TM 9-3405-210-14&P

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS LIST

FOR

SAW, BAND, METAL CUTTING
MODEL 2614-1
(DO ALL COMPANY)
(NSN 3405-00-542-1328)

HEADQUARTERS, DEPARTMENT OF THE ARMY

JULY 1981

WARNINGS

When welding, step to one side to avoid welding sparks.

When grinding the welded band, keep hands away from rotating grinding wheel. Because it may be difficult to see if the wheel if rotating. a pilot light is provided. This light is on when thegrinder motor is running.

Disconnect electric power to the welder before making adjustments.

Technical Manual

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DEPARTMENT OF THE ARMY
Washington, DC, *31 July* 1981

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REPORTING OF ERRORS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS Rock Island, IL 61299. A reply will be furnished directly to you.

NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this band saw is issued.

Manufactured by: Continental Machines, Inc.
Savage, Minnesota 55378
for:
DoALL Company
254 N. Laurel Avenue
Des Plaines, II. 60016

Procured under Contract No. DAAAO977-C-7006

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3. Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

INSTRUCTIONS FOR REQUISITIONING PARTS

NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Number, it is mandatory that the following information be furnished the supply officer.

1 - Manufacturer's Federal Supply Code Number - 18056

2 - Manufacturer's Part Number exactly as listed herein.

3 - Nomenclature exactly as listed herein, including dimensions, if necessary.

4 - Manufacturer's Model Number - Model 2614-1

5 - Manufacturer's Serial Number (End Item)

6 - Any other information such as Type, Frame Number, and- Electrical Characteristics, if applicable.

7 - If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

(a] In blocks 4, 5, 6, list manufacturer's Federal Supply Code Number - 18056 followed by a colon and manufacturer's Part Number for the repair part.

(b) Complete Remarks field as follows:
Noun: (nomenclature of repair part)
For: NSN: 3405-00-542-1328
Manufacturer: Continental Machines, Inc.
for
DoAll Company
Mode: 2614-1
Serial: (of end item)

Any other pertinent information such as Frame Number, Type, Dimensions, etc.

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CHAPTER 1

INSTALLATION

LOCATION

Place the machine so that any overhead light will strike the table over the operator's right shoulder when he is in position for cutting. The machine should be centrally located for your cutting needs. 'Provide sufficient clearance around the machine for handling large pieces of material.

LIFTING INSTRUCTIONS

A 3/4 in. NC tapped hole is provided in the upper surface of the machine head. Use a forged 3/4-10 NC eye-bolt screwed into this hole for lifting the machine. Net weight of Model 2614-1 is approximately 2500 Ibs.

UNPACKING

(1) Remove rear drive housing. Carefully remove all protective coverings, strapping, and the skid. Unfasten the hold down bracket for the power feed weight.

(2) A rust-preventive coating has been applied to all exposed bare metal surfaces. Remove this coating with solvent. Inspect the machine for broken or damaged parts.

ELECTRICAL INSTALLATION

Bring the leads of the line circuit to the electrical enclosure on the machine column. Refer to the wiring diagram furnished with the machine.

Jog the start button intermittently and open the door over the lower band wheel. Check to see if the wheel is turning clockwise. If it is turning counterclockwise, reverse any two of the connections.

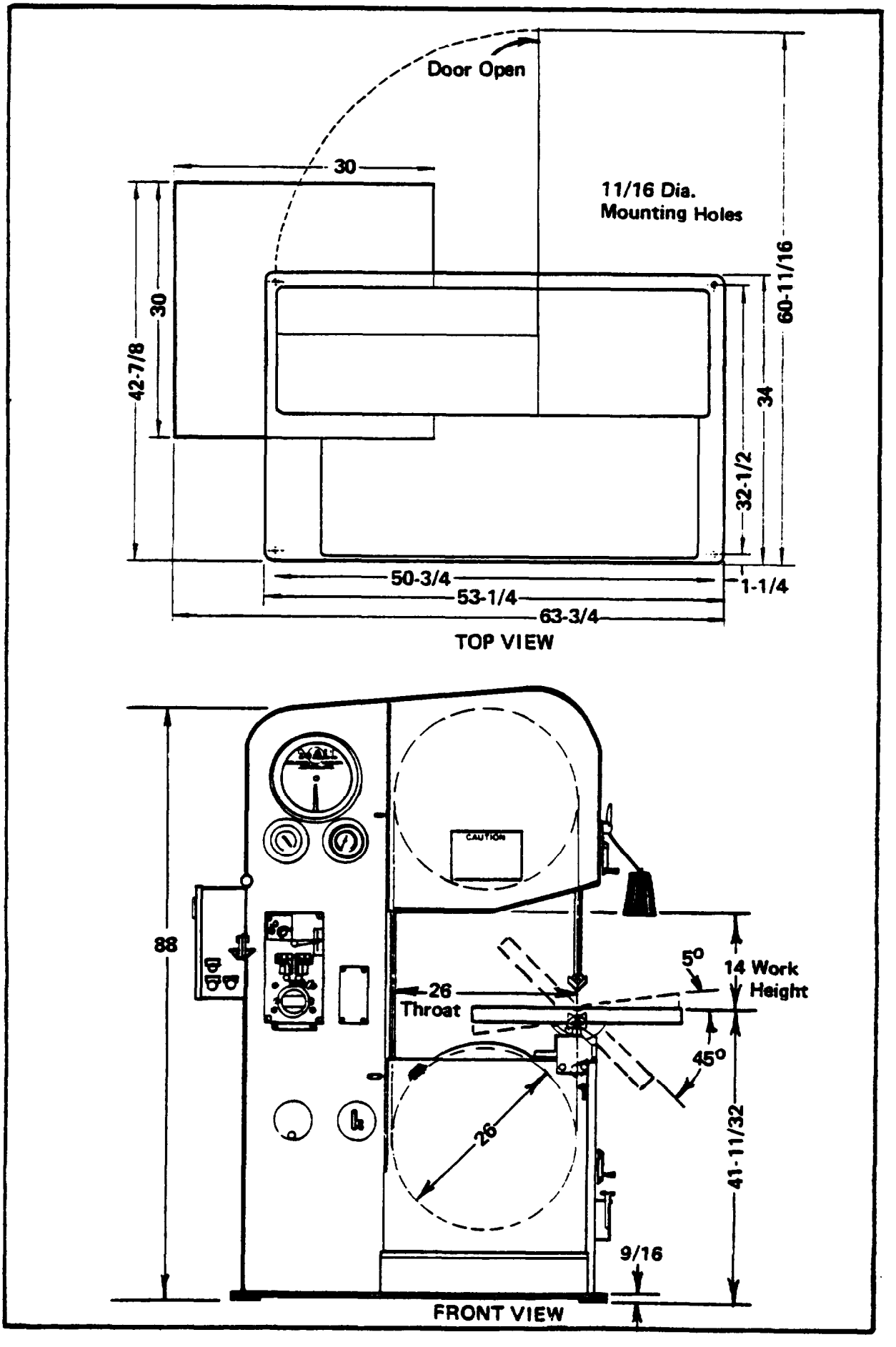
Overload protection is provided. Under ordinary conditions this will be ample protection. If the machine is started and stopped a number of times in rapid succession, the overload relay may kick out. Let the relay cool for a few minutes before starting the machine again.

ALIGNMENT

Before the machine is bolted into position, or whenever the machine is moved, the alignment should be checked and the machine shimmed.

(1) Place machine in desired location. Use 1/4 in. spacers between the floor and the base mounting pads of the machine.

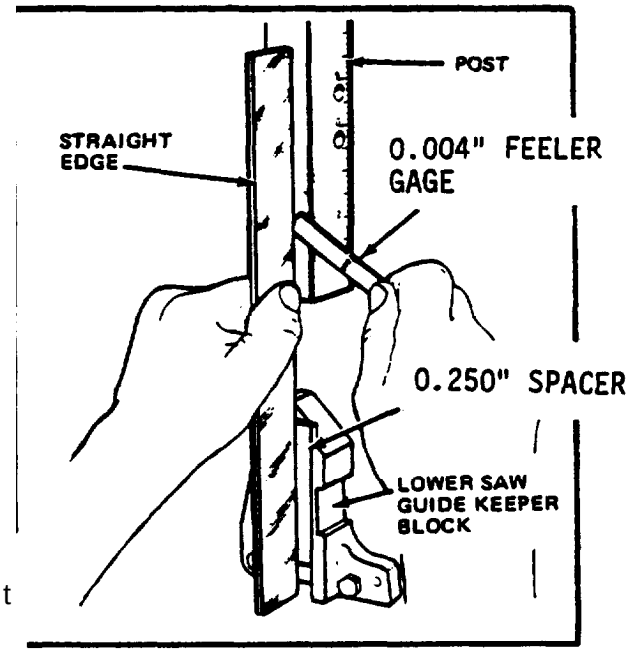
(2) Shim under the pads as required until the machine is level and bears evenly on all pads. Uniformity of bearing can be checked by tapping on the spacers with a bar or hammer.


Door Open
30
11/16 Dia.
Mounting Holes
60-11/16
42-7/8
30
34
32-1/2
50-3/4
1-1/4
53-1/4
63-3/4
TOP VIEW
88
5°
14 Work
Height
26
Throat
45°
26
41-11/32
9/16
FRONT VIEW

(3) Remove table center plate and post saw guard. Install a 1-inch wide saw band and apply correct band tension.

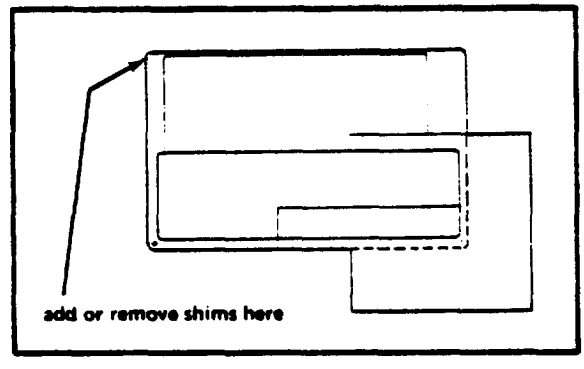
(4) Clamp or hold a straight edge to the front face of the post and the face of the lower saw guide keeper block.

(5) The post should be parallel with the machined saw guide mounting recess in the lower keeper block. As shown in the sketch, this parallelism is checked by placing a spacer block (ground to exactly 0.250" thickness) in the keeper block. Then place an accurate straight edge against this spacer block and the post. Using a feeler gage, check the clearance and parallelism of the post to the straight edge. A clearance of 0.004" or less is required.



CHECK ALIGNMENT OF POST TO LOWER SAW GUIDE KEEPER BLOCK

(6) Adjust the gap by adding shims (to increase gap) or removing shims (to decrease gap) under only the mounting bolt location shown in drawing.



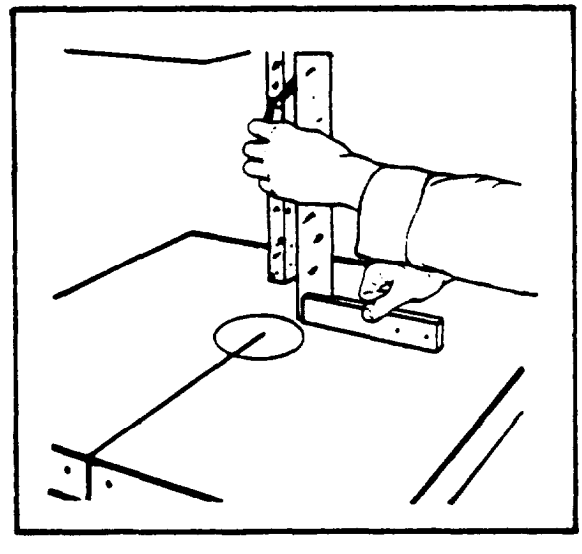
SHIMMING LOCATION -- TOP VIEW

(7) Replace table center plate and post saw guard.

(8) Loosen table tilt trunnion lock nut with the wrench furnished with the machine. Square the table to the post and check as shown above. Tighten the trunnion lock.

(9) If necessary, adjust the tilt angle pointer to zero.

(10) The back of the band should be just touching the saw guide back-up insert. Adjust upper wheel tilt, if necessary, so that band is positioned and will track properly. (See Tracking the Band in Operation Chapter).



SQUARE TABLE TO POST AND TIGHTEN TABLE TILT LOCK

PREPARATION FOR USE

(1) Check the transmission oil level and fill if necessary. See Lubrication, Chapter 3.

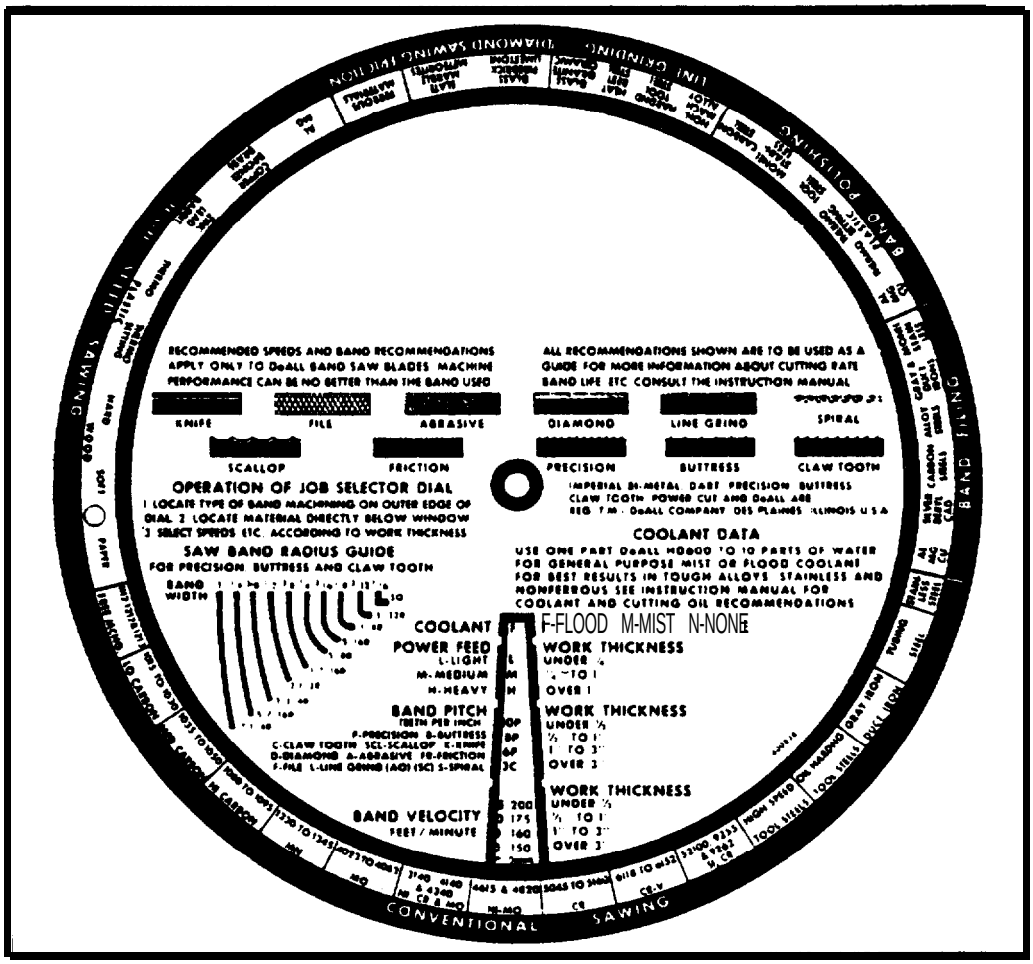
(2) Check to see if all other points listed in the Lubrication Chart, Chapter 3, have been serviced.

NOTICE!!!

OSHA Regulation No. 1910.212 (B) - Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

CHAPTER 2

OPERATION



TO USE THE JOB SELECTOR, FOLLOW THESE STEPS:

(1) Turn the dial until the material to be cut is directly below the window in the cover (see above).
(2) Locate the recommended pitch and blade type listed next to the work thickness.
(3) If a radius is being cut, locate the correct blade width on the radius chart. Having determined the width, pitch and tooth type, refer to a saw blade specification table to determine the gage and set.
(4) Locate the recommended band speed for the work thickness and blade type used.
(5) Note the recommended feed force to be used for the work thickness.
(6) Note the recommended method of coolant application (if your machine is equipped with drip or spray coolant applicators).
(7) This completes the choice of blade and sets up requirements for the job. However, these recommendations can be adjusted to meet particular requirements.

NOTE

Job selector recomnendations are for average straightline sawing and manual contour sawing of work less than one inch thick.

HOW TO ADJUST INSERT-TYPE SAW GUIDES

(1) Select the set of inserts marked for the width of saw band being used,

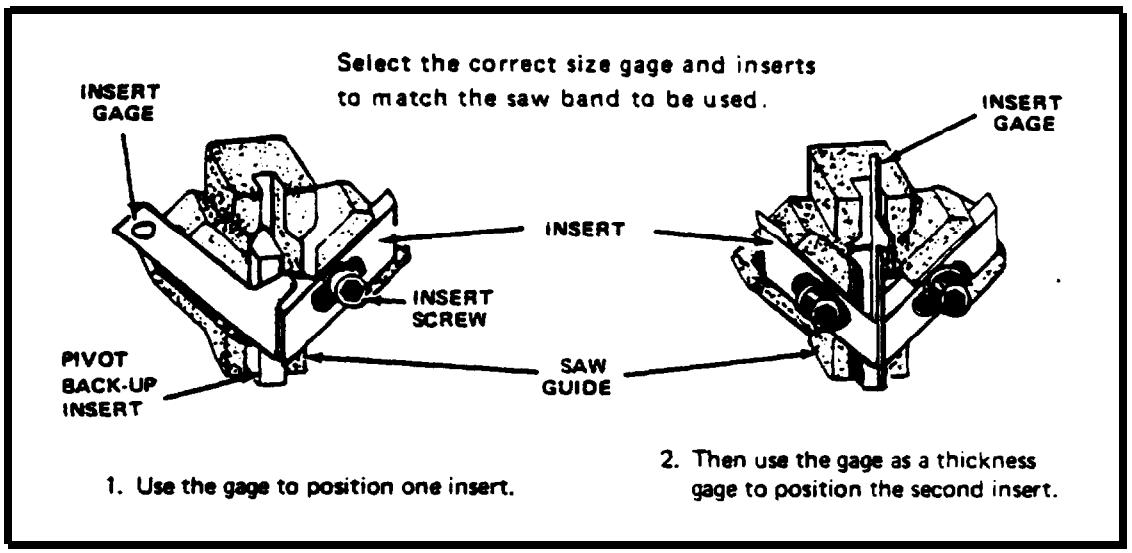
(2) Place the right-hand insert in the milled slot and tighten the screw lightly so that while the insert will slide in the slot, it will still hold its position when released,

(3) Select the proper insert gage for the gage of saw band being used.

(4) Place the gage in the opposite slot and adjust the insert so that it meets the two gaging edges. Then tighten the insert securely in place.

(5) Place the left-hand insert in the slot and tighten the screw lightly.

(6) Place the gage edgewise between the two inserts. Then bring the left-hand insert down so that it rests against the gage. When the gage is removed, the gap left will be the proper thickness for the saw band.



BAND INSTALLATION

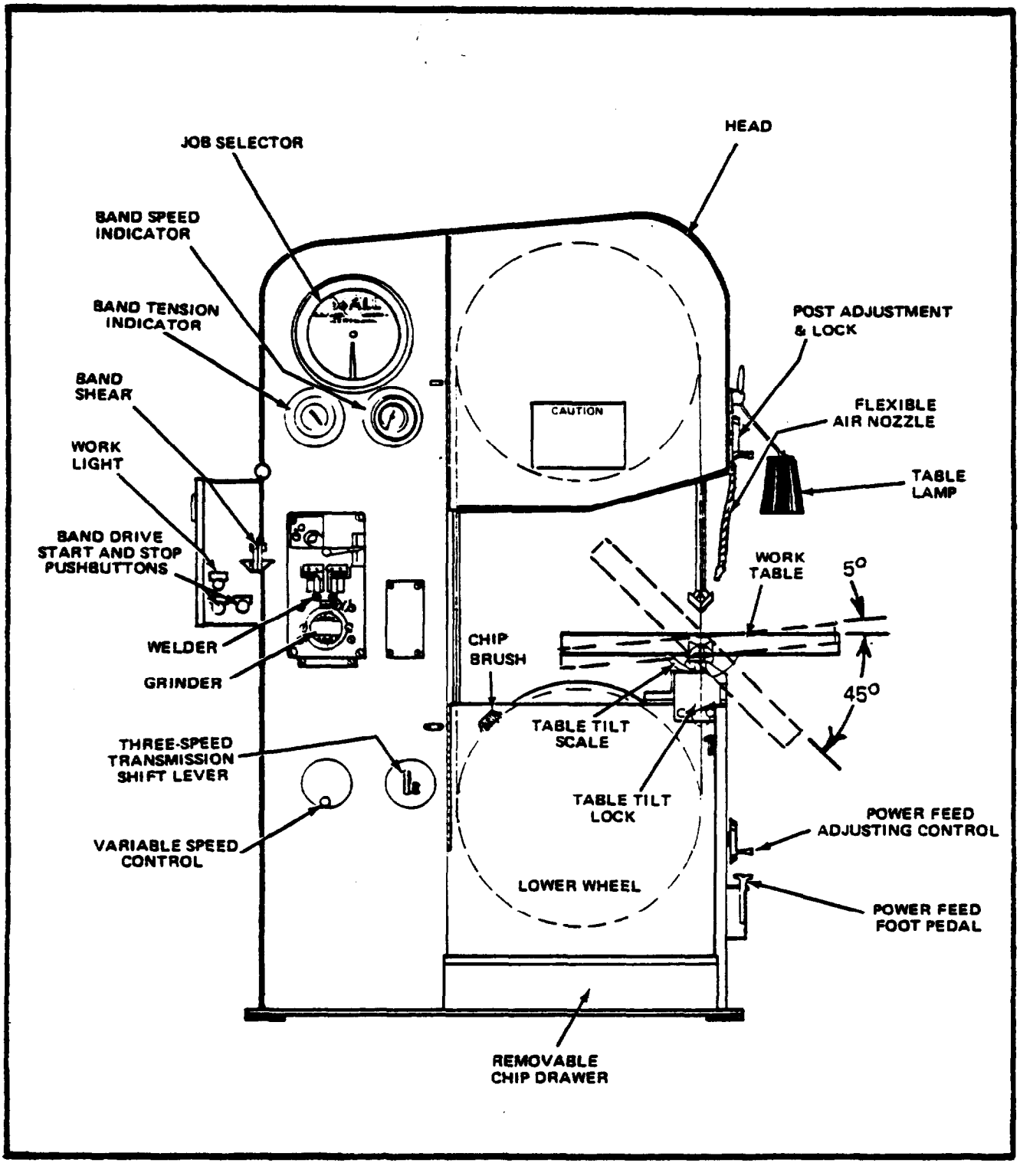
(1) Open the band wheel doors.

(2) Unlock and open the bar which crosses the table saw slot, just below the front edge of the table.

(3) Remove saw band guard from post.

(4) Using the gloves to handle the band, place it carefully over the wheels and between the saw guide inserts.

(5) Replace band guard, close and lock the bar over the table slot and close the wheel doors.



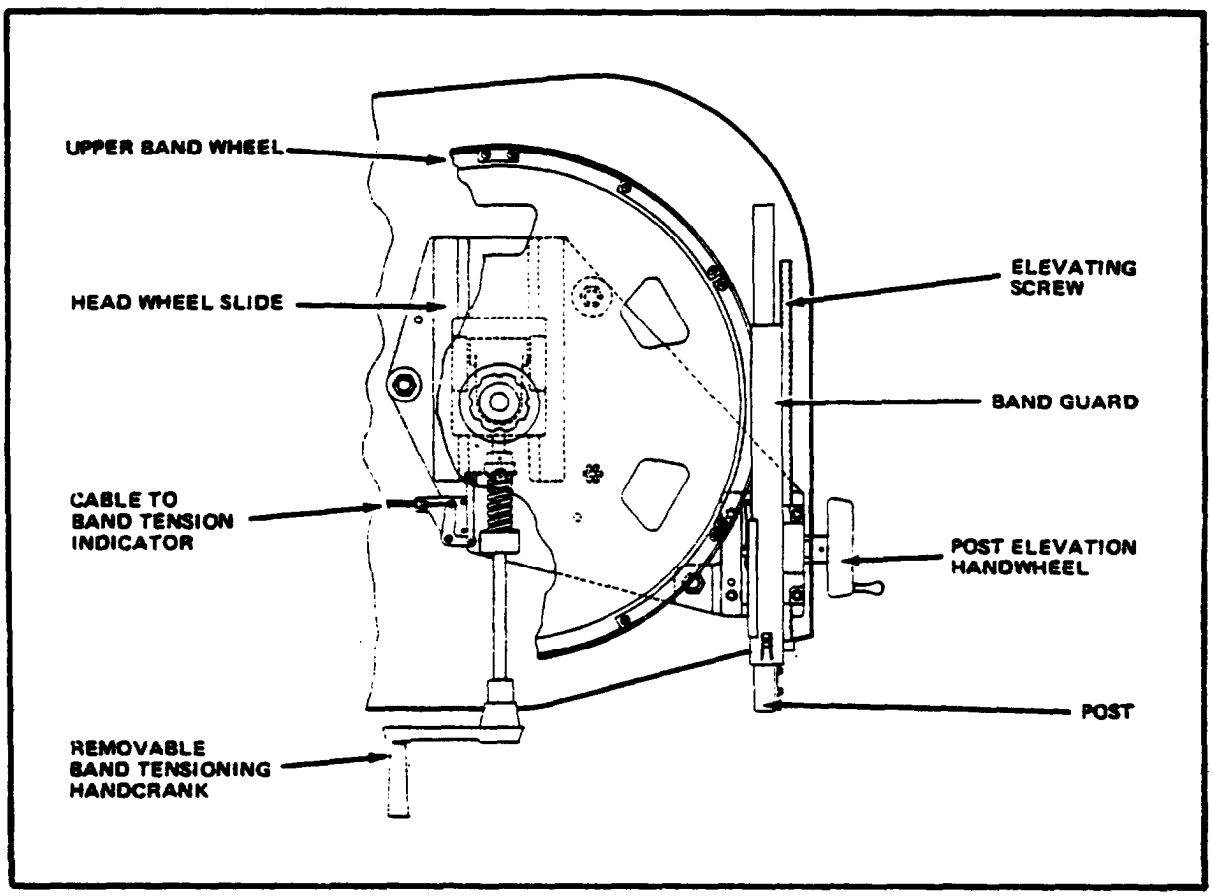
Model 2614-1 showing location of all operation and alignment controls.

BAND TENSIONING

It is essential that the saw band be correctly tensioned in order to obtain maximum accuracy and cutting rate.

Band tension is applied by tuning the removable handcrank located below the saw heed. Tighten the band to the proper tension indicated on the band tension indicator on the machine column. The figures on this scale are recommended tensions and are based on the most common gages and pitches used. When using bands with coarser pitch or lighter gage, reduce tension. Increase the tension when using heavier bands.

A new band may stretch slightly as it is being used. It is important to check the tension of the band so that it does not become too slack.



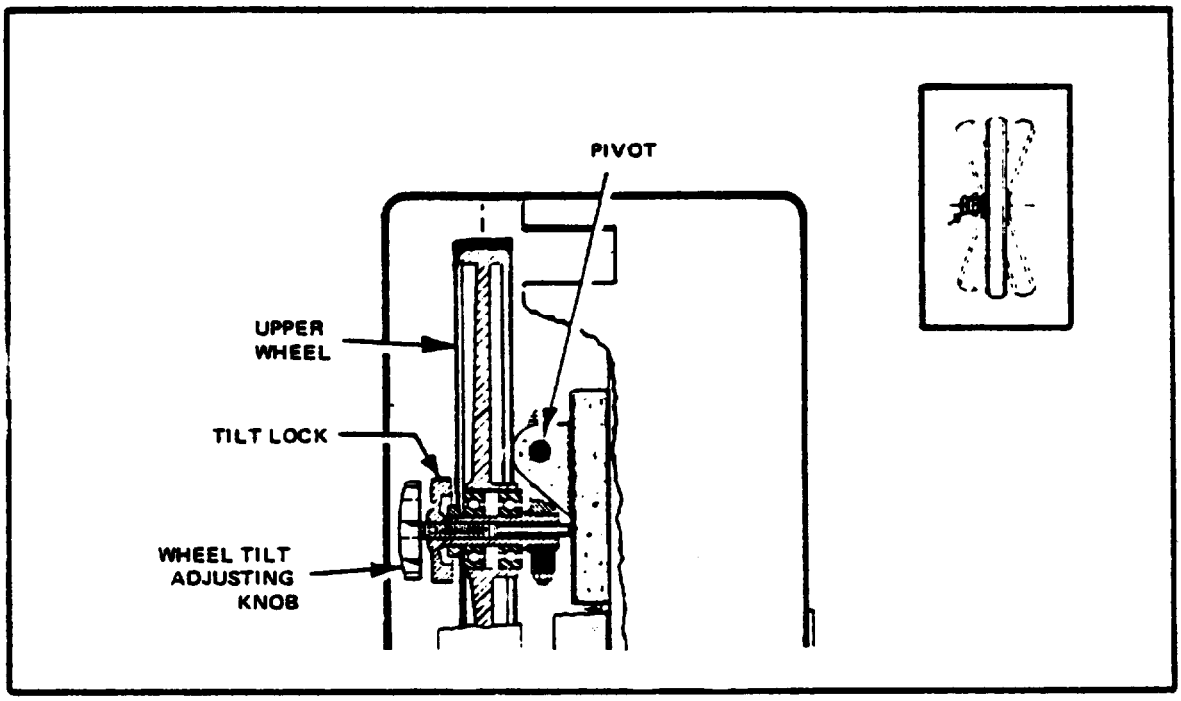
TRACKING THE BAND

To facilitate tracking the band on the wheels, the upper wheel is tiltable in and out, as well as adjustable up and down.

(1) With the wheel doors open, jog the start/stop pushbuttons and observe how the band tracks.

(2) Adjust upper wheel tilt until the band tracks properly. The tilt and lock controls are located on the wheel hub. To adjust wheel tilt, first loosen the lock which is located between the tilt adjusting knob and the wheel (see drawing below). Then turn the tilt knob until the back edge of the band just touches the saw guide back-up inserts.

(3) When the band is tracking correctly, tighten the tilt lock.



Adjust upper wheel tilt until band tracks correctly.

POSITIONING UPPER SAW GUIDE and POST

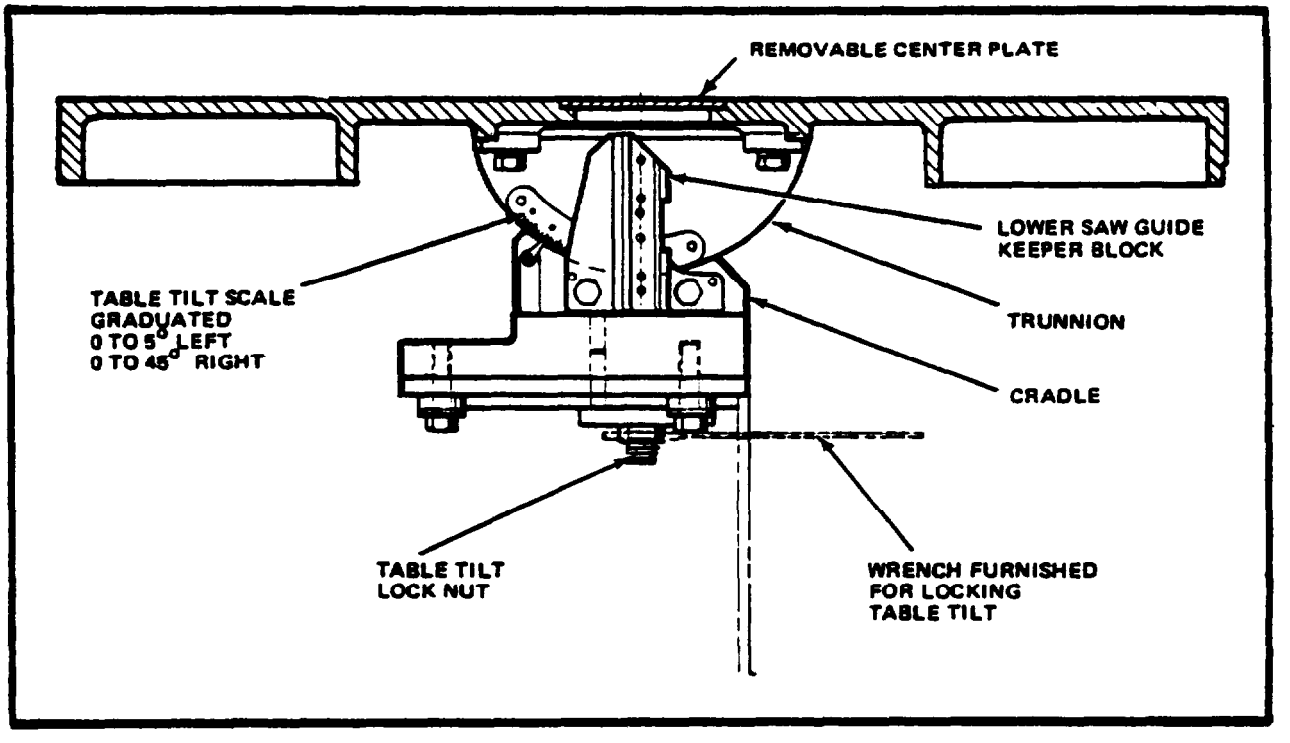
Post elevation is adjusted manually with the handwheel located on the side of the saw head. Always keep the post and saw guide as close as possible to the workpiece. This will provide maximum support for the saw band and increase accuracy. The band guard should be locked in place at all times during sewing.

WORK TABLE

The 30" X 30" heavy duty table has a removable center disk. Accessories can be bolted to tapped mounting holes provided on the front and side edges of the table.

ADJUSTING TABLE TILT

Table tilt is used primarily when sawing compound angles. To tilt the table, use wrench provided and loosen lock located below table. Tilt table manually until it is at desired angle. The amount of table tilt (maximum -5º left, and 45º right) is shown by pointer and calibrated scale mounted on trunnion.



Front sectional view of the work table and its mounting assembly.

USING BAND SPEED CONTROLS

The transmission gear shift control is used to select one of three transmission speed ratios low, high, or medium. Band speeds within each range can be varied gradually by the speed change control which changes the position of the variable pulley. Band speed is shown in feet per minute (FPM) for each range on the speed indicator dial.

(1) Always allow the machine to come to a complete stop before shifting gears. If the gears are not in a position to mesh,start and stop the machine intermittently until they do. Do not attempt to force the shift control into place.

(2) Before stopping the machine, always turn the variable speed control to slow. An interlock mechanism prevents shifting gears when the variable pulley is in its high speed position.

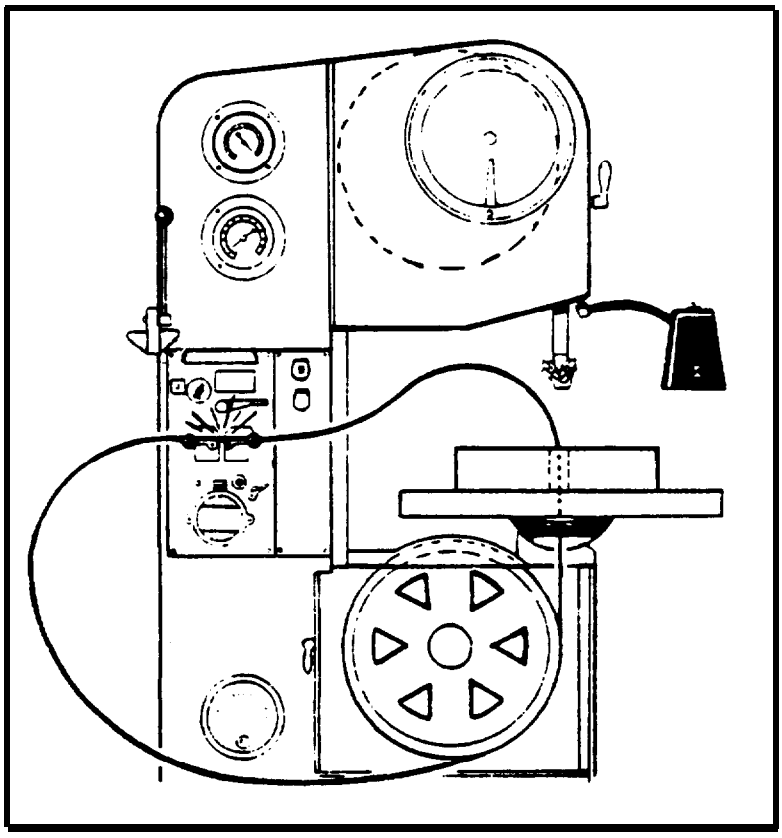
CONTOUR SAWING PROCEDURES

Use hand feed or screw feed (accessory) for sawing intricate contours. The variable weight power feed can be used for contour sawing of large, heavy parts. When cutting into an opening, reduce the feed force to prevent damage which might result when the blade enters the opening suddenly.

Do not feed the work so rapidly that the saw band twists or bows. Follow the recommendations on job selector for band speed and feed pressure.

A hole is usually drilled when there is a sharp corner to be cut, but this is not always true. A corner may be by-passed with a curve and the remainder notched out later. To saw an internal contour, first drill a starting hole, then run the saw band through the hole and weld. If the contour is a radius, use the disk cutting accessory.

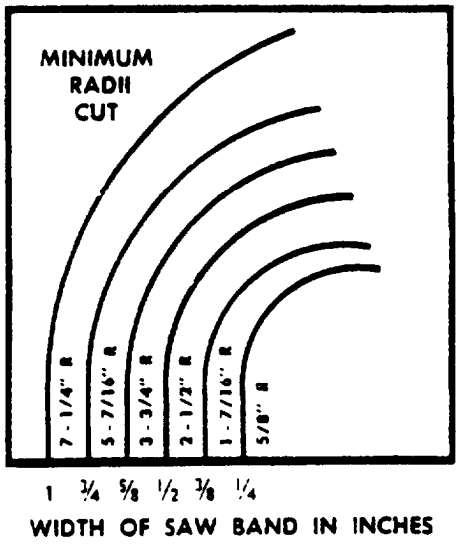
The diameter of the drilled starting hole is determined by the size of the saw band. The widest possible saw band is used for the curve to be cut, but attempting to cut too small a radius with too wide a saw bend will bind the band and cause the lower wheel tire to become grooved. See the radii chart for minimum radii possible with various saw band widths. Use a heavy gage blade for contour sawing of heavy workpieces.



For sawing an internal contour, the band must be cut, run through a starting hole in the workpiece, and then welded. **NOTE:** When welding band which passes through hole in workpiece - be sure to insulate it from contact with workpiece or table. This will insure a better weld.

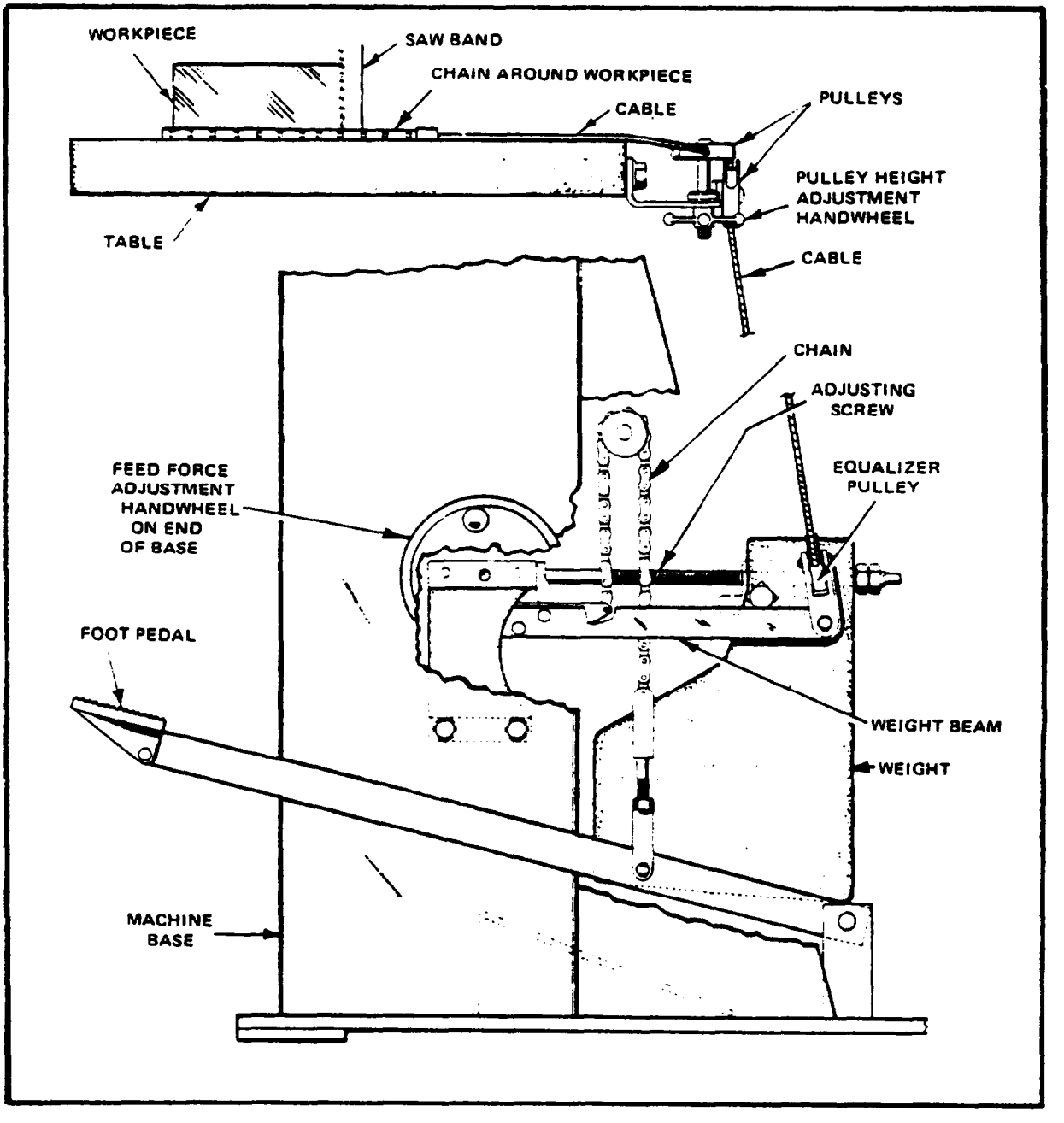
(Machine model shown is not necessarily the specified model. For welding illustration only.)

The recommendations in the radii chart are based on sawing relatively thin stock. Use a narrower saw band than recommended when sawing stock more than one inch thick.



VARIABLE WEIGHT POWER FEED

(1) The variable weight power feed is a feed assist which allows the operator to use both hands to guide the work while it is being pulled into the saw band.



(2) The main mechanism for this system is contained within the machine. A weight on a beam pulls the work holding chain which, in turn, pulls the work into the blade. The chain and cable pulley system permits rotating the work to follow curved layout lines while still using power feed.

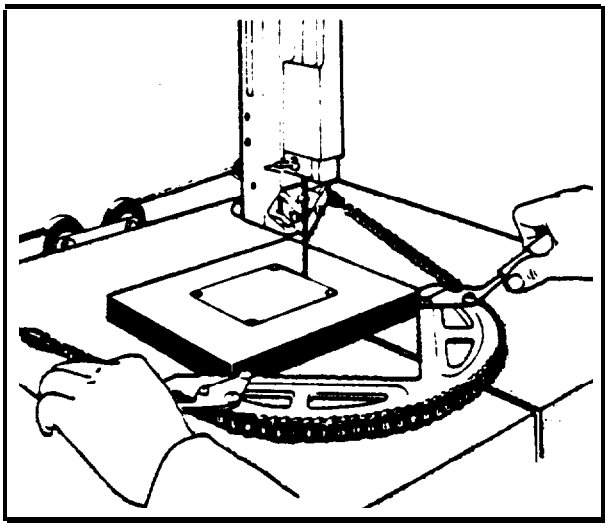
(3) Position of weight on beam determines both rate and force of feed. This position is set by a hand wheel on side of machine. The beam is raised initially by a pedal on front of machine.

(4) The weight-type feed system exerts 0 to 80 Ibs. maximum feed force against blade. Heavy feed force should be used when sawing with wide saw bands. Lighter feed forces are required when using narrower bands.

(5) Feed force less than 10 Ibs. is achieved by partially restraining pedal. Lighter feed forces are also required if workpiece is significantly thicker. Example: 1/4 in. band in 1 in. thick 1020 HRS use maximum feed force; but in 6 in. thick 1020 HRS use light feed force.

(6) On large work where cut is longer than 10-in. maximum feed distance, the weight is brought back into position by pressing pedal into notch at bottom of its stroke and then taking up slack in work-holding chain.

When not in use, the foot pedal should be left in the upper position.



The workholding jaw is used to guide the work. The power feed chain can be looped around the workholding jaw as shown here.

CHIP REMOVAL

A removable chip drawer is provided below the lower wheel.

Remove the drawer and clean out when necessary. A wheel brush, mounted above the lower wheel, cleans chips from the wheel tire.

WELDING SAW BANDS

Complete instructions covering blade welding and operation and maintenance of the welder are given in the separate welder instruction manual.

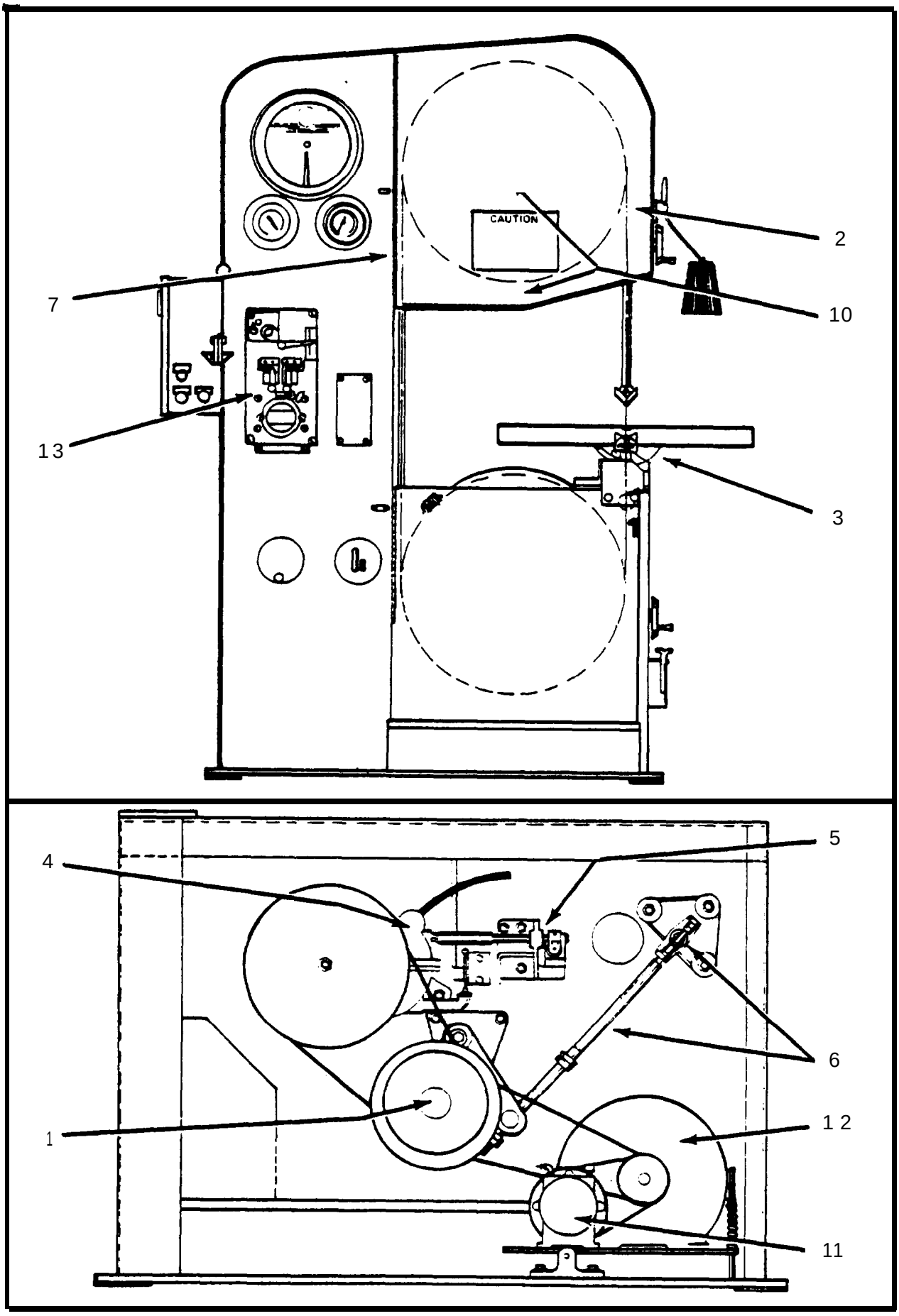
SAFETY PRECAUTIONS

CHAPTER 3

LUBRICATION

LUBRICATION POINT NO.	LOCATION DESCRIPTION and SERVICE RECOMMENDATIONS	LUBRICATION INTERVAL *	RECOMMENDED LUBRICANT
1	Variable Pulley. 1 oil cup.	WEEKLY	High quality, rust and oxidation inhibited, medium hydraulic and general purpose industrial oil. ASTM Grad. No., 215.
2	Post. Post Elevation Screw and Gears. Clean and apply oil.	MONTHLY	High quality, rust and oxidation inhibited, medium hydraulic and general purpose industrial oil. ASTM Grade No. 315.
3	Table Trunnion. Oil tilt surfaces.	MONTHLY	
4	Transmission. 1 quart capacity. Proper oil level must be maintained. Drain and refill yearly or when required.	AS REQUIRED	
5	Transmission Shift Linkage and Interlock. Clean and apply oil as required.	AS REQUIRED	
6	Speed Change Screw and Linkage. Clean and apply oil	CK. MONTHLY/ AS REQUIRED	
7	Miscellaneous, Hinges. Pivots, etc. Clean and apply oil	CK. MONTHLY/ AS REQUIRED	
8	Accessory Equipment as Supplied. Keep clean and apply oil as required to maintain proper function and reduce wear, corrosion, etc.	CK. MONTHLY	
9	Air Compressor. (optional item) Proper oil level must be maintained; drain and refill every three months. Keep crankcase and air intake filter clean.	CHECK WEEKLY	(For 80° F. and above) High quality. rust and oxidation inhibited, medium hydraulic and general purpose industrial oil. ASTM Grade No. 465.
10	Band Tension Screw and Bearing. 3 grease fittings.	3 MONTHS	Premium quality, multi-purpose, lithium base, EP (extreme pressure) grease. NLGI Grade No. 2.
11	Air Pump, Remove air intake filter and while pump is in motion, feed lubricant into opening. Keep air filter clean.	CK. MONTHLY/ AS REQUIRED	Dry, powdered lubricating graphite (natural or manufactured).
12	Electric Motor	Lubricate as required per manufacturer's recommendations.	
13	DBW-15 Welder.	Lubricate as required per DBW-15 Instruction Manual.	
14	Mist Coolant Tank. (optional item) 1 quart capacity. Keep filled.	CHECK DAILY/ AS REQUIRED	Premium quality, sew band coolant and lubricant. cutting fluids and/or oils.

*** Lubrication intervals are based on an 8 hour day, 40 hour week. Lubricate more often when required.**


CAUTION
2
7
10
13
3
5
4
6
1
12
11

CHAPTER 4

MAINTENANCE

HEAD ASSEMBLY

Wipe oil on the post occasionally and run the post up and down through the slide block several times. The upper wheel slide and band tension screw are lubricated by grease fittings. The wheel bearings are sealed and lubricated for life at assembly.

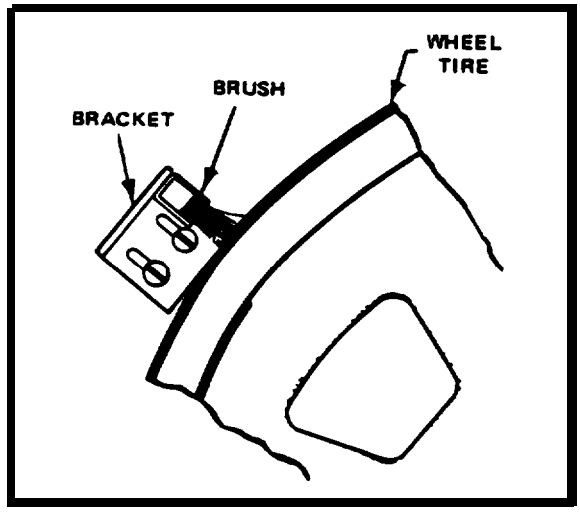
If it is necessary to adjust the band tension indicator, first loosen the set screw clamping the wire leading to the indicator. Then take all slack out of the band with the band tension control. Adjust the indicator pointer to zero and lock the linkage arm to the wire. A more accurate calibration can be obtained by using a band tension measuring instrument.

REPLACING WHEEL TIRES

When the tires are completely worn out, replace them by loosening the tire with a screw driver or other flat tool and stretching it until it can be taken off. Scrape the wheel clean, and apply new cement before installing a new tire.

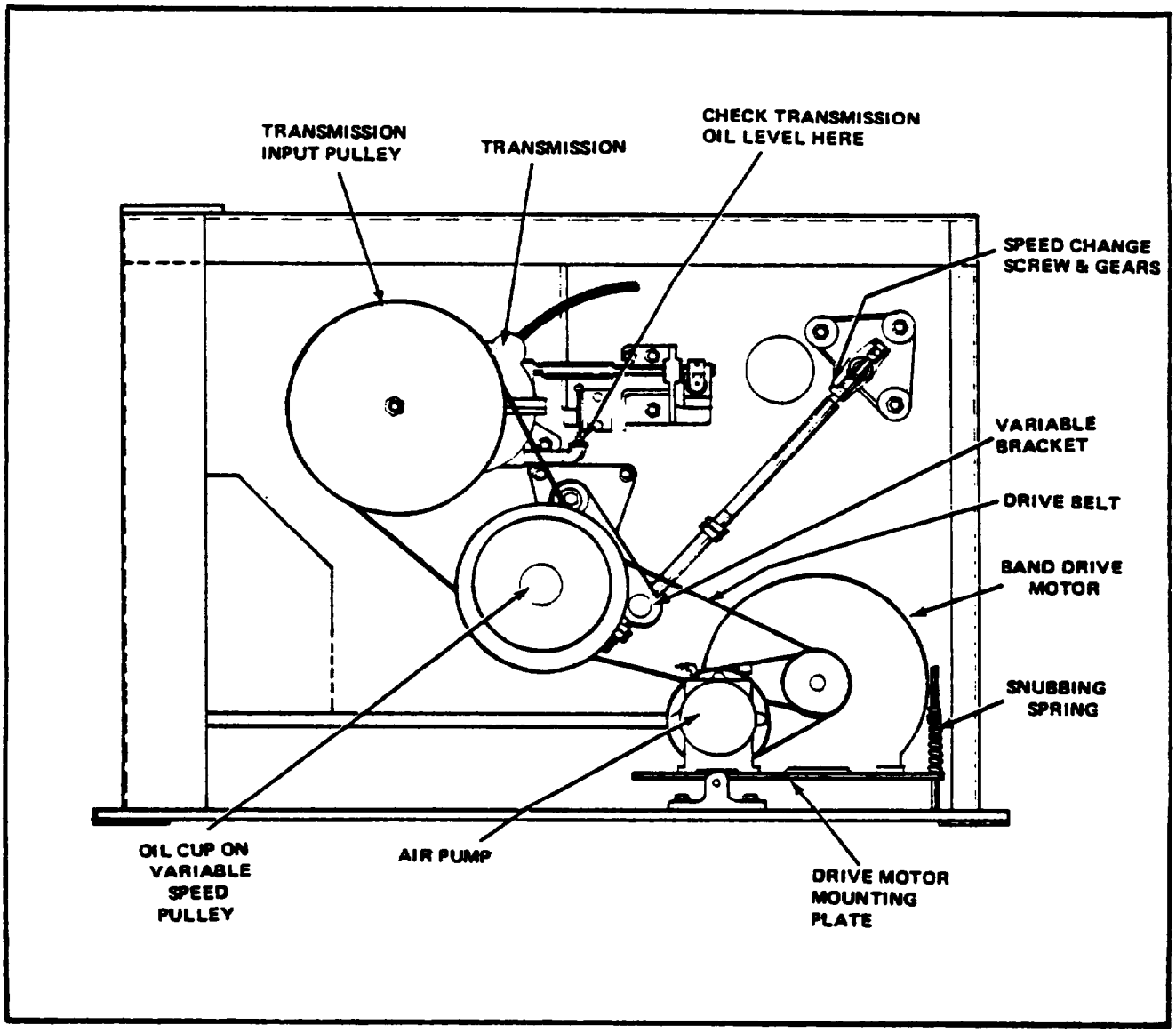
WHEEL BRUSHES

Check the wheel brush occasionally. If it worn so that it is no longer contacting the wheel face, loosen the adjusting screws and move the brush up to the wheel. Replace as needed.



ELECTRIC MOTOR

Main Drive Motor - Follow the manufacturer's instructions (see tag attached to motor).



Rear view of Model 2614-1 drive compartment.

TRANSMISSION

Drain, flush and refill after first month and at least every six months, thereafter. Fill to top of fill pipe, but do not overfill. Use an ASTM Grade No. 315 industrial oil (see Lubrication Chapter). Check for seal leaks around shafts.

Any rough operation, vibration, loud or unusual noises should be investigated immediately. It is recommendad that the transmission be returned to the factory for repairs. Installing a new transmission correctly is extremely important because of the careful alignment involved. If the shifter plate has been removed for any reason, do not attempt to operate lever.

C H A P T E R 5

TROUBLESHOOTING

MACHINE WILL NOT START:

(1) Check main fuses and control circuit fuse.
(2) Check reset on band drive motor starter (if used). 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. If the heater relay has been set for automatic operation, it will not be necessary to push the reset button, but only to wait for the relay to cool.
(3) Check transformer.

SEVERE MACHINE VIBRATION

(1) Band wheels not balanced.
(2) Variable pulley components not balanced.
(3) Variable drive belts are unbalanced.
(4) Machine not resting evenly on floor.

SAW BAND VIBRATION (while sawing)

(1) Incorrect band speed.
(2) Incorrect choice of saw band pitch.
(3) Incorrect choice of coolant.
(4) Incorrect feed pressure.
(5) Work piece not firmly clamped to table.
(6) Worn or improperly adjusted saw guide inserts.
(7) Worn saw guide backup bearing.
(8) Special support not used under work when using Heavy work clamp.

NO COOLANT FLOW:

(1) Coolant applicator nozzle jammed.
(2) Coolant hose clogged or kinked.
(3) Coolant reservoir empty.

SURFACE FINISH ON WORK TOO ROUGH:

(1) Saw guide inserts worn. Readjust.
(2) Saw band speed too low.
(3) Saw band pitch too coarse.
(4) Feed too heavy.
(5) Vibration.

SAW BAND TEETH STRIPPING: (usually caused by chip welding)

(1) Saw band pitch too coarse for thin work section.
(2) Work not held firmly to stop vibration.
(3) Feed pressure too high.
(4) Band speed too low.

PREMATURE DULLING OF SAW BAND TEETH:

(1) Not breaking in saw band on first few cuts. Reduce feed pressure and speed on first cuts.
(2) Band speed too high, causing abrasion. Reduce speed.
(3) Saw band pitch too coarse.
(4) Wrong type coolant or no coolant used.
(5) Feed pressure too light. Increase feed.
(6) Coolant not covering saw band.
(7) Cutting rate too high.
(8) Faulty material such as heavy scale, inclusions, hard spots, etc.
(9) Material analysis incorrect.
(10) Saw band vibration.
(11) Chipped tooth lodged in cut.
(12) Chip welding.
(13) Operator's error.
(14) Inserts too large for blade width, allowing inserts to hit set teeth.

MOTOR RUNS BUT BAND DOES NOT MOVE:

(1) Broken drive belts or belts off pulleys.
(2) Over-oiling of variable pulley, excess oil has coated pulley and belts.
(3) Drive belt tension too low.
(4) Wrong size drive belts.
(5) Band tension incorrect.
(6) Transmission bad.

BAND SLIPS OFF WHEELS:

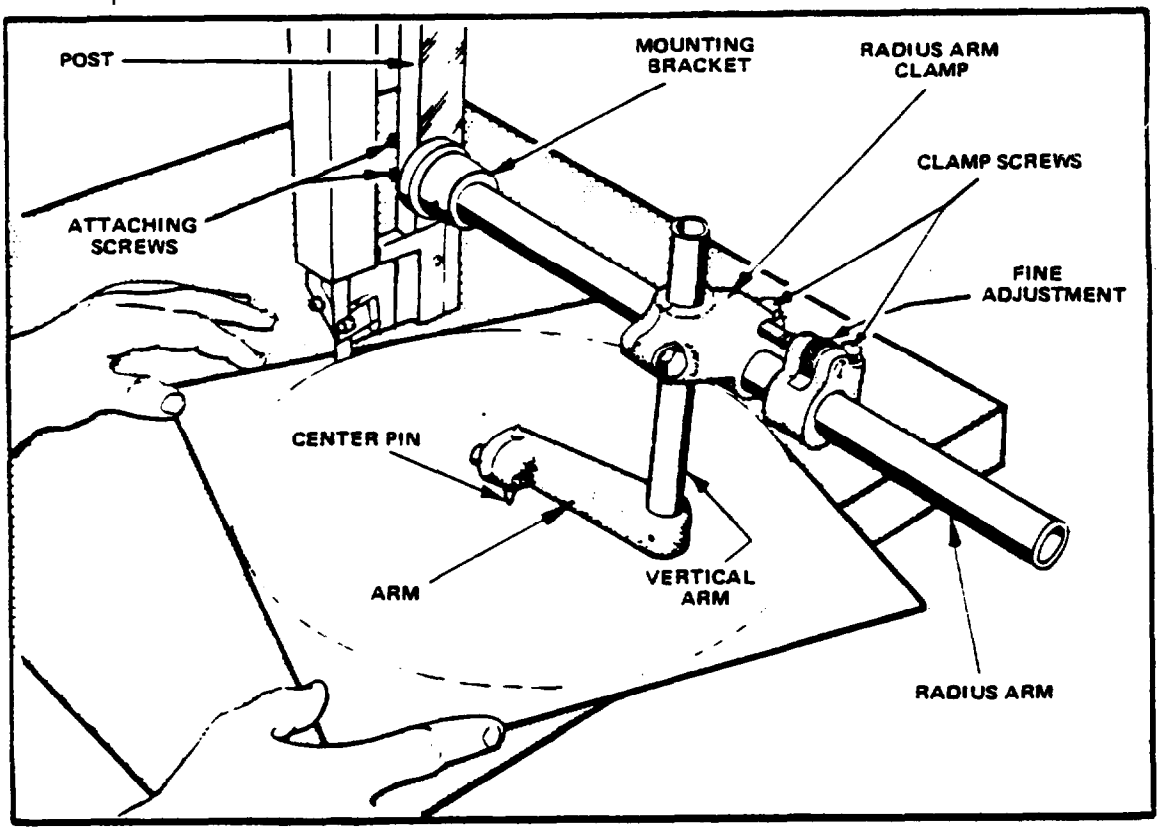
(1) Upper wheel not aligned correctly, band does not track on center of wheel tire.
(2) Too much coolant used or wrong type coolant used, causing band to slip off wheel tires.
(3) Initial machine alignment wrong. See Chapter 1.

CHAPTER 6

ACCESSORIES

DISK CUTTING ACCESSORY

The disk cutting accessory is used for cutting of true circles, either internally or externally, of any diameter from 2-1/2 in. to 30 inches. This attachment is bolted to the post with the cap screws and washers furnished.



(1) Place flat washers under screws and bolt bracket (see drawing) to post.

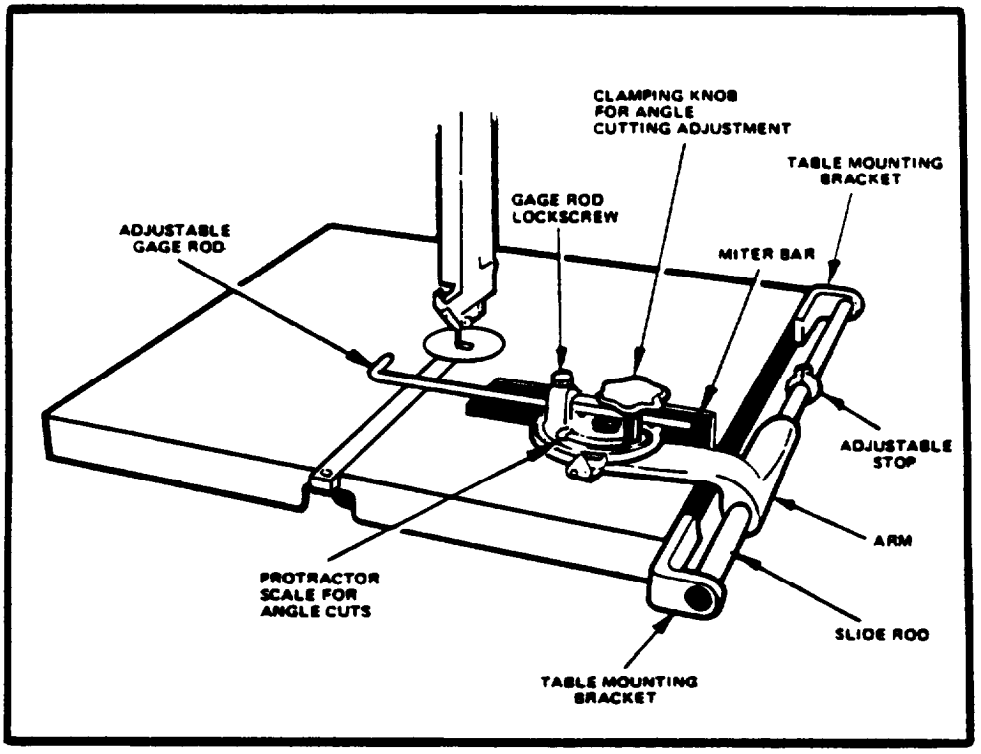
(2) Lower post until saw guides are approximately 3/8 in. above table.

(3) Loosen bolts on fine adjustment and arm clamps and move center pin to approximate distance or radius to be cut. Tighten bolt on fine adjustment clamp.

(4) The center of centering pin must be directly in line with cutting edge of saw band. To accomplish this, place a square against side of saw slot with blade of square against tip of saw tooth. Loosen vertical adjustment clamp bolt and !ine up centering pin with edge of square's blade; then clamp tight.

(5) Make final radius adjustments with fine adjustment wheel and tighten arm clamp bolt. Tighten bolt on the radius arm clamp, making sure center pin is square to table.

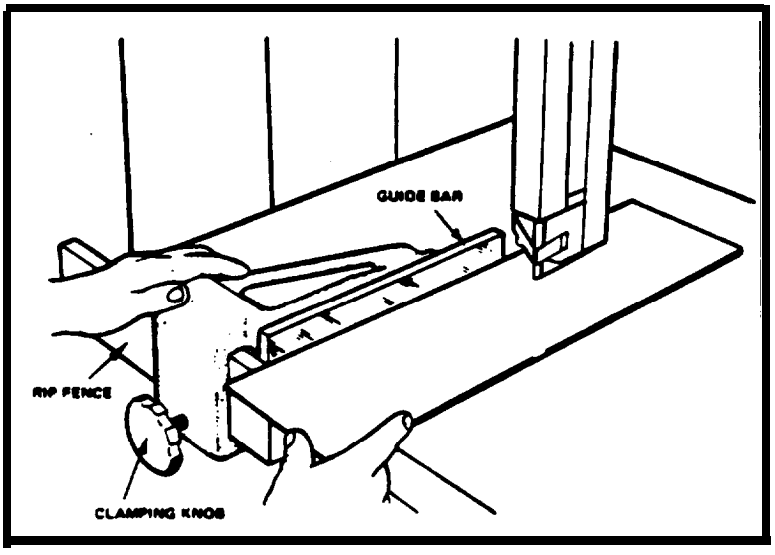
(6) Adjust unit for work thickness by raising or lowering saw guide post.



SIDE-MOUNTING MITERING ACCESSORY

Set up this attachment as shown in the drawing, making sure that the mitering bar is in even contact with the table surface. Use a combination square in the table slot as a basis for alignment and setting the mitering bar at various angles.

When not in use, swing the attachment up, to the right and around on the slide rod so that it hangs below the table.



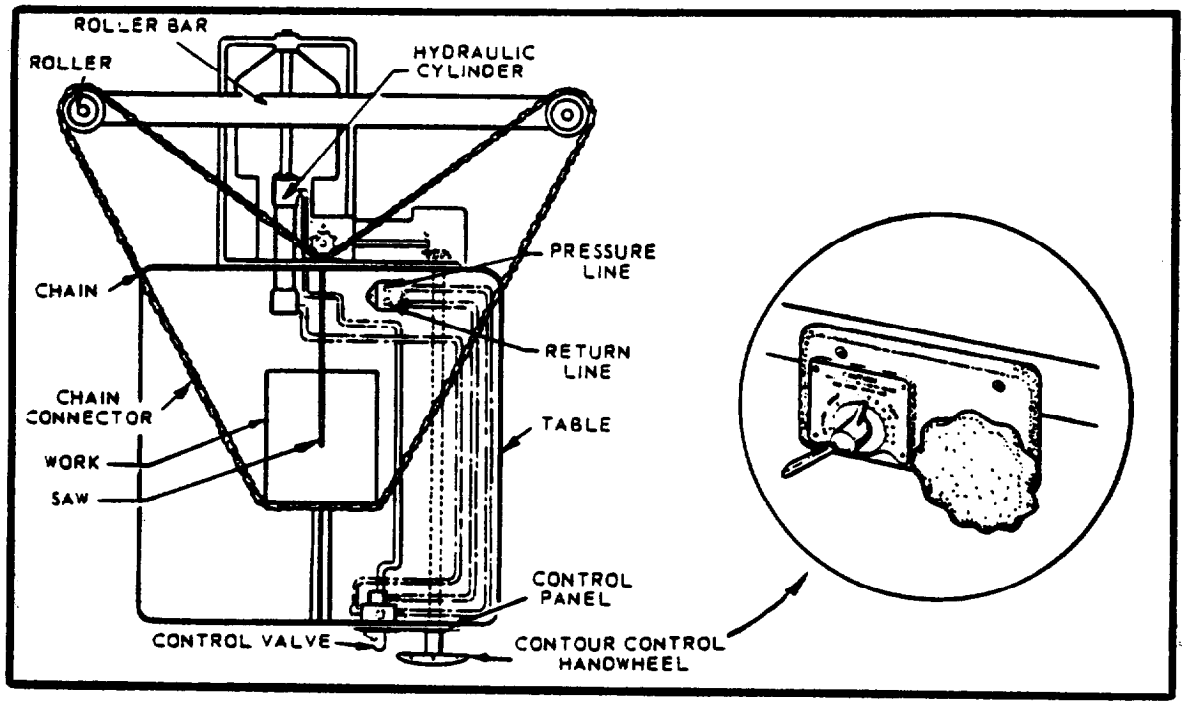
RIP FENCE

To set up this accessory be sure to square the fence so that it is in line with the table slot. Also make sure that the machine is in proper alignment as described in the Installation Chapter.

In making a long cut, check to be sure that the saw band used is not worn on one side. This will cause the work to wander relative to the rip fence guide.

HYDRAULIC CONTOUR FEED

Hydraulic-controlled contour feed provides power feeding for all types of contour sawing, and is controlled by a handwheel and control valve on the table. This is a factory installed attachment.



As shown above, the power feed guide roller bar is drawn by a hydraulic cylinder. The valve which controls the hydraulic pressure varies the rate of feed from 0 to 15FPM. When the pointer of the valve handle (shown in sketch) is turned to the right, the feed increases up to a maximum speed of 15FPM. The hydraulic feed reverses when the control valve handle is turned to the returned position. The handle should always be in the stop position when the hydraulic feed is not in operation.

Use the contour control handwheel to turn the work and follow contours while it is being pulled into the saw band.

A. SETUP

(1) Check all hydraulic connections. Fill hydraulic tank with 2-1/2 gallons of ESL anti-wear hydraulic oil.

(2) Put control valve in stop position and start hydraulic pump motor. Be sure motor is running so that rotation is in same direction shown by arrow on motor. This may be changed by reversing leads to machine.

(3) Move guide roller bar conected to piston rod back and forth by turning control valve handle from feed Position to return position until system is completely filled with oil and free of air pockets. The hydraulic system is then ready for operation.

(4) With control valve handle in stop position, place chain around contour control sprocket at rear of table, (as shown in sketch) and then loop chain around two horizontal rollers at ends of guide roller bar.

(5) With guide roller bar in extreme reverse position, take up all slack in chain and connect ends together, using quick lock provided. The power feed is then ready for operation.

B. OPERATION

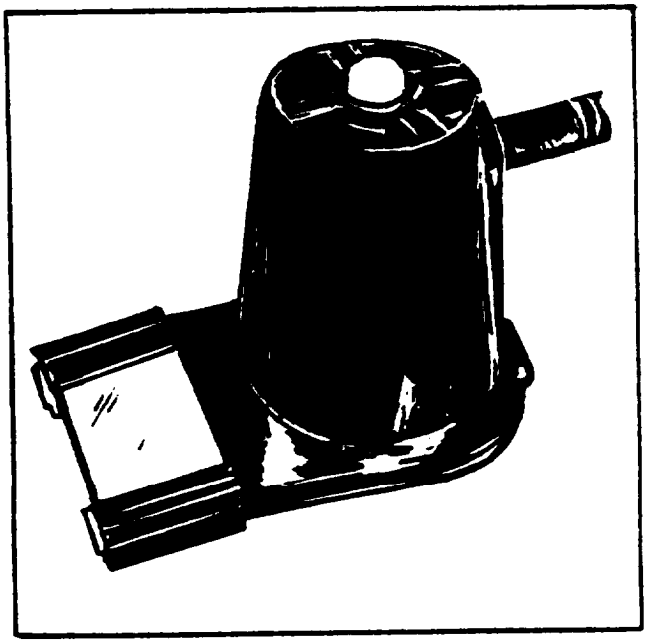
(1) Always be sure there is enough hydraulic oil in tank. Check oil level with dip nick provided.

(2) Clean tank and oil filter every six months. Oil filter is located inside of tank and may be serviced by removing cover plate at front end of tank.

(3) If hydraulic pressure drops, dirt may be lodged in relief valve or relief valve spring may be weak. The relief valve is set at 100 pounds pressure at factory. To increase pressure, remove the cap on top of relief valve and turn adjustment screw clockwise. Check pressure with a pressure gage. If pressure is high enough and pulling power is still low, cylinder piston cups may have to be replaced.

(4) If control valve does not operate properly, there may be dirt between disk and face of valve. If so, valve should be taken apart and faces cleaned or lapped if necessary.

(5) Bumpy or uneven feed is caused by air in cylinder. This air may be removed by running piston rod back and forth for full length of cylinder a number of times. This condition usually occurs when a new machine is installed and started for first time, or when system has been drained, cleaned and refilled with oil.



WORK MAGNIFIER

The plastic-constructed magnifier is light-weight and easily mountable to the machine's worklamp reflector with a single locking bolt and nut. A snap-on protective lens cover prevents scratching or damage when the magnifier is not in use.

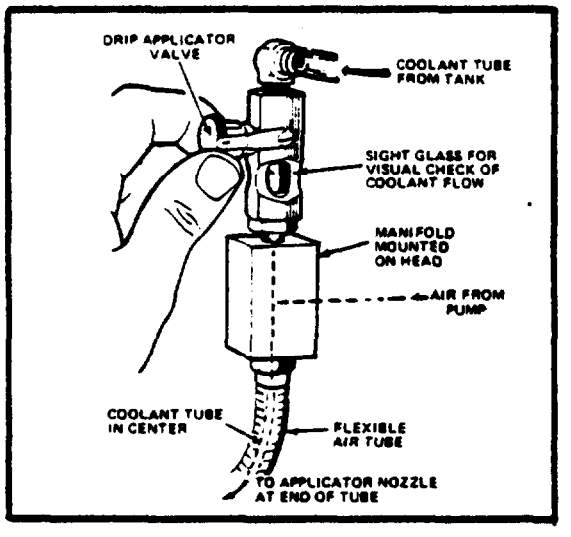
MIST COOLANT

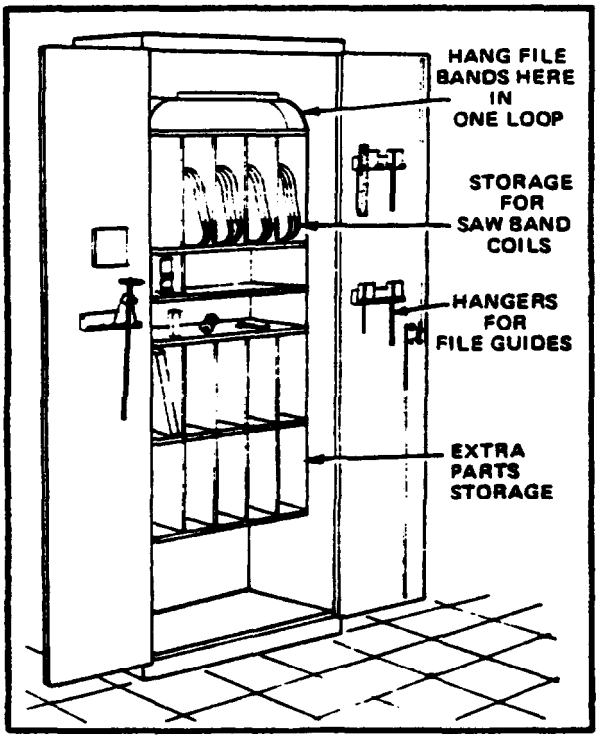
THE SYSTEM: Mist coolant is delivered from the coolant tank mounted on the back of the head to a drip applicator valve which has a sight glass. Next, the coolant enters a manifold where it is directed into a nylon tube which passes through the center of the flexible air tube. The air and coolant are mixed at the end of the applicator tube nozzle to form a fine mist.

THE APPLICATION: Regulate the mist by adjusting the drip applicator valve and counting the drops visible through the sight glass. A normal adjustment to produce a fine mist would be about one drop of coolant per second. Direct the mist stream on a metal surface to check for a fine, consistent mist. If the mist stream is intermittent, with spurts of coolant, there is probably an air leak somewhere at the manifold. Check all joints. Bend the mist applicator tube to direct a mist stream on the blade teeth and work.

COOLANTS TO USE: The mist applicator is designed to work properly with coolants such as POWER-CUT HD-600, Kleen-Kool, and POWER-CUT No. 360. If other coolants are used, such as wax based coolants, clogging may occur.

MAINTENANCE: Clean the nozzle and coolant tank when necessary. If the nylon center tube is replaced, disassemble and replace the nylon tube, make sure all joints are sealed and tight, coil the applicator tube a few times, then trim off the excess nylon flush with the end of the nozzle.





SUPPLY CABINET

The supply cabinet provides for orderly, safe storage of saw band coils, welded saw bands, file bands, as well as the component parts and accessories when they are not being used on the machine.

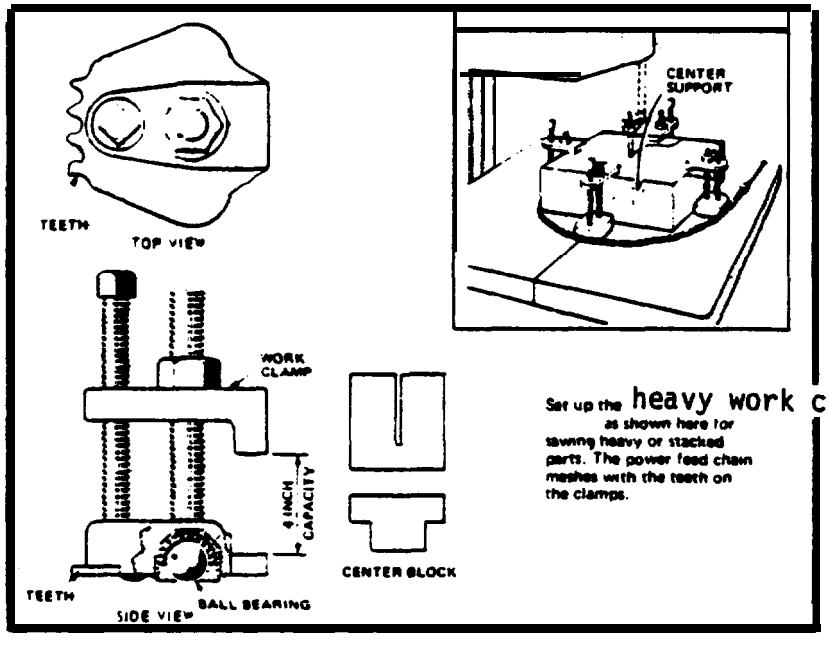
Saw bands may be looped into a triple coil, but the file bands should be hung over the appropriate hanger in one loop.

HEAVY WORK CLAMPS

The heavy work clamps are used for contour sawing of particularly heavy materials, as well as for sawing stacked parts to produce multiple parts in one operation. These clamps have a bail bearing base and have a standard clamping capacity of four inches.

A special center block provided which should be inserted in the table center and sawed to leave a path or kerf for the saw blade to travel in. It is important that this center support be used when cutting stacked parts since it will prevent the bottom pieces from bending downward or vibrating which will cause excessive wear on the saw band. Clamp the four work holding clamps on the material and square the work with the blade through the use of the table tilting device.

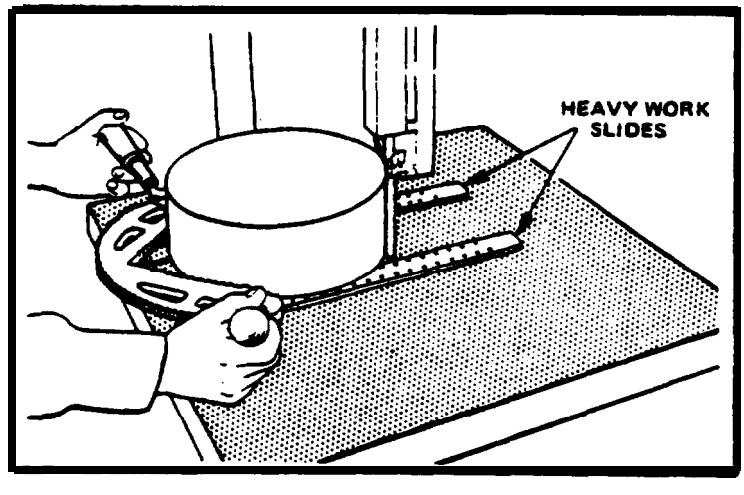
Each clamp is provided with gear teeth which mesh with the power feed chain.



HEAVY WORK SLIDES

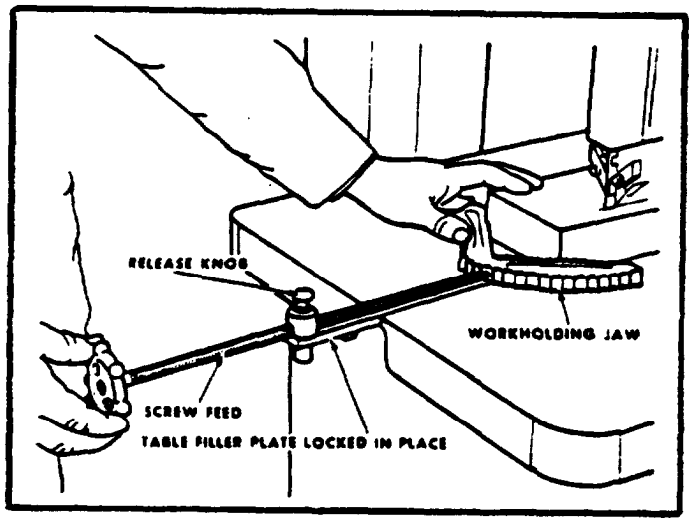
Heavy work slides permit easy movement of heavy parts which would be difficult to feed into saw band. The slide bars contain ball bearings and have a separate center block to support the material at the point of cutting.

Insert the special center support in the table center disk. The center block should then be sawed so that the path, or kerf, is made for the band to travel in. This will allow a solid contact between the work and feed table surface at the sawing point.



SCREW FEED

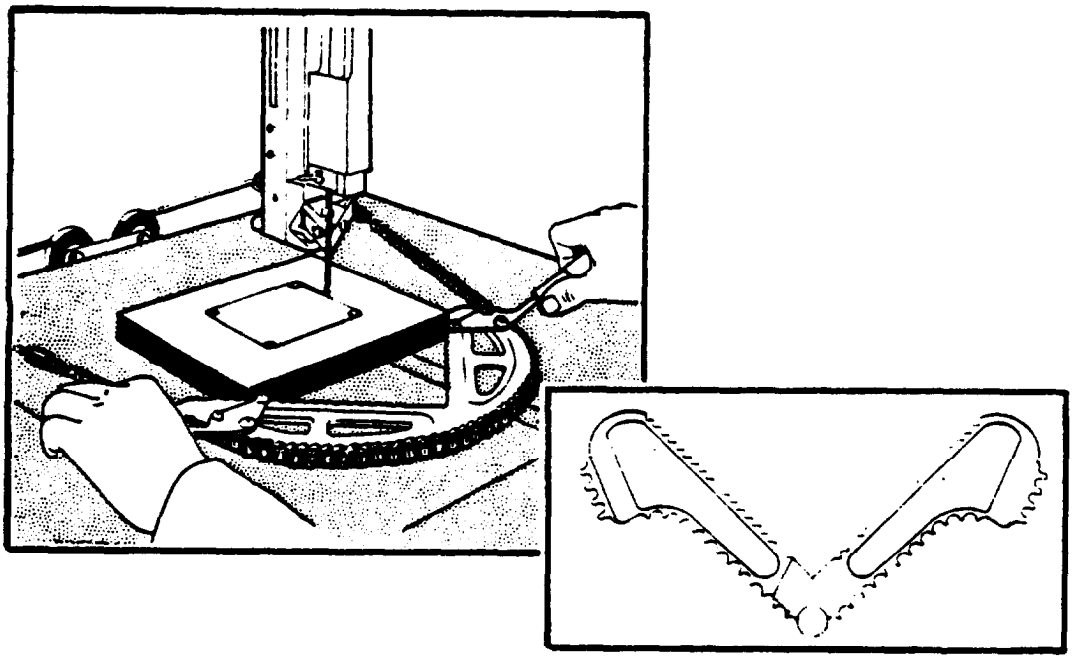
The screw feed accessory is used for precision contour sewing of heavy work. The 1/2" thread screw has a hardened point. The swivel is mounted in a hole in a bracket attached to the able front The screw is quickly adjusted to any point within a 12-inch movement simply by lifting the knob in the top of the-swivel.



WORKHOLDING JAW(s)

The workholding jaw can be used with or without its handles attached. It should be used with screw feed accessory and also as a fixed-angle jaw for manually guided contour sawing.

A workholding jaw, with adjustable angle (0º to 90°) jaws, is also available.

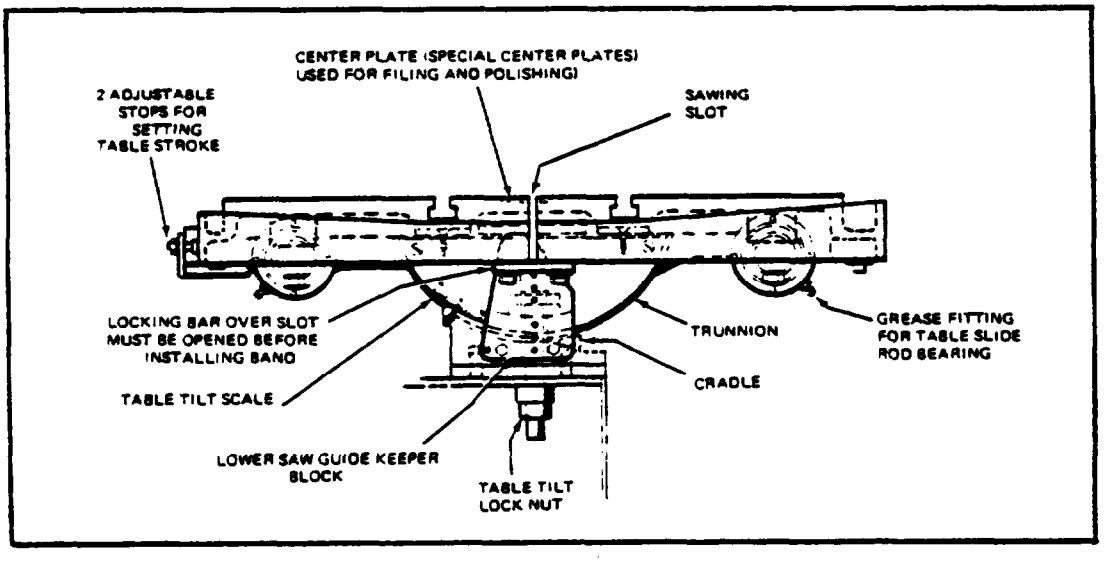


AIR POWERED WORKTABLE

This accessory replaces the standard 30" x 30" worktable, variable weight power feed, and workholding jaw. It also reduces the machine's work height to thirteen inches.

The air powered worktable is a heavy, ribbed cast-iron table, 26-1/2 x 33-1/2 inches, with two 1/2 inch T-slots for tooling purposes. It has a 12 inch feed stroke and is operated at 80 psi on shop air. Mechanical stops are provided to limit table travel if desired. The table can also be tilted 6º left or 45º right, and locked in place for angle cutting. A removable center plate is provided. This can be replaced with special plates for filing or polishing. A pin work rest inserted into a hole on the table top acts as a work stop. A squaring bar fits into a table slot to hold the workpiece during production sawing.

When the workpiece has been setup the table using either the pin work rest inserted into the table top or the squaring bar inserted in a table slot resting against the pin rest, move the table manually until the cut is started. Press the air control lever, located on the left front of the table, enough to obtain the feed force desired. When the lever is released, the feed force returns to zero and the table can be moved easily forward or backward for loading or fixturing.



ADJUSTING TABLE STOPS

The work stops are located on the left hand edge of the table. They are adjusted by loosening the lock nuts and sliding the stops to the desired position. Set the front stop to control duplication of cut depth and the rear stop to minimize table travel.

ADJUSTING TABLE TILT

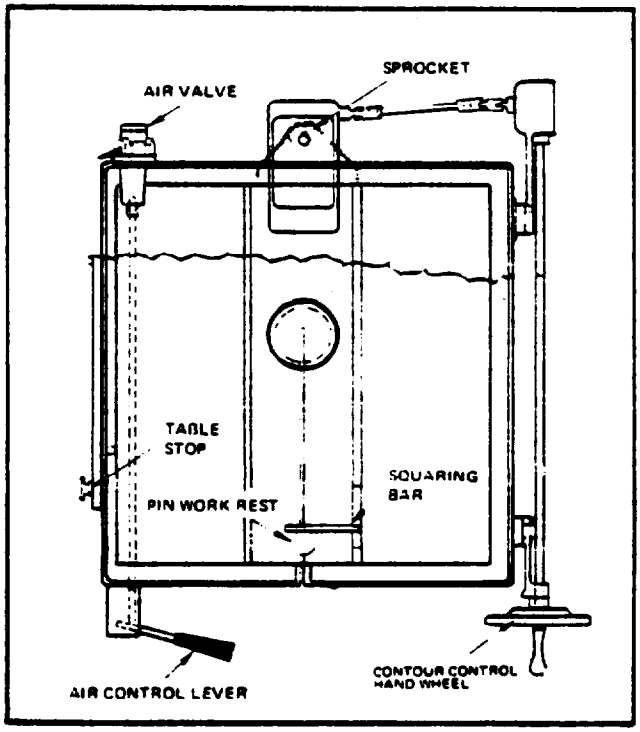
Table tilt is used primarily when sawing compound angles. To tilt the table, loosen the lock nut with the wrench provided and tilt the table manually until it is at the desired angle. The amount of table tilt, maximum 6º degrees left and 45º degrees right, is shown by the pointer and calibrated scale mounted on the trunnion. Next, lock the table in position.

CONTOUR SAWING ATTACHMENT & PROCEDURES (Air powered table only)

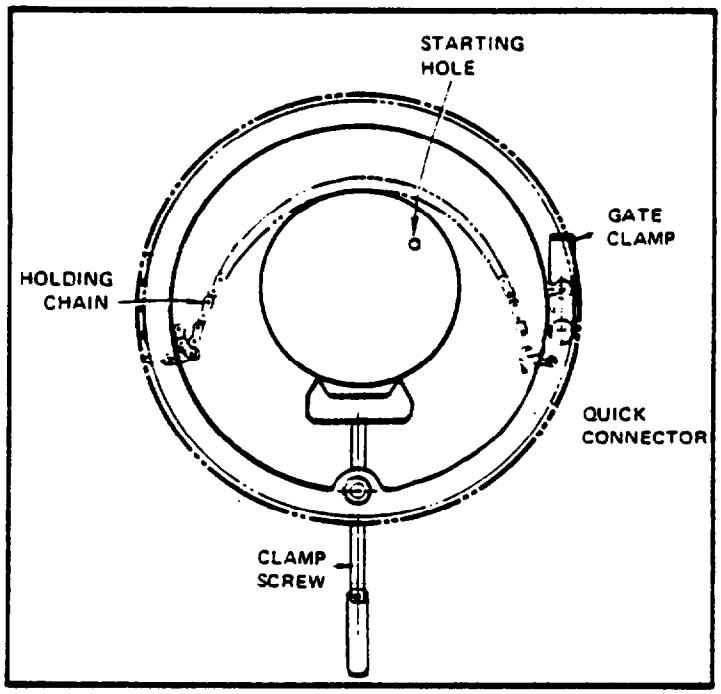
The contouring attachment permits the operator to guide a workpiece through intricate contours by means of a single handwheel controlling a gear train, sprocket, chain and holding fixture. The control handwheel at the right front of the table drives the sprocket and chain which turns the work being cut.

The sprocket work holding fixture will take round workpieces to 11-1/4 in. diameter or rectangle shapes to 8 x 11 inches. Place workpiece in center of fixture, hook holding chain into chain connectors and tighten clamp screw to hold work solid. Place drive chain around sprocket at rear of table and work fixture. Connect chain with quick lock provided, shortening chain loop enough to bring work into sawing position with table in forward position.

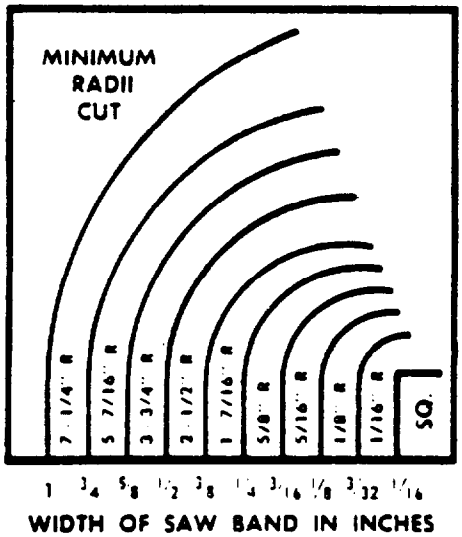
Do not feed the work so rapidly that the saw band twists or bows. Follow recommendations on, job selector for band speed, feed pressure and coolant application.



Top view of table.



Sprocket Work Holding Fixture.

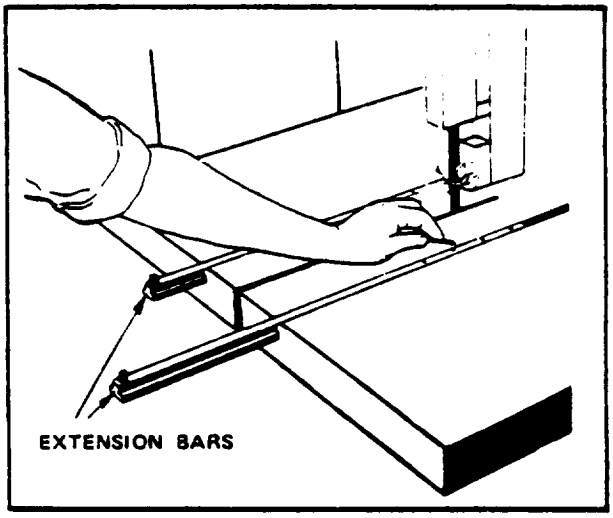


Radii Chart. The minimum cutting radius possible is shown above each saw band width.

TABLE EXTENSION BARS

(Air powered table only)

The table extension bars provide adjustable outboard support for plate of flat stock larger than the table. The bars can be locked in any position in the table T slots. Studs at the ends of the bars serve as backstops for straight or irregular pieces at any angle.

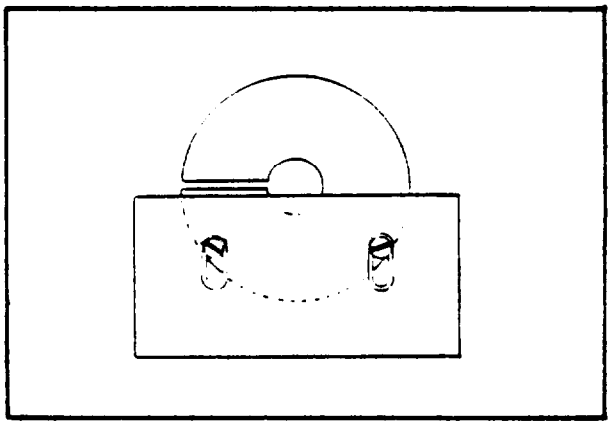


FILE ADAPTER PLATE (Air powered table only)

By using this file adapter plate, accurate filing of small work is possible. It also acts as a safety device, since it prevents jamming of the work between the table slot and the face of the file band.

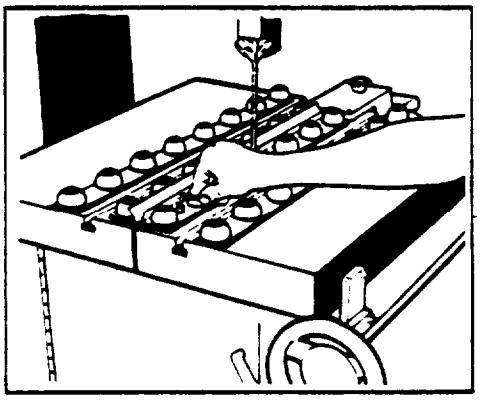
(1) Remove the table center plate and install the special file adapter plate around the file band.

(2) Loosen the flat head screws in the top plate and adjust to within 1/16 in. of the cutting surface of the file band. Tighten the flat head screws.



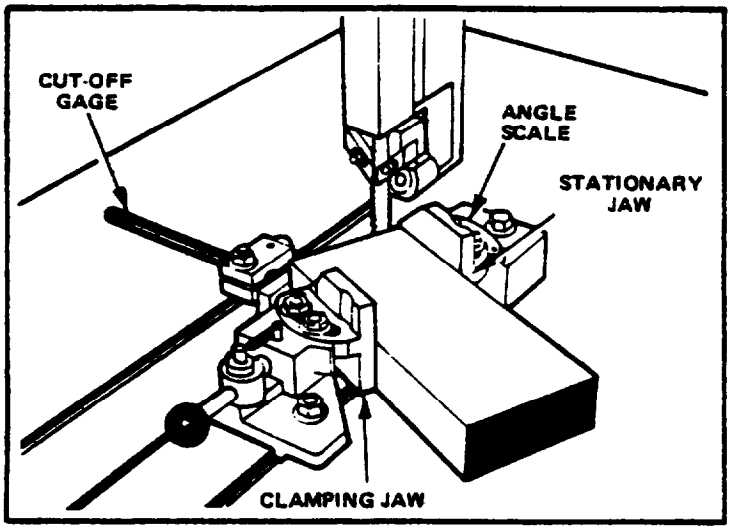
DETACHABLE BALL TRANSFER STRIPS (Air powered table only)

For a large or heavy workpiece, use the ball transfer strips. The two center strips should be attached to the table with screws as shown here. The other strips can be moved about as required during sawing. **NOTE:** Using the ball transfer strips reduces work height capacity 1-1/2 inches.



UNIVERSAL VISE (Air powered table only)

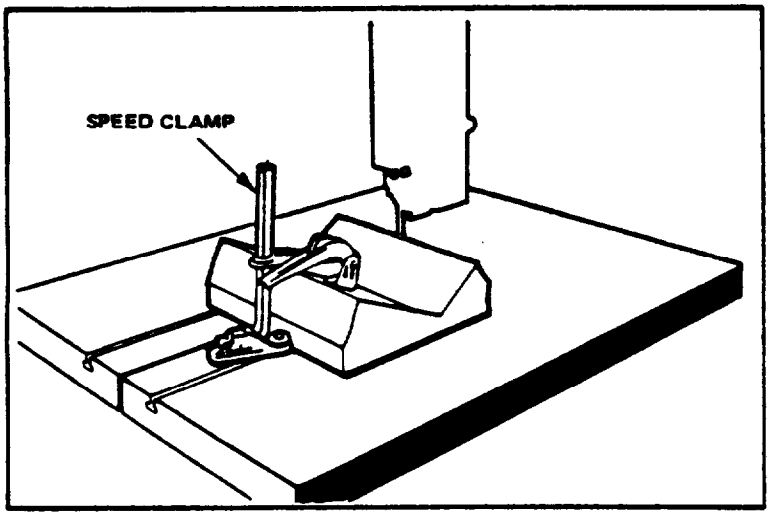
With this accessory, the operator can rapidly clamp and unclamp work by means of a lever-operated eccentric. The universal vise applies positive work holding pressure needed for accurate production cut-off work. The angle of cut-off is accurately adjusted from 0 to 45 degrees by means of a pointer and protractor. The table T slots allow quick and easy removal of the vise. An adjustable cut-off gage assembly mounts in a T slot on the left side of the table to allow duplicate cut-off operations for production runs.



The universal vise jaws are clamped in a table T slot and set at the desired angle. The cut off gage is mounted in the left-hand T slot.

MACHINE SPEED CLAMP (Air powered table only)

The machine speed clamp is specifically designed to hold fiat or odd-angle work to the machine table. The clamp is held on the table by means of a 1/2 inch T-bolt in the table slot. The clamp head is self-aligning; it automatically adjusts to the angle of the workpiece surface. The capacity of this clamp is 0 to 8 inches (0 to 200 mm), and the approximate maximum clamping pressure at 4 in. is 1000 Ibs. The cam action handle is provided with a quick release operated by thumb pressure.



The machine speed clamp mounts in the table T slot. The clamp head automatically adjusts to the shape of the workpiece .

THE UNIVERSAL CALIBRATED WORK FIXTURE (Air powered table only)

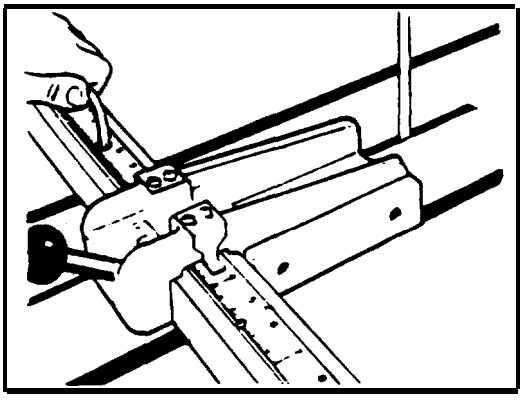
The universal work fixture is clamped to the table and holds the workpiece in position while it is moved into the saw band. The foot switch may be used if desired. Use the following procedure for setting up the fixture.

A. Set up for straight cut-off.

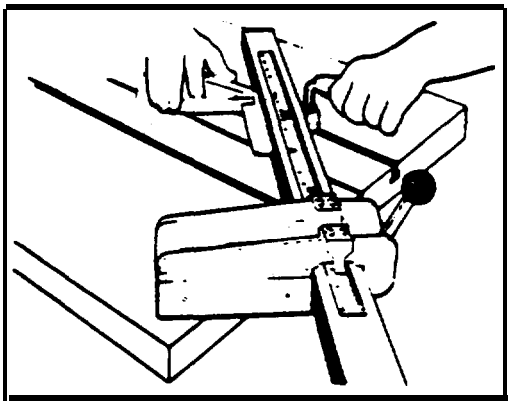
(1) The fixture bar is bolted to the table with T nuts and socket head cap screws. Place bar on table at required distance from band and loosely install nuts and screws.*

(2) Square bar to table by lining up one edge of movable stop with one edge of table slot. Next tighten the two socket head screws.

(3) After work fixture has been set up, a kerf can be sawed into bar 1/16 in. to 1/8 in. deep. This will allow cutting completely through workpiece. Set adjustable table stops to prevent sawing deeper into work bar upon completion of cut.



Square the bar to the table T slots.



Setting up the fixture for angle sawing

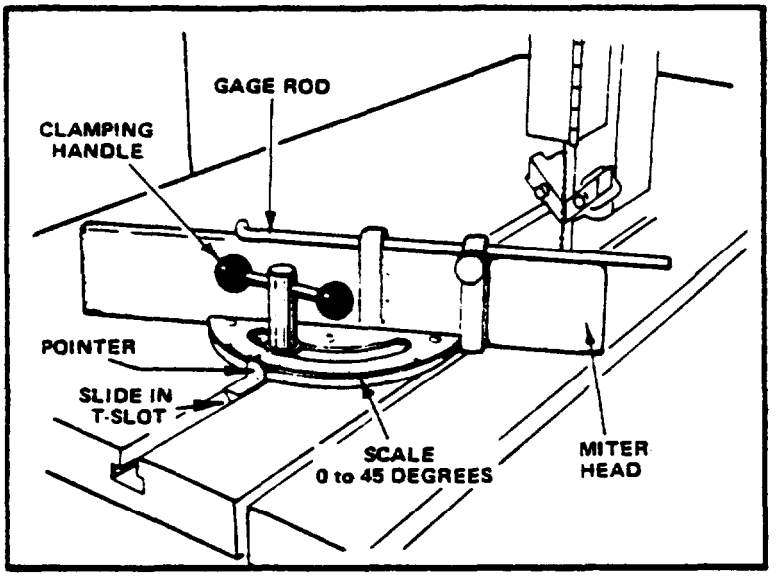
B. Set up for angle cut-off.

(1) Remove right hand T-nut and socket head screw from bar. Loosen left hand screw.
(2) Turn bar to desired angle and tighten left hand screw.
(3) Mount collar (behind bar) loosely on T nut with socket head screw. Bring collar up snugly against bar and tighten screw.

* If necessary, align zero mark on scale with saw band, then zero the pointers.

PROTRACTOR WORK STOP AND ALIGNING GAGE (Air powered table only)

(1) To set up, lock T-shaped slide on bottom of base plate in table T-slot.
(2) Set stop on table slide bar in a position that will prevent saw band from sawing into miter head.
(3) Adjust miter head for angle cutting by releasing clamp stud. The protractor plate is calibrated to 45 degrees.
(4) Adjust gage rod to control length of cut by loosening thumb screw and sliding rod to its correct position. Turn selector switch on control panel to straight (if SERVO-CONTOUR is used).



Protractor work stop. This accessory is especially adapted For production cut-off and angle cut-off operations.

PARTS MANUAL

APPENDIX A

INDEX A-2

FICHE NO. A-35 CLASS Contour MODEL 2614-1 SERIAL NO. 364-76101 TO

PAGE NO.	DESCRIPTION	FIRST SERIAL	LAST SERIAL	FRAME NO. DWG.	FRAME NO. P.LIST	FICHE NO.
C-1-47	Final Assembly	A L L		A-3	A-4	
C-8-57	Air Compressor	A L L		A-5	A-6	
C-8-54	Air Pump & Chip Blower	A L L		A-7	A-8	
C-7-26	Bandfiler	A L L		A-9	A-10	
C-7-26	Band Polisher	A L L		A-9	A-10	
C-2-55	Band Tension Indicator	A L L		A-11	A-12	
H1-19.0	Blade Shear	See Buttwelder		F-9	F-10	H-2
C-1-47	Chip Brush	A L L		A-3	A-4	
C-8-64	Coolant Assembly (Mist Type)	A L L		A-13	A-14	
C-10-7	Cutoff Attach. #1 All Purpose	A L L		B-1	B-2	
C-10-28	Cutoff Attach. #2 Side Mount	A L L		B-3	B-4	
C-10-2	Disc Cutter	A L L		B-5	B-6	
C-1-56	Door Handles & Latches	A L L		B-7	B-8	
C-5-66	Drive Assembly	A L L		B-9	B-10	
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C-2-75	Head Assembly	A L L		B-11	B-12	
C-2-76	Head Sub-Assembly	A L L		B-13	B-14	
C-10-38	Heavy Work Clamps	A L L		C-1	C-2	
C-10-23	Heavy Work Slides	ALL		C-3	C-4	
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C-8-8	Lamp Assembly	A L L		C-7	C-8	
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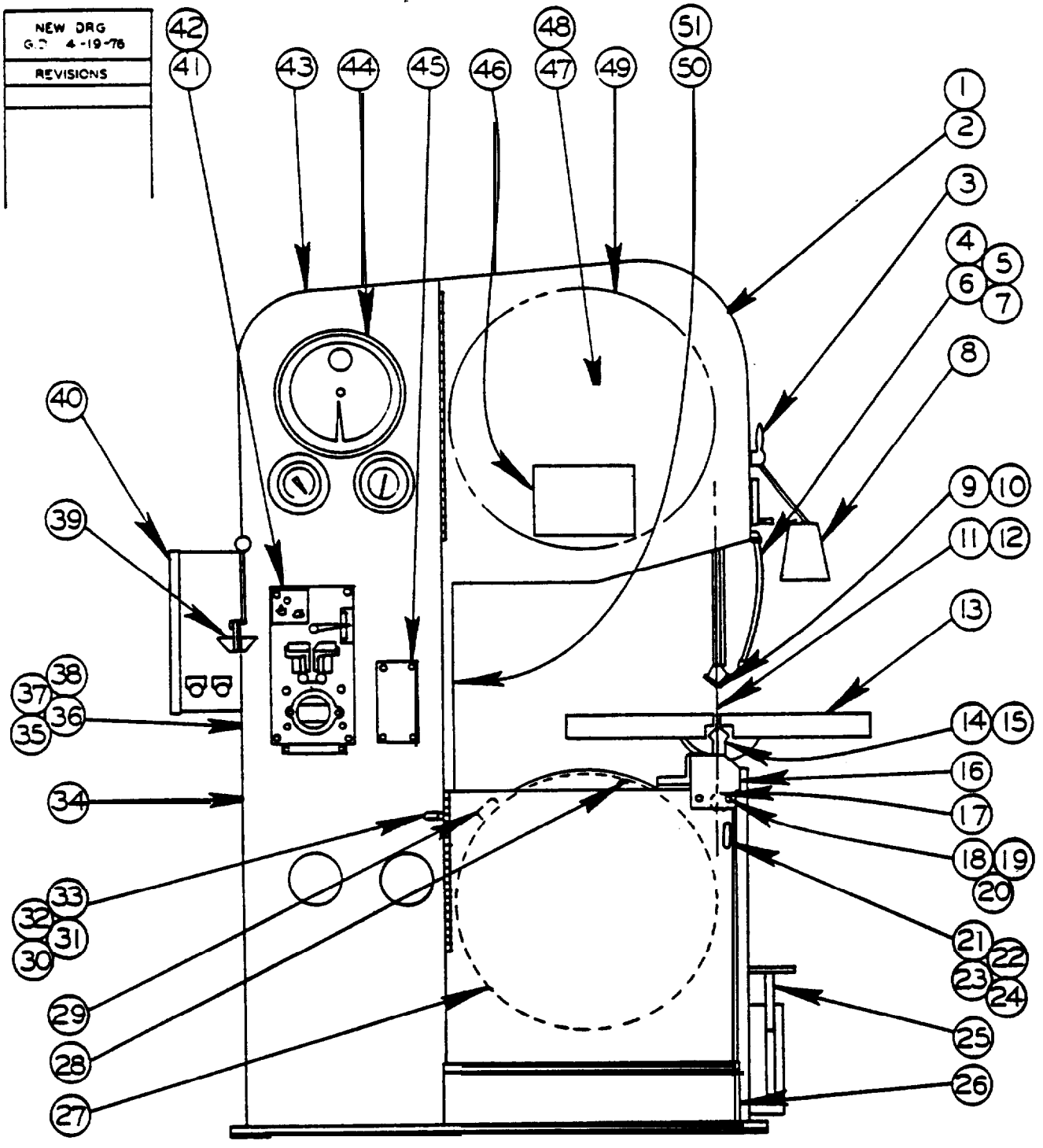
C-10-6	Rip Fence	A L L		D-3	D-4	
C-7-18	Saw Guides, Insert Type 1 of 2	A L L		D-5	D-6	
C-7-20	Saw Guides, Insert Type 2 of 2	A L L		D-7	D-8	
C-7-19	Saw Guides, Roller Type	A L L		D-9	D-10	
	Saw Lubricator	See Coolant				
C-10-29	Screw Feed	A L L		D-11	D-12	
C-5-90	Shift Sub-Assembly	A L L		D-13	D-14	
C-4-39	Shifter Assembly (Transmission)	A L L		E-1	E-2	
C-5-105	Speed Indicator	A L L		E-3	E-3	
C-3-78	Table Assembly (Air Feed) 1 of 3	A L L		E-5	E-6	
C-3-79	Table Assembly (Air Feed) 2 of 3	A L L		E-7	E-8	
C-3-80	Table Assembly (Air Feed) 3 of 3	A L L		E-9	E-10	
C-3-80	Table Cylinder (Air Feed)	A L L		E-9	E-10	
C-3-52	Table Trunnion Assembly	A L L		E-11	E-12	
C-9-107	Table Supports	A L L		E-13	E-14	
C-4-38	Transmission Assembly	A L L		F-1	F-2	
C-5-90	Varible Assembly	A L L		D-13	D-14	
C-5-91	Varible Bracket	A L L		F-3	F-4	
C-5-92	Varible Speed Pulley (10")	A L L		F-5	F-6	
CM-4-124	Varible Pulley Oiler (Attach.)	A L L		F-7	F-8	
C-9-14	Weight Feed Assembly 1 of 2	A L L		F-9	F-10	
C-9-15	Weight Feed Assembly 2 of 2	A L L		F-11	F-12	
C-5-93	Wheel Assemblies (Lower & Upper)	A L L		F-13	F-14	
C-10-16	Work Holding Jaws	A L L		G-1	G-2	



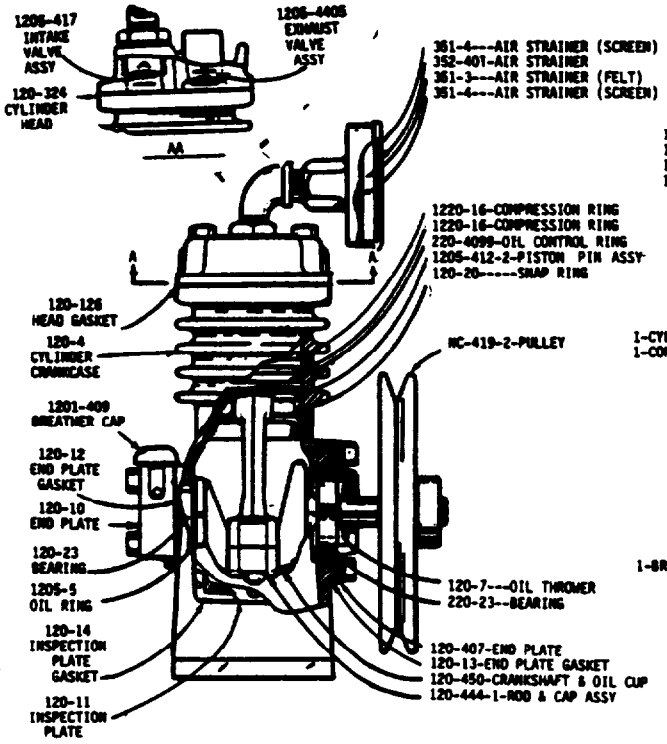
FINAL ASSEMBLY

MODEL	FIRST MACH	LAST MACH
2614-1	364-76101	

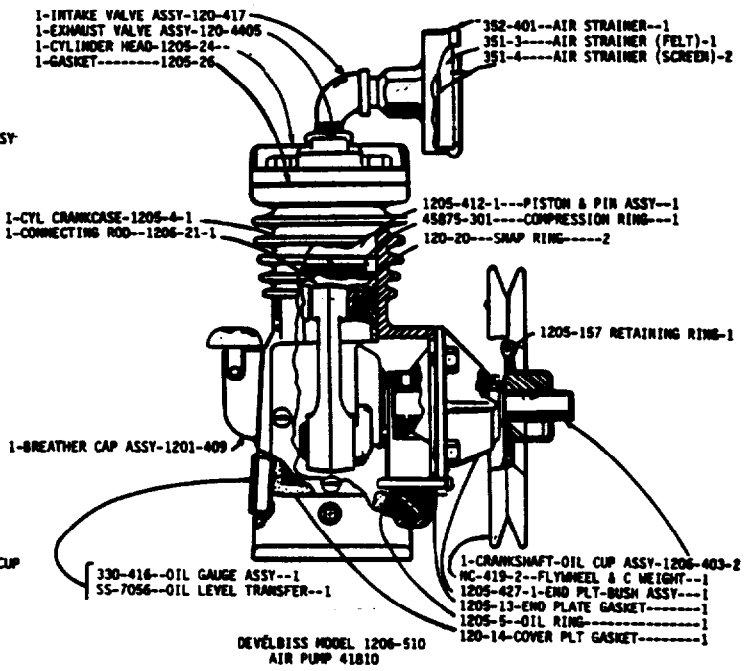
CODE NO. C-1-47

FINAL ASSEMBLY

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y .
Ref.	504940	Final Assembly	
1	094-066792	. Cover	1
2	091-990135	. Ser. Truss Hd. Mach. #10-24NC x 1/4	8
3	090-234147	. Upper Door Latch Assembly (See Detail)	1
4	090-040973	. Air Hose	1
5	105-045207	. 90º Street Elbow	1
6	090-000084	. Hose	A.R.
7	090-179029	. Hose Clamp	2
8	094-061413	. Worklight (See Detail)	1
9	093-048437	. Upper Saw Guide Assembly (See Detail)	1
10	090-185000	. Upper Saw Guide Holding Screw	2
11	091-403295	. Saw Band	2
12	093-045250	. Band Tag	1
13	095-049391	. Table & Trunnion Assembly (See Detail)	1
14	093-048445	. Lower Saw Guide Assembly (See Detail)	1
15	091-982462	. Ser. Soc. Hd. Cap 1/4-20NC x 1-3/4	2
16	094-065950	. Chip Baffle	1
17	091-086017	. Plug Button	1
18	091-991158	. Nut, Hex. 1/4-20NC	2
19	091-990200	. Ser. Truss Hd. Mach. 1/4-20NC x 1/2	10
20	091-993212	. Washer, Lock 1/4 Std	8
21	090-168428	. Handle Assembly	1
22	105-021018	. Door Latch (See Detail)	1
23	090-022716	. Spacer	2
24	091-984229	. Ser.Soc.Set1/4-20NCx1/4	1
25	095-048286	. Weight Feed Assembly (See Detail)	1
26	095-049482	. Chip Box	1
27	095-048278	. Drive Assembly (See Detail)	1
28	094-065950	. Lower Wheel Cover Sub-Ass'y.	1
29	090-278847	. Wheel Brush Ass'y	1
	090-166844	. . Brush	1
	090-177957	. . Brush Holder	1
30	090-060641	. Bracket	2
31	090-122359	. Rubber Grommet	2
32	091-993204	. Washer, Lock #10-Std	4
33	091-988691	. Ser. Rd. Hd. Mach. #10-24NC x 1/2	4
34	095-48294	. Rear Cover Sub-Assembly	1
35	093-020568	. Escutcheon (Mach. Specs.)	1
36	091-292730	. Escutcheon (Pat. No's.)	1
37	091-993964	. Ser. Rd. Hd. Drive #2 x 3/16 Type U	6
38	135-044287	. Plug Button	2
39	091-318071	. Blade Shear Assembly	1
40	095-053310	. Electrical Assembly (See Detail)	1
41	097-322727	. DBW-15 Buttwelder Assembly	1
42	091-990192	. Ser. Truss Hd. Mach. 1/4-20NC x 3/8	10
43	095-0475O2	. Frame Assembly	1
44	094-014610	. Job Selector Assembly (See Detail)	1
45	091-187039	. Cover	1
46	094-044765	. Escutcheon (Caution)	1
47	090-412636	. Name Plate	1
48	091-988667	. Ser. Rd. Hd. Mach. #10-24NC x 5/16	3
49	095-049896	. Head Assembly (See Detail)	1
50	093-048767	. Column Saw Guard	1
51	091-092940	. Shim	A.R.

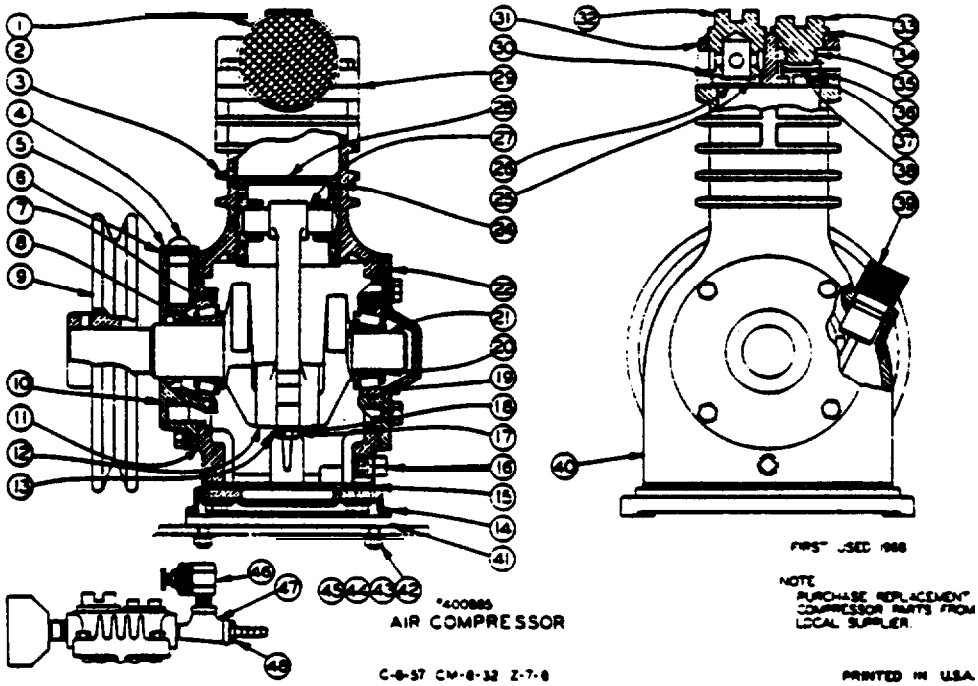


DEVILBISS MODEL 121-510
AIR PUMP 43424



DEVILBISS MODEL 1206-510
AIR PUMP 41810

NOTE: TO REPLACE COMPLETE UNIT
ORDER #400895.
PURCHASE INDIVIDUAL PARTS LOCALLY.
NUMBERS SHOWN ARE DEVILBISS NUMBERS.



*400885
AIR COMPRESSOR

NOTE
PURCHASE REPLACEMENT COMPRESSOR PARTS FROM LOCAL SUPPLIER.

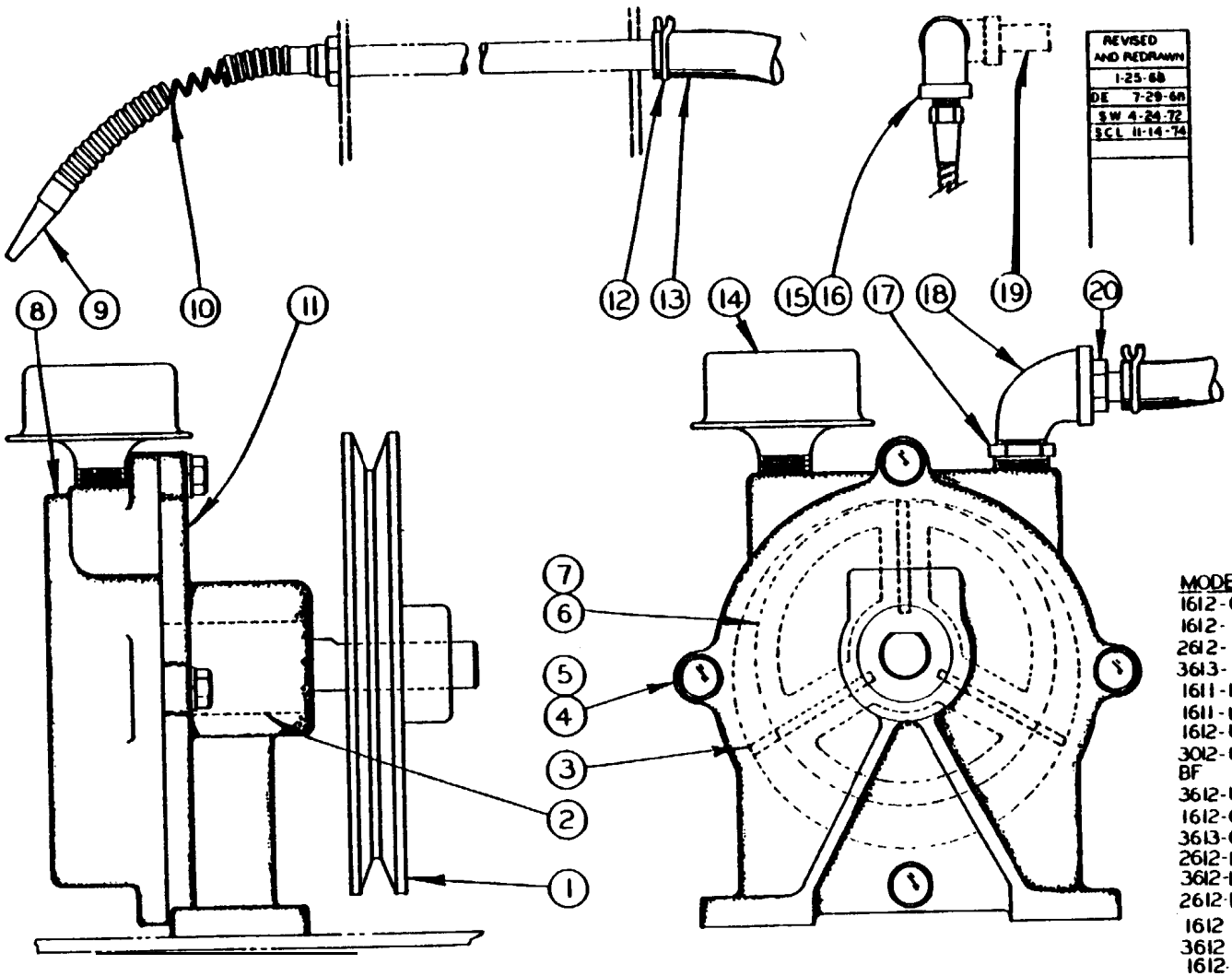
C-8-57 CM-8-32 Z-7-8

PRINTED IN U.S.A.

CODE NO. **C-8-57**
CM-8-32
Z - 7 - 8

AIR COMPRESSOR

INDEX NO.	PART No.		UNITS PER ASS'Y .
Ref.	400895	Air Compressor	
1	118639	. Breather Assembly	1
2	118640	. Replacement Felt	1
3	118601	. Cylinder	1
4	118602	. Stud Breather	1
5	118603	. Breather Valve Bumper	2
6	118604	. Breather Valve	1
7	118605	. Bearing CUP	1
8	118606	. Bearing Cone	1
9	118641	. 6" Pulley For x-2 Comp	USE
	118642	. 8"Pulley For X-2 Comp	ONE
10	118607	. Bearing Carrier	1
11	118608	. Bearing Plate Gasket	2
12	118609	. Connecting Rod Assembly	1
13	118610	. Connecting Rod Bolt Wire	1
14	118611	. Oil Pan	1
15	118612	. Oil Pan Gasket	1
16	118613	. Oil Drain Plug	1
17	118614	. Connecting Rod Bolt	1
18	118615	. Connecting Rod Bolt Lockwasher	1
19	118616	. Bearing Cup	1
20	118617	. Bearing Cone	1
21	118618	. Crank Shaft	1
22	1186l9	. Bearing Carrier	1
24	120943	. Piston Compressor Ring	3
25	118626	. Suction Valve Spring	1
26	118627	. Suction Valve Bumper	1
27	118623	. Piston Pin Assembly	1
28	118624	. Piston	1
29	118625	. Head Gasket	1
30	118628	. Socket Valve Bumper Gasket	1
31	118630	. Cylinder Head	1
32	118631	. Suction Valve Seat	1
33	118632	. Discharge Valve Bumper	1
34	118633	. Intercooler Gasket	1
35	118634	. Discharge Valve Spring	1
36	118629	. Valve	2
37	118636	. Discharge Valve Guide	1
38	118637	. Discharge Valve Guide	1
39	118638	. Oil Gauge Assembly	1
40	400835	. Air Compressor (6"Pulley)	use
	401957	. Air Compressor (8"Pulley)	one
41	37252	. Adapter Plate Weldment	1
42	198027	. Screw, Hex. Hd. Cap 5/16-18NC x 3/4	4
43	199262	. Washer, Flat 5/16 Std.	4
44	199122	. Nut, HEX 5/16-18NC	4
45	199323	. Washer, Lock 5/16 Std.	4
46	2103	. Relief Valve	1
47	35-847	. Service Tee	1
48	2004	. Barbed Insert	1



AIR PUMP ASS'Y

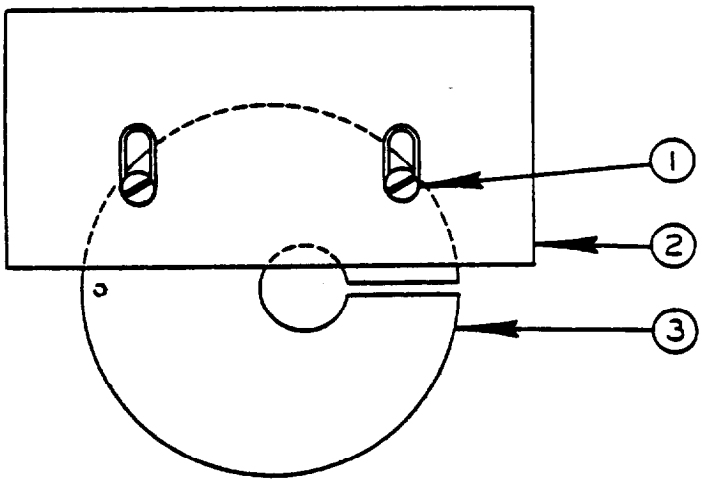
MODEL	FIRST MACH	LAST MACH
1612-0	209-62101	209-681820
1612-1	148-59101	
2612-1	172-60101	172-68229
3613-1	149-59101	
1611-H	258-68102	258-68231
1611-U	270-68101	270-68156
1612-U	146-59101	146-682364
3012-U	147-59101	147-681104
BF	136-62221	136-67279
3612-U	271-68101	271-68131
1612-0	277-68101	
3613-0	278-68101	
2612-H	269-68101	269-68102
3612-H	272-68101	
2612-H	284-68101	
1612	287-68101	
3612	291-68101	
1612-H	288-69101	
2013	301-71101	301-74165
2012-A	320-72101	320-74333
2013-0	321-72101	321-74357
2013-1	338-74101	
2013-10	339-74101	
2012-1H	348-75101	
2614-1	364-76101	

AIR PUMP ASSEMBLY

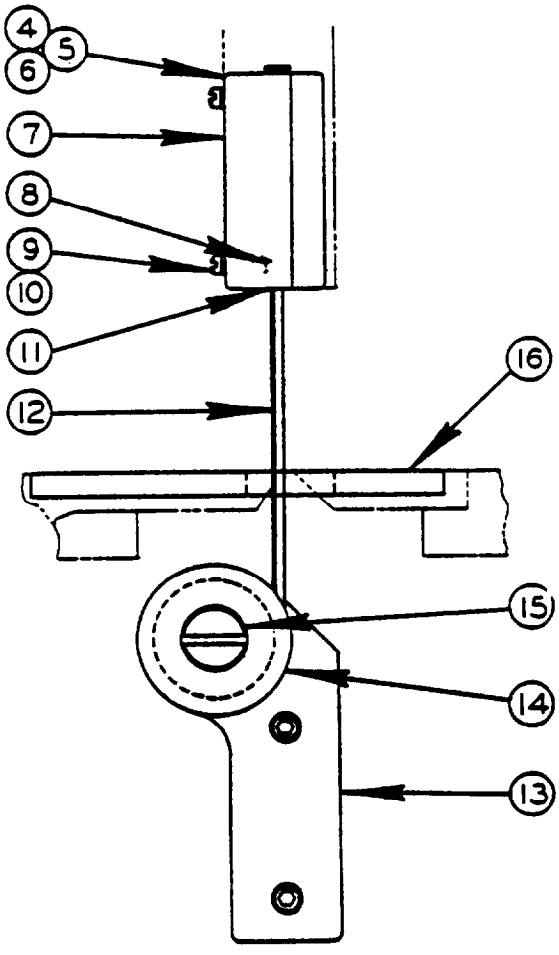
INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
**Ref.	S-11002	Air Pump Ass'y	
**Ref.	42708	Air Pump Ass'y	
*1	5-11316	. Pulley	1
2	5-11405	. Bearing	1
3	5-11319	. Vane	3
4	Comm.	. Screw, Hex. Hd. Cap 1/4-20NC x 3/4"	4
5	Comm.	. Washer, Lock 1/4 I.D. Shakeproof	4
6	5-11104	. Air Pump Rotor	1
7	Comm.	. Screw, Soc. Set 1/4-2ONC x 1/2"	2
8	35-6736	. Air Pump Body	1
*9	6073	. Air Hose (1612-1)	1
	4097	. Air Hose (1612-U, 3012-U, 3613-1, 1612-0)	1
*10	4658	. Wire Insert	1
11	35-6735	. Air Pump Cover	1
*12	17902	. Hose Clamp.	2
*13	Stk.#008	Hose.	AR
14	5-11510	. Breather	1
*15	35-3647	. 90º Elbow (1612-U & 3012-U)	2
* 16	14-14528	. Close Nipple (1612-U & 3012-U)	1
17	5-11517	. Reducer	1
18	17-13521	. Street Elbow 1/4 Std	1
*19	8386	. Nipple (1612-U & 3012-U)	1
20	2004	. Hose Nipple	1

**NOTE: When replacing complete ass'y #42708, order complete ass'y #5-11002.

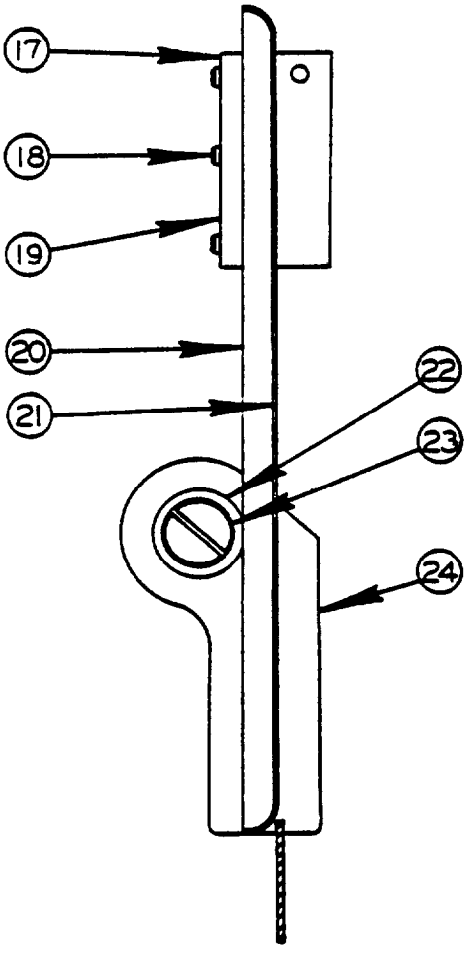
*NOTE: One starred items are not part of Air Pump Ass'y.



SMALL PARTS FILING ASSEMBLY



BAND FILING ASSEMBLY



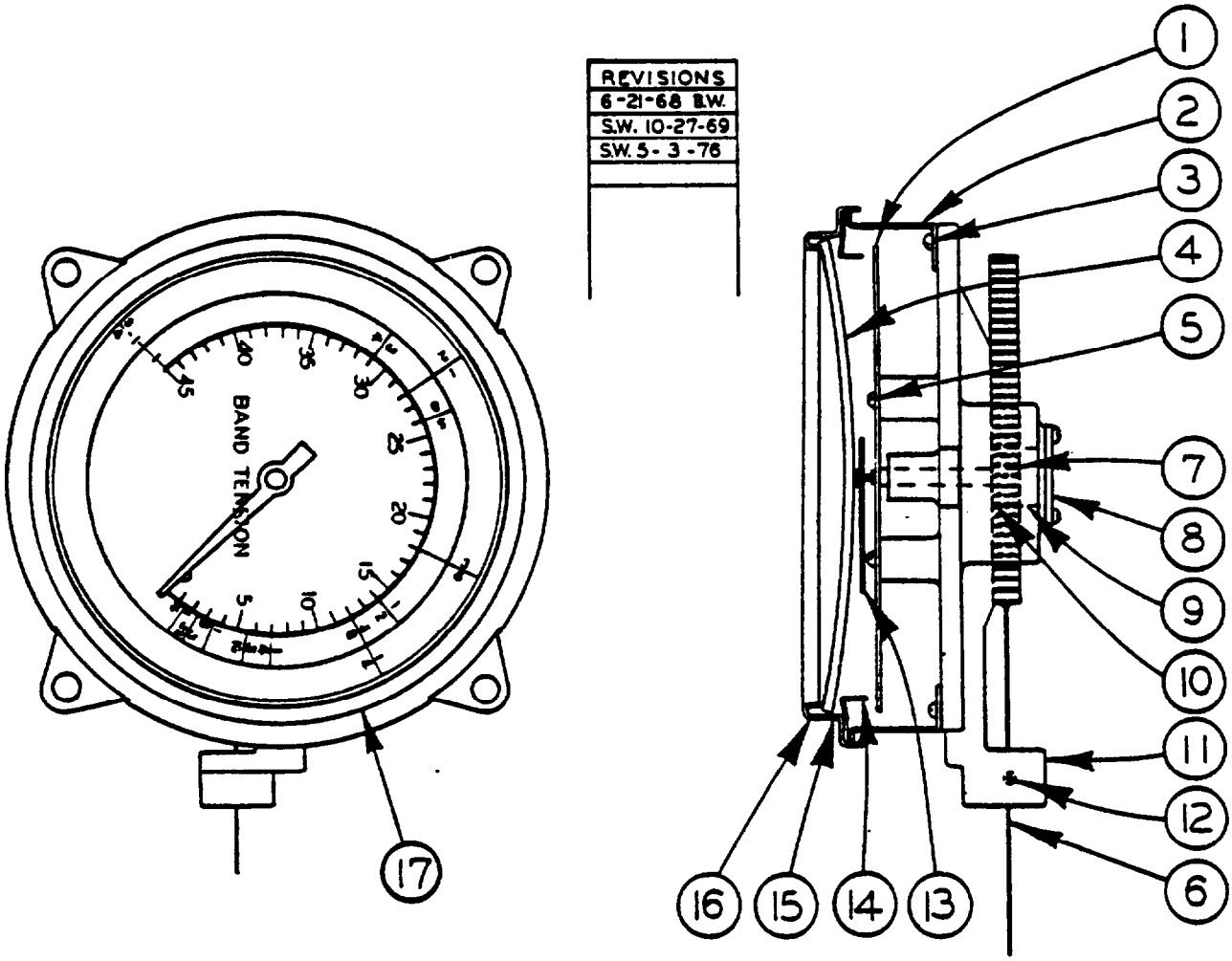
BAND POLISHING ASSEMBLY

Band Filing & Polishing Assemblies

CODE NO. C-7-26
CM-7-25

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY
Ref.	7645	Small Parts Filng Assy. (1612, 1612-0, 1612-H, 1612-1, 2013, 2013-1, 2013-0, 2013-10, 2012-A, 2012-1A, 2012-AT 2012-1AT, 2612-H 2612-1, 3612, 3613-0 3612-H, 3613-1	
1	198748	. Screw, Fl. Hd. Mach. #10-24NC x 3/8	2
2	12046	.Small Part Plate	1
3	12045	.Center Plate	1
Ref.	44780	Band Filing Assy. (1612, 1612-0, 1612-H, 1612-1, 1613-2, 1612-3, 2013, 2013-1, 2013-0, 2013-10, 2012-A, 2012-1A 2012-AT, 2012-1AT, 2612-2H, 2613-3, 3612-H, 3613-1, 3612-3, 6013-3)	
Ref.	111948	Band Filing Assy (1612, 1612-0, 1612-H, 1612-1, 1612-3, 2013 2013-1, 2013-0, 2013-10, 2012-A, 2012-1A, 2012-AT, 2012-1AT, 3612-H, 3612-3)	
Ref.	132773	Band Filing Assy. (1612,1612-0,2013, 2013-1, 2013-0, 2013-10, 2012-A, 2012-AT, 2612-H. 2612-1, 3612, 3613-01	
Ref.	404994	Band Filing Assy. (1612, 1612-0, 2013, 2013-1, 2013-0, 2013-10, 2012-A, 2012-AT, 2612-H, 2612-1, 3612. 3613-O)	
Ref.	48532	Band Filing Assy. (1612-3, 2612-2H, 2613-3, 3612-3, 6013-3)	
Ref.	401438	Band Filing Assy. (1613-3, 2612-2H, 2613-3, 3612-3. 6013-3)	
Ref.	44781	Band Filing Assy. (2613-2, 3613-2, 6013-2)	
Ref.	45597	Band Filing Assy. (3613-2, 6013-2)	
4	27487	.1/4- File Guide Assy. (Assys # 44780, #404994, #44781)	1
	27490	. 1/4" File Guide Assy. (Assys #111948, #132773, #45597)	1
	34096	1/4" File Guide Assy. (Assy #'48532)	1
	34099	. 1/4" File Guide Assy. (Assy '#401438)	1
5	27488	3/8" File Guide Assy. (Assys #44780, #404994, #43781)	1
	27491	3/8" File Guide Assy. (Assys #111948, #132773, #45597	1
	34097	. 3/8" File Guide Assy. (Assy #48532)	1
	34103	. 3/8" File Guide Assy. (Assy #401438)	1
6	27489	1/2" File Guide Assy. (Assy #44780, #404994, #44781	1
	27492	. 1/2" File Guide Assy #111948, #132773, #45597	1
	34098	1/2" File Guide Assy. (Assys #48532).	1
	34104	. 1/2" File Guide Assy. (Assy #401438)	1
7	27417	. . Bracket (Assy 27487)	1
	27418	. . Bracket (Assy #27490)	1
	34095	. . Bracket (Assy #34096)	1
	34094	. . Bracket (Assy # 34099)	1
		. . Bracket (Assy # 27488)	1
	27420	. . Bracket (Assy # 27491)	1
	27421	. . Bracket (Assy # 34097)	1
	34093	. . Bracket (Assy # 34103)	1
	34092	. . Bracket (Assy # 27489)	1
	27419	. . Bracket (Assy # 27492)	1
	27422	. . Bracket (Assy #34098)	1
	34091	. . Bracket (Assy #34104)	1
	34090		
8	6-09314	. . Washer (Assys #27487, #27490, #34096, #34099)	2
	6-09313	. . Washer(Assys #247488, #27491, #34097, #34103, #27489, #27492 #34098, #34104	2
9	198680	. . Screw, Fil. Hd. Mach. #4-40NC x 5/8 (Assys #27487, #27490, #34096, #34099	2
	198699	. . Screw, Fil. Hd. Mach. #10-24NC x 5/8 (Assys #37488, 27491, #34097, #34103,#27489, #27492, #34098, #34104)	2
10	199315	. . Washer, Lock #4 Std. (Assys #27490, #34099)	2
	199319	. . Washer, Lock #10 Std. (Assys #27488, #27491, #34097, #34103 #27489, #27492, #34098, #34104)	2
11	6-09307	. . Insert (Assys #27487, #34096	1
	6-09303	. . Insert (Assys #27490, #34099)	1
	6-09301	. . Insert (Assys #27488, #34097)	1
	6-09305	. . Insert (Assys #27491, #34103)	1
	6-09309	. . Insert (Assys #27489, #34098)	1
	6-09311	. . Insert (Assys #27492, #34104)	1
12	6-09308	. . File Guide #27487, #34096)	1
	6-09304	. . File Guide (Assys #27490, #34099).	1
	6-09302	. . File Guide (Assys #27488, #34097)	1
	6-09306	. . File Guide (Assys #27491, #34103)	1
	6-09310	. . File Guide (Assys #27489, #34098)	1
	6-09312	. . File Guide (Assys #27492, #3410)	1
	34-09313	. . Guide Plates (Not Shown)(Assys #27490, #34099	2
	34-09402	. . Pin (Not Shown) (Assys #27490, #34099)	2
13	1371	. Adapter	1
14	34-09312	. File Guide Back-up (Assys #44780 #111948, #132773, #404994, #44781 #45597)	1
	110931	. File Guide Back-up (Assys #48532, #401438	1
15	34-09001	. Screw Assembly	1
	3801	. . Head	1
	3802	. . Screw	1
16	10627	. Center Plate (Assys #44780, #111948 #48532, #401438	1
	120128	. Center Plate (Assys #132773, #404994)	1
Ref.	106957	Band Polishing Assy (1611-H, 1611-U, 1612, 1612-0, 1612-H, 1612-1, 2013, 2013-1,2013-0, 2013-0, 2013-10, 2012-A, 2012-1A, 2012-AT, 2012-1AT, 2612-H, 2612-1, 3612-U, 3612, 3613-0, 3612-H, 3613-1	
Ref.	29023	Band Polishing Assy (1612-1, 1613-2, 1612-3, 3613-1, 3613-2, 3612-3)	
Ref.	27485	Band Polishing Assy (26-2, 60-2, 2612-2H, 2613-2, 6013-2	
Ref.	27484	Band Polishing Assy (16-2, 16-3, 36-2, 36-3)	
Ref.	27486	Band Polishing Assy (26-3, 60-3, 2613-3, 6013-3)	
Ref.	106958	Band Polishing Assy (2612-1)	
17	16686	. Band Polishing Assy (Assys #106957, #29023, #27485, #27484, #106958)	1
	27414	. Band Polishng Sub-Assy (Assy #27486	1
18	198696	. . Screw, Fil, Hd. Mach #106958 x 3/8	3
19	27412	. . Bracket	1
20	6-10301	. . Backup Plate (Assy #16686)	1
	35-9923	. . Backup Plate (Assy #27414)	1
21	34-10505	. . Backup Cloth	1
22	34-10402	. Guide Backup	1
23	34-09001	. Screw Assembly	1
	3801	. . Head	1
	3802	. . Screw	1
24	1371	. Adapter	1
	10570	. Center Plate (Not Shown) (Assys. #106957, #106958)	1

REVISIONS
6-21-68 S.W.
S.W. 10-27-69
S.W. 5-3-76



BAND TENSION INDICATOR ASSEMBLY

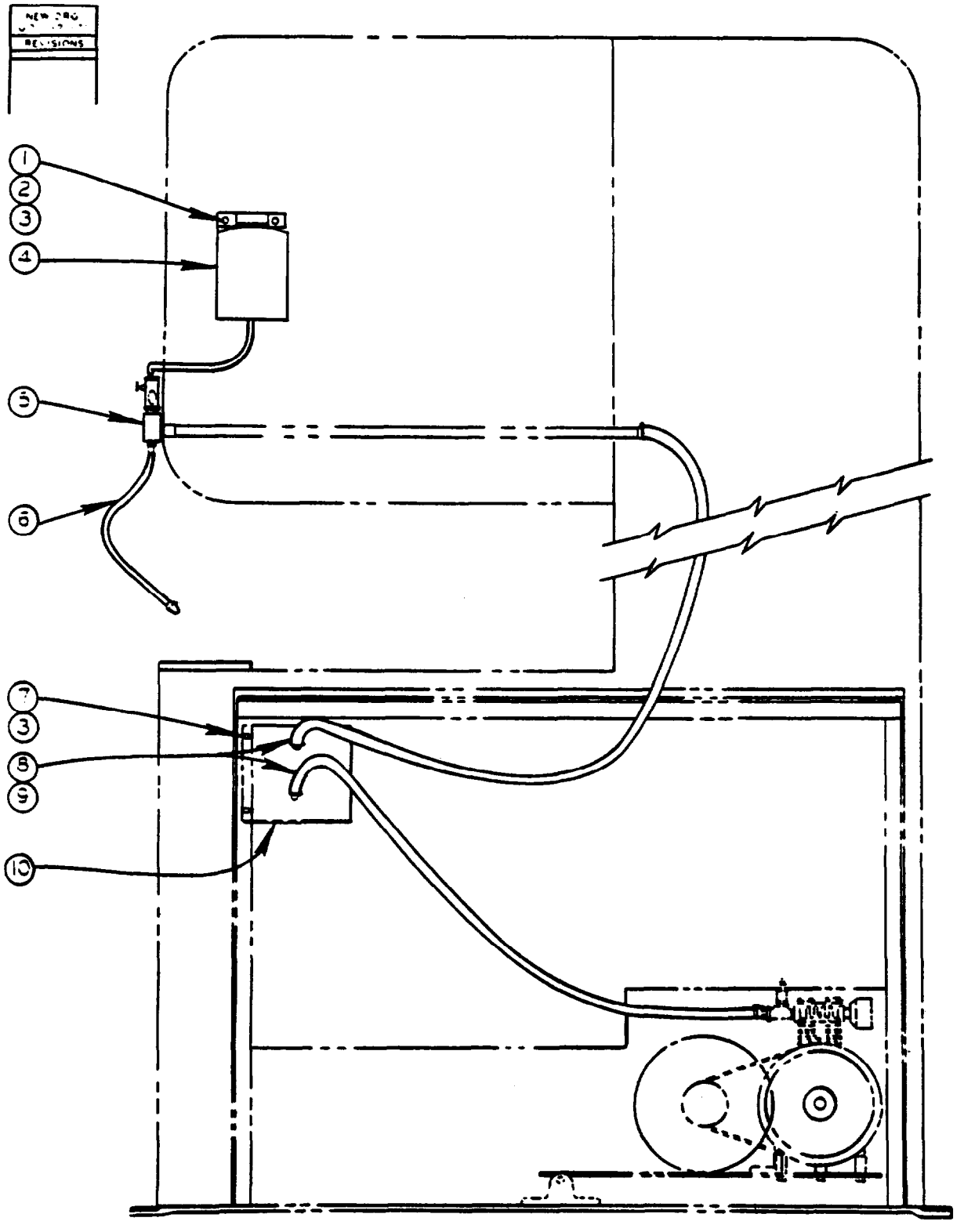
MODEL	FIRST MACH.	LAST MACH.
2613-2	127 - 66251	
1612-1	148 - 671183	
2612-1	285 - 68101	
3613-1	149 - 66432	
2612-H	284 - 68101	
2612-2H	206 - 66195	
1612-X1	170 - 65107	
1613-2	150 - 65486	
3613-2	151 - 66369	
1612-3	152 - 66691	
3612-3	153 - 65787	
6013-2	129 - 66110	
2612-D	236 - 74115	
3612-1H3	358 - 76101	
2613-1H	361 - 76101	
2612-1H3	362 - 76101	
2614-1	364 - 76101	

CODE NO. C-2-55
CM-2034

BAND TENSION INDICATOR ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNIT PER ASS'Y
Ref.	45510	Tension Indicator Ass'y. (2612-2H & 2613-2)	
Ref.	45511	Tension Indicator Ass'y. (6013-2)	
Ref.	45716	Tension Indicator Ass'y. (3613-2, 3613-1 & 3612-3) .	
Ref.	457I7	Tension Indicator Ass'y. (1612-X1, 1613-2, 1612-3 & 1612-1)	
Ref.	40481	Tension indicator Ass'y. (2612-H, 2612-1, 2612-D, 2614-1, 2613-1H, 2612-1H3)	
1	101966	Dial (2612-2H & 2613-2)	1
	102015	Dial (6013-2)	1
	101805	Dial (3613-2, 3612-3 & 3613-1)	1
	101804	Dial (1612-X1, 1613-2, 1612-3 & 1612-1)	1
	121920	Dial (2612-H, 2612-1 & 2612-D)	1
2	35-2471	Case	1
3	Comm.	Screw, Rd. Hd. Mach. #6-32 NC x 1/4	4
4	3980	Glass	1
5	Comm .	Screw, Rd. Hd. Mach. #3-48NC x 1/4	4
*6	7144	Rack & Wire Sub-Assembly	1
7	111597	Shaft	1
8	35-1974	. Cap	1
9	35-1973	. Spacer	1
10	35-2473	. Spur Gear	1
11	35-1970	. Bracket	1
12	Comm.	. Screw, Soc. Hd. Set #8-32NC x 1/4	1
13	111929	. Pointer	1
14	3977	. Ring	1
15	4644	. Bezel	1
16	3978	. Rubber Gasket	1
17	17478	. Bezel	1

*NOTE: Refer to Head Assembly for Casing Part Number.



MIST COOLANT ASSEMBLY

MODEL	FIRST MACH	LAST MACH
2613-1H	361-76101	
2614-1	364-76101	

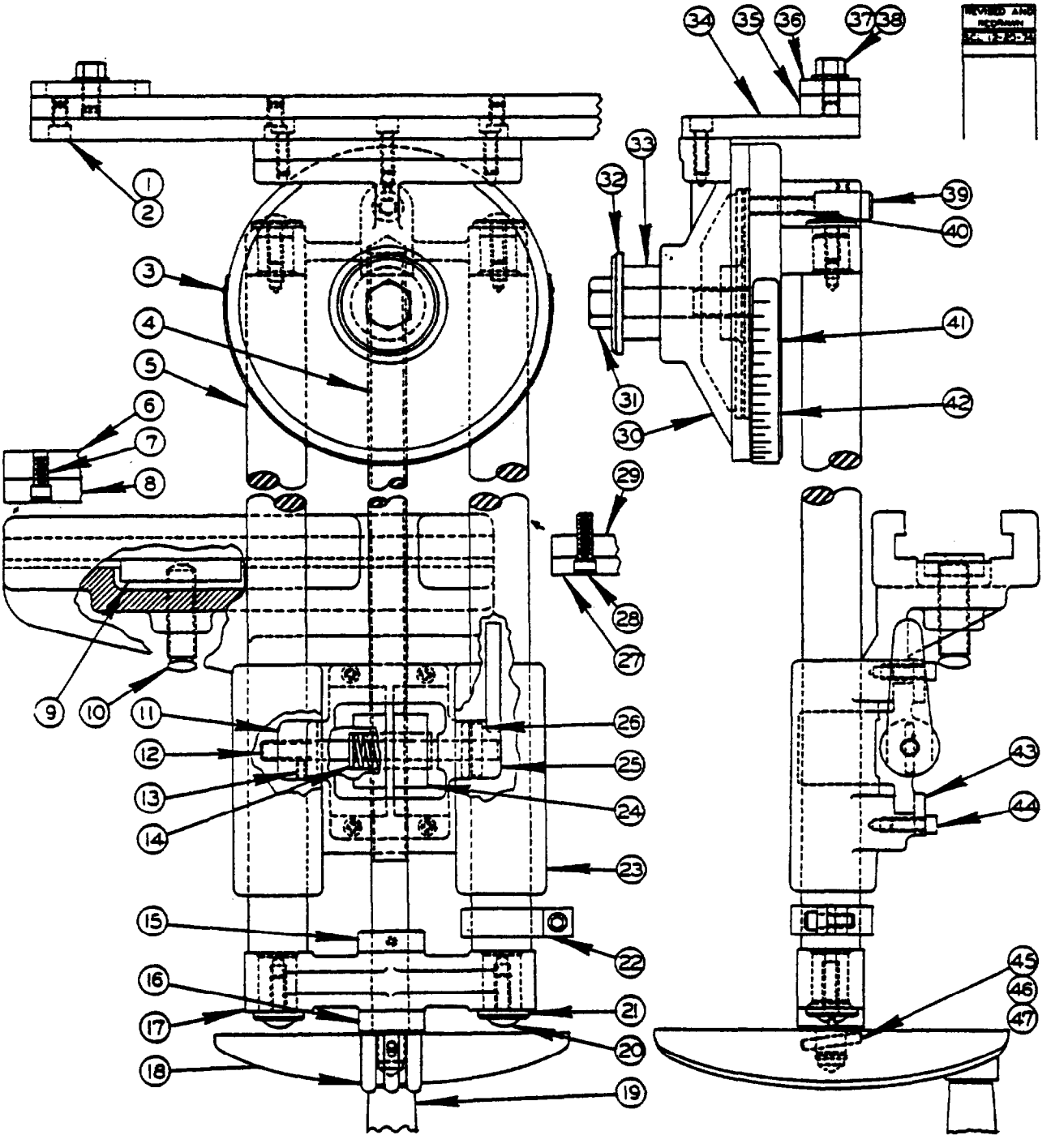
C-8-64 CM-8-55

PRINTED IN U.S.A.

CODE NO. C- 8-64
CM-8-55

MIST COOLANT ASSEMBLY

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	504993	Mist Coolant Assembly	
1	093-039568	Bracket	1
2	091-988931	Scr. Rd. Hd. Mach. 1/4-20NC x 3/8	2
3	091-993212	Washer, Lack 1/4 Med.	2
4	091-369181	Bottle Assembly	1
	090-160011	Barbed Insert	1
	091-317958	Sealant	A.R.
5	090-381245	Coolant Manifold Assembly	1
6	114-145287	Close Nipple	1
7	091-980250	Scr. Hex. Hd. Cap 5/16-18NC x 1/2	2
8	090-000035	Hose	A.R.
9	090-179029	Hose Clamp	2
10	090-389347	Air Dome Sub-Assembly	1



NO. 1
ALL PURPOSE CUT OFF, RIPPING &
MITERING ATTACHMENT

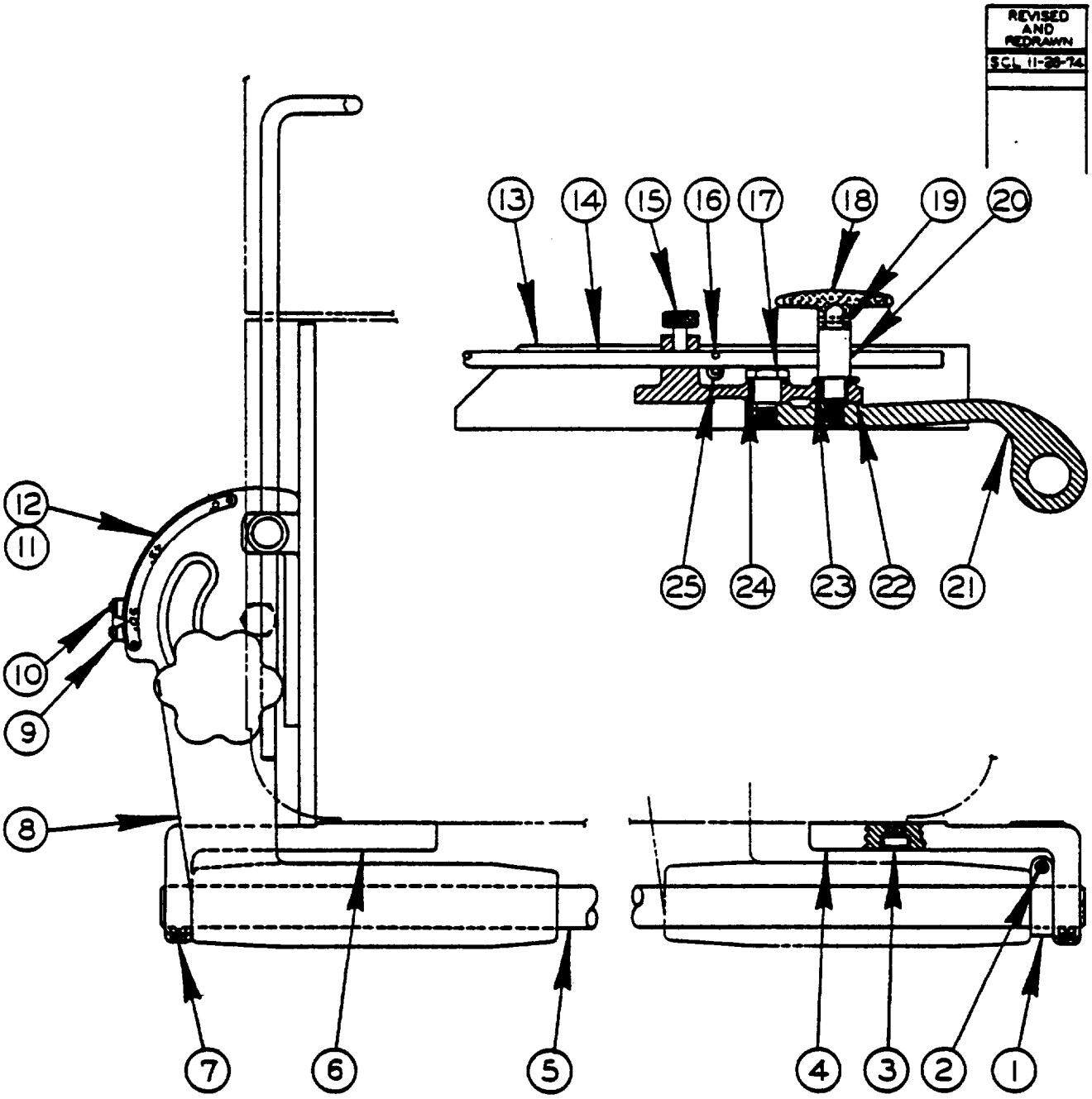
C-10-7 Z-10-4

PRINTED IN U.S.A.

CODE NO. C-10-7
Z-10-4

No. ALL PURPOSE CUT-OFF, RIPPING AND MITERING ATTACHMENT

INDEX No.	PART No.	DESCRIPTON	UNITS PER ASS'Y.
Ref.	50493	No. 1 All Purpose Cut-Off, Ripping & Mitering Attachment (24 x 24 Table)	
Ref.	11-28004	No. 1 All Purpose Cut-Off, Ripping & Mitering Attachment (30 x 30 Table)	
Ref.	35-5427	No. 1 All Purpose Cut-Off, Ripping & Mitering Attachment (36x36Table)	
1	35-5185	. All Purpose Miter Attachment Sub-Assemble	1
2	1898235	. . Screw, Soc. Hd. Cap 1/4 -20NC x 3/8	7
3	199397	. . Screw, Rd. Hd. Drive #2 x 1/4 P.K.	4
4	11-28416	. . Feed Screw	1
5	11-28415	. Slide Rod	2
6	6-28301	. L.H. Table Guide Spacer (24" Table)	USE
	11-28303	. L.H. Table Guide Spacer (30" Table)	
	35-4725	. L.H. Table Guide Spacer (36" Table)	ONE
7	198236	. Screw, Soc. Hd. Cap 1/4-20NC x 1/2	2
8	6-28302	. L.H. Table Guide (24" Table)	USE
	11-28302	. L.H. Table Guide (30"Table)	
	35-4726	. L.H. Table Guide (36"Table)	ONE
9	11-28304	. . Locking Pad	I
10	11-28409	. . Locking Pad Set Screw	1
I1	11-28110	. . Split Nut Adjusting Nut	1
12	11-25417	. . Split Nut Adjusting Pin	1
13	198410	. . Screw, Soc. Set #10-24NC x 1/4	3
14	11-28508	. . Split Nut Spring	I
15	11-28418	. . Screw Collar	1
16	11-28419	. . Screw Handwheel Collar	1
17	11-29108	. . Slide Rod & Handle Bracket	I
18	34-05103	. . Handwheel	1
19	118116	. . Speed Change Handle	1
20	199019	. . Screw, Truss Hd. Mach. 1/4-20 NC x 3/4	4
	11-28420	. . Slide Rod Washer	4
22	11-28109	. . Feed Shop Collar	I
23	11-2807	. . Table Slide Casting	1
24	11-28111	. . Split Nut	1
25	11-28112	. . Split Nut Adjusting Handle	1
26	4233	. . Roll Pin	1
27	6-28303	. R.H. Table Guide (24" Table)	USE
	11-28308	. R.H. Table Guide (30" Table)	
	35-4728	. R.H. Table Guide (36" Table)	ONE
28	198242	. Screw, Soc. Hd. Cap 1/4-20 NC x 1	6
29	6-28304	. R.H. Table Guide Spacer (24" Table)	USE
	11-28307	. R.H. Table Guide Spacer (30" Table)	
	35-4727	. R.H. Table Guide Spacer (36" Table)	ONE
30	11-28102	. . Miter Head	1
31	198071	. . Screw, Hex. Hd. Cap 1/2-13NC x 2-1/2	1
32	11-28405	. . Power Feed Chain Washer	1
33	11-28410	. . Power Feed Chain Collar	1
34	11-28301	. . Miter Bar Support	1
35	11-28306	. . Work Stop	1
36	11-28305	. .	1
37	199262	. . Washer, 5/16 Std.	1
38	198025	. . Screw, Hex. Hd. Cap 5/16-18NC x 1/2	1
39	11-28413	. . Miter Head Support Pin	1
40	198438	. . Screw, Soc. Hd. Set 5/16-18NC x 5/8	1
41	11-28106	. . Miter Head Base	I
42	11-28505	. . Miter Head Graduated Plate	I
43	11-28309	. . Split Nut Side Plate	1
44	198221	. . Screw, Soc. Hd. Cap #10-24NC x 5/8	5
45	4259	. . Roll Pin	1
46	116442	. . Screw, Soc. Hd. Shoulder	1
47	115632	. . Washer	1
	118117	. . Pin (Not Shown)	1



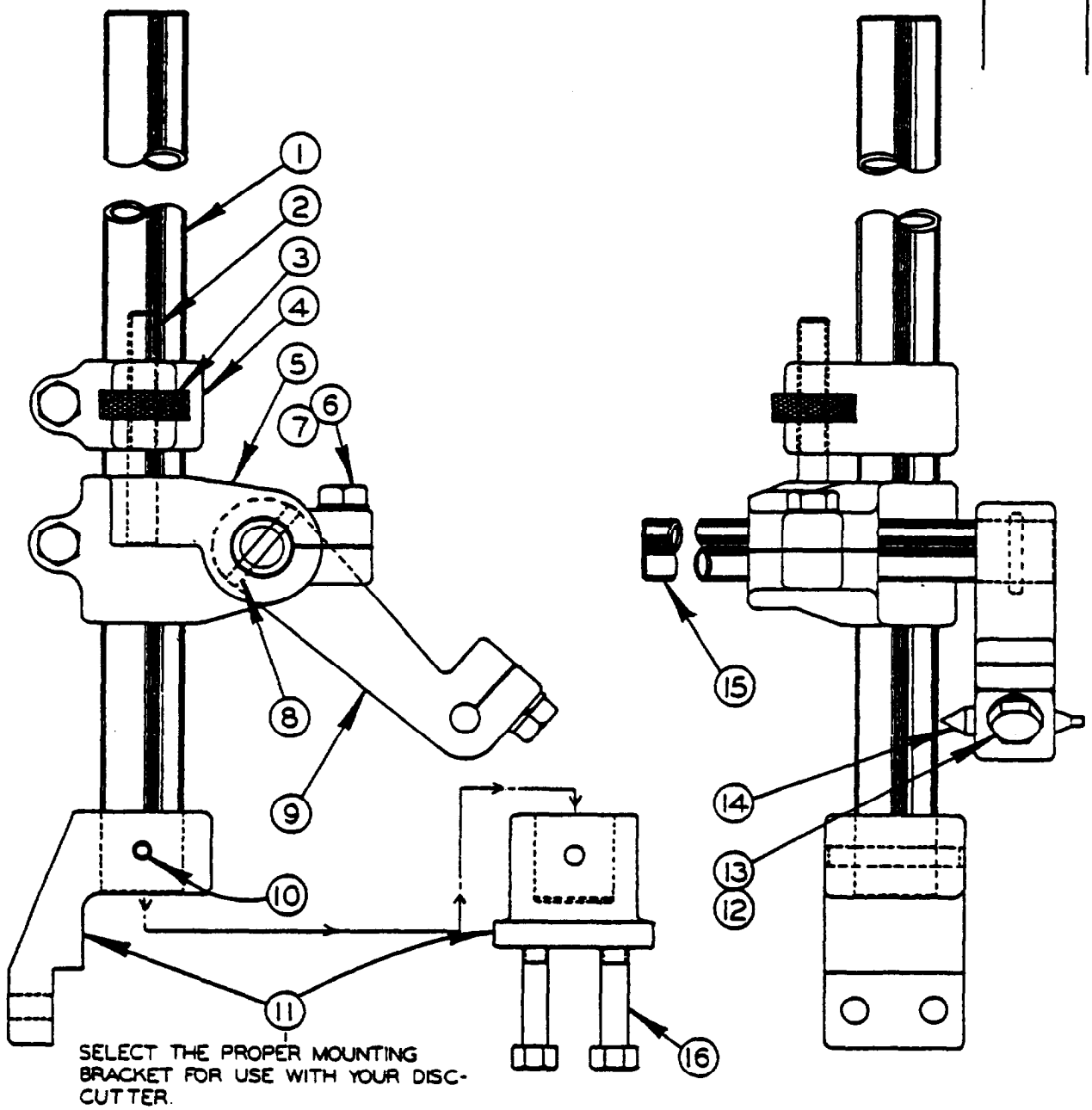
NO. 2
STANDARD CUT OFF & MITERING ATTACHMENT
(SIDE MOUNT)

CODE NO. C-10-28
Z-10-6

NO. 2 STD. CUT-OFF 8 MITERING ATTACHMENT

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y .
Ref.	50419	No. 2 Std. Cut-Off & Mitering Attachment (20" x 20" Table)	
Ref.	55290	No. 2 Std. Cut-Off & Mitering Attachment (24" x 24" Table)	
Ref.	55305	No. 2 Std. Cut-Off & Mitering Attachment (26" x 26" Table)	
Ref.	50511	No, 2 Std. Cut-Off & Mitering Attachment (30" x 30" Table)	
1	11-28109	. Stop	1
2	198220	. Screw, Soc. Hd. Cap #10-24NC x 1/2 (20" & 24" Tables)	1
	198378	. Screw, Soc. Hd. Cap #10-24NC x 5/16 (26" Table)	1
	198423	. Screw, Soc. Hd. Set 1/4-20NC x 5/16 (30" Table)	1
3	198276	. Screw, Soc. Hd. Cap 3/8-16NC x 1/2 (20" & 30" Tables)	4
	198278	. Screw, Soc. Hd. Cap, 3/8-16NC x 3/4 (24" & 26" Tables)	4
4	3682	. Rear Slide Rod Bracket (20" Table)	1
	29583	. Rear Slide Rod Bracket (24", 26" & 30" fables)	1
5	3-20406	. Slide Rod (20" Table)	1
	4-20401	. Slide Rod (24" Table)	1
	101935	. Slide Rod (26" Table)	1
	101931	. Slide Rod (30" Table)	1
6	3681	. Front Slide Rod Bracket (20" Table)	1
	29584	. Front Slide Rod Bracket (24", 26" & 30" Table)	1
7	198423	. Screw, Soc. Hd. Set 1/4-20NC x 5/16	2
8	50711	. Miter Attachment Sub-Assembly (20" Table)	1
	50710	. Miter Attachment Sub-Assembly (24" Table)	1
	55304	. Miter Attachment Sub-Assembly (26" Table)	1
	50712	. Miter Attachment Sub-Assembly (30" Table)	1
9	3676	. . Pointer	1
10	199008	. . Screw, Oven Hd. Mach. #8-32NC x 1/4 (Cad. Pltd.)	2
11	3672	. . Degree Plate	1
12	199399	. . Screw, Rd. Hd. Drive P.K. #4 x 1/4 Type "U"	4
13	3-20306	. . Miter Bar (20" Table)	1
	4-20301	. . Miter Bar (24" Table)	1
	102944	. . Miter Bar (26" Table)	1
	11-20301	. . Miter Bar (30" Table)	1
14	4-20302	. . Gage Rod	1
15	34-17401	. . Thumb Screw	1
16	4254	. . Roll Pin	2
17	34-20407	. . Miter Head Pivot	1
18	5131	. . Handwheel	1
19	4229	. . Roll Pin	1
20	3677	. . Stud	1
21	40598	. . Slide Arm	1
22	20941	. . Miter Head	1
23	34-20410	. . Locking Stud Washer	1
24	34-20409	. . Pivot Washer	1
25	198236	. . Screw, Soc. Hd. Cap 1/4-20NC x 1/2	2

NEW DRG. S.W. 8-22-69
REVISIONS



SELECT THE PROPER MOUNTING BRACKET FOR USE WITH YOUR DISC-CUTTER.

DISC CUTTER ASSEMBLY

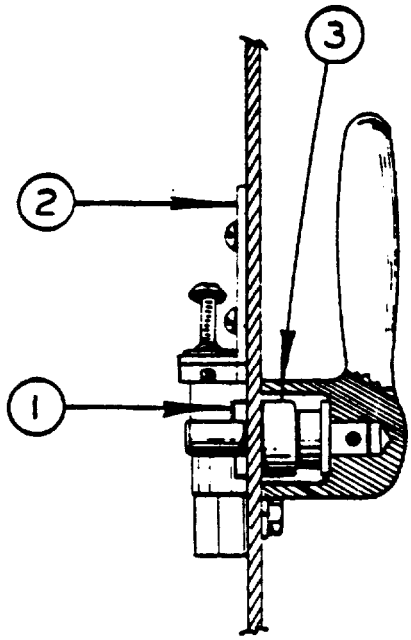
C-10-2 CM-9-1 Z-9-4

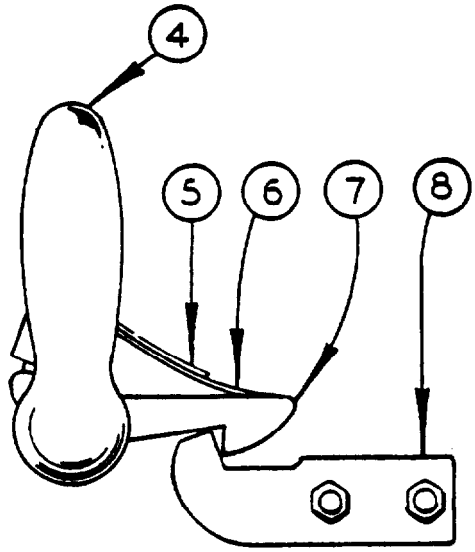
PRINTED IN U.S.A.

CODE NO. C-10-2
CM-9-1
Z-9-4

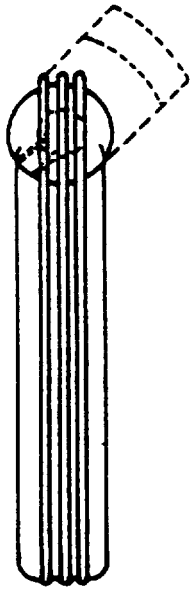
DISC CUTTER ASSEMBLY

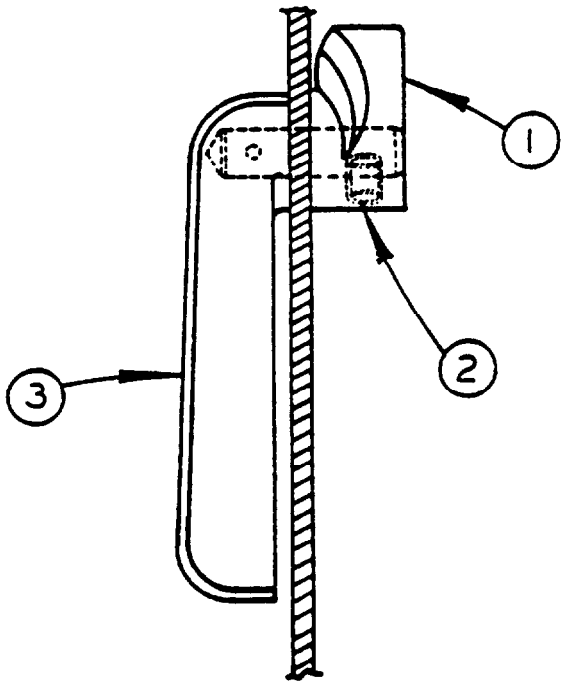
INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y
Ref.	402080	Disc. Cutter Assembly	
Ref.	40044	Disc. Cutter Assembly	
1	35-3399	. Radius Arm	1
2	5-15413	. Adjustment Screw	1
3	5-15412	. Adjustment Wheel	1
4	5-15109	. Adjustment Housing	1
5	35-3400	. Radius Arm Clamp	1
6	Comm.	. Screw, Hex. Hd. Cap, 3/8-16NC x 1	3
7	Comm.	. Washer, Lock 3/8 Std	3
8	4261	. Roll Pin	1
8	35-3402	. Center Pin Clamp	1
10	4276	. Roll Pin (Used on Ass'y #402080)	1
	4275	. Roll Pin (Used on Ass'y #40044)	1
11	34019	. Bracket (Used on Ass'y #402080)	1
		. Bracket (Used on Ass'y #40044)	1
12	Comm.	. Screw, Hex. Hd. Cap, 5/16-18NC x 1	1
13	Comm.	. Washer, Lock 5/16 Std	1
14	5-15415	. Center Pin	1
15	35-3401	. Center Adjustment Tube	1
16	Comm.	. Screw, Hex. Hd. Cap 5/16-18NC x 2(DZ-36only)	2
	Comm.	. Screw, Hex. Hd. Cap 5/16-18NC x 1 1/2(All other models)	2
	Following items not shown:		
	34-20308	. Wrench	1
	Comm.	. Screw, Hex. Hd. Cap 5/16-18NC x 7/8 (Used only on Ass'y #402080)	2





NEW DRG. D.E.7-23-68
REVISIONS





MODEL	FIRST MACH.	LAST MACH.
2612-H	284-68101	
2612-1	285-68101	
2613-1H	361-76101	
2614-1	364-76101	
2612-1H3	362-76101	

DOOR LATCH ASSEMBLY

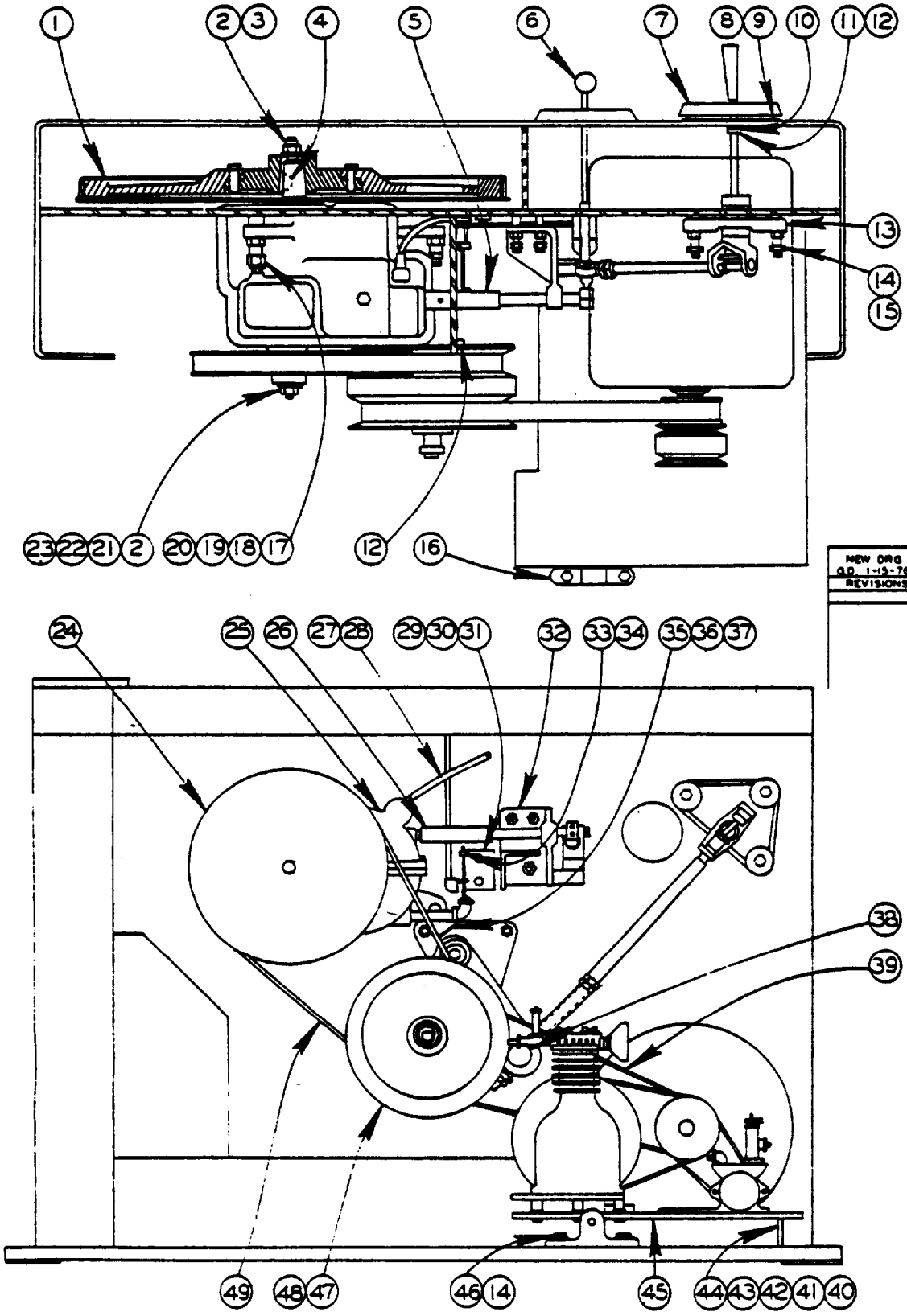
C-1-56 CM-1-47

PRINTED IN U.S.A.

CODE NO. C-1-56
CM-1-47

DOOR LATCH ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y
Ref.	23414	Upper Door Latch Ass'y	
1	5-01406W	. Latch Bushing	1
2	8359	. Bracket	1
3	8981	. Nut	1
4	23413	. Door Handle	1
5	34-01309	. Aux. Spring	1
6	34-01306	. Spring	1
7	34-01105	. Upper Latch	1
8	6557	. Latch Hook	1
Ref.	35-2304	Lower Door Latch Ass'y	
1	5-02101	. Base Door Latch	1
2	Comm	. Scr, Soc. Hd. Set 1/4-20NC x. 1/4	1
3	5-02003	. Lower Door Handle Sub Ass'y	1



NEW DRG
O.D. 1-19-78
REVISIONS

THREE SPEED DRIVE LINE ASS'Y

C-5-66 CM-5-68

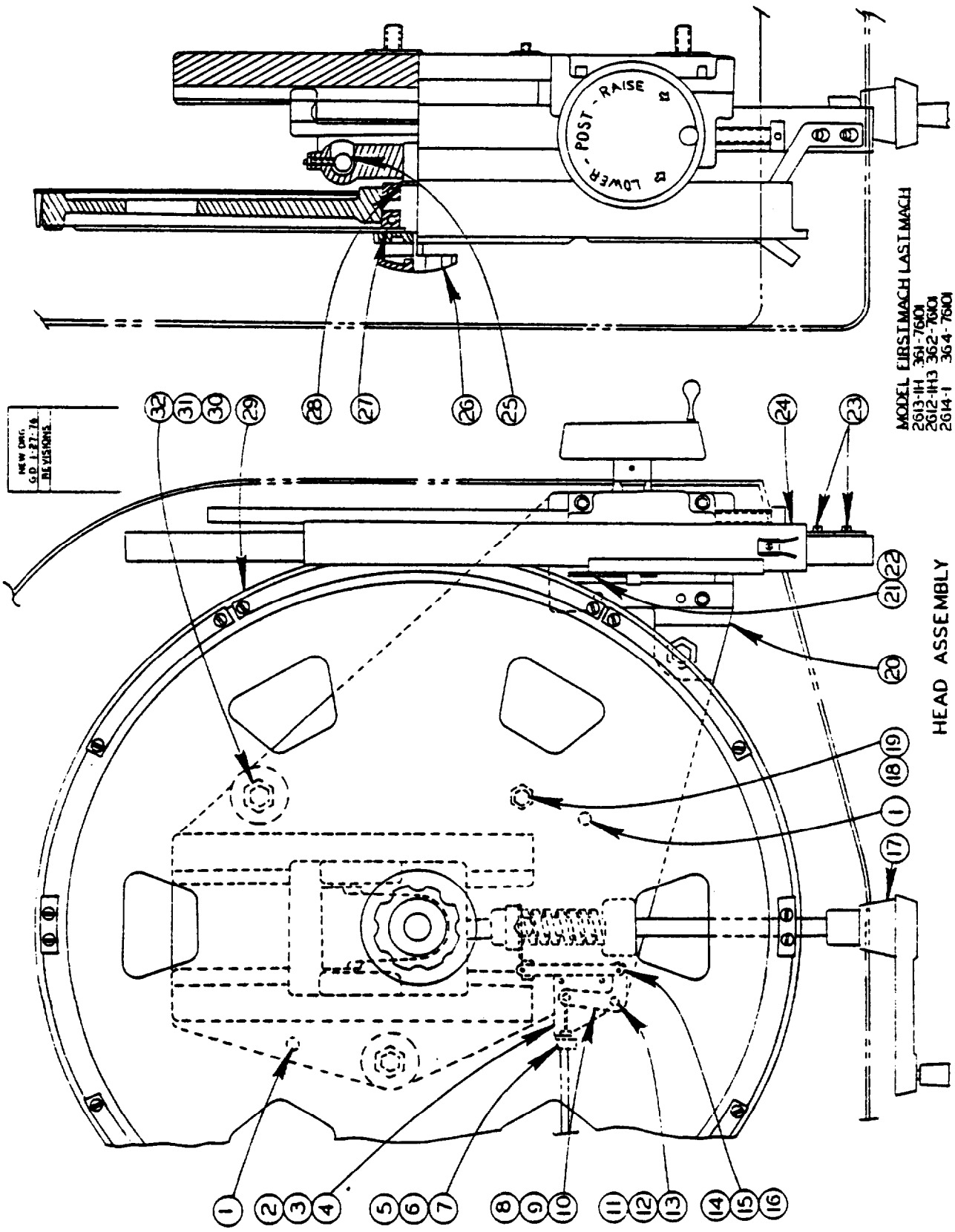
MODEL	FIRST MACH	LAST MACH
2613-1H	361-76101	
2612-1H3	362-76101	
2614-1	364-76101	

PRINTED IN U.S.A.

CODE NO. C-5-66
CM-5-68

THREE SPEED DRIVE LINE ASSEMBLY

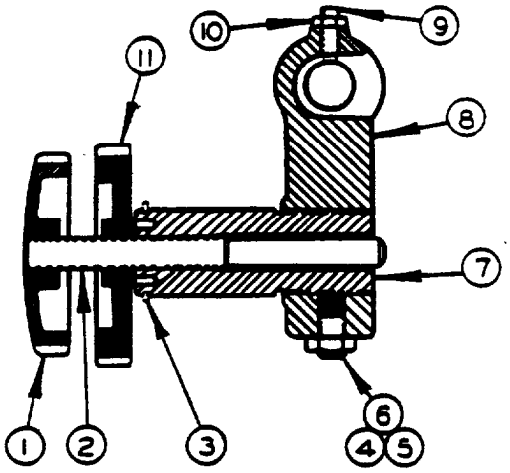
INDEX NO.	CATALOG NO.		UNITS PER ASS'Y .
Ref.	504815	Drive Line Assembly (2613-1H. 2612-1H3)	
Ref.	504827	Drive Line Assembly (2614-1)	
1	54079	. Wheel Ass'y (See Detail)	1
2	091-995175	. Cotter Pin	2
3	091-991620	. Costellated Nut 3/4-16NF	1
4	105-046049	. Woodruff Key	1
5	093-048361	. Lock Sector Sub-Ass'y	1
6	134-135086	. Knob	1
7	090-229063	. Handwheel Sub-Ass'y. (See Detail)	1
8	105-051049	. Handwheel Bearing	1
9	091-994657	. Scr. & Self Tap #10-24NC x 3/8	3
10	091-993048	. Washer, Wrought 1/2 S.A.E.	1
11	134-054105	. Collar	1
12	091-984229	. Scr. Soc. Set 1/4-20NC x 1/4	3
13	094-064276	. Variable Bracket Ass'y. (See Detail)	1
14	091-993329	. Washer, Lock 3/8 Std	12
15	091-980532	. Scr. Hex. Hd. Cap, 3/8-16NCx2-3/4	8
16	090-220385	. Hinge	2
17	091-993279	. Washer, Lock 1/2 Std	4
18	090-028234	. Screw	3
19	091-991455	. Nut, Jam Hex. 7/8-14NF	3
20	091-980722	. Scr. Hex. Hd. Cap 1/2-13NC x2-3/4	3
21	091-991612	. Nut. Castellated 5/8-18NF	1
22	091-992627	. Washer, Plain 5/8 Std.	1
23	106-335151	. Woodruff Key	1
24	090-541186	. Sheave (Input)	1
25	090-501867	. MX-2 Transmission Ass'y,(See Detail)	1
26	090-042599	. Roll Pin 3/16 x 1	2
27	135-008928	. Cable Housing Sub-Ass'y.	1
28	090-078320	. Speed Ind. Cable Key	1
29	090-236431	. Shift Lock Sub-Ass'y.	1
30	090-052176	. Spring	1
31	091-980441	. Scr. Hex. Hd. Cap 3/8-16NC x 3/4	2
32	094-067642	. Gear Shift Sub-Ass'y. (See Detail)	1
33	135-064707	. Collar	1
34	091-984096	. Scr. Soc. Set #10-24NC x 3/16	1
35	091-402032	. Lock Rod	1
36	090-161472	. Lock Rod Piston Scr	1
37	091-995126	. Cotter Pin 3/32 Dia. x 3/4	2
38	090-060500	. Pin	1
39	091-038513	. Belt	1
40	135-087658	. Stud	1
41	091-991273	. Nut, Hex. Jan 3/8-16NC	2
42	091-992644	. Washer 3/8 Med.	1
43	090-018755	. Spring	1
44	134-054147	. Washer	1
45	504825	. Meter & Base Sub-Ass'y. (See Detail) (2613-1H, 2612-1H3)	USE
	504826	. Meter & Base Sub-Ass'y. (See Mail) (2614-1)	O N
46	091-980466	. Scr. Hex. Hd. Cap 3/8-16NC x 1	4
47	090-379231	. Variable Sheave Ass'y. 10" (See Detail)	1
48	094-064292	. Variable Ass'y. (See Detail)	1
49	091-030494	. Belt	1
	Items Not Shown:		
	090-425455	. Shift Plate	1
	091-982215	. Scr. Soc. Hd. Cap #10-24NC x 5/8	3
	090-275199	. Speed Ind. Head Ass'y	1
	091-988675	. Scr. Rd. Hd. Mach. #10-24NC x 3/8	4
	090-174780	. Speed Ind. Dial	1
	091-984526	. Scr. Soc. Set 3/8-16NC x1	1
	091-980466	. Scr. Hex. Hd. Cap, 3/8-16NC x 1-1/2	1


POST - RAISE
LOWER
MODEL FIRST MACH LAST MACH
2613-1H 361-7601
2612-1H3 362-7601
2614-1 364-7601
NEW DWG. G.D. 1-27-78 REVISIONS
HEAD ASSEMBLY
C-2-75 CM-2-81
PRINTED IN U.S.A.

CODE NO. C-2-75
CM-2-81

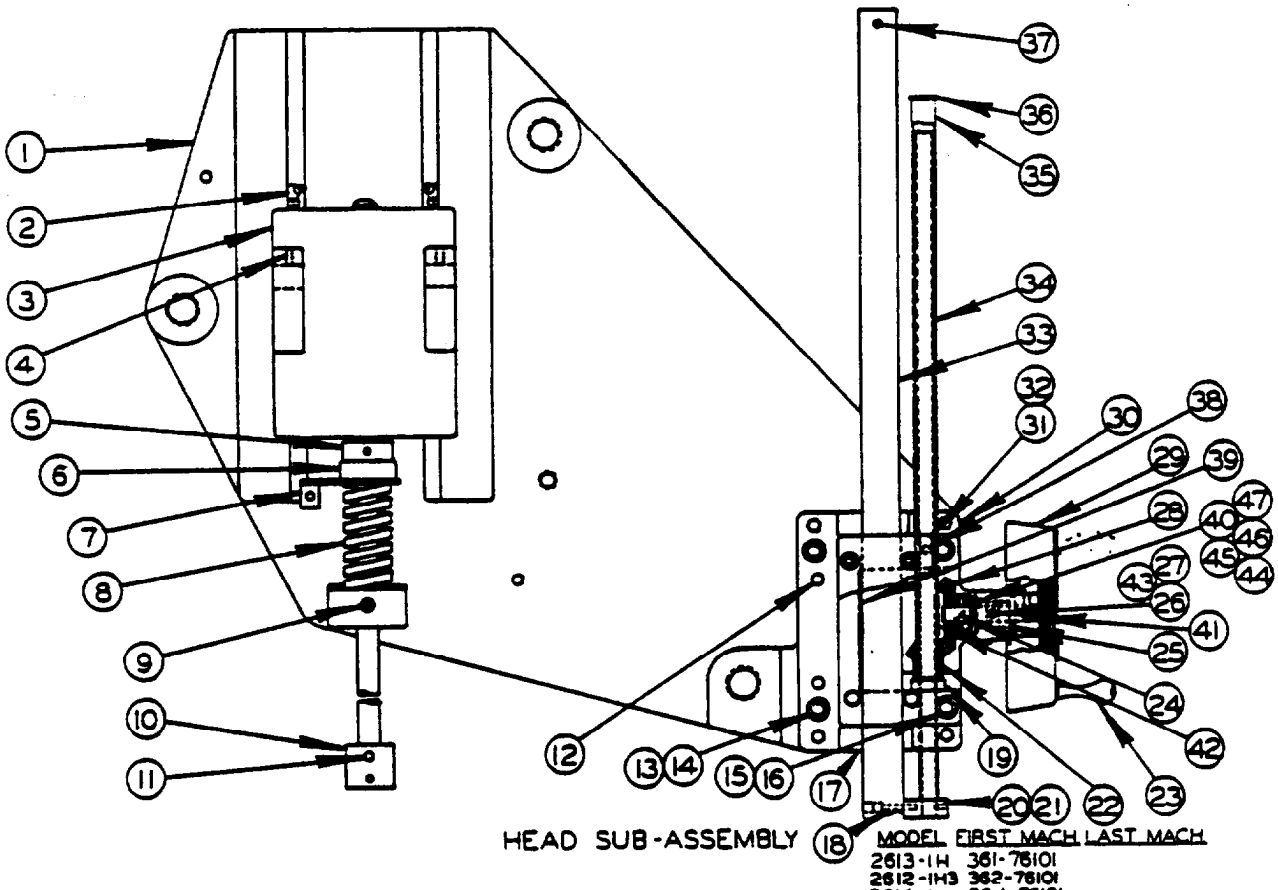
HEAD ASSEMBLY

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	504989	Head Assembly	
1	090-059189	. Dowel Pin	2
2	091-988691	. Scr. Rd. Hd. Mach. #10-24NC x 1/2	2
3	091-993196	. Washer, Lock #10 Std	2
4	091-000851	. Pivot Ass'y.	1
5	091-984062	. Scr. Soc. Set Cup Point #8-32 NC x1/4	1
6	135-052967	. Casing	1
7	090-033556	. Casing Clamp	1
8	091-988519	. Scr. Rd. Hd. Mach. #8-32NC x 1/4	1
9	091-001891	. Swivel	1
10	091-004028	. Radius Washer	1
11	091-995076	. Cotter Pin 1/16 x 1/2 Lg.	1
12	135-085827	. Ext. Retaining Ring	1
13	091-001909	. Crank Ass'y.	1
14	090-046178	. Ext. Retaining Ring	4
15	091-004044	. Pin	2
16	091-008466	. Link	2
17	090-285271	. Handle Ass'y.	1
18	091-9986349	. Scr. Soc. Set Oval Point 1/2-13 NC x 1-1/2	2
19	091-991323	. Nut, Jam 1/2-13 NC	2
20	094-9065927	. Head Sub-Assembly (See Detail)	1
21	093-044980	. Stop	1
22	091-988675	. Scr. Rd. Hd. Mach. #10-24 NC x 3/8	6
23	091-986984	. Scr. Fillister Hd. #10-24 NC x 1/2	2
24	093-048411	. Saw Rand Guard Ass'y.	1
25	135-086106	. Hinge Pin	1
26	090-306010	. Wheel Hinge Ass'y. (See Detail)	1
27	090-156381	. Rearing	2
28	090-134073	. Back-Up Washer	A.R.
29	. 456451	. Wheel Ass'y. (See Detail)	1
30	090-059163	. Lock Bolt	3
31	091-980755	. Scr. Hex. Hd. Cap 1/2-13 NC x 3-3/4	3
32	091-991455	. Nut, Jam 7/8-14NF	3
	Following Items Not Shown:		
	090-404815	. Tension Indicator Ass'y. (See Detail)	1
	090-174780	. Bezel	1



NEW DRG
SW 2-23-76
REVISIONS

*30601
WHEEL HINGE ASSEMBLY



HEAD SUB-ASSEMBLY

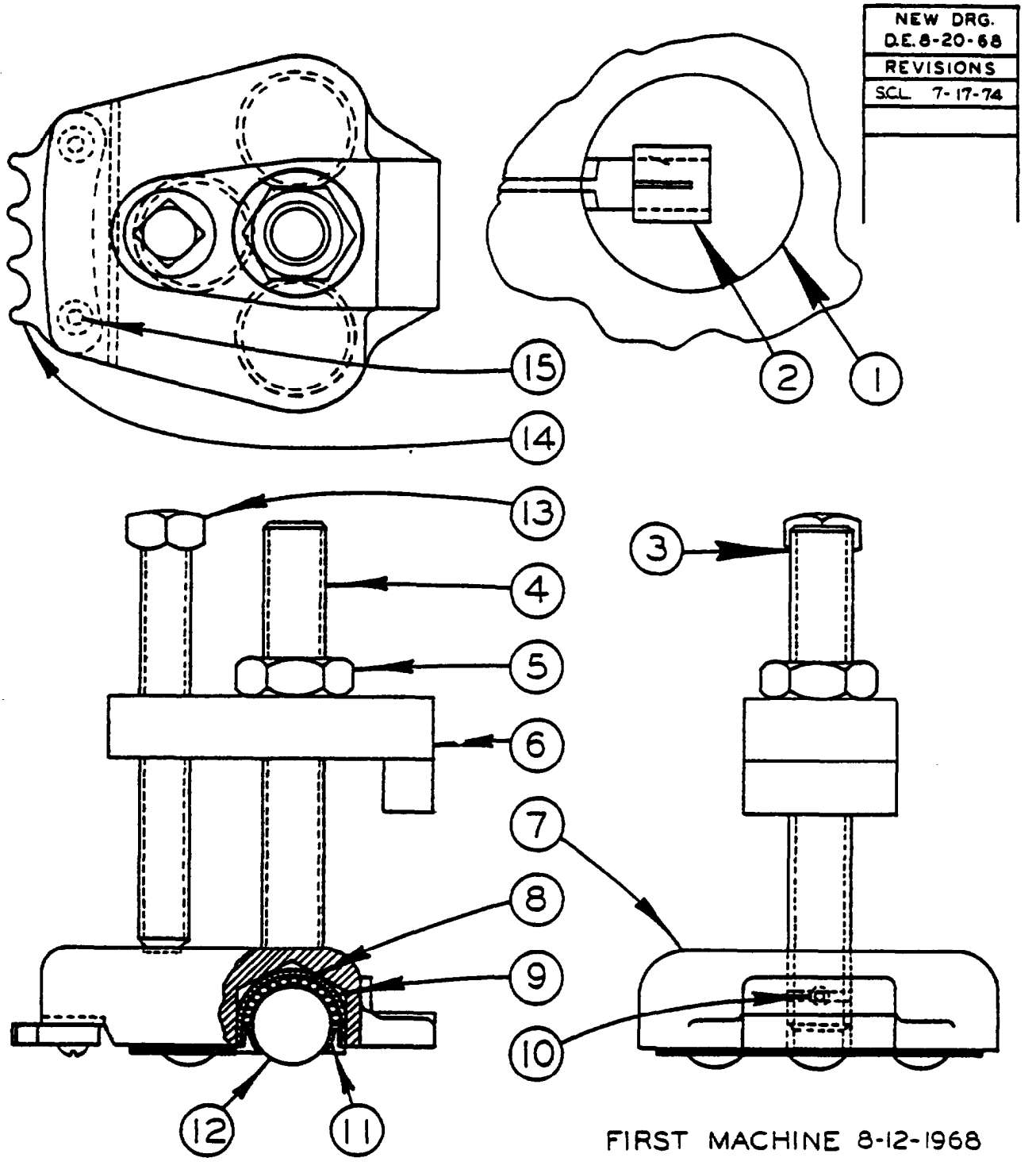
MODEL	FIRST MACH	LAST MACH
2613-1H	361-76101	
2612-1H3	362-76101	
2614-1	364-76101	

C-2-76 CM-2-82

PRINTED IN U.S.A.

HEAD SUB-ASSEMBLY

INDEX No.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	406592	Head Sub-Assembly	
1	095-003745	. Head Casting	1
2	090-059197	. Grease Fitting	2
3	090-410275	. Slide Block	1
4	091-984336	. Screw, Soc. Set 1/4-28NF x 1/2	2
5	091-401489	. Screw Assembly	1
6	135-086155	. Thrust Bearing	1
7	091-000836	Rod Anchor	1
8	091-004051	. Spring	1
9	135-094738	. Grease Fitting	1
10	091-003970	. Adapter	1
11	091-003996	. Dowel Pin	1
12	105-014013	. Dowel Pin	2
13	091-982819	. Screw, Soc. Hd. Cap 3/8-16NC x 1-1/2	2
14	091-993329	. Washer, Lock 3/8" Std.	2
15	090-051509	. Washer, Lock Hi-Collar 3/8	2
16	091-982876	. Screw, Soc. Hd. Cap 3/8-16NC x 1-1/2	2
17	093-048742	. Post Elevating Mechanism	1
18	091-983304	. . Screw, Soc. Hd. Mach. #10-24NC x 1	2
19	135-028108	. . Thrust Bearing	1
20	091-154278	. . Screw, Soc. Set (Nylok) #10-24NC x 1/4	3
21	091-209205	. . Block	1
22	091-209254	. . Gear	1
23	091-046904	. . Handle	1
24	091-209239	. . Shaft	1
25	091-209221	. . Bearing	2
26	091-407650	. . Friction Plug	1
27	091-984229	. . Screw, Soc. Set 1/4-20NC x 1/4	1
28	090-114356	. . Gear	1
29	090-386434	. . Handwheel	1
30	094-017688	. . Housing	1
31	040-386442	. . Cover	1
32	091-982363	. . Screw, Soc. Hd. Cap 1/4-20 NC x 1/2	4
33	093-048734	. . Post	1
34	091-401505	. . Screw	1
35	091-401497	. . Tube	1
36	091-235812	. . Plug Button	1
37	090-042250	. . Roil Pin	1
38	091-984096	. . Screw, Soc. Set #10-24 NC 3/16	1
39	105-013064	. . Spring	A.R.
40	091-333104	. . Shim	A.R.
41	090-042599	. . Roll Pin	1
42	091-240317	. . Bearing	1
43	090-039710	. . Spring	1
44	091-333112	. . Shim	A.R.
45	091-333120	. . Shim	A.R.
46	091-333138	. . Shim	A.R.
47	091-333146	. . Shim	A.R.
Ref.	30601	Wheel Hinge Assembly	
1	105-011084	. Tilt Knob	1
2	105-014252	. Tilt Screw	1
3	135-075968	. Retaining Ring	1
4	091-991273	. Nut, Jan 3/8-16NC	1
5	135-085785	Insert	1
6	091-984492	. Screw, Soc. Set 3/8-16 NC x 1/2	1
7	090-164O88	. Wheel Axis Stud	1
8	090-222688	. Wheel Hinge	1
9	090-038621	. Screw, Soc. Set (Dog Pt.)	1
10	091-991141	. Nut, Jam 1/4-20NC	1
11	105-011092	. Tilt Lock Knob	1



HEAVY
PARRALEL WORK CLAMP ASSEMBLY

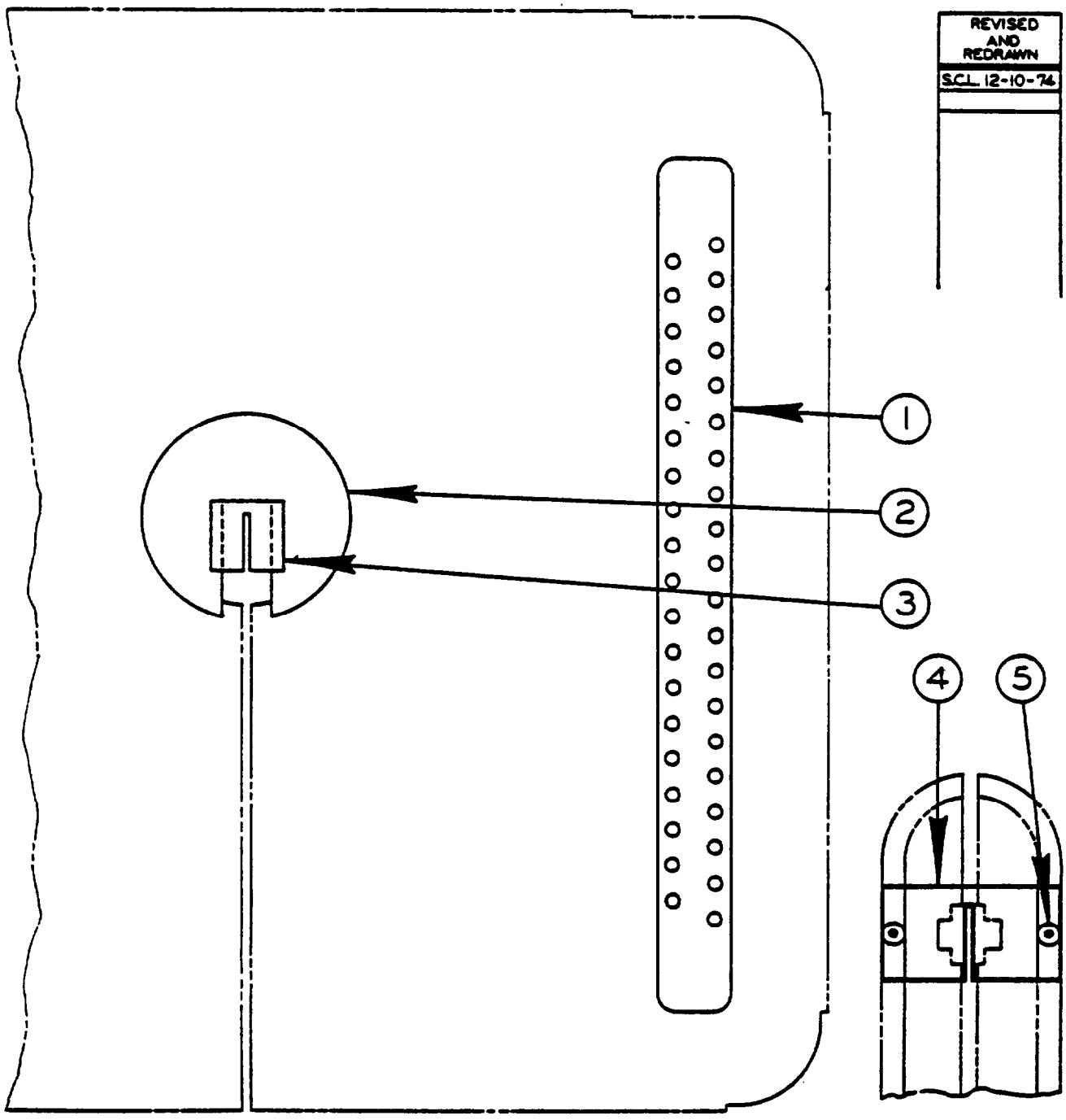
C-10-38 CM-10-31 Z-10-17

PRINTED IN U.S.A.

CODE NO. C-10-38
CM-10-31
Z-10-17

HEAVY
PARALLEL WORK CLAMP ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PE ASS'Y
Ref.	45009	Parallel Work Clamp Assembly	
1	27950	Center Plate	1
2	6-24413	. Center Support	1
3	37629	. Parallel Work Clamp Sub-Assembly	4
4	6-24415	. . Clamp Stud	1
5	199135	. . Nut, Hex. 5/8-11 NC	1
6	6-24307	. . Parallel Arm,	1
7	37628	. . Clamp Body	1
8	6-24505	. . Steel Ball	195
9	6-24306	. . Ball Cup	3
10	198411	. . Screw, Soc. Set #10-24NC x 3/8	1
11	35-3797	. . Ball Retainer Ring	3
12	6-24504	. . Steel Ball	3
13	6-24508	. . Set Screw	1
14	5-13313	. . Work Holding Jaw Sprocket	1
15	198689	. . Screw, Rd. Hd. Mach. #10-24NC x 1/2	4



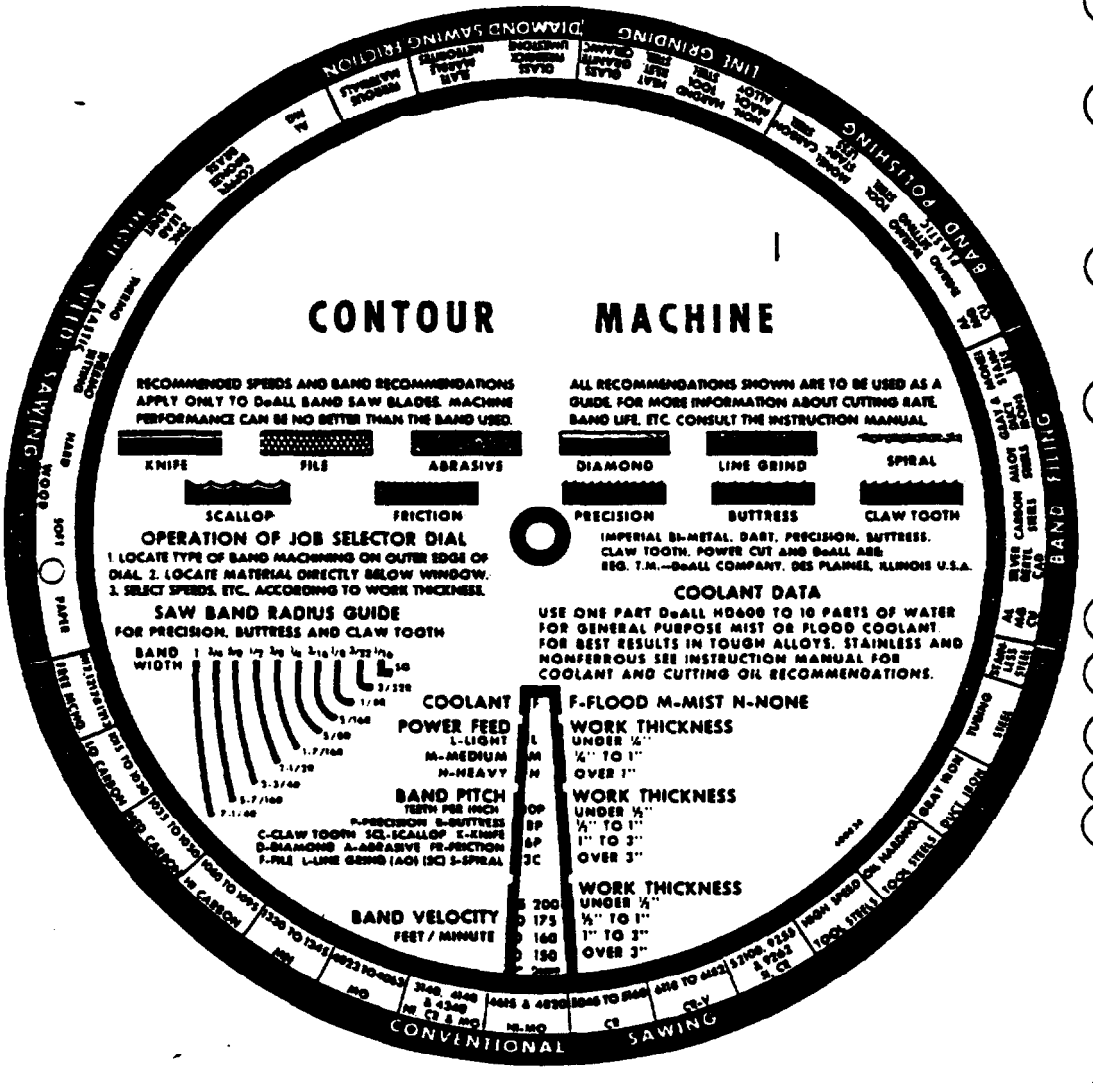
HEAVY WORK SLIDES

CODE NO. CM-10-23
CM-10-33
Z-10-12

HEAVY WORK SLIDES

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y
Ref.	45004	Heavy Work Support Assembly (1612, 1612-0, 1612-1, 2013, 2013-0, 2013-1, 2013-10, 2612-1, 3612, 3613-0, 3613-1)	
Ref.	35-5247	Heavy Work Support Assembly (1613-2, 2613-2, 3613-2, 6013-2, ZS-3620, ZV-3620, ZW-3620)	
Ref.	400692	Heavy Work Slide Assembly (2612-2H)	
1	6-23319	. Work Transport Bar	2
2	27950	. Center Plate (Assembly #45004 Only)	1
3	6-23452	. Center Support (Assemblies #45004 & 35-5247)	1
4	117814	. Center Support (Assembly #400692 Only)	1
5	198320	. Screw, Fl. Hd. Soc. Cap, 1/4-20NC x 3/4 (Assembly #400692 Only)	2

REVISED AND REDRAWN
S.W. 12-16-74



JOB SELECTOR ASSEMBLY

C-8-104 CM-8-53 Z-6-54

PRINTED IN U.S.A.

CODE NO. C-8-104
CM-8-53
Z-6-54

JOB SELECTOR

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y
Ref.	46817	Job Selector (1612-U, 3012-U, 1611-H, 2612-1H, 2013, 2013-0, 2012-A, 2012-AT, 1612-0, 3613-0, 1612, 3612, 2013-1,2013-10, 2012-1A, 2012-1AT)	
*Ref.	*43560	Job Selector (1612-1, 3613-1, 2612-1, 2613-2, 6013-2, 2618-4, HS-6013, ZW-3620, ZV-3620, ZS-3620)	
1	22078	. Jab Selector Dial	1
2	6-14304	. Outer Edge Felt	4
3	400838	. Job Selector Plate	1
4	198027	Screw, Hex. Hd. Cop 5/16-18NC x 3/4	1
5	4449	. Acorn Nut 5/16-18NC	1
6	6-14401	. Bushing	USE
	*2701	. Bushing	ONE
*7	198890	. Screw, Rd. Hd. Mach. 1/4-20NC x 1/4	4
*8	199374	. Washer, Lock Shakeproof 1/4 Internal	4
*9	199114	. Nut, Hex. Jam 1/4-20NC	4
*10	42672	. Job Selector Frame	1

NOTE: Job Selectors #46817 & #43560 First Used 9/17/62. Before This Date 400838 Plate and 22078 Dial, Must Be Replaced Together as a Unit.

*NOTE: Starred Items Used Only On Assembly #43560.

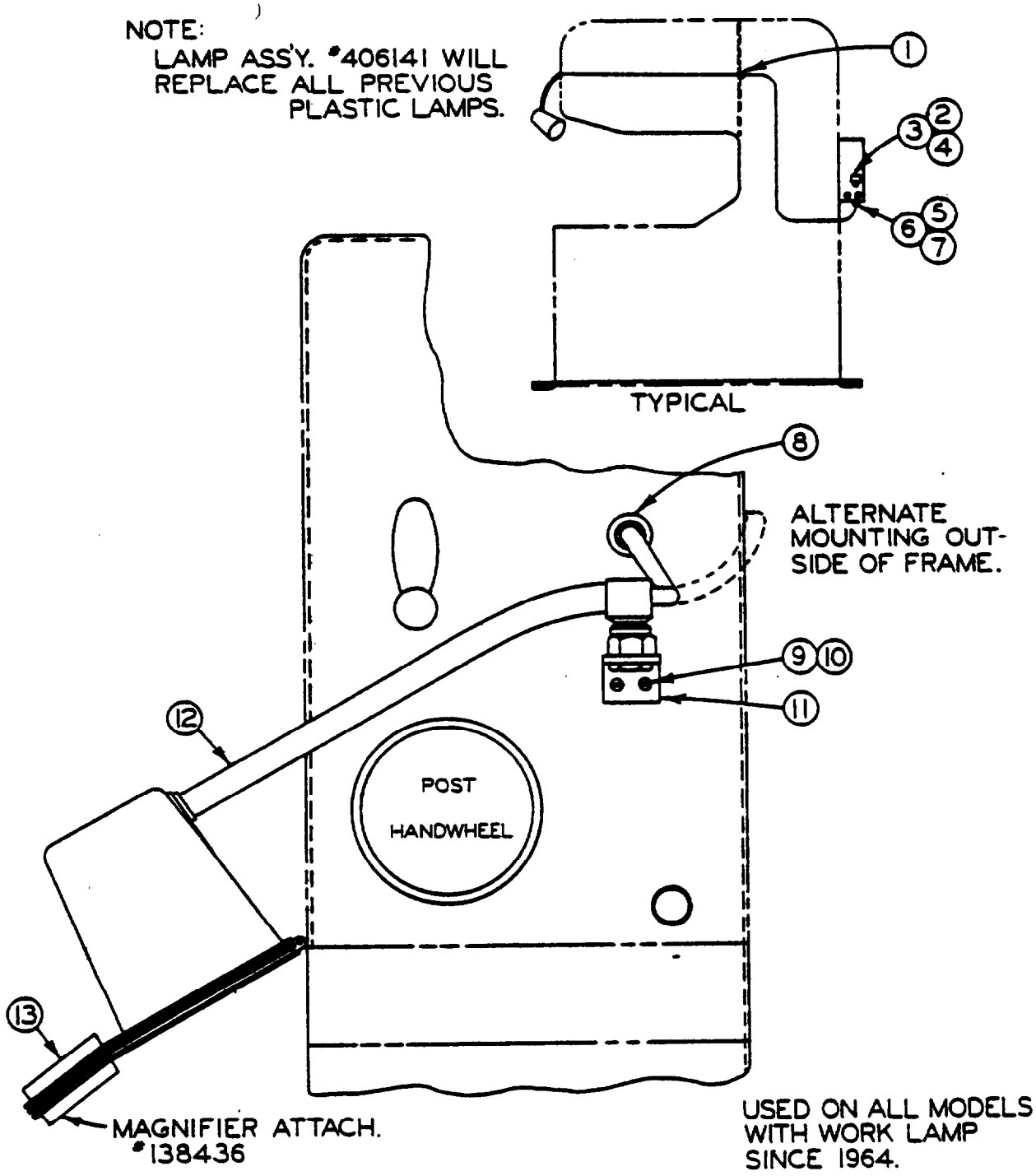
*NOTE: Last Used On Models:

MODEL	LAST MACH.
1613-2	150-69593
3613-2	151-69515
1612-3	152-691017
2613-3	198-69361
3612-3	153-691054
6013-3	199-70125
1612-H	288-69204
2612-H	284-69135
2612-2H	206-69308
3612-H	272-69152

REVISIONS
REDRN. 5-23-75 WS

O.S.H.A. REQUIREMENT:
WIRE WORK LAMP DIRECT TO CONTROL BOX. MOUNT LAMP SWITCH ON SIDE OF CONTROL BOX OR THE CONTROL PANEL.

NOTE:
LAMP ASS'Y. #406141 WILL REPLACE ALL PREVIOUS PLASTIC LAMPS.



LAMP & MAGNIFIER ASSEMBLIES

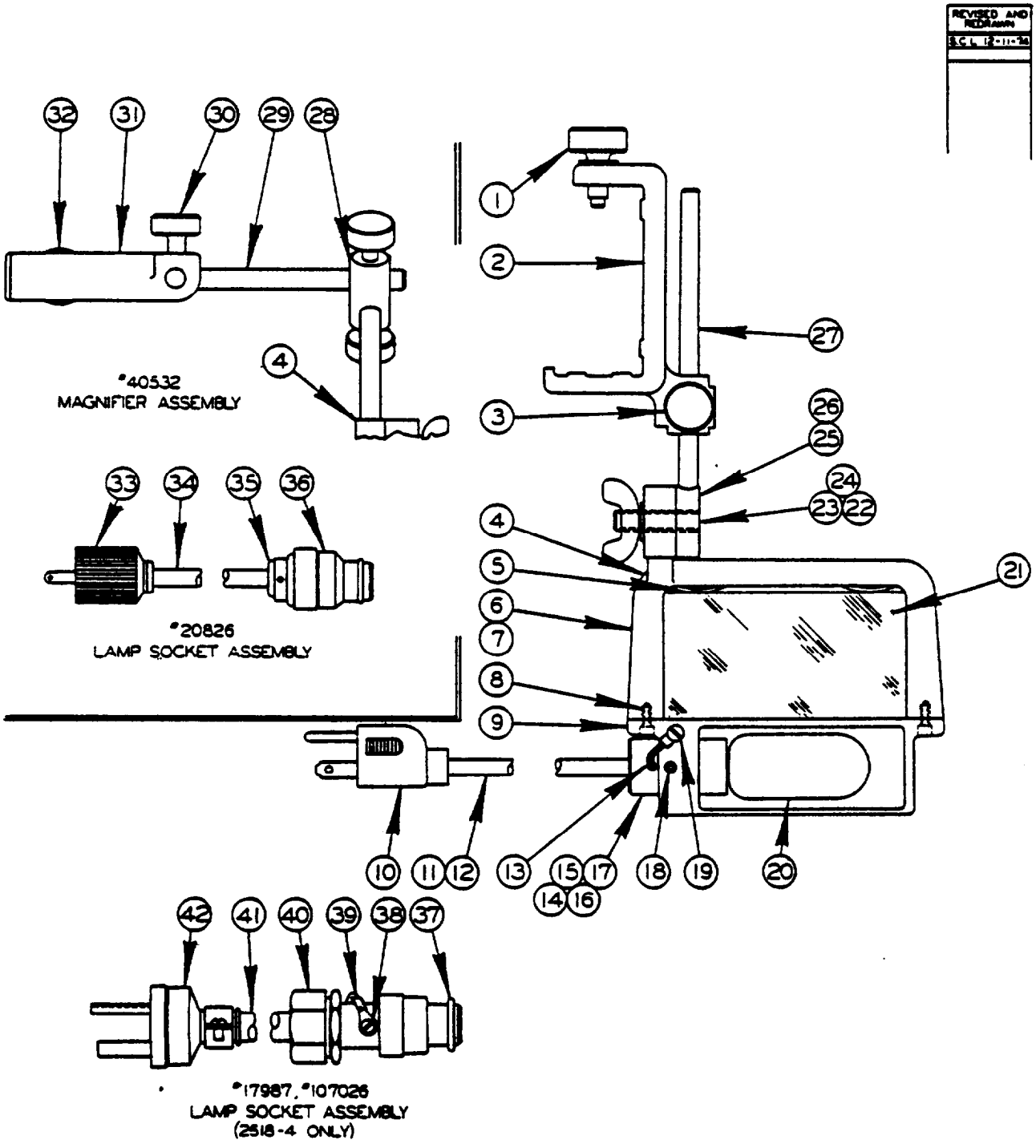
PRINTED IN U.S.A.

C-8-8 CM-8-31 PS-8-103 TF-4-100 F9-6.1 Z-7-61

CODE NO. C-8-8
CM-8-31
PS-8-103
TF-4-100
F9-6.1
Z-7-61

LAMP & MAGNIFIER

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y
Ref.	406141	Lamp Ass'y	
1	15745	. Bushing	1
2	15245	. Selector Switch, 2-Postion	1
3	104820	. Contact Block	1
4	133359	. Legend Plate	1
5	14545	. Card Grip Connector	1
6	14411	. Washer	1
7	14505	. O-Ring	1
8	15139	. Cord Grip	1
9	198865	. Screw, Rd. Hd. Mach. #10-24UNC x 1/4	2
10	199319	. Washer, Lock #10 Std.	2
11	102504	. Bracket	1
12	138452	. Lamp Sub-Ass'y., 19" Flexible Cable, 11'- 1/2" Connecting Cord	1
13	138436	Magnifier Attachment, Mounts to Lampshade on Lamp Part #138452	1



MAGNIFIER ATTACHMENT
ASSEMBLY

PRINTED IN U.S.A.

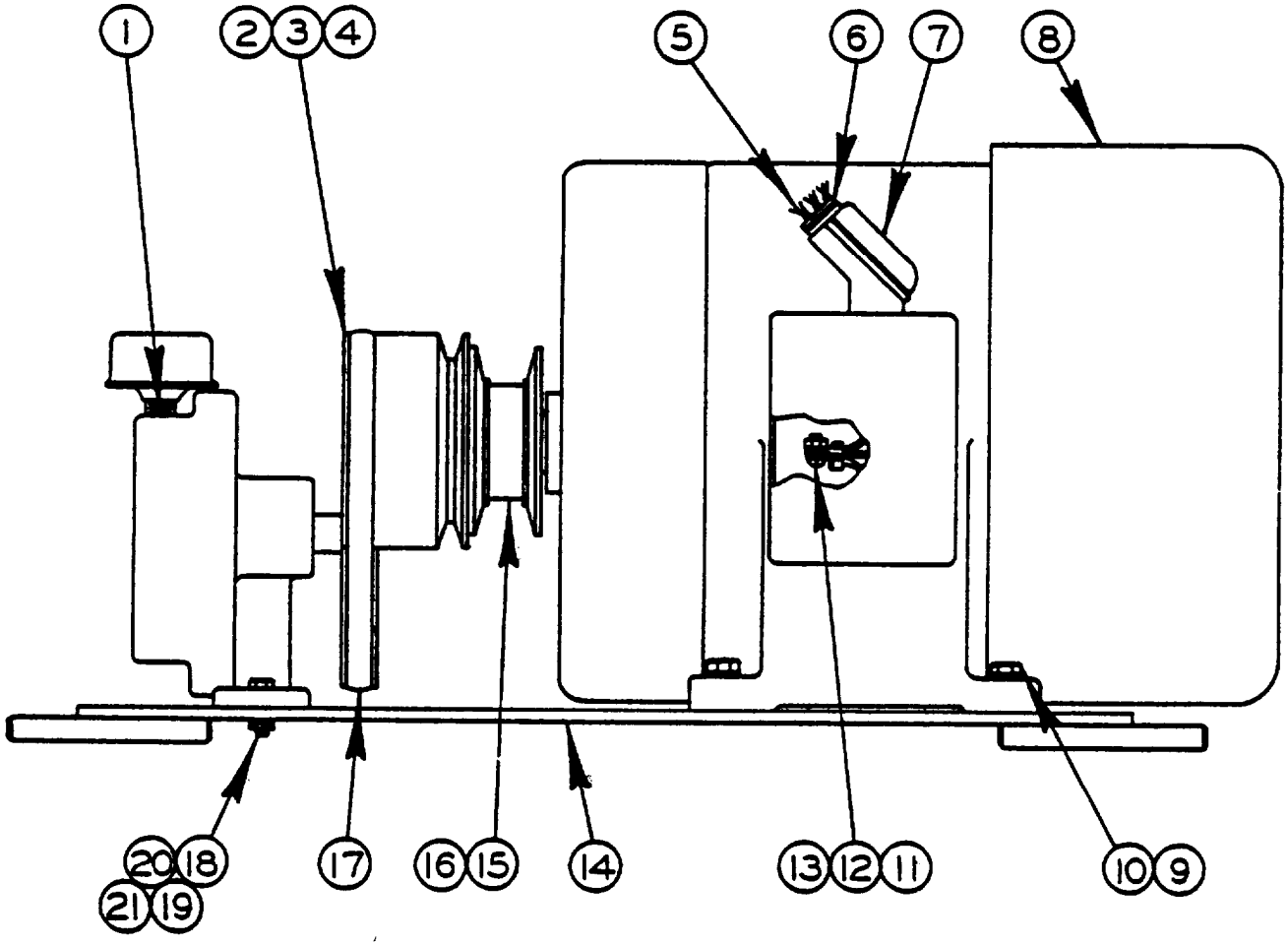
CODE NO. C-10-15
CM-9-3
Z-9-7

MAGNIFIER ATTACHMENT ASSEMBLY

INDEX No.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	35-555	**Magnifier Attachment Assembly** (1612, 1612-0, 1612-H, 1612-1, 1613-2, 1612-3, 2012-A, 2012-AT 2013, 2013-0, 2012-1A, 2012-1AT 2013-1, 2013-10, 2612-H, 2612-1 3612, 3613-0, 3612-H, 3613-1, 3613-2, 3612-3)	
Ref.	42872	**Magnifier Attachment Assembly** (2613-2, 2613-3, 6013-2, 6013-3)	
Ref.	47767	Magnifier Attachment Assembly (2618-4)	
Ref.	40532	Magnifier Attachment Assembly (ZS-3620, ZV-3620, ZW-3620)	
1	34-17401	. Thumbnut (Ass'y #35-555, #42872, #47767)	1
	198242	. Screw, Soc. Hd. Mach. 1/4-20NC x 1 (Ass'y #47767, Extra Work Height)	2
2	300189	. Post Clamp (Ass'y #35-555)(1-1/2" Post)	USE
	24393	. Post Clamp (Ass'y #42872)(2-3/4"Post)	
	47763	Post Clamp (Ass'y #47767)(3-1/4"Post)	
	400073	: Post Clamp (Ass'y #47767, Extra Work Height)	ONE
3	35-554	. Thumb Nut	1
4	45105	. Magnifier Sub-Assembly (Ass'ys #35-555, #42872	USE
	47768	. Magnifier Sub-Assembly (Ass'y #47767	
	41252	. Magnifier Sub-Assembly (Ass'y #40532	ONE
5	35-2104	. . Lens Spring	2
6	35-5269	. . Magnifier Housing Sub- Assembly	1
7	35-552	Frame	1
8	198690	Screw, Fil. Hd. Mach. #6 32NC x 3/8	2
9	35-553	. . . Housing	1
10	302168	. . . Lamp Socket Assembly (Ass'y #45105 Only	1
11	130538	. . . Electrical Card	1
12	103837	. . . Wire Terminal	2
13	103834	. . . Wire Terminal	1
14	103536	. . . Socket Bushing	1
15	133884	. . . Socket 75-W, 125-V	1
16	130537	. . . Strain Relief	1
17	198406	. . . Screw, Soc. Set #8-32NC x 1/4	1
18	198410	. . . Screw, Soc. Set #10-24NC x 1/4	1
19	198851	x 1/4 (Ass'y #45105 Only)	1

INDEX No.	PART No.	DESCRIPTION	UNITS RR ASS'Y.
20	133874	. . Lamp (Ass'ys #45105, #41252	USE
	19512-A	. . Lamp (Ass'y #47768)	ONE
21	34-17501	. . Magnifying Lens	
22	35-559	. . Pivot Stud	
23	199262	. . Washer 5/16 S.A.E. Std.	1
24	35-562	. . Wing Nut	1
25	35-560	. . Post Arm Swivel Sub-Assembly (Ass'y #45105)	USE
	107025	. . Arm Assembly (Ass'y #47768)	
	35-876	. . Post Arm Swivel Sub-Assembly (Ass'y #47768, 36" Zaphyrs)	
	18375	. . Post Arm Swivel Sub-Assembly (Ass'y #41252)	ONE
26	35-558	. . . Swivel (Ass'y #35-560, #107025)	USE
	35-872	. . . Swivel (Ass'y #35-876, #18375)	ONE
27	33-556	. . . Arm (Ass'y #35-560)	USE
	107024	. . . Arm (Ass'y #107025)	
	35-871	. . . Arm (Ass'y #35-876)	
	136344	. . . Rod (Ass'y #18375)	ONE
Ref.	40532	Magnifier Attachment Assembly (ZS-3620, ZV-3620, ZW-3620)	
28	3108	. Joint	1
29	3107	Arm	
30	35-554	. Thumb Nut	3
31	22903	Post Clamp	1
32	34-17401	. Thumb Nut	1
Ref.	20826	. . Lamp Socket Assembly	
33	135394	Midget Cord Connector	
34	Stk #792	. . . Rubber Card	A.R.
35	135388	. . . Rushing	2
36	135391	. . .	1
Ref.	17987	. . Lamp Socket Assembly (2618-4 L.A.Machines	1
Ref.	107026	. . Lamp Socket Assembly (2618-4	
37	18347	. . . Socket	1
38	198851	. . . Screw, Rd. Hd. Mach. #8 32NC x 1/4	1
39	103834	. . . Wire Terminal	
40		. . . Cord Grip Connector	1
41	18346	. . . Rubber Cord	A.R.
42	16213	. . . Plug U-Ground	1

NEW DRG. S.W. 4-9-76
REVISIONS



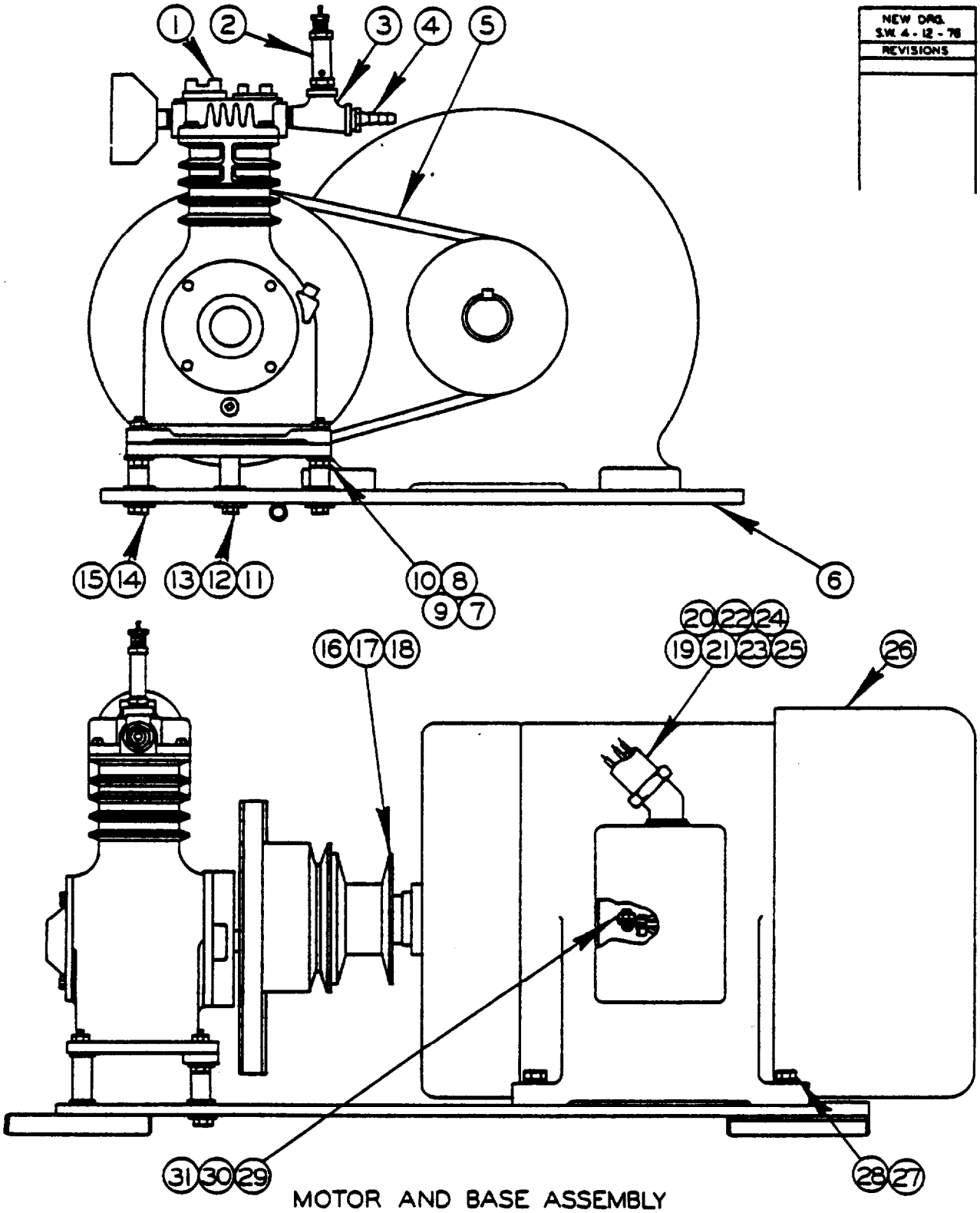
MOTOR AND BASE ASSEMBLY

MODEL	FIRST MACH.	LAST MACH.
2614-1	364-76101	

CODE NO. C-5-83

MOTOR AND BASE ASSEMBLY

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	504826	Motor and Base Assembly	
1	090-427089	. Air Pump Assembly (See Detail)	1
2	105-113161	. Pulley	1
3	091-984385	. Screw, Soc. Set 5/16-18NC x 5/8	1
4	135-098499	. Key	1
5	090-195538	. Wire #14	A.R.
6	090-195173	. Conduit	1
7	091-382523	. 45° Box Connector	1
8	091-195172	. Electric Motor, 5 H.P. 1200 R.P.M. 60 HZ	1
9	091-980466	. Screw, Hex. Hd. Cap, 3/8-16NC x 1	4
10	091-993253	. Washer, Lock 3/8" Std.	4
11	090-195421	. Wedge-On Contact	3
12	091-991117	. Nut, Hex. #10-24NC	6
13	191-988666	. Screw, Rd. Hd. Mach. #10-24NC x 5/16	6
14	094-067667	. Base Plate Weldment	1
15	094-067675	. Motor Pulley	1
16	091-984377	. Screw, Soc. Set 5/16-18NC x 1/2	2
17	105-115208	. V-Belt	1
18	091-980102	. Screw, Hex. Hd. Cap, 1/4-20NC x 1	2
19	091-991158	. Nut, Hex. 1/4-20NC	2
20	091-993212	. Washer, Lock 1/4" Std.	2
21	091-992602	. Washer 1/4" Std.	2



MOTOR AND BASE ASSEMBLY

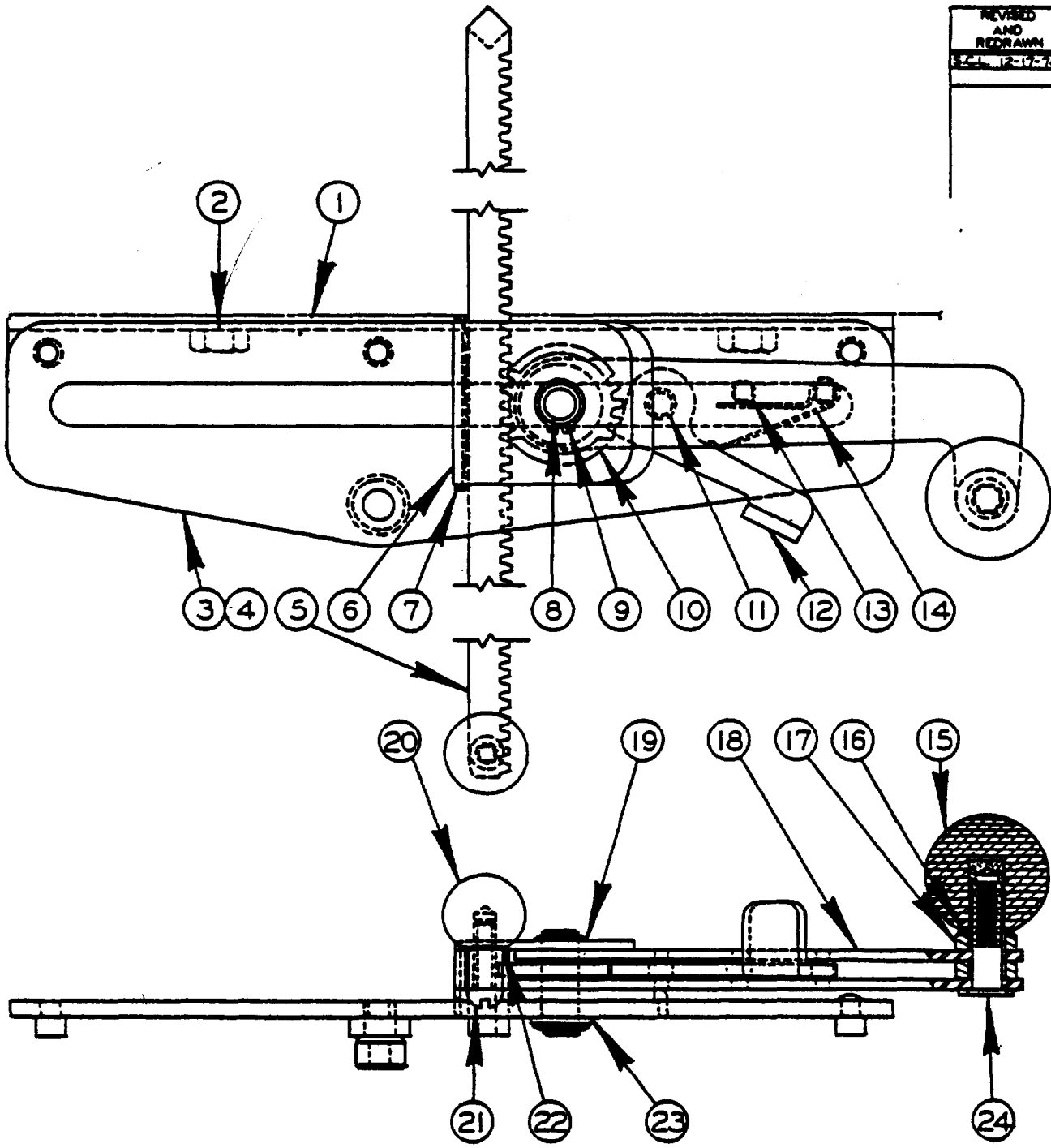
MODEL	FIRST MACH.	LAST MACH.
2614-1	364-76101	

PRINTED IN U.S.A.

CODE NO. C-5-84

MOTOR AND BASE ASSEMBLY
(USED WITH MIST COOLANT)

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y .
Ref.	504816	Motor and Base Assembly (60 HZ)	
Ref.	505189	Motor and Base Assembly (50 HZ)	
1	094-019577	. Air Compressor (See Detail)	1
2	091-180885	. Safety Valve	1
3	135-008472	. Service Tee	1
4	090-020041	. Barbed Insert	1
5	135-024164	. Belt (Used on Ass'y. #504816)	USE
	135-023083	. Belt (Used on Ass'y. #505189)	ONE
6	094-067667	. Base Plate Weldment	1
7	091-211631	. Plate Weldment	1
8	091-980318	. Screw, Hex. Hd. Cap, 5/16-18NC x 1-1/2	2
9	091-993014	. Washer 5/16" Std	2
10	091-993246	. Washer, Lock 5/16"	2.
11	091-991224	. Nut, Hex, 5/16-18NC	5
12	091-211615	. Spacer	1
13	091-0992628	. Washer, 5/16 S.A.E	6
14	091-980342	. Screw, Hex. Hd. Cap 5/16-18NC x 2-1/2	2
15	091-211607	. Spacer	2
16	094-067675	. Motor Pulley (Used on Ass'y. #504816)	USE
	094-067691	. Motor Pulley (Used on Ass'y. #505189)	ONE
17	135-098499	. Key	1
18	091-984377	. Screw, Soc. Set 5/16-18NC x 1/2	2
19	090-005208	. Conduit 1/2" Sealtite	A.R.
20	090-007246	. Wire #12 AWG 19 Str. Blk	A.R.
21	090-145079	. Connector	1
22	090-145459	. Connector	1
23	090-005505	. Wire Markers	A.R.
24	090-144114	. Washer	2
25	090-145053	. O-Ring	2
26	091-195172	. Electric Motor, 5 H.P. (Used on Ass'y. #504816)	USE
	091-195180	. Electric Motor, 5 H.P. (Used on Ass'y. #505189)	ONE
27	091-980466	. Screw, Hex. Hd. Cap, 3/8-16NC x 1	4
28	091-993253	. Washer, Lock 3/8" Std	4
29	090-195421	. Wedge on Contact	3
30	091-988667	. Screw, Rd. Hd. Mach. #10-24NC x 5/16	6
31	091-991117	. Nut, Hex. #10-24NC	6
	091-318170	. Tag (Not Shown)	1



RATCHET TABLE FEED ASSEMBLY

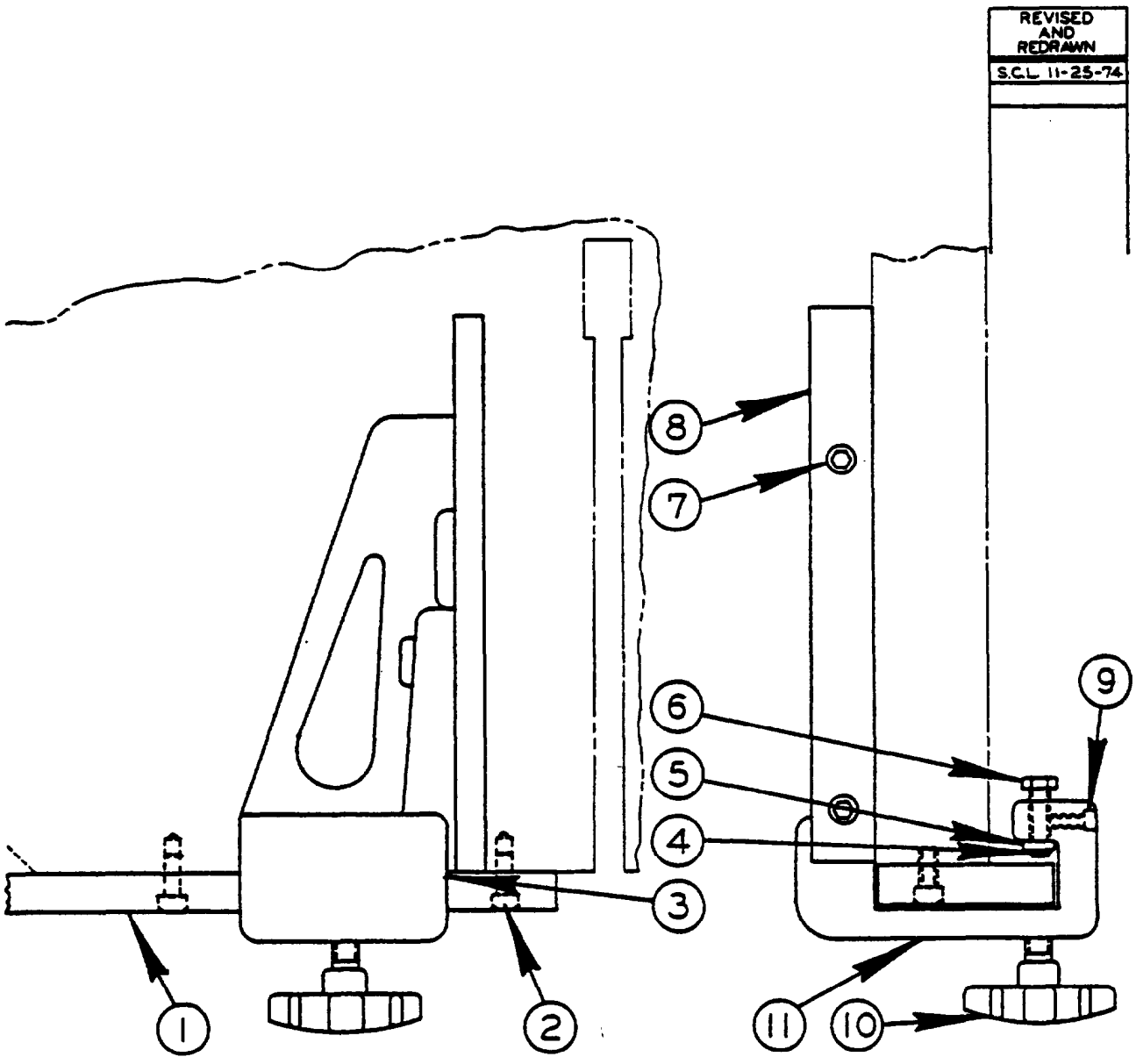
C-10-20 CM-9-7 Z-10-2

PRINTED IN USA

CODE NO. C-10-20
CM-9-7
Z-10-2

RATCHET TABLE FEED ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	42978	Table Feed Assembly	
1	42977	. Table Feed Bracket	1
2	198043	. Screw, Hex. Hd. Cap 3/8-16NC x 5/8	2
3	40061	. Table Feed Assembly	1
4	40825	. . Base Plate Assembly	1
5	20097	. . Rack Weldment	1
6	1343	. . Bracket	1
7	1349	. . Spring	1
8	1344	. . Center Pin	1
9	35-9613	. . Retaining Ring	2
10	1345	. . Gear	1
11	1332	. . Spacer Pin	1
12	1346	. . Thumb Lever	1
13	1331	. . Spacer Pin	2
14	1350	. . Spring	1
15	34-13508	. . Knob	1
16	199358	. . Washer, Lock 3/8 Shakeproof Int.	1
17	1342	. . Spacer	2
18	1347	. . Arm	2
19	133191	. . Shim Option List	1
20	133971	. . Knob	1
21	19898	. . Screw, Rd. Hd. Mach. 1/4-20NC x 7/8	1
22	199356	. . Washer, Lock 1/4 Shakeproof Int.	1
23	5559	. . Washer, Flat	1
24	4417	. . Screw	1



RIP FENCE ASSEMBLY

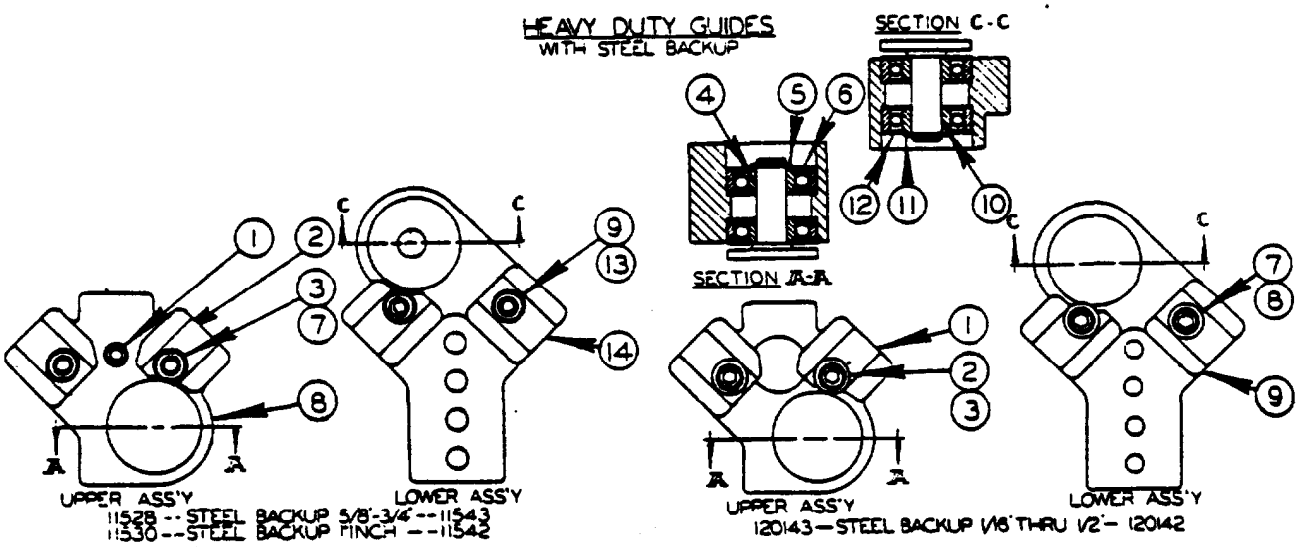
PRINTED IN U.S.A.

CODE NO. C-10-6
Z-9-5

RIP FENCE ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	35-542	Rip Fence Assembly (30" Table)	
Ref.	35-543	Rip Fence Assembly (24" Table)	
1	5-16302	• Clamp Guide	1
2	198278	• Screw, Sac. Hd. Cap 3/8-16NC x 3/4 (#35-542)	2
	Comm.	• Screw, Soc. Hd. Cap 3/8-16NC x 3/4 (#35-543)	2
3	35-5178	• Rtp Fence Sub-Assembly (#35-542)	1
	35-5251	• Rip Fence Sub-Assembly (#35-543)	1
4	34-06504	• • Spring Clip	2
5	5-16303	• • Clamp Bar	1
6	5-16403	• • Clamp Bar Screw	2
7	198278	• • Screw, Soc. Hd. Cap 3/8-16NC x 3/4 (#35-5178).	2
	Comm.	• • Screw, Soc. Hd. Cap 3/8-16NC x 3/4 (#35-5251)	2
8	35-546	• • Work Guide (#35-5178)	1
	35-548	• • Work Guide (#35-5251)	
9	198425	• • Screw, Soc. Set 1/4-20NC x 1/2	2
10	5-16004	• • Handwheel Assembly	1
11	35-544	• • Clamp (#35-5178)	1
	35-545	• • Clamp (#35-5251)	1

HEAVY DUTY GUIDES
WITH STEEL BACKUP

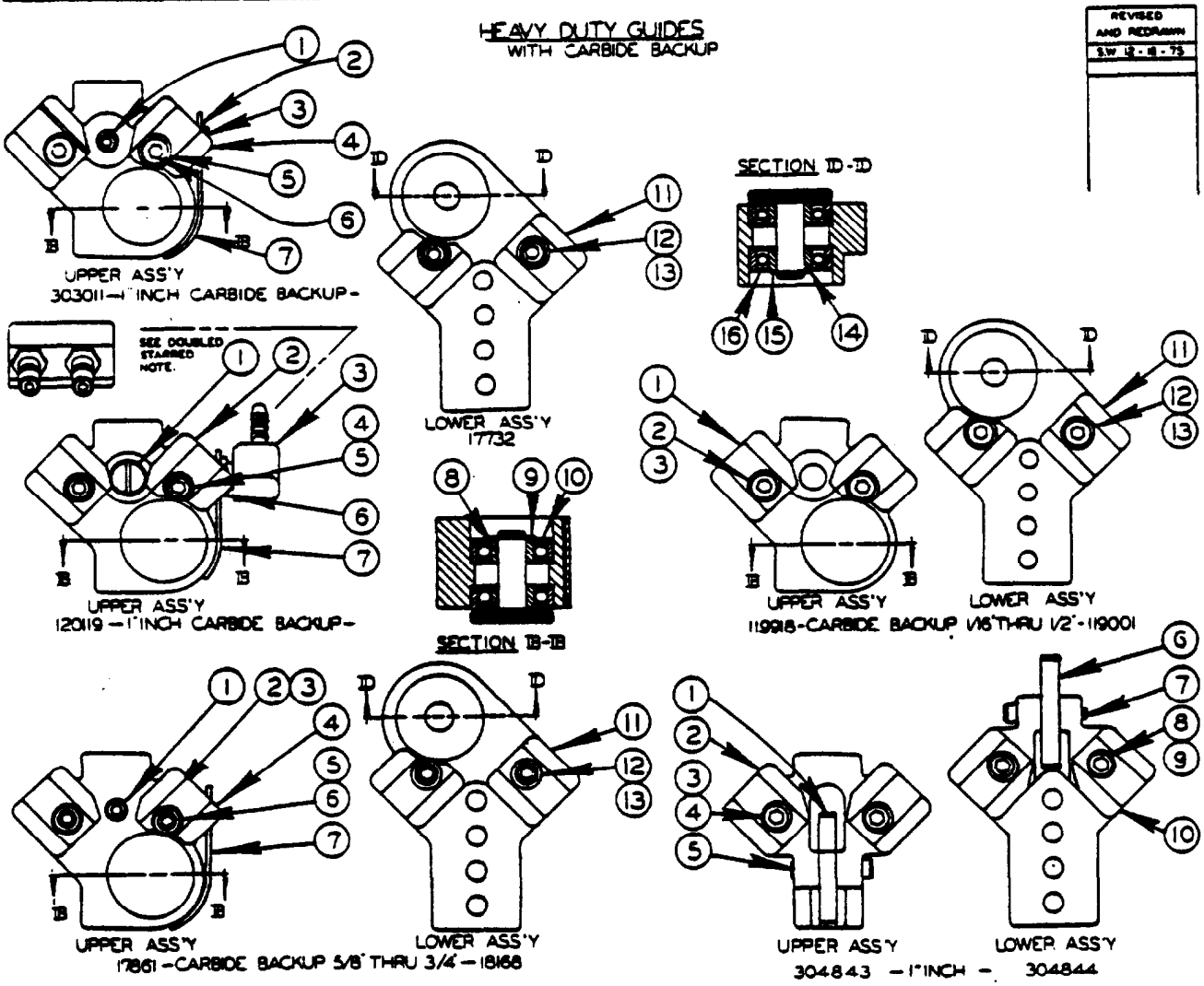


11528 -- STEEL BACKUP 5/8"-3/4" -- 11543
11530 -- STEEL BACKUP PINCH -- 11542

120143 — STEEL BACKUP 1/16" THRU 1/2" — 120142

HEAVY DUTY GUIDES
WITH CARBIDE BACKUP

REVISED AND REDRAWN S.W. 12-18-75



303011 — 1" INCH CARBIDE BACKUP —
17732
120119 — 1" INCH CARBIDE BACKUP —
119918 - CARBIDE BACKUP 1/16" THRU 1/2" - 119001
17861 - CARBIDE BACKUP 5/8" THRU 3/4" — 18168
304843 — 1" INCH — 304844

SAW GUIDE SELECTION
*121230

C-7-18 CM-7-23

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CODE NO. C-7-18
CM-7-23

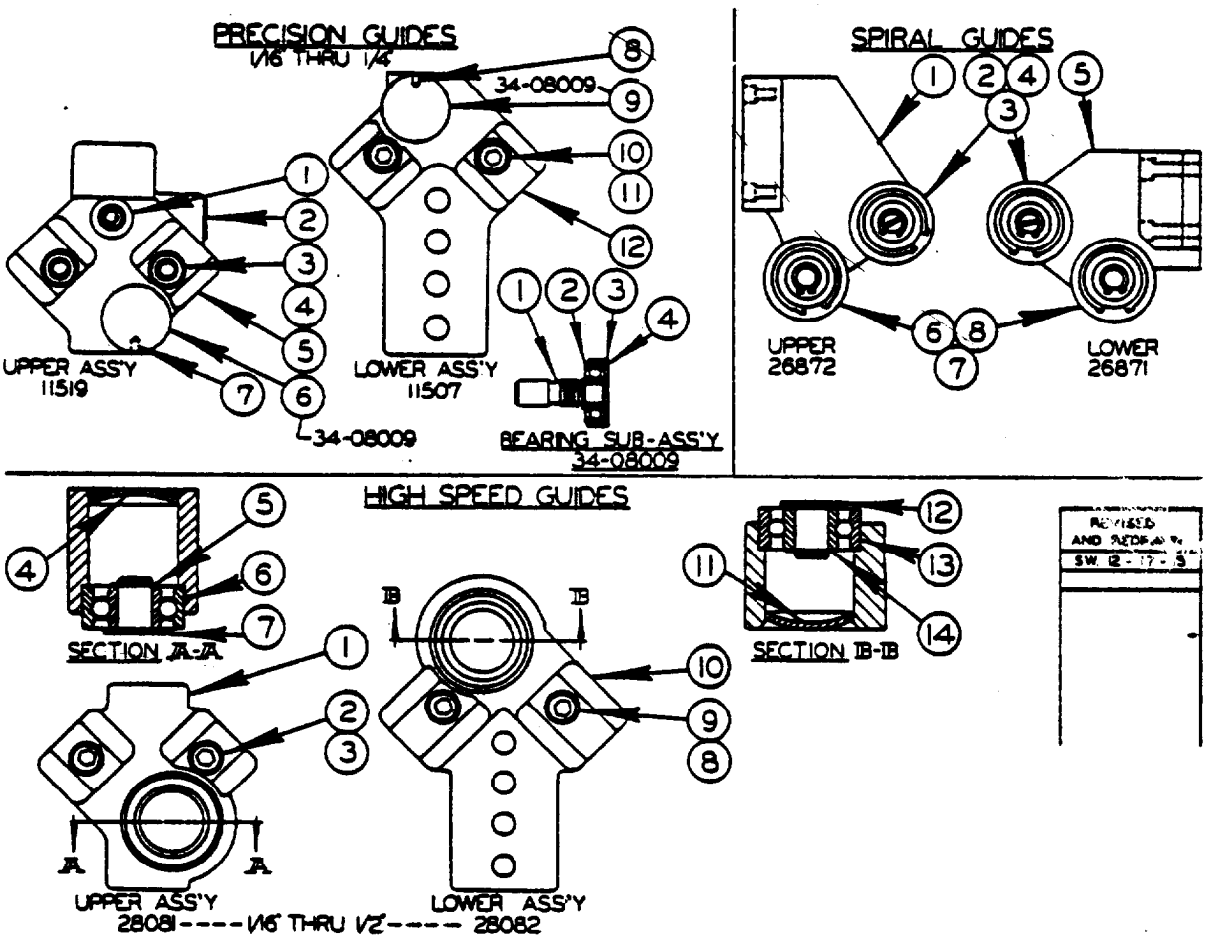
#121230

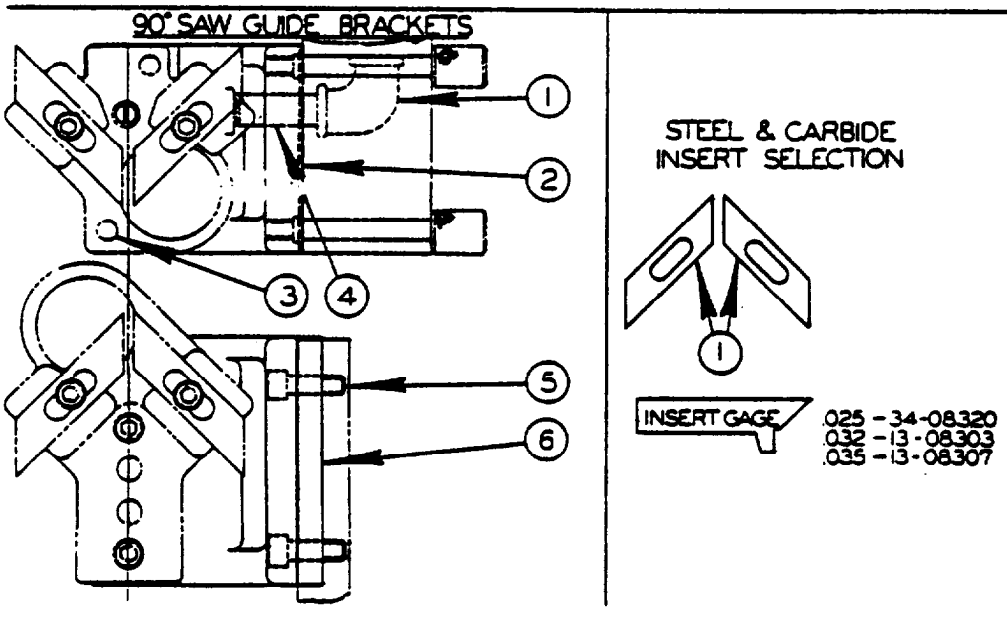
SAW GUIDE SELECTION

INDEX No.	CATALOG No.	DESCRIPTION	UNITS ASS'Y
HEAVY DUTY GUIDES (STEEL BACKUP)			
Ref.	091-201434	Upper Saw Guide Ass'y. (1/16" to 1/2")	
1	090-380767	. Upper Saw Guide Block	1
2	091-982447	. Screw, Soc. Hd. Cap 1/4-20NC x 1-1/4	2
3	134-085026	. Washer	2
4	090-115403	. Bearing Cap	1
5	090-115411	. Retaining Ring	1
6	090-115296	. Searing	2
Ref.	091-201426	Lower Saw Guide Ass'y. (1/16" to 1/2")	
7	091-982447	. Screw, Soc. Hd. Cap 1/4-20NC x 1-1/4	2
8		. Washer	2
9	090-377383	. Lower Saw Guide Block	1
10	090-115403	. Bearing Cap	1
11	090-115411	. Retaining Ring	1
12	090-115296	. Bearing	2
Ref.	090-115288	Upper Saw Guide Ass'y (5/8" to 3/4")	
Ref.	090-115304	Upper Saw Guide Ass'y (1")	
1	091-984450	. Screw Soc. Hd. Set 5/16-24NF x 1/2	1
2	091-203695	. Soc. Hd. Pipe Plug	1
3	091-982421	. Screw, Soc. Hd. Cap 1/4-20NC x 1 (5/8" to 3/4)	2
	091-982447	. Screw, Soc. Hd. Cap 1/4-20NC x 1-1/4 (1")	2
4	090-115403	. Bearing Cap	1
5	090-115411	. Retaining Ring	1
6	090-115296	. Bearing	2
7	134-085026	. Washer	2
8	090-252529	. Upper Saw Guide Block (5/8" to . 3/4")	USE ONE
	090-252537	. Upper Saw Guide Block (1")	
Ref.	090-115437	Lower Saw Guide Ass'y. (5/8" to 3/4"	
Ref.	090-115429	Lower Saw Guide Ass'y. (1")	
9	091-982421	. Screw, Soc. Hd. Cap 1/4-20NC x 1 (5/8" to 3/4")	2
	091-982447	. Screw, Soc. Hd. Cap 1/4-20NC x 1-1/4" (1")	Text
10	090-115403	. Bearing Cap	1
II	090-115411	. Retaining Ring	1
I2	090-115296	. Bearing	2
13	134-085026	. Washer	2
14	090-252586	. Lower Saw Guide Block (5/8" to 3/4")	USE ONE
	090-252578		
HEAVY DUTY GUIDES (CARBIDE BACKUP)			
Ref.	091-199182	Upper Saw Guide Ass'y. (1/16" to 1/2"	
	090-380767	. Upper Saw Guide Block	1
2	091-982389	. Screw Soc. Hd. Cap 1/4-20NC x 5/8	2
	134-085026	. Washer	2
8	090-172180	. Bearing Cap	1
9	090-115411	. Retaining Ring	1
10	090-115296	. Bearing	2
Ref.	091-190017	Lower Saw Guide Ass'y. (1/16" to 1/2)	
11	090-377383	. Lower Saw Guide Block	1
12	091-982389	. Screw, Soc. Hd. Cap 1/4-20NC x 5/8	2
13	134-085026	. Washer	2
14	090-172180	. Bearing Cap	1

"NOTE If Your Machine Was Equipped With Two Coolant Lines to the Upper Saw Guide, Order Additional Parts 091-094524 Swivel Joint, Qty. 1, 090-081166 Barbed Insert Qty . 2 and Delete 091-081166 90° Barbed Insert, Qt. 1.

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y
15	090-115411	. Retaining Ring	1
16	090-115296	. Bearing	2
Ref.	090-178617	Upper saw Guide Ass'y. (5/8" to 3/4")	
1	091-984450	. Screw, Soc. Hd. Set 5/16-24NF x 1/2	1
2	091-332023	. Pipe Plug	1
3	091-354415	. Locknut	1
4	090-252529	. Upper Saw Guide Block	1
5	091-982421	. Screw, Soc. Hd. Cap 1/4-20NC x 1	2
6	134-085026	. Washer	2
7	090-183377	. Guide Guard	1
8	090-172180	. Bearing Cap	1
9	090-115411	. Retaining Ring	1
10	090-115296	. Bearing	2
Ref.	00-181686	Lower Saw Guide Ass'y. (5/8" to 3/4")	
11	090-252586	. Lower Saw Guide Block	1
12	091-982421	. Screw, Soc. Hd. Cap 1/4-20NC x 1	2
13	134-085026	. Washer	2
14	090-172180	. Bearing Cap	1
15	090-115411	. Retaining Ring	1
16	090-115296	. Bearing	2
Ref.	093-0301	Upper Saw Guide Ass'y. (1")	
1	091-984450	. Screw, Soc. Set 5/16-24NF x 1/2"	1
2	091-354415	. Locknut	1
3	091-332023	. Pipe Plug	1
4	090-252537	. Upper Saw Guide Block	1
5	134-085026	. Washer	2
6	091-982421	. Screw, Soc. Hd. Cap 1/4-20NC x 1	2
7	090-183377	. Guide Guard	1
8	090-172180	. Bearing Cap	1
9	090-115411	. Retaining Ring	1
10	090-115296	. Bearing	2
Ref.	091-201194	Upper Saw Guide Ass'y. (1")	
1	090-335092	. Coolant Nozzle	1
2	090-336314	. Upper Saw Guide Block	1
3	091-81166	. 90° Barbed Insert	1
4	091-982447	. Screw, Soc. Hd. Cap 1/4-20NC x 1-1/4	2
5	134-085026	. Washer	2
6	091-354415	. Locknut	1
7	090-183377	. Guide Guard	1
8	090-172180	, Bearing Cap	1
9	090-115411	. Retaining Ring	1
10	090-118296	. Bearing	2
Ref.	090-177320	Lower Saw Guide Block (1")	
11	090-252578	. Lower Saw Guide Block	1
12	091-982447	. Screw, Soc. Hd. Cap 1/4-20NC x 1-1/4	2
13	134-085026	. Washer	2
14	090-172180	. Bearing Cap	1
I5	080-115411	. Retaining Ring	1
16	090-115296	. Bearing	2
Ref.	093-048437	. 1 Inch Upper Saw Guide Block Sub-Assembly	
1	091-212100	. Back-Up Insert	1
2	094-064300	. Upper Saw Guide Block	1
3	091-982447	. Scr. Soc. Hd. Cap 1/4-20NC 1-1/4	2
4	131-085026	. Washer	2
5	091-402040	. Pivot Bolt	1
Ref.	093-048445	. 1 Inch Lower Saw Guide Block Sub Assembly	
6	091-212100	. Back-Up Insert	1
7	091-402040	. Pivot Bolt	1
8	091-982447	. Scr. Soc. Hd. Cap 1/4-20NC x 1-1/4	2
9	134-085026	. Washer	2
10	094-067683	. Lower Saw Guide Block	1





SAW GUIDE SELECTION

*121230

C-7-20 CM-7-29

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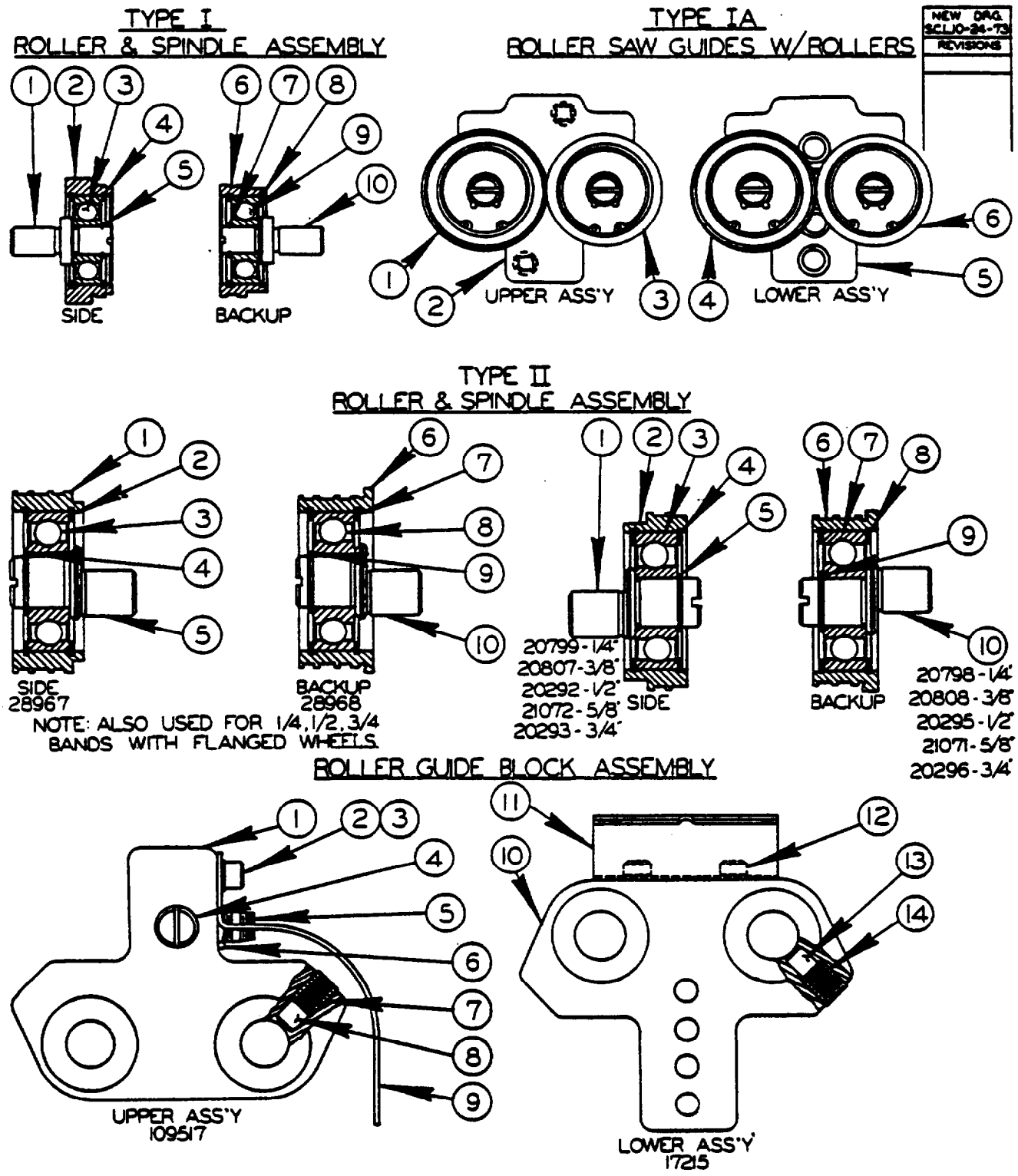
CM-7-29

#121230
SAW GUIDE SELECTION

		DESCRIPTION	UNITS PER ASS'Y.
Ref.	090-115197	Upper Saw Guide Assembly (1/16" to 1/4")	
1	091-984450	. Screw, Soc. Set 5/16-24NF x 1/2	1
2	091-203695	. Soc. Hd. Pipe Plug	1
3	091-982389	. Screw, Soc. Hd. Caps 1/4-20NC x 5/8	2
4	134-085026	. Washer	2
5	090-252495	. Upper Saw Guide Block	1
6	134-080092	. Bearing Sub-Assembly (See Detail)	1
7	091-985010	. Screw, Soc. Set #8-32Nc x 1/4	1
Ref.	090-115072	Lower Saw Guide Assembly (1/16" to 1/4")	
8	091-985010	. Screw, Soc. Set #8-32Nc x 1/4	1
9	134-080092	. Bearing Sub-Assembly (See Detail)	1
10	091-982389	. Screw, Soc. Hd. Cap 1/4-20NC x 5/8	2
11	134-085026	. Washer	2
12	090-252479	. Lower, Saw Guide Block	1
Ref.	134-080092	Bearing, Sub-Assembly	
1	134-084185	. Shaft	1
2	135-090439	. Bearing	1
3	134-083096	. Roller sod	1
4	134-083120	. Washer	1
SPIRAL GUIDES			
1	090-268723	Spiral Saw Guide Assembly (Upper)	
2	135-069532	. Eccentric Guide	1
3	NA ALONE	. Tire Only	1
4	NA ALONE	. Rim Only	1
5	090-268715	Spiral Saw Guide Assembly (Lower)	
6	135-069524	. Plain Guide	1
7	NA ALONE	. Tire Only	1
8	NA ALONE	. Rim Only	1
HIGH SPEED GUIDES			
Ref.	090-280819	Upper Saw Guide Assembly (1/16" to 1/2")	
1	090-279811	. Upper Saw Guide Stock	1
2	091-982389	. Screw, Soc. Hd. Cap 1/4-20NC x 5/8	2
3	134-085026	. Washer	2
4	091-373399	. Plug	1
5	090-115411	. Retaining Ring	1
6	135-022804	. Bearing	1
7	090-184151	. Bearing Cap	1
Ref.	090-282827	Lower Saw Guide Assembly (1/16" to 1/2')	
8	091-982389	. Screw, Soc. Hd. Cap 1/4-20NC x 5/8	2
9	134-085026	. Washer	2
10	090-279837	. Lower Saw Guide Block	1
11	091-373399	. Plug	1
12	090-184151	. Bearing Cap	1
13	135-022804	. Ball Bearing	1
14	090-115411	. Retaining Ring	1
90° SAW GUIDE BRACKETS			
Ref.	090-448044	90° Saw Guide Assembly	
1	135-036473	. 90° Elbow	1
2	090-275975	. Upper Angle Block	1
3	091-982421	. Screw, Soc. Hd. Cap 1/4-20NC x 1	2
4	090-116583	. Nipple	1
5	091-982397	. Screw, Soc. Hd. Cap 1/4-20NC x 3/4	2
6	090-275966	. Lower Angle Block	1
	090-292616	. Center Plate 24 x 24 Table (Not Shown)	USE ONE
	093-021780		

STEEL AND CARBIDE INSERT SELECTION

1	Ref.	Steel Insert (4 Req'd)	Ref.	Carbide Insert (4 Req'd)
	090-044991	1/16"	090-161688	1/4"
	090-044983	3/32"	090-161704	3/8"
	090-044975	1/8"	090-132911	1/2"
	090-044967	3/16"	091-058941	5/8"
	090-044959	1/4"	090-132929	3/4"
	O90-039603	3/9"	090-089822	1"
	090-039595	1/2"		
	090-039587	5/8"		
	090-039579	3/4"		
	090-039561	1"		



121230
SAW GUIDE SELECTION

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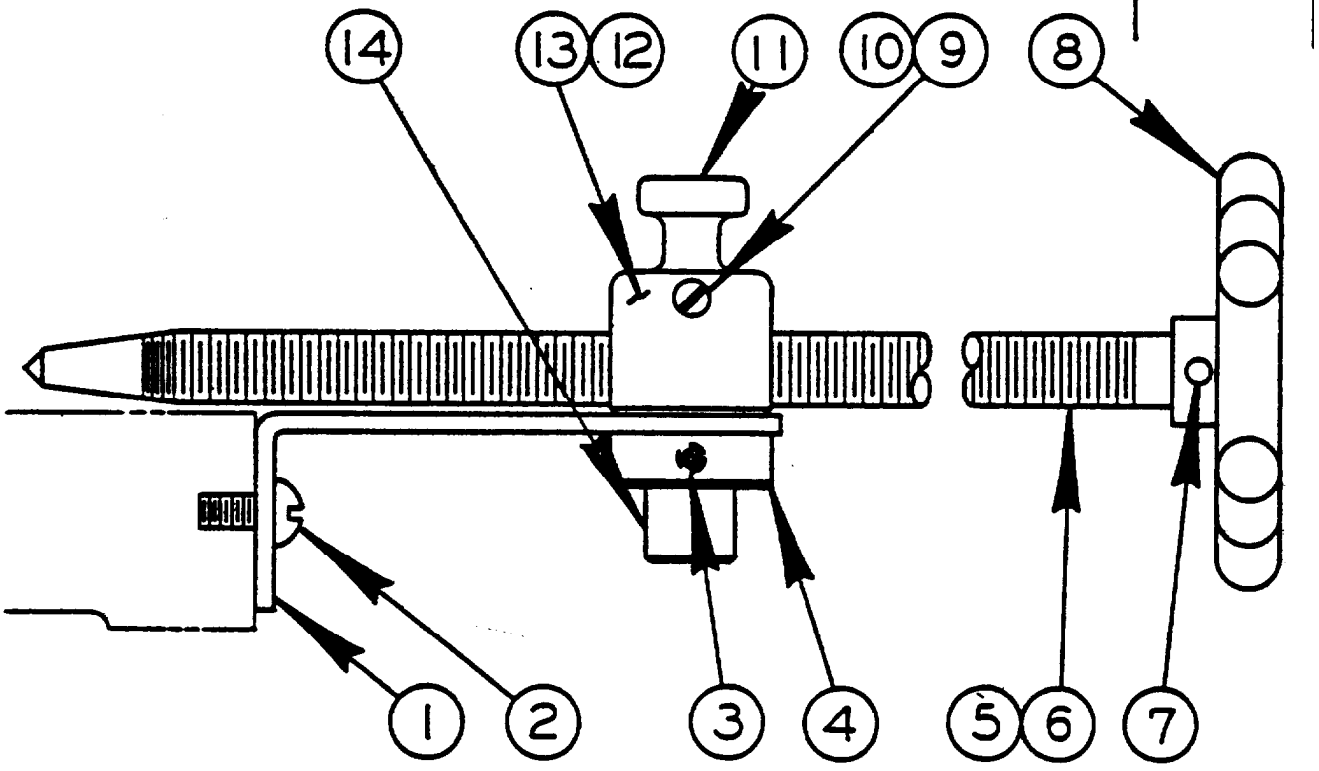
CM-7-27

SAW GUIDE SELECTION

INDEX No.	PART No.	DESCRIPTION	UNITS PER ASS'Y
TYPE 1 - ROLLER AND SPINDLE ASSEMBLY			
Ref.	28984	Roller Sub-Assembly 1/4" Side	
Ref.	28980	Roller Sub-Assembly 3/8" Side	
Ref.	28974	Roller Sub-Assembly 1/2" Side	
1	18296	. Bearing Shaft	1
2	28985	. Roller 1/4"	Select
	28981	. Roller 3/8"	
	28975	. Roller 1/2".	One
3	11529	. Bearing(N.D.Z99500XRIE)	1
4	100046	. Internal Ring	2
5	11541	. Snap Ring	1
Ref.	28982	Flanged Roller Sub-Assembly 1/4" Backup	
Ref.	28978	Flanged Roller Sub-Assembly 3/8" Backup	
Ref.	28976	Flanged Roller Sub-Assembly 1/2" Backup	
6	28983	. Flanged Roller 1/4"	Select
	28979	. Flanged Roller 3/8"	
	28977	. Flanged Roller 1/2".	One
7	11541	. Snap Ring	1
8	100046	. Internal Ring	2
9	11529	. Roaring (N.D. Z99500XRIE).	1
10	18296	. Bearing Shaft	1
TYPE 1A - ROLLER SAW GUIDES WITH ROLLERS			
Ref.	29256	Upper Roller Saw Guide Assembly 1/4"	
Ref.	29258	Upper Roller Saw Guide Assembly 3/8"	
Ref.	29506	Upper Roller Saw Guide Assembly 1/2"	
1	Ref.	Select flanged backup roller sub-assembly from type 1 detail and parts list.	
2	28960	. Upper Saw Guide Mock	1
3	Ref.	Select side roller sub-assembly from tvpe 1 detail and parts list.	
	Comm.	Scr, Soc. Hd. Cap 1/4-20NC x 3/4(Not Shown)	2
	Comm.	. Washer, Lock 1/4 Std. (Not Shown)	2
Ref.	29257	Lower Roller Saw Guide Assembly 1/4"	
Ref.	29259	Lower Roller Saw Guide Assembly 3/8"	
Ref.	29505	Lower Roller Saw Guide Assembly 1/2"	
4	Ref.	Select flanged backup roller sub-assembly from type 1 detail and parts list.	
5	28961	. Lower Saw Guide Block	1
6	Ref.	Select side roller sub-assembly from type 1 detail and parts list.	
	Comm.	. Scr., Soc. Hd. Cap 1/4 - 20NC x 3/4 (Not Shown)	2
	Comm.	. Washer, Lock 1/4 Std	2
Type II - ROLLER AND SPINDLE ASSEMBLY			
Ref.	29967	Side Roller Guide Assembly	
1	100758	. Guide Roller 1"	1
2	1303	. Retaining Ring	2
3	1779	. Bearing	1
4	1568	. Retaining Ring	1
5	13530	. Spinale	1
Ref.	28968	Backup Roller Guide Assembly	
6	100758	. Guide Roller 1"	1
7	1303	. Retaining Ring	2
8	1779	. Bearing	1
9	1568	. Retaining Ring	1
10	13530	. Spindle	1
Ref.	20799	Guide Roller Assembly 1/4" Side	
Ref.	20807	Guide Roller Assembly 3/8" Side	
Ref.	20292	Guide Roller Assembly 1/2" Side	
Ref.	21072	Guide Roller Assembly 5/8" Side	
Ref.	20293	Guide Roller Assembly 3/4" Side	
1	13530	. Spindle	1
2	13531	. Guide Roller 1/4"	Select
	13540	. Guide Roller 3/8"	
	13533	. Guide Roller 1/2"	
	13542	. Guide Roller 5/9"	
	13535	. Guide Roller 3/4"	One
3	1779	. Bearing	1
4	1303	. Retaining Ring	2
5	1568	. Retaining Ring	1
Ref.	20798	Backup Roller Guide Assembly 1/4"	
Ref.	20808	Backup Roller Guide Assembly 3/8"	
Ref.	20295	Backup Roller Guide Assembly 1/2"	
Ref.	21071	Backup Roller Guide Assembly 5/8"	
Ref.	20296	Backup Roller Guide Assembly 3/4"	
6	13532	Backup Roller 1/4"	Select
	13541	. Backup Roller 3/8"	
	13534	. Backup Roller 1/2"	
	13543	. Backup Roller 5/8"	
	13536	. Backup Roller 3/4"	One
7	1779	. Bearing	1
8	1303	. Retaining Ring	2
9	1568	. Retaining Ring	1
10	13530	. Spindle	1
	Roller Guide Black Assembly		
Ref.	109517	Upper Guide Sub-Assembly	
1	33517	. Upper Guide Block	1
2	Comm.	. Screw, Soc. Hd. Cap 1/4-20NC x 1/2	1
3	Comm.	. Washer, Lock 1/4 Std.	1
4	33509	. Coolant Nozzle	1
5	14-14528	. Close Nipple	1
6	7-015104	. Hex. Pipe Nipple	1
7	Comm.	. Scr., Soc. Hd. Set 3/8-16NC x 3/8	2
8	1741	. Plug	2
9	33636	. Coolant Guard	1
		. Cloth Bag (Not Shown)	1
Ref.	17215	Lower Guide Sub-Assembly	
10	27743	. Lower Guide Block	1
11	2140	. Chip Deflector	
12	Comm.	. Screw, Soc. Hd. Cap 1/4-20NC x 3/8	2
13	1741	. Plug	2
14	Comm.	. Screw, Soc. Hd. Set 3/8-16NC x 1/2	2

REVISED AND REDRAWN
S.C.L. 12-10-74



SCREW FEED ASSEMBLY

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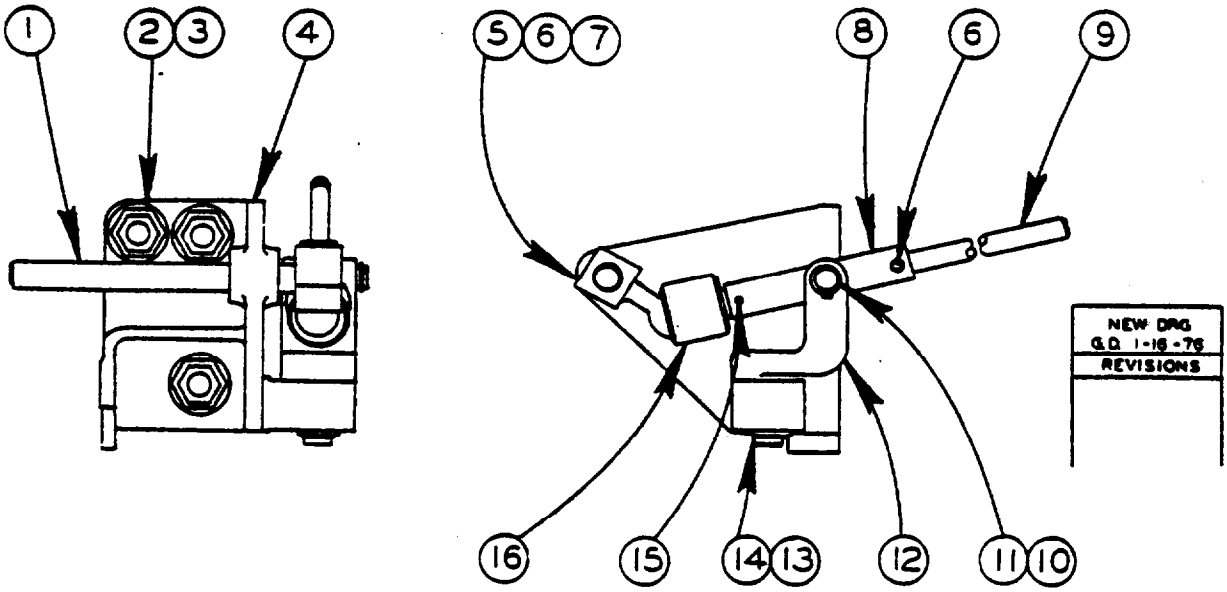
CM-10-17

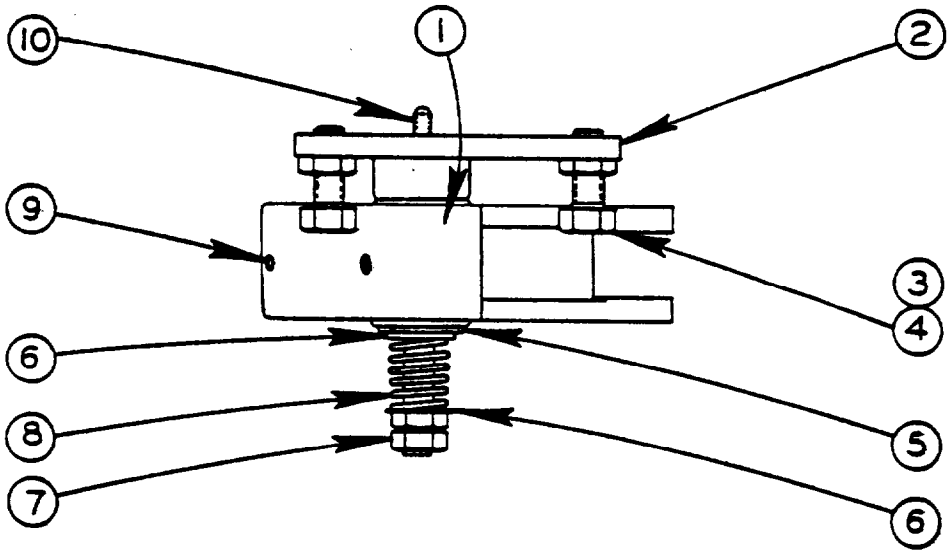
SCREW FEED ASSEMBLY

INDEX No.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	35-6212	Screw Peed Assembly (1612,1612-0,1612-1, 2013, 2013-0, 2013-1, 2013-10, 2012-1A, 2012-1AT, 2612-1, 3612, 3613-1)	
Ref.	45467	Screw had Assembly (1613-2, 2613-2, 3613-2, 6013-2)	
1	35-6211	. Feed Screw Bracket	1
2	198895	. Screw, Rd. Hd. Mach. 1/4-20NC x 1/2	2
3	198410	. Screw, Soc. Set #10-24NC x 1/4	1
4	11-28418	. Collar	1
* 5	11-03007	. Screw Feed Handle & Screw Sub-Assembly	1
6	11-03401	. . Screw Feed Screw	1
7	4255	. . Roll Pin	1
8	34-03106	. . Screw Feed Handle	1
*9	35-5224	. Screw Feed Swivel Sub-Assembly	1
10	198838	. . Screw, Rd, Hd. Mach. #6-32NC x 1/4	1
11	5-03402	. . Screw Feed Key	1
12	5-03502	. . Steel Ball	2
13	5-03501	. . Detent Spring	1
14	5-03401	. . Screw Feed Swivel	1

*NOTE: Starred items are the only parts for assembly #45467.



GEAR SHIFT SUB-ASS'Y



VARIABLE ASSEMBLY

MODEL	FIRST MACH.	LAST MACH.
2613-1H	361-76101	
2612-1H3	362-76101	
2614-1	364-76101	

C-5-90 CM-5-69

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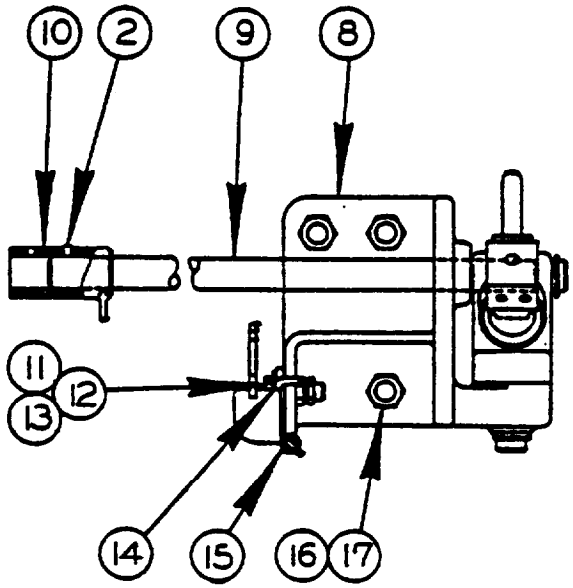
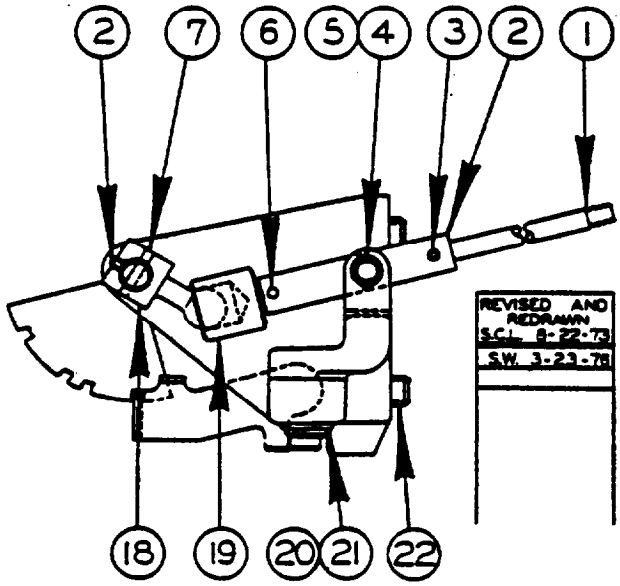
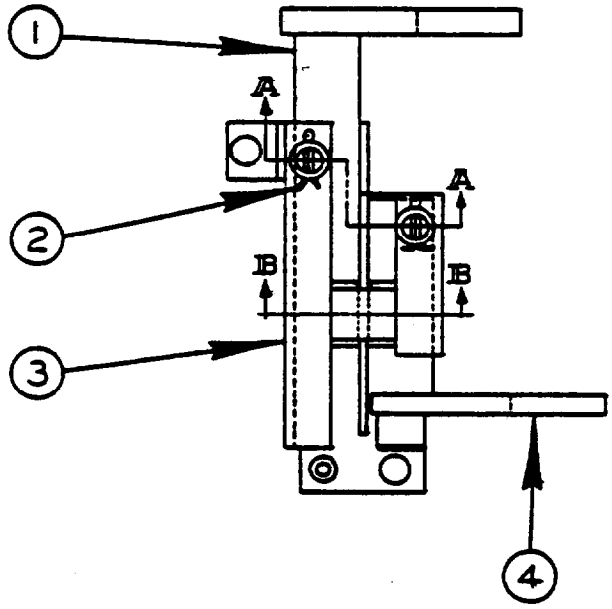
GEAR SHIFT SUB-ASSEMBLY

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	094-067642	Gear Shift Sub-Assembly	
1	090-052218	. Shaft	1
2	135-078152	. Adjustment Screw	3
3	091-991380	. Nut, Hex. Jam 5/8-18NF	3
4	090-410796	. Bracket	1
5	09-052200	. Ball Crank	1
6	091-0984229	. Scr. Soc. Hd. Set 1/4-20NC x 1/4	2
7	090-042599	. Roll Pin	1
8	090-052168	. Pivot Arm	1
9	090-161449	. Shifter Rod	1
10	135-096139	. Retaining Ring	2
11	090-040767	. Pin	1
12	090-210287	. Swivel Block Sub-Ass'y	1
13	135-064269	. Retaining Ring	1
14	090-052226	. Washer	1
15	090-042557	. Roll Pin	1
16	135-087013	. Socket	1
Ref.	094-064292	Variable Assembly	
1	094-064284	. Arm	1
2	090-220369	. Variable Plate Sub-Ass'y.	1
3	111-034047	. Adjustment Ser.	2
4	091-991380	. Nut, Hex. Jam 5/8-18NF	2
5	091-992701	. Washer, 1 SAE Std.	1
6	091-0992677	. Plain Washer, 5/8 Light Wt. 1-5/16	2
7	091-991364	. Nut, Hex. Jam 5/8-11NC	2
8	090-058454	. Spring	1
9	091-984369	. Scr. Soc. Hd. 5/16-18NC x 3/8	1
	091-984534	. Scr. Soc. Hd. Set 3/8-16 NC x 1-1/4	1

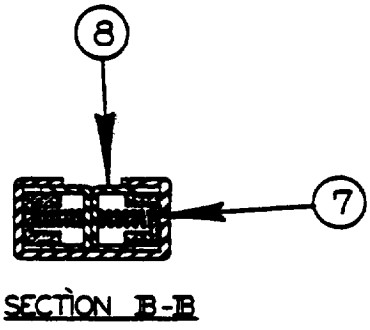




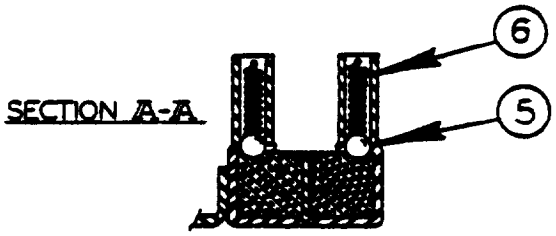
GEAR SHIFT ASSEMBLY



SHIFTER ASSEMBLY



SECTION B-B



SECTION A-A

MODEL	FIRST MACH.	LAST MACH.
2612-1H	240-65101	240-68145
2612-1H	284-68101	
2612-1H	269-68101	269-68102
2613-2	127-60139	
6013-2	129-60105	
2612-1H3	354-76101	
3612-1H3	358-76101	
2612-2H	206-62101	
1612-3	152-59101	
3612-3	153-59101	
1613-2	150-59101	
3613-2	151-59101	
2012-1H3	354-76101	
2613-1H	361-76101	
2614-1	364-76101	

C-4-39 CM-4-12

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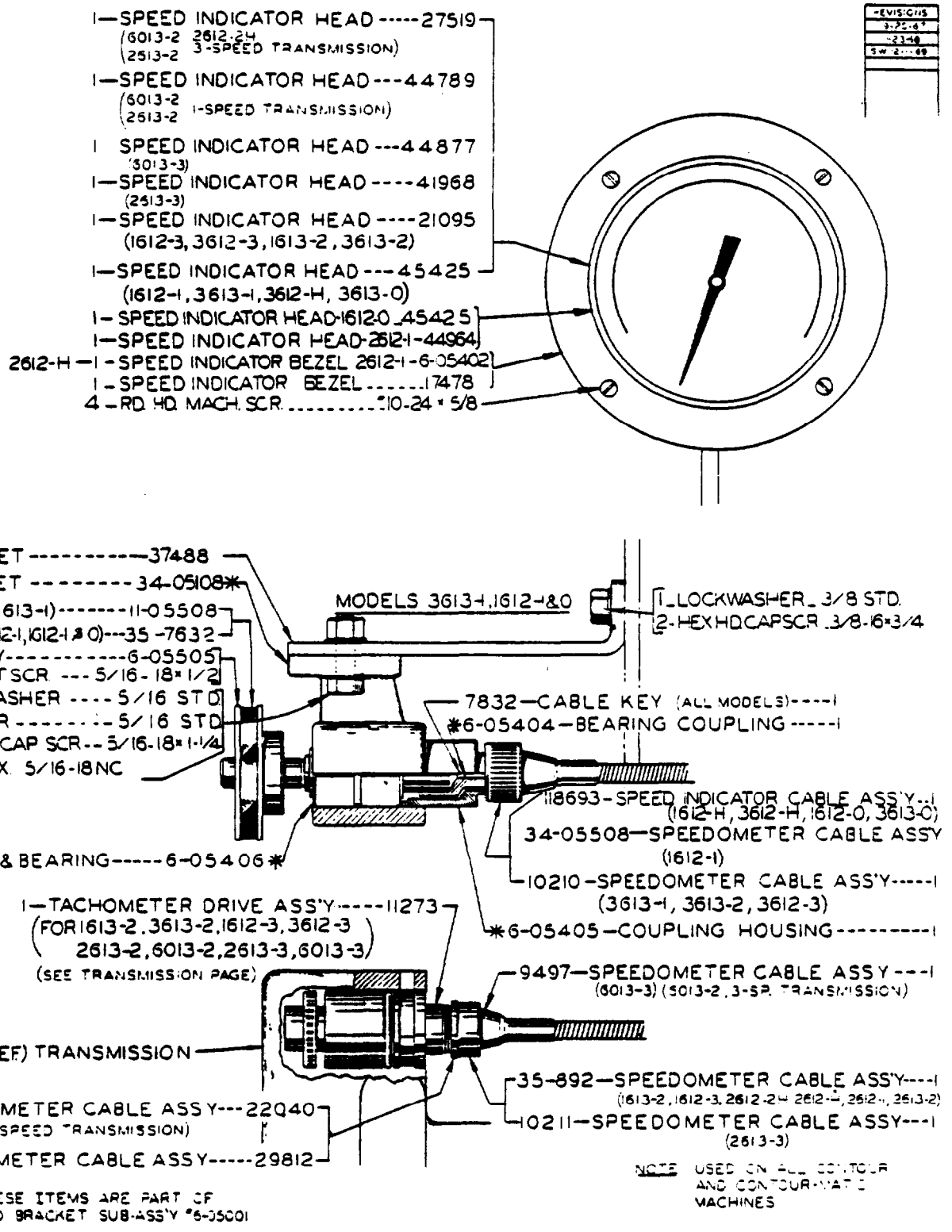
CODE NO. C-4-39
CM-4-12

GEAR SHIFT & SHIFTER ASSEMBLIES

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	090-236449	Gear Shift Sub-Assembly (3613-2, 3612-3,1613-2, 3612-1H3)	
Ref.	090-278540	Gear Shift Sub-Assembly (6013-2)	
Ref.	090-410804	Gear Shift Sub-Assembly (1612-3)	
Ref.	090-449075	Gear Shift Sub-Assembly (2613-2, 2612-2H)	
1	090-039256	. Shifter Rod	1
2	090-052168	. Pivot Arm	1
3	091-984229	. Scr. Soc. Hd. Set 1/4-20NC x 1/4	3
4	090-040767	. Pin	1
5	135-096139	. Retaining Ring	2
6	090-042557	. Roll Pin	1
7	090-042599	. Roll Pin	2
8	090-410796	. Bracket	1
9	090-085267	. Shaft (3613-2, 3612-3, 3612-1H3, 1613-2)	USE
	090-052218	. Shaft (2613-2, 2612-2H, 1613-3)	
	090-172974	. Shaft (6013-2)	ONE
10	090-216516	. Shift Lock Selector Sub-Assembly	1
11	091-981001	. Scr. Hex. Hd. Cap 5/16-18NC x 1	1
12	091-991232	. Nut, Hex. Jam 5/16-18NC	2
13	091-993014	. Washer, Flat 5/16	1
14	090-219502	. Lock Lever	1
15	090-052176	. Spring	1
16	135-078152	. Adjustable Screw	3
17	091-993055	. Nut, Hex. Jam 5/8-18NF	3
18	090-052200	. Ball Crank	1
19	135-087013	. Socket	1
20	135-064269	. Retaining Ring	1
21	090-052226	. Washer	1
2 2	090-210287	. Swivel Block Sub-Assembly	1
Ref.	090-402801	Shifter Assembly	
1	090-204280	. Shifter Rod Assembly	1
2	091-995191	. Cotter Pin	2
3	090-203886	. Shifter Rod Cage	1
4	090-204272	. Shifter Rod	1
5	105-035026	. Steel Ball	2
6	090-023292	. Spring	2
7	090-110008	. Spring	2
8	090-025883	. Latch	2



SPEED INDICATOR ASSEMBLY

FOR MODELS 1612-3, 3612-3, 1612-1, 3613-1, 1613-2, 3613-2
2613-2, 6013-2, 2613-3, 6013-3, 2612-2H
1612-0, 2612-1, 2612-H, 1612-H, 3612-H, 3613-0

C-5-105
CM-5-53

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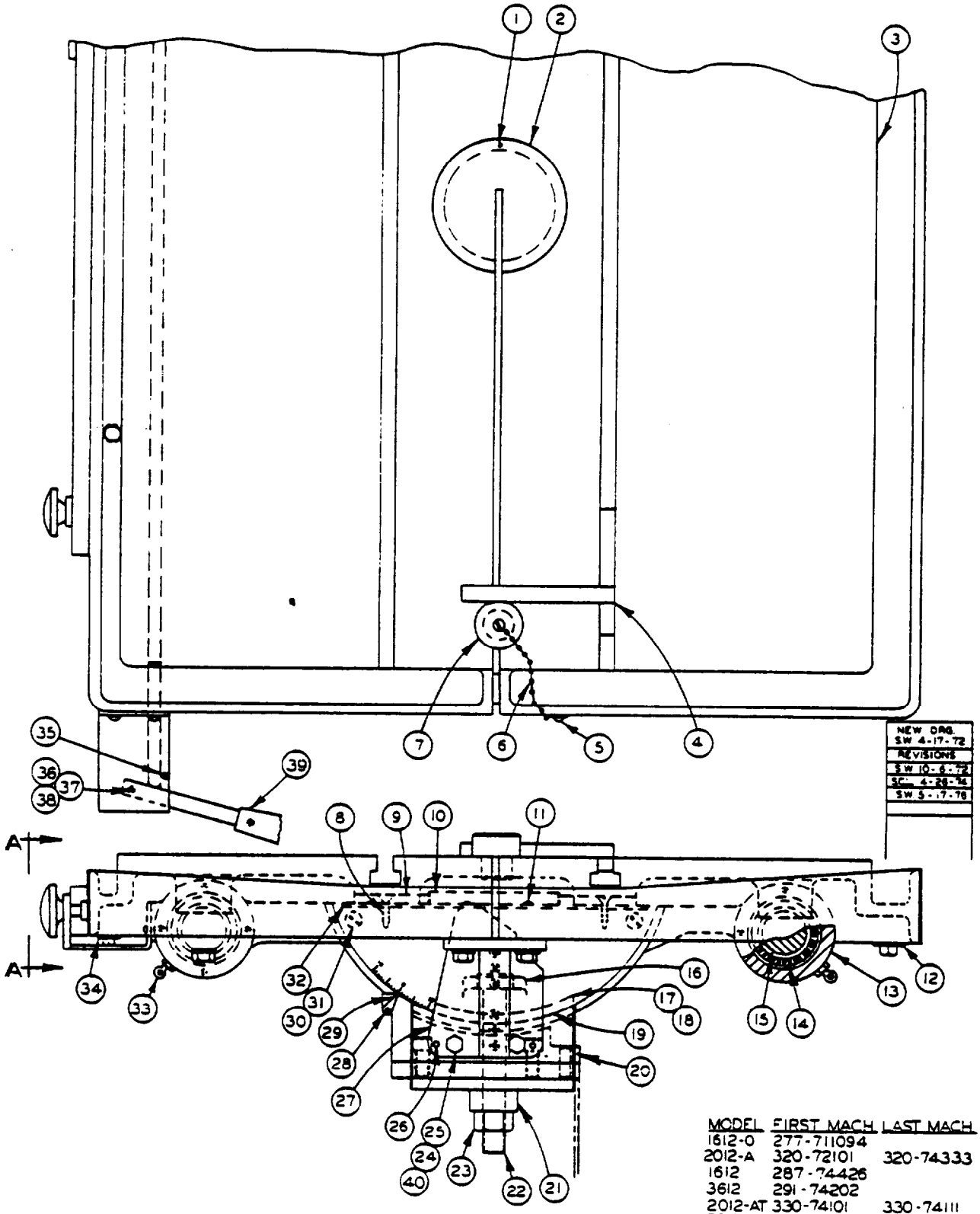


MODEL	FIRST MACH	LAST MACH
1612-0	277-711094	
2012-A	320-72101	320-74333
1612	287-74426	
3612	291-74202	
2012-AT	330-74101	330-74111
2012-IA	340-74101	
2012-IAT	341-74101	
2514-1	364-76101	

SLIDING TABLE ASS'Y.
AIR FEED

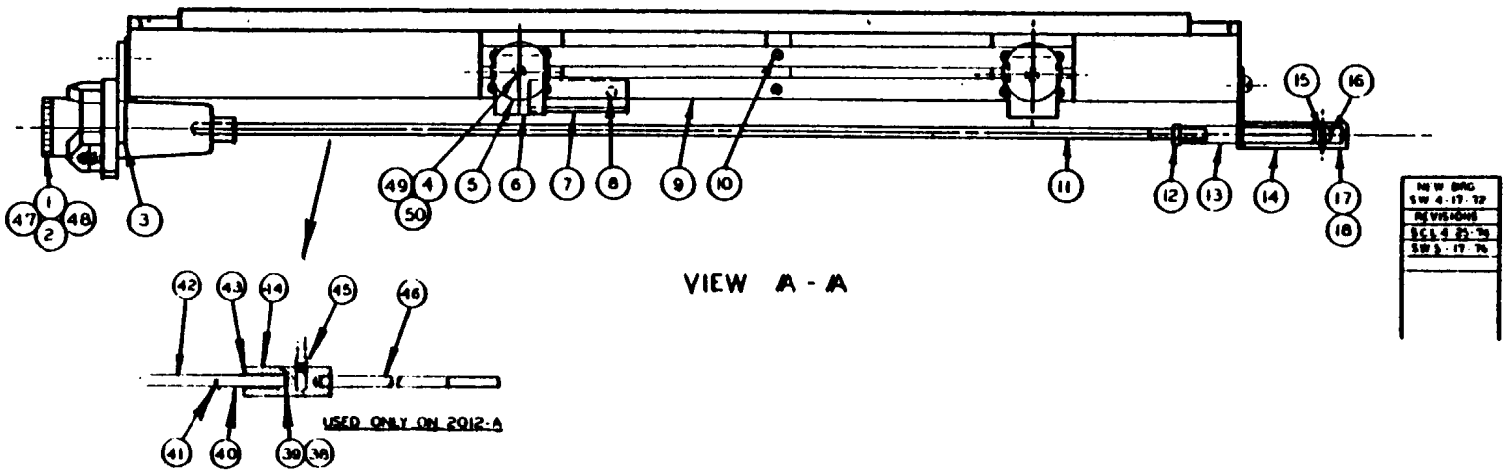
C-3-78

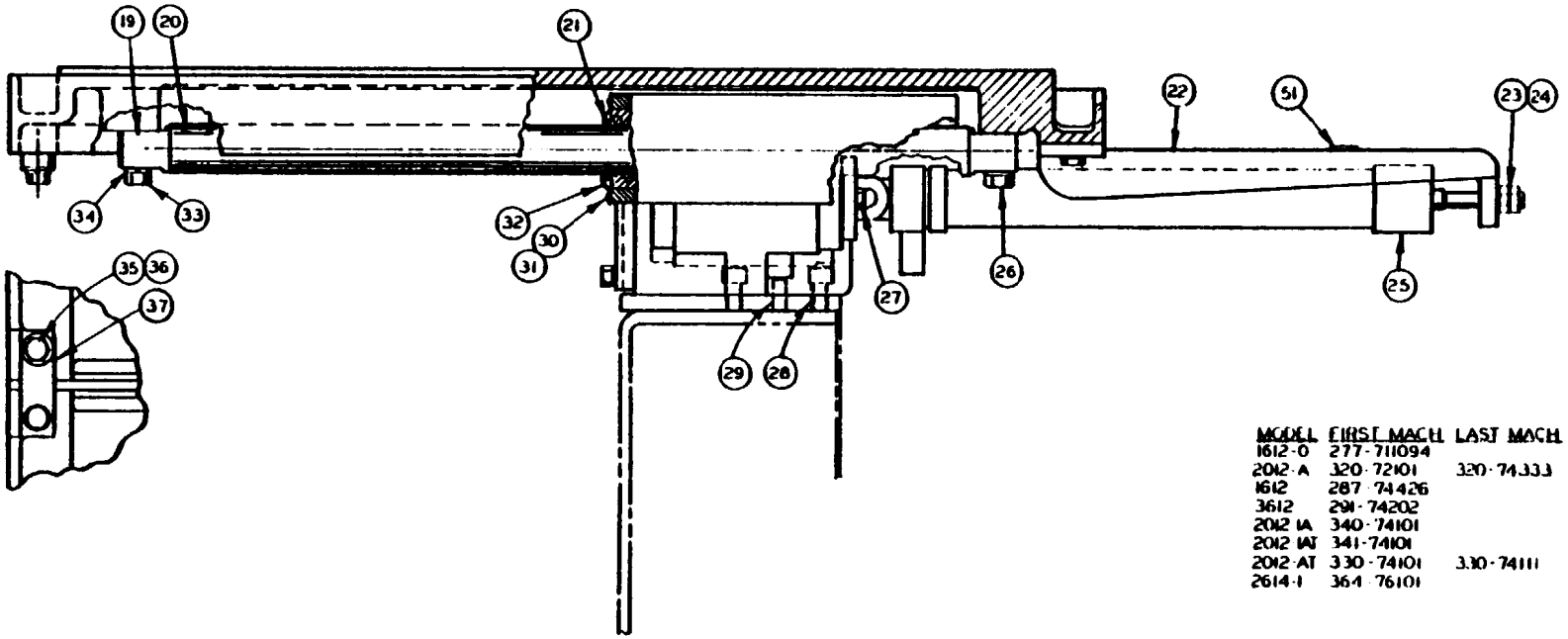
PRINTED IN U.S.A.

CODE NO. C-3-78

SLIDING TABLE ASSEMBLY
(Air Feed)

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY
Ref.	501532	Sliding Table Assembly (1612-0, 1612 3612)(2614-1)	
Ref.	503826	Sliding Table Assembly (2012-A, 2012-1A, 2012-AT, 2012-1AT)	
1	4209	• Roll Pin	1
2	10490	• Center Plate	1
3	501380	• Table	1
4	125361	• Square Weldment	1
5	198851	• Screw, Rd. Hd. Mach. #8-32NC x 1/4	2
6	129590	• Chain	1
7	125393	• Plug	1
8	199019	• Screw, Truss Hd. Mach. #1/4-20NC x 3/8	6
10	503045	• Pan	1
11	198867	• Screw, Rd. Hd. Mach. #10-24NC x 3/8	16
12	35-6580	• Pipe Plug	1
13	50791	• Trunnion	1
14	3647	• Ball Bushing	4
15	5180	• Spacer	2
16	39464	• Head	1
17	41093	• Chip Guard Assembly (#501532)	1
18	45080	• Chip Cover Assembly (#501532)	1
19	21621	• Trunnion Plate	1
20	40903	• Cradle	1
21	10501	• Spacer	1
22	198123	• Screw, Hex. Hd. Cap 3/4-16NF X 4 3/4	1
23	199141	• Nut, Hex. 3/4-16NF	1
24	198047	• Screw, Hex. Hd. Cap 3/8-16NC X 1 1/4	1
25	199332	• Washer, Lock 3/8 Std	10
26	35-328	• Dowel Pin	2
27	24241	• Keeper Block	1
28	198838	• Screw, Rd. Hd. Mach. #6-32NC X 1/4	1
29	34-03315	• Pointer	1
30	198893	• Screw, Rd. Hd. Mach. 1/4-20NC x 3/8(#501532)	2
	198822	• Screw, Pan Hd. Mach. 1/4-20NC x 3/8(#503826)	2
31	199356	• Washer, Lock 1/4 Shakeproof Int	8
32	34212	• Cover	1
33	8790	• Lube Fitting 90°	2
34	6-33518	• Pipe Plug	1
35	4244	• Roll Pin	1
36	104632	• Belleville Washer	6
37	198252	• Screw, Soc Hd. Cap 1/4-28NF x 1 1/4	1
38	115660	• Locknut	1
39	131011	• Handle Sub-Assembly	1
40	199264	• Washer, Flat 3/8 Std. S.A.E.	2
	Following items not shown:		
	131948	• Guard Assembly(#503826)	1
	11-05509	• Pipe Plug(#503826)	1
	28527	• Handle Assembly	1
	129447	• Screw Assembly	1





MODEL	FIRST MACH	LAST MACH
1612-0	277-711094	
2012-A	320-72101	320-74333
1612	287-74426	
3612	291-74202	
2012 IA	340-74101	
2012 IAT	341-74101	
2012-AT	330-74101	330-74111
2614-1	364-76101	

SLIDING TABLE ASSEMBLY
AIR FEED

C-3-79

PRINTED IN U.S.A.

CODE NO. C-3-79

SLIDING TABLE ASSEMBLY
(AIR FEED)

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY
Ref.	501532	Sliding Table Assembly (1612-0, 1612, 3612)(2614-1)	
Ref.	503826	Sliding Table Assembly (2012-A, 2012-1A, 2012-AT, 2012-1AT)	
1	125674	• Regulating Valve	1
2	198711	• Screw, Fil. Hd. Mach. #12-24NC x 7/8 (#501532)	2
	198710	• Screw, Fil. Hd. Mach. #12-24NC x 3/4 (#503826)	2
3	125386	• Mounting Plate (#503826)	1
4	9392	• T-Bolt	2
5	14909	• Knob	2
6	9504	• Dog	2
7	9503	• Stop	1
8	198895	• Screw, Rd. Hd. Mach. 1/4-20NC x 1/2	A.R.
9	23967	• Slide Bar	2
10	198221	• Screw, Soc. Hd. Mach. #10-24NC x 5/8	10
11	125387	• Actuator Rod	1
12	199127	• Nut, Hex. Jam 3/8-16NC	1
13	125388	• Shaft	1
14	125389	• Bracket Weldment	1
15	4255	• Roll Pin	1
16	125392	• Shaft	1
17	118116	• Tapered Handle	1
18	4242	• Roll Pin	1
19	131802	• Shim Option List	A.R.
20	21612	• Guide Rod	2
21	5177	• Scraper Ring	4
22	404546	• Cylinder Bracket	1
23	119364	• Grip Ring (#501532)	1
24	199134	• Nut, Hex. Jam 1/2-20NF (#503826)	2
25	403320	• Table Cylinder Assembly (See Detail)	1
26	198044	• Screw, Hex. Hd. Cap 3/8-16NC x 3/4	A.R.
27	198027	• Screw, Hex. Hd. Cap 5/16-18NC x 3/4	2
28	198291	• Screw, Soc. Hd. Cap 1/2-13NC x 3/4	4
29	34-13407	• Dowel Pin (#501532)	2
	16351	• Dowel Pin (#503826)	2
30	199319	• Washer, Lock #10 Std.	16
31	198865	• Screw, Rd. Hd. Mach. #10-24NC x 1/4	2
32	5176	• Retainer	4
33	198069	• Screw, Hex. Hd. Cap 1/2-13NC x 2	4
34	199327	• Washer, Lock 1/2 Std.	7
35	198046	• Screw, Hex. Hd. Cap 3/8-16NC x 1	2
36	198264	• Washer 3/8 Std.	A.R.
37	4599	• Clamp	1
	301371	• Release Valve Assembly (2012-A Only)	
38	128231	• • Seal Disc	1
39	34-01503	• • Adhesive	A.R.
40	1790	• • Spring	1
41	4215	• • Roll Pin	1
42	128215	• • Plunger	1
43	14-06553	• • Bearing	1
44	301372	• • Valve Body	1
45	16001	• • Barbed Insert	1
46	128216	• • Actuator Rod	1
47	198009	• Screw, Hex. Hd. Mach. 1/4-20NC x 7/8	2
48	122748	• Pipe Plug	1
49	198218	• Screw, Soc. Hd. Cap #10-24NC x 1/4	2
50	199122	• Bolt, Hex. 5/16-18NC	2
51	6291	• Plug Button	1

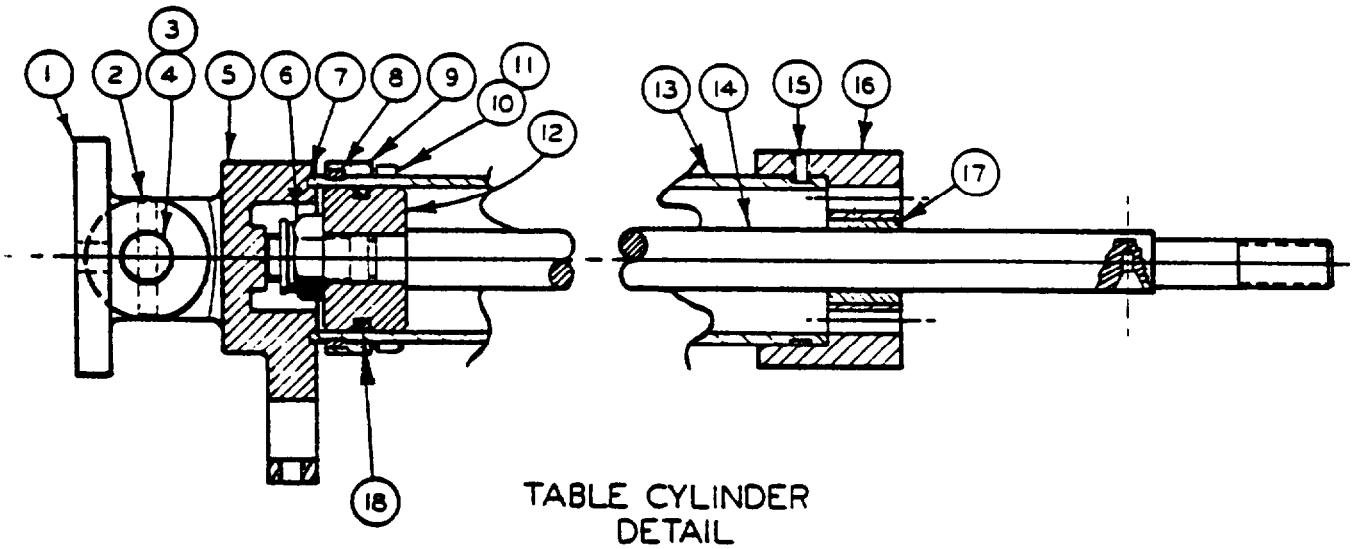
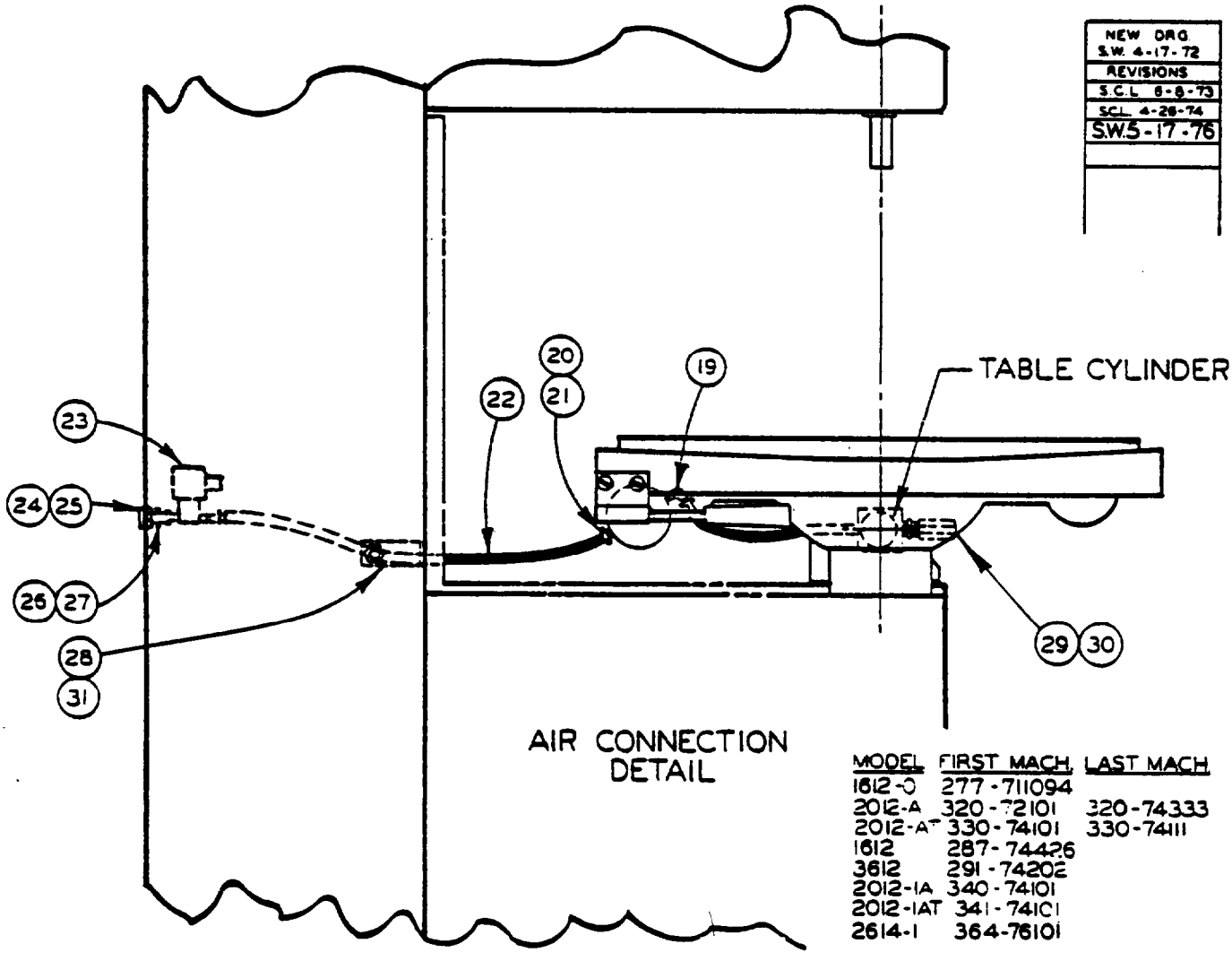


TABLE CYLINDER
DETAIL

NEW DRG
S.W. 4-17-72
REVISIONS
S.C.L 8-8-73
SCL 4-28-74
S.W.5-17-76



AIR CONNECTION
DETAIL

MODEL	FIRST MACH.	LAST MACH
1612-0	277-711094	
2012-A	320-72101	320-74333
2012-AT	330-74101	330-74111
1612	287-74426	
3612	291-74202	
2012-1A	340-74101	
2012-1AT	341-74101	
2614-1	364-76101	

AIR FEED
SLIDING TABLE ASS'Y.

C-3-80

PRINTED IN U.S.A.

CODE NO. C-3-80

SLIDING TABLE ASSEMBLY
(AIR FEED)

INDEX NO.	PART NO.	DESCRIPTION	
Ref.	501532	Sliding Table Assembly (1612-0, 1612, 3612)(2614-1)	
Ref.	503826	Sliding Table Assembly (2012-A, 2012-1A, 2012-AT, 2012-1AT)	
Ref.	403320	• Table Cylinder Assembly	1
1	21594	• • Swivel	1
2	4261	• • Roll Pin	1
3	35-891	• • Shim	2
4	5130	• • Swivel Pin	1
5	25655	• • Rear Cylinder Cap	1
6	12776	• • Locknut	1
7	35-463	• • Cylinder Gasket	1
8	35-466	• • Snap Ring	2
9	35-465	• • Cylinder Collar	1
10	198242	• • Screw, Soc. Hd. Cap 1/4-20NC x 1	4
11	3559	• • Washer, Lock 1/4 Hi-Collar	4
12	125685	• • Piston	1
13	127821	• • Cylinder	1
14	302327	• • Piston Rod	1
15	115427	• • Screw, Soc. Set Self-Locking	3
16	300468	• • End Cap	1
17	5123	• • Bearing	1
18	127774	• • Seal Ring	1
19	17-13521	• 90° Street Elbow	1
20	104478	• Hose Clamp (#501532)	6
	35-6888	• Hose Clamp (#503826)	4
21	2004	• Barbed Insert	6
22	Stk #003	• Hose 3/8 O.D. (#501532)	A.R.
	Stk #008	• Hose 5/8 O.D. (#503826)	A.R.
*23	119401	• Solenoid Valve 120V 60Hz	Use
	119404	• Solenoid Valve 240V 60Hz	
	119408	• Solenoid Valve 380V 60Hz	
	119407	• Solenoid Valve 480V 60Hz	One
*24	125673	• Bulkhead Adapter	1
*25	14-03507	• Close Nipple	2
*26	3818	• Reducing Coupling	2
*27	14-14528	• Close Nipples	3
*28	128148	• Manifold	1
*29	105996	• Reducer Bushing	1
*30	303417	• Orifice	1
*31	120369	• Pipe Plug	1
*	102918	• Oil Lubricator (Not Shown)	1

*Note: Starred items used only on assembly #501532

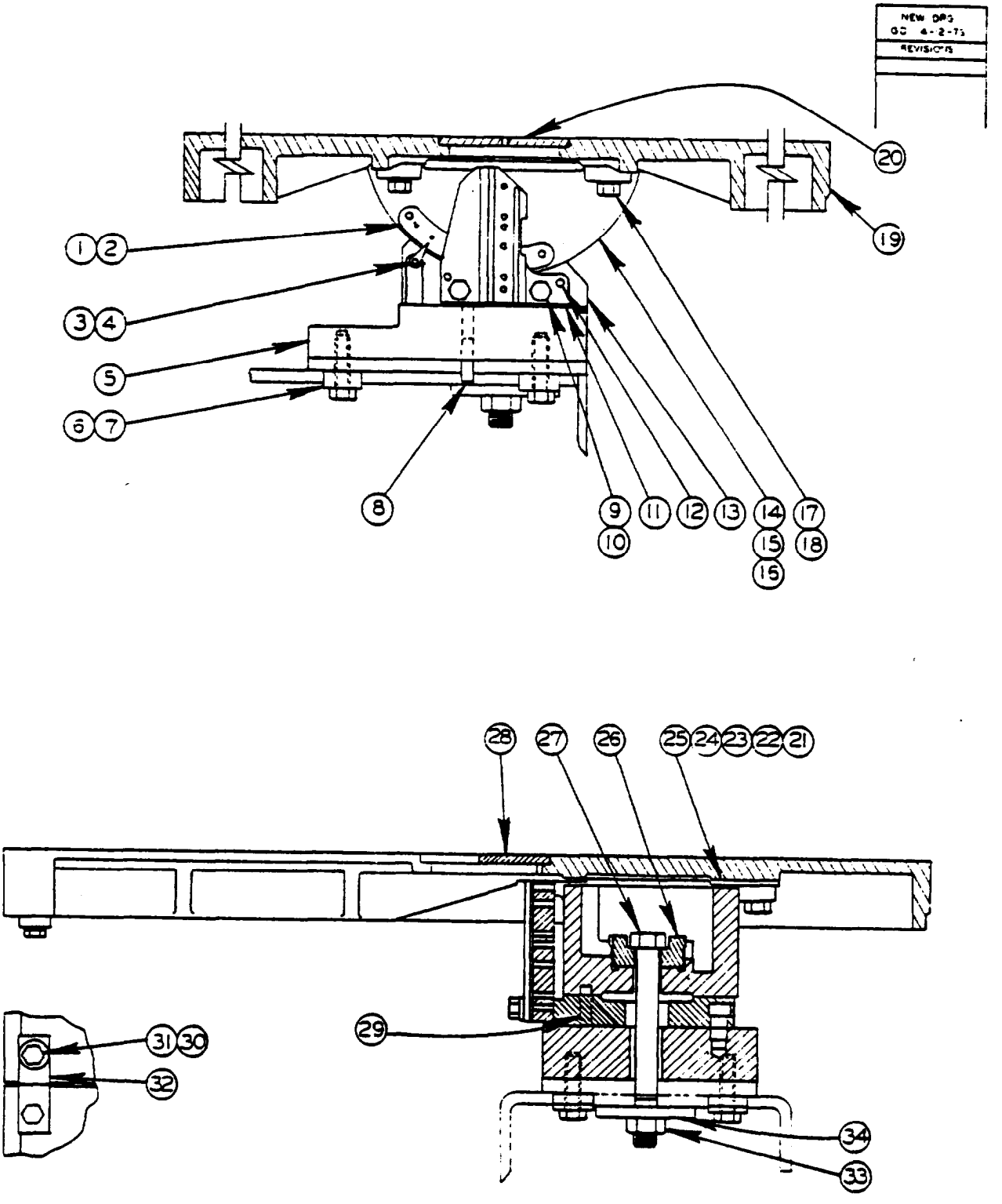


TABLE & TRUNNION ASSEMBLY

MODEL	FIRST MACH	LAST MACH
2614-1	364-76101	

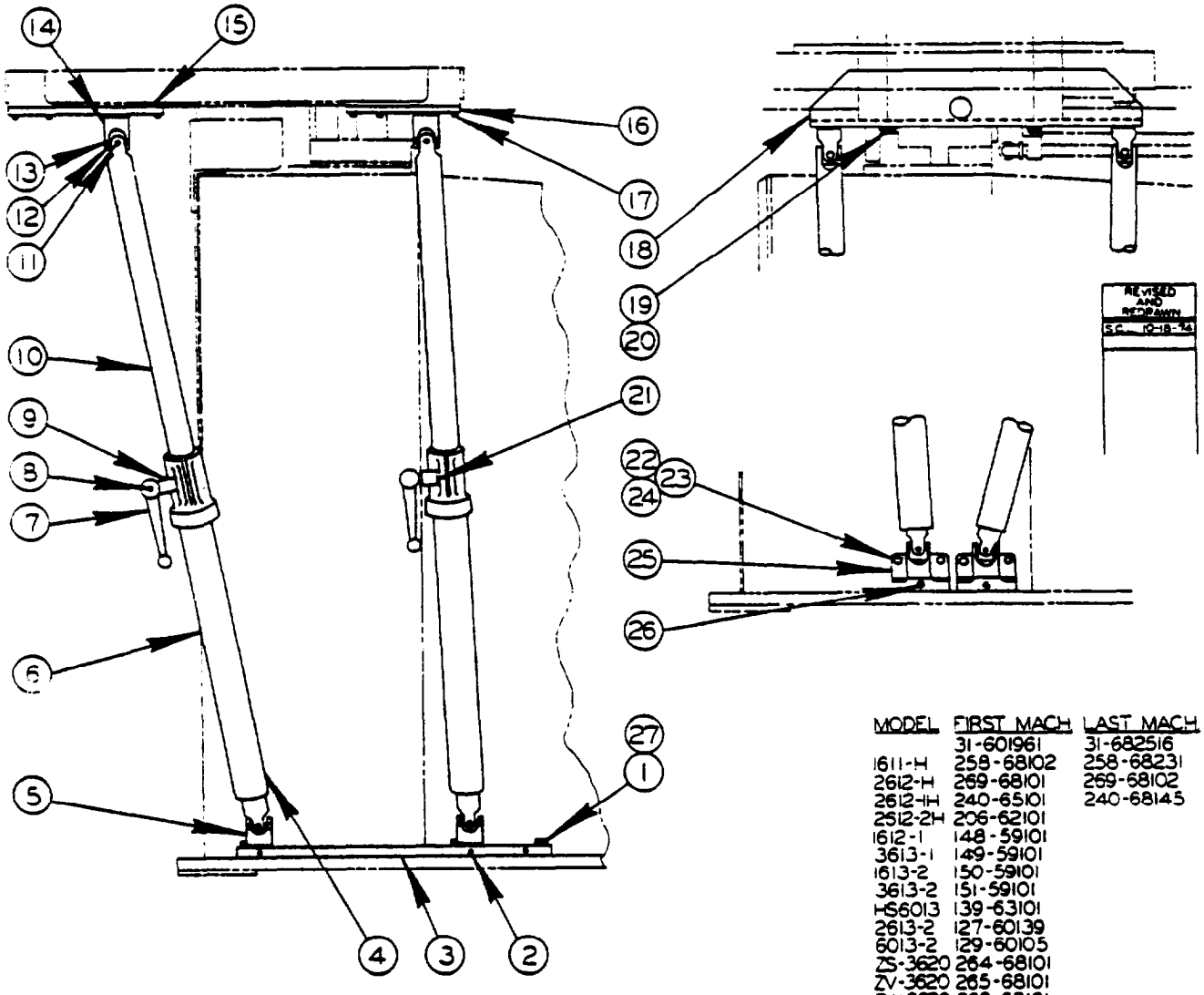
C-3-52

PRINTED IN U.S.A.

CODE NO. C-3-52

TABLE & TRUNNION ASSEMBLY

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASSY.
Ref.	504939	Table & Trunnion Assembly	
1	090-038613	• Escutcheon	1
2	091-994012	• Scr., Rd. Hd. Mach. PK Type U #6 x 3/8	2
3	134-033158	• Trunnion Tilt Pointer	1
4	091-988378	• Scr. Rd. Hd. Mach. #6-32NC x 3/16	1
5	094-065935	• Spacer	1
6	090-012352	• Spacer	4
7	091-980698	• Scr. Hex. Hd. Cap 1/2-13NC x 2	4
8	135-004455	• Dowel Pin	2
9	091-980474	• Scr. Hex. Hd. Cap 3/8-16NC x 1-1/4	2
10	091-993329	• Washer, Lock 3/8 Std.	3
11	090-242447	• Lower Post Block	1
12	135-005163	• Dowel Pin	2
13	090-406497	• Cradle	1
14	090-406455	• Trunnion	1
15	134-134071	• Dowel Pin	2
16	091-982918	• Scr. Soc. Hd. Cap 1/2-13NC x 3/4	4
17	091-980656	• Scr. Hex. Hd. Cap 1/2-13NC x 1	4
18	091-993774	• Washer, Lock 1/2 Shakeproof	4
19	090-598269	• Table	1
20	090-104902	• Center Plate	1
21	091-333104	• Shim	A.R.
22	091-333112	• Shim	A.R.
23	091-333120	• Shim	A.R.
24	091-333138	• Shim	A.R.
25	091-333146	• Shim	A.R.
26	090-394644	• Head	1
27	091-981407	• Scr. Hex. Hd. Cap 3/4-16NF x 6-1/2	1
28	090-042094	• Roll Pin	1
29	114-004732	• Dowel Pin	2
30	091-980466	• Scr. Hex. Hd. Cap 3/8-16NC x 1	2
31	091-982611	• Washer, Flat 3/8 Std.	1
32	090-045998	• Clamp	1
33	091-991414	• Hex. Nut 3/4-16NF	1
34	091-401513	• Washer	1



MODEL	FIRST MACH	LAST MACH
	31-601961	31-682516
1611-H	258-68102	258-68231
2612-H	269-68101	269-68102
2612-1H	240-65101	240-68145
2612-2H	206-62101	
1612-1	148-59101	
3613-1	149-59101	
1613-2	150-59101	
3613-2	151-59101	
HS6013	139-63101	
2613-2	127-60139	
6013-2	129-60105	
ZS-3620	264-68101	
ZV-3620	265-68101	
ZW-3620	266-68101	
1612	287-68101	
3612	291-68101	
1612-0	277-68101	
3613-0	278-68101	
2612-1	285-68101	
1612-H	288-69101	
3612-H	272-68101	
2612-H	284-68101	
1612-3	152-59101	
3612-3	153-59101	
2613-3	198-61101	
6013-3	199-61101	199-75138
2013-1	338-74101	
2013-10	339-74101	
2012-1A	340-74101	
2012-1AT	341-74101	
2012-1H	348-75101	
2012-1H3	361-76101	
2612-1H3	362-76101	
2614-1	364-76101	
6013-H3	199-76139	

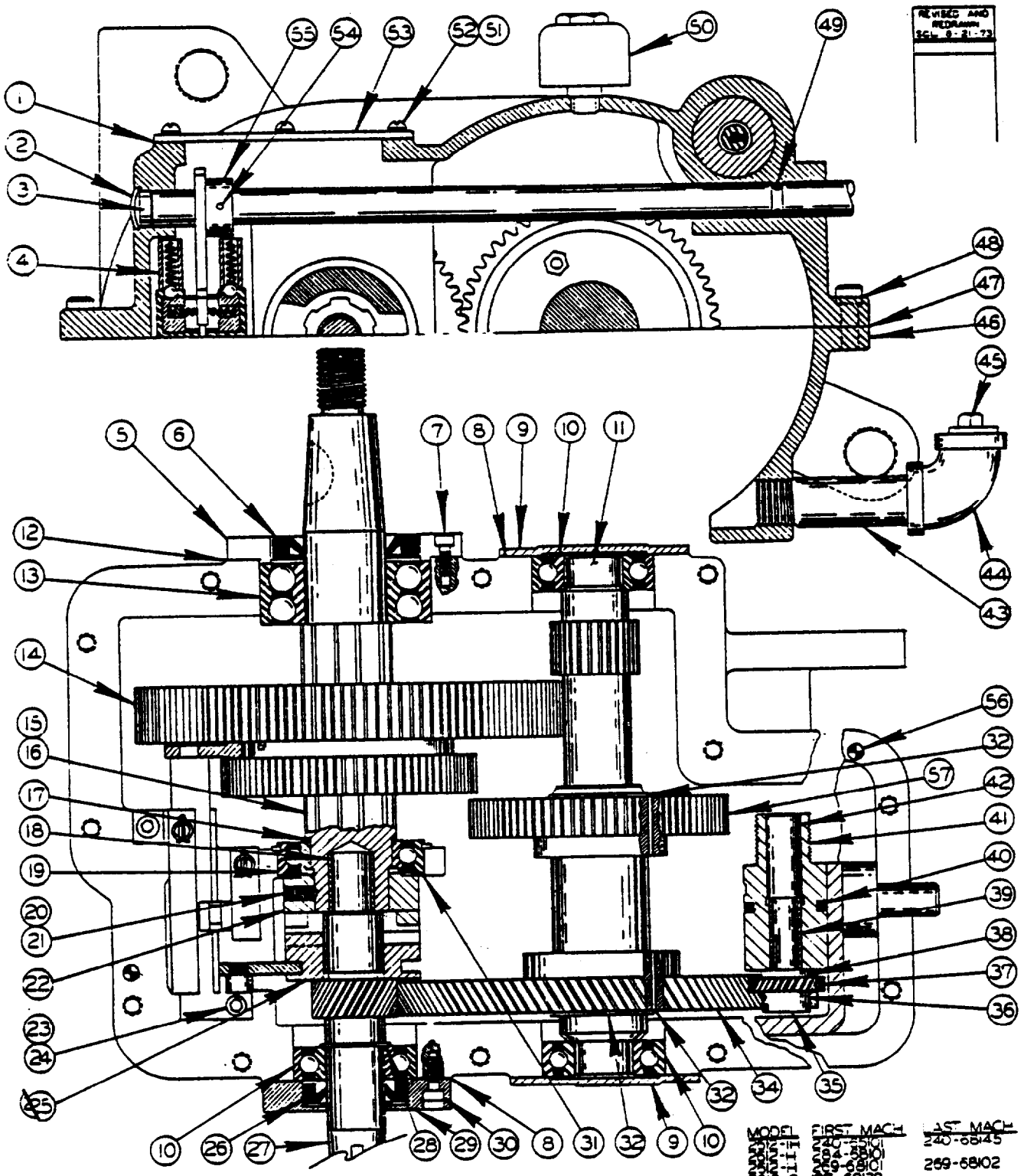
TABLE SUPPORT ASSEMBLY

CODE NO. C-9-107
CM-9-4
Z-9-16

TABLE SUPPORT ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY
*Ref.	55436	Table Support Assembly (1612, 3612, 1612-0, 3613-0, 1612-1, 2612-1, 3613-1, 1613-2, 3613-2, HS6013, 2013-1, 2013-10, 2012-1A, 2012-1AT)	
*Ref.	50826	Table Support Assembly (1611-H, 1612-H, 3612-H, 2612-H, 2612-1H, 2612-2H, 1612-3, 3612-3)	
*Ref.	51216	Table Support Assembly (2613-2, 6013-2)	
*Ref.	52992	Table Support Assembly (2613-3, 6013-3)	
*Ref.	17-03003	Table Support Assembly (ZS-3620, ZV-3620, ZW-3620)	
1	198046	• Screw, Hex. Hd. Cap 3/8-16NC x 1 (Used on Assy's #55436, #51216, #50826)	A.R.
2	198410	• Screw, Soc. Hd. Set #10-24NC x 1/4 (Used on Assy's #55436, #50826, #51216)	2
3	29592	• Plate (Used on Assy's #55436, #50826, #51216)	1
*4	35-5239	• Table Support Rod Assembly	2
5	35-877	• • Universal Joint	1
6	35-5238	• • Table Support Tube Sub-Assembly	1
7	17-03105	• • Lock Lever	1
8	4259	• • Roll Pin	1
9	17-03406	• • Lock Shaft	1
10	17-03404	• • Support Rod	1
11	133185	• • Universal Joint Pin	2
12	133183	• • Universal Joint Swivel	2
13	133184	• • Universal Joint Swivel Pin	2
14	302678	• • Universal Joint Thd. End	1
15	30440	• Left Table Support Plate (Used on Assy #55436)	1
16	30441	• Right Table Support Plate (Used on Assy #55436)	1
17	198220	• Screw, Soc. Hd. Cap #10-24NC x 1/2 (Used on Assy #55436)	8
	22297	• Angle Bracket (Used on Assy #50826)	1
	198044	• Screw, Hex. Hd. Cap 3/8-16NC x 3/4 (Used on Assy #50826)	2
20	199264	• Washer 3/8 Std. (Used on Assy #50826)	6
21	132287	• Spacer Option List (Used on Assy's #55436, #50826, #52992, 17-03003)	1
	35-7708	• Spacer (Used on Assy #51216)	A.R.
22	198045	• Screw, Hex. Hd. Cap 3/8-16NC x 7/8 (Used on Assy #52992)	4
	198046	• Screw, Hex. Hd. Cap 3/8-16NC x 1 (Used on Assy #17-03003)	4
23	199126	• Nut, Hex. 3/8-16NC (Used on Assy's #52992, #17-03003)	4
24	199264	• Washer 3/8 Std. (Used on Assy #52992)	4
	199332	• Washer, Lock 3/8 Std. (Used on Assy #52992)	4
25	17-03104	• Bottom Bracket (Used on Assy's #52992, 17-03003)	2
26	198423	• Screw, Soc. Set 1/4-20NC x 5/16 (Used on Assy #52992, #17-03003)	2
27	199332	• Washer, Lock 3/8 Std. (Used on Assy's #55436, #50826, #51216)	A.R.
	NOT SHOWN		
	199268	• Washer 3/4 Std. (Used on Assy #52992)	2

*NOTE: All Table Support Assemblies use Table Support and Rod Sub-Assembly #35-5239. However, different upper and lower connecting brackets are used. Locate on the drawing the brackets used on your machine.



MODEL	FIRST MACH	LAST MACH
[illegible]	240-55101	240-68145
[illegible]	284-58101	
[illegible]	269-68101	269-68102
[illegible]	327-60139	
6013-2	329-60105	
2613-1H	361-76101	
3612-1H3	358-76101	
2612-2H	206-62101	
1612-3	152-59101	
3612-3	153-59101	
1613-2	150-59101	
3613-2	151-59101	
2012-1H3	354-76101	
2612-1H3	362 75101	
2614-1	364-76101	

MX-2 TRANSMISSION ASSEMBLY

NOTE:
ASSEMBLY NO. 50186 DOES NOT INCLUDE GEAR SHIFT ASSEMBLY.

C-4-38 CM-4-11

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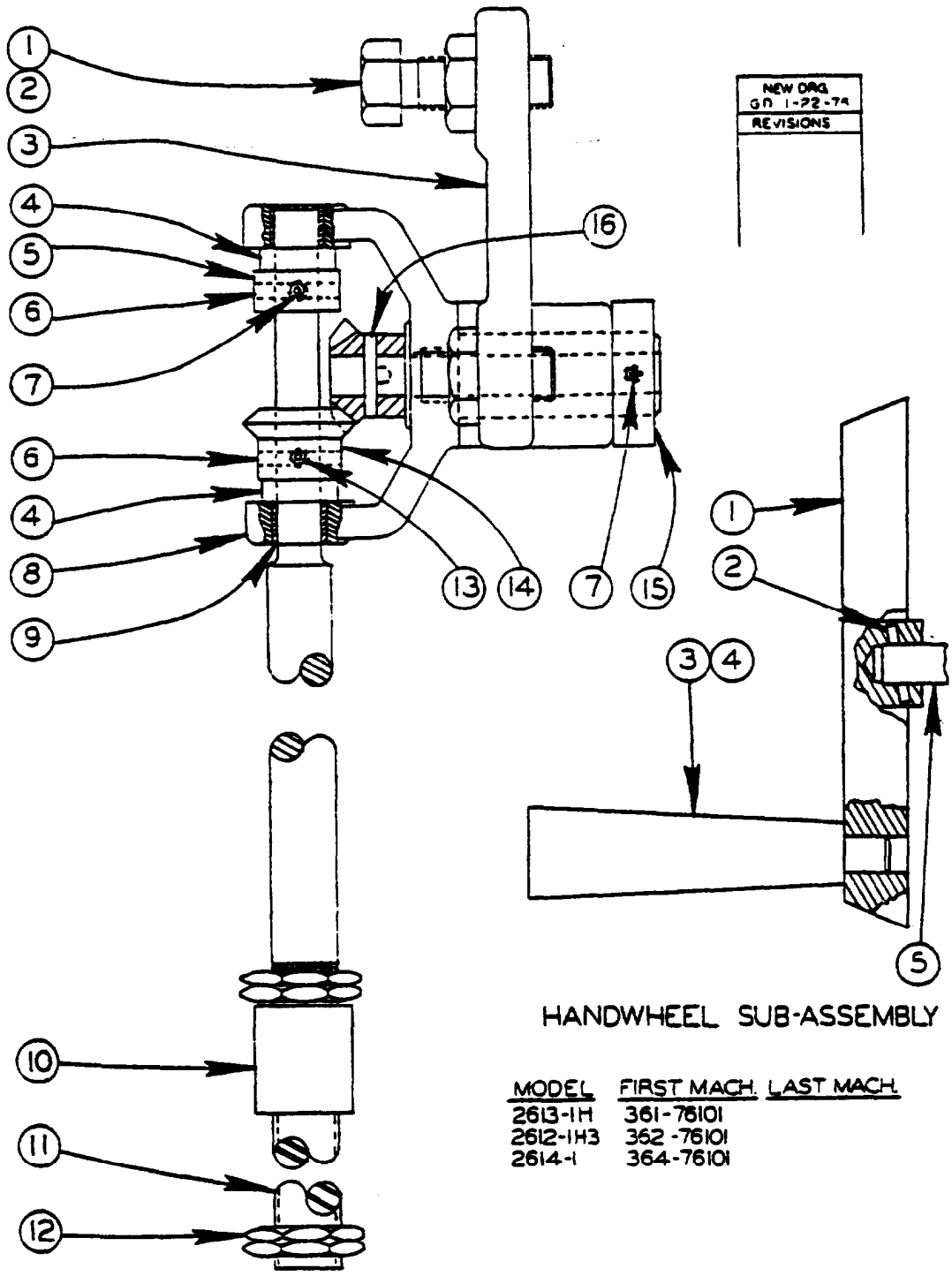
COOE NO. C-4-38
CM-4-11

MX-2 TRANSMISSION ASSEMBLY

INDEX No.	PART NO.	DESCRIPTION	UNITS PER ASSY
Ref.	50186	MX-2 Transmission Assembly	
1	2596	• Gasket	1
2	35-3419	• Expansion Plug	1
3	2266	• Shifter Rod	1
4	40280	• Shifter Assembly (See Detail)	1
5	5026	• Bearing Retainer	1
6	2689	• Oil Seal	1
7	Comm.	• Screw, Soc. Hd. Cap #10-24NC x 1/2	5
8	2263	• Gasket	3
9	2264	• Bearing Cap	2
10	2276	• Ball Bearing	3
11	24698	• Counter Shaft	1
12	3872	• Gasket	1
13	5027	• Ball Bearing	1
14	42974	• Cluster Gear Sub-Assembly	1
15	21290	• Output Shaft Sub-Assembly	1
16	20947	• • Output Shaft	1
17	13-01304	• Spacer	1
18	4575	• • Bushing	1
19	4581	• Ball Bearing	1
20	3908	• Screw, Soc. Set Dog. Pt	1
21	Comm.	• Screw, Soc. Set 1/4-20NC x 1/4Lg. Cut Pt	1
22	3688	• Stationary Clutch Jaw	1
23	Comm.	• Screw, Soc. Hd. Cap 1/4-20NC x 3/8	2
24	Comm.	• Washer, Lock 1/4 Std. Shakeproof Int.	2
25	3465	• Sliding Clutch Jaw	1
26	2690	• Oil Seal	1
27	25998	• Input Shaft	1
28	13611	• Retaining Ring	1
29	2265	• Bearing Retainer	1
30	Comm.	• Screw, Soc. Hd. Cap #10-24NC x 1/2	5
31	35-3436	• Spacer	A.R.
32	2277	• Retainer Ring	2
33	35-7192	• Woodruff Key	2
34	42976	• Counter Shaft Gear	1
35	11273	• Tachometer Drive Assembly	1
36	4229	• • Roll Pin	1
37	10540	• • Helical Gear	1
38	2271	• • Spacer	1
39	14-06553	• • Oilite Bushing	1
40	2278	• • O Ring	1
41	2279	• • Body	1
42	2280	• • Spindle	1
43	2989	• Pipe Nipple	1
44	14-348	• 90° Elbow	1
45	1276	• Pipe Plug	1
46	50193	• Housing Assembly	1
47	20399	• • Gasket	1
48	1993	• • Washer, Lock	12
49	4122	• O Ring	1
50	35-6068	• Breather	1
51	Comm.	• Screw, Rd. Hd. Mach. #10-24NC x 1/2	14
52	Comm.	• Washer, Lock #10 Reg	14
53	2595	• Cover	1
54	6-04405	• Pin	1
55	20425	• Shifter Arm	1
56	5-04412	• • Dowel Pin	2
57	25123	• Intermediate Gear	1
	Following items not shown:		
	5-04612	• Pipe Plug	1
	Comm.	• Screw, Soc. Set 1/4-20NC x 5/16 Lg. Cup Pt	1



HANDWHEEL SUB-ASSEMBLY

MODEL	FIRST MACH.	LAST MACH.
2613-1H	361-76101	
2612-1H3	362-76101	
2614-1	364-76101	

VARIABLE BRACKET

C-5-91 CM-5-71

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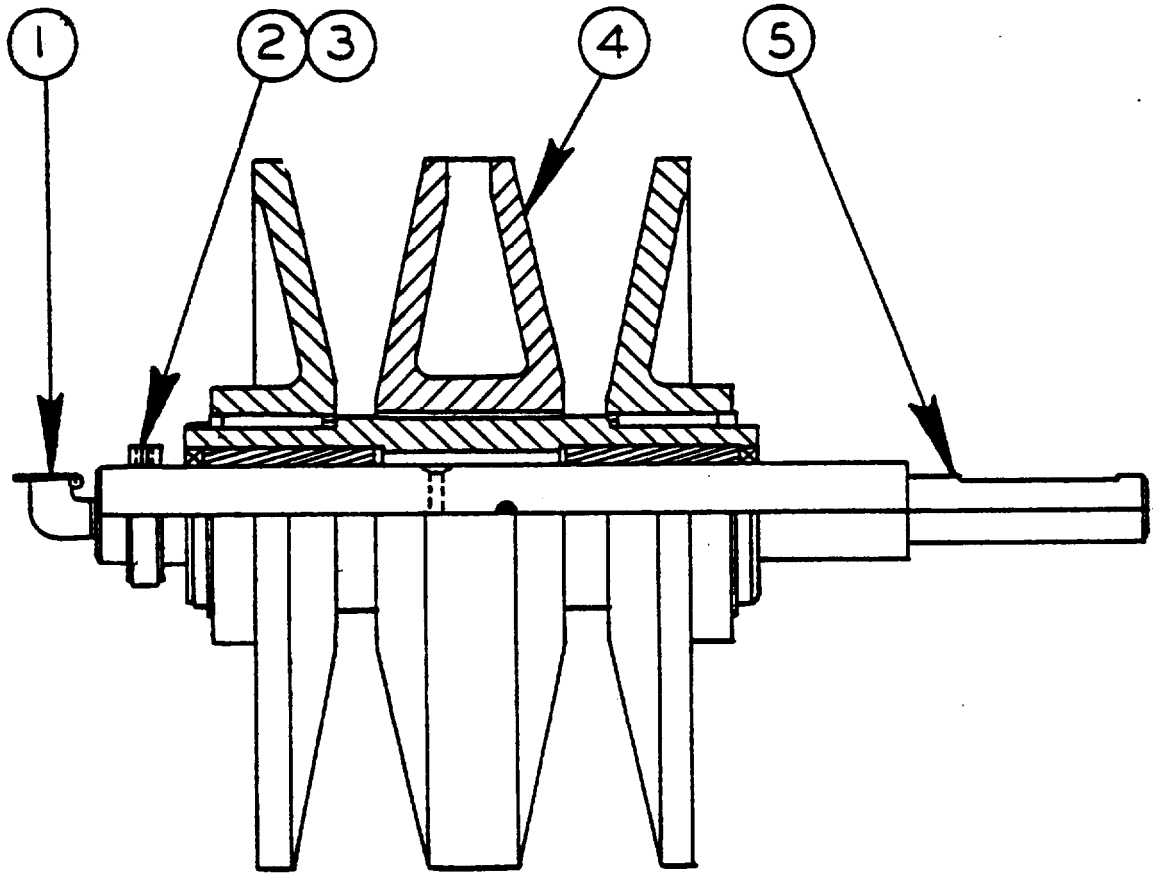
CODE NO. C-5-91
CM-5-71

VARIABLE BRACKET & HANDWHEEL SUB-ASSY.

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASSY
Ref.	094-064276	Variable Bracket	
1	111-034047	• Adjustment Scr	3
2	091-991364	• Nut, Hex. Jam 5/8-11 NC	3
3	090-418468	• Swivel Base	1
4	135-028108	• Thrust Bearing	2
5	134-054105	• Collar	1
6	090-042599	• Roll Pin	2
7	091-984229	• Scr. Soc. Set 1/4-20NC x 1/4	2
8	090-418450	• Swivel	1
9	090-073511	• Oilite Bearing	2
10	090-089616	• Spacer	2
11	093-048635	• Screw	1
12	091-991406	• Nut, Hex. Jam 3/4-10NC	4
13	091-984104	• Scr. Soc. Set #10-24NC x 1/4	2
14	090-099714	• Miter Gear	2
15	135-017804	• Collar	1
16	090-042334	• Roll Pin	1
Ref.	090-229063	Handwheel Sub-Assembly	
1	090-425356	• Handwheel	1
2	090-042599	• Roll Pin	1
3	091-181164	• Handle	1
4	091-181172	• Pin	1
5	090-073529	• Shaft	1

NEW DRG.
G.D. 3-5-76
REVISIONS



10" VARIABLE ASSEMBLY

MODEL	FIRST MACH.	LAST MACH.
2613-1H	361-76101	
2612-1H3	362-76101	
2614-1	364-76101	

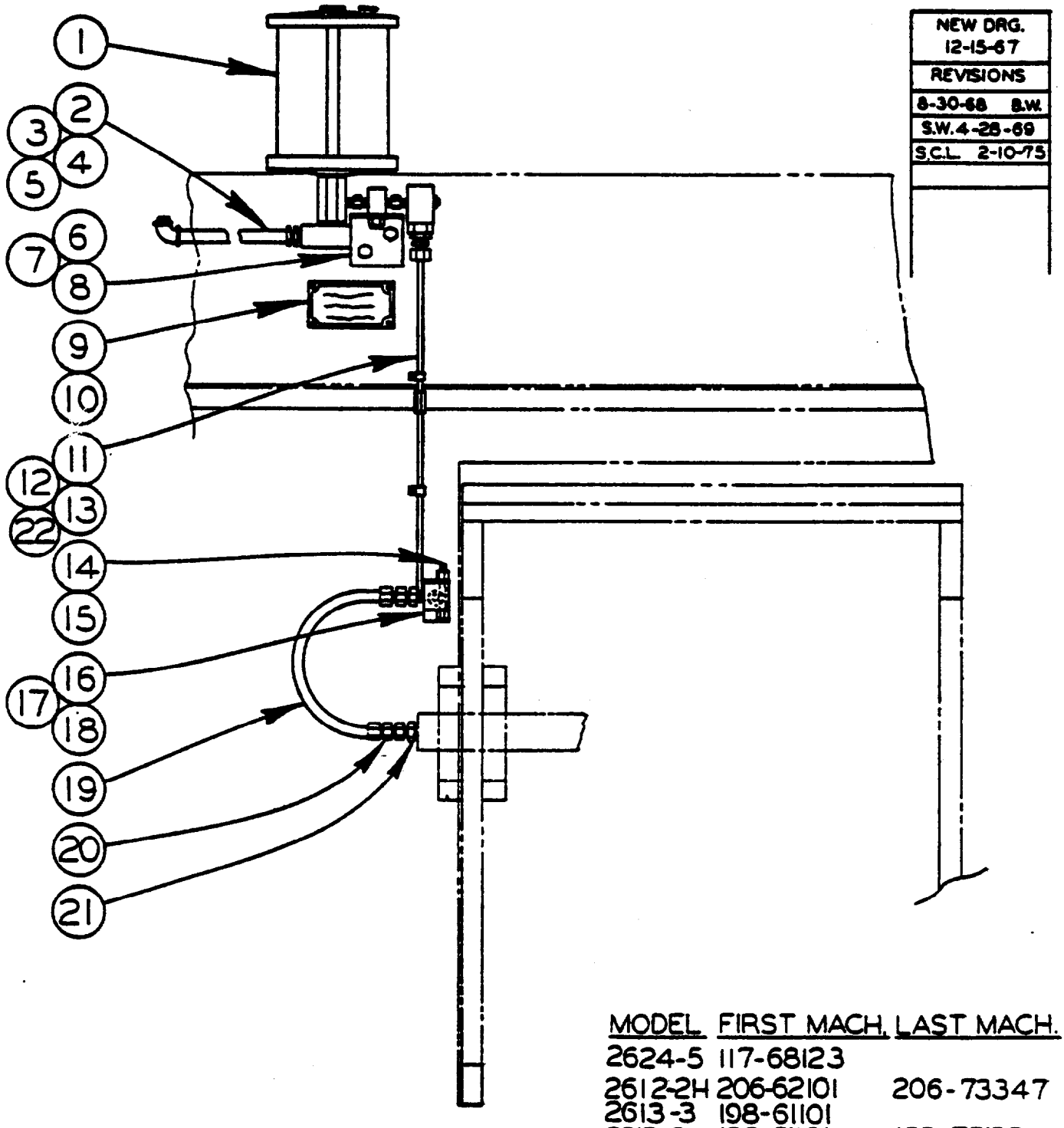
C-5-92 CM- 5-72

PRINTED IN U.S.A.

CODE NO. C-5-92
C-5-72

10" VARIABLE ASSEMBLY

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASSY
Ref.	090-379231	10" Variable Assembly	
1	111-055125	• Variable Oiler	1
2	091-195198	• Stop Collar	1
3	091-984237	• Scr, sac. set 1/4-20NC x 5/8	1
4	090-304569	• Variable Sub-Assembly (Replace as a unit)	1
5	090-379223	• Shaft	1



NEW DRG. 12-15-67
REVISIONS
8-30-68 B.W.
S.W. 4-28-69
S.C.L. 2-10-75

MODEL	FIRST MACH.	LAST MACH.
2624-5	117-68123	
2612-2H	206-62101	206-73347
2613-3	198-61101	
6013-3	199-61101	199-75138
6013-H3	199-76139	
2613-1H	361-76101	
2612-1H3	362-76101	
2614-1	364-76101	

VARIABLE PULLEY OILER ATTACHMENT

CM-4-124

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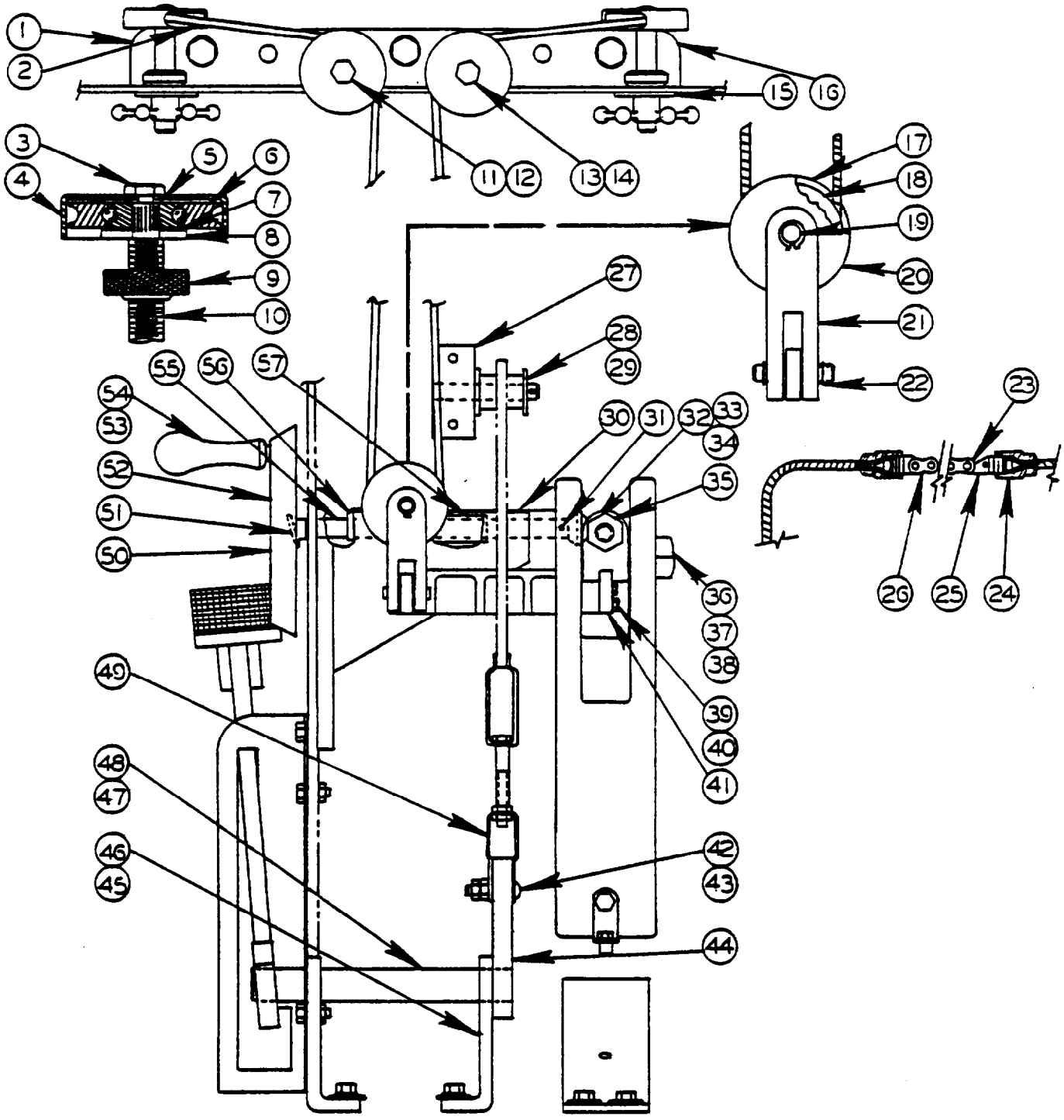
CODE NO. CM-4-124

VARIABLE OILER ATTACHMENT

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY
Ref.	47802	Variable Oiler Attachment (2612-2H) (2613-1H, 2612-1H3, 2614-1)	
Ref.	47771	Variable Oiler Attachment (2624-5)	
Ref.	56402	Variable Oiler Attachment (2613-3)	
Ref.	56187	Variable Oiler Attachment (6013-3) (6013-H3)	
1	108204	• Reservoir	1
2	8437	• St. Connector (Assy's #47802, #47771)	1
	14545	• Sealtite Connector (Assy's #56187, #56402)	1
3	8438	• 90° Connector (Assy's #47802, #47771)	1
	14505	• O-Ring (Assy's #56187, #56402)	1
4	Stk #520	• 1/2" Conduit Sealtite	A.R.
5	Stk #746	• Wire, Stranded #14 Red	A.R.
6	108205	• Reservoir Bracket	1
7	198008	• Screw, Hex. Hd. Cap 1/4-20NC x 3/4 (Assy's #47771, 56402, #56187)	A.R.
8	199321	• Washer, Lock 1/4 Std	A.R.
9	108297	• Auto. Oil Reservoir Plate	1
10	199396	• Screw, Drive #2 x 3/16 Type "U"	4
11	Stk #210	• Nylon Tubing 1/4 O.D.	A.R.
12	16968	• Tubing Clamp	A.R.
13	198691	• Screw, Fil. Hd. Mach. #8-32NC x 1/4	A.R.
14	198012	• Screw, Hex. Hd. Cap 1/4-20NC x 1-1/2 (Assy #47771)	4
	198011	• Screw, Hex. Hd. Cap, 1/4-20NC x 1-1/4 (Assy's #47802, • #56402, #56187)	3
15	199115	• Nut, Hex. 1/4-20NC	A.R.
16	1400	• Male Connector	A.R.
17	107027	• Manifold Bracket (Assy #47771 Only)	1
18	107967	• Manifold (Assy's #47802, #47771)	1
	108206	• Manifold (Assy's #56402, #56187)	1
19	1843	• Hose 3/8 O.D. x 12 (Assy's #47771, #56402, #56187)	1
	6969	• Hose 3/8 O.D. x 18 (Assy #47802)	1
20	3849	• Swivel Adapter	A.R.
21	35-2456	• Reducer Bushing	1
	17110	• 90° Elbow (Not Shown) (Assy's #47802, 56402, 56187)	1
22	15780	• Grommet (#47802, #56402, #56187)	1
	Following Items Not Shown:		
	14411	• Flange Washer	2
	14504	• Sealtite Connector	1
	Stk #102	• Capper Tubing 1/4 O.D.	A.R.

NEW DRG.
G.D. 4-20-76
REVISIONS



WEIGHT FEED ASSEMBLY

MODEL	FIRST MACH	LAST MACH
2614-1	364-76101	

PRINTED IN U.S.A.

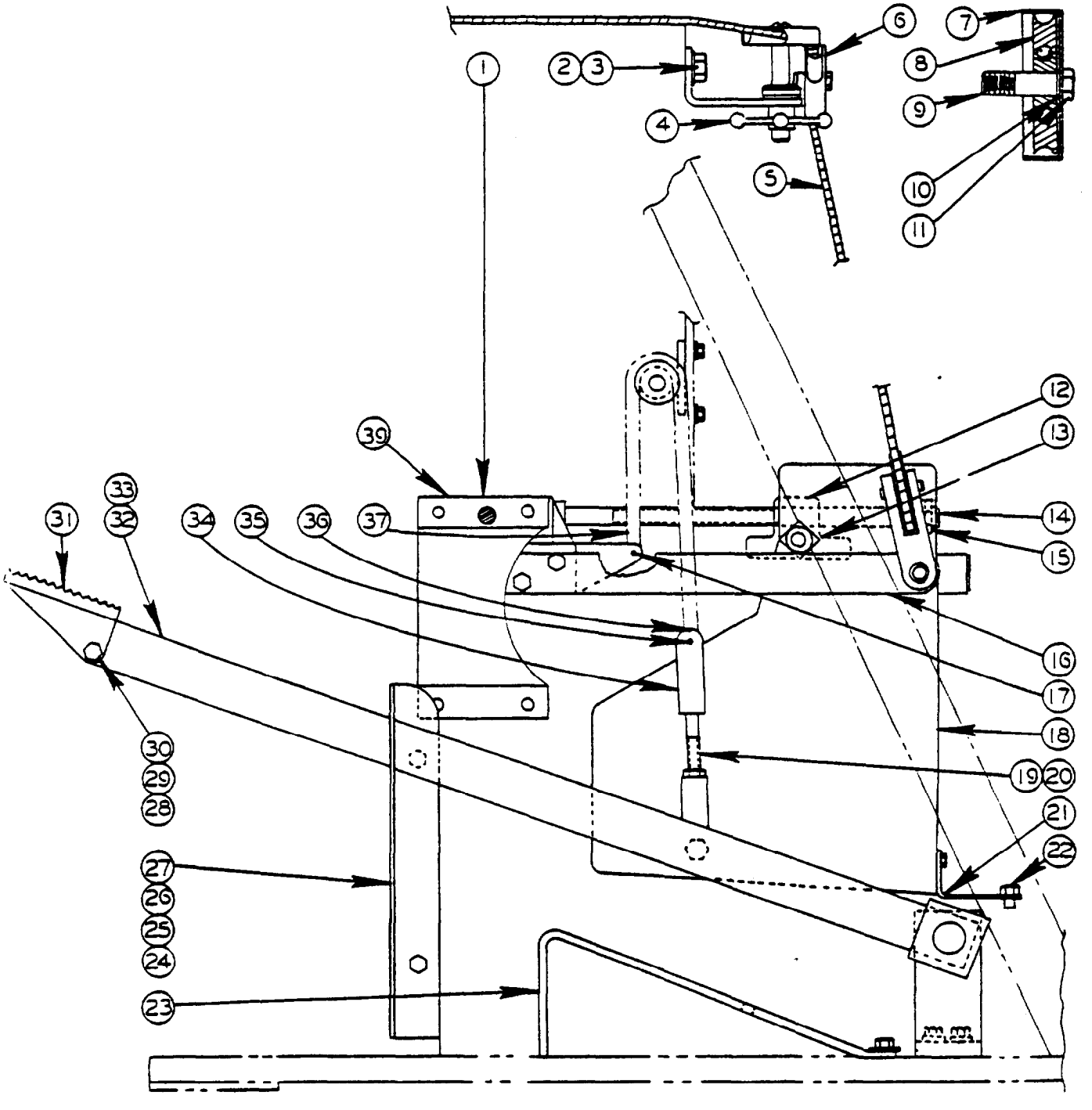
CODE NO. C-9-14

WEIGHT FEED ASSEMBLY

INDEX No.	CATALOG NO.	DESCRIPTION	UNITS PER ASSY
Ref.	095-04826	Weight Feed Assembly	
1	135-053221	• Bracket and Cable Assembly	1
2	135-063956	•• Horizontal Pulley Assembly	2
3	091-980052	••• Scr. Hex. Hd. Mach. 1/4-20NC x 3/8	1
4	134-133016	••• Cap	1
5	091-993758	••• Washer, Shakeproof #1214	1
6	134-135045	••• Pulley	1
7	105-133094	••• Spacer	1
8	134-054147	••• Washer	1
9	134-134188	••• Thumb Nut	1
10	135-063980	••• Pulley Screw	1
11	134-054147	•• Washer	2
12	105-133094	•• Spacer	2
13	091-991273	•• Nut, Hex. Jam 3/8-16NC	2
14	091-993329	•• Washer, Lock 3/8 Std.	2
15	091-992669	•• Washer, 1/2" Plain	2
16	135-063972	•• Cable Carrier	1
17	135-074979	•• Equalizer Pulley Assembly	1
18	134-135045	••• Pulley	1
19	090-032756	••• Pulley Axis	2
20	134-133115	••• Cap	1
21	090-032749	••• Clevis	1
22	090-032764	••• Retaining Ring	4
23	135-050110	•• Power Feed Chain Sub-Assembly	1
24	105-134175	•• Housing	2
25	105-134183	•• Hook	1
26	106-135015	•• Feed Chain	1
27	091-402131	• Pivot Bracket Weld't. Assembly	1
28	091-993048	• Wrought Washer 1/2 Std.	2
29	091-306555	• Chain Roller	1
*30	090-540998	•• Power Feed Hinge	1
*31	090-042599	•• Roll Pin	2
*32	090-099714	•• Miter Gear	2
*33	091-984104	•• Scr. Soc. Set #10-24NC x 1/4	2
*34	091-984229	•• Scr. Soc. Set 1/4-20NC x 1/4	2
35	105-131122	• Stop Nut	2
36	091-991786	• Nut, Square Hd. 1/2-13NC	1
37	091-993279	• Washer, Lock 1/2" Std.	1
38	091-980748	• Bolt, Hex. Hd. Mach. 1/2-13NC	1
*39	091-980458	•• Scr. Hex. Hd. Cap 3/8-16NC x 7/8	6
*40	091-993329	•• Washer, Lock 3/8 Std.	6
*41	090-168717	•• Weight Beam	1
42	091-990325	• Scr. Oven Hd. Mach. 3/8-16NC x 1-1/4	1
43	091-991265	• Nut, Jam 3/8-16NC Std.	2
44	091-306571	• Release Arm	1
45	093-023299	• Bracket	2
46	091-992644	• Washer, Flat 3/8 Std.	4
47	091-306563	• Shaft	1
48	091-995183	• Cotter Pin	2
49	105-133169	• Chain Anchor	1
*50	090-275272	•• Handwheel Assembly	1
*51	090-042599	••• Roll Pin	1
*52	090-425489	••• Handwheel	1
*53	091-181164	••• Handle	1
*54	091-181172	••• Pin	1
*55	090-167958	••• Shaft	1
*56	134-054105	•• Collar	2
*57	090-168725	•• Hinge Bushing	1

* NOTE: Starred Items are part of Hinge Assembly #090-447962.

NEW DRG
GD 6-5-74
REVISIONS



WEIGHT FEED ASSEMBLY

MODEL	FIRST MACH	LAST MACH
2614-1	364-76101	

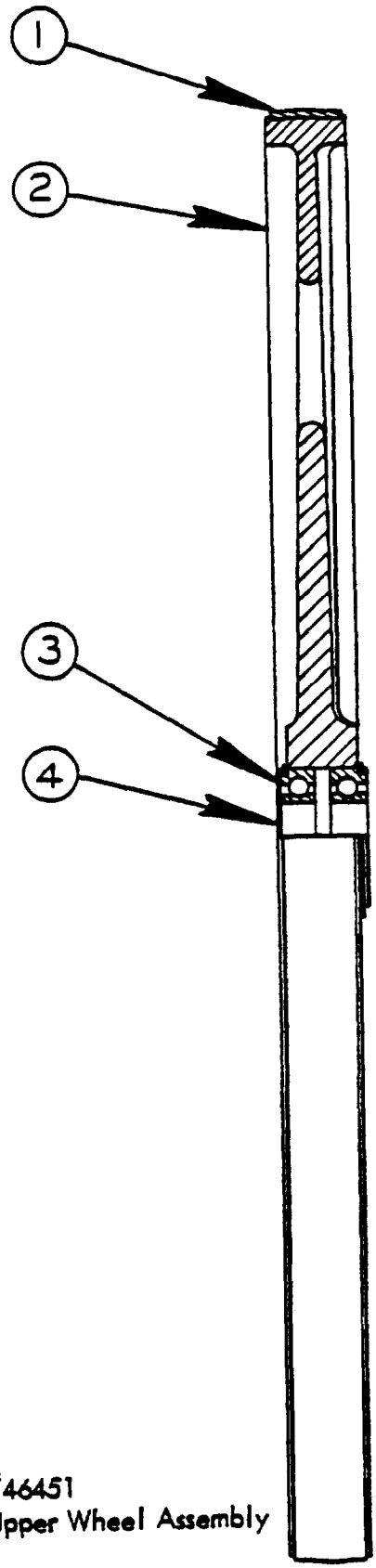
CODE NO. C-9-15

WEIGHT FEED ASSEMBLY

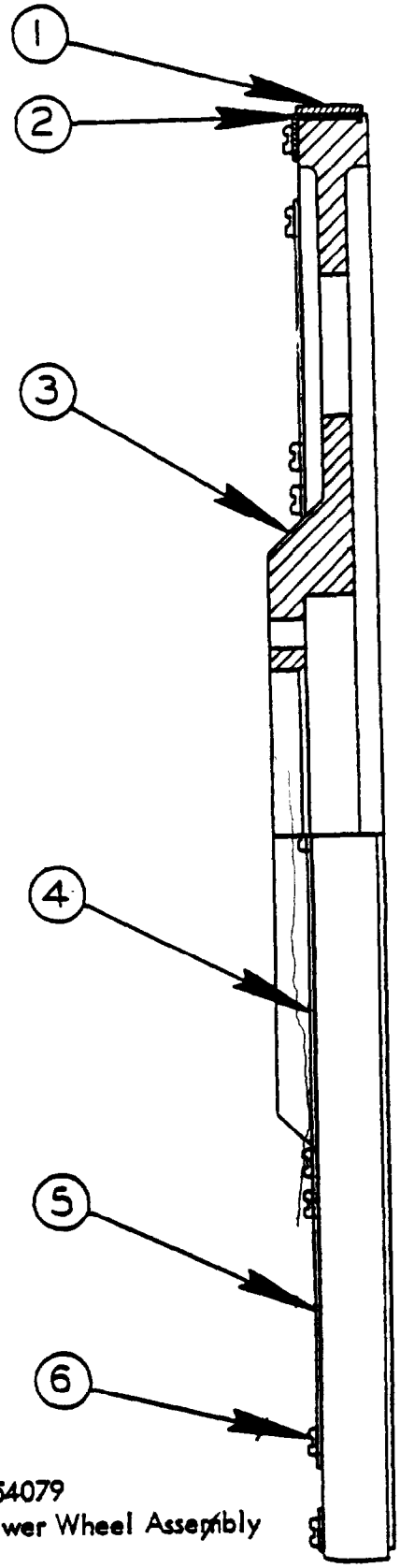
INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASSY
Ref.	504828	Weight Feed Assembly	
1	090-447962	• Hinge Assembly	1
2	091-980441	• Scr. Hex. Hd. Cap 3/8-16NC x 3/4	8
3	091-993329	• Washer, Lock 3/8 Std.	10
*4	134-131069	• Handwheel	2
*5	105-135099	• Cord	1
*6	135-063964	• Vertical Pulley Sub-Assembly	2
*7	134-133016	•• Cap	1
*8	134-135045	• Pulley	1
*9	135-063998	•• Stud	1
*10	091-993741	•• Washer, Shakeproof #1214	1
*11	091-980052	•• Scr. Hex. Hd. Mach. 1/4-20NC x 3/8	1
**12	090-213448	•• Weight Bracket Screw Assembly	1
**13	105-131056	••• Weight Bracket	1
**14	105-134019	••• Weight Adjustment Screw	1
**15	105-134100	•• Stop Nut	2
**16	090-167966	•• Cable Beam	1
17	105-134118	• Pin	1
18	105-131122	• Weight	1
19	091-980466	• Scr. Hex. Hd. Mach. 3/8-16NC x 1	5
20	091-991265	• Nut, Hex 3/8-16NC	2
21	105-133086	• Weight Bracket	1
22	091-980425	• Scr. Hex. Hd. Cap, 3/8-16NC x 1/2	2
23	094-010352	• Bracket	1
24	093-013423	• Catch Bracket	1
25	091-980276	• Scr. Hex. Hd. Cap 5/16-18NC x 3/4	4
26	091-991224	• Nut, Hex. 5/16-18NC	2
27	091-993238	• Washer, Cock 5/16 Std.	4
28	091-980128	• Scr. Hex. Hd. Cap 1/4-20NC x 1-1/2	1
29	091-991158	• Nut, Hex. 1/4-20NC	1
30	091-993212	• Washer, Lock 1/4 Std.	1
31	105-131130	• Foot Pedal	1
32	093-028520	• Release Lever Weld't. Assembly	1
33	090-139965	• Dowel Pin	2
34	135-050128	• Chain Assembly	1
35	091-995472	•• Rd. Hd. Rivet 3/16 Dia. x 5/8	1
36	105-133144	•• Chain Anchor	1
37	105-135107	•• Chain	1
**38	090-275256	•• Hinge Bracket	1

*NOTE: Single Starred items are part of Bracket and Cable Assembly ,#135-053221.

**NOTE: Double Starred items are part of Hinge Assembly #090-447962.



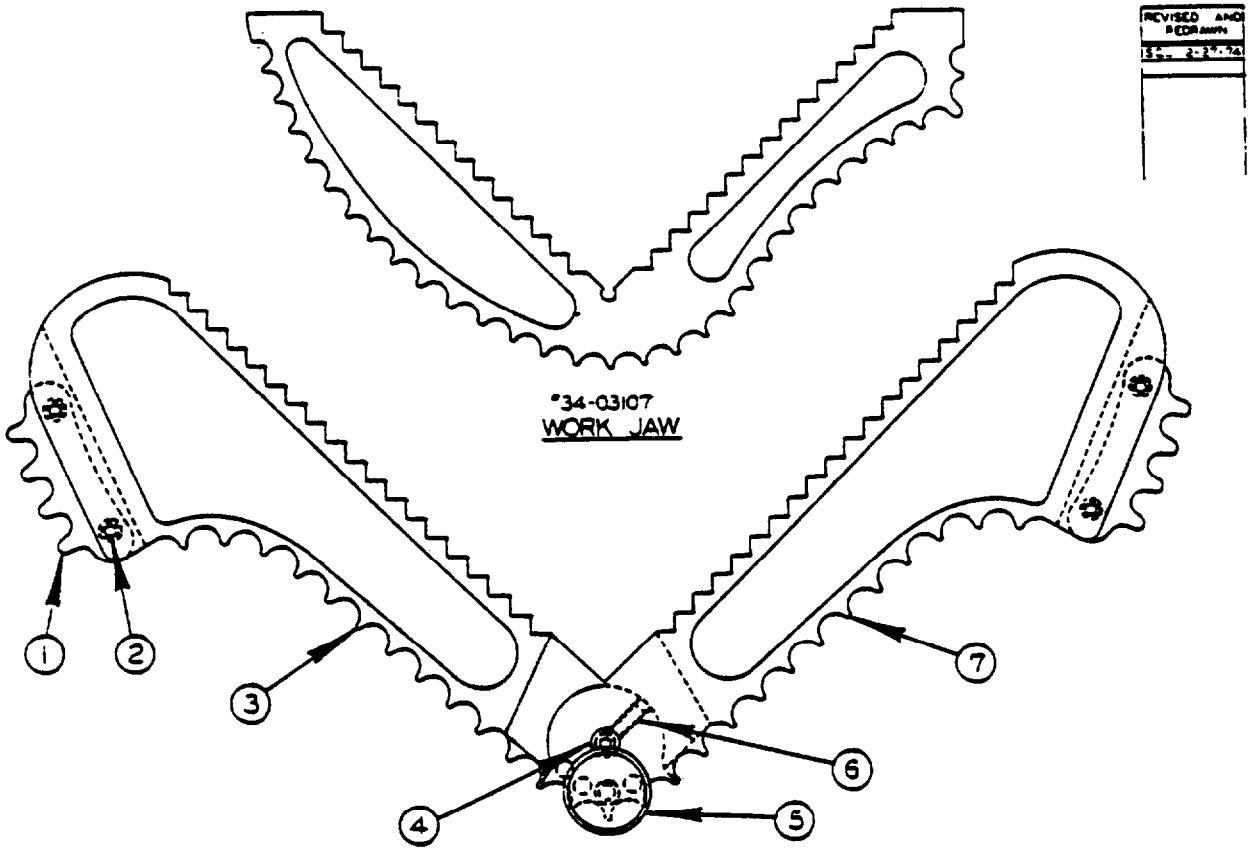
#46451
Upper Wheel Assembly



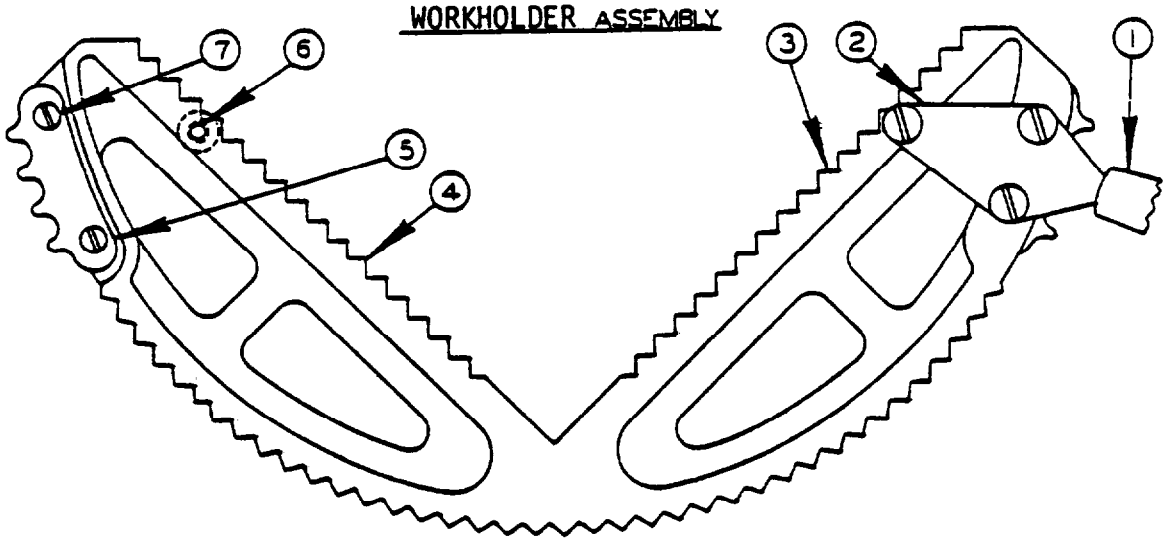
#54079
Lower Wheel Assembly

UPPER & LOWER WHEEL ASSEMBLIES

INDEX NO.	CATALOG NO.	DESCRIPTION	UNITS PER ASSY
Ref.	46451	Upper Wheel Assembly	
1	13-001502	• Tires	1
2	46444	• Wheel	1
3	16538	• Bearing	2
4	106748	• Plastic Plug	2
Ref.	54079	Lower Wheel Assembly	
1	304742	• Tire Assembly	1
2	7430	• Retainer	2
3	54035	• Wheel	1
4	35-4212	• Retainer Ring Segment	2
5	22513	• Retainer Ring Segment	4
6	199015	• Screw, Truss Hd. Mach. #10-24NC x 3/8	18



WORKHOLDER ASSEMBLY



*5-13007
WORKHOLDING JAW ASSEMBLY

C-10-16 CM-9-5 Z-9-9

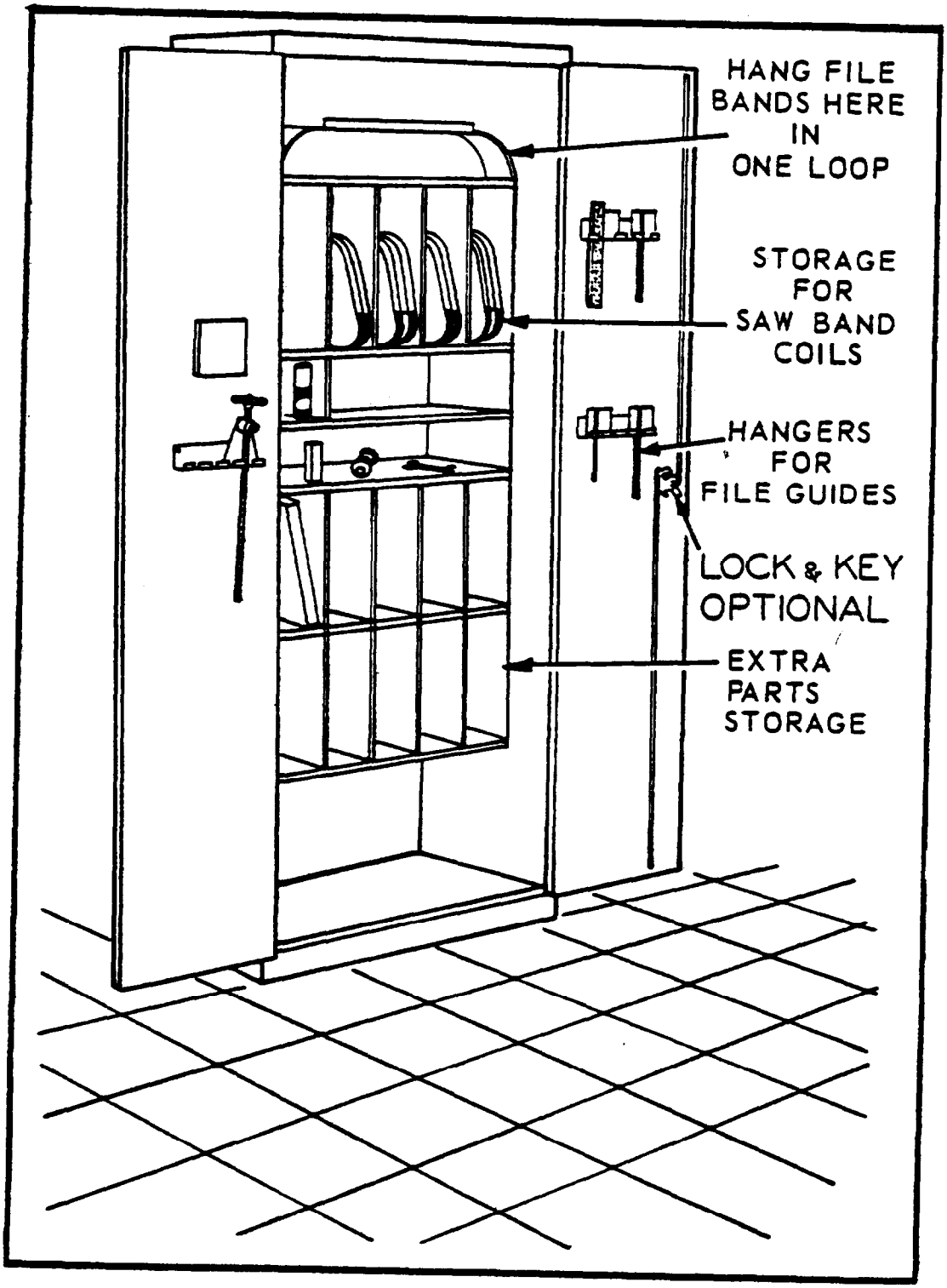
PRINTED IN U.S.A.

CODE NO. C-10-16
CM-9-5
Z-9-9

WORKHOLDING JAW

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY.
Ref.	34-03107	Work Jaw (1612, 1612-0, 2013, 2013-0, 2013-1, 2013-10, 3612, 3613-0)	
Ref.	40262	Work Holder Assembly (1612, 1612-0, 1612-H, 1612-1, 1613-2, 1612-3, 2013, 2013-0, 2012-A, 2012-AT, 2013-1, 2013-10, 2012-1A, 2012-1AT, 2612-H, 2612-1, 2612-2H, 2613-2, 3612, 3613-0, 3612-H, 3613-1, 3613-2, 3612-3, 6013-2)	
1	5-13313	• Sprocket	2
2	198698	• Screw, Fil. Hd. Mach. #10-24NC x 1/2	4
3	20386	• Left Arm	1
4	198235	• Screw, Soc. Hd. Cap 1/4-20NC x 3/8	1
5	2162	• Knurled Screw	1
6	198410	• Screw, Soc. Hd. Set #10-24NC x 1/4	2
7	20385	• Right Arm	1
Ref.	5-13007	Workholding Jaw Assembly (1612, 1612-0, 1612-1, 1613-2, 1612-3, 2013, 2013-0, 2013-1, 2013-10, 2012-1A, 2012-1AT, 2612-1, 2613-2, 3612, 3613-0, 3613-1, 3613-2, 3612-3, 6013-2, ZW-3620)	
1	5-13512	• Handle	2
2	5-13318	• Handle Bracket	2
3	40678	• Workholding Jaw Sub-Assembly	1
4	5-13110	• • Work Holding Jaw	1
*5	5-13313	•• Sprocket	2
6	198892	•• Screw, Rd. Hd. Mach. 1/4-20NC x 5/16	6
7	199015	•• Screw, Truss Hd. Much. #10-24NC x 3/8	4

*NOTE: Before 2-12-44 on Hydraulic Machines use #6-23337 Sprocket with 3/16" Pitch, Specify Pitch of Chain when Ordering.



43033

SUPPLY CABINET ASS'Y.

ALL MACHINES

C-10-40, CM-10-41, PS-10-17
TF-5-110, Z-10-18, F9-7.0, G6-10.0

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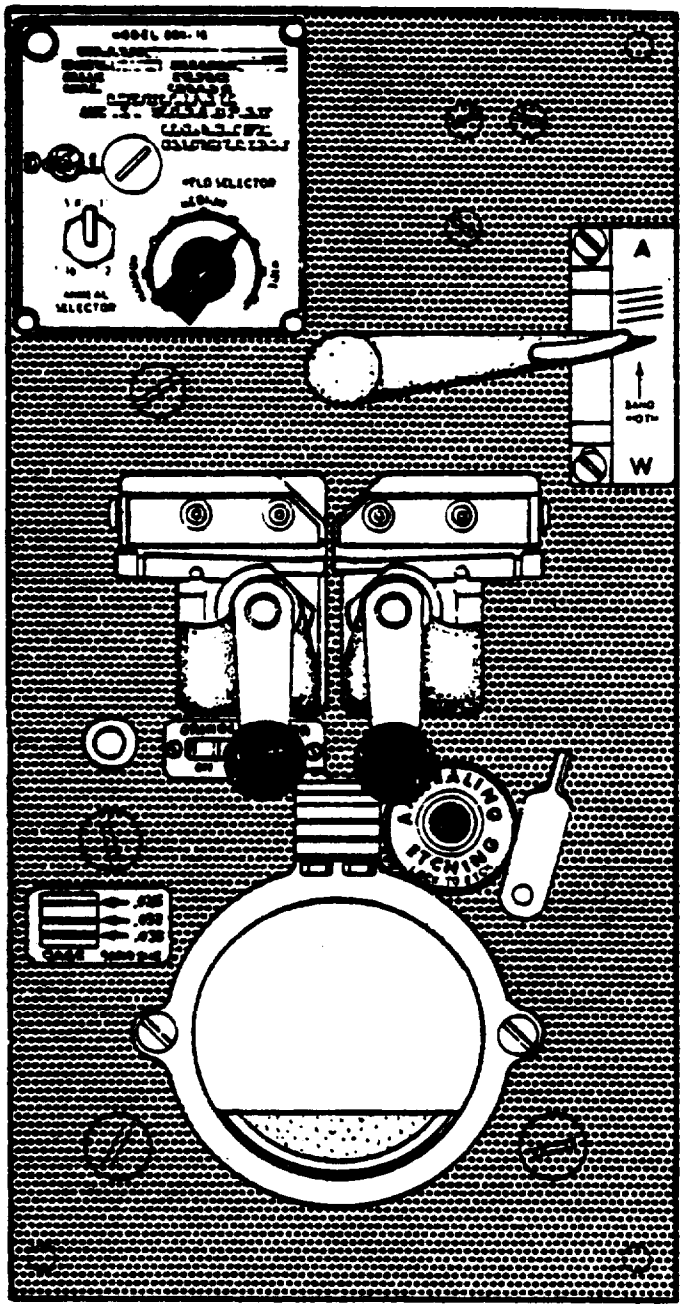
INSTRUCTION AND PARTS MANUAL



Model DBW-15

APPENDIX H

CHAPTER 1

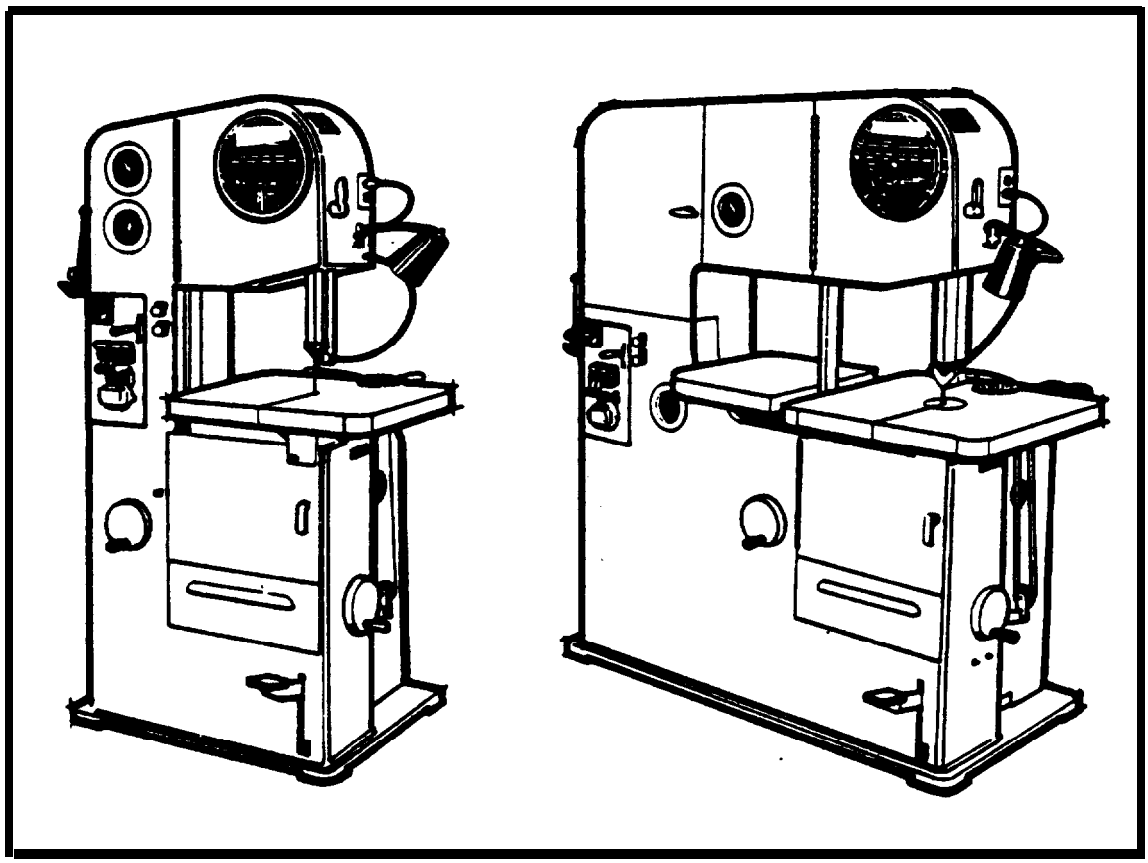
INSTALLATION

LOCATION

Locate the welder so that the operator will have sufficient room for handling and welding saw bands. Space should be allowed so that the coiled band will not injure persons passing nearby. The welder should also be located so that the welding sparks will not ignite flammable material.

ELECTRICAL CONNECTIONS (PORTABLE ONLY)

The welder must be connected to an electrical power line of sufficient capacity to provide for the instantaneous load specified on the data plate. The welder should be fused according to the amperage on the data plate. Refer to the wiring diagram supplied with the welder. The welder will not operate on direct current.



The welder may be installed on band sawing machines. The location is convenient for welding bands to fit over two or three band wheels of saw. Correct band length for the machine is stamped on a data plate attached to the rear of the machine column.

CHAPTER 2

OPERATING FEATURES

GENERAL DESCRIPTION

The Model DBW-15 is a resistance-type butt welder. The two clamping jaws of the welder hold the butted band ends together. When the welding switch lever is pressed, an electric current is induced through the butted band ends, creating enough heat to soften and join them.

Pressing the welding lever also releases a spring which causes the jaws to force the band ends together. The electrical current is shut off before the movable jaw completes its movement. Final upset or "forging" occurs when the band is still hot, but is no longer being heated by its electrical energy source.

JAW GAP AND UPSET FORCE CONTROLS

The initial gap between the welder jaws and the spring upset force must both be adjusted in proportion to the cross-sectional area of the band being welded. A greater jaw gap will allow a wider or thicker band to reach its proper welding temperature. A greater upset force produces the same unit pressure in welding a wider or thicker band.

A jaw upset force selector is used to provide a variable control of upsetting force. Initial jaw gap is set by adjusting the position of the weld lever before making the weld.

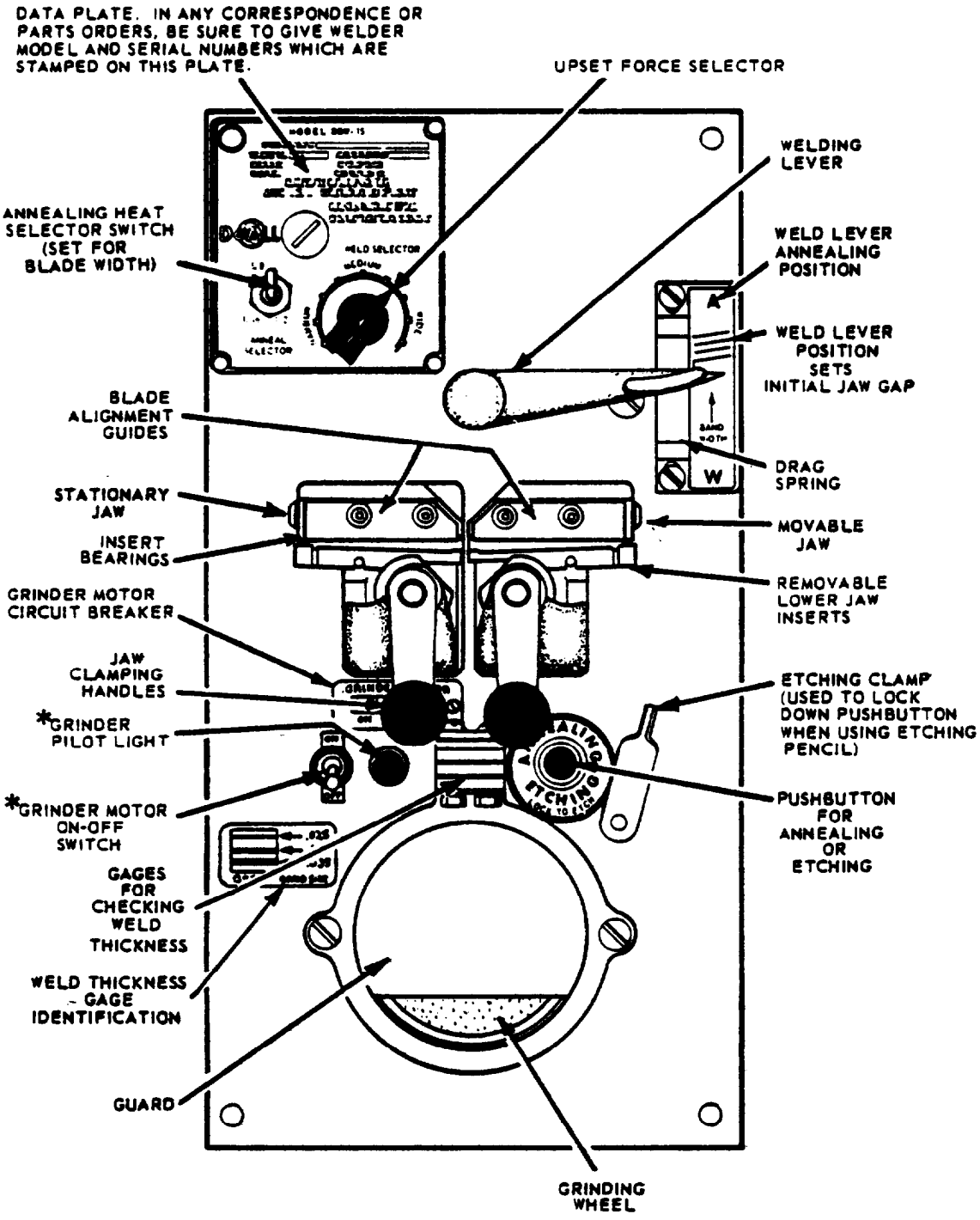
A N N E A L I N G

When the band is heated in the butt welding process, the steel at the point of weld air-hardens and becomes brittle. The annealing push button is used to anneal the weld by reheating it. This returns the band to an approximation of its original condition. A selector switch is provided for choosing the correct annealing heat, depending upon the width of the saw blade.

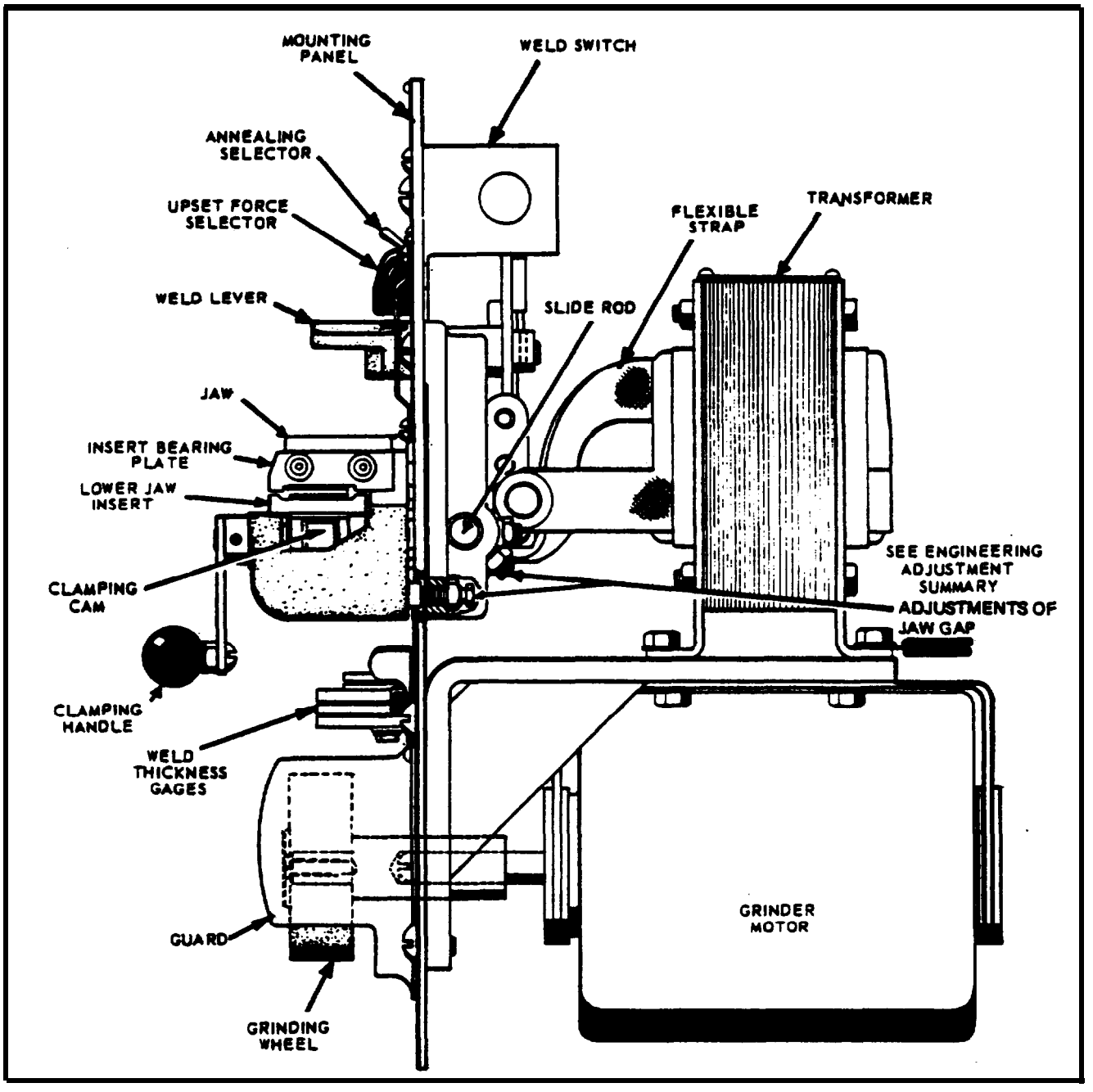
WELD GRINDER

The grinding wheel is used to prepare the blade for welding and to remove flash from the weld. Flash on both sides of the weld must be ground off to blade's thickness. The gage at the top of the wheel guard is used to check for complete removal of the flash. After grinding, the weld should pass freely through this gage.

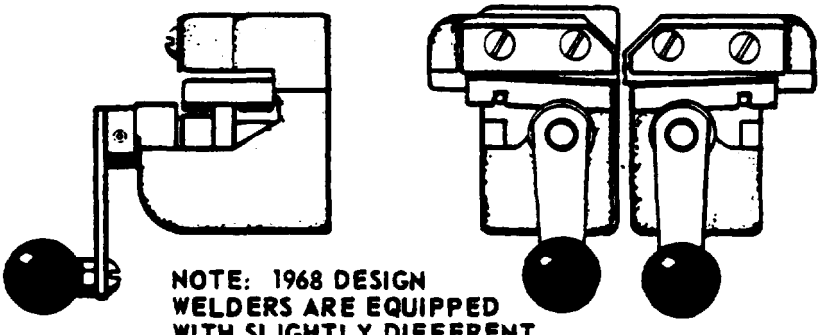
Since it may be difficult to see if the grinding wheel is rotating, a pilot light is provided as a safety feature. This light is on when the grinding motor is running.



Model DBW-15 welder controls and features, front view.



Side View of the welder, showing features and controls.
(Current design shown)



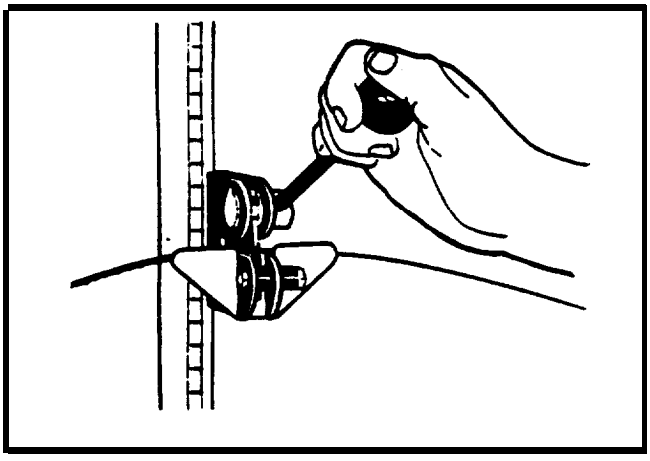
NOTE: 1968 DESIGN WELDERS ARE EQUIPPED WITH SLIGHTLY DIFFERENT JAWS AND INSERTS, AS SHOWN HERE.

CHAPTER 3
OPERATION

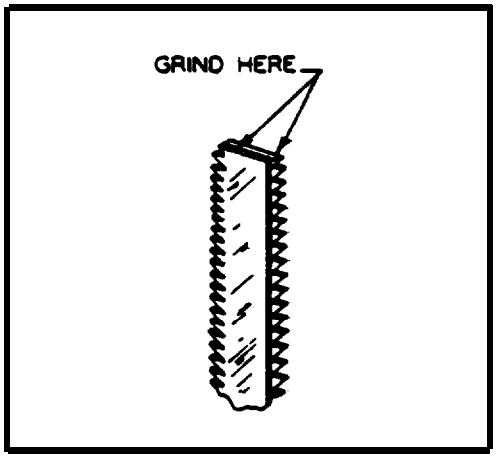
PREPARING THE BLADE

(1) Cutting the Blade: Cut the saw blade to length. Use the blade shear if it is available. Using the blade shear will insure that the blade ends are flat, square and smooth.

(2) Tooth Spacing: In fine pitched bands, one or more teeth on each side of the cut must be removed by grinding, so that the cross section of the weld area of the band is uniform. This will also insure proper tooth spacing at the weld area and that the set pattern of the teeth will be retained.



Using the Blade Shear.



If snips are used to cut blade, grind ends square as shown.

NOTE

If the Blade Shear has not been used to cut the blade, square the ends of the blade before welding. Grind both ends of the saw blade in one operation as shown in the sketch. Hold the ends so that the teeth point in opposite directions. Regardless of the angle of grinding, the two ends will match perfectly when turned over.

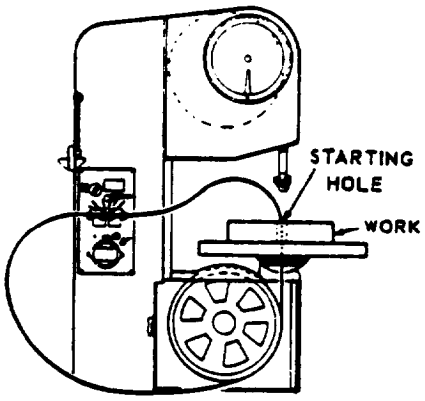
(3) Clean the band: Use No. 120 grit emery cloth or equivalent for this operation. Care must be taken so that the teeth are not touched with the emery cloth, because the set or sharpness of the teeth could be damaged. The part of each end of the band that comes into contact with the inserts must be sanded. Any dirt, oil, oxide or scale that is not removed will prevent good electrical contact. The oxide on Dart Blade -must be removed.

SAW BLADE ALIGNMENT BEFORE WELDING

(1) For internal sawing, the blade is inserted through the starting hole in the work. The ends of the saw blade are then brought together to be clamped into the jaws.

When rewelding a used band - cut out the old weld - it is recommended that the saw band contain only one weld.

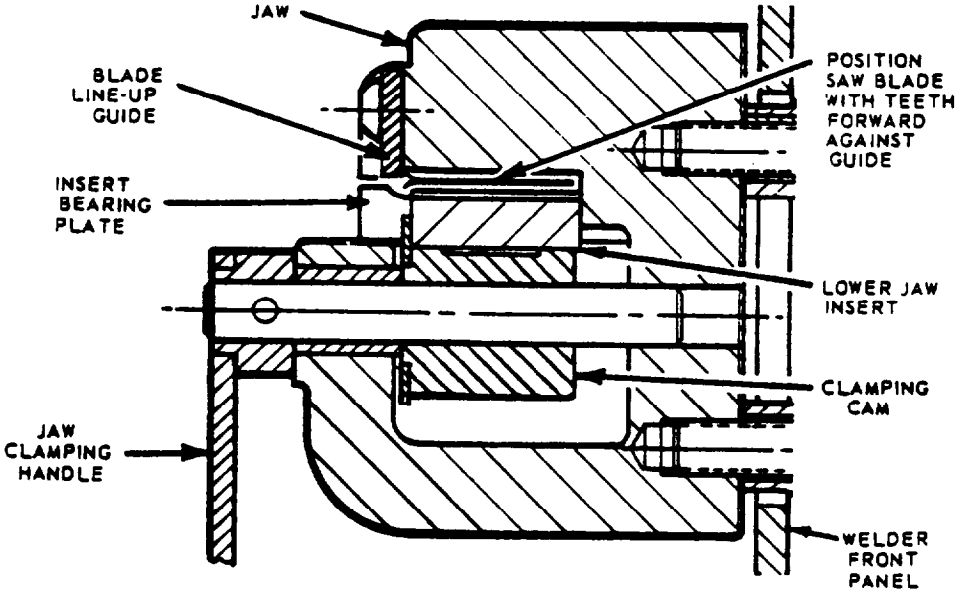
NOTE: When welding band which passes through hole in workpiece- be sure to insulate **bond from contact with workpiece or** table, this will insure a better weld.



(2) Place the band ends between the jaws with the teeth against the line-up guides which are attached to the front edge of the jaws, see sketch.

NOTE

Blades which are 1/8 inch or less in width are too narrow to be clamped correctly when they are placed against the line-up plates. Move these narrow blades back slightly from the line-up plates and align **them** by eye, then clamp them in place.



(3) The jaws are clamped by moving the handles upward.

(4) Check to be sure that the band ends meet in the center of the jaw gap without any offset either in thickness or across the width. If the contact across the width is not complete, remove one end and recut it. A misaligned joint will cause an incomplete weld.

MAKING THE WELD

WARNING

STEP TO ONE SIDE TO AVOID WELDING SPARKS.

(1) Press (using a smooth and steady motion - not too fast or slow) and hold down the weld lever to make the weld. The lever should held down until the weld has cooled.

(2) Release the stationary jaw clamping handle before releasing the weld lever. This will prevent scoring the welder jaw surface.

(3) Release the weld lever. When the lever is released, the welder mechanism and electrical switches are automatically recocked.

CAUTION

Special note only for IMPERIAL BI-METAL Saw Band or very narrow carbon bond: in order to protect the weld from accidental breakage it is recommended that the weld be annealed before it is removed for grinding as well as after grinding. Follow the annealing instructions given on page 11.

(4) Remove the welded saw band. Inspect the weld as described on the next page. If weld is poor, see the Troubleshooting Chapter for possible causes.

CLEAN-UP WELDER JAWS AFTER WELDING

It is important that the welder jaws be kept clean at all times. The jaws and inserts must be wiped or scraped clean after every weld. Doing this will insure better welds by:

(1) Holding proper alignment.

(2) Preventing flash from becoming embedded in the band.

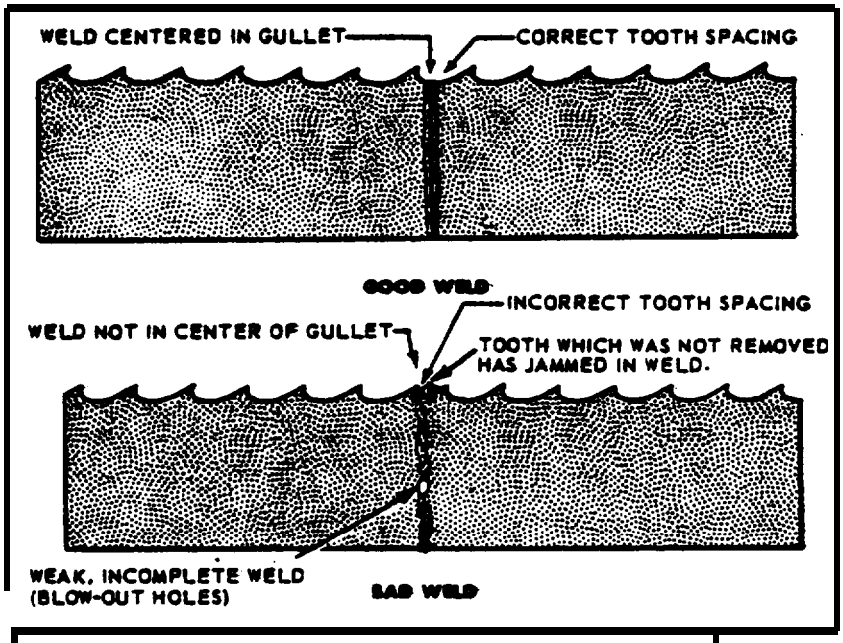
(3) Preventing shorts or poor electrical contact.

CAUTION

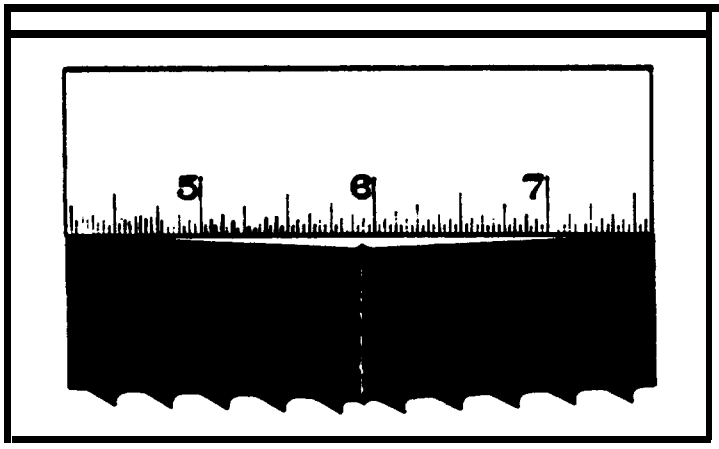
This welder is designed for intermittent use. Repeated welding within a short period of time may cause the welder to overheat.

INSPECTION OF THE WELD

When the band is removed from the welder it should be inspected carefully. The spacing of the teeth should be uniform and the weld should be located in the center of the gullet. Major jaw misalignment is easily noted at this time from the weld appearance. See the Trouble shooting Chapter if the weld is imperfect.



Some of the characteristics of good and bad welds.



Hold a straight edge to the back edge of the band to check for misalignment.

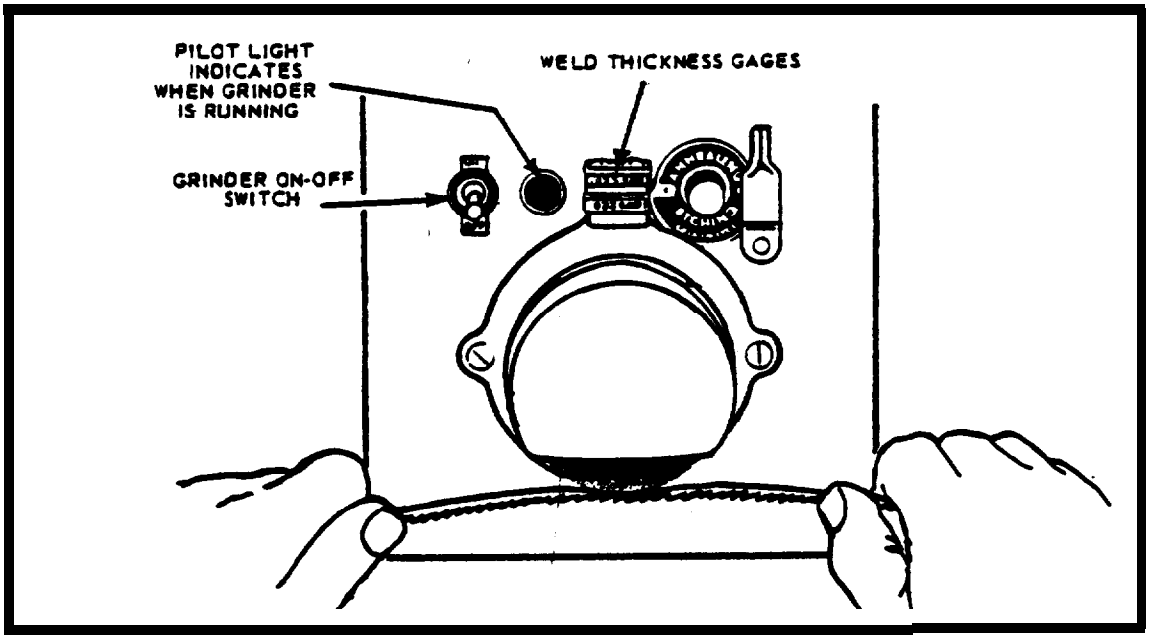
GRINDING THE WELDED BAND

WARNING

Keep hands away from rotating grinding wheel. Because it may be difficult to see if the wheel is rotating, a pilot light is provided. This light is on when the grinder motor is running.

After welding, the band must be dressed to remove excess metal or flash from the weld. Grind the welded area down to the same thickness as the rest of the band. With the teeth facing out, grind the weld as shown in the drawing. Handle the band carefully - the weld will be brittle because it has not been annealed.

Grind Carefully: do not hit the teeth; or grind deeper than the thickness of the band; or burn or overheat the weld area. Be sure to remove flash from the back edge of the band. Any flash or "stub" teeth which project beyond the normal set or height of the other teeth must be ground off. Check the weld thickness by passing it through the correct gage for the thickness of the band.



Grinding the weld.

SPECIAL NOTE FOR EARLY MODELS Of THE DBW-15

Early models of this welder had a different wiring arrangement for the grinder motor. Thes welders can be recognized easily because they were equipped with a grinder motor pushbutton and did not have a pilot light. On these early models only: the grinder motor will not operate if the weld lever is in its lowest position. Move the lever up before running the grinder.

ANNEALING THE WELDED BAND

(1) Swing the weld lever up all the way to the anneal' position which is marked by the letter "A". The lever will be held in place by the bend in the drag spring.

(2) Clamp the band just as in welding.

(3) Set the anneal heat selector switch for the width of the band.

(4) Anneal the band as explained below.

CAUTION

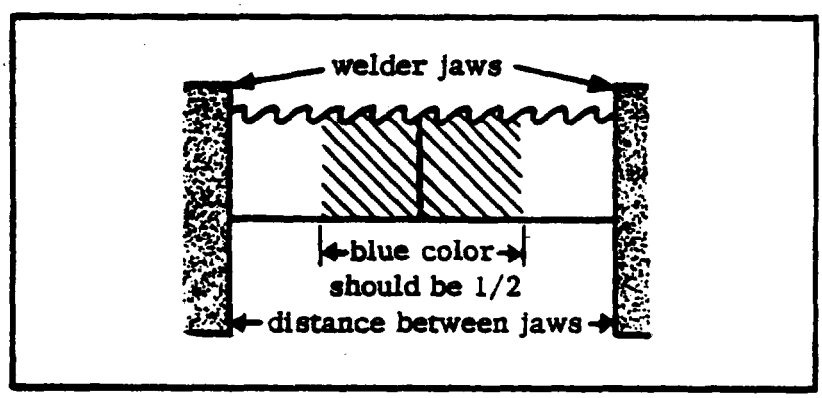
Follow these instructions carefully.

(a) For Carbon Blade: Press and jog the annealing switch button until the weld is a dull cherry to cherry red color. Allow the blade to cool slowly by decreasing the jogging frequency.

(b) For Dart Blade: Heat the blade slowly until the weld becomes a deep blue color. Continue to heat by jogging the anneal button until the width of the blue color is one-half the length of the band exposed between the jaws. Do not overheat or the temper of the band will be damaged.

CAUTION

Do not heat beyond the blue state - if the band begins to show any red color, it is too hot. Coot quickly by releasing the anneal button.



Correct annealing of Dart Blade.

(c) For IMPERIAL BI-METAL Blade: Heat the band slowly by jogging the annealing h button until the weld just begins to emit light (this would be the dullest red color). The desired color may not be visible in normal room light. Always shade the weld area with your hand.' Cool the weld quickly by releasing the annealing button.
NOTE: This procedure should be followed both before and after grinding IMPERIAL BI-METAL Blades.

CHAPTER 4

MAINTENANCE

LUBRICATION

The slide rod, upset force selector cam, and all miscellaneous pivot points should be lubricated every six months. The interval between lubrication may be shortened or lengthened, depending upon how much dust and dirt are in the area. If the slide rod sticks, then the rod should be cleaned and greased more often. The grinder motor will not normally require lubrication for several years. Use ASTM Grade 215 or equivalent oil on all lubrication points except the slide rod.

SLIDE ROD MAINTENANCE

The slide rod should be kept clean and greased. Rust or dirt may cause rod to stick and "burn out" the weld.

Check movable jaw for freedom of movement. If it binds, apply a drop of oil to slide rod and work it in by repeatedly pressing the lever. If this does not free the jaw movement, remove slide rod and clean and grease it. Before removing slide rod, clamp a piece of saw band securely between welder jaws to maintain correct spacing. Use ASTM Grade 465 grease, or equivalent on slide rod.

The slide rod stop screw should not bind slide rod. Turn screw in, then back off 3/4 turn.

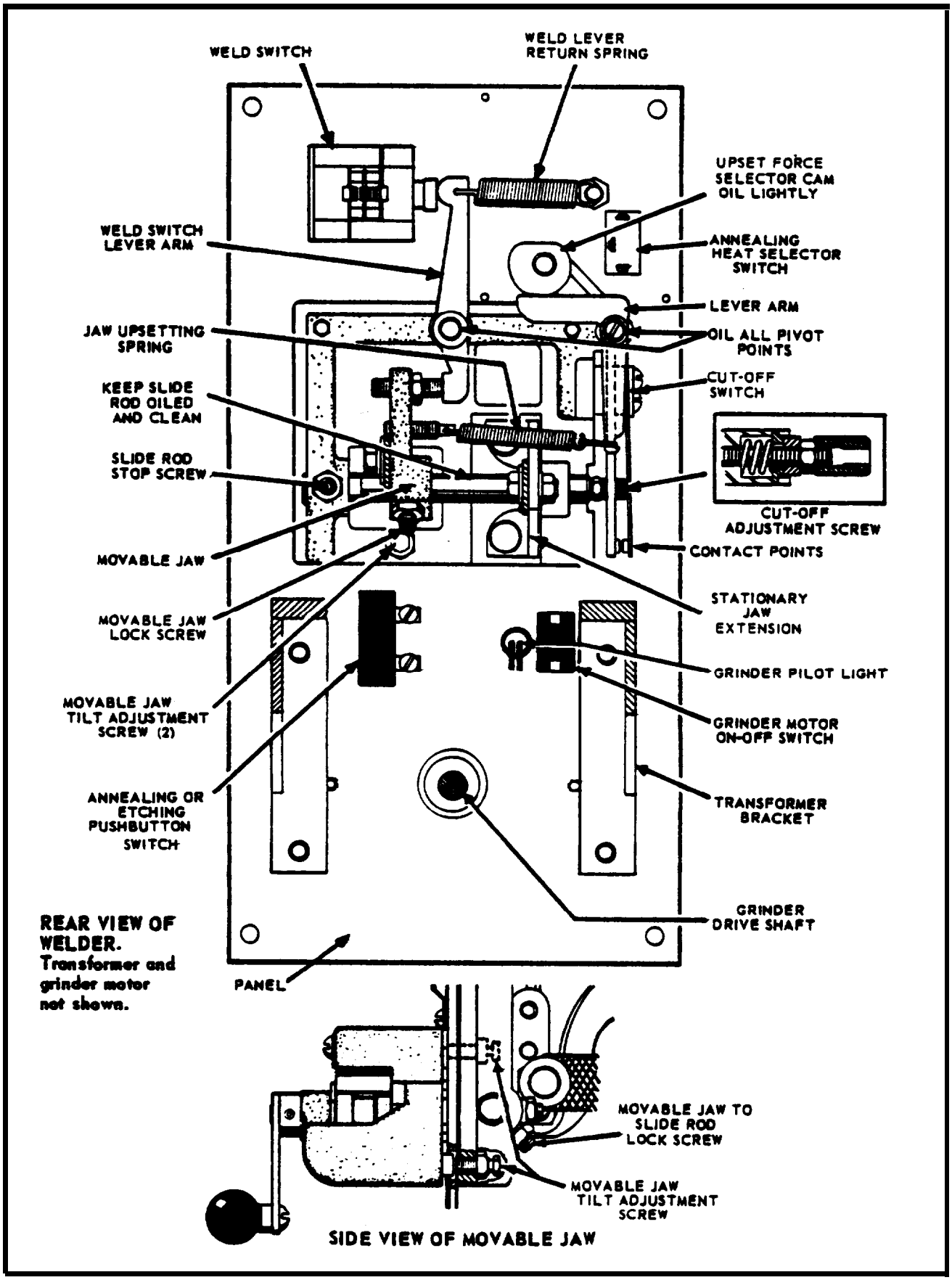
WELDER JAWS MAINTENANCE

TO secure consistent results, the welder jaws must be kept clean. During the welding cycle, excess metal in the form of incandescent particles is blown out of the weld, causing a scale or flash to build up on the welder jaws. The welder will not weld properly unless the jaws are wiped clean after every weld.

Misalignment of the weld is usually caused by worn or dirty jaws. However, if the welder jaws are clean and not worn and the welds are out of line, then the jaws are not aligned properly. This misalignment can be determined by inspection of the weld after the flash has been removed. After determining which jaw is not in alignment, the jaws can be adjusted as desired. Jaw alignment instructions are given in a separate Engineering Adjustment Summary. Replace lower jaw inserts that are worn excessively.

CUT-OFF SWITCH AND WELD SWITCH CONTACT POINTS

If the cut-off and weld switch contact points are welded together, pitted, corroded, or covered by oxide, they must be replaced. If the points are only dirty, clean them with a commercial point cleaner and clean, lintless cloth (such as linen tape).



Maintenance and adjustment locations.

JAW ALIGNMENT

The importance of accurate jaw alignment cannot be overemphasized. The jaws have been carefully aligned during assembly at the factory; however, it may be necessary to align the jaws if they are bumped or damaged. The easiest and most effective way to see if misalignment exists is to actually inspect the weld joint. A misaligned weld is usually caused by worn or dirty welder jaws.

(1) Check with a straight edge to see if the jaws are in alignment with each other with respect to elevation, inclination, and twist.

(2) The stationary jaw can be moved slightly on its mounting screws by loosening the screws and tapping the jaw.

(3) The movable jaw tilt is adjusted with two set screws as shown in drawing.

Detailed alignment instructions are given in a separate Engineering Adjustment Summary .

ADJUSTMENTS (Jaw Gap, Electrical Cut-off, Upset Force)

Incomplete and burned out welds are a result of incorrect adjustments. If the weld cycle is cut off too soon, the weld will be incomplete (low heat produces a weak weld which may be only partly joined). Too long a weld cycle will produce excessive heat which will result in a burned out weld (excess molten metal around a discontinuous joint).

For adjusting the cut-off point, a hole in the outside leaf of the cut-off switch permits insertion of a socket wrench into the end-knob of the slide rod (see drawing).

For all adjustments, follow the procedures given in the Engineering Adjustment Summary .

WARNING

DISCONNECT ELECTRIC POWER TO THE WELDER BEFORE MAKING ADJUSTMENTS.

CHAPTER 5

TROUBLESHOOTING

MISALIGNED WELD

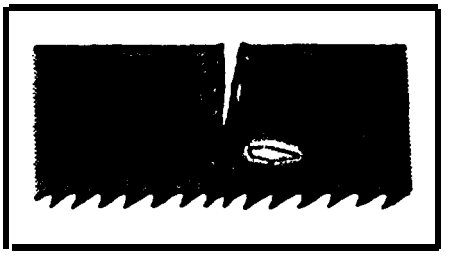
(1) Dirt or scale on jaws or blade.

(2) Blade ends not cut off square.

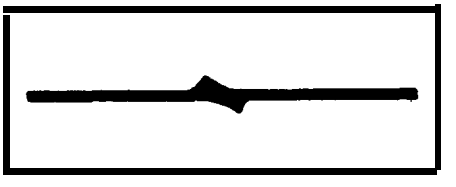
(3) Blade ends not correctly aligned when clamped in jaws.

(4) Worn jaws or inserts.

(5) Jaws are not aligned correctly.



Misaligned weld.



Overlapped weld.

MISALIGNED WELD-BLADE ENDS ARE OVERLAPPED

(1) Jaw upset force control set for wider blade than used, adjust correctly.

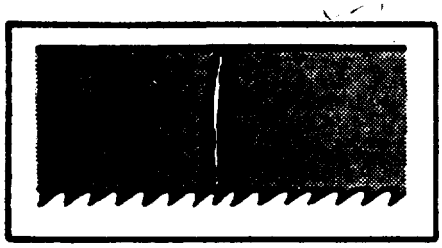
(2) Blade ends or jaws not aligned correctly.

WELD BREAKS WHEN USED

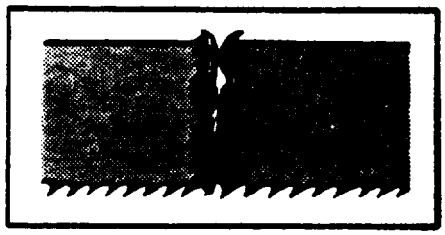
(1) Weld not annealed correctly.

(2) Weld has been ground too thin.

(3) Weak incomplete weld.



Incomplete weld.



Blown-out weld.

INCOMPLETE WELD (joint is not complete, blow holes in joint)

(1) Incorrect Initial Set-Up:
(a) Initial jaw gap (weld lever position) not set correctly.
(b) Upset force control not set correctly.

(2) Improper clamping procedures.

(3) Defective cut-off switch may not break the circuit at end of welding operation.

(4) Cut-off switch not adjusted correctly.

(5) Points of cut-off switch welded together.

(6) Slide rod sticking because of rust or dirt. Clean and oil rod - see Maintenance. (chapter 4)

(7) Slide rod movement obstructed because stop screw too tight on rod.

(8) Jaw movement obstructed by kinked jaw cable or tangled wires. Bend cable and untangle wires.

(9) Movable jaw binding on jaw bearings because of tilt adjustment screw turned in too far.

BRITTLE WELDS

(1) Weld has not been annealed correctly, see Annealing in Operation Chapter. Poor annealing can be caused by:

a. Incorrect annealing heat. Bring weld up to correct color as described under Annealing in Operation Chapter.

b. Scale or oil on weld can cause poor annealing.

CHAPTER 6

ACCESSORIES

ETCHING PENCIL

The Etching Pencil is used with the butt welder to mark tools, jigs, fixtures, templates, etc.

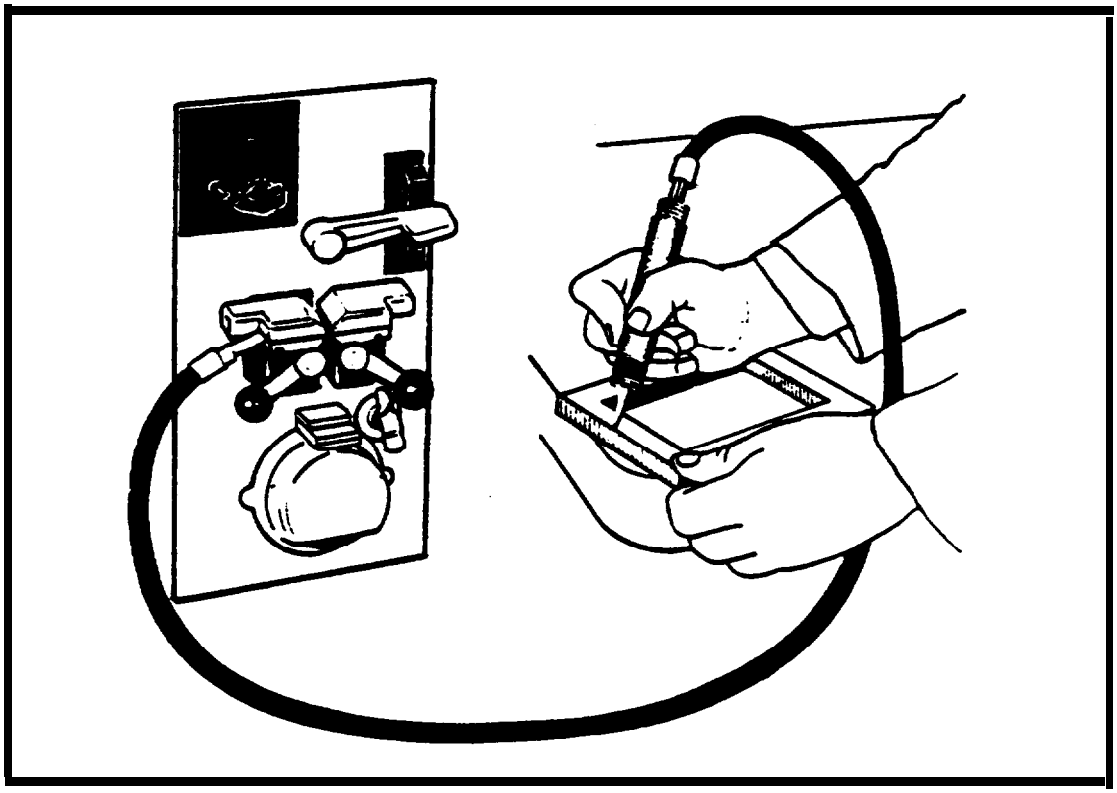
TO use the etching pencil:

(1) Clamp cable end of etching pencil in welder stationary jaw. Move weld lever up to anneal position.

(2) Press the anneal and etching pushbutton and clamp the button down with the etching pencil clamp. This closes the circuit through the welder and also grounds the etching current through the machine.

(3) Place the work to be marked on the table of the machine. Since the machine is grounded there is no second lead required to the work.

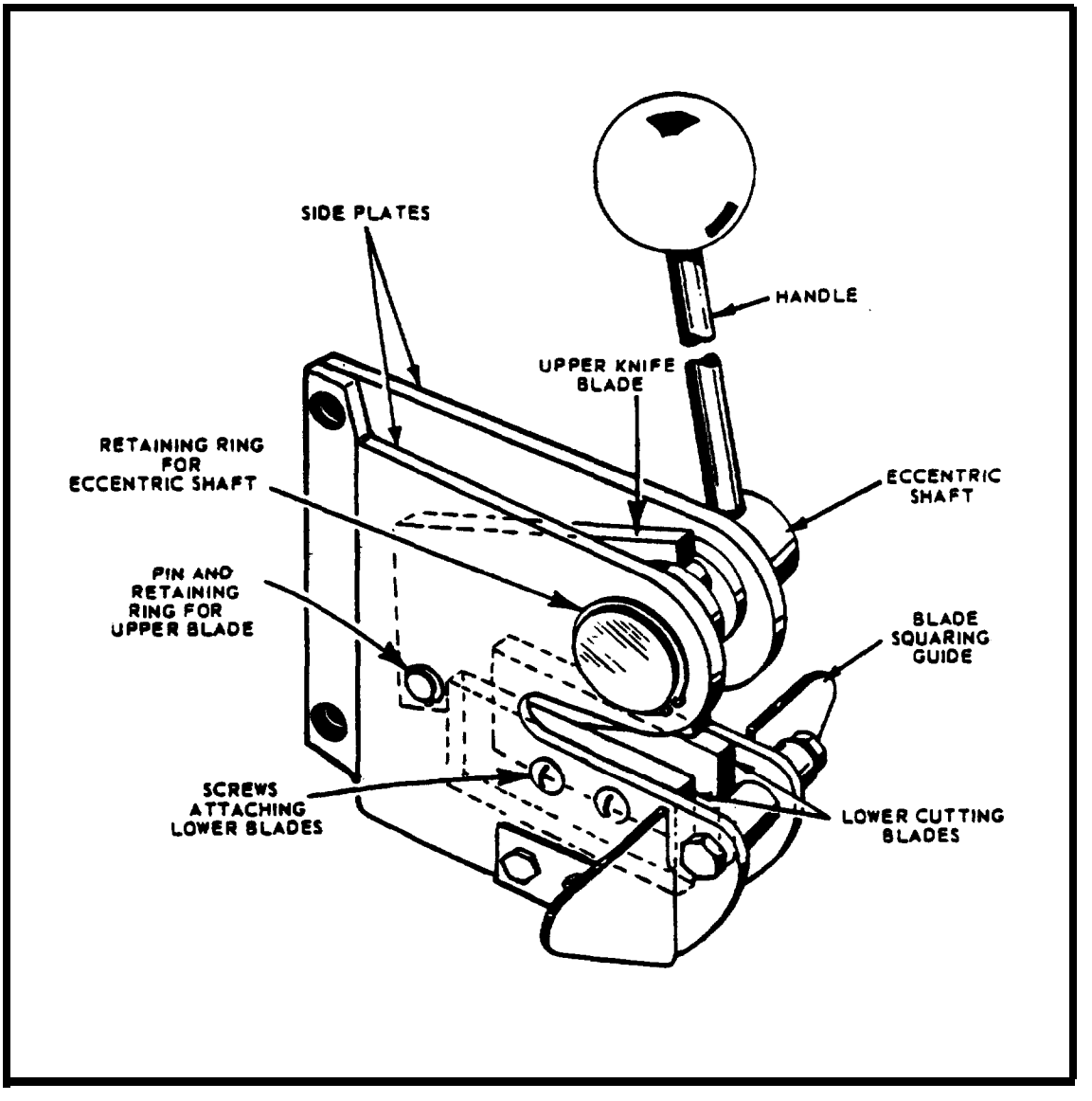
(4) Etch with sufficient pressure to prevent the point from arcing, but not great enough to destroy the copper point. The copper point should be kept sharp to secure best results.



Using the Etching Pencil.

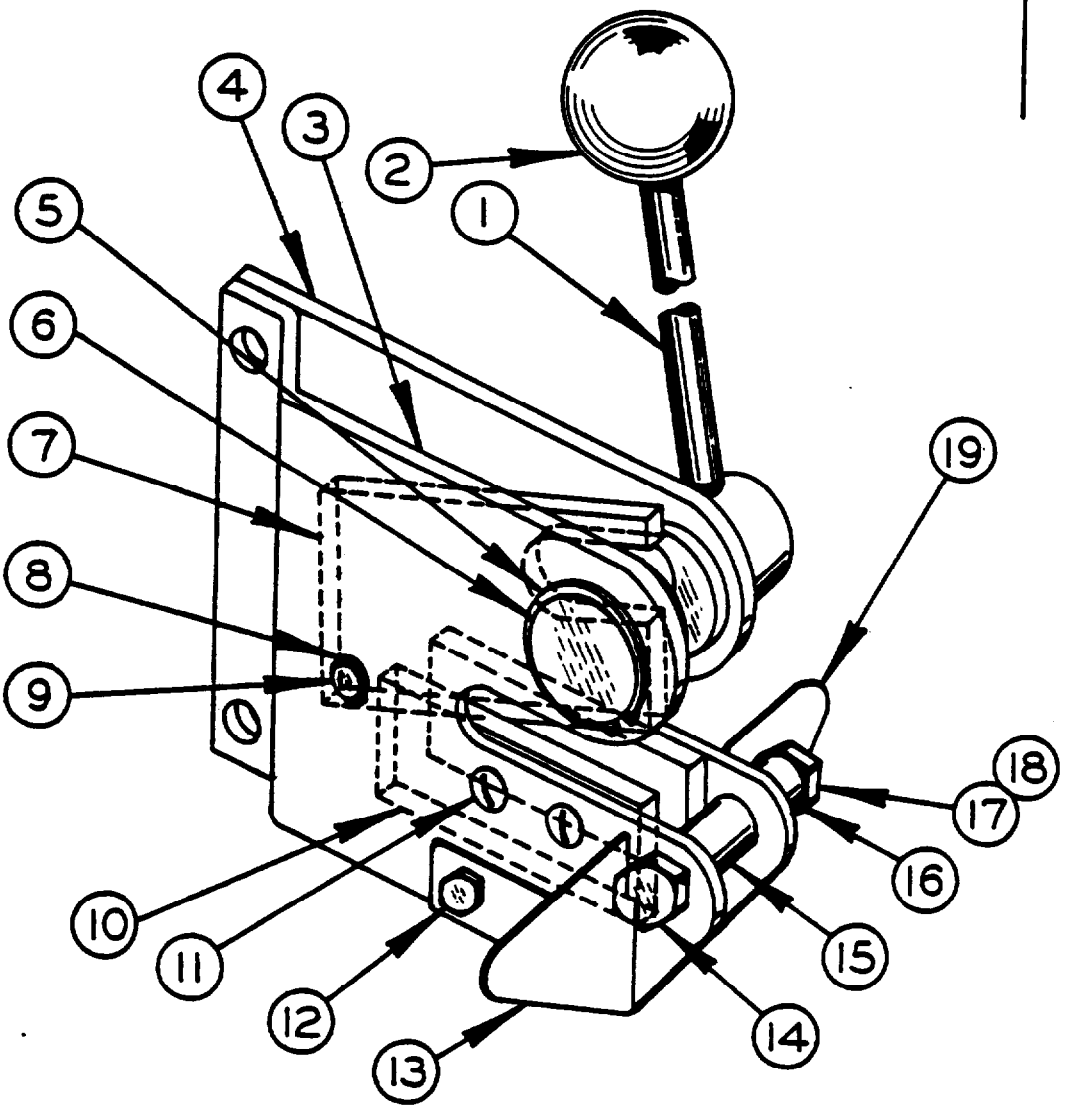
BLADE SHEAR

The cutter blades can be easily replaced. Disassemble by removing the snap rings from the pivot pin and eccentric disk. Then remove the retaining screws on the bottom blades.



The Blade Shear Assembly.

REVISED AND REDRAWN
S.W. 12-12-74



USED ON ALL MODELS.

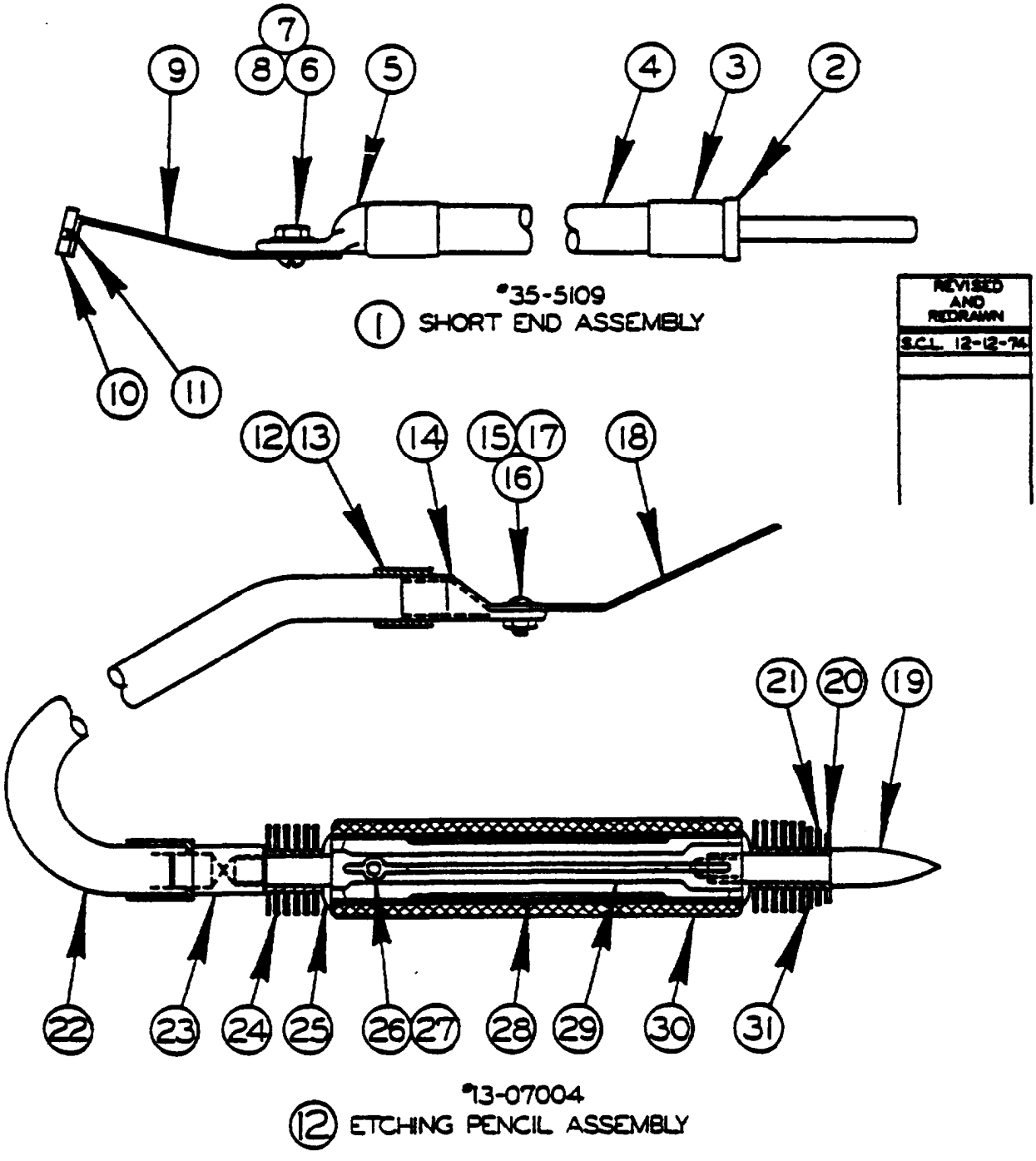
BLADE SHEAR ASSEMBLY

PRINTED IN U.S.A.

CODE NO. H1-19.0

BLADE SHEAR ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY.
Ref.	35-8440	Blade Shear Assembly	
1	35-8438	• Handle	1
2	34-13508	• Ball	1
3	35-8447	• Side Plate L. H.	1
4	35-8448	• Side Plate R.H.	1
5	35-7558	• Retaining Ring	2
6	35-8441	• Eccentric	1
7	35-8437	• Knife	1
8	35-8582	• Retaining Ring	2
9	35-8451	• Pin	1
10	100015	• Blade	2
11	198865	• Screw, Rd. Hd. Mach. #10-24NC x 1/4	4
12	198011	• Screw, Hex. Hd. Cap 1/4-20NC x 1-1/4	2
13	35-8445	• Square L.H.	1
14	198012	• Screw, Hex. Hd. Cap 1/4-20NC x 1-1/2	1
15	100016	• Spacer	3
16	35-8585	• Spacer	1
17	199115	• Nut, Hex. 1/4-20NC	3
18	199321	• Washer, Lock 1/4 S.A.E. Std.	3
19	35-8446	• Square R.H.	1



*35-5109
(1) SHORT END ASSEMBLY

REVISED AND REDRAWN
S.C.L. 12-12-74

*13-07004
(12) ETCHING PENCIL ASSEMBLY

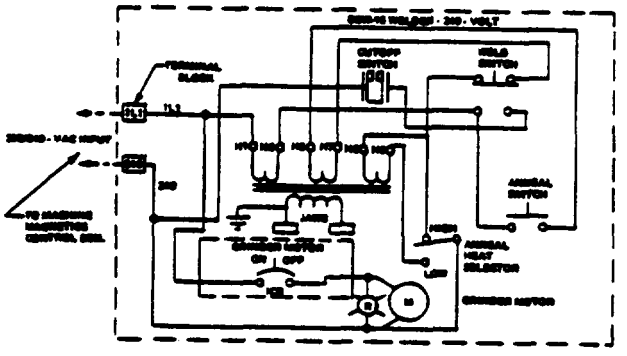
ETCHING PENCIL ASSEMBLY

CODE NO. H1-20.0

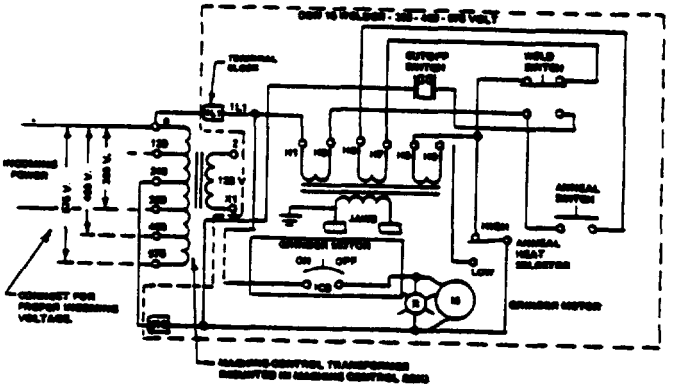
ETCHING PENCIL ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
*Ref	1347003	Etching Pencil Assembly	
1	35-5109	. Short End Assembly	1
2	6-07420	. . Plug	1
3	2154	. . Ferrule	2
4	19546	. . Cable	A.R.
3	19545	. . Solder Lug	1
6	198852	. . Screw, Rd. Hd. Mach. #8-32NC x 5/16	1
7	199109	. . Nut, Hex #8-32NC	1
8	199292	. . Washer, Brass #8 Std	1
9	13-07302	. . Terminal Strip	1
10	13-47303	. . Insulator	1
11	34-18407	. . File Rivet	2
**12	13-07004	. Etching Pencil Assembly	1
13	2154	. . Ferrule	2
14	19545	. . Terminal Lug	1
15	198852	. . Screw, Rd. Hd. Mach. #8-32NC x 5/16	1
16	199109	. . Nut, Hex. #8-32NC	1
17	199292	. . Washer, Brass #8-Std	1
18	13-07304	. . Terminal Strip	1
19	6-07424	. . Paint	1
20	6-07310	. . Fin	1
21	607309	. . Fin	1
22	135994	. . Cable	A.R.
23	6-07423	. . Connector	1
24	6-07307	. . Fin	12
25	647311	. . Washer	2
26	35-5077	. . Stem Assembly	1
27	6-07425	. . . Pin	1
28	6-07421	. . . Tube	1
29	6-07201	. . . Stem	1
30	6-07503	. . Tube	1
31	6-07308	. . Fin	1

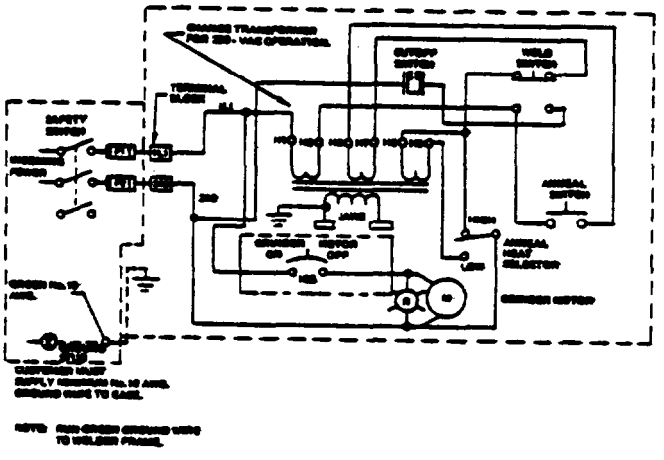
***NOTE: For welders shipped before 6-23-44 with ground bushing in panel.**
****NOTE: For welders shipped after 6-23-44.**



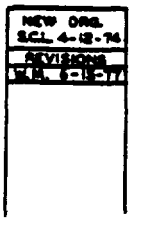
STANDARD 240 VOLT DIAGRAM
No. 119994-7

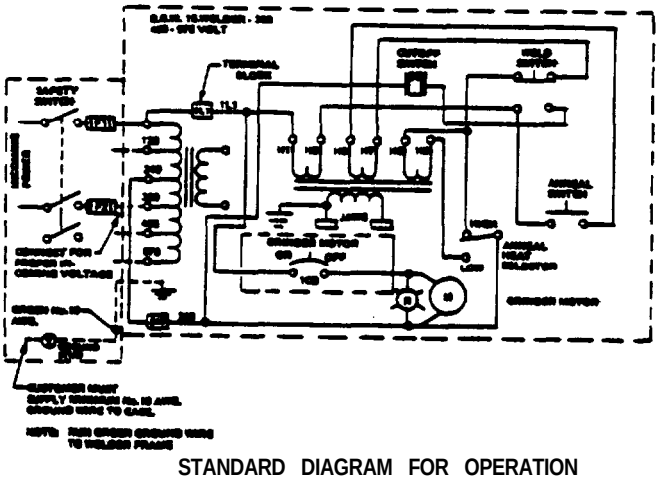


STANDARD 380-480-575-VOLT DIAGRAM
No. 119995-6



STANDARD 240-VOLT DIAGRAM
PORTABLE
No. 132816-3





STANDARD DIAGRAM FOR OPERATION
ABOVE 240 VAC PORTABLE
No. 132817-3

ELECTRICAL SCHEMATICS
FOR ALL
DBW-15 BUTT WELDERS

FIRST USED FEB 1977

H1-13.5.1

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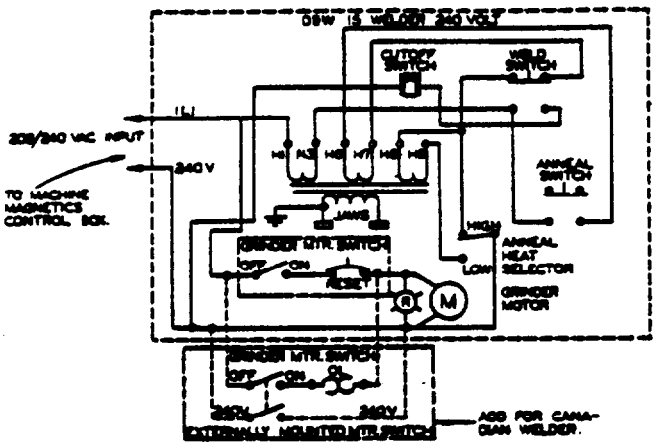

STANDARD 240 VOLT DIAGRAM
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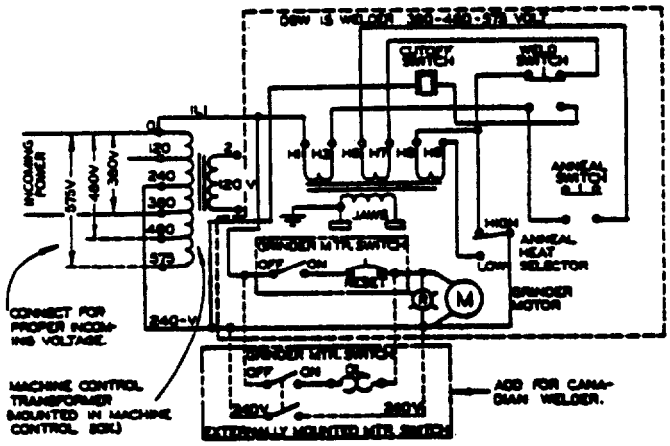

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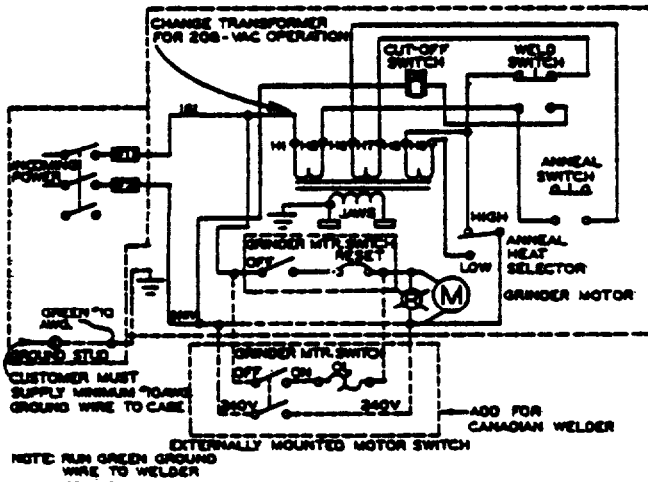
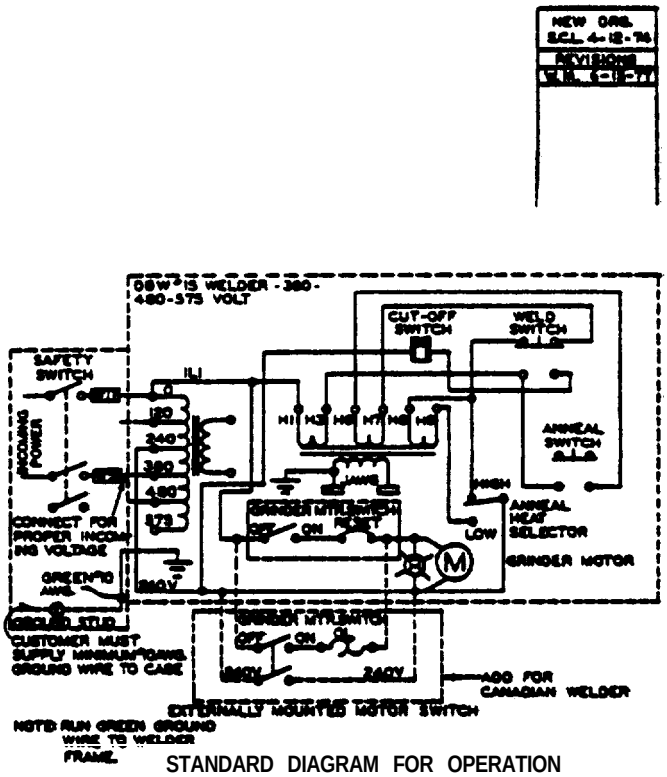


STANDARD 240-VOLT DIAGRAM
PORTABLE
#132816-2

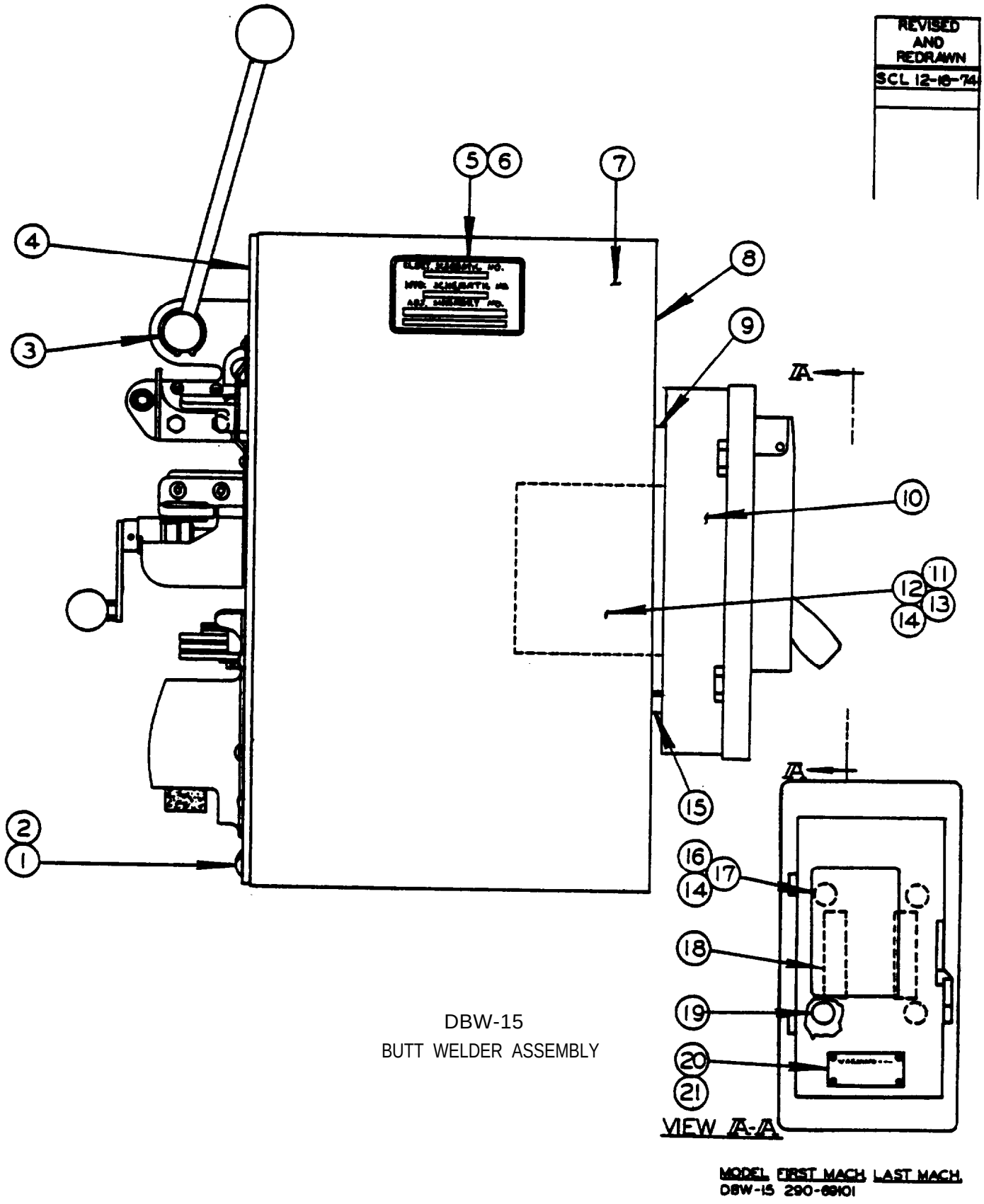


STANDARD DIAGRAM FOR OPERATION
ABOVE 240 VAC PORTABLE
#132817-2

ELECTRICAL SCHEMATICS
FOR ALL
DBW-15 BUTT WELDERS

FIRST USED APRIL 1974
LAST USED FEB 1977

PRINTED IN U.S.A.



DBW-15
BUTT WELDER ASSEMBLY

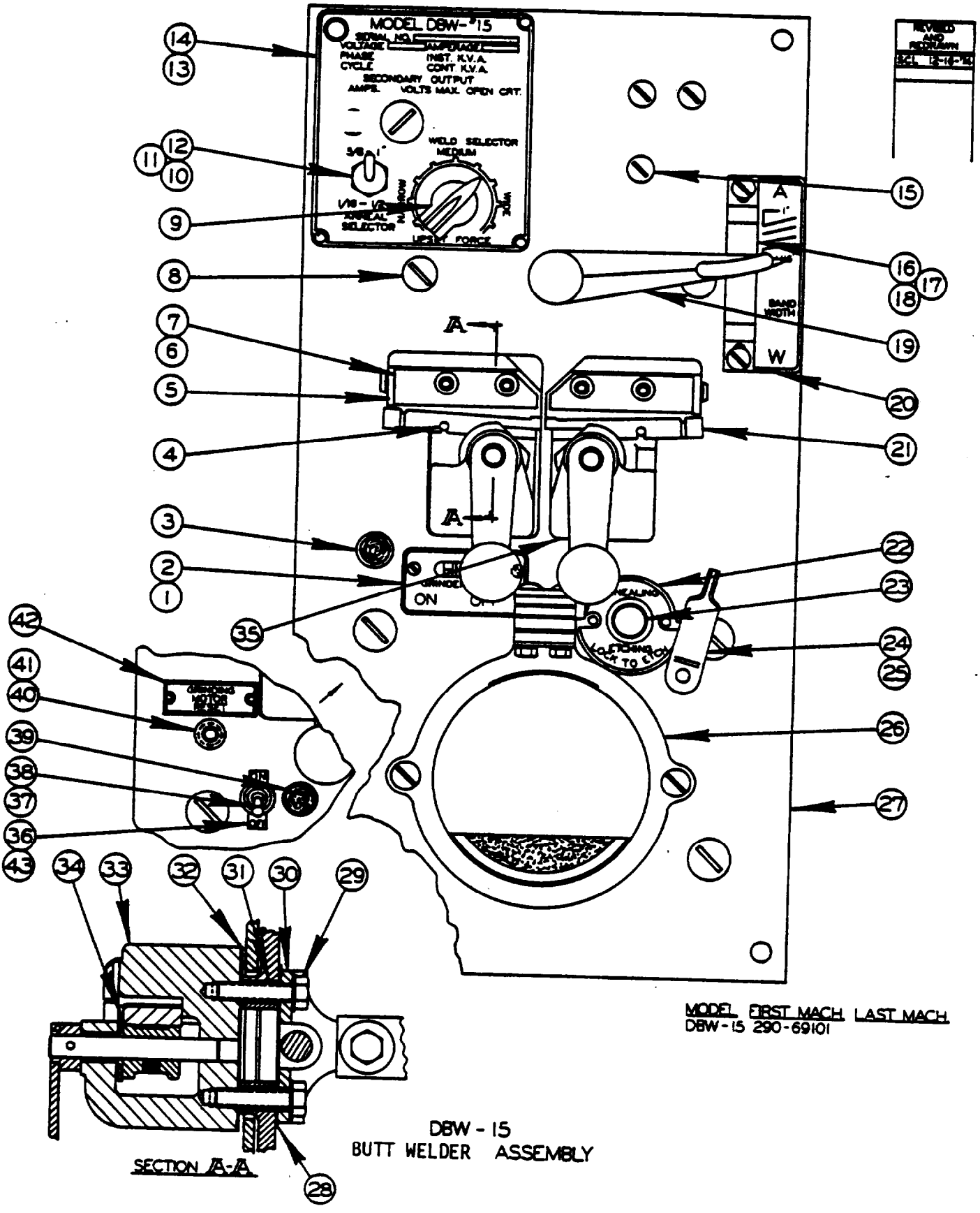
CODE NO. H1-13.0

DBW-15 BUTT WELDER ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	401436	DBW-15 Portable Assembly	
1	199019	. Screw, Truss Hd. Mach. 1/4-20NC x 3/8	4
2	199356	. Washer, Lock 1/4 Shakeproof Int	4
3	131807	. Blade Shear Assembly (See Detail)	1
4	59788	Butt Welder Assembly (See Detail)	1
5	116552	. Data Plate	1
6	199396	. Screw, Rd. Hd. Drive #2 x 3/16 Type "U"	4
7	132814	Butt Welder Box Assembly (Std. 240 Vac.)	USE ONE
	132815	Butt Welder Box Assembly (Above 240 Vac.)	
8	6-06342	.Butt Welder Box	USE ONE
	50528	.Butt WELDER Box	
9	1927	. . Spacer (Sq. D Switch Only) (#132815 Only)	4
10	132821	. . Safety Switch 39010	USE ONE
	16180	. . Safety Switch 39010	
11	408838	. . Transformer (#132815 Only)	1
12	198895	. . Screw, Rd. Hd. Mach. 1/4-20NC x 1/2 (#132815 Only)	4
13	199321	. . Washer, Lock 1/4 Std. (#132815 Only)	4
14	199115	. . Nut, Hex 1/4-20NC (#132815 Only)	4
15	7506	. . Grommet	1
16	198897	. . Screw, Rd. Hd. Mach. 1/4-20NC x 3/4	4
17	199321	. . Washer, Lock 1/4 Std.	4
18	133848	. . Fuse 10A-250 V	2
	133861	. . Fuse 5A-600 V	2
19	104770	. . Ground Tag	1
20	133160	. . Escutcheon ("Warning ---")	1
21	199396	. . Screw, Rd. Hd. Drive #2 x 3/16 Type "U"	4

Following Items Not Shown:

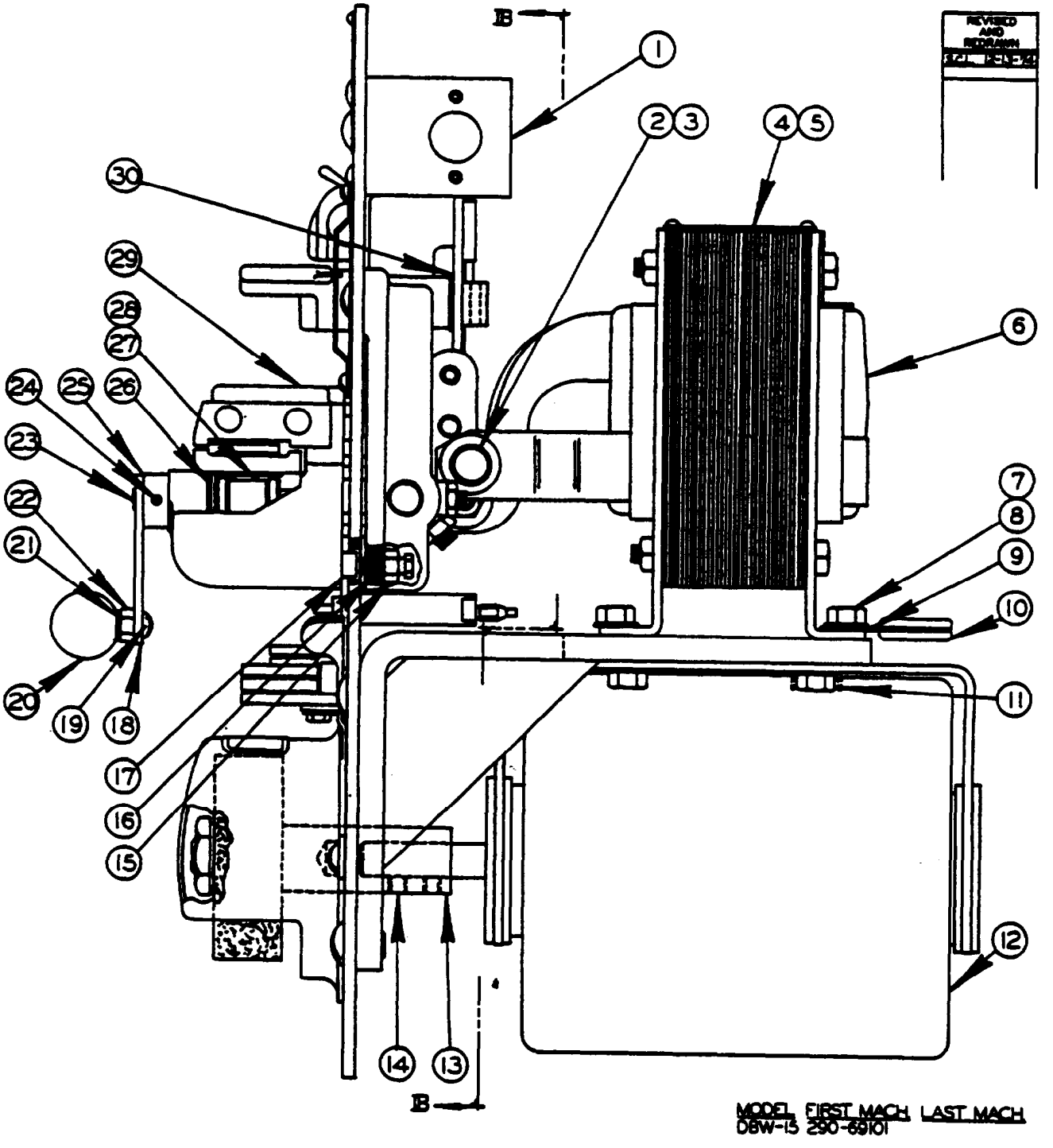
STK#714	. . Wire, #10 AWG Green	A.R.
STK#724	. . Wire, #12 AWG Black	A.R.



DBW - 15
BUTT WELDER ASSEMBLY

DBW #15 BUTT WELDER ASSEMBLY

INDEX No.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	59788	DBW-15 Butt Welder Assembly	
1	136185	.Escutcheon (English)	USE
	136186	.Escutcheon (International)	ONE
2	198840	.Screw, Rd. Hd. Mach. #6-32-NC x 3/8	2
3	114591	.Glo-Lite 240-V	1
4	119906	.Pin	2
5	121067	.Insert Bearing	1
6	121066	.Line Up Guide	2
7	198346	.Screw, Soc. Hd. Cap #8-32NC x 3/8 (Button)	8
8	199023	.Screw, Truss, Hd. Mach. 1/4-20NC x 3/4	2
9	34-06518	.Knob	1
10	107171	.Washer, Lock	1
11	108450	.Switch S.P.D.T.	1
12	114568	.Nut, Hex. 15/32-32 NC	1
13	119861	.Escutcheon	1
14	199397	.Screw, Rd. Hd. Drive Pk #2 x 1/4 Type "U"	5
15	199015	.Screw, Truss Hd. Mach. #10-24NC x 3/8	3
16	119880	.Drag Spring	1
17	198866	.Screw, Rd. Hd. Mach. #10-24NC x 5/16	2
18	120268	.Shim	3
19	119883	.Handle Assembly	1
	119564	. . Handle	1
	119879	. . Shaft	1
	4231	. . Roll Pin	1
20	119862	.Escutcheon	1
21		.Jaw Insert	2
22	38660	.Escutcheon	1
23	34-06503	.Anneal Switch	1
24	35-2010	.Pushbutton Clamp	1
25	199538	.Rivet, Rd. Hd. 1/8 Dia. x 1/2	1
26	303886	.Grinder Wheel Guard Assembly (See Detail)	1
27	59767	.Panel	1
28	2761	.Insulator	1
29	3172	.Screw Hex. Hd. Cap	2
30	2748	.Connector	1
31	35-9614	.Insulator Bushing	2
32	119863	.Insulator	1
33	401871	.Stationary Welder Jaw	1
34	121477	.L.H. Can Sub-Assembly	1
	Following Items Not Shown		
	133826	.Wire Connector	3
	103848	.Wire Terminal	10
	133827	.Wire Connector	1
	Stk #731	.Wire, Stranded #14 Black	A.R.
	111123	.Wire Terminal	4
	NOTE: The Following Items Are For Machines After Serial #290-68182 and Before Serial #290-745446.		
*35	10776	.On-Off Plate (English)	USE
	131202	.On-Off Plate (International)	ONE
*36	111123	.Wire Terminal	A.R.
*37	110953	.Toggle Switch	1
*38	107171	.Washer, Lock	2
*39	114591	.Glo-Lite 250-V	1
40	113262	.Circuit Breaker 1.5A E-T-A	1
41	121410	.Wire Terminal	2
42	121411	.Escutcheon (English)	USE
	131203	.Escutcheon (International)	ONE
	*NOTE: For Canadian Welders Omit Items 35, 36, 37, 38 and 39 and replace with:		
	100888	.Plug Button	2



DBW-15

BUTT WELDER ASSEMBLY

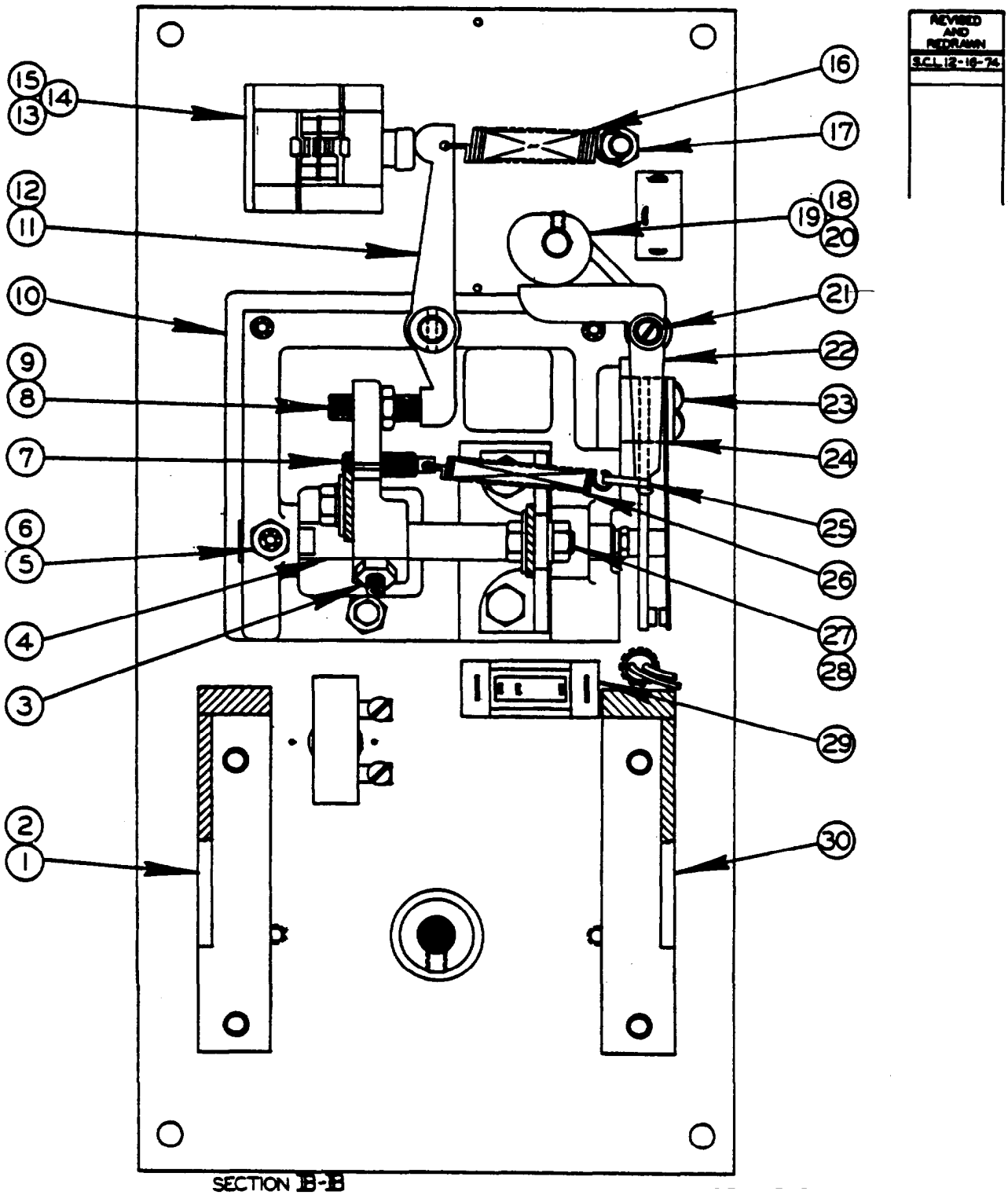
PRINTED IN U.S.A.

CODE NO. H1-13.2

DBW-15 BUTT WELDER ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref*	59788	DBW-15 Butt Welder Assembly	
1	35-9545	Switch Bracket	1
2	198039	. Screw, Hex. Hd. Cap, 5/16-18NC x 3/4	1
3	12736	. Washer	2
4	6-06502	. Butt Welder Tag	1
5	199563	. Key, Hex. 3/32 Across Flats	1
6	405422	. Transformer Assembly 240-V	1
7	198025	. Screw, Hex. Hd. Cap 5/16-18NC x 1/2	8
8	199323	. Washer, Lock 5/16 Std.	12
9	35-9617	. Conduit Anchor	1
10	7677	. Grommet	1
11	12442	. Stop	1
12	135510	. Motor 1/6 H.P. 1 PH	1
13	303815	. Rear Adapter	1
14	198422	. Screw, Soc. Set 1/4-20NC x 1/4	2
15	199115	. Nut, Hex. 1/4-20NC	2
16	1006	. Bearing Stud	2
17	6-06417	. Jaw Bearing	2
18	119859	. L. H. Cam Lever & Pin Assembly	1
	12038	. R.H. Cam Lever & Pin Assembly	1
19	199023	. . Screw, Truss Hd. Mach. 1/4-20NC x 3/4	1
20	133971	. . Knob	1
21	199356	. . Washer, Lock 1/4 Shakeproof Int.	1
22	199115	. . Nut, Hex. 1/4-20NC	1
23	119858	. . Pin	1
24	4229	. . Roll Pin	1
25	119857	. . Cam Lever Sub-Assembly	1
26	103947	. Bearing	2
27	198423	. Screw, Soc. Set 1/4-20NC x 5/16	2
28	121478	. R.H. Can Sub-Assembly	1
29	401872	. Movable Welder Jaw	1
30	105116	. Hardened Washer	1

*NOTE: Before Serial #290-745446, Item 13 #303815 was 35-614.



MODEL	FIRST MACH	LAST MACH
DBW-15	290-69101	

DBW-15

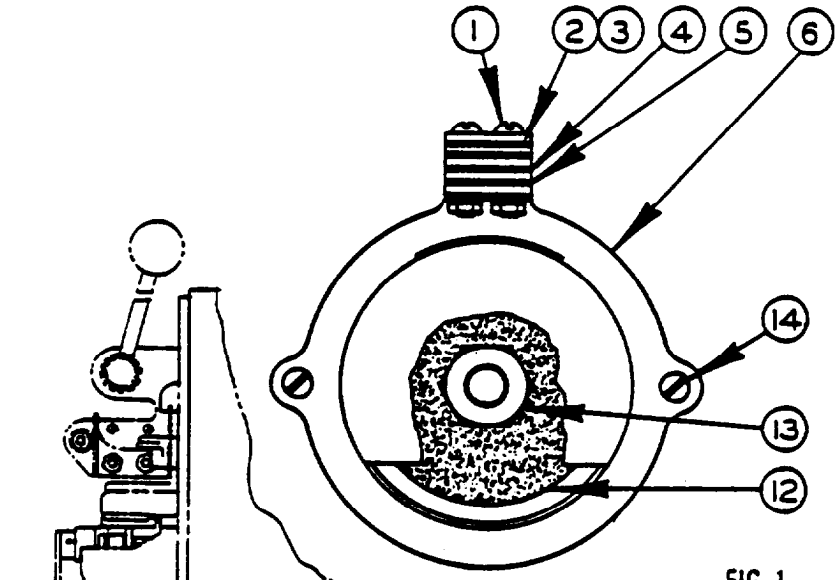
BUTT WELDER ASSEMBLY

PRINTED IN U.S.A.

CODE NO. H1-13.3

DBW-15 BUTT WELDER ASSEMBLY

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	59788	DBW-15 Butt Welder Assembly	
1	28091	. L.H. Bracket Assembly	1
2	199033	. Screw, Truss Hd. Mach. 5/16-18NC x 5/8	4
3	198446	. Screw, Soc. Set, 5/16-24NF x 3/4	1
4	103147	. Slide Rod Assembly (See Detail)	1
5	198591	. Screw, Soc. Set 1/4-20NC x 5/8 Dog Pt)	1
6	199114	. Nut, Hex, Jam 1/4-20 NC	1
7	35-9549	. Spring Stud	1
8	198447	. Screw, Soc. Set 5/16-24NF x 1-1/4	1
9	199125	. Nut, Hex. Jam 5/1624NF	2
10	35-9557	. Butt Welder Frame	1
11	119884	. Lever Weldment	1
12	4227	. Roll Pin	1
13	35-5078	. Welder Switch Sub-Assembly	1
14	198861	. Screw, Rd. Hd. Mach. #8-32NC x 1-1/2	2
15	199318	. Washer, Lock #8 Std.	2
16	104030	. Spring	1
17	35-9592	. Spring Stud	1
18	35-9548	. Shaft	1
19	6-06324	. Cam	1
20	198410	. Screw, Soc. Set #10-24NC x 1/4	1
21	1005	. Pivot	1
22	35-9550	. Lever	1
23	198887	. Screw, Rd. Hd. Mach. #10-32NF x 1	1
24	20017	. Cutoff Switch Assembly	1
25	6-06313	. Insulator	1
26	6-06339	. Spring	1
27	1998026	. Screw, Hex. Hd. Mach. 5/16-18NC x 5/8	1
28	199122	. Nut, Hex. 5/16-18NC	2
29	135944	. Circuit Breaker	1
30	28090	. R.H. Bracket Assembly	1



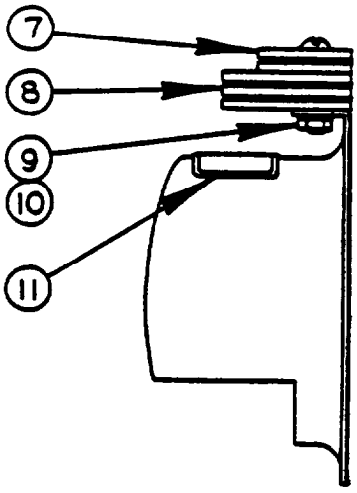
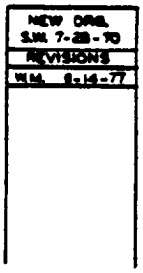


FIG.-1
GUARD SUB-ASSEMBLY



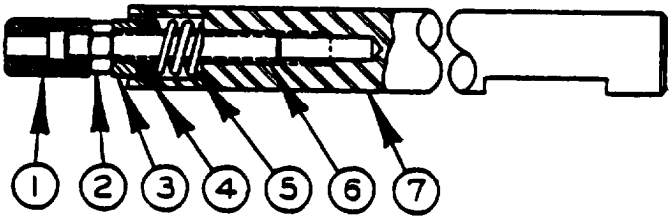


FIG.-2
SLIDE ROD ASSEMBLY

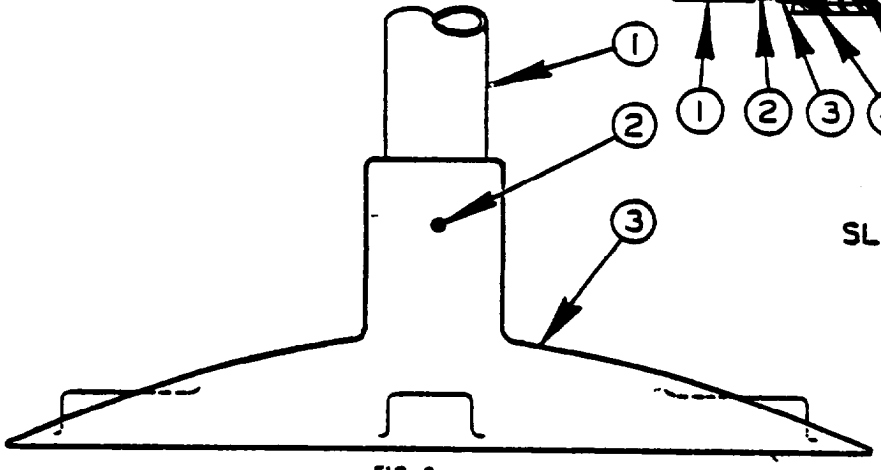


FIG.-3
BUTT WELDER PEDESTAL

MODEL	FIRST MACH.	LAST MACH.
DBW-15	290-69101	

CODE NO. H1-13.4

DBW-15 BUTT WELDER DETAIL
REF. 59788 ASS'Y

INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y.
Ref.	303886	Guard Sub-Assembly FIG - 1	1
1	198888	. . Screw, Rd. Hd. Mach. #10-32 NF x 1	2
2	133798	..Spacer (.015)	1
3	133799	.. Spacer (.012)	1
4	13-06304	.. Spacer (.0359)	1
5	13-06307	.. Spacer (.040)	1
6	405735	.. Grinder Wheel Guard	1
7	6-06306	.. Block	2
8	13-06306	. . Block	3
9	199113	.. Nut, Hex. #10-32NF (Plated)	2
10	199319	.. Washer, Lock #10 Std.	1
11	113447	.. Escutcheon	1
12	13-06501	. Abrasive Wheel	1
*13	303816	. Front Adaptor	1
14	198890	. Screw, Rd. Hd. Mach. 1/4-2ONC x 1/4	2
Ref.	59788	Butt Welder Assembly	
Ref.	103147	. Slide Rod Assembly. FIG-2	1
1	6-06418	.. Knob	1
2	199113	.. Nut, 10-32NF Std.	1
3	6-06336	.. Collar	1
4	6-06337	.. Key	1
5	6-06338	.. Spring	1
6	198420	Screw, Soc. Set 10-32NF x 1-1/4	1
7	16541	. . Slide Rod	1
Ref.	402520	Butt Welder Pedestal FIG-3	
1	39653	. Pedestal Top, Weldment	1
2	198424	. Screw, Soc. Set 1/4-2ONC x 3/8	2
3	503117	. Pedestal Base	1

*NOTE: Before Ser. #290-745446, Front Adapter #303816 was replaced with #34-12402 washer and #6-06429 screw.

ENGINEERING ADJUSTMENT SUMMARY MODEL DBW-15	1434 SHEET 1 OF 11		NUMBER 120739-2

This welder is a resistance type butt welder capable of welding 1/16 x 0.025" up to 1" x 0.035" Carbon, Dart and Imeprial band.

WARNING
All adjustments must be made with the power-off, except where specifically instructed otherwise.

WELDER JAW ALIGNMENT:

There are three basic adjustments for the alignment of the welder jaws. They are Elevation, Inclination and Twist. They are all dependent on one another. Any adjustment of one may require a readjustment of one or both of the others. The welder jaws shall be aligned to result in a finish weld which is within 4% of the band gage. The blade alignment guides shall insure that the tooth edge of the band be straight within 0.004" per 4", measured 2" on either side of the weld.

The initial line up of the welder jaws is accomplished with a straight edge. The final adjustment is made so that the weld produced in a 1" x 0.035" Imperial band will meet the above specifications.

In order to make the initial adjustment with the straight edge, it is necessary to remove the lower jaw inserts, the insert bearings, and the blade alignment guides. It is advisable to remove the transformer straps from the jaws, the jaw upset spring, the weld lever return spring, and space the jaws approximately 1/8" apart.

Prepared by: Roger Harris Approved: Date: 7-31-69

REVISIONS		
REVISED & REDRAWN FOR CLARIFICATION SMUTKA 8-1-69	2	120789-2
MAX. JAW GAP PAR. WAS ON SHT. 10 OF 11 WELD LEVER PAR. WAS ON SHT. 8 OF 11 SMUTKA 2-24-70	2	

ENGINEERING ADJUSTMENT SUMMARY MODEL DBW-15	1434 2 11	NUMBER 120789-2

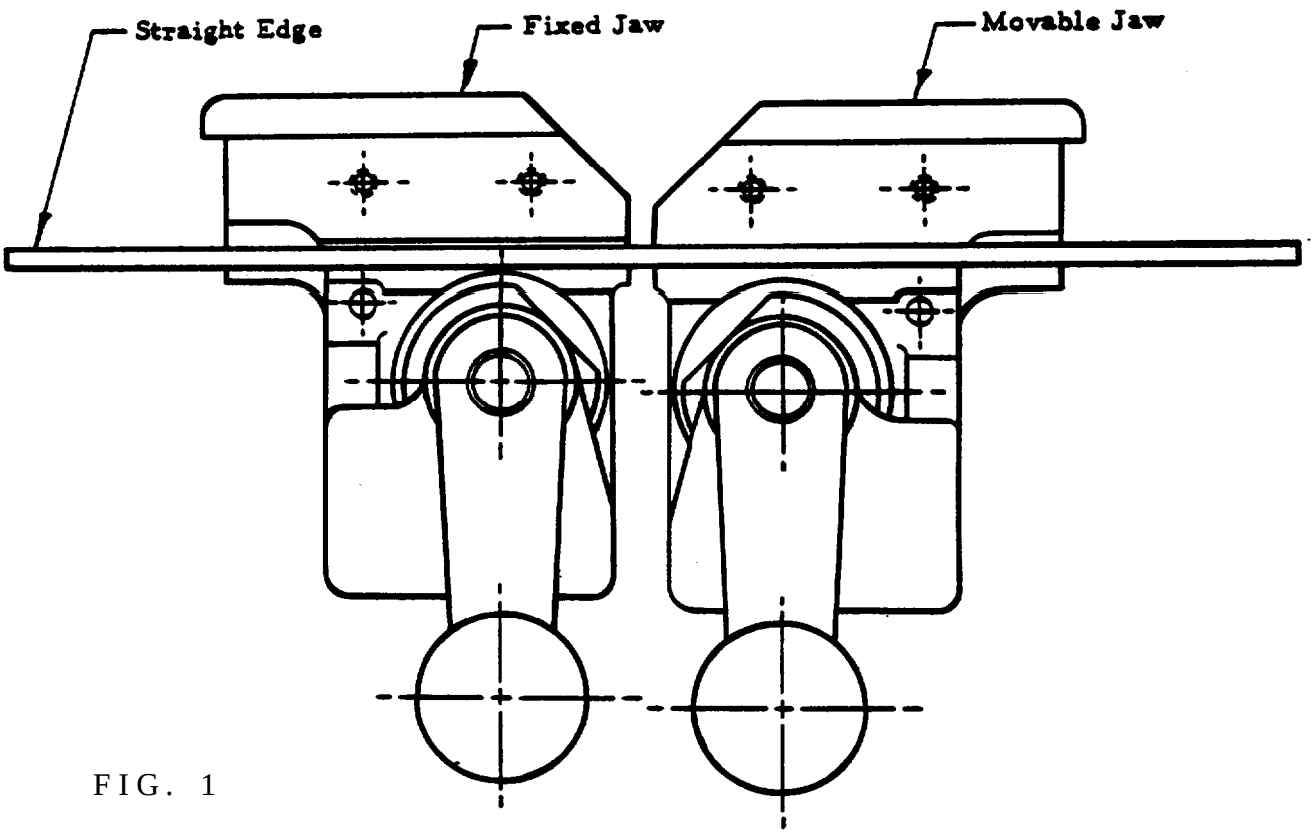


FIG. 1

1. Fig. 1 is an example of jaw elevation misalignment. It is checked with a straight edge. The fixed jaw must be moved to correct this problem. Loosen the mounting screws and move the jaw as required. The mounting screws are located inside the welder case and behind the fixed jaw.

Prepared by: Roger Harris Approved: [signature] Date: 7-31-69

REVISIONS	NUMBER 120789-2

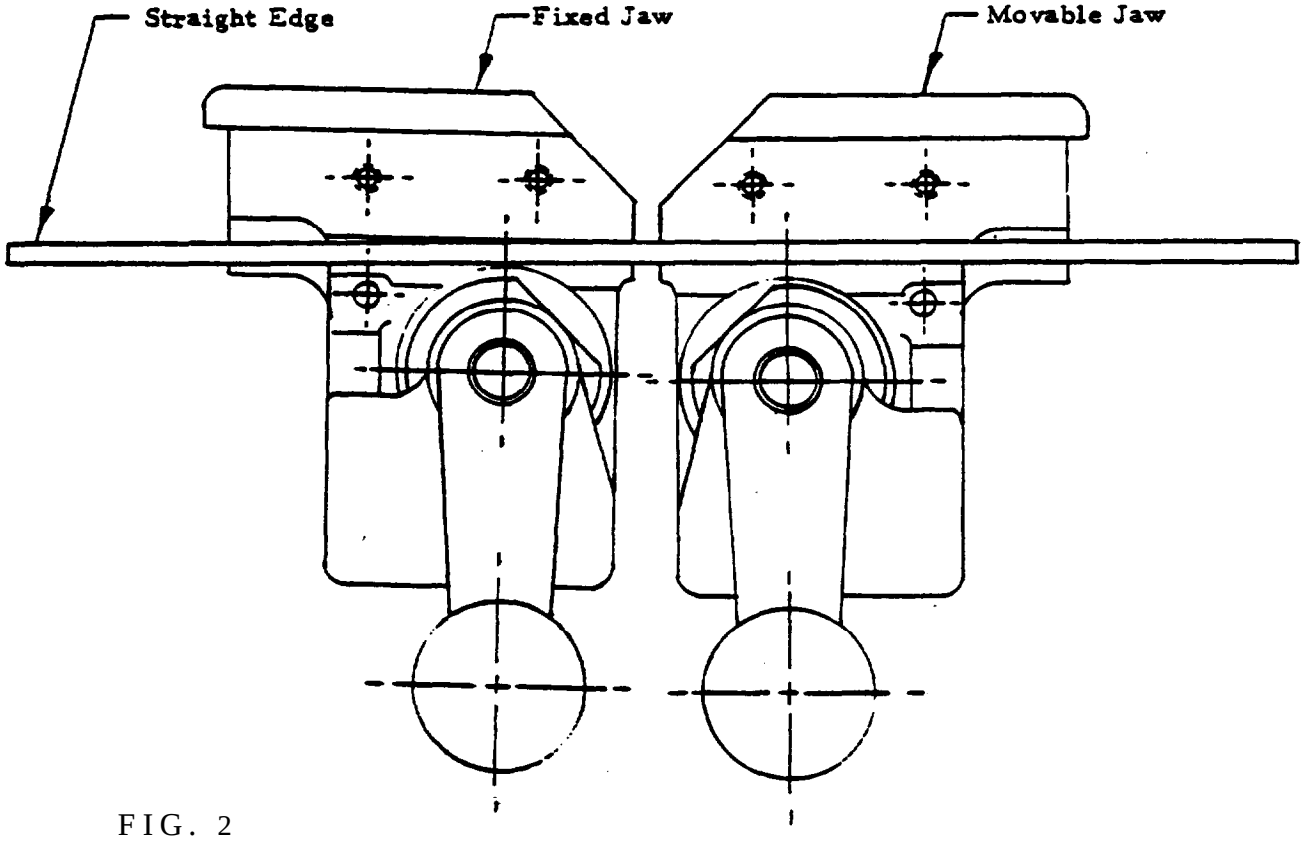


FIG. 2

2. Fig. 2 is an example of inclination misalignment as checked with a straight edge. The fixed jaw must be moved to correct this problem. Loosen the mounting screws and move the jaw required. The mounting screws are located inside the welder case - behind the fixed jaw.

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REVISIONS

120789-2

Welder Jaw Alignment -- continued

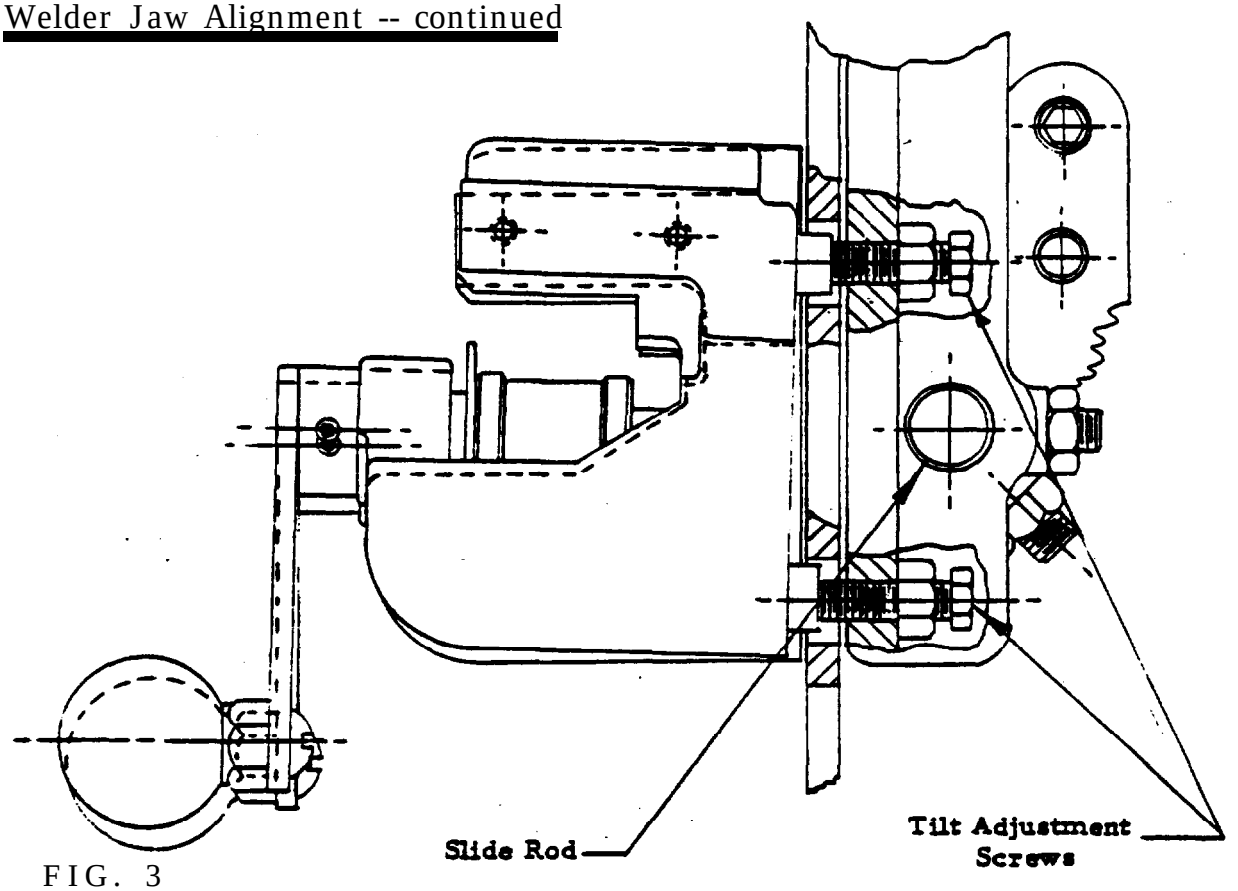

FIG. 3

3. Fig. 3 is an example of twist misalignment. The movable jaw must be adjusted to correct this problem. Two adjustment screws are provided. Both of them must be used when making a correction. Care must be taken to prevent any binding on the slide rod.

4. Verify the proper setting of the slide rod stop screw (item 2, fig. 4). It is adjusted to maintain 1/4 turn clearance between the end of the stop screw and the milled flat on the slide rod. The movable jaw must move freely with both tilt adjustments barring on the jaw.

Prepared by: Roger Harris Approved: Date: 7-31-69

REVISIONS

NUMBER
120789-2

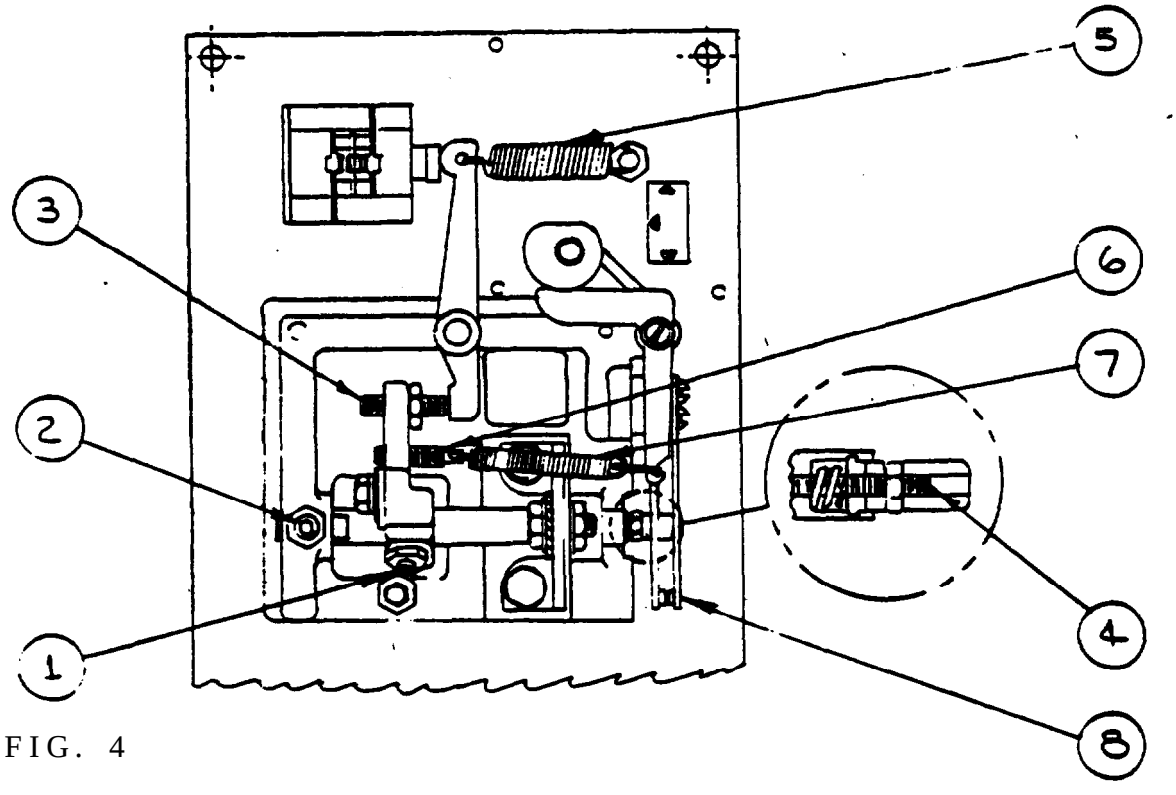

FIG. 4

1. Movable jaw lock screw
2. Slide rod stop screw
3. Jaw gap adjustment screw
4. Cut-off adjustment screw
5. Weld lever return spring
6. Upset force adjustment screw
7. Jaw upset spring
8. Cut-off switch

Prepared by: Roger Harris Approved: Date: 7-31-69

REVISIONS

NUMBER
120789-2

Welder Jaw Alignment -- con't.

5. The final jaw alignment cannot be finished until all of the steps in this Adjustment Summary have been completed. Only then can a weld be made that is suitable for alignment purposes.

FINAL JAW GAP

The final jaw gap shall be 0.075" with the weld lever fully depressed. It is set in the following manner:

1. Loosen the lockscrew (item 1, fig. 4) that holds the movable jaw to the slide rod.
2. Place a 0.075" gage beween the jaws. The jaws must hold the gage is place.
3. Push the slide rod toward the fixed jaw until the shoulder of its milled flat contacts the slide rod stop screw (item 2, fig. 4).
4. Tighten the lockscrew (item 1, fig. 4) and lock the jam nut on it.
5. Recheck the final jaw gap dimension.

JAW GAP AT ELECTRICAL CUT--OFF

The jAW GAP AT the electrical cut-off shall be 0.140". Adjust the electrical cut-off in the following manner, with the power OFF :

1. Connect a continuity meter to the wires on the cut-off switch.
2. Place a 0.140" gage between the jaws. The jaws must hold the gage in place.
3. Turn the adjustment screw (item 4, fig. 4) as required to just break the circuit with 0.140" gap. (Cw reduces the gap; CCW increases the gap.)

ENGINEERING ADJUSTMENT SUMMARY MODEL DBW - 15	1434 7 11	NUMBER 120789-2

WELD UPSET FORCE:

The upset force shall be from 10 to 12 lbs. when measured at the movable jaw with the upset force selector set for the narrowest width band. The approximate locations of the upset force adjustment screw (item 6, fig. 4) is with the back end of the screw flush with the cost jaw surface. The final adjustment is made in the following manner:

1. Disconnect the weld lever return spring (item 6, fig. 4).
2. Disconnect the jaw upset spring.
3. Bend the transformer lead that attaches to the movable jaw so that when it is connected it will just urge the jaw to its fina1 jaw gap position.
4. Reconnect the jaw upset spring.
5. Attach a spring scale to the movable jaw and with it, manually pull the jaw to its maximum open position, (approximately 15/32”).
6. Gradually release the pull on the scale. Note the reading when the jaw just starts to move.
7. If the spring scale reading at this point does not fall in the required range (10 to 12 lbs.) the upset force adjustment screw must be reset, (item 6, fig. 4).
8. To re-set the screw, disconnect the jaw upset spring (item 7, fig. 4) and turn the screw, as required.
9. Replace the jaw upset spring and re-check as in steps 5 and 6.
10. Replace the weld lever return spring.

Prepared by: Roger Harris Approved: [signature] Date: 7-31-69

REVISIONS

120789-2

WELD LEVER DRAG SPRING

The weld lever drag spring (item 1, fig 5) serves two functions: First, the upper corner acts as a detent to locate the movable jaw for annealing band; and second, the force exerted by the spring against the weld lever provides the frictional drag to held the lever at any of the several required initial jaw gap settings for welding. This allows the operator to clamp a blade in the welder or adjust the upset force selector without disturbing jaw gap setting.

The spring is mounted on the band width escutcheon, (item 2, fig. 5). (Both are secured by two screws.) It is adjusted by shimming between the escutcheon and the spring. Shim as required to obtain both objectives. Shims under either top or bottom screws will effect function, however, the top shim (item 3, fig. 5) usually is used to establish detent, and the bottom shim (item 4, fig. 5) to establish frictional drag.

MAXIMUM JAW GAP

With the weld lever in the anneal position, (as located by the detent of the drag spring) and the upset force doctor in its widest position, turn the jaw gap adjustment screw (item 3, fig. 4) to obtain 15/32" jaw gap. Lock the adjustment in place.

Prepared by: Roger Harris Approved: Date: 7-31-69

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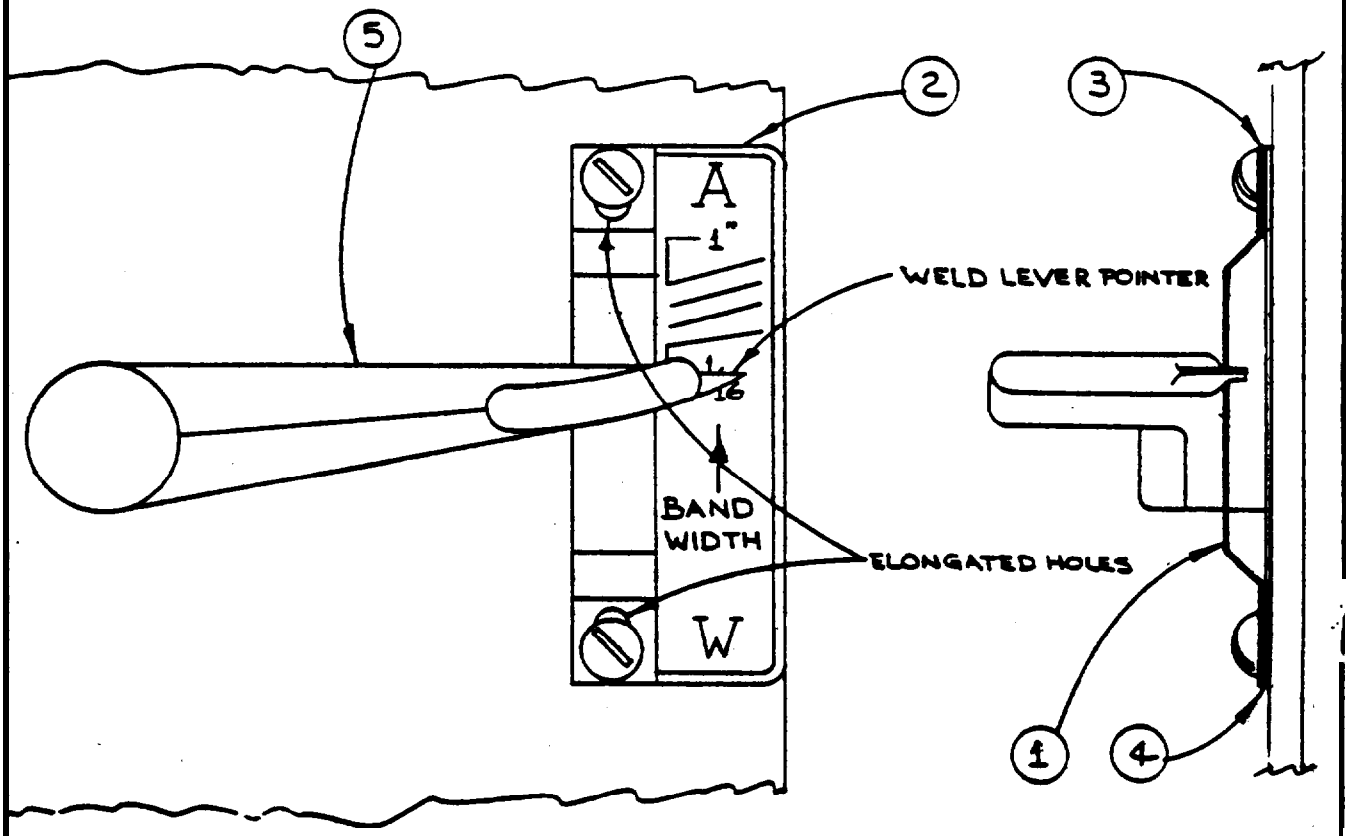

FIG. 5

1. Drag spring
2. Escutcheon
3. Top shim
4. Bottom shim
5. Weld lever

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WELD LEVER must be calibrated in the following manner:

1. The weld lever drag spring must be properly shimmed as described above.

2. Loosen but do not remove the two screws that secure the spring, shims and escutcheon.

3. Place a 0.150" gage between the jaws and bring the weld lever down, so the jaws just touch the gage.

4. Move the escutcheon (note elongated holes fig. 5) so the weld lever pointer indicates the narrowest position (the bottom line on the escutcheon that also corresponds with 1/16" band - note fig. 5) and then tighten the two screws.

BLADE ALIGNMENT GUIDES

The blade alignment guides are used to maintain tooth edge alignment of the wide of the band being welded. Before installing the band guides, check their mounting surfaces on the welder jaws. These surfaces must be in line within 0.004", when checked with a straight edge. A file may be used to bring the surfaces in line. The guides are aligned to protrude below the band clamping surface of the welder jaws by 0.025" (fig. 6). Adjust in the following manner:

1. Loosen the screws holding the Band Guides to the jaws.

2. Insert a section of 1" x0.035 ga. band into the welder jaws. The band must be out of the jaws (teeth extend in front of alignment guides by at least 3/16") as shown in fig. 6.

3. Place a 0.025" shim on top of the band, but within the jaw clamping area.

4. Clamp the jaws.

5. Adjust the Band Guides so they touch the ride of the 1" x 0.035 band and lock in place.

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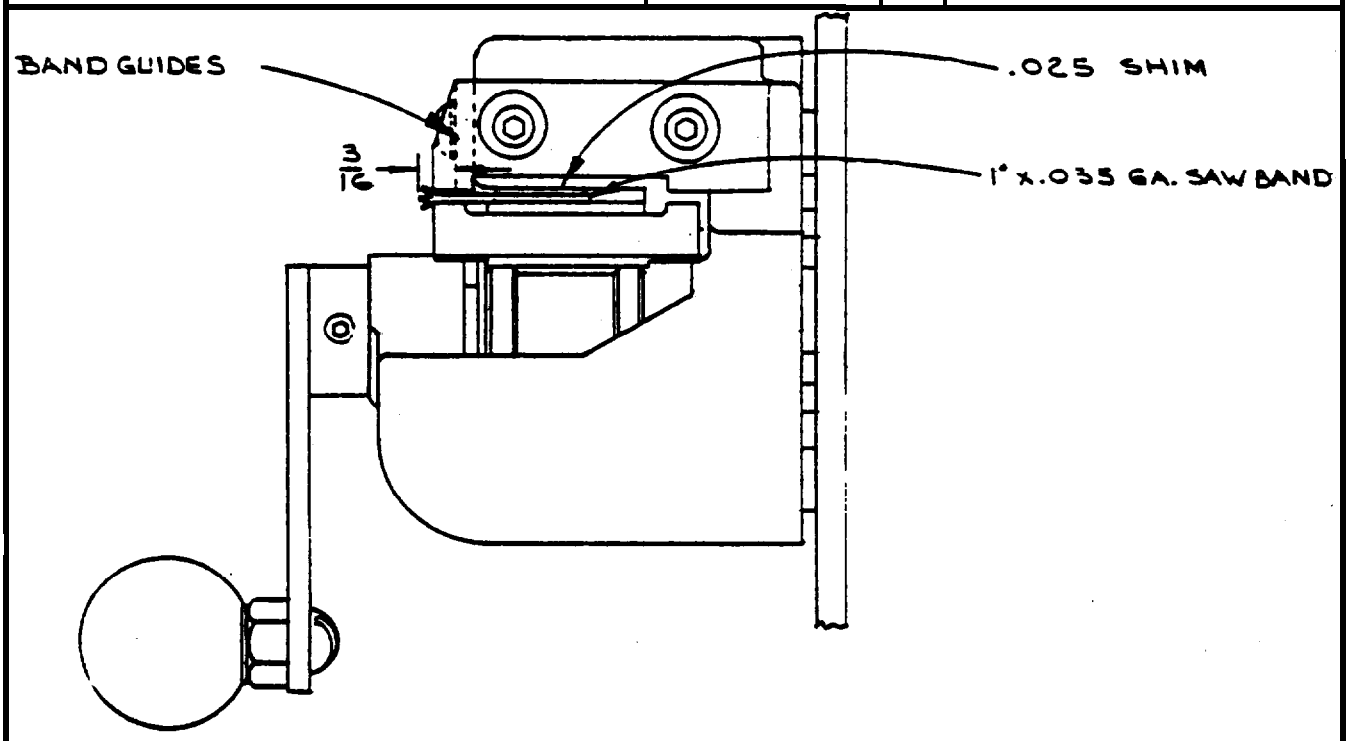

FIG. 6

FINAL JAW ALIGNMENT

A weld must be made in 1" x0.035 ga. Imperial band in order to check the final alignment. The finished weld must be within 4% of the band gage. The both edge of the hand must be straight within (0.004" in 4" measured 2" on either ride of the weld. To make this weld:

1. Set the jaw upset force knob to its maximum wide position.
2. Set the initial jaw gap by adjusting the position of the weld lever. It must be set to the line indicating the widest width.
3. Make the final jaw alignment adjustment as required to result in the tolerances listed.

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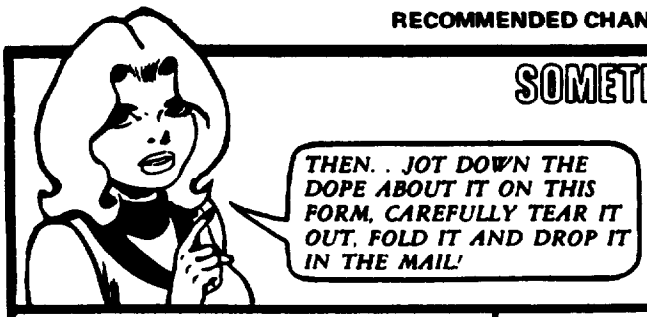

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