DoALL®

INSTRUCTION MANUAL

MODEL: C-9V

SERIAL NO: 296-70101 to 296-76325

BAND SAWING MACHINE

DAMAGE CLAIM PROCEDURES

VISIBLE DAMAGE AT THE TIME OF DELIVERY:

1. Note damage on carrier's delivery receipt. Accept the shipment. It can be returned later if repairs are not possible in the field.

2. Request a "damage inspection" from the delivery carrier:

   a. The carrier will send his own people or contract an independent agency to make the inspection.

   b. The inspector will request a signature on the report and leave a copy.

   c. The carrier "damage inspection" report is not final. If additional damage is found when repairs are started, contact the carrier for another inspection; or at least give them the details of the damage.

3. Do not move the equipment from the receiving area and keep all shipping materials until carrier "damage inspection" report is complete.

4. If possible, take photographs of the damage and keep them for your files. Photos could possibly prove a claim at a later time.

5. Keep a record of all expenses and be sure they are documented.

6. Repair damage in the field whenever possible. Carriers encourage this to keep expenses down.

7. You have nine (9) months to file a claim.

CONCEALED DAMAGE:

1. You have fourteen (14) days to report damage not noted at time of delivery.

   a. Report damage as soon as possible. This makes it easier to prove that it did not happen at cosignee's plant.

   b. Inspect machine(s) carefully before moving from the receiving area. Again, if machine is not moved, it is easier to prove your case.

2. Request a "damage inspection" from the delivery carrier:

   a. The carrier will send his own people or contract an independent agency to make the inspection.

   b. The inspector will request a signature on the report and leave a copy.

   c. The carrier "damage inspection" report is not final. If additional damage is found when repairs are started, contact the carrier for another inspection; or at least give them the details of the damage.

3. Do not move the equipment from the receiving area and keep all shipping materials until carrier "damage inspection" report is complete.

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7. You have nine (9) months to file a claim.

METAL CUTTING BAND SAW
MACHINE SPECIFICATIONS

SERIAL NUMBER _____ VOLTAGE _____

INSTANTANEOUS AMPS _____ NORMAL AMPS _____

CYCLE _____ PHASE _____

SAW BAND LENGTH: 160 in. BAND WIDTH: 1 in.

For your information and future reference, pertinent data concerning your machine should be written in the spaces provided above. This information is stamped on the data plate mounted on the machine head. In any correspondence or parts orders, be sure to give the machine model and serial numbers.

PB-169 (6-70)

PRINTED IN U.S.A.

WARNING

TO AVOID POTENTIAL HAZARDS, OBSERVE THESE PRECAUTIONS WHEN OPERATING OR SERVICING THIS MACHINE-OPERATOR MUST:

READ INSTRUCTION MANUAL BEFORE OPERATING THIS MACHINE.
WEAR SAFETY GLASSES.
WEAR GLOVES WHEN HANDLING SAW BAND.
NOT WEAR GLOVES WHEN OPERATING MACHINE.
SECURELY LOCK BAND WHEEL COVER DOOR IN "UP" POSITION BEFORE WORKING UNDER IT.
CLOSE BAND WHEEL COVERS BEFORE TENSIONING BAND OR STARTING THE MACHINE.
KEEP HANDS AWAY FROM MOVING SAW BAND AND VISE AREA.
CLOSE DOORS, REPLACE PANEL COVERS AND OTHER SAFETY GUARDS BEFORE OPERATING MACHINE.
AVOID CONTACT WITH COOLANT. ESPECIALLY GUARD YOUR EYES.
STOP MACHINE BEFORE REACHING INTO CUTTING AREA.
BRING ADJUSTABLE SAW GUIDE AND GUARD AS CLOSE TO WORK AS POSSIBLE.
REMOVE LOOSE ITEMS FROM WORK AREA BEFORE OPERATING MACHINE.
REMOVE CUT-OFF PIECES CAREFULLY. KEEP HANDS AWAY FROM MOVING SAW BAND.
DISCONNECT ELECTRICAL SUPPLY BEFORE REMOVING PANELS OR DRIVE COVERS.

MAKE SAFETY THE RULE AND FOLLOW SAFE SHOP PRACTICES.
ALWAYS CONSULT THE OPERATOR'S MANUAL PRIOR TO SERVICING.

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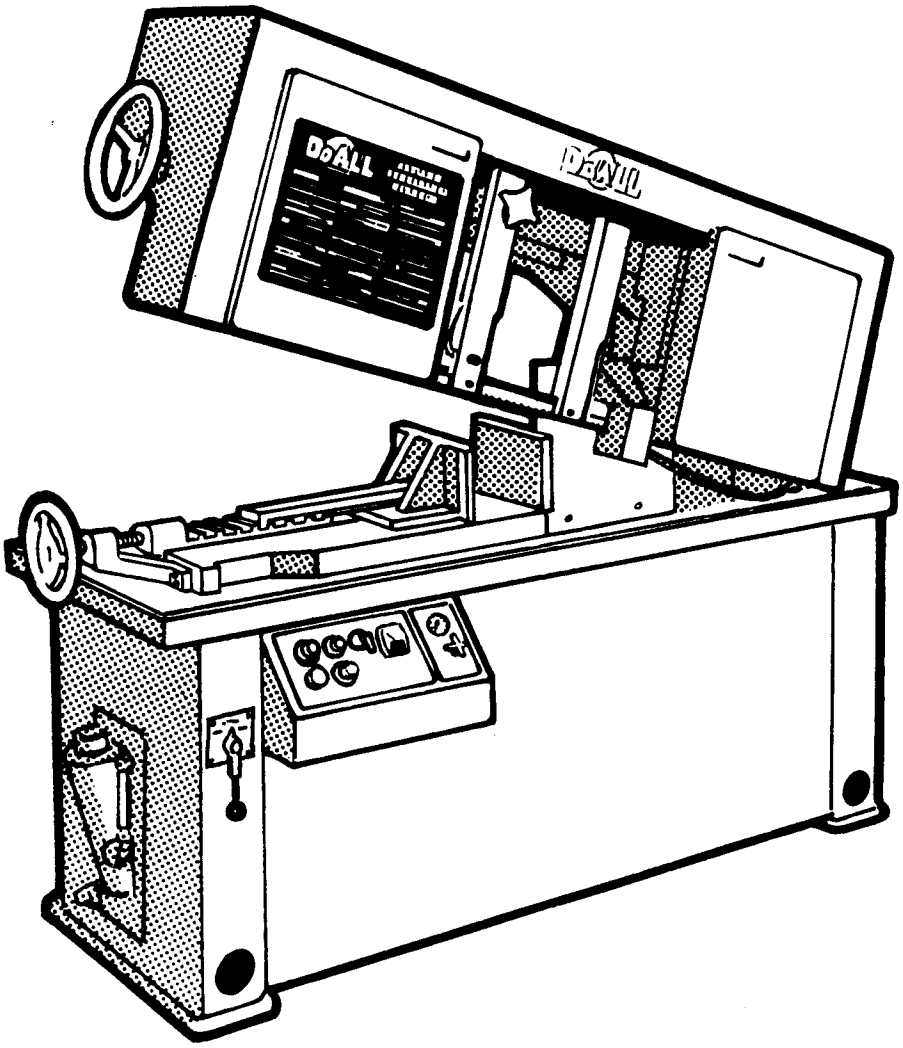
OPERATOR'S INSTRUCTION MANUAL



Metalcutting Band Saw Model C-9V

Please read this manual carefully before operating your machine.

DoALL COMPANY
254 NORTH LAUREL AVENUE
DES PLAINES, ILLINOIS 60016

TABLE OF CONTENTS

CHAPTER 1
INSTALLATION

MACHINE LOCATION

The type of work to be done will determine the proper machine placement. The machine should be placed so that work can be fed into it and removed in a minimum amount of time. Allow sufficient room for head elevation and door opening.

UNCRATING

Remove all crating carefully. Remove (save bracket for possible future use) the shipping bracket which secures the head in place.

Remove all wires which are used to secure doors, wheels, etc. Use solvent to remove the preservative grease which is placed on all bare metal surfaces. Check the machine carefully for broken or damaged parts.

LIFTING INSTRUCTIONS

A fork lift truck can be used to lift and transport the machine. Total net weight is approximately 1310 lbs. (without accessories). The machine can also be lifted by means of an overhead hoist with slings placed under the overhanging ends of the coolant drip pan at each end of the machine.

INSTALLATION ON FLOOR

Because of the rigid construction of the head and frame of this machine, it is imperative that the base be fully supported under all four mounting pads.

(1) Use shims under all four corners of the base. Level the machine and distribute weight evenly on all four corners by adding or removing shims. NOTE: For better coolant drainage, you may wish to install the machine so that it is pitched very slightly forward so that used coolant will flow to chip drawer opening.

(2) The right rear base pad has a leveling screw. Adjust the screw to prevent any "rock" and distribute weight evenly.

(3) If bolting machine to floor, be careful not to distort frame.

ELECTRICAL CONNECTIONS

Bring the leads of the line circuit to the terminals in the starter enclosure.

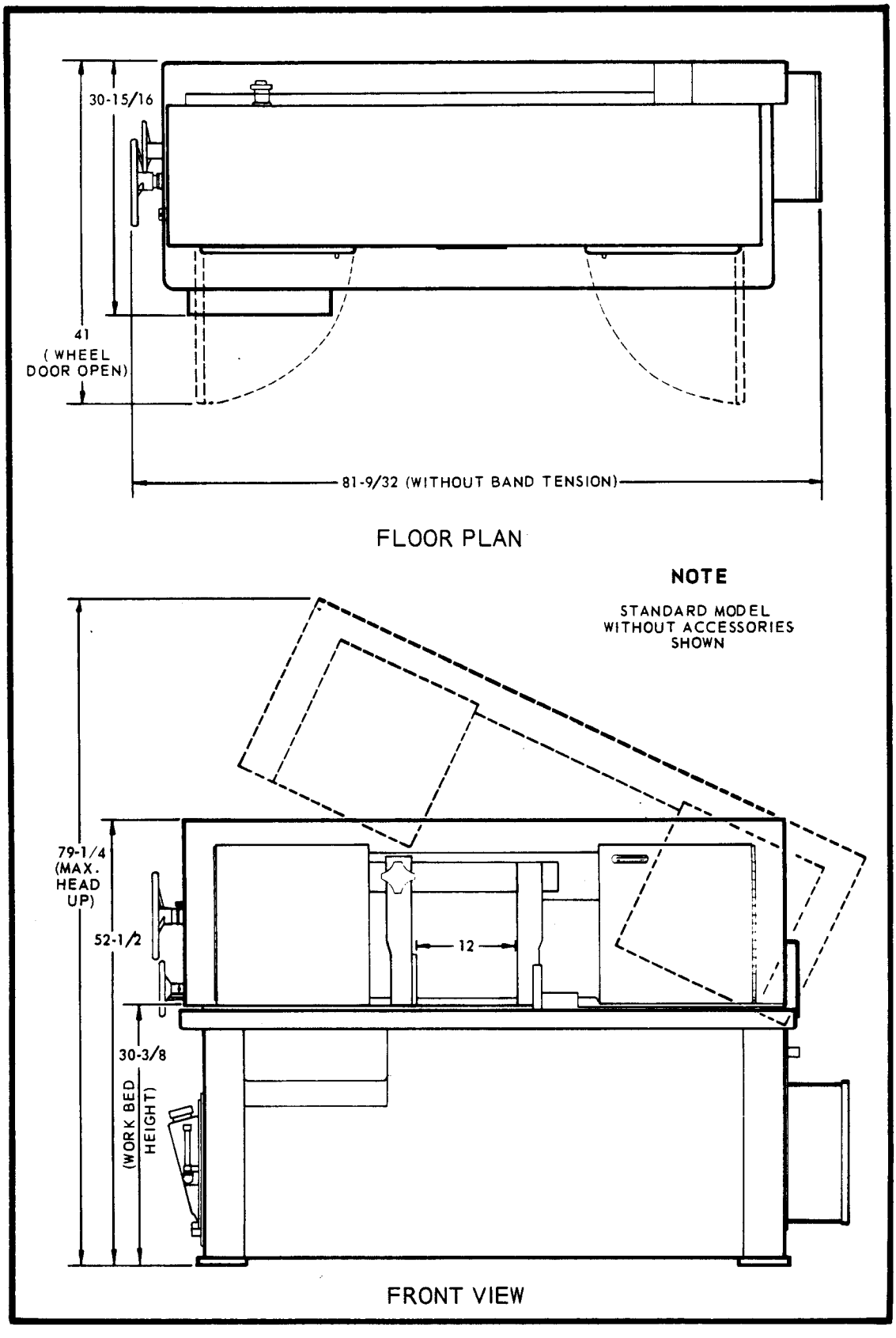
Press the start button intermittently, and open the door over the drive band wheel. Check to see if the wheel is turning in a counter-clockwise direction. If it is turning in a clockwise direction interchange any two connections on the starter.

RECOMMENDED HYDRAULIC FLUID

Hydraulic tank capacity is 12 gallons. An oil-level sight gage is provided. Use DoALL "ESL" anti wear hydraulic fluid. See Lubrication Chapter for hydraulic oil specifications.

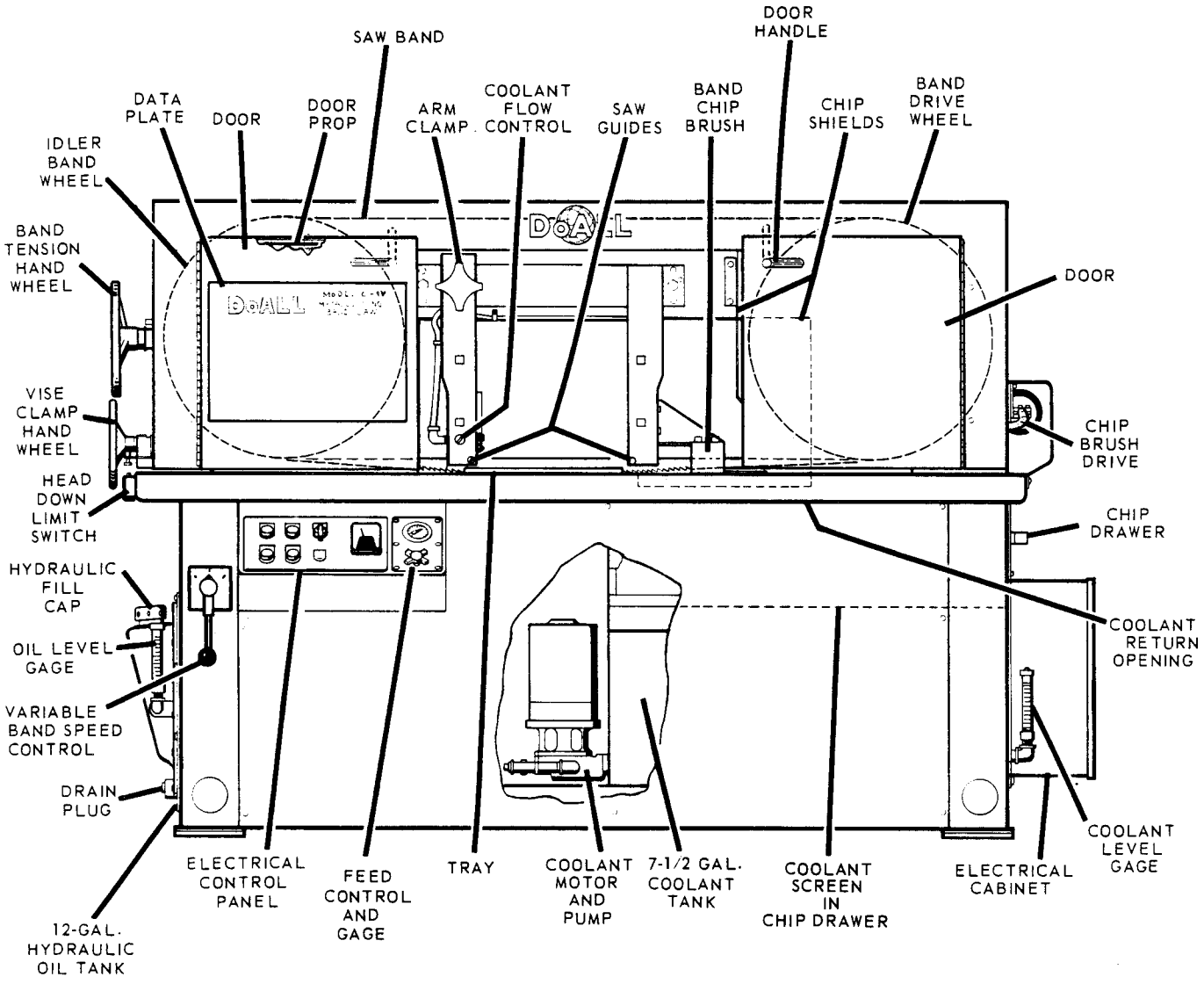
RECOMMENDED SAW BAND

The required saw band is one inch wide by 160 inches long. IMPERIAL BI-METAL and Demon saw bands made by DoALL are recommended. Dart and Carbon saw bands can also be used. Literature is available from the DoALL Company which describes these saw bands.



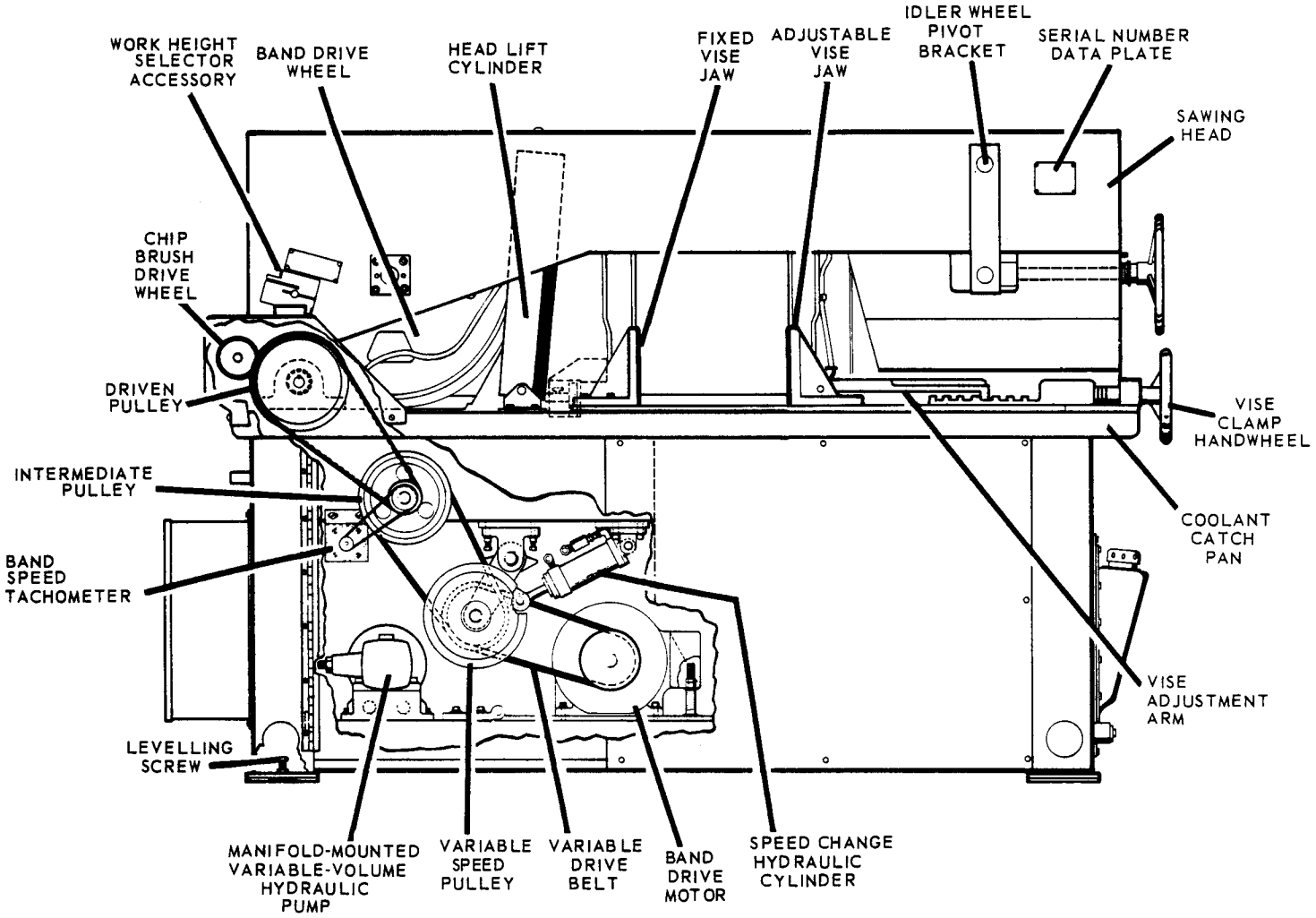
Model C-9V dimensions.

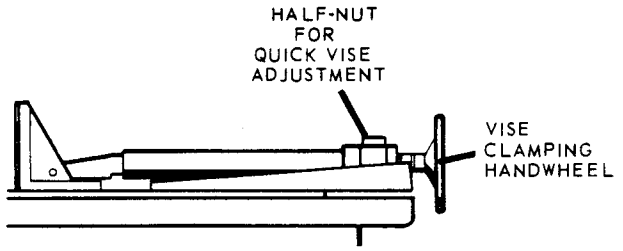
CHAPTER 2
OPERATION



Front View of Model C-9V, showing controls and features.

Features and controls of the Model C-9V-rear view.





PREVIOUS VISE CLAMP DESIGN USED HALF-NUT & SCREW FOR ADJUSTMENT.

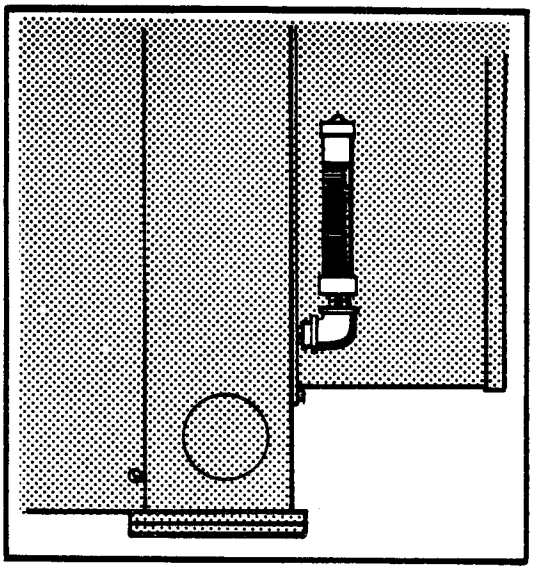
COOLANT SYSTEM

The use of the proper cutting fluid is essential to obtain the full advantage of high speed steel saw blades.

The main cause of tooth failure in band machining is excessive heat build up. This is the reason cutting fluid is so necessary to long tool life and/or high cutting rates. The cutting fluid reduces the amount of heat generated during cutting by its lubricating properties. It carries the heat away by its coolant properties.

The choice of coolant will depend upon factors such as the kind of metal to be cut, its machinability rating, and the band speed used, and the overall sawing operation. The use of one or several may provide maximum efficiency and economy. Literature is available from the DoALL Company describing all types of coolant. Your DoALL Sales Engineer is available to assist on your application.

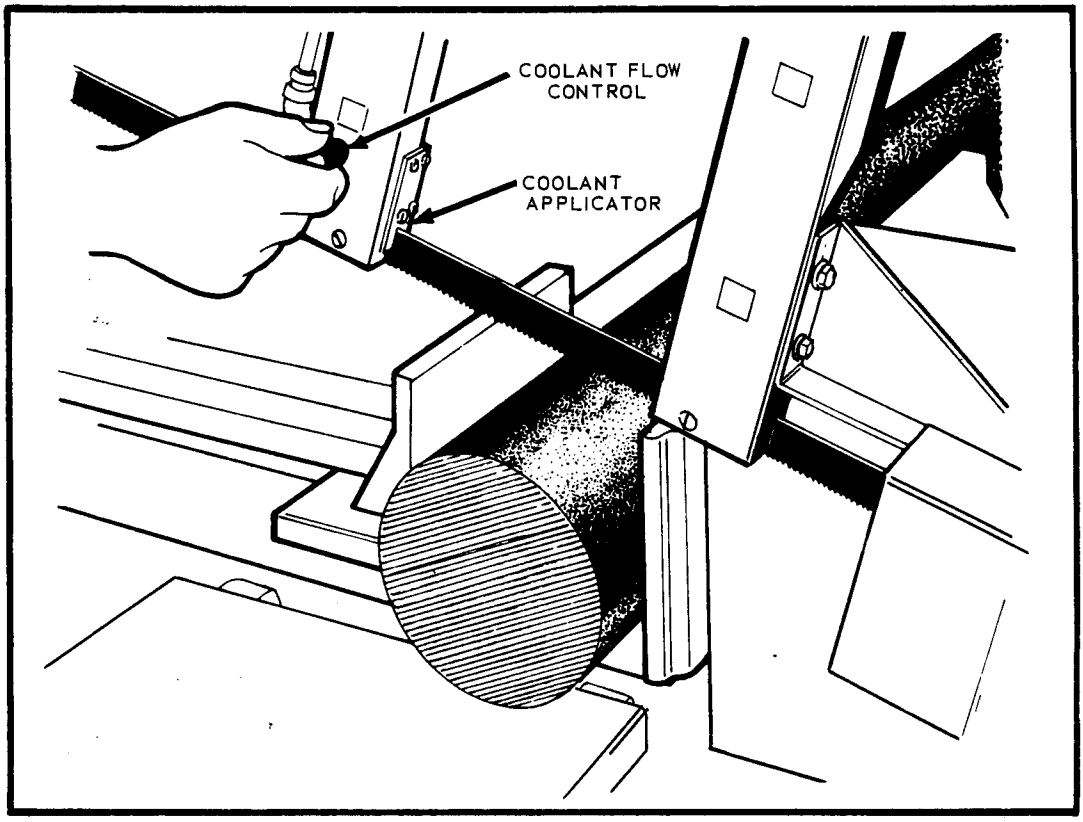
A coolant level sight gage is provided at the right-hand end of the base. Check coolant level every day before sawing.



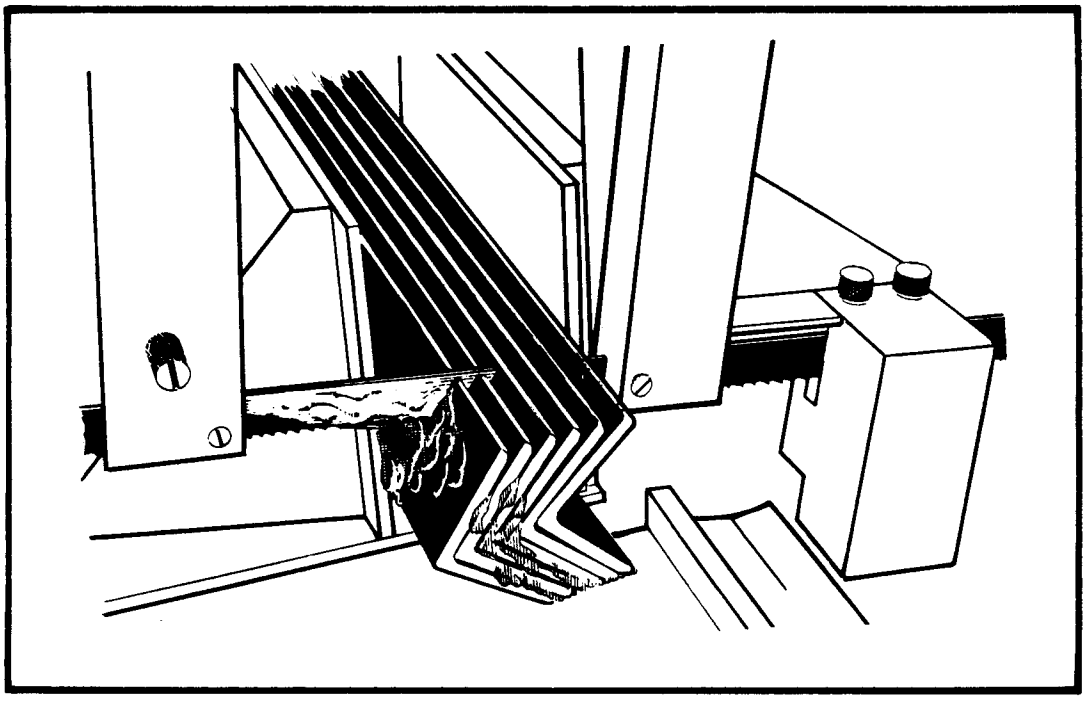
Installing Coolant. Coolant tank capacity is 7-1/2 gallons. Fill the tank slowly to avoid overflowing. A coolant level sight tube is provided (on the right-hand end of the base) to prevent overfilling the tank.

Before filling coolant tank for the first time or whenever changing type of coolant, it is recommended that the coolant system be flushed out with DoALL Kleen Flush, DoALL SOC and water.

Applying Coolant. The coolant volume control valve is located on the left-hand saw guide arm. Keep the left-hand arm as close to the work as possible. Open the coolant valve until a generous flow of coolant covers the band teeth and is carried into the cut. If the coolant does not follow the band into the cut, adjust the applicator gasket on the left-hand arm. Loosen the screws and press the gasket edges together.



Regulate coolant flow with the control valve located on the left-hand saw guide arm.



Adjust coolant control so that a generous flow of coolant covers both sides of the band and is carried into the cut, as shown here.

DRY CUTTING

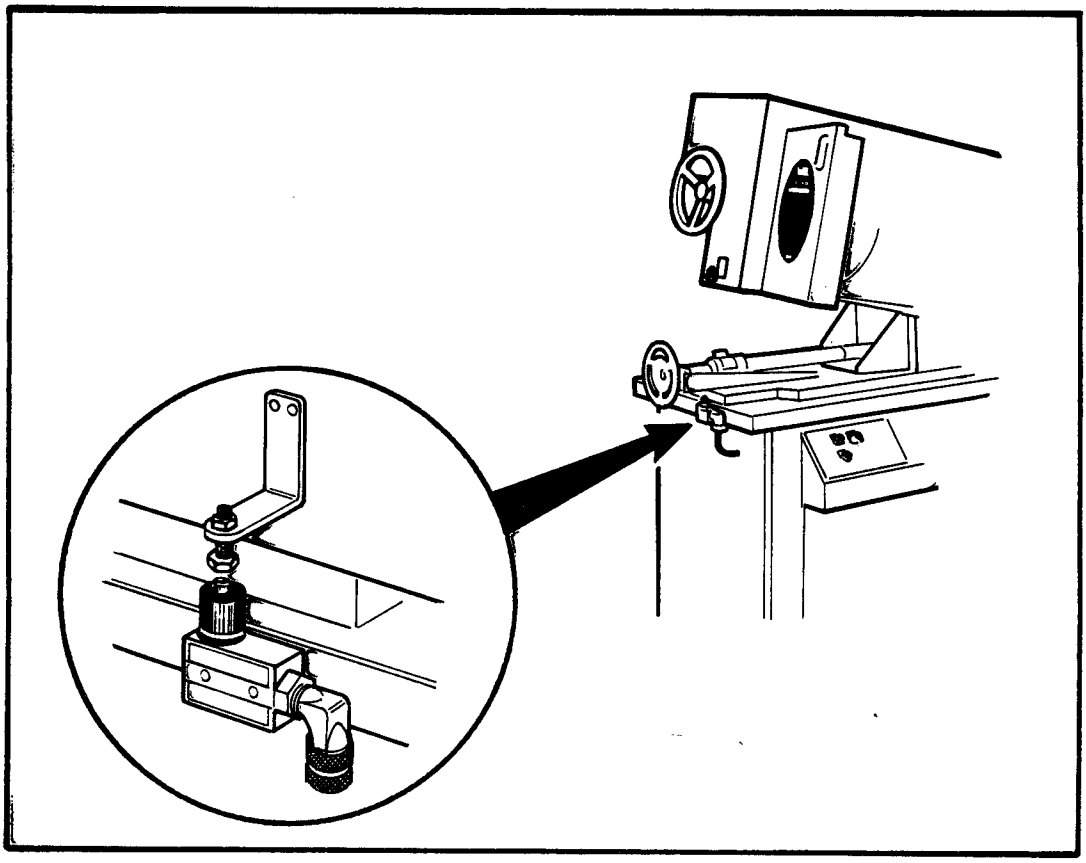
With some materials (such as cast iron, aluminum or magnesium) it is desirable to cut dry, that is, to cut without coolant flowing. The operator should follow the same control procedure as usual except that the coolant volume control should be closed. The coolant drain opening in the bottom of the chip drawer should be plugged to prevent chips from falling into the coolant tank.

CAUTION

Dry cutting will greatly reduce band life because the band is not being cooled and lubricated by coolant.

AUTOMATIC SHUT-OFF

The machine will automatically shut-off when each cut is completed and the limit switch is tripped. If automatic shut-off is not desired, adjust the limit switch contact screw on the head so that it does not trip the limit switch.



The "head down" limit switch stops the machine at the end of each cut.

DESCRIPTION OF CONTROLS

Band drive start and stop pushbuttons - These pushbuttons control the band drive motor.

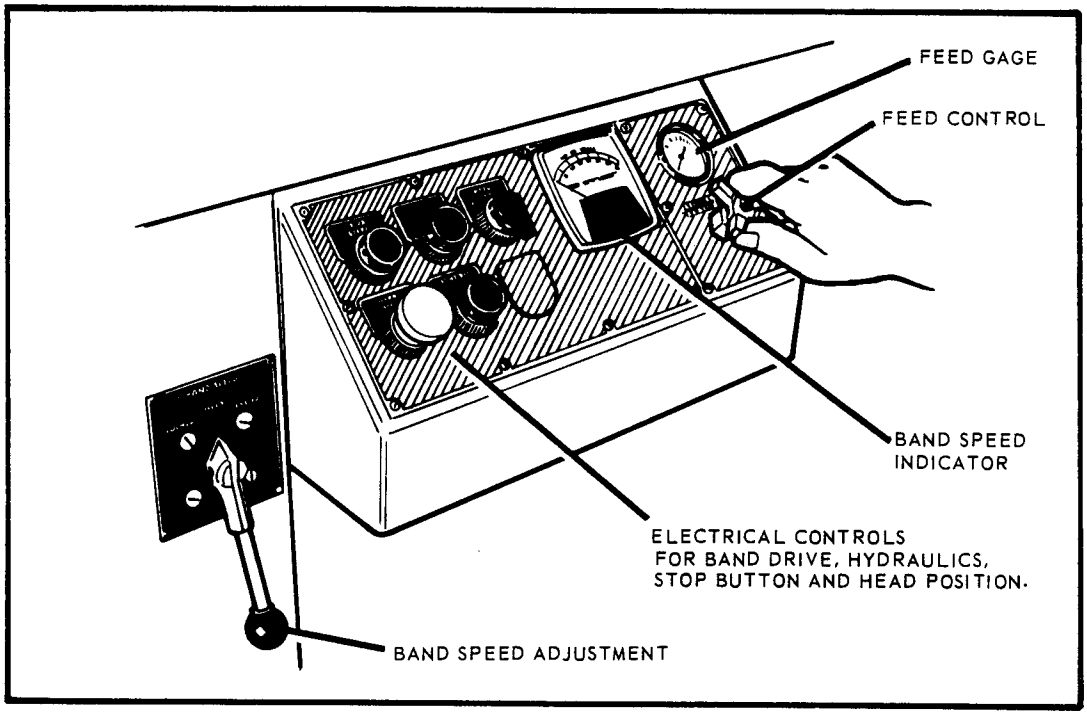
Hydraulic start pushbutton - This pushbutton starts the separate motor which powers the hydraulic pump -- it also starts the coolant pump motor.

Stop pushbutton - This large pushbutton is used to stop all motors.

Head position selector switch - This switch controls head movement and also provides a "hold" position when set at the center position.

Feed control - This is a manually-operated control valve located on the control panel. The feed gage is calibrated according to workpiece width. Please read the section titled "Feed Adjustment".

Coolant volume control - This valve is located on the left-hand saw guide arm. Turn the valve in or out to regulate coolant flow.



The control panel. Head movement is controlled with the selector switch. The feed gage is calibrated according to work size. (Standard machine shown - some machines may have different arrangement of controls).

SAW BAND INSTALLATION

(1) The sawing head should be in the slightly raised position with all motors turned off. Adjust the saw guide inserts, if necessary, so that the band can be inserted easily.

(2) Open the band wheel doors. Use the swing-out prop to hold the left-hand door open.

CAUTION: WEAR GLOVES WHENEVER HANDLING THE SAW BAND.

(3) Place the saw band over the wheels with the back of the band against the wheel flanges.

(4) Using the band tension handwheel, apply just enough tension to the band to take up slack and keep the band on the wheels.

(5) Next, grasp the band with both hands on each side of the saw guides and twist it 90 degrees so that the teeth are pointing down. Then slip the band up between the saw guide inserts. The band teeth should also, of course, point in the direction of the drive wheel.

(6) Close the band wheel doors.

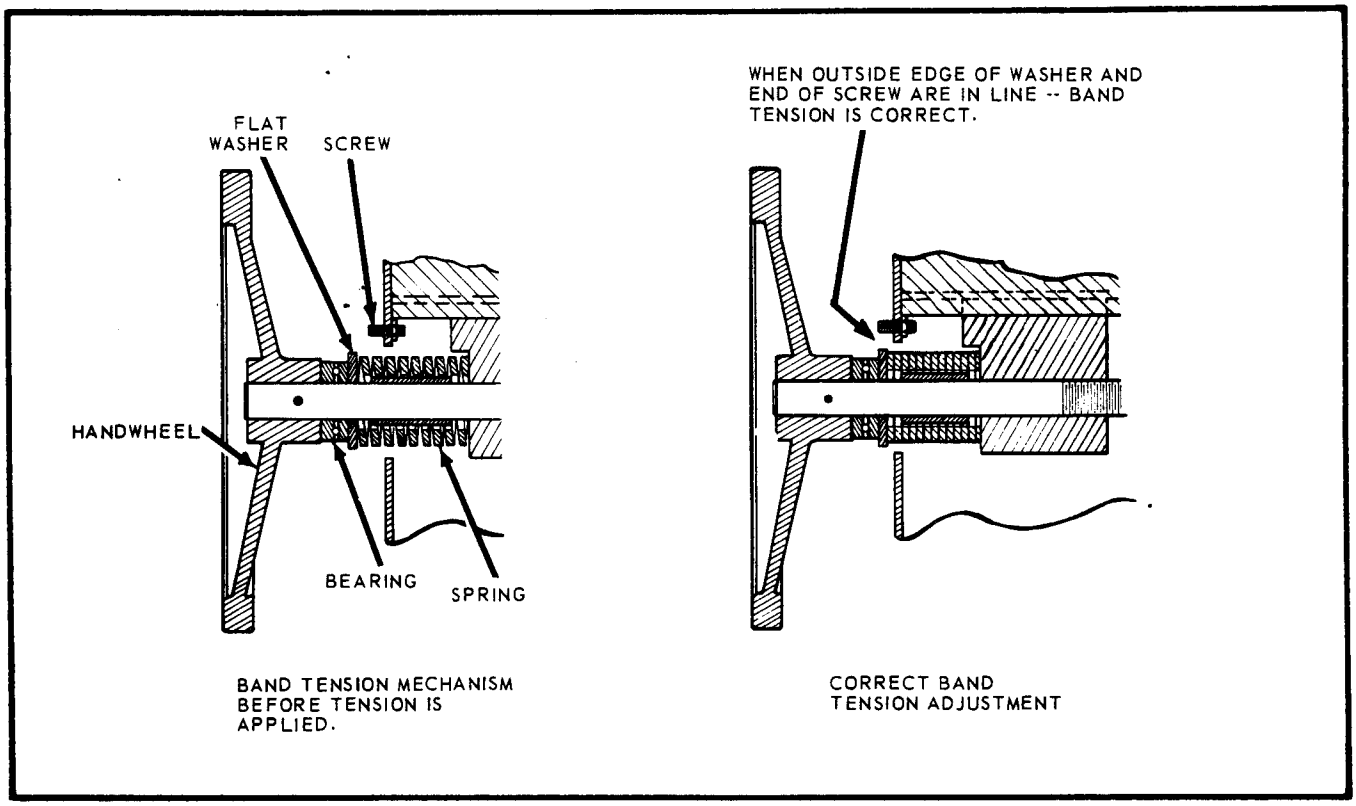
(7) Tension the band as described next.

(8) Adjust the inserts as described in a following paragraph.

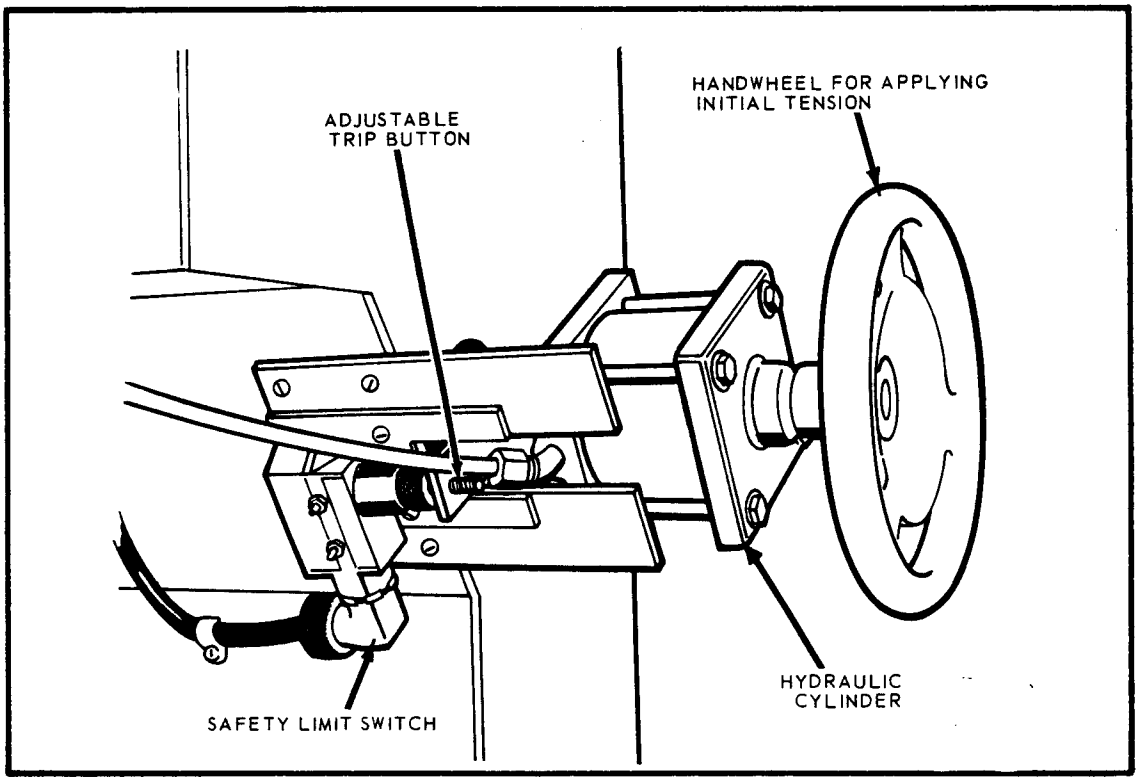
BAND TENSION ADJUSTMENT

(1) For standard machines with manual band tension:
The band is tensioned correctly for IMPERIAL BI-METAL, Dart or Demon bands by turning the band tension handwheel until the outside edge of the large flat washer next to the handwheel hub is even with the end of the small threaded screw located just above the washer. At this point the saw band is at proper tension. Note: Standard carbon bands cannot tolerate as much tensioning, therefore the correct tension adjustment should be about one-half that required for IMPERIAL BI-METAL, Dart or Demon bands.

(2) For machines with hydraulic band tension (accessory): Turn tension handwheel an additional 1/2 to 1 turn after all slack is out of band. The correct band tension for the saw band will be applied automatically by the hydraulic cylinder.
(see drawing on opposite page).



Band tension adjustment with the manual handwheel.



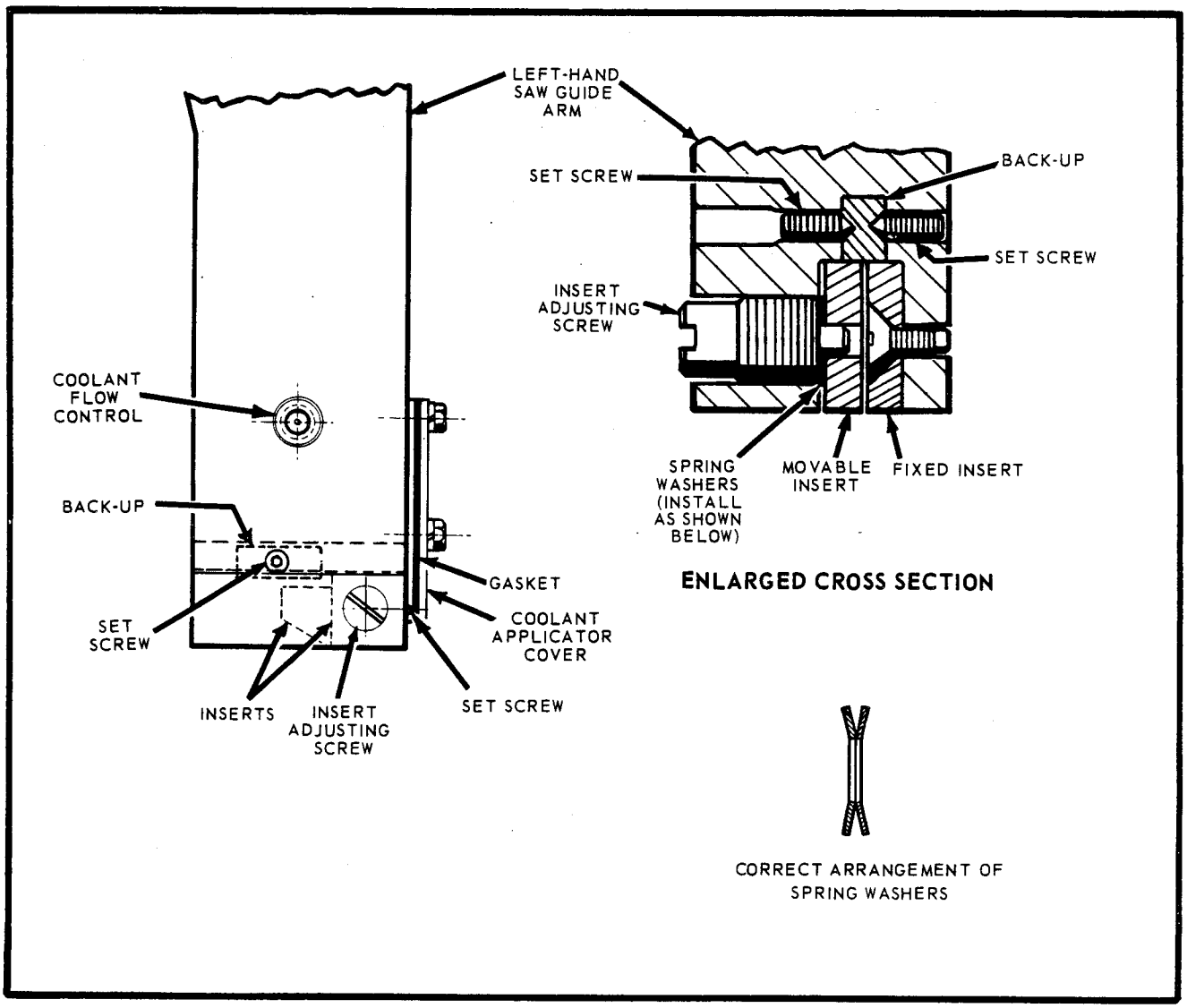
The hydraulic band tension and safety limit switch accessories.
The cylinder automatically applies the correct band tension.
The limit switch stops the machine if the band breaks.

SAW GUIDE ARM ADJUSTMENT

The right-hand saw guide arm is fixed. For different work widths, the left-hand arm is positioned on an overhead slide. To adjust, loosen the hand knob and slide the arm until it is in position adjacent to the workpiece. The left-hand guide should at all times be kept as close to the work as possible so that the band will be supported and guided properly. Make sure there is clearance between the arm and the work when the head raises.

SAW GUIDE INSERT ADJUSTMENT

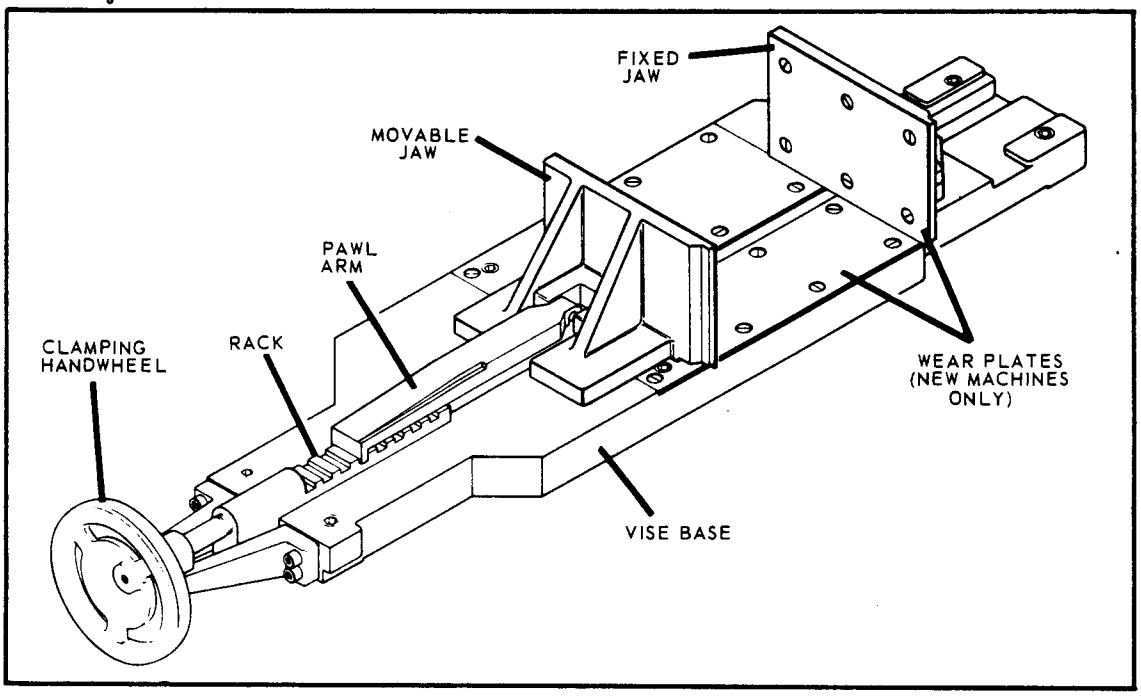
Adjust the spring-loaded, carbide saw guide inserts as follows: Turn the slotted screw in until tight against the saw band, then back off the screw slightly less than one-eighth turn.



Construction of Saw Guides.

VISE ADJUSTMENT (Current design)

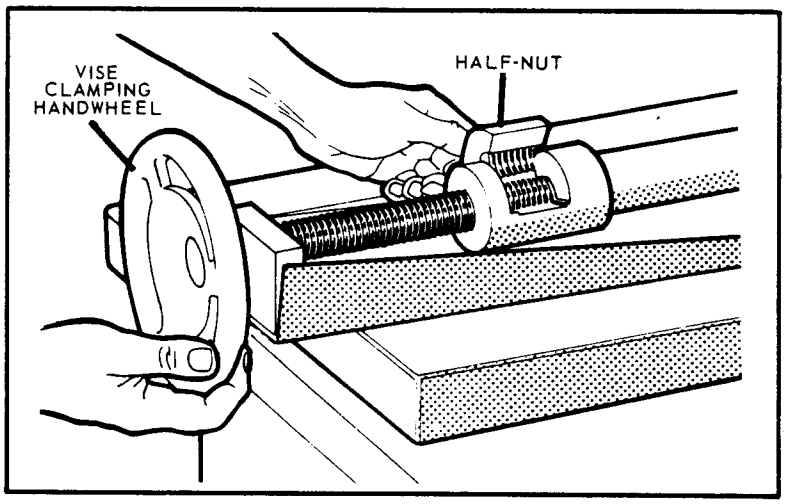
To adjust the vise jaw opening for the work width, lift up the pawl arm and slide the movable jaw up to the work. Engage the pawl in the nearest notch in the rack. Turn the handwheel to clamp the vise jaws on the work.



VISE ADJUSTMENT (Obsolete design using half-nut and screw)

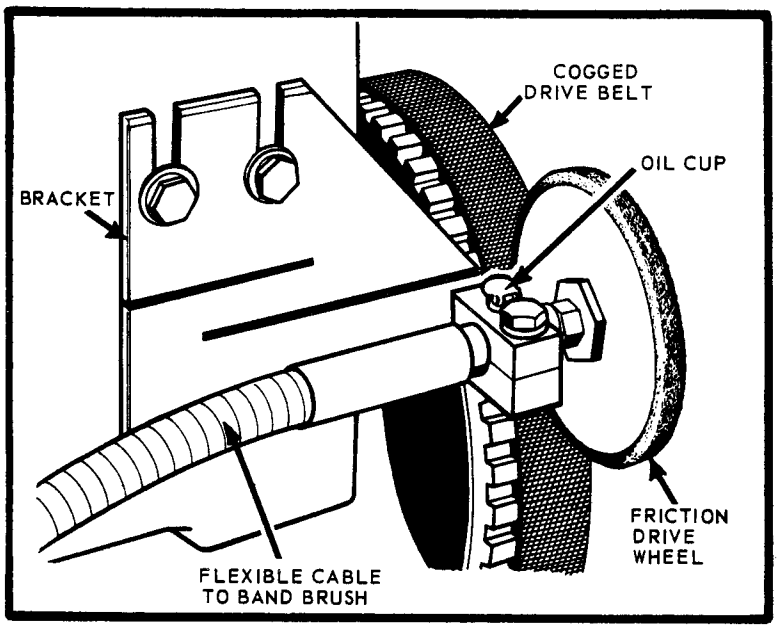
The vise is clamped by means of a handwheel which turns a long feed screw traveling through a half nut attached to the movable vise jaw. For quick-positioning of the vise, lift-up the half nut and slide the vise into position as shown below. Then lower the half nut and use the handwheel to clamp the vise on the work.

Excessive tightening of the vise handwheel should be avoided at all times. Tighten vise only enough to prevent stock movement.



For quick-positioning of the vise, lift up the half nut and slide the jaw up to the workpiece.

(OBSOLETE DESIGN)



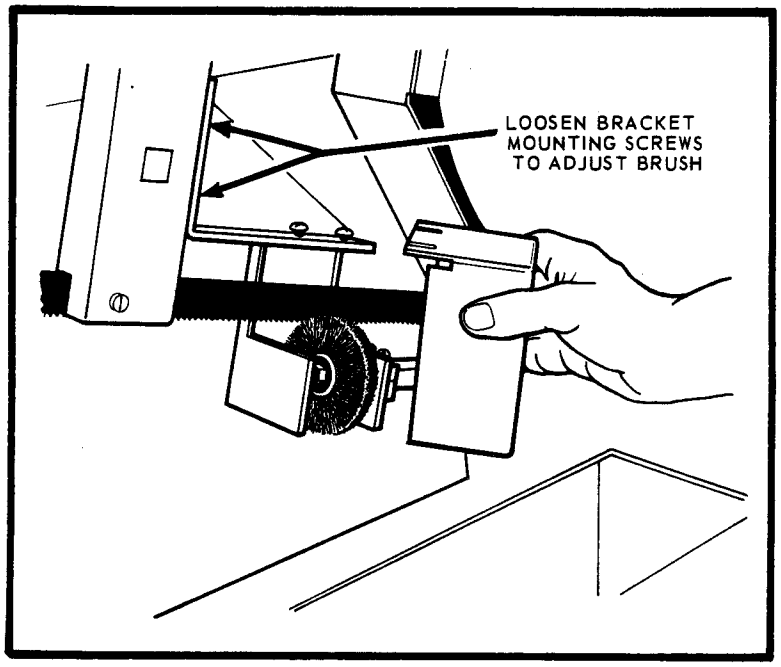
The powered band brush drive wheel.

BAND BRUSH

The band brush is driven through a flexible cable by a wheel which is driven by frictional contact with the band drive belt on the cogged pulley.

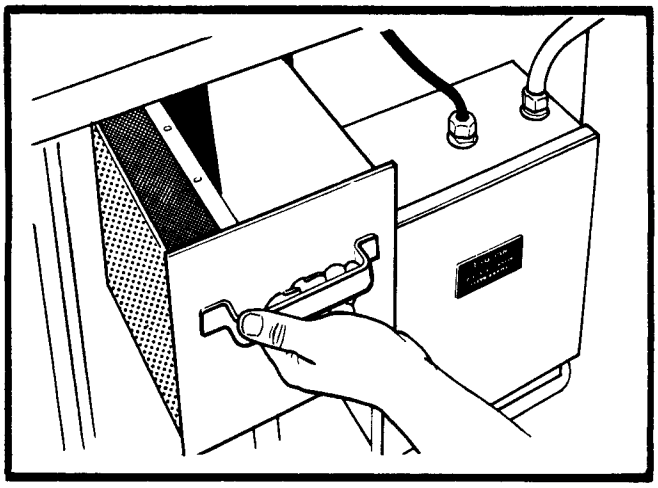
(1) Drive wheel - Adjust the wheel bracket if necessary so that the brush drive wheel is in contact with the belt, above.

(2) Brush - Adjust the brush (by loosening the bracket mounting screws and shifting the bracket, see below, so that the band teeth are cleaned of all chips.



The powered band brush.

The Chip Drawer.



CHIP REMOVAL

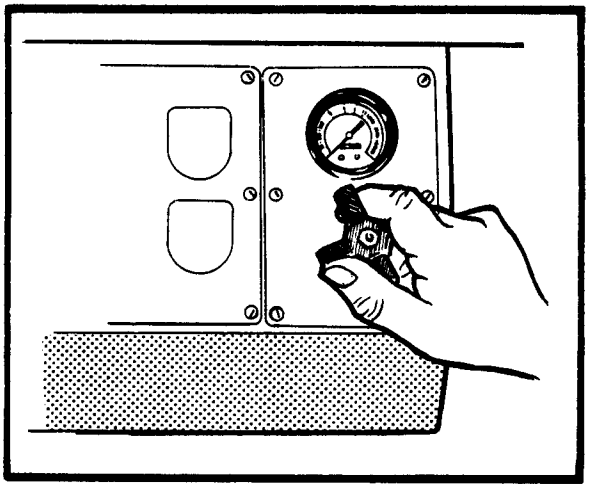
Keep the work area clear of chips. Use the accessory flushing hose, if available, to wash away chips. Use the flushing hose to clean around the idler wheel and drive wheel. Wash or scrape the chips into the opening in the coolant pan over the chip drawer. Remove the chip drawer and empty it when necessary. Whenever the drawer is emptied, be sure to clean the screen in the bottom of the drawer. When replacing the drawer, be sure to push it all the way in.

FEED ADJUSTMENT

A feed control and gage are provided on the control panel. The gage dial is calibrated to indicate the correct feed to use for each work width being cut. Feed should always be adjusted while the band is actually sawing the work. However, there are two exceptions:

(1) For some materials, such as stainless steel, it is important that the feed control be set before starting sawing. This can only be accomplished if the head is lowered all the way to the base, and the start button is held down while adjusting the feed control. If necessary, any further feed adjustment can then be made while sawing.

(2) When sawing small-diameter work, or tubing or structurals which have thin-walled sections, start with the feed pointer set at 12-inches work width and then adjust in the direction of narrower work span until a satisfactory cutting rate is achieved.

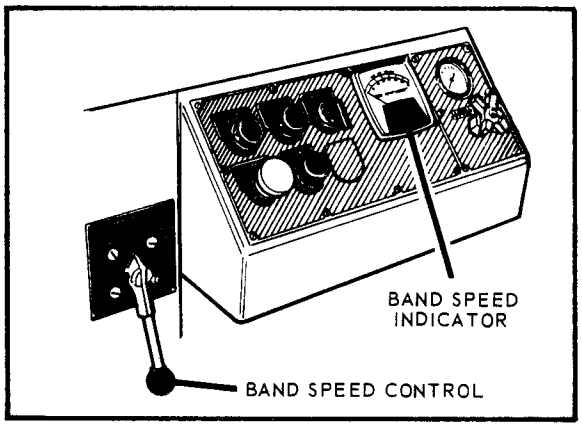


The Feed Control and Gage.

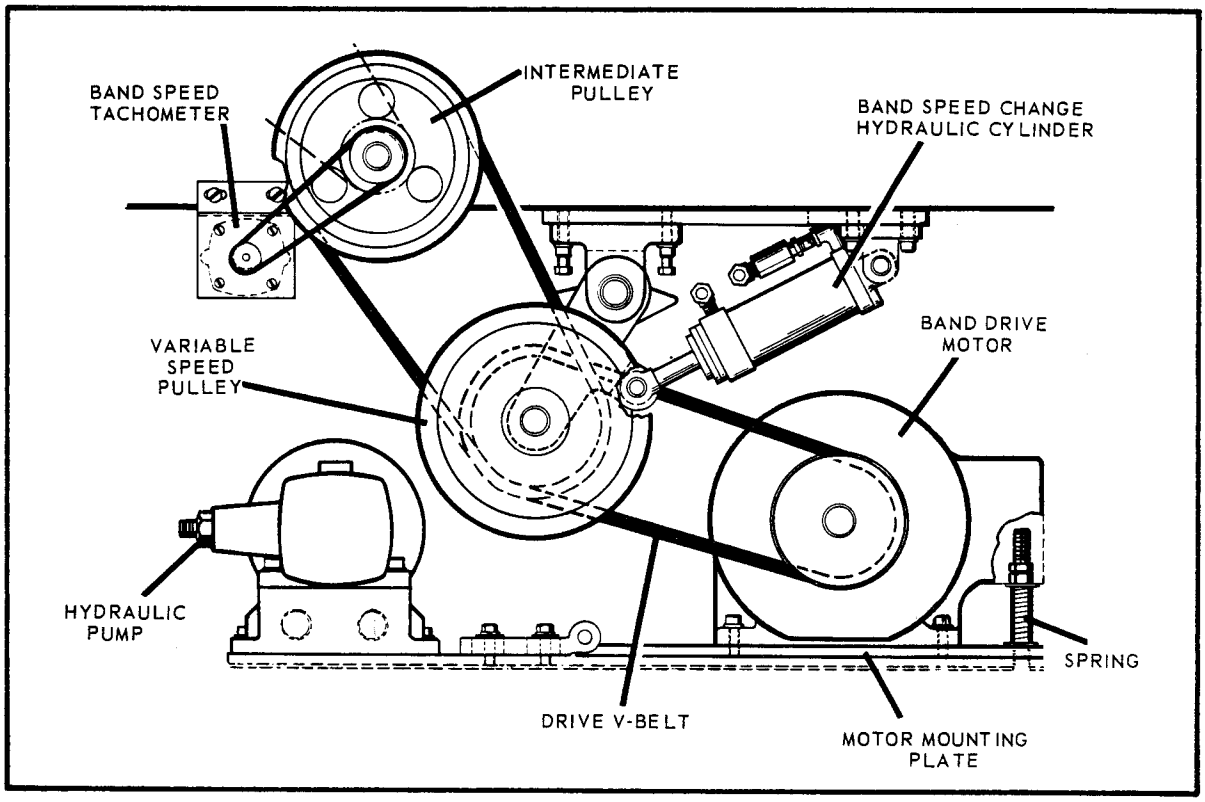
BAND SPEED CONTROL

Band speed is regulated with the control mounted at the left-hand end of the base, near the control panel. A speed indicator is located on the control panel. The control handle controls an hydraulic cylinder which positions a variable speed pulley. Speed range is infinitely variable from 80 to 400 fpm.

To increase or decrease band speed, with machine running, turn the control handle in the direction shown on the escutcheon and hold until the desired speed is shown on the speed indicator, then return the handle to the center position.



The Band Speed Controls.



Rear View of the Band Drive System.

GENERAL SAWING PROCEDURE

(1) With the saw head raised, open the vise and position the workpiece. Clamp the vise.
(2) Position the left-hand saw guide arm near the workpiece.
(3) Start the machine. Adjust band speed, if necessary.
(4) Adjust the coolant volume control until coolant covers both sides of the saw band.
(5) Turn head control to "head down" position. Then, as the band enters the work, adjust the feed control (Note the two exceptions described in "FEED ADJUSTMENT").
(6) At the end of the cut the machine will stop automatically. Remove the cut-off piece.
(7) Start machine and turn the head control to "head up". Raise the head until the band clears the workpiece, then stop the machine.
(8) Position the workpiece for the next cut.

SAFETY PRECAUTIONS

(1) Always close band wheel doors before tensioning band or starting the band in motion.

(2) Always wear safety glasses when operating the machine.

(3) Keep the drive belt enclosure in place at all times except when servicing the machine.

(4) Disconnect power supply before removing the panels covering electrical components.

(5) Always wear gloves when removing saw bands. Use rubberized gloves that will not snag on band teeth. Keep saw cap on new band until it has been installed.

(6) Never reach under a moving saw band to adjust stock or vise jaws.

(7) Never attempt to adjust workpiece while machine is operating.

(8) Remove cut-off pieces carefully. Keep hands away from moving saw band (especially if wearing gloves which could snag on teeth).

CHAPTER 3
LUBRICATION

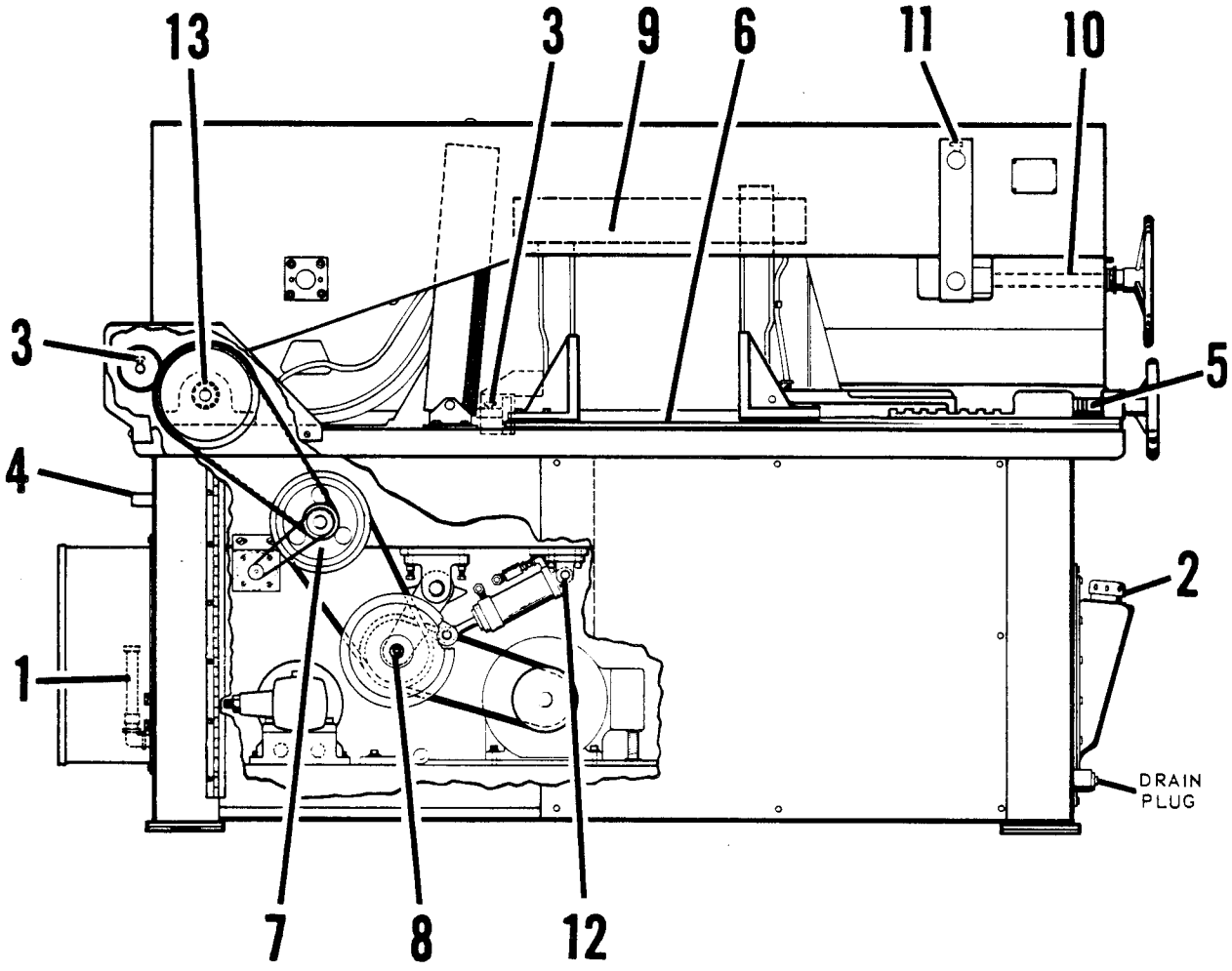
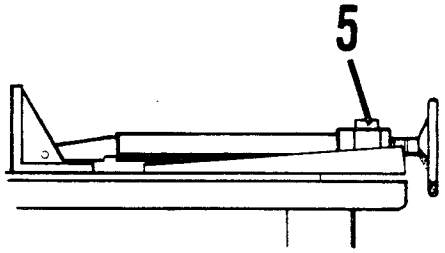


Diagram of Lubrication and Service Locations.
(Rear View of Standard Machine shown).



PREVIOUS DESIGN OF VISE CLAMP.
(APPLY OIL TO HALF NUT AND SCREW)

LUBRICATION CHART

INDEX NO. (See diagram)	INTERVAL	LOCATION and HOW SERVICED	LUBRICANT
1	Check level daily	Coolant Tank - Coolant level tube on right-hand end of base.	Use DoALL coolant Capacity: 7-1/2 Gal.
2	Check hydraulic oil level daily	Hydraulic tank - Drain tank and refill after 1st week, thereafter every 4 months. (If machine has oil filter, change filter when changing oil).	*Use DoALL hydraulic fluid. Capacity: 12 gallons.
3	Oil daily	Chip brush - Oil cup located on each end ofshaft.	SAE #20 oil.
4	Clean when necessary	Chip drawer and screen - Remove drawer and clean out. Clean screen in drawer. Clean coolant tank intake screen when necessary.	
5	Monthly	Vise adjustment screw - Oil lightly.	SAE #20 oil.
6	When necessary	Vise slide - Oil moving parts.	SAE #20 oil.
7	Monthly	Intermediate shaft bearings - Two bearings with grease fittings. Remove chip drawer to service front bearing.	High temp. E.P. #2 grease.
8	Weekly	Variable Speed Pulley - Oil cup in end of shaft.	SAE #10 oil.
9	When necessary	Saw guide arm slide - Apply grease to slide.	General Purpose cup grease #2.
10	Monthly	Band tension screw - Apply grease to screw.	
11	3 Months	Idler wheel yoke - Pivot shaft bearing oil cup.	SAE #20 oil.
12	3 Months	Miscellaneous - Door hinges, pivot points, etc.	
13	6 Months	Drive Band Wheel - Clean and apply grease to drive wheel ring gear and pinion teeth.	Waterproof E.P. grade #2 grease.

NOTE: Lubrication intervals based on 8 hr. day, service more often if machine is operated more than 8 hrs. per day.

*RECOMMENDED HYDRAULIC FLUID

The recommended hydraulic fluid is DoALL "ESL" Anti-wear, rust and oxidation inhibited, hydraulic fluid. Viscosity: approximately 217 SUS at 100 F.

CAUTION

THE SEALS AND CUPS USED IN DoALL HYDRAULIC SYSTEMS ARE COMPATIBLE ONLY WITH HYDRAULIC OIL HAVING AN ANILINE POINT BETWEEN 215°F. AND 230°F. IF HYDRAULIC OIL IS USED WHICH HAS AN ANILINE POINT NOT FALLING WITHIN THIS RANGE, THE SEALS MAY EITHER SWELL OR SHRINK AND HARDEN, CAUSING MACHINE MALFUNCTIONS, AND LEAKAGE. DoALL HYDRAULIC OIL WILL NOT CAUSE DETERIORATION OF COMPONENT SEALS.

CHAPTER 4
MAINTENANCE

SAW GUIDE INSERT REPLACEMENT

(1) Loosen set screw, then remove insert adjusting screw.

(2) The movable, spring-loaded inserts can then be removed. Do not lose the spring washers which are located between the insert and the adjusting screw.

(3) The fixed insert is held in place by a flat head screw. Remove the screw and insert.

(4) Clean the new inserts and saw guide body carefully before replacing the inserts.

CORRECT ARRANGEMENT OF SPRING WASHERS

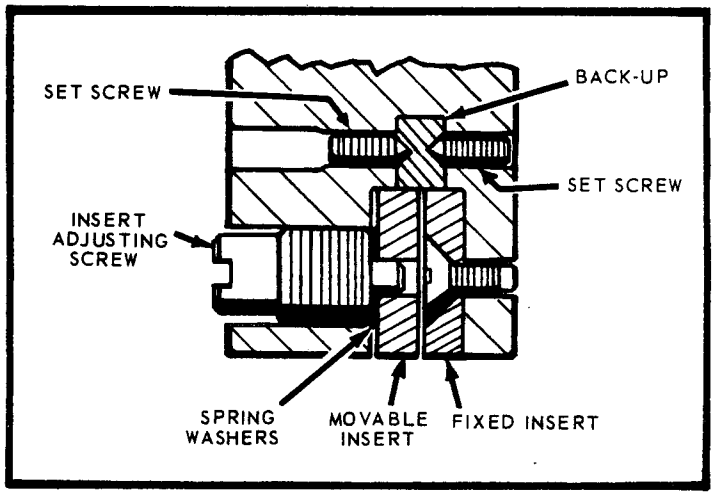
(5) Make sure that the spring washers are installed exactly in the same position as before. Install the fixed insert first, then the movable insert, spring washers and adjusting screw.

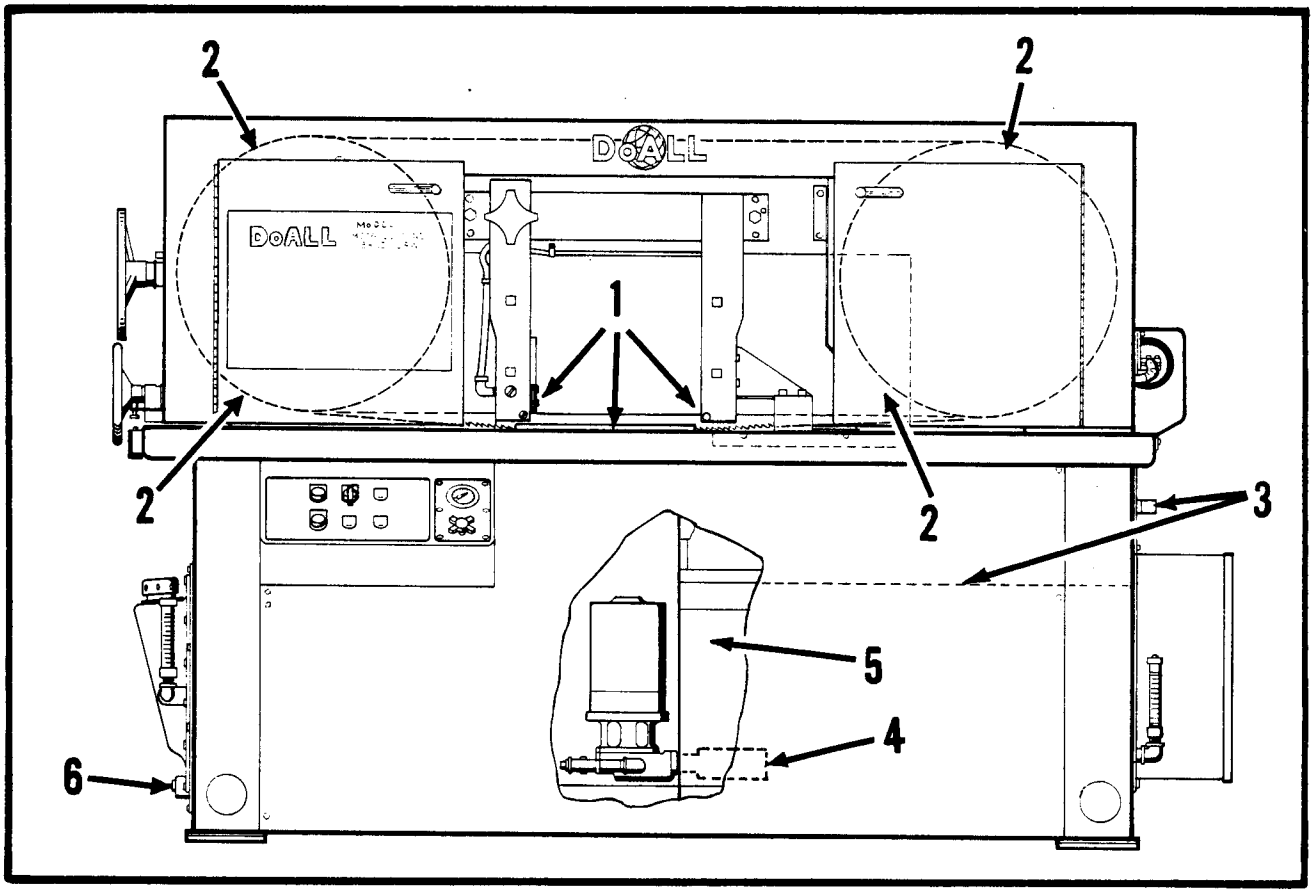
SAW GUIDE BACK-UP REPLACEMENT

Check the saw guide back-ups periodically for wear or damage. A worn back-up may damage the back edge of the saw band. As shown in the drawing, the back-up is held in place with two set screws. The screws are not tightened, however: they are backed off enough to allow the back-up to pivot slightly. This pivoting feature allows the back-up to provide full-length back-up support to the band even when it deflects slightly under sawing loads.

The back-up is reversible: if one face is worn, it can be turned over to use the opposite face.

Cross-section of the Saw Guide.





Cleaning locations - numbers refer to items listed below.

CLEANING

Periodically the working areas of the machine should be cleaned of chips. Pay special attention to the following areas:

(1) Saw Guides and surrounding areas. Keep saw guides and surrounding areas clean. Prevent chips from building up between guides and base or discharge tray. Use the chip flushing hose (if available) for clean up.

(2) Band wheels and surrounding areas. Before installing a new band, wipe chips from the band wheel rim and other areas inside the doors where chips may build up.

(3) Chip drawer. The chip drawer and its bottom screen should be removed and cleaned when necessary.

(4) Coolant pump intake screen. Clean when clogged with chips.

(5) Coolant tank. Clean tank when dirty or if changing type of coolant. In order to remove the coolant tank for cleaning, it is necessary to first remove the panel covering the front of the machine base. Capacity: 7-1/2 gallons.

(6) Hydraulic tank. Drain the hydraulic tank after first week, thereafter every four months. Capacity: 12 gallons.

BAND WHEELS

Every six months, remove the band wheels and clean the area around each wheel and the wheel itself. Clean the drive wheel ring gear and pinion. Then apply waterproof E.P. grease grade #2 to the gear teeth. Install the wheels.

BLEEDING HYDRAULIC HEAD LIFT CYLINDER

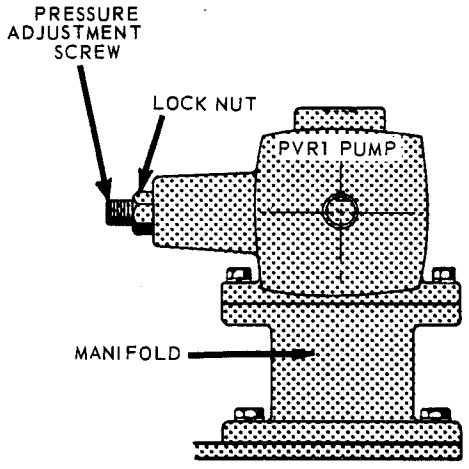
(1) Remove plug button on top of head.

(2) Unscrew socket head pipe plug in top of head lift cylinder no more than 1 turn. (CAUTION: Unscrew plug only enough to release air. Injury or damage may result if the plug is unscrewed more than 1 turn.) Bleed off air only as head is lowering. Tighten plug and replace plug button.

ADJUSTING HYDRAULIC SYSTEM PRESSURE

Hydraulic system pressure is determined by the setting of the hydraulic pump. The pump is correctly set at the factory and should not normally require adjustment for a considerable period of time.

If the pump requires adjustment, please consult the hydraulic schematic furnished with the machine.



An adjusting screw, extending from the center of the cap on the side of the pump, is used to adjust pump pressure. Loosen the lock nut before turning the pressure adjusting screw. Pressure settings should always be made with the pump in the "no-flow" condition (all circuits blocked so that no usuable oil is flowing from the pump).

CHAPTER 5
TROUBLE SHOOTING

The following is a partial list of troubles that may arise in the operation of your machine. Refer to the hydraulic and electrical schematics furnished with the machine.

MACHINE WILL NOT START:

(1) Check main fuses, wiring and control circuit fuse.
(2) Check reset on band drive motor starter located in the electrical cabinet. Starting and stopping the machine a number of times in quick succession or an overload will trip the starter heater. After locating and correcting the trouble, push in the reset button.
(3) Broken drive belt.
(4) Mechanical jamming.
(5) Broken saw band has tripped band tension safety limit switch (Accy.).
(6) Saw band too long or not pre-tensioned before applying hydraulic band tension.

SLUGGISH OPERATION OF HYDRAULIC COMPONENTS:

(1) Check for low hydraulic system pressure.
(2) Check for low hydraulic oil level.
(3) Check for air in system.
(4) Check hydraulic pump.

SAW BAND VIBRATION (while sawing):

(1) Incorrect band speed for material.
(2) Incorrect choice of saw band pitch.
(3) Incorrect choice of coolant.
(4) Try changing feed control setting slightly.
(5) Work piece not firmly clamped in vise.
(6) Worn or improperly adjusted saw guide inserts.
(7) Worn saw guide backup.

NOTE: It is strongly recommended that repair and adjustment procedures should be performed only by experienced maintenance personnel or your local DoALL Serviceman who has been factory-trained in the repair and service of DoALL Power Saws.

BAND STALLS IN WORK:

(1) Try adjusting feed control in the direction of wider work span.
(2) Not enough teeth per inch (pitch of blade) contacting work. Replace band with one having higher pitch; at least three teeth should be in work at all times.

HIGH FREQUENCY SQUEAL DURING SAWING:

(1) Try adjusting feed control in the direction of narrower work span.
(2) Not enough coolant, adjust coolant flow.
(3) Too many teeth per inch (pitch) for work size. For larger pieces, lower pitch can be used.

CUT IS NOT COMPLETED:

(1) Chips may have built up under saw guides.

NO COOLANT FLOW:

(1) Chips may have clogged hoses, control valve, screen, etc.
(2) Coolant pump failure, remove pump and return to factory.

SAW HEAD LOWERS ERRATICALLY:

(1) Mechanical obstructions or binding.
(2) Air in cylinder or lines. Bleed as described in Maintenance Chapter.
(3) Damaged head lift cylinder.

HEAD DROPS SLOWLY WHEN MACHINE IS SHUT OFF:

(1) Check for leakage in lines or fittings.
(2) Head lift cylinder worn or damaged.

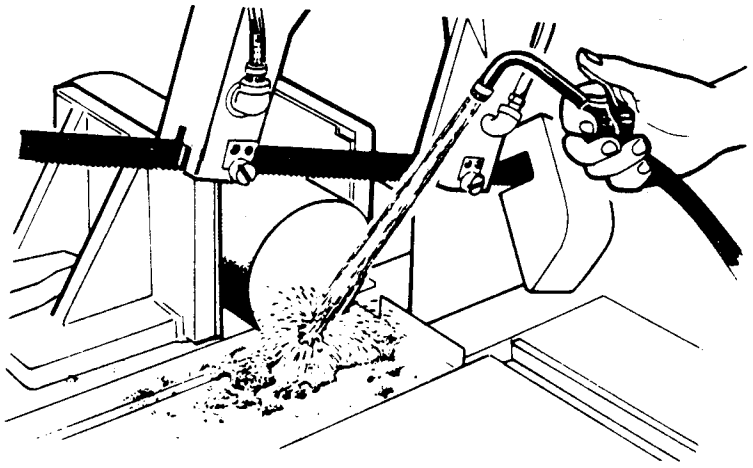
INACCURATE SAWING (pieces are either cut thicker at top or bottom or at one side or the other):

(1) Saw guide inserts are loose.
(2) Saw guide inserts are worn.
(3) Worn saw band will lead to one side as it cuts.
(4) Try adjusting feed control in the direction of wider work span.
(5) Work piece not clamped tightly.
(6) Left-hand saw guide arm not positioned close enough to workpiece.

CHAPTER 6
ACCESSORIES

CHIP FLUSHING HOSE

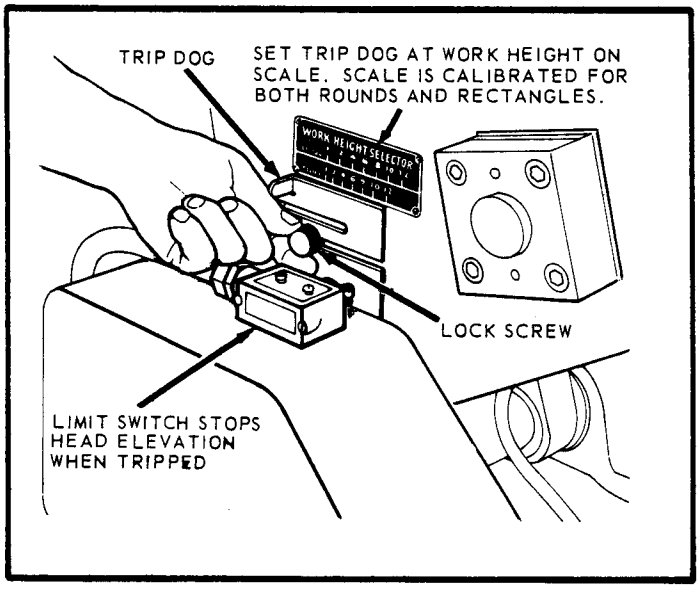
This is a convenient accessory consisting of a hose and hand valve attached to the coolant pump. Use the hose to wash chips away from the sawing area and workpiece.



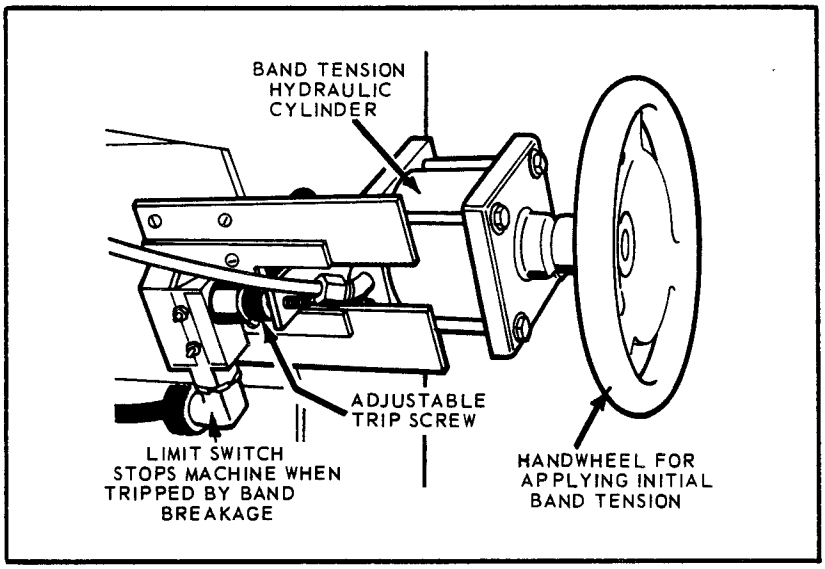
The Chip flushing hose and spray valve.

HEAD ELEVATION LIMIT SWITCH (Work Height Selector)

This accessory, below, consists of a limit switch and an adjustable trip dog. The switch functions as a work height selector, automatically stopping the raising of the head when the band has cleared the workpiece. A scale is provided for accurate setting.



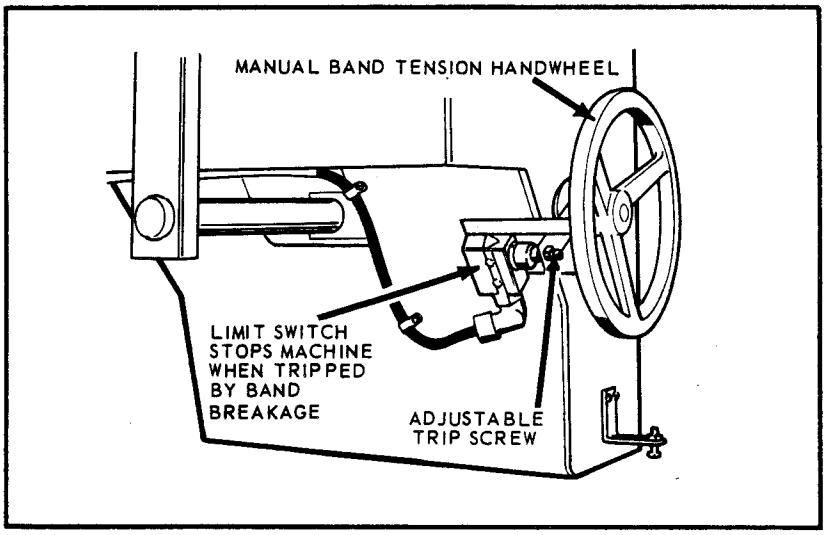
Adjust the head elevation limit switch for the work height.



Hydraulic band tension and safety limit switch.

AUTOMATIC HYDRAULIC BAND TENSION

This modification (shown above) consists of a hydraulic cylinder which is factory set to automatically provide the correct band tension for DoALL saw bands.



The band tension safety limit switch.

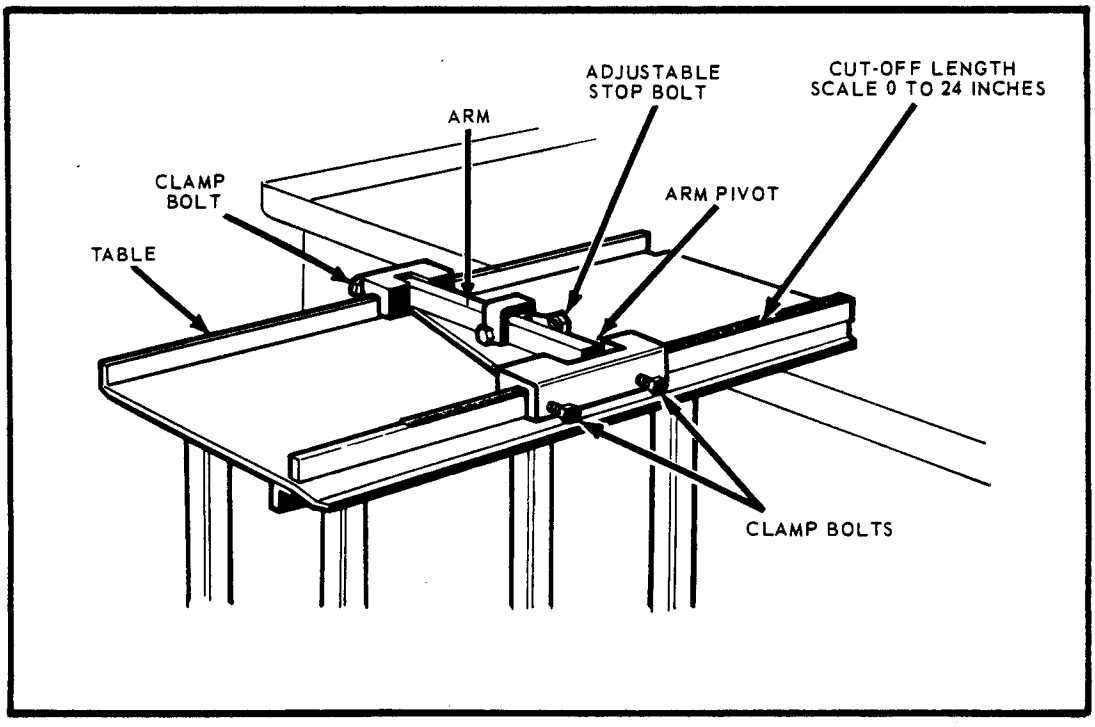
AUTOMATIC SHUT-OFF WITH BAND BREAKAGE

This is an optional safety device. If the band should break, a limit switch (above) located next to the band tension handwheel or cylinder will be tripped, stopping the machine. The limit switch tripping button is adjustable.

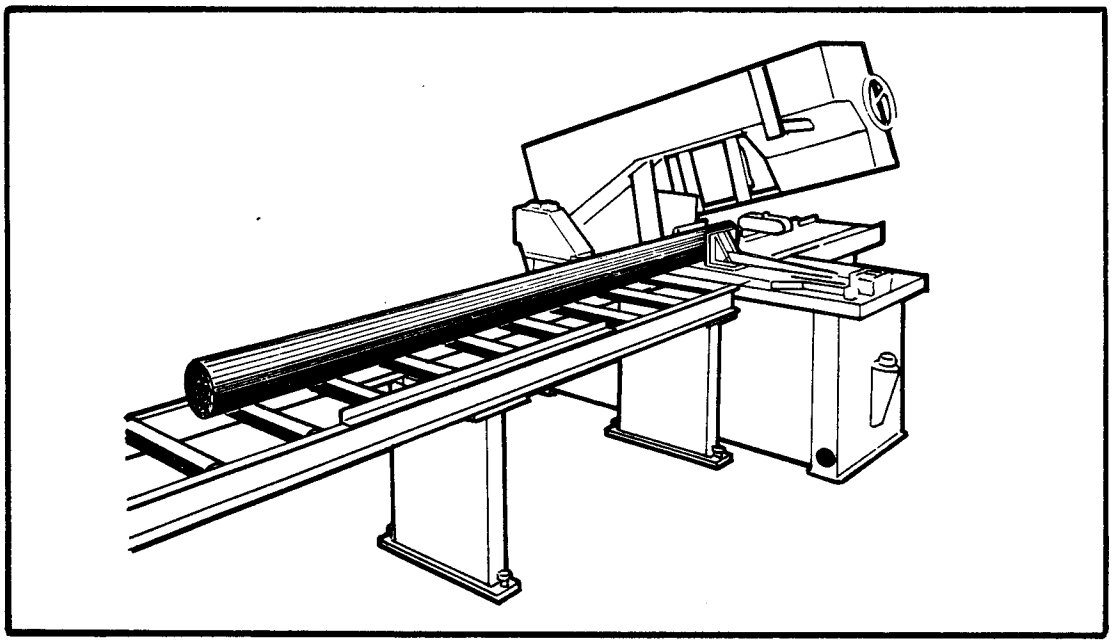
UNLOADING TABLE AND WORK STOP

The unloading table is attached to the machine in place of the standard discharge tray. Two holes are provided in the vise bed for attaching the table. Shims will probably be required between the table and vise bed in order to position the table properly. Adjust the four leveling screws and shim as required so that the table work surface is slightly below the vise bed and also sloped slightly toward the machine (for proper coolant drainage).

Position the work stop at the approximate cut-off length as shown in the drawing. Lock the work stop in place by tightening the clamp bolts on the two brackets. The final, fine length adjustment can then be made with the stop bolt on the arm. The stop, of course, should be positioned along the arm so that it will contact the workpiece. Note that the work stop arm can be swung up out of the way without changing the cut-off length adjustment.



Unloading Table and Work Stop.



The Idler Roller Stock Table.

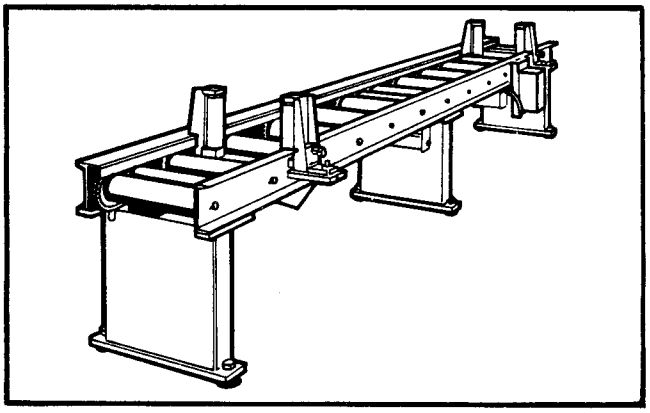
IDLER ROLLER STOCK TABLES

The roller stock tables are 18 in. wide and either 5 ft. or 10 ft. long. Vertical guide fences are provided at each side of the table. The conveyor foot levelling screws should be adjusted so that the rollers are in the same plane as the vise bed. The roller stock tables can be mounted on either the feed or discharge side of the machine.

MOTORIZED CONVEYOR TABLE

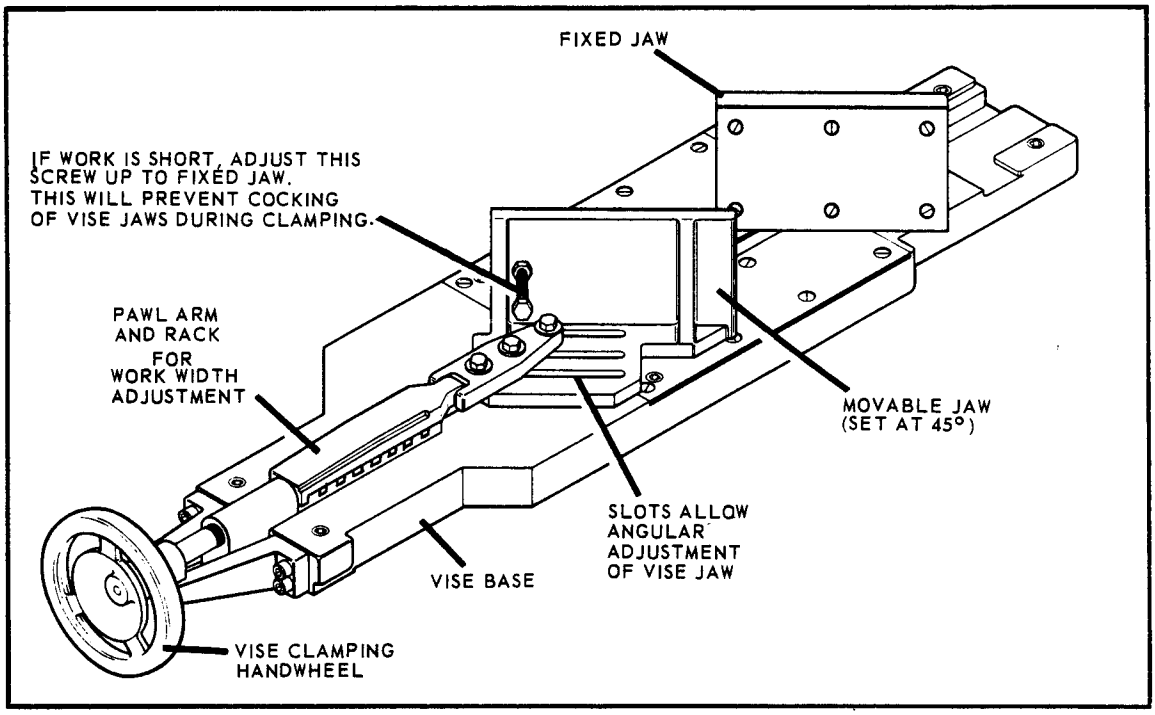
The 10 ft. long motorized stock table has ten 2-1/2 inch diameter rollers. The rollers are powered by an electric motor and gear reduction unit which drives a chain and sprocket system. Stock feed is controlled by means of a selector switch. Four vertical guide rollers are provided on the sides of the table.

Motorized Conveyor.



SWIVEL VISE JAWS (Manually or Hydraulically operated)

The swivel vise jaws can be set at any angle from 0 to 45° for cutting off work at an angle. The swivel jaws are adjusted by simply loosening the attaching screws for the fixed and movable jaws and then rotating both jaws to the desired angle. Be sure to allow clearance between saw guides and jaws. NOTE: when the jaws are set at 45°, maximum capacity will be reduced to 6-1/2 in. wide by 10 in. high.



HYDRAULIC VISE

The hydraulic vise accessory (below) consists of a hydraulic cylinder which provides the vise clamping power. The vise is clamped or unclamped by means of a selector switch mounted on the control panel.