300 Series Boiler Tube Cutter

For Tube OD Ranges 2” - 3”

Tube & Pipe Cleaners ○ Tube Testers ○ Tube Plugs ○ Tube Removal ○ Tube Installation

Operating and Maintenance Instructions

www.elliott-tool.com

ELLIOTT TOOL TECHNOLOGIES

TABLE OF CONTENTS

INTRODUCTION

Thank you for purchasing this Elliott product. More than 100 years of experience have been employed in the design and manufacture of this control, representing the highest standard of quality, value and durability. Elliott tools have proven themselves in thousands of hours of trouble-free field operation.

If this is your first Elliott purchase, welcome to our company; our products are our ambassadors. If this is a repeat purchase, you can rest assured that the same value you have received in the past will continue with all of your purchases, now and in the future.

The Boiler Tube Cutter has been designed for the following types of equipment:

Firetube & Watertube Boilers

Sugar Mill Vacuum Pans

If you have any questions regarding this product, manual or operating instructions, please call Elliott at +1 800 332 0447 toll free (USA only) or +1 937 253 6133, or fax us at +1 937 253 9189 for immediate service.

SAFETY GUIDELINES

Read and save all instructions. Before use, be sure everyone using this machine reads and understands this manual, as well as any labels packaged with or attached to the machine.

- Know Your Elliott Tool. Read this manual carefully to learn your tool's application and limitations as well as the potential hazards specific to this tool.
- Avoid Dangerous Environments. Do not use power tools in damp or wet locations
- Keep Work Area Clean and Well Lit. Cluttered, dark work areas invite accidents.
- Dress Properly. Do not wear loose clothing or jewelry. Wear a protective hair covering to contain long hair. It is recommended that the operator wear safety glasses with side shields or a full face shield eye protection. Gloves and water repellant, nonskid footwear are also recommended. Keep hands and gloves away from moving parts.
- Use Safety Equipment. Everyone in the work area should wear safety goggles or glasses with side shields complying with current safety standards. Wear hearing protection during extended use. Hard hats, face shields, safety shoes, respirators, etc. should be used when specified or necessary. Keep a fire extinguisher nearby.
- Keep Bystanders Away. Bystanders should be kept at a safe distance from the work area to avoid distracting the operator and contacting the blade.
- Use The Right Tools. Do not force a tool or attachment to do a job or operate at a speed it was not designed for.
- Use Proper Accessories. Use Elliott accessories only. Be sure accessories are properly installed and maintained.
- Check for Damaged Parts. Inspect guards and other parts before use. Check for misalignment, binding of moving parts, improper mounting, broken parts or any other conditions that may affect operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "Do Not Use" until repaired. A damaged part should be properly repaired or replaced by an Elliott service facility. For all repairs, insist on only identical replacement parts.
- Keep Hands Away from All Moving Parts.
- Do Not Overreach. Maintain Control. Keep proper footing and balance at all times.
- Stay Alert. Watch what you are doing, and use common sense. DO NOT use a tool when you are tired, distracted or under the influence of drugs, alcohol or any medication causing decreased control.
- Unplug Tool. Unplug tool when it is not in use, before changing cutter blades or pilots, and performing recommended maintenance.
- Maintain Tool Carefully. Keep tools sharp and clean for best and safest performance. Follow instructions for lubrication, maintenance and changing accessories.
- Maintain Labels and Nameplates. These carry important information and will assist you in ordering spare and replacement parts. If unreadable or missing, contact an Elliott service facility for a replacement.

GENERAL INFORMATION

The 376 / 396 Series Boiler Tube Cutter is designed to cut steel and non-ferrous tubes inside of watertube and firetube boilers. New tubes can be cut to length a uniform distance from the front (outside) of the tube sheet. Existing tubes can be cut off on the back side (inside) of the tube sheet to allow for removal when re-tubing.

These cutters have a 1” (25.4mm) male square drive that is easily adapted to tube rolling motors that are 150 RPM or less. The cutters may also be employed with a ratchet for applications in space restricted areas.

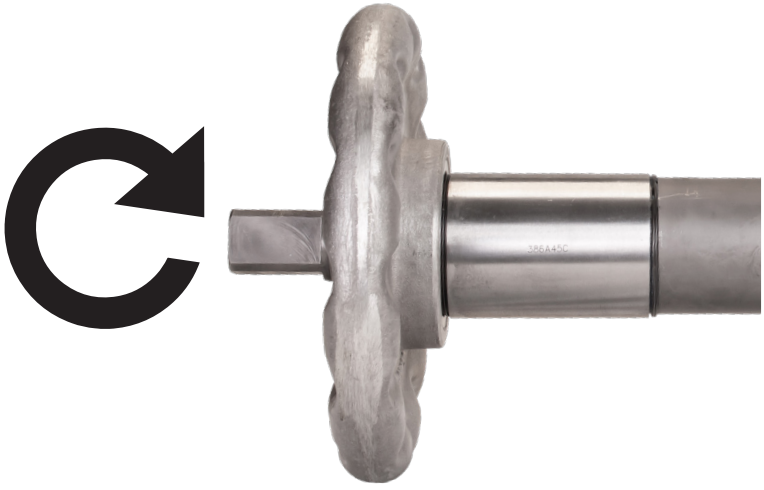
OPERATION INSTRUCTIONS

After selecting the proper 376 / 396 Series Boiler Cutter, follow these steps below:

1. Determine the distance the cutter wheel is to be positioned behind or in front of the tube sheet. To adjust this position, loosen the set screws on the guard and position it as required.

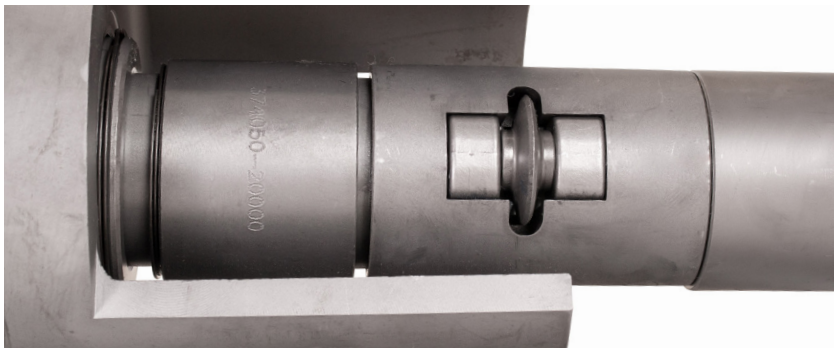
2. Loosen the set screws with an Allen key and adjust as needed. Tighten the Allen key snuggly to prevent the collar from moving during operation.

3. Rotate the feed wheel (left hand thread) to confirm that it turns freely. This also confirms that the cutter wheel and cutter wheel carrier are expanding and contracting properly



OPERATION INSTRUCTIONS

4. Check to see that the cutter wheel turns freely and is not dull. If any of the above mentioned parts do not move freely, refer to the maintenance section of this manual.



5. Position the cutter wheel so that it is full retracted and insert the cutter into the tube. Confirm that the guard prongs are in equal contact with the face of the tube sheet. uneven contact can cause binding and possible tube cutter damage.

6. Start the drive motor (motors of 190 RPM or less are recommended) and the tube cutter should rotate freely in the tube. The cutter wheel should not be in contact with the tube at this time.

7. To engage the the cutter wheel, grasp the feed wheel until you start to feel the cutter wheel contact the tube ID. Once you feel resistance, let go of the wheel and allow the cutter wheel 1-3 rotations to score the ID of the tube. The operator on the motor should feel the torque lower as the cutter wheel scores the tube. Once again, grab the feed wheel and allow for the cutter wheel to feed out again. You will repeat this process until you feel the tube break free.

OPERATION INSTRUCTIONS

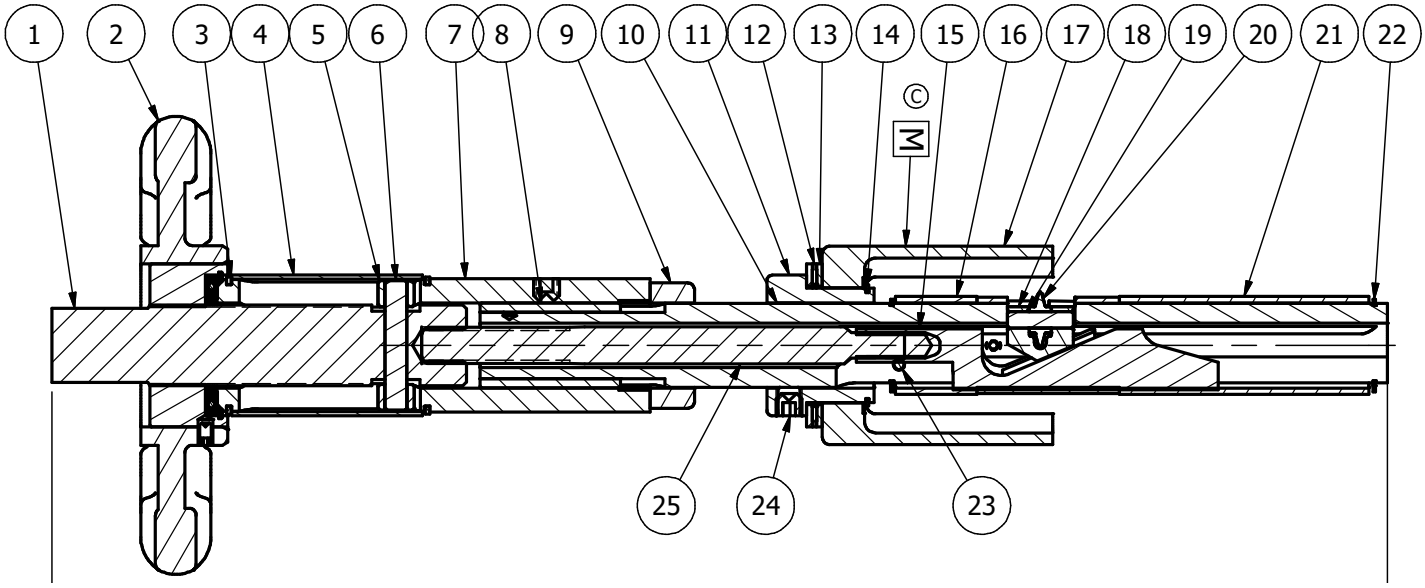
8. Once the tube has been cut, you will reverse the motor, and someone should hold the feed wheel allowing the blade to be returned to the minimum position so that the cutter can be removed from the tube.

NOTE: The cutter wheel expansion is limited by an internal feed stop, do not use excessive force when holding the aluminum feed wheel stationary as this could cause the cutter wheel carrier to damage the internal feed stop.

For more information on blade changes, scan the QR code below to watch our instructional video:

PARTS LISTS & DIAGRAMS

376-00-20000



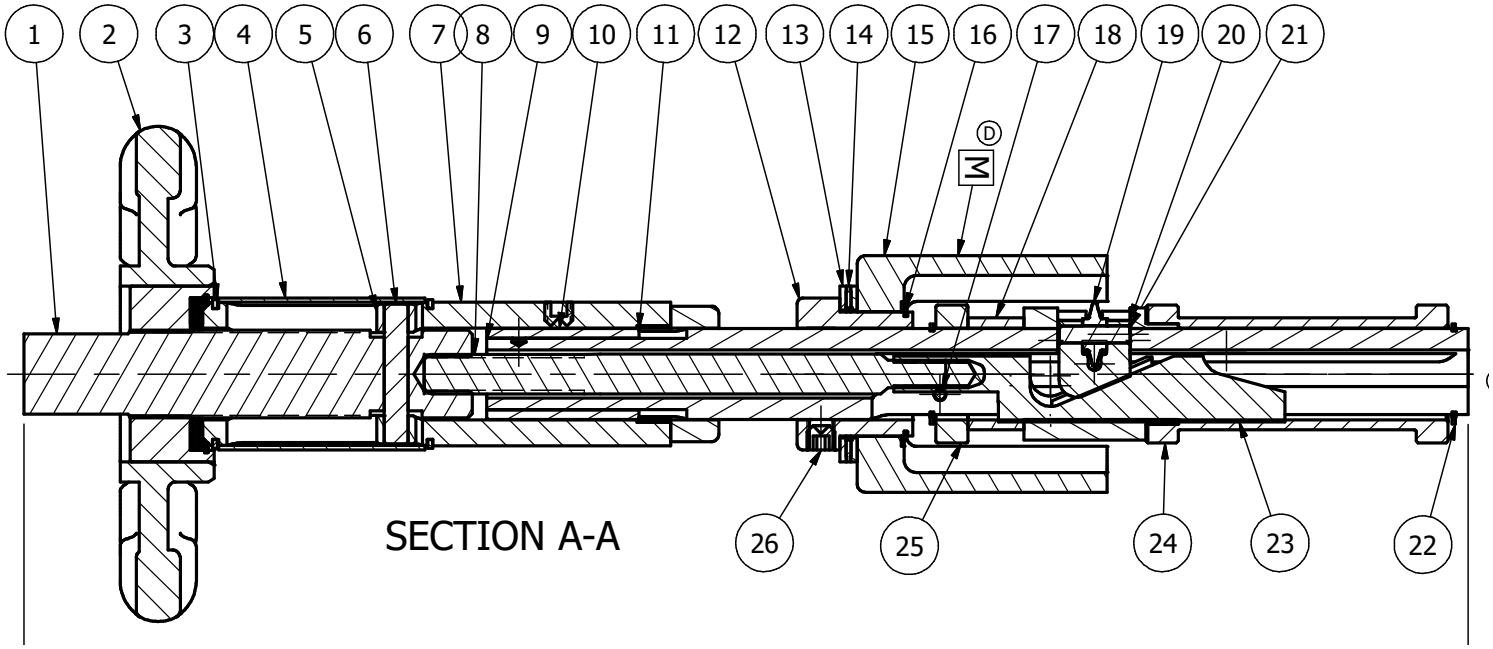
PARTS LISTS & DIAGRAMS

376-00-20000

Item	Description	Qty	Part Number
1	Drive Feed Screw	1	386A45D
2	Power Adapter Handwheel	1	386A45N
3	Retaining Ring, 2-5/32	2	P8286-215T
4	Power Drive Bushing	1	386A45C
5	Drive Rolls	2	386A45W
6	Drive Pin	1	386A45P
7	Frame	1	386A45F
8	Power Adapter Bushing	1	37830B
9	Adapter Collar	1	37830A
10	Frame w/ Hub	1	374160-20000
11	Adjustment Collar	1	37403A20000
12	Thrust Bearing	1	P1067-13
13	Thrust Race	2	P1067AQ
14	Retaining Ring, 1-7/8	1	P8286-187
15	Casting	1	374180-20000
16	Short Bushing	1	374050-20000
17	Guard	1	374040-20000
18	Wheel Carrier	1	374200-20000
19	Cutter Pin	1	37419P20000
20	Cutter Wheel	1	374190-20000
21	Long Bushing	1	374060-20000
22	Retaining Ring, 1-7/16	2	P8286-143T
23	Stop Shaft	1	37405S20000
24	Cup Point Set Screw, 7/16-14 x 3/8	5	128CK
25	Feed Rod	1	374170-20000

PARTS LISTS & DIAGRAMS

376-00-20102



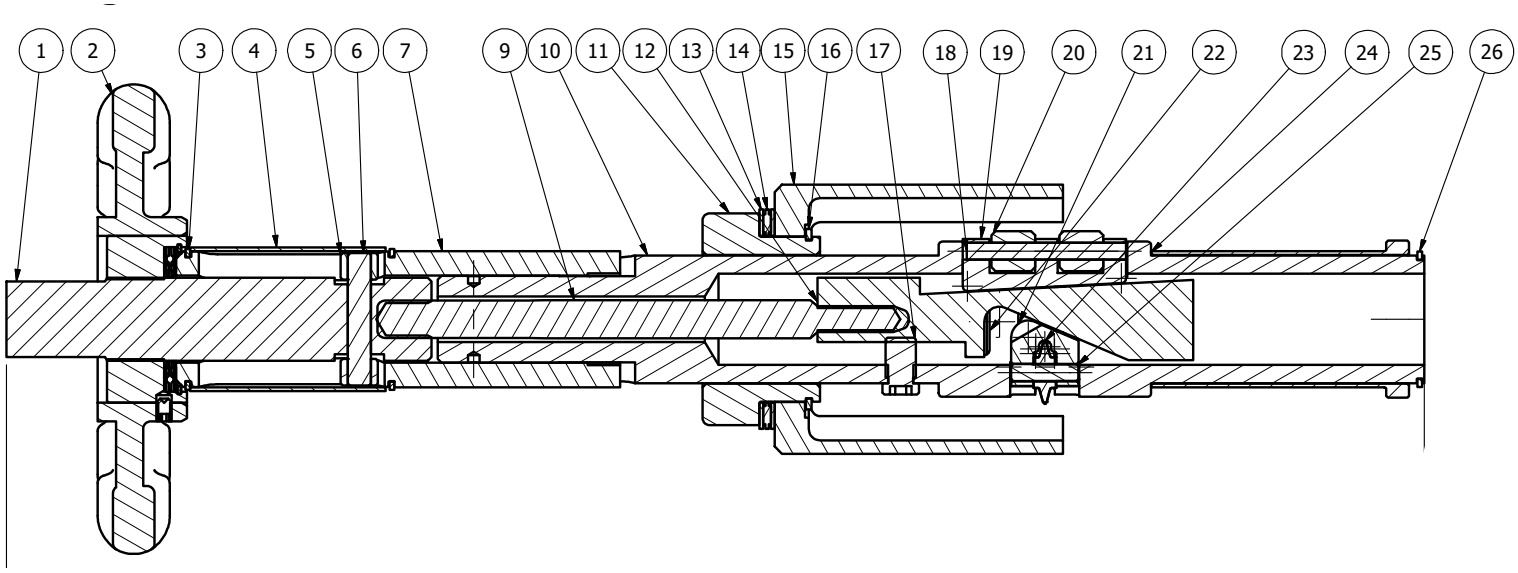
PARTS LISTS & DIAGRAMS

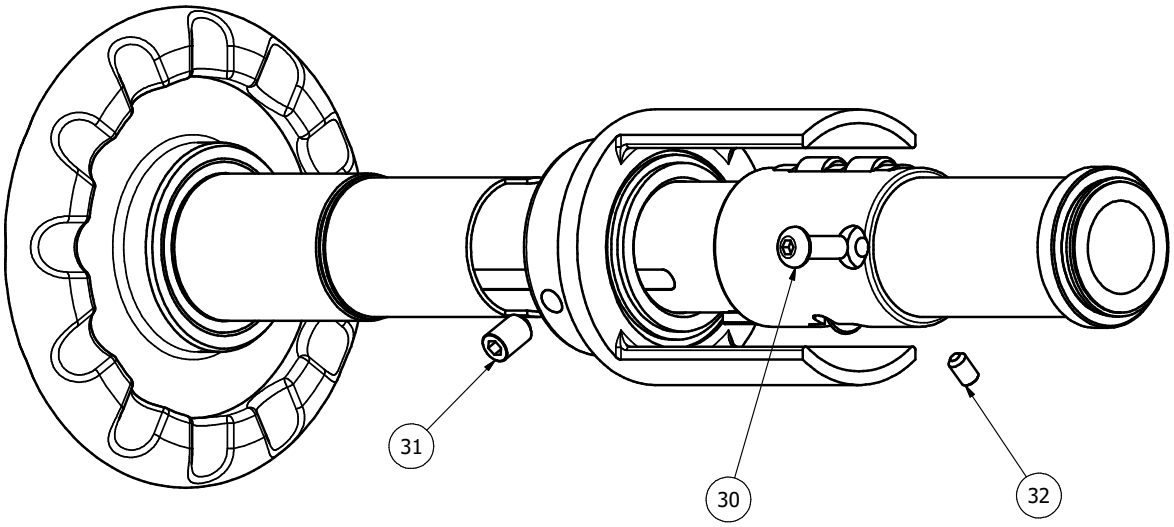
376-00-20102

Item	Description	Qty	Part Number
1	Drive Feed Screw	1	386A45D
2	Power Adapter Handwheel	1	386A45N
3	Retaining Ring, 2-5/32	2	P8286-215T
4	Power Drive Bushing	1	386A45C
5	Drive Rolls	2	386A45W
6	Drive Pin	1	386A45P
7	Frame	1	386A45F
8	Feed Rod	1	374170-20000
9	Frame w/ Hub	1	374160-20102
10	Adapter Bushing	1	37830B
11	Adapter Collar	1	37830A
12	Adjustment Collar	1	37403A20000
13	Thrust Race	2	P1067AQ
14	Thrust Bearing	1	P8286-187
15	Guard	1	374040-20102
16	Retaining Ring, 1-7/8	1	P8286-187
17	Stop Pin	1	37405S20000
18	Short Bushing	1	37405A20104
19	Cutter Wheel	1	374190-20104
20	Wheel Carrier	1	374200-20102
21	Cutter Pin	1	37419P20000
22	Retaining Ring, 1-7/16	2	P8286-143T
23	Feed Wedge	1	374180-20000
24	Long Bushing	1	37406A20104
25	Steading Ring	1	37405B20102
26	Cup Point Set Screw, 7/16-14 x 3/8	5	128CK

PARTS LISTS & DIAGRAMS

396-00-30000





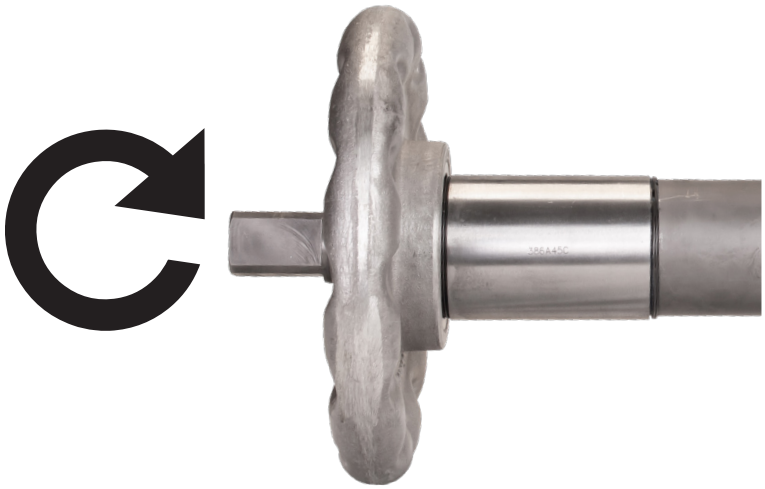
PARTS LISTS & DIAGRAMS

396-00-30000

Item	Description	Qty	Part Number
1	Drive Feed Screw	1	386A45D
2	Power Adapter Handwheel	1	386A45N
3	Retaining Ring, 2-5/32	2	P8286-215T
4	Power Drive Bushing	1	386A45C
5	Drive Rolls	2	386A45W
6	Drive Pin	1	386A45P
7	Frame	1	386A45F
8	Cup Point Set Screw, 7/16-14 x 3/8	1	128CK
9	Feed Rod	1	374170-20000
10	Frame w/ Hub	1	374160-30000
11	Adjustment Collar	1	38403A30000
12	Feed Wedge	1	375FW30000
13	Thrust Race	2	P1067AJ
14	Thrust Bearing	1	P1067-18
15	Guard	1	384040-30000
16	Retaining Ring, 2-3/4	1	P8286-275T
17	Stop Bolt	1	375150-3000
18	Carrier Pin	1	37523P30000
19	Double Carrier	1	375240-30000
20	Roll, Double Carrier	2	375230-30000
21	Wheel Carrier	1	374200-20104
22	Special Pin	2	375160-30
23	Cutter Wheel	1	374190-20104
24	Long Bushing	1	384060-30000
25	Cutter Pin	1	37419P20000
26	Retaining Ring, 2-1/16	1	P8286-206T
27	Carrier Pin	1	37521P30000
28	Roll, Single Carrier	1	375220-30000
29	Roll, Single Carrier	1	375210-30000
30	Button Head Cap Screw, 1/2-13 x 3/4	2	P8597-4
31	Cup Point Set Screw, 1/2-13 x 3/4	2	128FF
32	Cup Point Set Screw, 5/16-18 x 1/2	1	128BR

MAINTENANCE INSTRUCTIONS

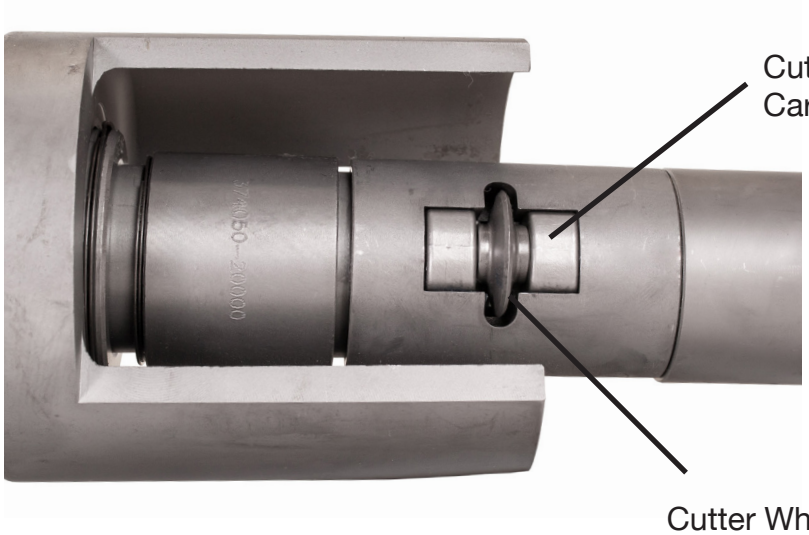
- Before each use, inspect the drive feed screw threads to assure that the aluminum feed wheel rotates freely.



Prong Guard

- Inspect the prong guard assembly to see that the guard rotates freely.

- Lubricate the cutter wheel and cutter wheel carrier to assure that both move freely. Dull cuter wheels and should be replaced, see the instructions below to change the blade.



MAINTENANCE INSTRUCTIONS

Primary Wear Items	Secondary Wear Items
Cutter Wheel	Cutter Carrier
Cutter Wheel Pin	Feed Wheel Nut
	Feed Wedge

For more information on maintenance, scan the QR code below to watch Elliott's video on blade changeout.

WARRANTY

Should any part, of Seller's own manufacture, prove to have been defective in material or workmanship when shipped (as determined by Seller), Seller warrants that it will, at its sole option, repair or replace said part f.o.b., point of manufacture, provided that Buyer notifies, in writing, of such defect within twelve (12) months from date of shipment from the manufacturing plant.

On request of Seller, the part claimed to be defective will be returned, transportation, insurance, taxes and duties prepaid, to the factory where made, for inspection. Any item, which has been purchased by Seller, is warranted only to the extent of the original manufacturer's warranty to Seller.
Seller shall not be liable for any damages or delays caused by defective material or workmanship.

No allowance will be made for repairs or alterations made by others without Seller's written consent or approval. If repairs or alterations are attempted without Seller's consent, Seller's warranty is void.

THE WARRANTIES PROVIDED IN THE OBLIGATIONS AND LIABILITIES OF SELLER HEREUNDER, AND THE RIGHTS AND REMEDIES OF BUYER HEREUNDER ARE EXCLUSIVE AND IN SUBSTITUTION FOR, AND BUYER HEREBY WAIVES ALL OTHER WARRANTIES, GUARANTEES, OBLIGATIONS, CLAIMS FOR LIABILITIES, RIGHTS AND REMEDIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY FOR MERCHANTABILITY AND FITNESS FOR PURPOSE.

Seller's total liability is limited to the lower of the cost of repair or replacement.

This page intentionally left blank.

Contact Us

Elliott Tool offers a complete line of precision tube tools to meet your needs. Contact us or your local support.

Elliott Tool Technologies, Ltd.
1760 Tuttle Avenue
Dayton, Ohio 45403-3428
Phone: +1 937 253 6133 • +1 800 332 0447
Fax: +1 937 253 9189
www.elliott-tool.com

Locally Supported By:

www.elliott-tool.com/support

Printed in the USA

TM-158
PL-137