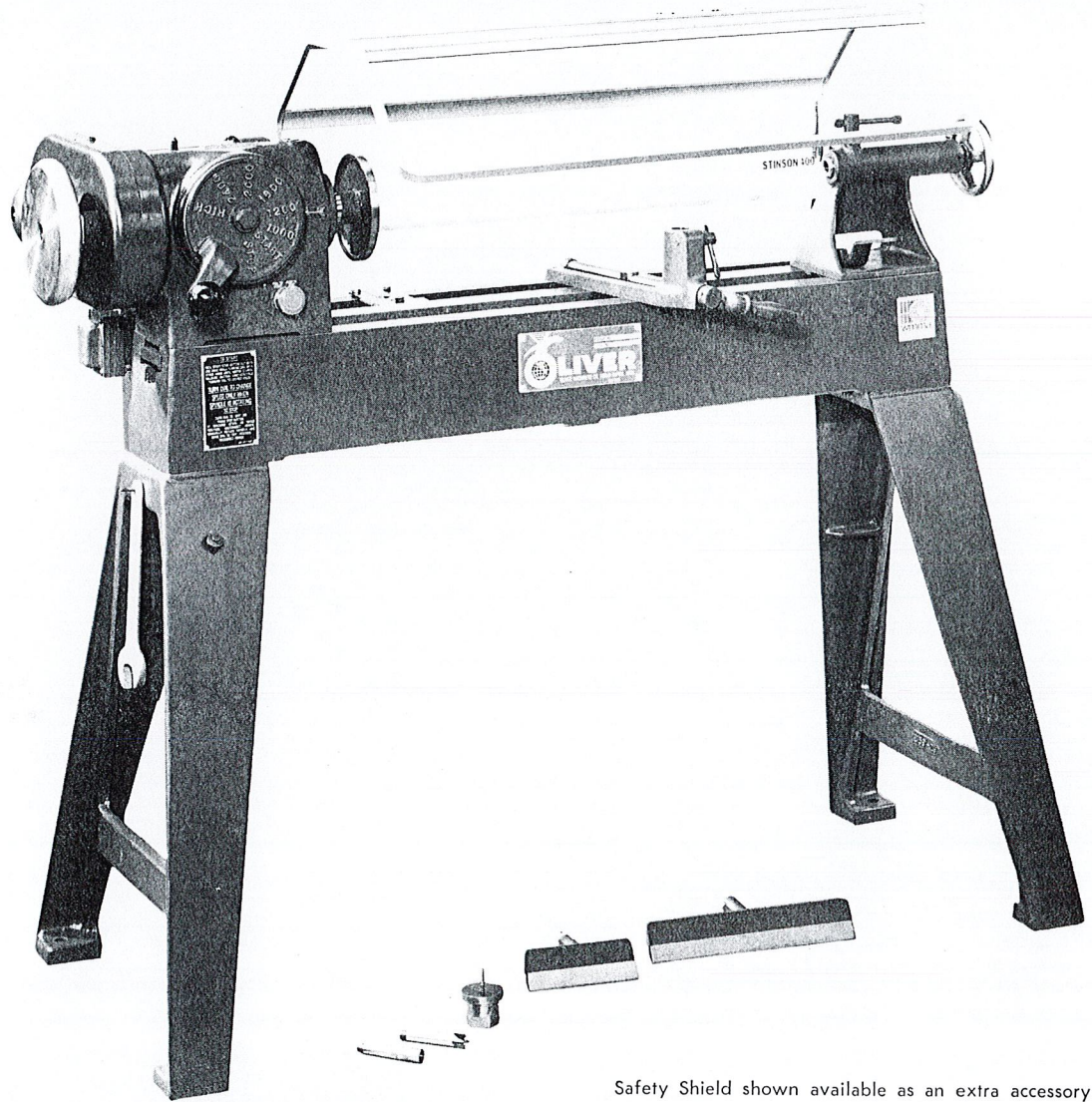




# No. 2159 LATHE



Safety Shield shown available as an extra accessory



# LIVER®

# 14" Speed Lathe

by **Oliver**

## HEADSTOCK

The headstock is of the double ended self-contained unit type, consisting of a headblock with ball bearing spindle driven by a suitable ball bearing motor, operating through a "V" belt on adjustable cone sheaves giving any speed, 800 to 2750 r.p.m. The headstock casting has a broad base with tongue fitting to the bed, rigidly clamped. Bearings are of the very best, deep groove, frictionless ball bearing type, with provision to resist end thrust from either direction. Positive spindle lock facilitates removal of face plates from both front and rear ends.

## VARIATION OF SPEED

Speed change to get any speed from 800 to 2750 r.p.m. is accomplished by merely shifting the speed control lever at the front side of the headstock to the position desired. Turning this lever operates a cam inside the headstock which shifts the inner half of the spindle sheave allowing the "V" belt to position itself automatically, due to the spring pressure of the outer half of the motor sheave, until a new relation of contact surface is established between the driven and the driving sheaves, causing the spindle to operate at the speed desired. Simple, yet very effective.

## MOTOR

The motor is mounted directly back of the headblock; 1 h.p., 1800 r.p.m., to suit your electric current. Motor starts only at the low spindle speed.

## ELECTRICAL CONTROLS

A magnetic control is furnished providing overload and low voltage protection. For safety, the motor starts only when the speed control handle is moved from the STOP to START position. It can only be started at low speed and then moved to any higher speed.

A control requiring the use of both hands to start the motor is standard equipment. When using this control the operator depresses the START button with one hand and moves the speed control lever from OFF to START position with the other.

## SPINDLE

Made of extra hard steel, finished, and ground true, has a hole through its entire length and is fitted with No. 2 Morse taper at front end for receiving centers. Spindle nose 1 1/8" diameter. Has threads on front and rear ends for face plates, and with plunger lock to hold spindle while putting on or removing face plates.

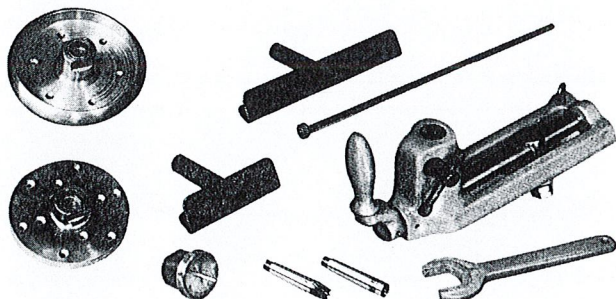
## REAR END TURNING

All of these lathes are regularly arranged for rear end turning by making the headstock spindle double ended and mounting on the rear end our 8" patented combined rear end hand wheel and face plate.

## THE BED

The bed is a cored casting 6 1/2" deep, 6 1/2" wide, and regularly 48" long. Beds up to 8' long can be furnished. The inside edges are machined and act as ways for the alignment of the headstock and tailstock. When furnished with a tool carriage, the ways for same are cast on the front of the bed. Bed is 36" from floor to top.

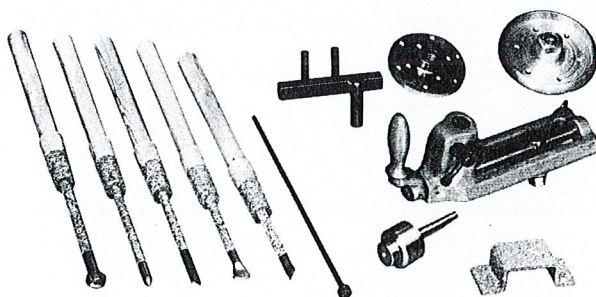
## REGULAR EQUIPMENT FURNISHED FOR WOODTURNING



### GROUP W FOR WOOD TURNING

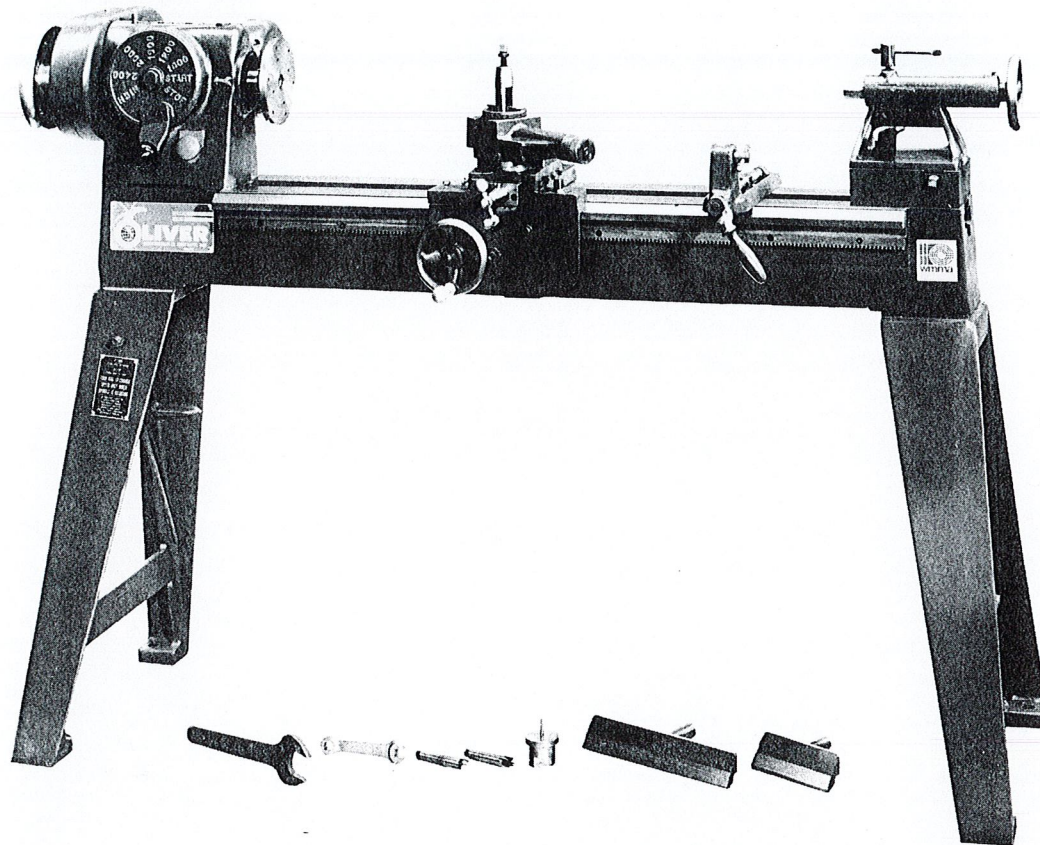
3/4" spur and 3/4" cup centers; 6" front faceplate and 8" rear combination faceplate and handwheel; 2 1/4" screw chuck; tool rest holder with 6" and 12" single pole rests, knockout rod and face plate wrench.

## REGULAR EQUIPMENT FURNISHED FOR METAL SPINNING



### GROUP M FOR METAL SPINNING

5 spinning tools; Pin rest and two pins; ball bearing tail center; 6" front face plate and 8" steel combination rear face plate and handwheel, steel tool rest holder, knockout rod and face plate wrench.



No. 2159 Lathe with 5' bed, Hand feeding carriage and set-over tailstock. Also available with 6', 7' or 8' bed.

### TAILSTOCK

This is of the open side design, 9" long, 6" wide. It is secured to the bed by a positive lever clamp. Spindle is machine ground steel  $1\frac{1}{4}$ " diameter, 8" long, bored for No. 2 Morse Taper and is held in position by lever clamp. Tail center is removed by backing of screw. On lathes with carriage, the tailstock is furnished with a set-over device for taper work. Spindle has traverse of 4".

### CAPACITY

Will swing 14" diameter over the bed or  $10\frac{1}{4}$ " over the carriage and will turn 26" long between centers on 48" bed or 38" long on 60" bed.

### HAND TOOL REST AND REST HOLDER

The tool rest is provided with a straight edge for guiding turning tools. The holder has an eccentric clamp operated by convenient handle.

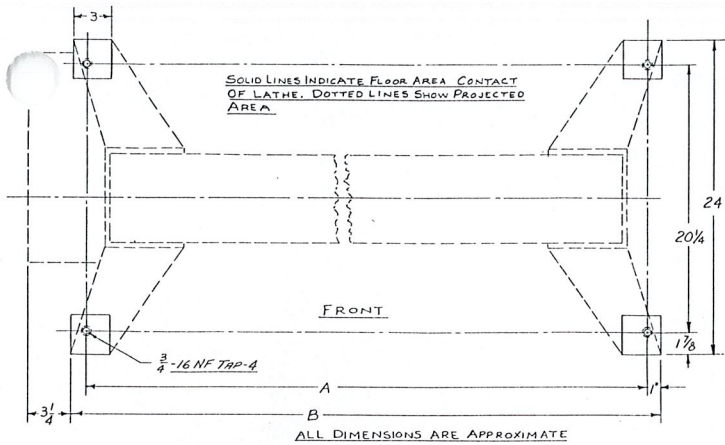
### HAND FEED CARRIAGE LATHE

**TOOL CARRIAGE** — The hand feed tool carriage with cross feed and compound swivel rest can be furnished with bed 5 to 8 feet long. The apron has a bearing of 10 inches on the bed, and a travel of 37 inches on a bed 60 inches long. It is freely operated in either direction by a cut steel rack and pinion actuated by a handwheel. The traverse of the cross feed is  $5\frac{1}{2}$  inches.

**COMPOUND SWIVEL TOOL REST** — The compound rest carries the slotted tool post, and has a traverse of  $3\frac{1}{2}$  inches. Its socket base is graduated and swivels on the cross slide. This mechanism enables the operator to remove the compound rest and substitute a socket to receive the hand tool rest so hand turning can be done without having to remove the carriage. The tool post slot is 2 inches high,  $\frac{19}{32}$  inch wide.

**CARRIAGE GRADUATIONS** — On lathes having tool carriage, the top of the bed and the guide of the cross slide are graduated by sixteenths. The end of the carriage, as well as the ends of the cross slide, are provided with little pointers adjustable to any work. The operator can turn work to a definite length or depth without fitting and trying.

**TAILSTOCK** — On machines having a hand feed carriage a set-over tailstock is furnished for taper turning.



BED LENGTH	A	B
4 Ft.	51 3/4	53 3/4
5 Ft.	63 3/4	65 3/4
6 Ft.	75 3/4	77 3/4
7 Ft.	87 3/4	89 3/4
8 Ft.	99 3/4	101 3/4

### CAPACITY

14" diameter over bed. 26" between centers with 4' bed. 10 1/4" diameter over carriage.

### MOTOR AND DRIVE

1 H.P., 1800 R.P.M. Spindle speed 800 to 2750 R.P.M.

### HEADSTOCK SPINDLE

No. 2 Morse Taper in right hand end. Threaded on both ends. 3/64" hole entire length.

### SPINDLE BEARINGS

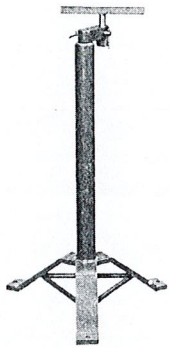
Oversize ball bearings, permanently lubricated.

### TAILSTOCK

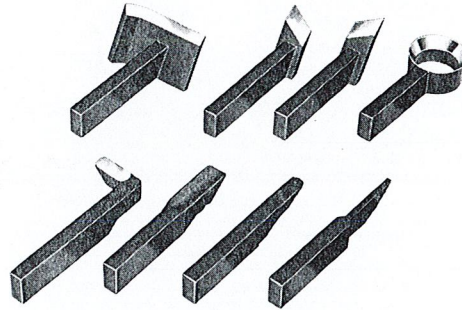
Plain open type 9" long, 6" wide. No. 2 Morse Taper bore. Spindle travel 4".

### CRATED WEIGHTS

PLAIN BED	WT.	CARRIAGE BED	WT.
4 Ft.	550 lbs.		
5 Ft.	600 lbs.	5 Ft.	640 lbs.
6 Ft.	655 lbs.	6 Ft.	715 lbs.
7 Ft.	715 lbs.	7 Ft.	815 lbs.
8 Ft.	785 lbs.	8 Ft.	915 lbs.



No. 256-A — Floor Stand.



Group D—Tool Post Tools for use in tool post of carriage of wood lathe. Shank 1/2" x 1".



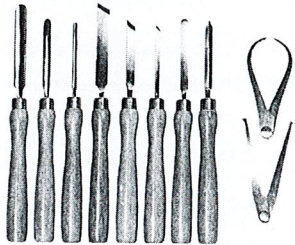
4095-0102-2401  
No. 2 — 3/4" Cone Center



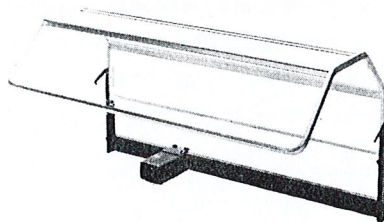
4095-0302-2401  
No. 2 — 3/4" Cup Center



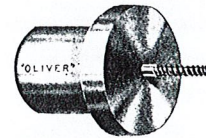
4095-0502-2401  
No. 2 — 3/4" Spur Center



No. 2400-7900 Woodturning Tools, recommended for educational institutions.



Lathe Safety Shield  
36" and 42" lengths



4115-0201-0201  
2 1/4" Screw Chuck

4115-0201-0301  
3" also available

ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

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