SEPTEMBER, 1950
JIG SAW BULLETIN J14001-2

ATLAS PRESS CO.
KALAMAZOO, MICH.
U.S.A.

INSTRUCTIONS AND PARTS LIST FOR
Atlas 24-inch JIG SAW
CATALOG Nos. 4001 and 4021

All the equipment furnished with the jig saw is packed in the carton in the saw crate. Be sure EVERYTHING has been removed before the carton is destroyed.

MOUNTING SAW

The Atlas No. 9014 Metal Stand is ideal for mounting the saw—complete mounting instruction are furnished.

If a wood bench is used make sure it's a heavy, rugged bench that's high enough so that the top of the saw table will be slightly lower than your elbow. Make sure bench is level and rests solidly on the floor before mounting saw.

MOTOR REQUIREMENTS

The Atlas Jig Saw requires a 1/3 or 1/2 HP, 1725 RPM motor, preferably a capacitor or repulsion-induction type. The motor pulley furnished has a ⅝-inch diameter bore—dealer can supply bushing for ½-inch diameter motor shaft.

There are four spindle speeds. Using a 1725 RPM motor they are: 570 RPM, 858 RPM, 1220 RPM and 1658 RPM.

Slide pulley on motor shaft so that small step is next to motor; tighten pulley set screw. Fasten motor to motor base but do not tighten bolts securely. Place belt around small step of motor pulley and large step of spindle pulley. Shift motor until pulleys are aligned and belt is straight. Slide the motor base back until belt is tight. Lock motor and motor base in this position. **Motor must rotate counter-clockwise facing pulley end.**

CAUTION: Maintain proper belt tension at all times—belt should be just tight enough to prevent slipping.

Fig. 1 ATLAS No. 4021 24" Jig Saw.

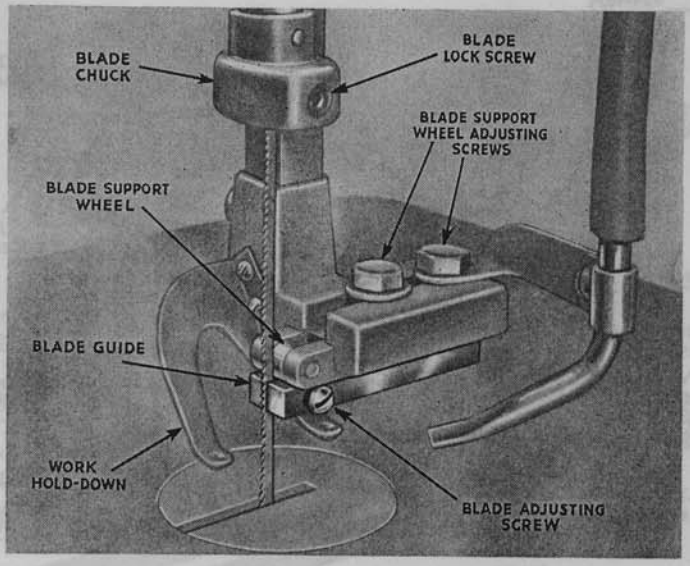


Fig. 2 Blade Guide and Work Hold-down.

STATIC ELECTRICITY

Sometimes a slight shock is experienced when touching the saw. This may be caused by a static electrical charge set up by the friction of the moving parts and is not necessarily an indication of faulty motor windings or grounds. To correct, ground the saw to a water or heater pipe.

CONTROLS

1. Knob at rear of saw table controls the table tilt lock, see Figure 6. The table can be tilted 0 to 15 degrees to the left—and 0 to 45 degrees to the right. The angle of tilt is shown on the graduated scale.
2. The Allen type machine screws (see Figure 6) located on the table trunnion bracket beneath the table control the table swivel lock. Entire table assembly may be swiveled 90 degrees to permit cutting any length stock from side of saw—table tilts 45 degrees to the right, 15 degrees to the left.
3. Work hold-down holds the work against the table, see Figure 2, enables the operator to concentrate on following the layout lines—vertical position is controlled by the sliding bar. To adjust merely loosen the thumb screw on left side of saw arm, place the hold-down against the work and retighten screw.
   The hold-down guide bar should be placed on right side of saw arm when the table is swiveled 90 degrees for cutting long stock. CAUTION: Before you start the motor make sure the hold-down clears the blade.
4. Blade lock screws in the upper and lower chucks lock the blade in the chuck jaws—screws are controlled by an Allen wrench furnished.
5. Blade Guide and Blade Support Wheel, located directly above the work hold-down, support the blade and keep it running true (see Figure 2). Both can be adjusted vertically and horizontally. For vertical adjustment, loosen the thumb screw on left side of saw arm—for horizontal adjustment, loosen the two screws on top of the guide. Blade guide may also be adjusted for any width blade by turning the machine screw on the side of the blade guide. Both wheel and guide should be adjusted so that blade rubs against them lightly. Position the blade guide so that the front edge is even with the bottom of the blade teeth as shown in Figure 3.
6. Blower hose keeps the layout lines free of sawdust.
7. The knurled knob on right side of saw arm (see Figure 6) controls the blade tension housing. Loosen the knob to adjust housing for various length blades.

LUBRICATION

1. The saw crankcase has been filled with SAE No. 30 machine oil, but should be checked before using the saw. Remove oil plug on right side of crankcase and replace with "L" oiler furnished. Remove oil vent screw just below "L" oiler. Oil should be to this level. If necessary place No. SAE 30 oil in oiler, filling crankcase until oil reaches hole. KEEP CRANKCASE FILLED TO OIL LEVEL AT ALL TIMES TO KEEP DRIVE MECHANISM PROPERLY LUBRICATED.
2. Upper Operating Shaft Bearings—Occasionally place a few drops of SAE No. 20 machine oil in the hole in side of blade tension housing.
3. Blade Guide—Oil guide wheel shaft occasionally.
4. Pump Cam—Occasionally place a few drops of oil in the oiler located on top of pump housing.

MOUNTING SAW BLADES AND FILES

Insert the blade between the two FLAT JAWS, with the teeth pointing down, approximately ⅜ inches into the lower chuck and tighten the lock screw. Then, turn the spindle pulley by hand until the blade is at the top of the stroke, loosen the blade tension knob, place the blade about ⅜ inches into the upper chuck and tighten chuck lock screw. Raise tension housing until desired blade tension is obtained and

(Continued on Page 4)

REPAIR PARTS LIST
ATLAS 24-inch JIG SAW

CATALOG Nos. 4001 and 4021

ORDERING INFORMATION

IMPORTANT—The following information must be furnished on all repair part orders —

1—Quantity Required

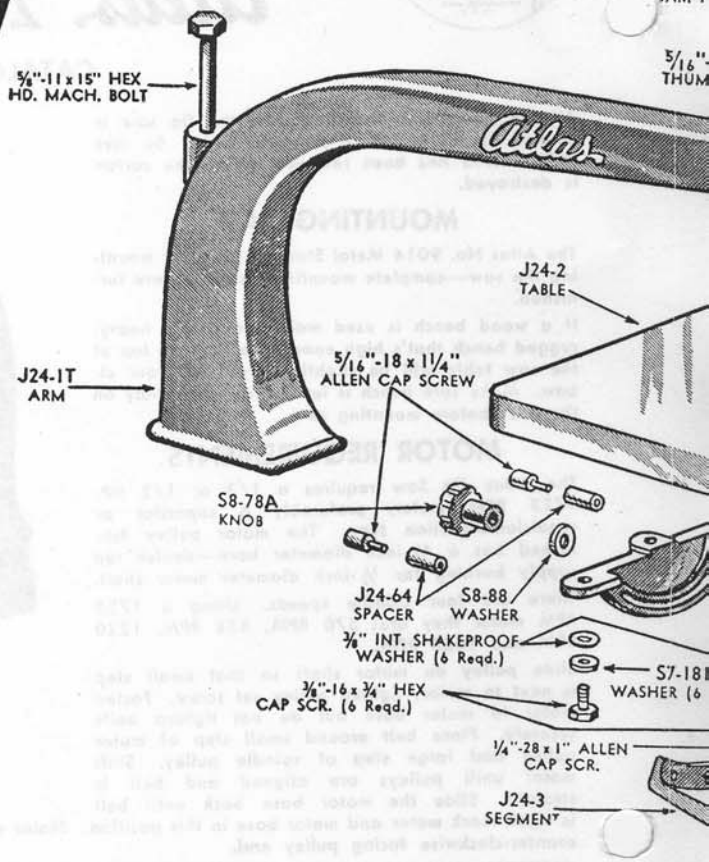
2—PART NUMBER and NAME of Part

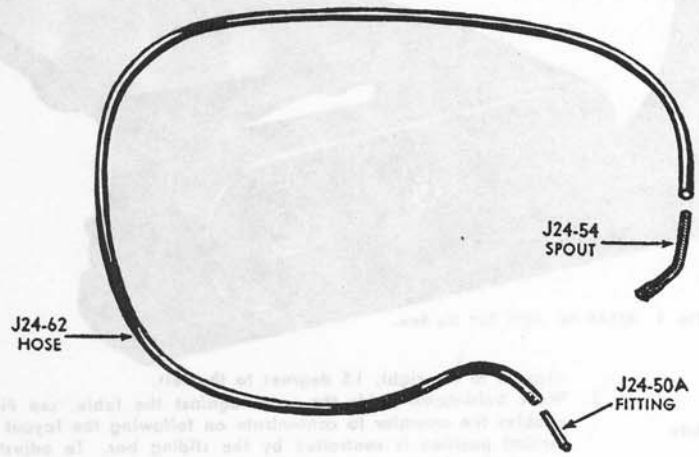
3—Model and Serial Number of Jig Saw

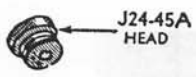
Parts shown without part numbers are standard parts and should be purchased locally.

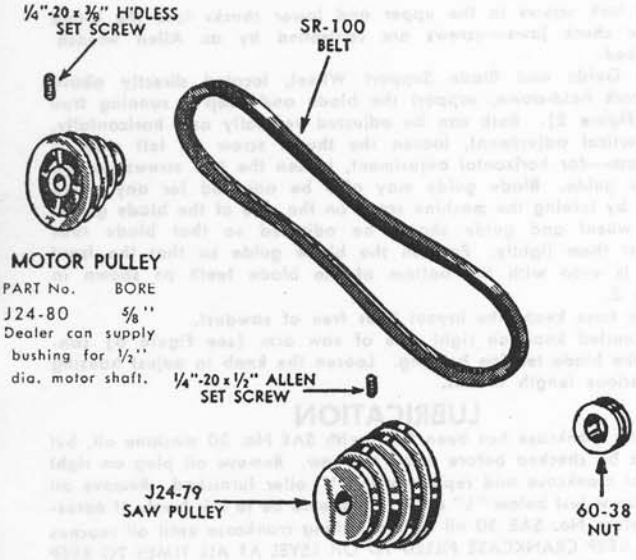
Be sure to give Model and Serial Number on this plate. Plate located on saw base.

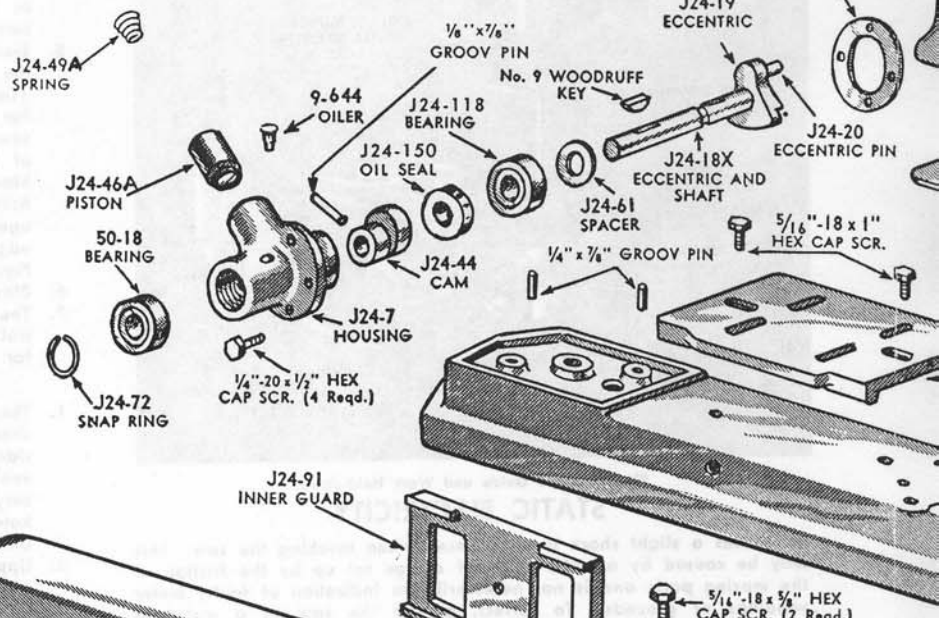
ATLAS PRESS CO. KALAMAZOO 13D, MICH., U. S. A.

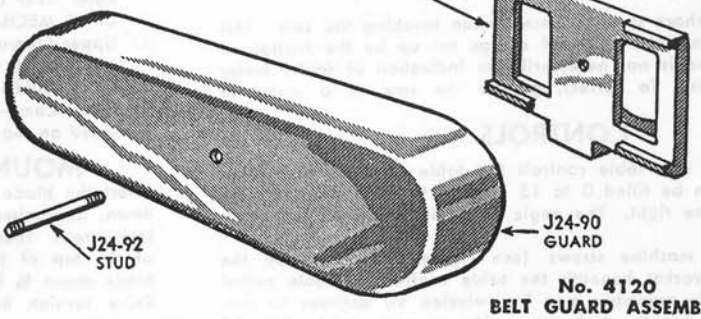




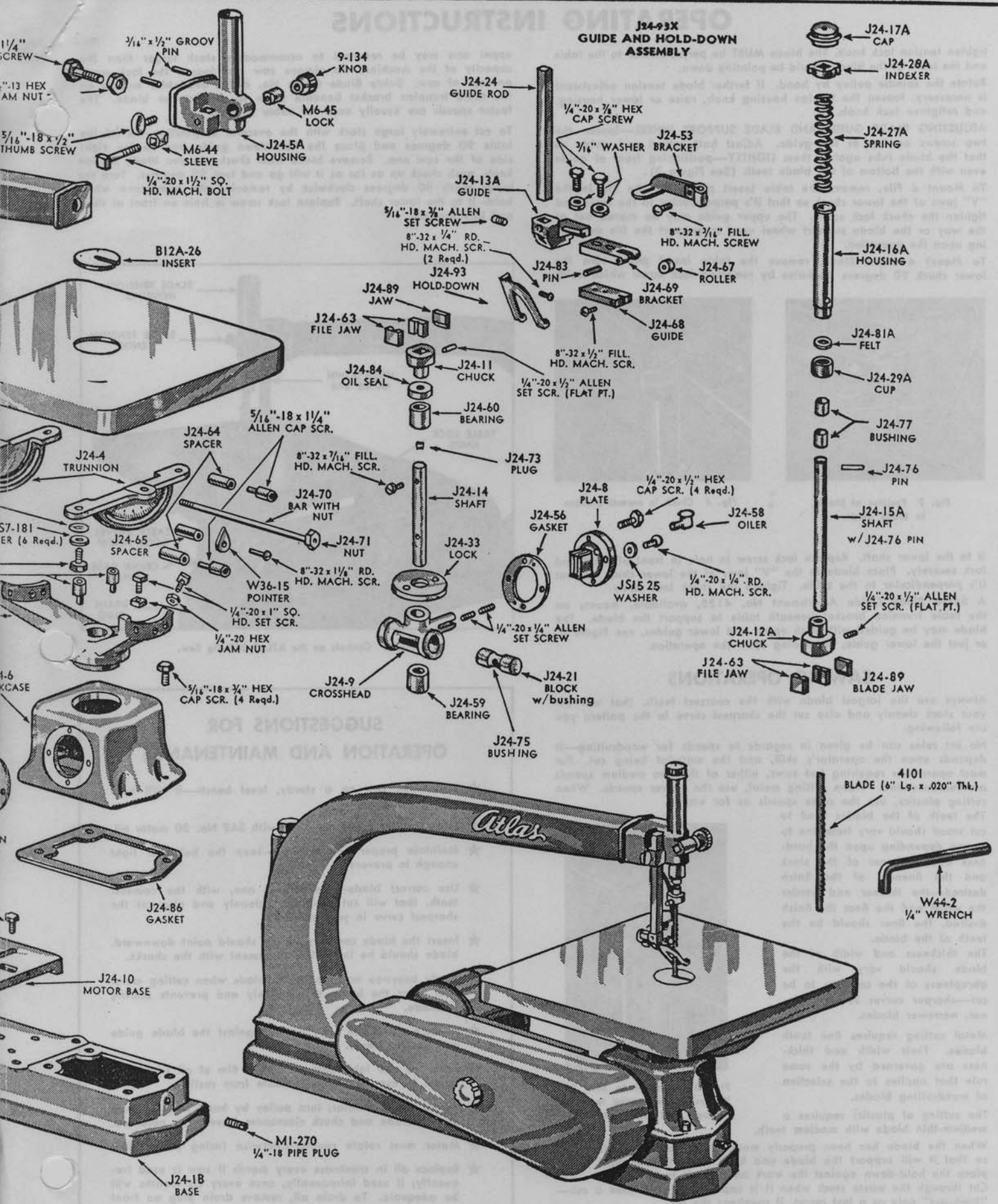








No. 4120
BELT GUARD ASSEMBLY


J24-93X
GUIDE AND HOLD-DOWN ASSEMBLY
J24-17A CAP
J24-28A INDEXER
J24-27A SPRING
J24-16A HOUSING
J24-81A FELT
J24-29A CUP
J24-77 BUSHING
J24-76 PIN
J24-15A SHAFT w/ J24-76 PIN
J24-12A CHUCK
J24-63 FILE JAW
J24-89 BLADE JAW
1/4"-20 x 1/2" ALLEN SET SCR. (FLAT PT.)
J24-24 GUIDE ROD
1/4"-20 x 7/8" HEX CAP SCREW
3/16" WASHER
J24-53 BRACKET
J24-13A GUIDE
5/16"-18 x 3/8" ALLEN SET SCREW
8"-32 x 3/16" FILL. HD. MACH. SCREW
8"-32 x 1/4" RD. HD. MACH. SCR. (2 Reqd.)
J24-83 PIN
J24-67 ROLLER
J24-69 BRACKET
J24-93 HOLD-DOWN
J24-89 JAW
J24-63 FILE JAW
J24-68 GUIDE
8"-32 x 1/2" FILL. HD. MACH. SCR.
J24-84 OIL SEAL
J24-11 CHUCK
1/4"-20 x 1/2" ALLEN SET SCR. (FLAT PT.)
J24-60 BEARING
J24-73 PLUG
8"-32 x 7/16" FILL. HD. MACH. SCR.
J24-14 SHAFT
J24-8 PLATE
1/4"-20 x 1/2" HEX CAP SCR. (4 Reqd.)
J24-58 OILER
J24-56 GASKET
JSI5 25 WASHER
1/4"-20 x 1/4" RD. HD. MACH. SCR.
J24-33 LOCK
J24-9 CROSSHEAD
1/4"-20 x 1/4" ALLEN SET SCREW
J24-21 BLOCK w/bushing
J24-59 BEARING
J24-75 BUSHING
4101 BLADE (6" Lg. x .020" Thk.)
W44-2 1/4" WRENCH
B12A-26 INSERT
3/16" x 1/2" GROOV PIN
9-134 KNOB
M6-45 LOCK
M6-44 SLEEVE
J24-5A HOUSING
1/4"-20 x 1 1/2" SQ. HD. MACH. BOLT
5/16"-18 x 1/2" THUMB SCREW
J24-4 TRUNNION
5/16"-18 x 1 1/4" ALLEN CAP SCR.
J24-64 SPACER
J24-70 BAR WITH NUT
J24-71 NUT
J24-65 SPACER
8"-32 x 1 1/8" RD. HD. MACH. SCR.
W36-15 POINTER
1/4"-20 x 1" SQ. HD. SET SCR.
1/4"-20 HEX JAM NUT
5/16"-18 x 3/4" HEX CAP SCR. (4 Reqd.)
J24-86 GASKET
J24-10 MOTOR BASE
J24-1B BASE
M1-270 1/4"-18 PIPE PLUG
Atlas

OPERATING INSTRUCTIONS

tighten tension lock knob. The blade MUST be perpendicular to the table and the teeth of the blade should be pointing down.

Rotate the spindle pulley by hand. If further blade tension adjustment is necessary, loosen the tension housing knob, raise or lower housing, and retighten lock knob.

ADJUSTING BLADE GUIDE AND BLADE SUPPORT WHEEL—loosen the two screws on top of the guide. Adjust both wheel and guide so that the blade rubs against them LIGHTLY—positioning front of guide even with the bottom of the blade teeth (See Figure 3).

To Mount a File, remove the table insert plate, put the file in the "V" jaws of the lower chuck so that it's perpendicular to the table and tighten the chuck lock screw. The upper guide may be moved out of the way or the blade support wheel used to support the file depending upon the operation.

To Mount a Sabre Blade, remove the table insert plate, turn the lower chuck 90 degrees clockwise by removing lock screw which holds

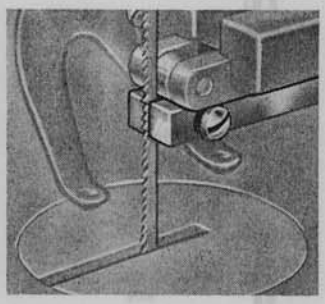


Fig. 3 Position of blade in blade guide.

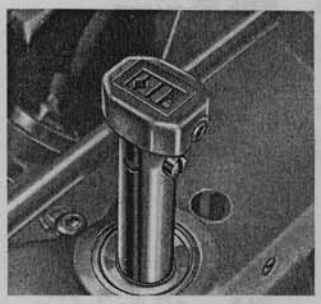


Fig. 4 Chuck in normal position

it to the lower shaft. Replace lock screw in hole in front of shaft and lock securely. Place blade in the "V" jaws of the lower chuck so that it's perpendicular to the table. Tighten the chuck lock screw.

A Sabre Blade Guide Attachment No. 4125, available, mounts on the table trunnion bracket beneath table to support the blade. The blade may be guided with both upper and lower guides, see Figure 5, or just the lower guide, depending upon the operation.

SAWING OPERATIONS

Always use the largest blade with the coarsest teeth, that will cut your stock cleanly and also cut the sharpest curve in the pattern you are following.

No set rules can be given in regards to speeds for woodcutting—it depends upon the operator's skill, and the material being cut. For most operations requiring fret saws, either of the two medium speeds are recommended. When cutting metal, use the slower speeds. When cutting plastics, use the same speeds as for wood.

The teeth of the blades used to cut wood should vary from fine to coarse depending upon the hardness and thickness of the stock and the fineness of the finish desired—the thinner and harder the wood and the finer the finish desired, the finer should be the teeth of the blade.

The thickness and width of the blade should vary with the abruptness of the contours to be cut—sharper curves require thinner, narrower blades.

Metal cutting requires fine tooth blades. Their width and thickness are governed by the same rule that applies to the selection of woodcutting blades.

The cutting of plastics requires a medium-thin blade with medium teeth.

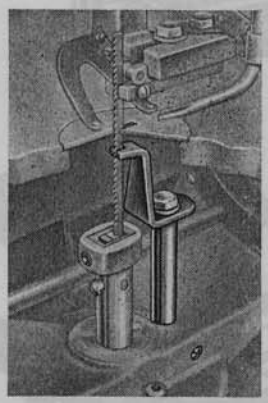


Fig. 5 Sabre blade held in V-Jaws and supported in both upper and lower guides.

When the blade has been properly mounted, adjust the blade guide so that it will support the blade and keep it running straight. Then place the hold-down against the work and lock it in position.

Cut through the waste stock when it is impossible to continue a cut—"back-out" only as a last resort, it roughens the cut.

Sabre blades are thick and wide, and are fastened in the lower chuck. See instructions under MOUNTING SAW BLADES AND FILES. The upper arm may be removed to accommodate stock larger than the capacity of the machine. To remove saw arm loosen the lock screw on rear of saw. Sabre Blade Guide No. 4125, available, mounts on the table trunnion bracket beneath table to support the blade. The faster speeds are usually used for sabre sawing.

To cut extremely large stock with the overarm in position, swivel the table 90 degrees and place the hold-down guide bar on the right side of the saw arm. Remove blade from chuck. Loosen blade tension knob, push chuck up as far as it will go and turn 90 degrees. Turn the lower chuck 90 degrees clockwise by removing the lock screw which holds it to the lower shaft. Replace lock screw in hole on front of shaft and lock securely.

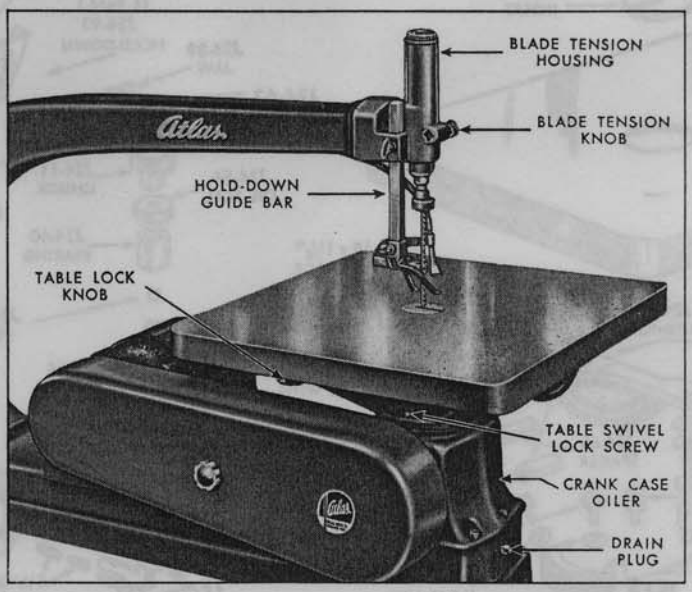


Fig. 6 Controls on the ATLAS 24" Jig Saw.

SUGGESTIONS FOR OPERATION AND MAINTENANCE

- ★ Mount the saw on a sturdy, level bench—it will help reduce vibration.
- ★ Keep the saw crankcase filled with SAE No. 30 motor oil.
- ★ Maintain proper belt tension—keep the belt just tight enough to prevent its slipping.
- ★ Use correct blade—the largest one, with the coarsest teeth, that will cut your stock cleanly and also cut the sharpest curve in your pattern.
- ★ Insert the blade correctly—teeth should point downward, blade should be in vertical alignment with the chucks.
- ★ Apply beeswax or soap to the blade when cutting metal —it helps the blade to cut freely and prevents scoring of blade.
- ★ Be sure the blade rests lightly against the blade guide and support wheel.
- ★ Keep the saw table covered with a film of oil when saw is not in use—it will keep table from rusting.
- ★ Before starting motor, turn pulley by hand to make sure proper blade and chuck clearances have been obtained.
- ★ Motor must rotate counter-clockwise facing pulley end.
- ★ Replace oil in crankcase every month if saw is used frequently; if used infrequently, once every six months will be adequate. To drain oil, remove drain plug on front of saw base.

Printed in U.S.A.

ATLAS PRESS COMPANY KALAMAZOO 13D, MICHIGAN, U.S.A.