

LU6X-130 Instructions and Parts List (including LU6X Basic)



Operating Instructions

Introduction

The LU6X is one of the most versatile pieces of equipment available to the lapidary enthusiast. It combines sawing, grinding, and polishing operations in one machine. Please read the following specifications and directions prior to using your Model LU6X.

Set-Up

Unpack the machine and check for shipping damage. If damage is found, you must notify the carrier immediately and file a claim.

The LU6X should be mounted to a solid workbench with four 1/4" bolts or wood screws through holes provided.

Motor Mounting

The motor is installed on the clip-on motor mount which slides directly onto the machine. A 2-1/2" motor pulley is supplied for proper shaft speed. We recommend a 1/3hp, 1725 rpm motor (LORTONE # 300-022). A motor of at least 1/4hp is required for adequate operation. The Model LU6X-130 comes with motor.

Install the motor on the motor mount using the bolts provided and tighten the bolts finger tight. Slide the motor mount into place on the mounting clip on the back of the machine. Position the motor so that the drive belt is just tight enough to eliminate belt slippage - an overly tight belt can cause excessive bearing wear, noise or vibration. Motor rotation should be clockwise to drive the shaft (shown on next page, Fig. 1).

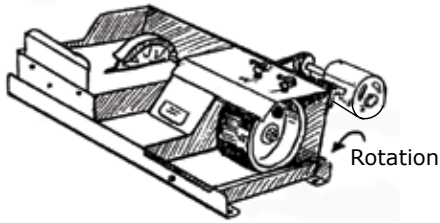


Fig. 1

Blade Installation

A 6" diameter diamond blade with a 1/2" arbor hole is required. Remove trim table from unit (see parts list drawings). Remove the arbor shaft nut by turning it *CLOCKWISE* and remove the outer blade flange from shaft. Slide the blade onto the shaft. If the blade comes with an adapter bushing, be careful the correct bushing remains in place during installation. Re-install the outer shaft flange and replace the arbor shaft nut. Tighten the arbor shaft nut by turning it *COUNTER-CLOCKWISE*. **DO NOT OVERTIGHTEN** the arbor shaft nut as this can distort the shaft flanges. Re-install trim table.

Slight blade wobble is normal with thin lapidary blades. Loosening the arbor shaft nut and rotating the blade slightly will often reduce wobble, re-tighten nut.

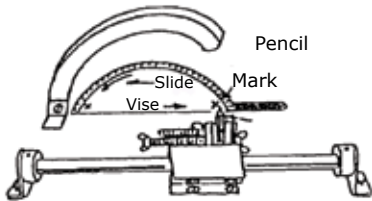


Fig. 2

Vise Attachment Installation

Vise attachment should be installed on trim table with self tapping sheet metal bolts in holes provided as shown on the parts list drawing. Care should be taken to assure that the vise runs parallel to the blade. Alignment can be checked by clamping a pencil in the vise with the point lightly against the side of the blade at the front. Slide the vise with pencil to the rear of the blade – The pencil point should lightly touch the side of the blade as the vise is moved towards the back. (Fig.2). If the pencil point pulls away from the blade or digs into the blade, loosen the vise mounting screws and adjust the vise until the alignment is good.

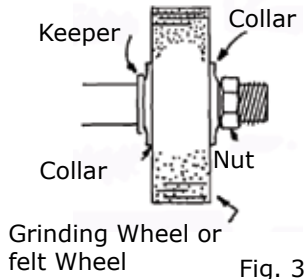


Fig. 3

Grinding Wheel & Sanding Drum Installation

The LU6X-130 machine has enough space on the right side to use one grinding wheel, a sanding drum and a screw-on polish head (items included with LU6X-130; not included with Basic LU6X). If using a grinding wheel or sanding drum with a different inside diameter, make sure to use bushings of the correct size. Check with the manufacturer of the wheels for the correct bushing.

The grinding wheel is installed on the section of shaft that is 3/4" in diameter. Install the 3/4" ID plated flange onto the shaft and slide it up against the retaining ring. Install the 6" x 1" grinding wheel onto the shaft using the correct plastic bushing. Install the second 3/4" ID flange onto the shaft. Install and tighten the 3/4" Hex Nut against the second flange. (Fig.3)

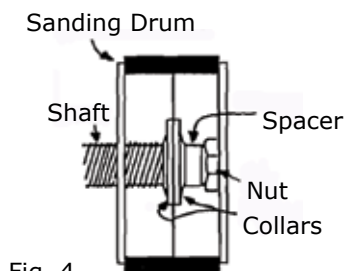


Fig. 4

The sanding drum is installed on the section of the shaft that is 1/2" in diameter. Install one 1/2" ID plated flange onto the shaft and slide it up against the step on the shaft. Install the 6" x 2-1/2" sanding drum onto the shaft. Install the second 1/2" ID flange onto the shaft. Install and tighten the 1/2" Hex Nut against the second flange. (Fig.4)

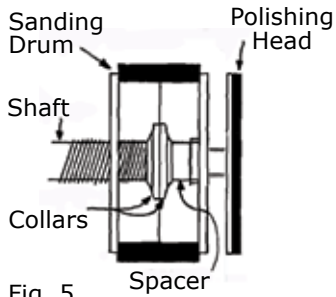


Fig. 5

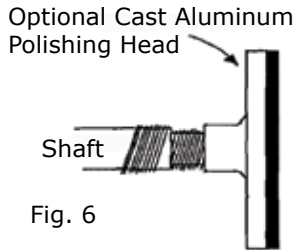


Fig. 6

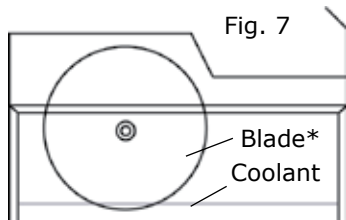


Fig. 7

*Make sure 1/4" of blade is submerged in coolant.



Fig. 8

Polishing Head Installation

The LU6X-130 machine comes with a felt-faced spin-on polish head. Insert the 1/4-20 threaded end of the polish head into the end of the shaft and tighten by turning the polish head clockwise. Avoid contaminating the polish head during installation.

For versatility, additional polish heads can be purchased either with or without the felt. Leather discs can be attached to the rubber face polish-heads with feathering disc cement. Heavy-duty cast aluminum polish heads are used for sanding and are threaded 1/2" N.F.R.H., they may be installed on shaft as show in Fig. 5. If they are used with a polishing pad, it is recommended they be installed on the shaft by themselves (see Fig. 6) to eliminate possibility of contamination.

Sawing

Pour coolant into saw case until 1/4" of blade is emerged in coolant (see Fig. 7). We recommend using lapidary cutting oil. Water with a rust preventative can be used as a coolant, but unit must be drained after every use to prevent blade from rusting. **CAUTION: DO NOT use Kerosene, Motor Oil, Transformer Oil, or Automobile Antifreeze.** Feed material into the blade with even pressure. Never force the material into the diamond blade. The rate of feed should never be so great that the blade slows down. For difficult to handle shapes, clamp the material in the vise.

Grinding

The LU6X is designed to be operated with either an overhead water drip system (Fig. 8) or a re-circulating system. Using the machine without water can generate a significant amount of dust which can result in reduced life of sanding belts and wheels as well as injury to operator.

It is important to remember that the saw is still running while the LU6X is being used for grinding, sanding or polishing. To reduce coolant mist from the saw when using the grinding side of the machine, place a small household sponge on the trim table directly in front of the blade. When you are ready to use the saw, remove the sponge.

Periodic Maintenance

The bearings used in this arbor are sealed and lubricated for life. The nuts and collars are plated to resist corrosion. The shaft is stainless steel which will also resist corrosion.

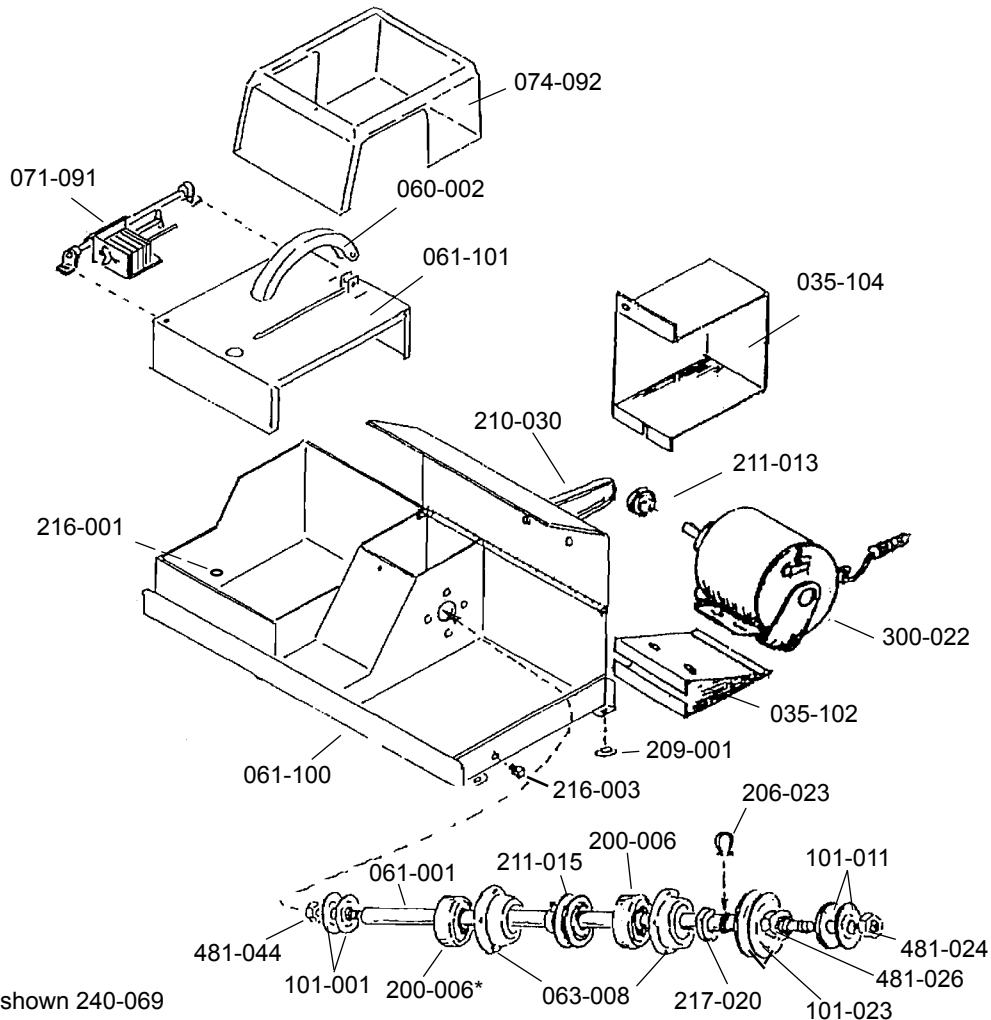
Helpful Hints

The LU6X-130 is supplied with a 2-1/2" pulley & V-belt. A precision turned, ground, and polished shaft is mated with sealed for life ball bearings for smooth, quiet operation. The point to remember is that the basic machine is a smooth running unit. Vibrations and noise, which can occur during operation of your machine, can often be traced back to the items being installed on the arbor shaft (grinding wheels, sanding drums, polishing heads, etc.) not being trued and balanced.

LU6X-130 Parts List

(including LU6X Basic)

LU6X-130 Item # 061-092
 LU6X Basic Item # 061-090



*Not shown 240-069

Qty	Part #	Description	Qty	Part #	Description
1	060-101	Trim Table	1	074-092	Hood**
1	061-001	Arbor Shaft	1	522-039	6" x .032 x 1/2" Blade
1	061-100	Frame	1	035-102	Motor Mount
2	063-008	Bearing Cover	4	209-003	Small Bump-on Foot
2	240-069	*Bearing Isolator (not shown)	4	480-002	1/4" x 3/4" Carriage Bolt (not shown)
2	200-006	Ball Bearing	4	481-028	1/4" Hex Nut (not shown)
1	206-023	Retaining Ring	4	489-012	1/4" Flat Washer (not shown)
1	210-030	Drive Belt	1	057-002	Splash Shield
1	211-015	2-1/2" x 3/4" Pulley	1	481-021	6-32 Hex nut (not shown)
1	216-001	Drain Plug (Brass)	1	485-005	6-32 x 3/8" Round Head Machine Screw
1	216-003	Drain Plug (Plastic)	1	489-066	#6 SAE Washer (not shown)
2	320-006	Rubber Grommet	1	035-104	Belt Guard
1	290-015	Thumb Screw	4	209-001	Large Rubber Foot
1	481-044	1/2"-20 LH Hex Nuts	1	209-010	Rubber Plug
1	481-024	1/2"-20 RH Hex Nuts	1	211-013	2-1/2" x 1/2" Pulley (for motor)
1	481-026	3/4"-16 RH Hex Nuts	2	101-023	3" x 3/4" Flange
2	101-001	1-1/2" x 1/2" Flange	2	101-011	2" x 1/2" Flange
1	060-002	Blade Guard	1	217-020	Insulating Bushing
1	485-037	1-3/8" #10 Machine Screw	1	488-032	10-24 x 1/2" Hex Head Threaded Cutting Screw (not shown)
1	481-027	10/32 Hex Nut			
1	489-062	#8 SAE Washer			
1	300-022	1/3 hp Motor w/Switch & Cord**			

** Items not included with LU6X Basic

LU6X-130 Parts List

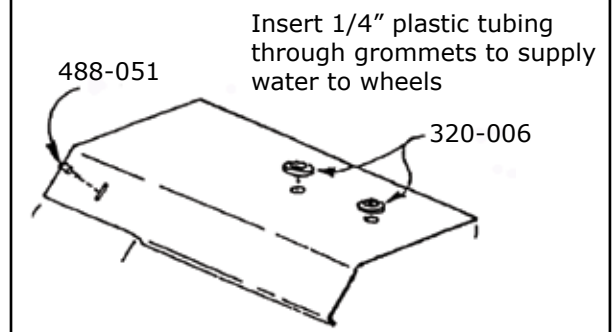
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Accessory Kit including:

Qty	Part #	Description
1	025-060	6" RH Spin-on Polish Head**
1	508-001	6" Felt Disc (attached to polish head)
1	072-090	EX625 X 1/2" Drum w/400 grit belt**
1	500-072	6" x 1" 100 Black Grinding Wheel**
1	511-001	TB4 Plastic Bushing (in grinding wheel)**
1	071-091	LU6X Vise**
1	501-012	2-1/2" x 18-15/16" 220 Grit Belt**
1	501-015	2-1/2" x 18-15/16" 600 Grit Belt**
1	549-010	Lortone Templates (5pk)**
4	550-010	5/16" Wood Dop Stick**
1	588-010	1/8 lb Dop Wax (1/2 stick)**
1	591-044	1 oz Cerium Oxide**
1	120-001	Aluminum Scribe**
1	120-002	Brass Scribe**

**Not included with LU6X Basic

Water Supply System



071-091 Model LU6X Vise Assembly**

Qty	Part #	Description
1	071-001	1-Hole Vise Plate
1	071-002	2-Hole Vise Plate
1	071-003	2-Hole Vise Pad
1	071-004	Vise Bolt
1	071-005	1-Hole Vise Pad
1	071-006	Guide Shaft
1	488-053	Thumb screw
1	071-101	Vise Carriage
2	071-102	Vise Guide Support
2	481-079	Wing nut
2	217-021	Nylon Bushing

