld durability, particularly with brittle blades.

WELDER MAINTENANCE

Welder should be installed in a dry, dust-free area. The brass jaws should be kept clean at all times using a petroleum solvent. They should not be filed, but can be touched up with fine emery paper.

To check clamps for correct contact pressure, insert a wide, smooth, bright band without weld and turn annealing switch to "hi". If band does not turn uniformly red over its entire width, check the pressure pieces (upper jaws) for dirt, see Fig. 7.

The left jaw moves in a ball guide. It should not be forced or hammered.

WELDING TIPS

If a weld is irregular, too wide, or shows holes, increase the upsetting pressure and reduce the welding current. If the weld burr has a layered appearance, reduce upsetting pressure or increase the welding current or both. **WARNING:** After finishing the latter looks like a normal weld but is not as durable.

Squared blade ends, cut at exact right angles and with all cutting burrs removed, are essential for effective, durable welds.

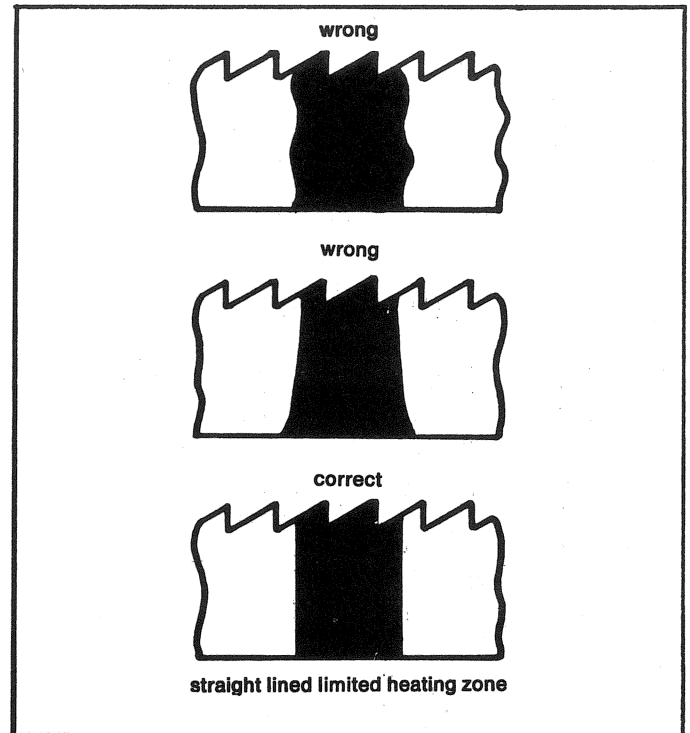
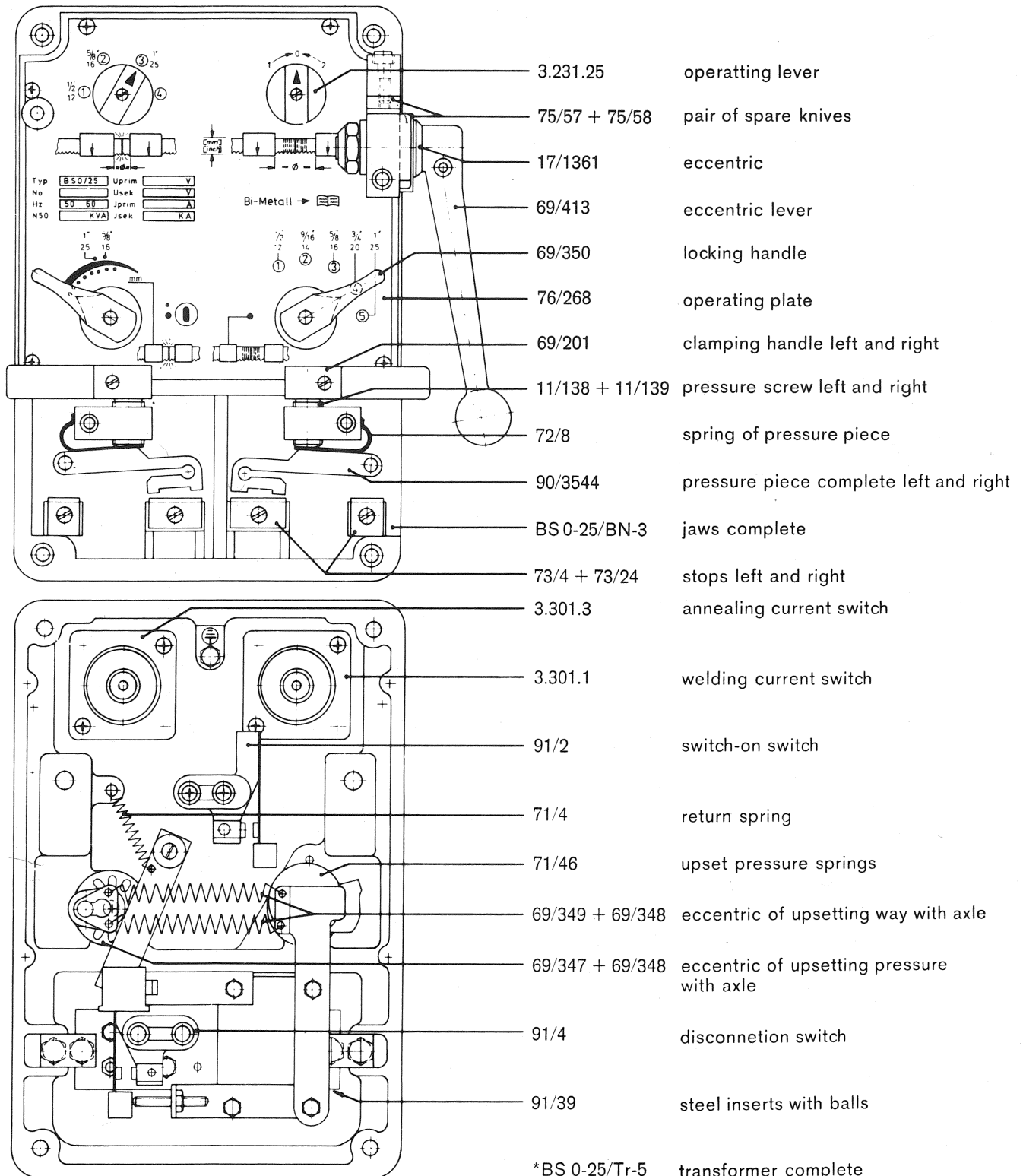


Fig. 7

LIST OF SPARE PARTS FOR WELDER AND BLADE SHEAR

(specify type and serial number when ordering)



For Service or Replacement parts on the Welder and Blade Shear write or phone:

AMERICAN & EUROPEAN MACHINE CO.

516 Sumner St.

Toledo, Ohio 43609

Phone: 1-800-537-1388

*BS 0-25/Tr-5

*821/2

*3.389.1

*80/25

* not visible

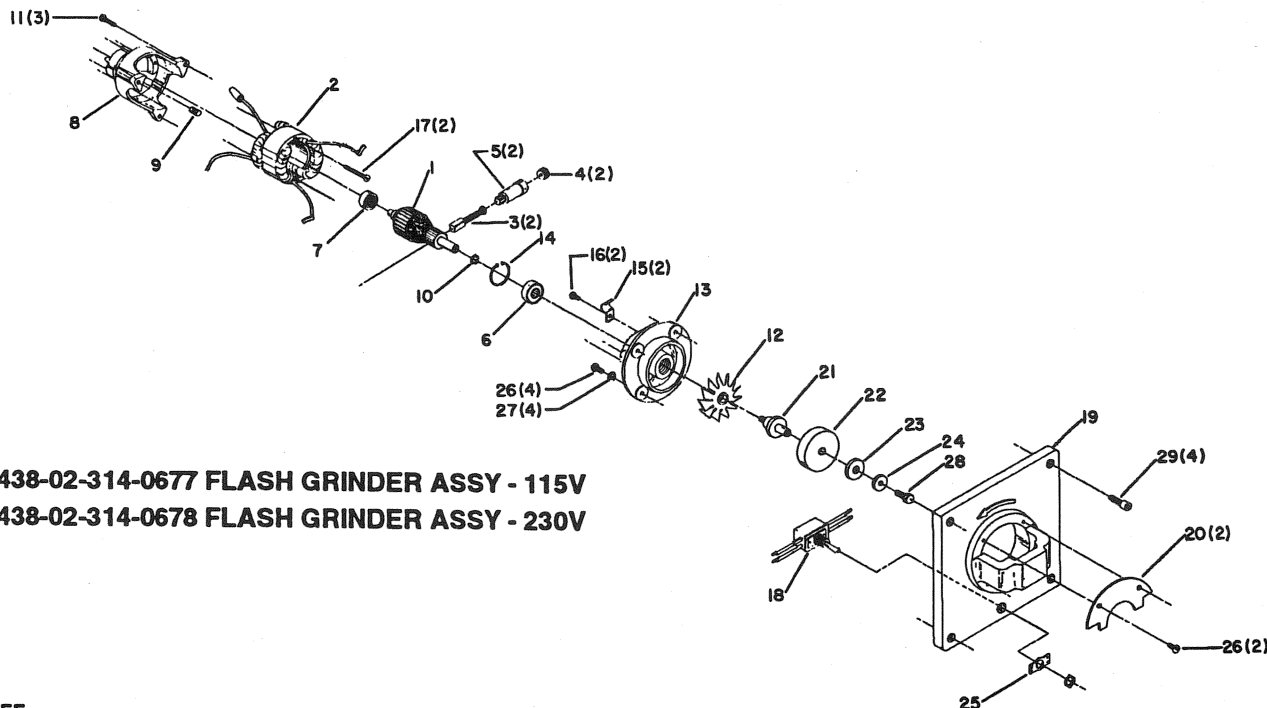
transformer complete

primary coil

connecting block

connecting cable

REPLACEMENT PARTS



438-02-314-0677 FLASH GRINDER ASSY - 115V

438-02-314-0678 FLASH GRINDER ASSY - 230V

REF NO	PART NUMBER	DESCRIPTION	REF NO	PART NUMBER	DESCRIPTION
*	438-02-314-0677	FLASH GRINDER ASSY - 115V, CONST OF:	13	400-08-031-0008	BEARING HOUSING
*	438-02-314-0678	FLASH GRINDER ASSY - 230V, CONST OF:	14	400-08-079-0008	BOTTOM BEARING RING
*	438-02-314-0675	MOTOR HOUSING - 115V, INCL:	15	400-08-060-0006	BRUSH HOLDER CLIP
*	438-02-314-0676	MOTOR HOUSING - 230V, INCL:	16	400-08-112-0018	BRUSH HOLDER SCREW
1	438-02-335-0026	ARMATURE - 220V	17	400-08-112-0017	FIELD SCREW
1	438-02-335-0027	ARMATURE - 115V	18	426-05-628-5004	SWITCH KIT
2	438-02-336-0027	FIELD - 115V	19	426-05-054-5008	GUARD
2	438-02-336-0026	FIELD - 230V	20	426-05-054-5010	GUARD
3	438-02-007-0016	BRUSH - 115V	21	426-05-403-5001	FLANGE
3	438-02-007-0017	BRUSH - 230V	22	426-05-100-5005	WHEEL
4	400-08-020-0004	BRUSH CAP	23	426-05-103-5001	FLANGE
5	438-02-041-0005	BRUSH HOLDER	24	426-05-104-5011	SPACER
6	400-08-139-0010	FRONT BEARING	25	438-01-021-0044	NAME PLATE
7	400-08-139-0007	REAR BEARING	26	901-02-010-0593	#10-24 X 3/8" ROUND HD SCREW
8	400-08-031-0009	MOTOR HOUSING	27	904-03-020-1775	3/16" INT TOOTH WASHER
9	400-08-074-0003	ARMATURE BEARING PLUG	28	901-01-063-1300	1/4-28 X 1 1/2" HEX HD SCREW
10	400-08-079-0006	ARMATURE SPACING RING	29	901-03-010-3309	1/4-20 X 5/8" HEX SOC HD SCREW
11	400-08-112-0019	SCREW			
12	438-02-333-0003	FAN			

* NOT SHOWN ASSEMBLED

For Service or Replacement Parts on the
Flash Grinder, write or phone:

DELTA INTERNATIONAL
4290 Raines Road
Memphis, TN, 38118
Phone: 1-(901) 363-8800

HOTLINE 1-800-223-PART

STANDARD SAFETY EQUIPMENT

In order to promote tool safety, Delta International Machinery Corp. strictly enforces the policy of repairing or replacing any damaged or missing standard safety equipment on machines presented to Delta Authorized Service Center for service/repairs. Any product which is presented to a Delta Authorized Service Center for repairs which contains missing or damaged standard safety equipment will have that equipment repaired or replaced and the customer will be charged for any such service/repairs. Customers can avoid such charges only if the missing safety component is supplied to the service center at the time of repair.

This parts list is provided to aid in obtaining service parts. Copies of the instruction and maintenance literature can be obtained through the Delta Technical Publications Department or through your local service outlet.

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