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PSI Woodworking KWL-1018VS

PSI Woodworking KWL-1018VS Turncrafter Commander 10" Variable Speed Midi Lathe User Manual

MODEL: KWL-1018VS | BRAND: PSI WOODWORKING

1. Important Safety Instructions

Operating any power tool requires adherence to strict safety guidelines to prevent injury. Read and understand all instructions before operating the lathe.

- Always wear appropriate personal protective equipment, including safety glasses or a face shield, and hearing protection.
- Ensure the work area is clean, well-lit, and free from obstructions.
- Keep children and bystanders at a safe distance from the operating lathe.
- Secure the workpiece firmly before starting the lathe. Loose workpieces can be ejected at high speed.
- Use only sharp, appropriate turning tools. Dull tools can cause kickback or poor cuts.
- Never wear loose clothing, gloves, or jewelry that could become entangled in moving parts. Tie back long hair.
- Disconnect power before making adjustments, changing accessories, or performing maintenance.
- Do not overreach. Maintain proper footing and balance at all times.
- Never leave the lathe running unattended.
- Ensure the lathe is properly grounded to prevent electrical shock.

2. Product Overview

The PSI Woodworking KWL-1018VS Turncrafter Commander is a 10-inch variable speed midi lathe designed for woodworking projects. It features a robust cast iron construction and a powerful motor for consistent performance.



Image: A red PSI Woodworking KWL-1018VS Turncrafter Commander 10-inch Variable Speed Midi Lathe, featuring a black headstock with a digital RPM display, a flexible work light, a tool rest, and a tailstock. The base is cast iron, and controls for power and speed are visible on the front.

Key Features

- **Motor:** 3/4 hp high-performance variable speed motor (110V).
- **Speed Control:** Two belt positions for optimal RPM ranges: Position A (500-2000 RPM) and Position B (1500-3600 RPM).
- **Digital Readout:** Allows for precise speed monitoring.
- **Headstock Thread:** 1" x 8tpi.
- **Headstock and Tailstock Taper:** #2MT.
- **Distance between Centers:** 18 inches.
- **Swing over Bed:** 10 inches.
- **Quill Travel:** 1-5/8 inches.
- **Indexing Positions:** 24 positions with spindle locking.
- **Construction:** Durable cast iron base.

Included Components

- Tool storage rack
- Work light with 18" flex cable
- 6" tool rest
- 12" tool rest
- 3" Faceplate
- Spur Drive Center
- Tailstock Live Center

- Hex Wrench (set of 4)
- Rubber feet (4)
- Knockout Rod
- Phillips Screw Driver
- Tailstock handle & bolt
- Safety Goggles

3. Setup and Assembly

The KWL-1018VS lathe requires minimal assembly. Follow these steps for initial setup:

1. **Unpacking:** Carefully remove all components from the packaging. Inspect for any shipping damage.
2. **Mounting:** Secure the lathe to a sturdy workbench using appropriate bolts and washers. The cast iron base provides stability, but proper mounting is crucial for safe operation.
3. **Install Rubber Feet:** Attach the four rubber feet to the base of the lathe if not already installed.
4. **Attach Tool Rests:** Insert the tool rest posts into the banjo and secure them at the desired height and position.
5. **Install Work Light:** Mount the flexible work light into its designated port and adjust its position for optimal illumination of the workpiece.
6. **Electrical Connection:** Ensure the lathe is connected to a grounded 110V power outlet.

4. Operating Instructions

Variable Speed Control

The lathe features a variable speed motor with two belt positions to optimize torque and speed for different turning tasks:

- **Position A (Low Speed):** Provides an RPM range of 500-2000 RPM. This setting is suitable for larger diameter workpieces, roughing, and initial shaping.
- **Position B (High Speed):** Provides an RPM range of 1500-3600 RPM. This setting is ideal for smaller diameter work, finishing, and sanding.

To change belt positions, disconnect power, open the headstock cover, manually move the belt to the desired pulleys, and close the cover. Use the digital readout to monitor and adjust the precise speed within the selected belt range.

Spindle Locking and Indexing

The lathe includes 24 indexing positions, allowing for precise division of the workpiece for fluting, reeding, or other decorative work. Engage the spindle lock to hold the spindle stationary at any of the 24 positions.

Mounting Workpieces

- **Between Centers:** For spindle turning, use the spur drive center in the headstock and the live center in

the tailstock to secure the workpiece.

- **Faceplate Turning:** For bowl or faceplate turning, attach the 3-inch faceplate to the headstock spindle and secure the workpiece to the faceplate using screws.

5. Maintenance

Regular maintenance ensures the longevity and safe operation of your lathe.

- **Cleaning:** After each use, clean wood dust and debris from the lathe bed, motor, and other components. Compressed air can be used carefully.
- **Lubrication:** Periodically apply a light machine oil to moving parts, such as the tailstock quill and banjo slides, to ensure smooth operation.
- **Belt Inspection:** Regularly check the drive belt for wear, cracks, or proper tension. Replace if necessary.
- **Electrical Connections:** Inspect power cords and connections for damage.

6. Troubleshooting

- **Motor Stalls During Operation:** This can occur if the cutting tool is too aggressive, the workpiece is too large for the selected speed, or the belt tension is incorrect. Reduce the cutting depth, adjust speed, or check belt tension.
- **Tailstock Does Not Lock Solidly:** Ensure the tailstock locking lever is fully engaged. Check for sawdust or debris under the locking mechanism that might prevent a secure lock. Adjust the lock nut on the cam lever assembly if needed.
- **Excessive Vibration:** Ensure the lathe is securely mounted to the workbench. Check for unbalanced workpieces or worn bearings.
- **Inaccurate Speed Reading:** Verify that the digital display is functioning correctly. If issues persist, consult customer support.

7. Specifications

Specification	Value
Manufacturer	PSI Woodworking Products
Part Number	KWL-1018VS
Item Weight	82 pounds
Product Dimensions	32 x 9 x 17 inches
Item Model Number	KWL-1018VS
Size	10"

Specification	Value
Style	VARIABLE SPEED
Material	Cast Iron
Voltage	110 Volts
Included Components	Lathe, User's Manual, various accessories (see 'Included Components' section)

8. Warranty and Support

The PSI Woodworking KWL-1018VS Turncrafter Commander Midi Lathe comes with a **3-year warranty** from the date of purchase, covering manufacturing defects. For warranty claims, technical assistance, or to order replacement parts, please contact PSI Woodworking customer support. Keep your proof of purchase for warranty validation.

For further assistance, refer to the official PSI Woodworking website or contact their customer service department directly.