
FACE TOOTH SHARPENER

TALON F-4



OPERATOR'S MANUAL

MADE IN THE U.S.A.

F-4 FACE TOOTH SHARPENER

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F-4 FACE TOOTH SHARPENER

TALON WARRANTY

This machine is warranted against defects in workmanship and materials under normal use and proper maintenance, for three years, or 3 million cycles, after date of purchase from WRIGHT MACHINE TOOL CO. Any part which is determined to be defective, and is returned to WRIGHT MACHINE TOOL CO. (shipping costs prepaid) will be repaired or replaced, at the option of WRIGHT MACHINE TOOL CO.

WRIGHT MACHINE TOOL CO., INC
365 Palmer Avenue
Cottage Grove, Oregon 97424

Phone (541) 942-3712
Fax (541) 942-0730



F-4 FACE TOOTH SHARPENER

GENERAL SAFETY RULES

Failure to follow the Safety Rules and other basic precautions, may result in serious injury.

Always use eye protection: When operating this machine, eye protection should be worn. Grinding particles and the possibility of wheel breakage make eye protection necessary. Also face or dust mask if operation is dusty. Use adequate ventilation.

Use ear protection: If operation is creating excessive noise.

Disconnect power: To machine when NOT in use.

Keep clear: Of grinding wheels and pinch points when machine is running.

Saws are sharp: Wear appropriate personal protective equipment when handling saw blades.

Mounting of wheels: Should only be done by persons with mechanical aptitude and good knowledge of mounting, care, and inspection of grinding wheels. Wheels must be rated for the RPM of the machine.

Dress properly: Do not wear loose clothing or jewelry. Non-skid foot wear is recommended. Wear protective hair covering to contain long hair.

Avoid dangerous environments: Don't use in wet location. Keep work area well lit. Do not use this machine in the presence of flammable liquid or gasses.

Keep children away: Do not let VISITORS contact this machine.

Keep work area clean: Cluttered areas invite accidents.

All electrical covers: Must be in place before applying electrical power to this machine. Electrical service must be locked out prior to removing any electrical covers or machine guards. Access to electrical components must be restricted to trained personnel only to avoid possible electrical shock.

No Magnetic Devices Near the Operator Interface): The touch panel Operator Interface contains internal circuitry along with an LCD Display that is sensitive to high magnetic fields. There must be a minimum distance of 2 meters from any magnetic device and the operator interface.

Voltage greater: Than specified on name plate can result in serious injury to user.

Never stand on this machine: Serious injury could occur if the machine is tipped or if the grinding wheel is accidentally contacted.

Follow safety precautions: For wheels, coolant and material being ground. These items must also be compatible. This information is available on the Safety Data sheet for each of these products.



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COOLANT SAFETY

Proper coolant maintenance will increase grinder life and grinding performance, and possibly reduce any risks associated with health concerns. Lack of proper coolant maintenance can result in increased exposure to grinding grit, bacteria, and other by products of grinding that may lead to increased skin sensitivity in some individuals.

WARNING!

Coolants used in this machine must be designed to be used in wet grinding operations. Do not use automotive coolant. Check with the manufacturer of the coolant to make sure it is designed for use in wet grinding of saws.

Water based coolants are designed to operate at precise mixture ratios. Check with the manufacturer of your coolant to determine the proper mix ratio.

CAUTION

Residual cleaning solutions on the saw will easily be dissolved into the coolant tank and can dramatically affect the chemistry of coolant which can significantly reduce wheel life, coolant efficiency, and corrosion efficiency.

Maintain the coolant filters that were shipped with this machine. If you have any questions on how to maintain the filters, call the factory at
1-541-942-3712

Test your coolant at regular intervals. Contact the manufacturer of your coolant to determine when to test, and which tests to perform.

Warning signs of improperly maintained coolant:

1. Strong (foul) odor coming from the coolant.
2. Color change in the coolant.
3. Noticeable stickiness on the saw.
4. Rust developing on the machine and/or saw steel.
5. Unexplained skin rash.

If you detect any of these warning signs consult the coolant manufacturer at once. If you are having trouble contacting the coolant manufacturer, call Wright Machine Tool Co. Inc. at 1-541-942-3712



F-4 FACE TOOTH SHARPENER

SPECIFICATIONS

TALON F-4 Automatic Face Tooth Sharpener for Circular Saws. Featuring up to 15 degree A.F.B./Skip-Tooth sharpening.

STANDARD VOLTAGE:	230 Volt, 3 Phase, 50/60 HZ
OPTIONAL VOLTAGE:	440 Volt, 3 Phase
SHIPPING WEIGHT:	1,500 lbs / 680 kg
CRATE SIZE:	L 48" X W 52" X H 54"
AIR REQUIREMENTS:	2 CFM at 80 psi / 6 bar
STANDARD SAW SIZE:	4"-34"/ 102mm-864mm - Automatically
SPINDLE MOTORS:	(1) 2hp Motor
STANDARD RPM:	3450 RPM
OPTIONAL RPM:	As Requested



F-4 FACE TOOTH SHARPENER

FEATURES

The Wright Machine Tool "TALON F-4" sharpens the face of circular saws. Heavy duty construction increases accuracy, productivity, and machine life. Improved saw sharpening accuracy is accomplished through lift off grind on return stroke, precision multi-bearing spindle, heavy duty slide system, 2 horse power drive motor, and a massive construction design. Advanced PLC error detection virtually eliminates the destruction of grinding wheels. The "TALON F-4" can sharpen saws ranging from 4" to 34". Tooth pitch is automatically detected, eliminating complex setup adjustments.

The "TALON F-4" features include*:

- *Filtered Full Flood Coolant*
- *Automatic Shut Off when saw is finished*
- *2 Low Voltage Work Lights*
- *2 HP Spindle Motor*
- *Dual Pressure Saw Clamp*
- *Precision Spindle*
- *Lift-Off Grind*
- *Advanced PLC Error Detection*

Notice

TALON F-4 series products and the information in this user guide are the proprietary property of Wright Machine Tool Co. Inc. or its licensors and may not be copied, disclosed, or used for any purpose not expressly authorized by the user thereof.

Wright Machine Tool Co. Inc. is constantly seeking ways to improve its entire product line of machinery, and therefor reserves the right to change this manual and hardware mentioned therein at any time without notice.

In no event will the provider of this equipment be liable for any incidental, consequential, or special damages of any kind or nature whatsoever, including but not limited to lost profits arising from or in any way connected with the use of the equipment or this user manual.

SAFETY FIRST!

*Specifications and availability subject to change without notice.



F-4 FACE TOOTH SHARPENER

OPTIONS

Totalizer Counter	W-70
Large Saw Option	W-2862-2
Borazon Grinding Wheel	B-51 (1 Required)
Diamond Grinding Wheel	D-51 (1 Required)

COMMON REPLACEMENT PARTS

Fixed Clamp Jaw	W-2830
Movable Clamp Jaw	W-2830-1
Index Finger	W-2867-1



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PRE SET UP (COOLANT)

Coolant capacity is 10 to 15 gallons. A rust inhibiting grinding coolant **MUST** be used or severe rust damage to machine can result. Mix coolant according to manufacturer's instructions.

COOLANT FILTERS: Clean coolant will increase grinding wheel life, improve grind finish and increase removal rates. Change coolant filter as necessary. Part # W-591.

RUST DAMAGE IS NOT COVERED BY THE WARRANTY MOUNTING GRINDING WHEELS

All grinding wheels must be rated for the RPM of this machine. Wheels exposed to higher than rated RPM are dangerous.

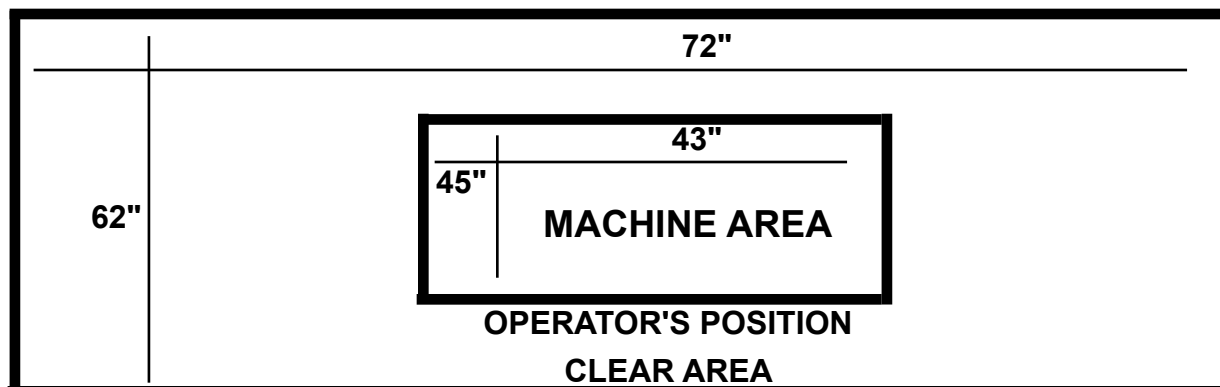
Mounting of the grinding wheel should only be done by persons with mechanical aptitude and good knowledge of mounting, care, and inspection of grinding wheels.

All grinding wheels must be rated for at least 3,450 RPM or the RPM of your machine, which ever is greater. For Carbide, 1 D-51 Diamond Wheel is required. For Stellite^(R) / High Speed Steel, 1 B-51 Borazon Wheel is required.

MACHINE INSTALLATION

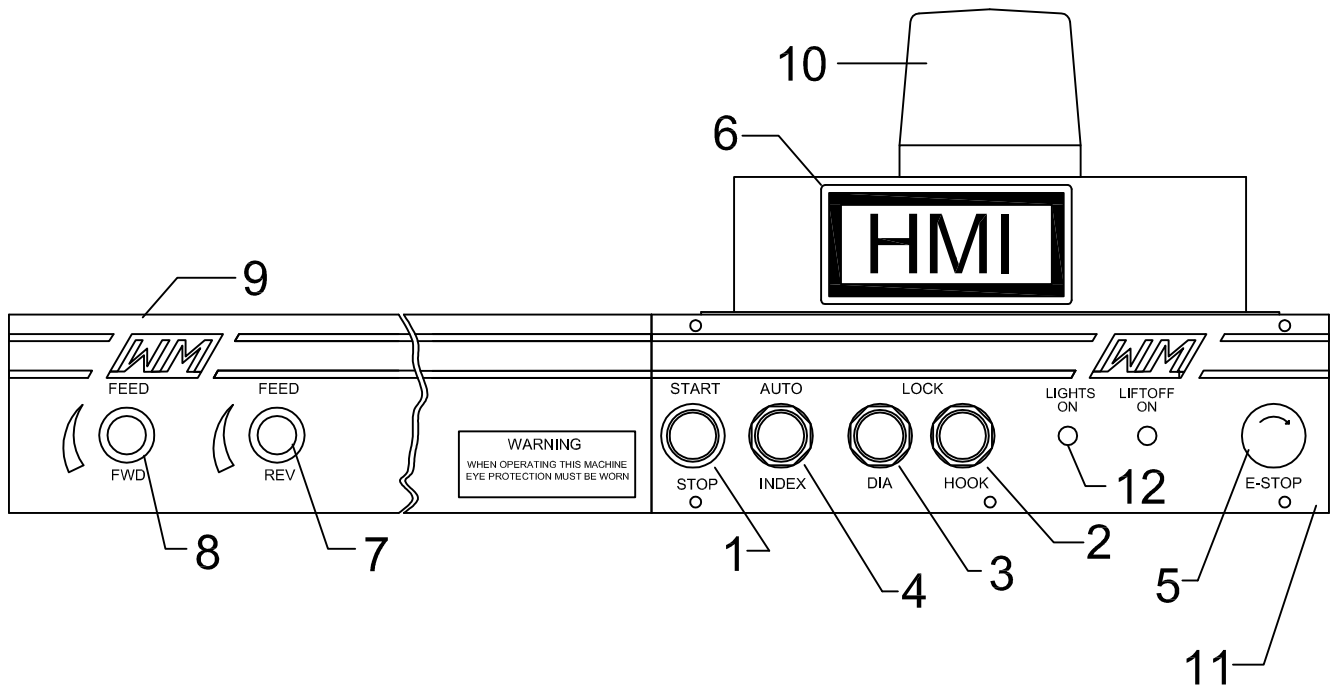
Lifting this machine should only be done with a fork lift under Machine bottom. Machine weight is approximately 1,500 pounds.

RECOMMENDED FLOOR SPACE FOR MACHINE AND OPERATOR



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CONTROLS

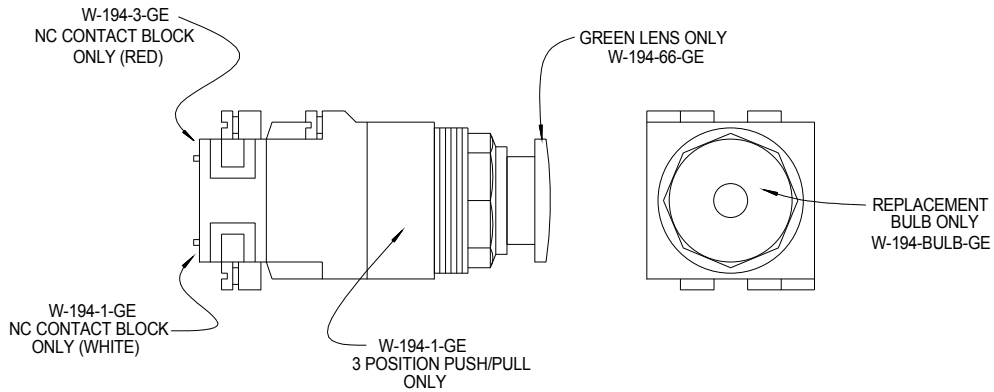


Part Number	Description
1. W-194-4-GE	Start / Stop Switch
2. W-2832-1 & W-2832-2	Hook Lock Button and Lens
3. W-2832-1 & W-2832-2	Saw Diameter Lock Button and Lens
4. W-735-GE	Control Joy Switch
5. A-5680(2)A-6705	Emergency Stop Contact Block
6. W-3061	IDEC Interface
7. C-5600	Reverse Feed Speed Knob
8. C-5600	Forward Feed Speed Knob
9. W-2806-FM	Left Control Panel
10. A-5945 & A-5945-1	Monitor Light and Bulb
11. W-2805-FM	Right Control Panel
12. W-193/W-1497	Toggle Switch

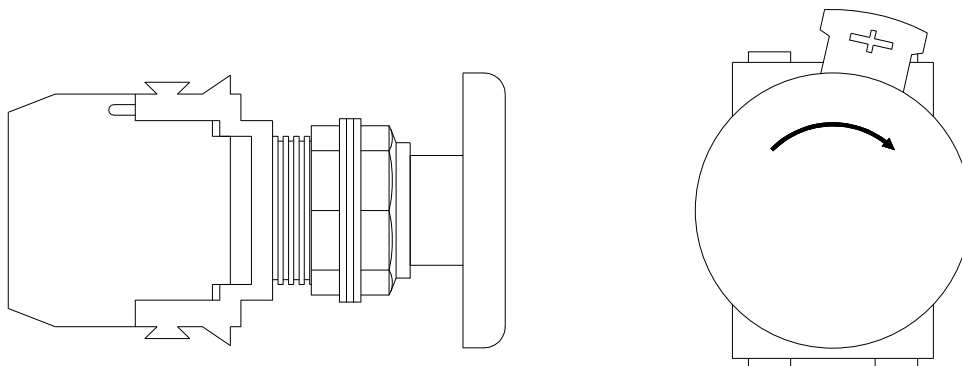


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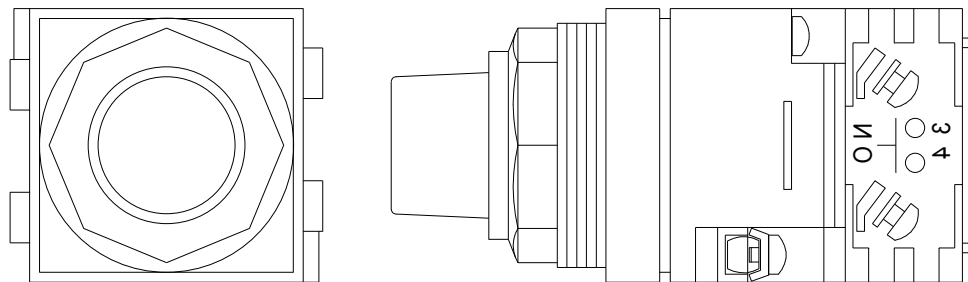
PUSH / PULL : START / STOP BUTTON - W-194-GE



EMERGENCY STOP (PANIC BUTTON) - A-5680 CONTACT BLOCK (2)A-6705

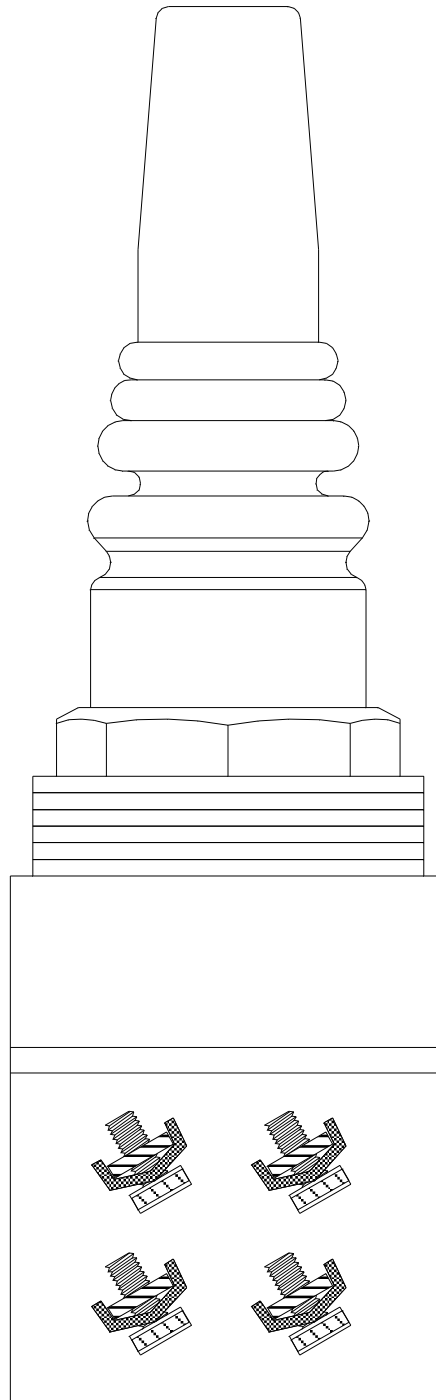


HOOK LOCK & SAW DIAMETER LOCK BUTTONS (2) W-2832-1 & (2) W-2832-2 WITH LENS



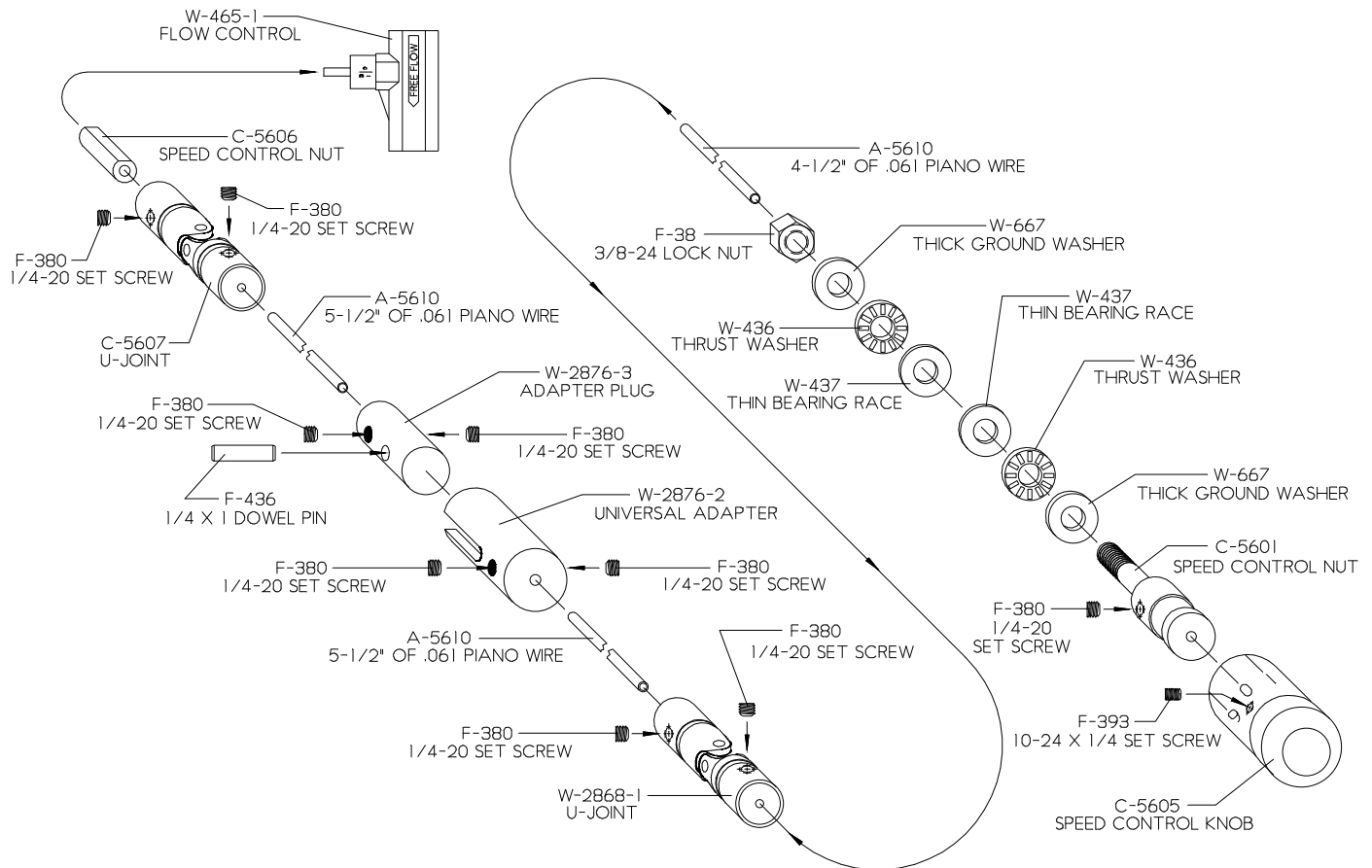
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CONTROL JOY SWITCH - W-735GE



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SPEED CONTROL KNOB ASSEMBLY



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CONTROLS

1. Start / Stop Switch...

- A. Starts motor
- B. Reverses motor direction and changes left to right bevel in A/P or combo bevel.
- C. Turn on and off coolant.

2. **Hook Angle Lock:** "HOOK". Light on to lock. Light off to adjust HOOK angle. Light is automatically on when joystick is in AUTO.

3. **Saw Diameter Lock:** "DIA". Light on to lock. Joystick must be out of AUTO and start/stop off. Light is automatically on when joystick is in AUTO.

4. Control Joystick...

- A. Moves head in for set up (Lock and Start buttons must be off).
- B. Moves head in when held to left.
- C. Moves head out when held to right.
- D. Index puts saw into position for grind.
- E. Auto puts machine into automatic cycle.
- F. Joystick to right when start button is off will move index finger out after 3 seconds.

5. **Emergency Stop:** Push to disconnect power to electrical system. Turn clockwise to reconnect power.

6. **OP-3 INTERFACE:** Use for setup and changing parameters.

7. **Reverse feed speed:** Use for adjusting the feed reverse speed.

8. **Forward feed speed:** Use for adjusting the feed forward speed. Adjust for differing amounts of material removal.

9. **Left Control Panel:** N/A

10. **Monitor Light:** The machine's monitor light will signal when the machine stops it's automatic cycle. The first minute down, the light blinks on for 1 second, of 3 seconds. At 2 minutes it flashes on for 1 second, off for 1 second. At 3 minutes it flashes on for 1 second, off for 1/3 second. At 4 minutes the monitor light stays on. To turn the monitor light off, restart the machine, or move the joy switch out of automatic. The machine monitor also reminds you when routine maintenance is needed. At 100,000 cycles the monitor light flashes on for 10 seconds off for 1 second. To reset after maintenance is completed, push the start/stop button in and hold the joy switch in the index position for 10 seconds.



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SETUP PROCEDURES

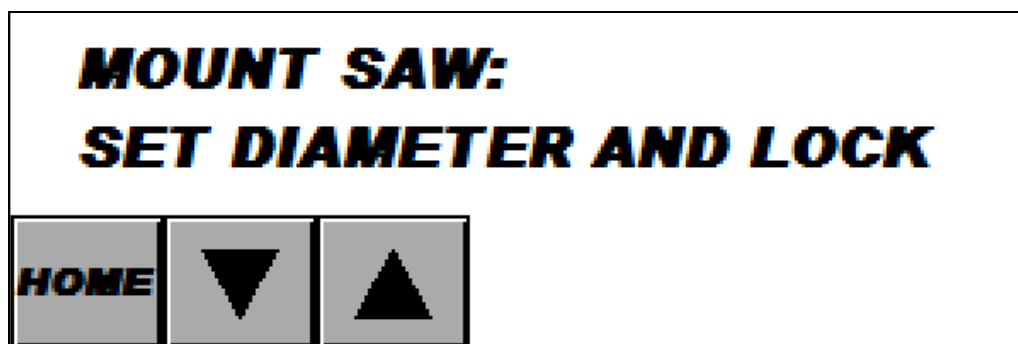
1. Apply power and air to the back of the machine.
2. Release the e-stop.
3. The touch screen will boot up to the following screen:



4. Pressing the button accesses the following screen:
5. With the lock push buttons off and no saw in place hold the joystick right until the finger retracts and stops.



6. Pressing the down arrow moves the operator to the following screen:



7. Mount the saw onto saw center bushing on the saw slide.
8. Align the carbide tooth face against the diamond wheel face. Adjust saw slide for proper saw diameter being sure that the diamond wheel



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does not hit the bottom of the gullet or the back of the next tooth. Push the "DIA" lock button when the saw is set. The button will light up.

9. Press the down arrow to continue the setup:

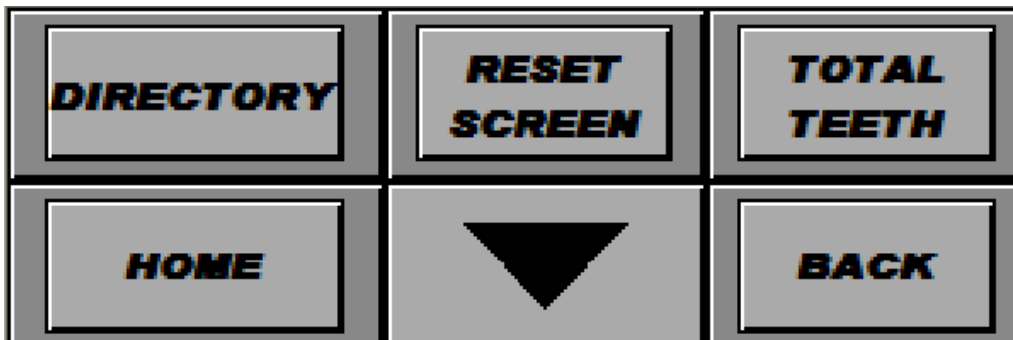


10. Adjust the hook angle by using the hook scale located under the clamp assembly. Once the hook is set push the "HOOK" lock button. The button will light up and the head will retract back to start position. The screen should now show the current program.



11. The current program is displayed on the upper left hand corner of the display while the home button takes the operator to the original boot screen.

12. Press the down arrow to continue if continued setup is required.

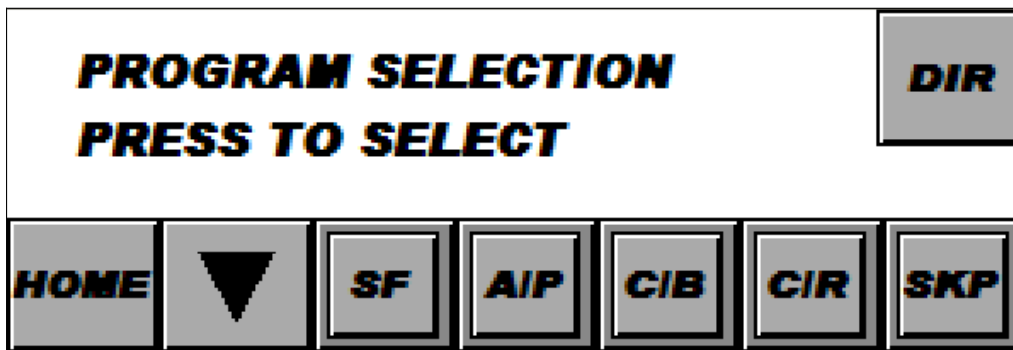


13. The Directory button allows access to the following:



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- Machine specifications
 - Machine settings
 - Program selection
14. The Reset screen button allows access to screens used to keep track of tooth and wheel counts. The following screens are accessed here:
- Teeth Since Last Shift
 - Teeth Since Last Maintenance
 - Wheel Wear Reset
 - Total Teeth Ground (display of the total teeth ground on the machine)



15. SF = Standard Flat (grinds flat face only). The total number of teeth on the saw needs to be entered on the touch screen.
16. A/P = Alternate or Pattern (face only). The number of lefts, rights and total teeth must be entered on the touch screen.
17. C/B = Combo Bevel (grinds the face of bevel teeth only). The number of consecutive rights and lefts and the number of tips between rakers must be entered on the touch screen as well as the total teeth on the saw. If the saw is a broken pattern toggle the button on and choose whether to begin on the left or right.
18. C/R = Combo Raker (grinds the face of raker teeth only). The number of tips between rakers and the total teeth on the saw must be entered.
19. SKP = Skip (saws with and index pitch greater than 4.250" must use dual feed finger option). The total number of teeth on the saw needs to be entered on the touch screen.
20. Pull the green start button to turn on the motor and coolant pump. Pull the green start button again toggles the pump off.
21. Use the joystick to index the tooth into position.
22. If in A/P or C/B mode then the green start button will reverse motor and switch from left to right bevel.
23. Move the joystick to the left for the head to move in. Move the joystick to the right for the head to move out. For fine tuning of the hook angle the head must be out and the joystick in the center position.
24. Use h-1 infeed adjustment for amount of carbide removal. Also use h-2 for infeed on alternate face saws.
25. If flat grind use 0° angle washer h-6. If and alternate bevel then select desired washer.
26. Test grind tooth if setup is ready and put joystick into auto.
27. The DIR button accesses the following Directory screen:



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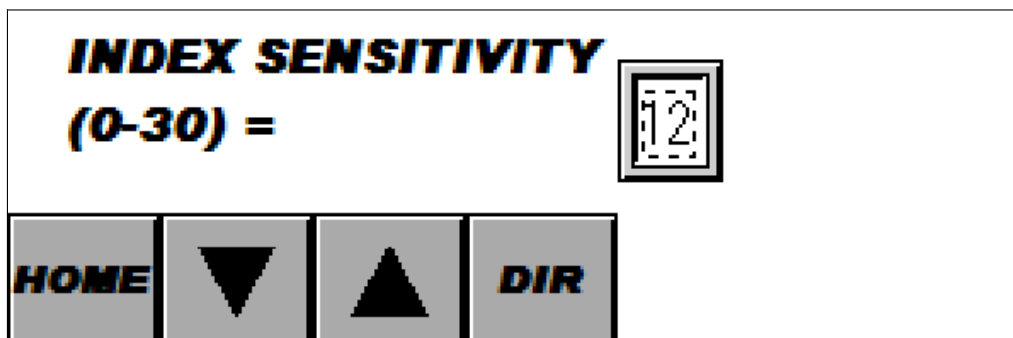


SENSITIVITY ADJUSTMENTS

1. Stop the machine by pressing the green on/off button.
2. Put the joystick in the center position.
3. From the directory screen press the Settings button.



4. LOWER NUMBERS ON SPINDLE SENSITIVITY MAKE THE SPINDLE MORE SENSITIVE. Spindle sensitivity is disabled by entering "0" in this screen. Pressing the down arrow allows access to Index Sensitivity.

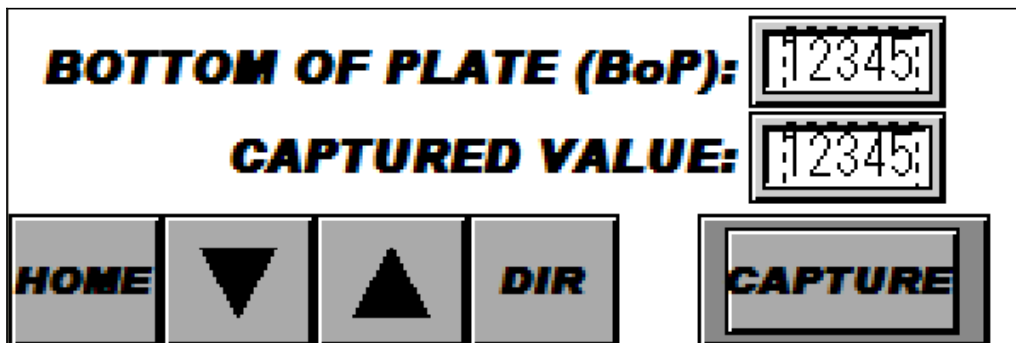


5. LOWER NUMBERS ON INDEX SENSITIVITY MAKE THE INDEX MORE SENSITIVE. Index sensitivity is disabled by entering "0" in this screen.

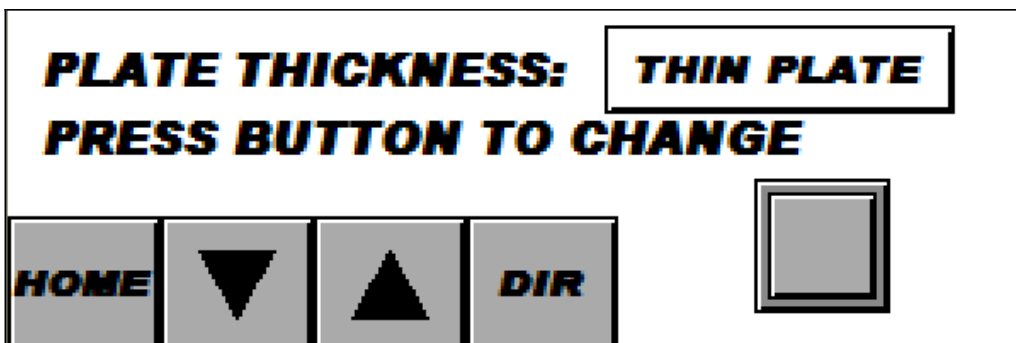


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6. Pressing the down button allows access to the Bottom of Plate adjustment.



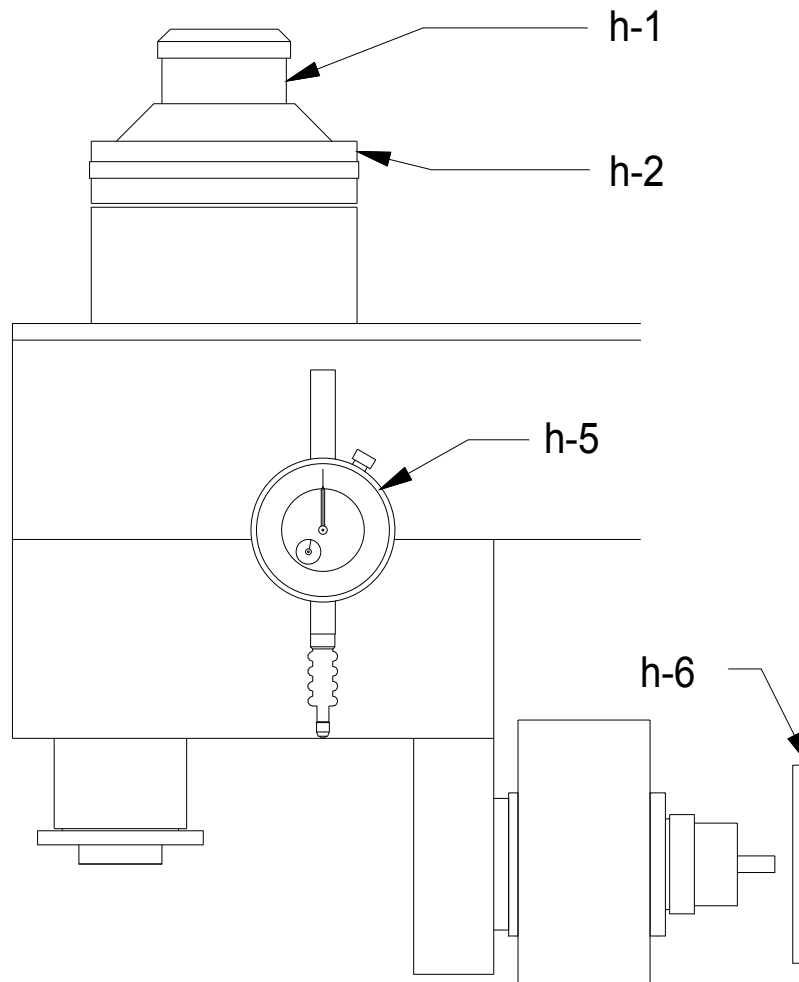
7. The current Bottom of Plate value is displayed as well as the captured value. To capture a new value place the saw plate on top of the index finger and push the plate against the fixed clamp jaw. The index finger will now be pushed down and the Bottom of plate value will climb. Hold the plate down firmly and press the capture button. The captured value should read between 40 and 60. If the plate number is too low loosen the set screw in front of the finger and raise the finger up. Retighten the screw. This will increase the BOP number.
8. Pressing the down arrow allows access to the Plate Thickness screen.



9. Pressing the button selects Thin or Thick Plate. This value allows for centering on alternate face bevel saws.

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GRINDING HEIGHT ADJUSTMENTS



h-1. Infeed moves grinding spindle (In-Feed) to compensate for wheel wear or wheel thickness.

h-2. Height 2, adjust for plate thickness.

h-5. Indicator.

h-6. Bevel angle adjustment. 0° to 15° , storage located inside door on left side of machine base.

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ADJUSTING ERROR SENSITIVITY

NOTE: With no user input for more than about a minute, the COROS OP3 operator interface will revert to the previous screen. If this happens, proceed from step 4 to continue.

1. Stop the machine by pressing the green on/off button.
2. Put joystick in center position.
3. On the COROS OP3 operator interface (OP3) press the red "ESC" button located in the upper right corner of the unit.
4. On the OP3 press the yellow "ENTER" button located in the lower right corner of the unit.
5. On OP3, push the blue arrow key down until "shift 2" to directory screen shows then simultaneously press the "shift key" and "2" button to go to directory.
6. On the OP3, push the blue down arrow key until the blinking cursor is on "07 Settings"
7. On the OP3, push the yellow "ENTER" button.
8. **Spindle sensitivity** is now displayed. LOWER NUMBERS ON SPINDLE SENSITIVITY MAKE THE SPINDLE MORE SENSITIVE. If no sensitivity adjustment is required, skip to step 9. Sensitivity can be adjusted by pushing the number keys then pressing "ENTER". **Spindle sensitivity is disabled by entering "0" in this screen.**
9. Use down blue arrow button to scroll down to Index sensitivity.
10. **Index sensitivity** is now displayed. LOWER NUMBERS ON INDEX SENSITIVITY MAKE THE INDEX MORE SENSITIVE. If no sensitivity adjustment is required, skip to step 11. Sensitivity can be adjusted by pushing the number keys then pressing "ENTER". **Index sensitivity is disabled by entering "0" in this screen.**
11. The values that are displayed on the OP3 are the current values stored in the PLC. The blinking cursor on either of the sensitivity values indicates the sensitivity values that will be used, whether they were changed or not. Resume grinding operations when ready.



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MAINTENANCE

Care should be taken when control console or rear cover is removed as not to allow any grinding grit to enter.

Coolant tank should be completely cleaned every 6 months. Remove all sludge from bottom of the tank.

All bare metal surfaces should be cleaned and oiled regularly.

Grease all zerk fittings (3) every 3 months (hook shaft, hook pivot block, lead screw at spindle attach block.)

Keep central lube reservoir full and change filter every year.

TROUBLE SHOOTING

- 1. Coolant does not flow when switch is on:**
 - a. Check to be certain coolant is in the tank.
 - b. Is valve open.
 - c. Blow air through the nozzle to clean obstruction.
 - d. Coolant pump defective.
 - e. Check relay ; plugged in or defective.
- 2. In automatic , index stays full forward and does not return :**
 - a. Index proximity needs to be adjusted.
- 3. Machine does not start and blue light flashes on/off pattern :**
 - a. Routine maintenance must be done. After servicing machine hold joystick to "Index" and hold "Stop" button in for 10 seconds thus resetting the maintenance counter.
- 4.**
 - a. Operating machine at too fast a speed for the amount of carbide to be removed can result in poor finish and carbide damage.
- 5. In automatic, heads stop full forward and does not return:**
 - a. Feed forward proximity switch is not tripped, check and adjust if needed.
- 6. In automatic, head grinds first tip and then does not index:**
 - a. Feed reverse proximity switch is not tripped, check and adjust if needed.
- 7. If index retracts more than one tooth then reset bottom of plate.**
past the side of the carbide.

HELPFUL HINTS

All saws should be measured with a micrometer to determine the saw plate thickness. Then each plate thickness should be marked on the plate with a marking pen, when using alternate mode.

When ready to grind the first saw be sure that the finger is centered and does not exceed past the side of the carbide.



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The useful life of this machine can be dramatically extended if the following rules of operation are followed...

1. Clean the machine regularly to avoid carbide buildup.
2. Leave all inspection covers closed and in place. Only open inspection covers during maintenance.
3. A good rust inhibiting coolant must be used in the correct ratio. Too weak a mix will cause rust problems and too thick will damage the paint and load the Diamond wheels.
4. When not in use leave the enclosure door open. This eliminates humidity build up in the enclosure. (Enclosure optional)
5. Do not clean the machine with high pressure air or water. This can blow grit into the internals of the machine and cause rusting problems which is not covered by warranty.

MAINTENANCE

DAILY

1. Check coolant level and filter.
2. Clean interior of machine.
3. Check oil level on central lube system.

WEEKLY

1. Check coolant tank for carbide buildup.
2. Replace coolant filters.

MONTHLY or 100,000 CYCLES

1. Grease hook pivot.
2. Inspect finger for wear.
3. Inspect clamp jaws and ramp for wear.

EVERY 6 MONTHS or 500,000 CYCLES

1. Inspect spindle drive belt.
2. Clean spindle motor fan.
3. Remove stainless splash guards and clean completely.
4. Inspect and clean central lube points for lubrication, linear slide system, bevel pivot, and spindle slide.
5. Inspect lube filter.

EVERY 24 MONTHS or 1,000,000 CYCLES

1. Replace spindle drive belt .
2. Inspect pulleys for wear.



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CENTRAL LUBRICATOR SYSTEM C-6060

Description

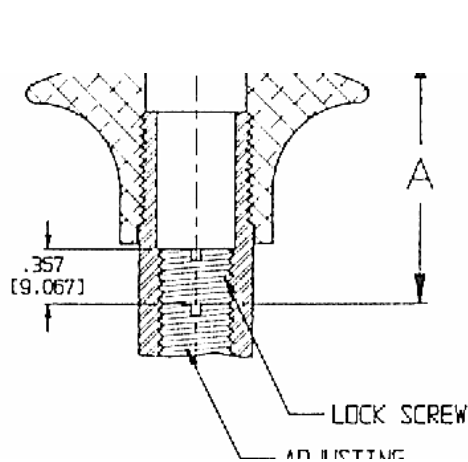
This unit pumps once every fifteen minutes of operation. To manually lubricate pull knob up . Lubricator is located at the rear of the machine.

Oil type	Way Oil HD220
Expected Consumption	Every three months (250 hours of operation)
Filter part #	A-6062
Inspect	6 months
Replace	12 months



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Discharge Volume Per Cycle: Adjustable from 2.5cc minimum to 5.0cc maximum. The lubricator is supplied at the maximum stroke setting. To reduce oil deliver, remove the lock screw, measure **A**, turn adjusting screw clockwise, increasing dimension **A** in the increment (corresponding to the desired discharge) as shown on Table.



dim. "A" ↓

IN.	DISCHARGE
.400	2.5cc
.320	3.0cc
.240	3.5cc
.160	4.0cc
.080	4.5cc
0	5.0cc

Filter Replacement: A filter at pump inlet protects the lubrication system and should be inspected every six months. If not clean, replace. To remove filter, pry out snap ring with screwdriver and remove filter discs and screens. To reinstall, insert in the following order: Filter disc support (coarse screen), filter disc screen (fine screen), filter disc, filter clamp ring and filter snap ring.

Motor Replacement: Remove motor cover and the motor mounting screws. To reassemble, be sure slot in motor shaft engages with pin in drive shaft before replacing screws. When ordering motor, see instructions included in drawing on front of sheet.

Maintenance: Check oil level daily and refill when required. Replace filter group annually or as frequently as necessary.



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FACE SHARPENING

ACCURACY PROBLEMS?

Is your saw plate clean?

If any pitch, flux or saw dust is on the sides of the saw plate, it can become lodged between the saw and the clamp jaw. This will force the saw to move away from the fixed clamp jaw.

Are your diamond wheels cutting freely?

Diamond wheels will not remove large amount of silver solder. The solder will melt and stick to the diamond particles in the grinding wheel. This makes it impossible for the wheel to cut freely.

To determine if the wheel is loaded, feel the back edge of the wheel with your fingernail. If there are any chips on this surface of the wheel, it indicates that the wheel is not cutting freely and therefore the grinding pressure is high enough that the rear of the wheel chips out.

If large amounts of silver solder are on the side of the tip, remove it with a 4-1/2 inch hand held grinder with paper grinding disk. This will remove the solder but leave the carbide undamaged. Grinding with loaded diamond wheels is very similar to shaving with a very dull razor. Also, the index will pick up solder on the side of the plate or tooth and can cause index error.

On the Face Sharpener it would take a grind side load of 25 pounds to deflect the grinding wheels .001. Therefore any deflection always occurs in the saw plate not in the grinding machine.

Are the proper diamond wheels being used?

(see wheel specification)

Are the saw's other critical dimensions accurate?

There are many things that effect face grinding tolerances in the saw plate such as O.D. run out, dubbed faces, hook angle variation, plate thickness variation, bumps, uneven tension, and bent teeth. You can not make an inferior saw into a quality saw by face grinding. To be extremely accurate on face grinding requires the rest of the saw to be at least reasonably accurate.

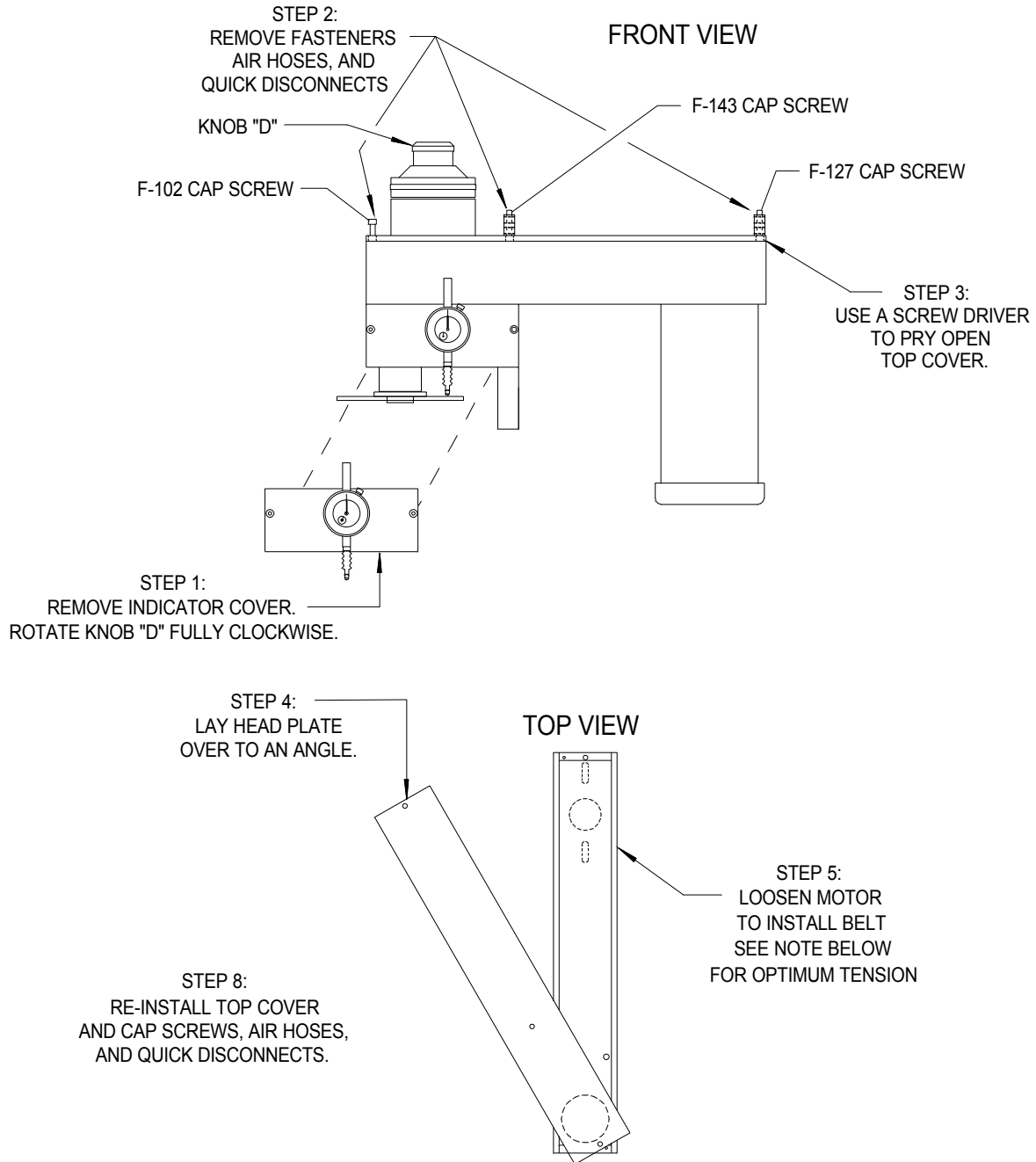
Any face grinder can grind accurately if reasonably maintained. Even the most expensive grinder will grind erratically if any of the preceding problems are encountered. In our experience less than 1/4 of the sharpening tolerances can be attributed to the sharpening machine.

If your face sharpening tolerances are still unacceptable, please call Wright Machine Tool Company and we will assist you with this problem.



F-4 FACE TOOTH SHARPENER

NOTE: DISCONNECT POWER FIRST! BELT REPLACEMENT INSTRUCTIONS

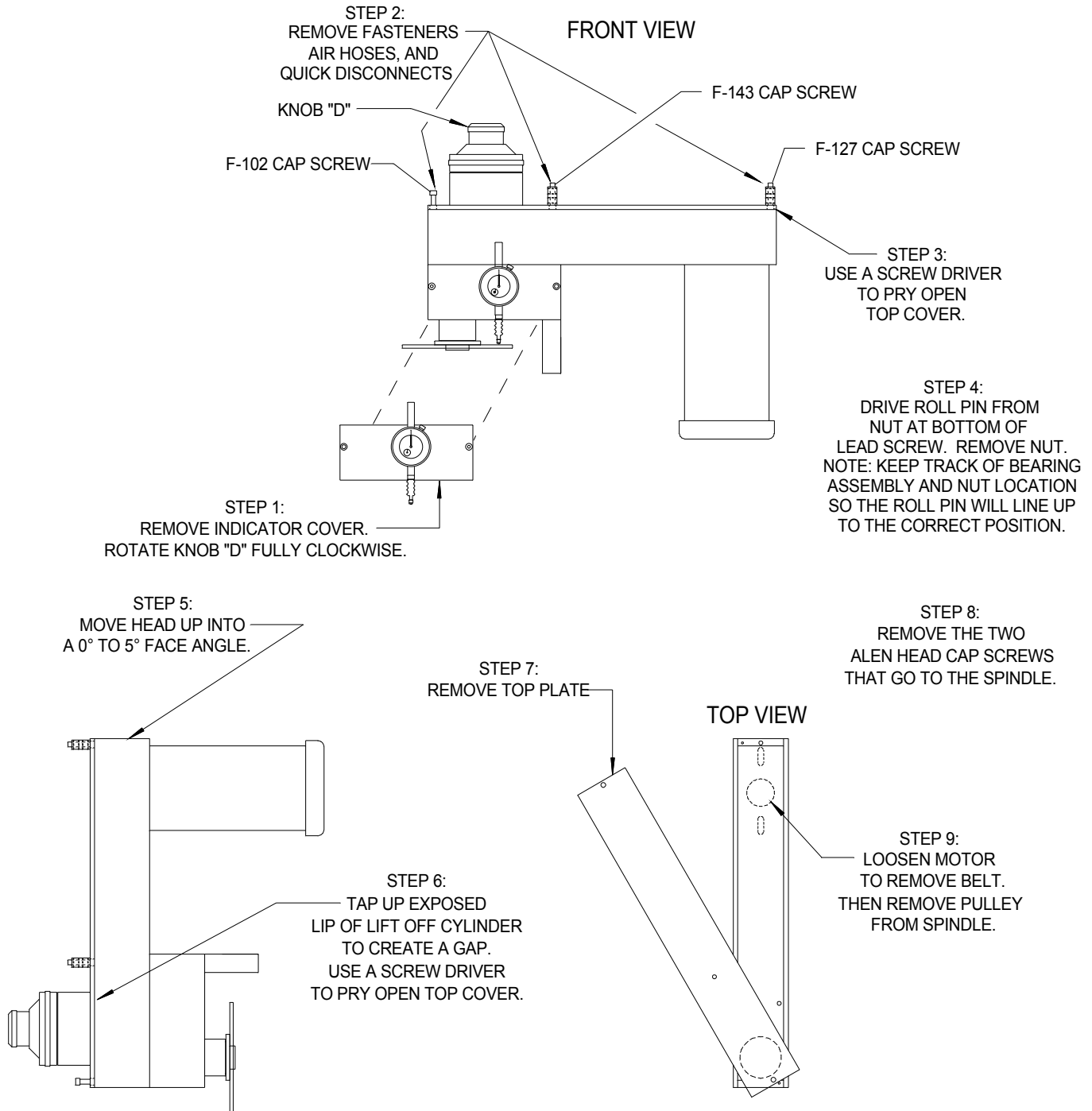


NOTE:
RUN MACHINE IN ALTERNATE. IF THE BELT
SQUEALS WHEN REVERSING THEN TIGHTEN BELT.
IF LIFT OFF DOES NOT FUNCTION THEN LOOSEN
BELT BY ADJUSTING THE MOTOR.



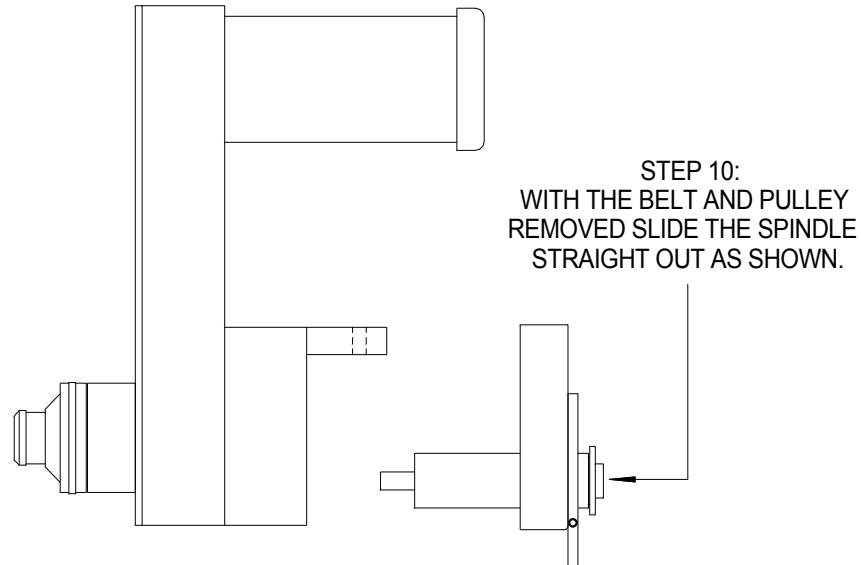
F-4 FACE TOOTH SHARPENER

NOTE: DISCONNECT POWER FIRST! SPINDLE REPLACEMENT INSTRUCTIONS

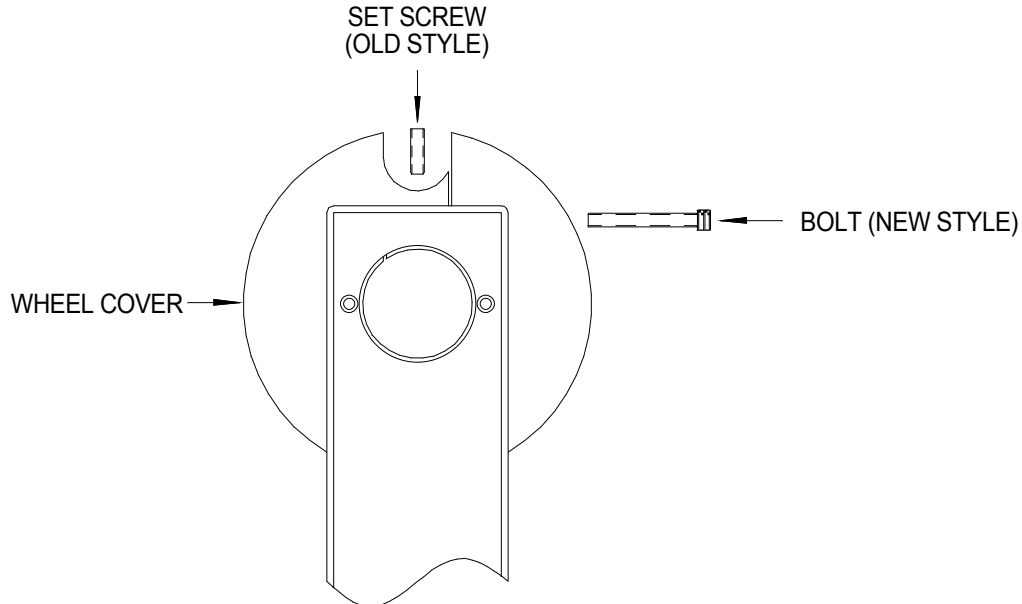


F-4 FACE TOOTH SHARPENER

NOTE: DISCONNECT POWER FIRST!
SPINDLE REPLACEMENT INSTRUCTIONS CONTINUED



INSTALL THE NEW SPINDLE IN THE SAME MANNER AS SHOWN IN STEPS 1-10.
 BE SURE THE BELT LINES UP IN BELT GROOVES ON THE MOTOR AND SPINDLE PULLEYS.

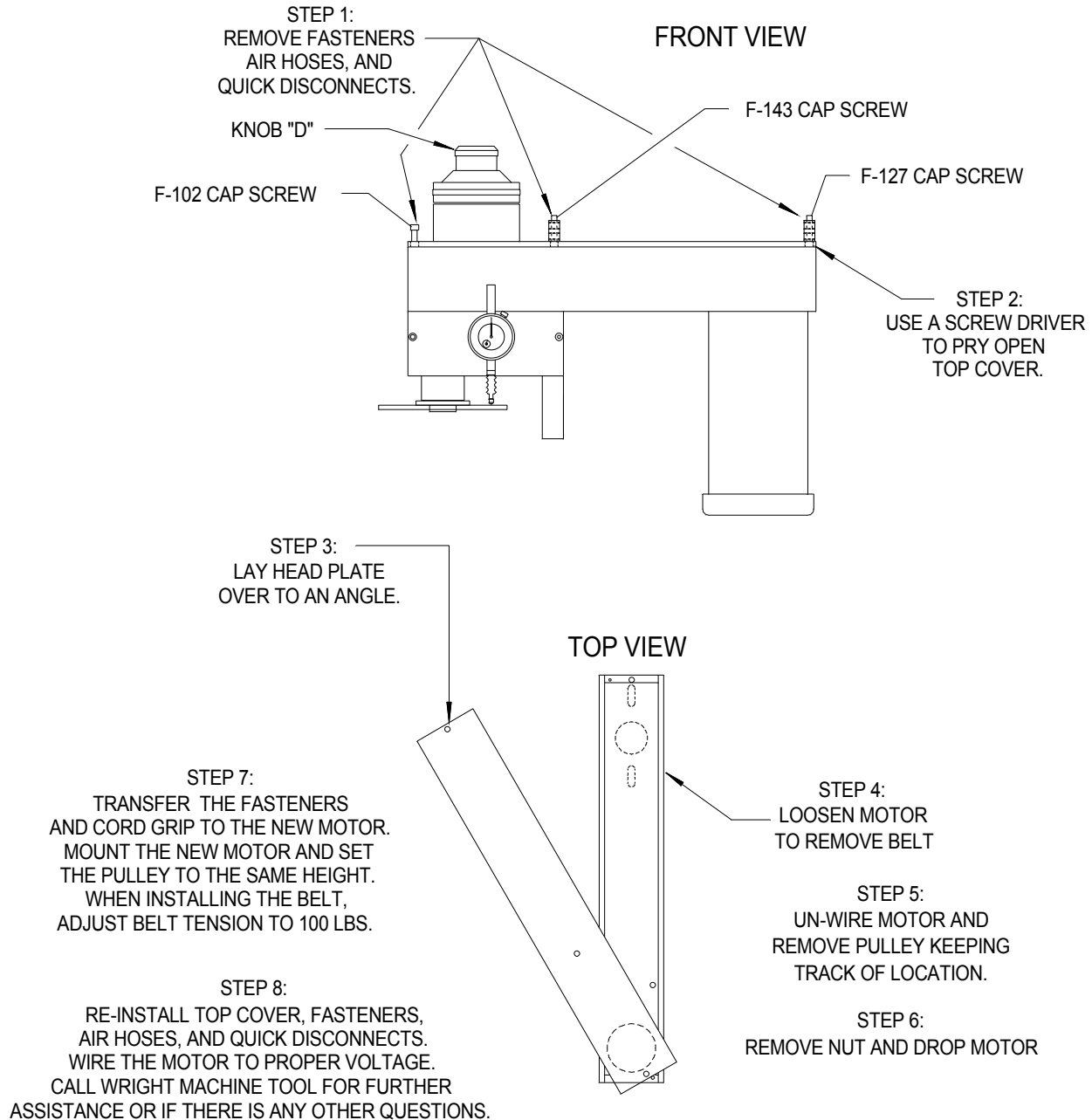


NOTE: ON THE WHEEL COVER SET SCREW - JUST RUNNING IT UP SNUG IS ALL THAT IS NEEDED.
 OVERTIGHTENED SET SCREW WILL HARM SPINDLE.
 ON LATER MACHINES THE SET SCREW WAS REPLACED BY A SPLIT GUARD AND SOCKET HEAD CAP SCREW.
 THE NEW STYLE SHOULD ONLY BE SNUG AND NOT OVERTIGHTENED.



F-4 FACE TOOTH SHARPENER

NOTE: DISCONNECT POWER FIRST! MOTOR REPLACEMENT INSTRUCTIONS



NOTE:
RUN MACHINE IN ALTERNATE. IF THE BELT
SQUEALS WHEN REVERSING THEN TIGHTEN BELT.
IF LIFT OFF DOES NOT FUNCTION THEN LOOSEN
BELT BY ADJUSTING THE MOTOR.



F-4 FACE TOOTH SHARPENER

ADJUSTING TENSION ON LIFT OFF LEAD SCREW

Begin by mounting the head top cover in a bench vise and lift off cylinder secured to top cover with two allen bolts (F-101). Insert lead screw (W-1368) through the assembly. Slip eight spring washers (F-68) on as sets of four, opposing one another. Spin anti-rotation nut (W-1358) onto the shaft and down tight. Back off nut approximately 1/16 turn. Check shaft pre-load, if tension is correct then transfer punch with 5/32 punch. Remove W-1358 nut, F-68 spring washers, and W-1368 lead screw. Drill punch marks with 1/8" drill to approximate depth of .200".

Assemble W-1368 lead screw, eight F-68 spring washers, and W-1358 nut. Tighten for correct tension and drive two roll pins (F-405) in place. Note: Lightly spread loctight onto the roll pins. The correct tension on the new lead screw assembly should be fairly tight to compensate for "break in".



F-4 FACE TOOTH SHARPENER

CONVERTING 220V TO 440V

WIRING CHANGE FOR MOTOR

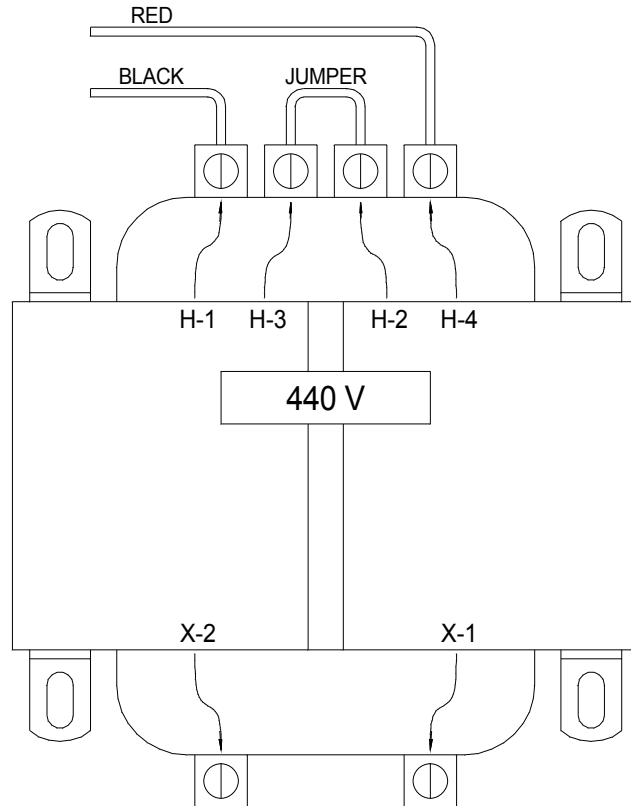
LINE 1 WHITE
 LINE 2 RED
 LINE 3 BLACK

SET MOTOR STARTER

OVERLOAD AT 2.4

JUMP TOGETHER 6 & 9
 5 & 8
 4 & 7

TRANSFORMER



TAKE JUMPER OFF H-1 AND H-3 AND OFF H-2 AND H-4, SO THE RED AND BLACK WIRE ARE THE ONLY WIRES IN CONNECTION. CONNECT A JUMPER BETWEEN H-2 AND H-3. PUT THE 440 STICKER OVER THE 240 ON THE ELECTRICAL NAME PLATE.

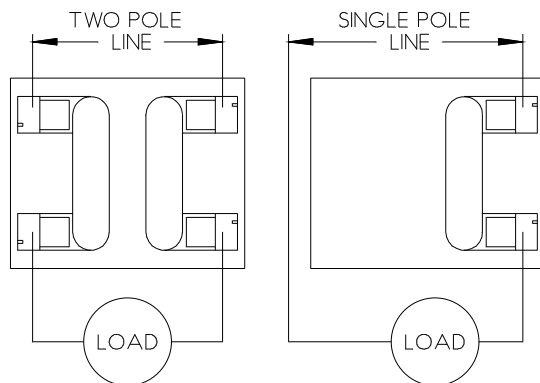


F-4 FACE TOOTH SHARPENER

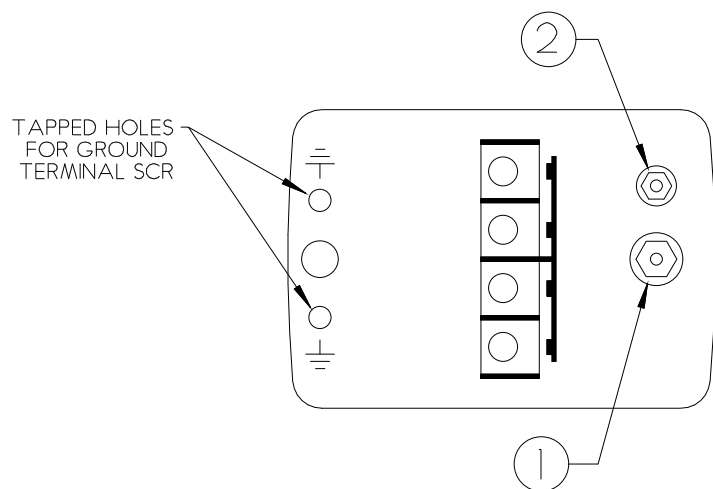
ADJUSTING AIR PRESSURE SWITCH (A-5785)

When air pressure to the machine falls below normal limits (80 P.S.I.), the machine cycle will lock up. The air pressure switch may be adjusted to compensate for low air pressure only if the maximum pressure does NOT exceed 80 P.S.I.. Call Wright Machine Tool if you have any questions or are in need for further details.

WIRING DIAGRAM



ADJUSTMENTS



ADJUST IN PROPER SEQUENCE

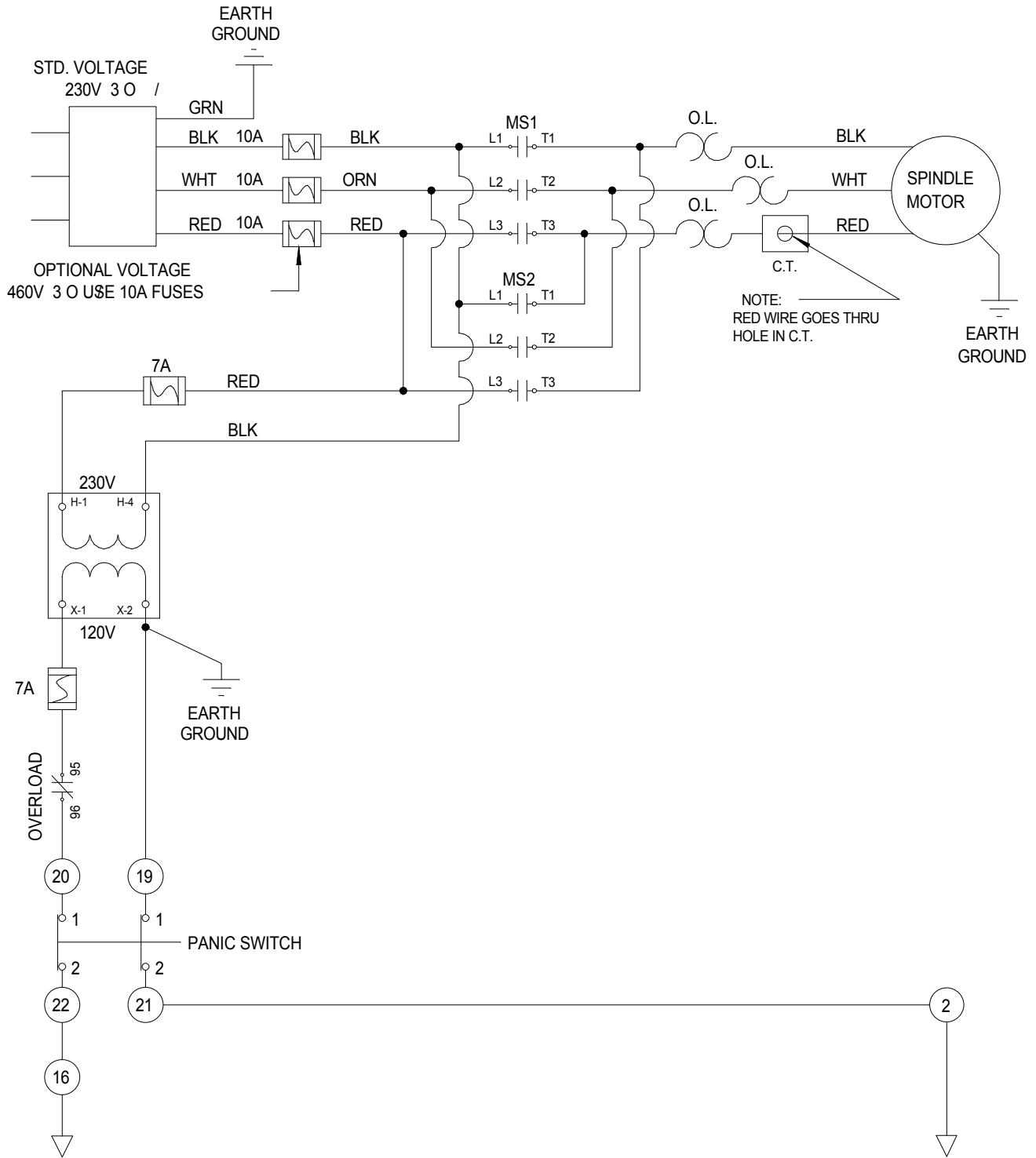
1. Turn nut 1 down to raise low operating point.
2. Turn nut 2 down to raise high operating point.

CAUTION: TO AVOID DAMAGE DO NOT EXCEED THE MAXIMUM ALLOWABLE PRESSURE. CHECK SWITCH OPERATION AFTER RESETTING.



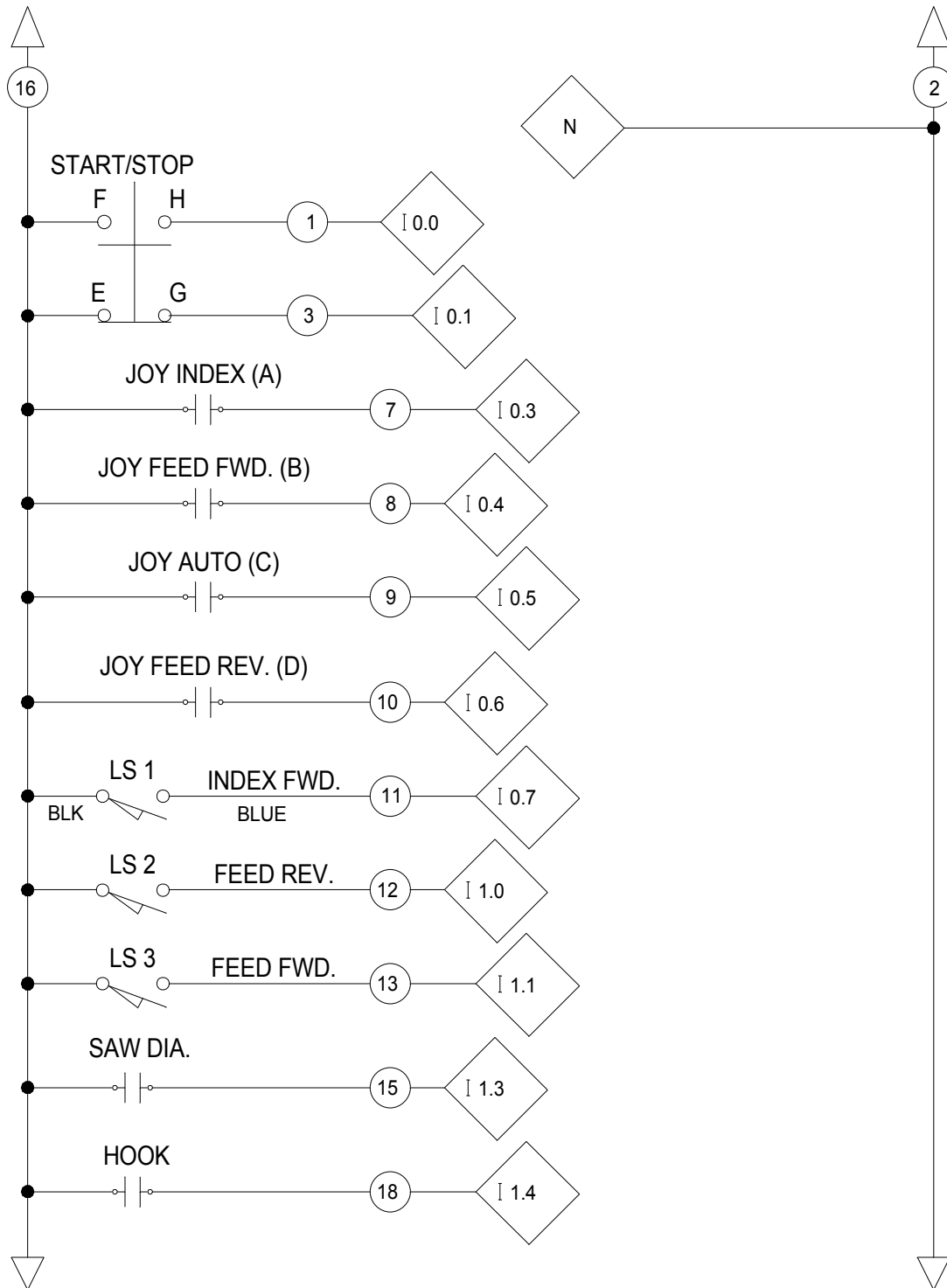
F-4 FACE TOOTH SHARPENER

ELECTRICAL SCHEMATIC



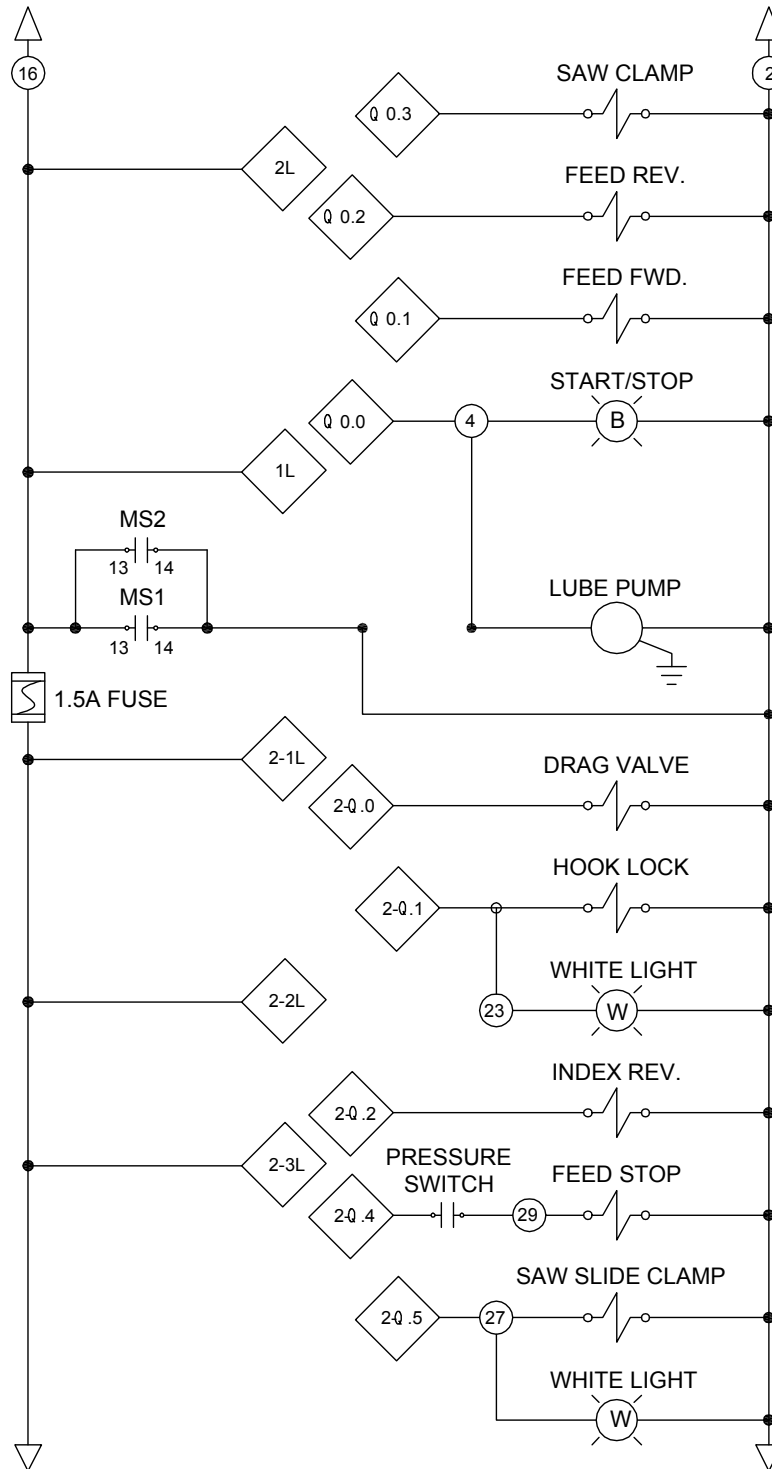
F-4 FACE TOOTH SHARPENER

ELECTRICAL SCHEMATIC



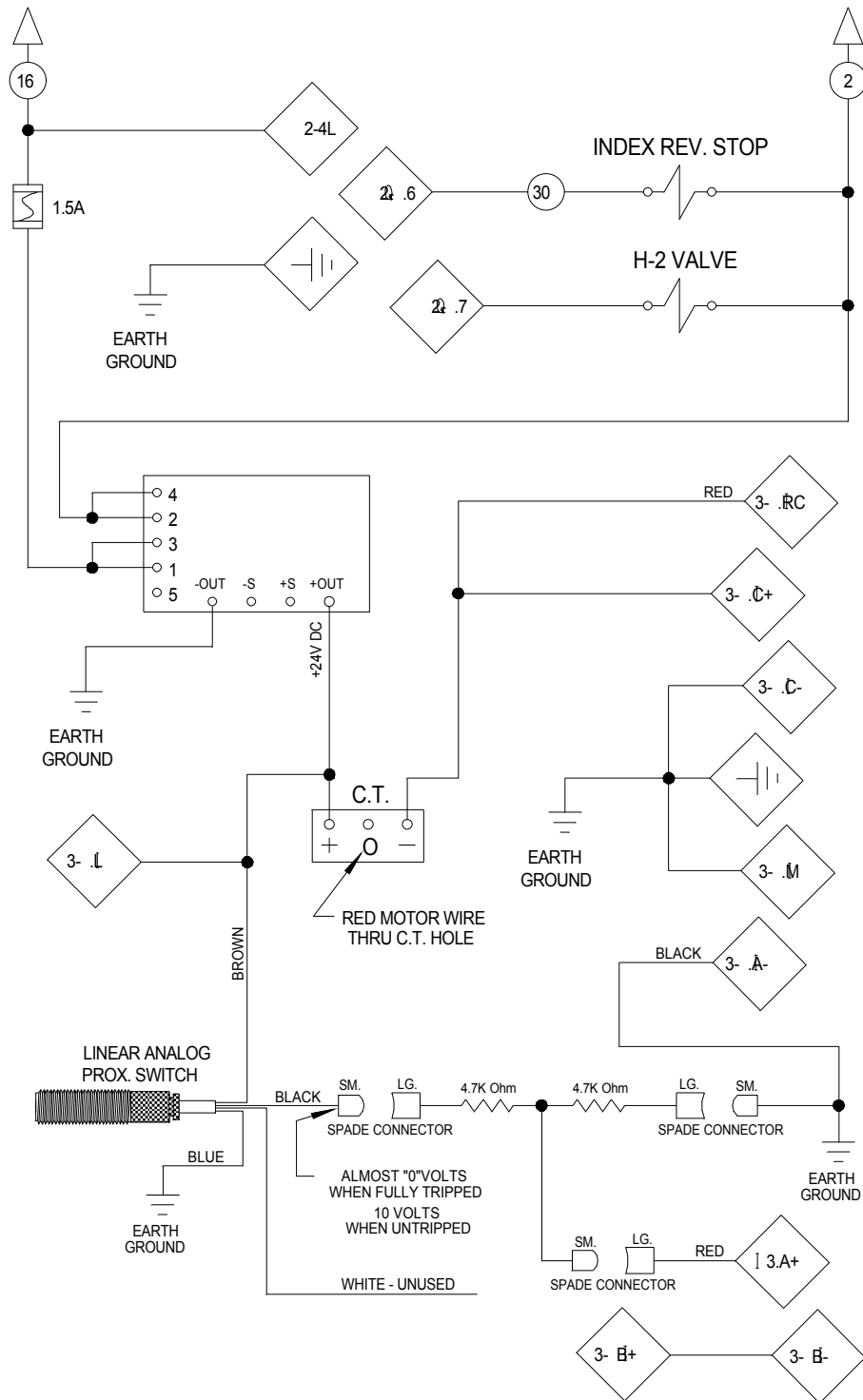
F-4 FACE TOOTH SHARPENER

ELECTRICAL SCHEMATIC



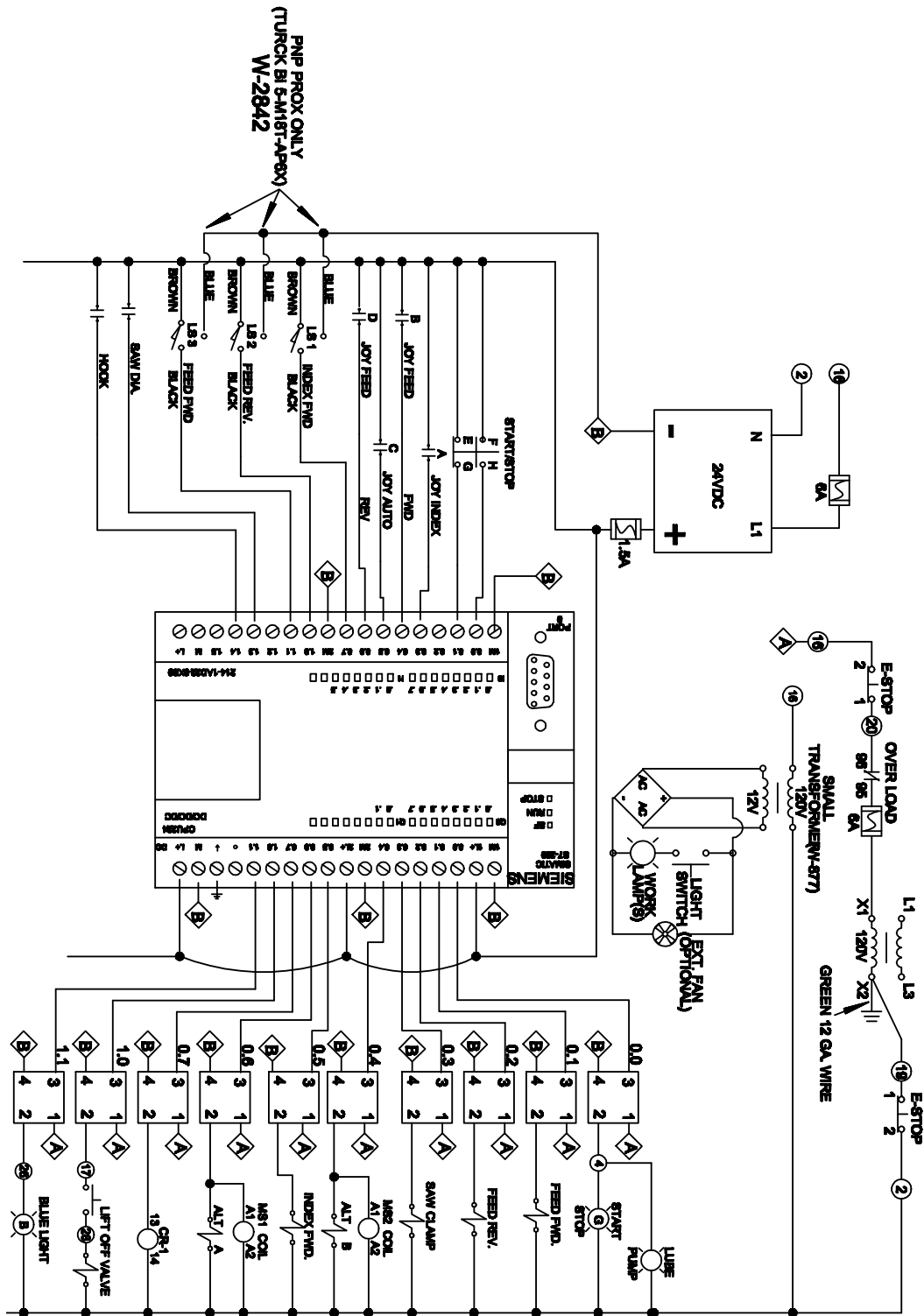
F-4 FACE TOOTH SHARPENER

ELECTRICAL SCHEMATIC



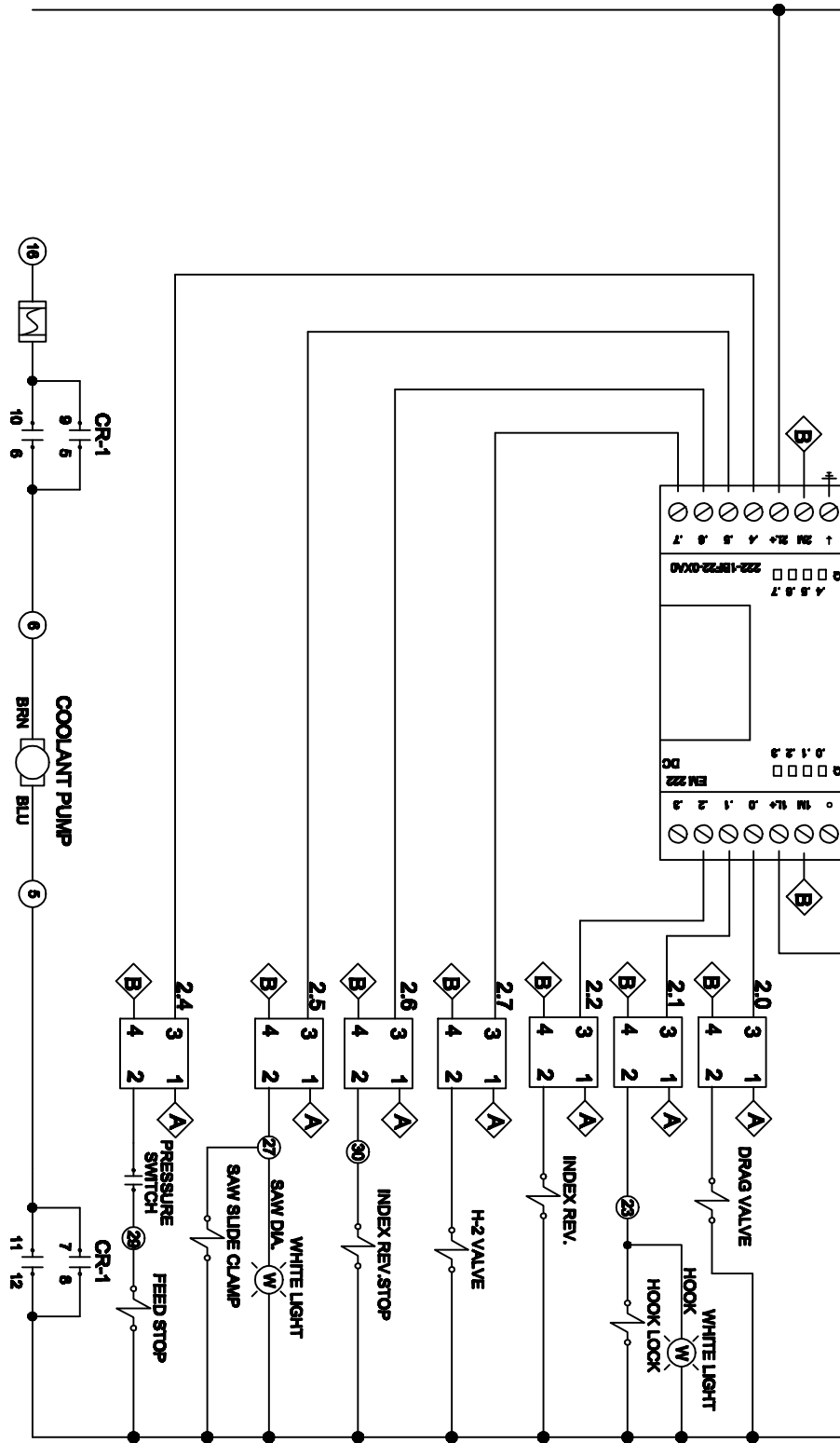
F-4 FACE TOOTH SHARPENER

ELECTRICAL SCHEMATIC (FLOW CHART)



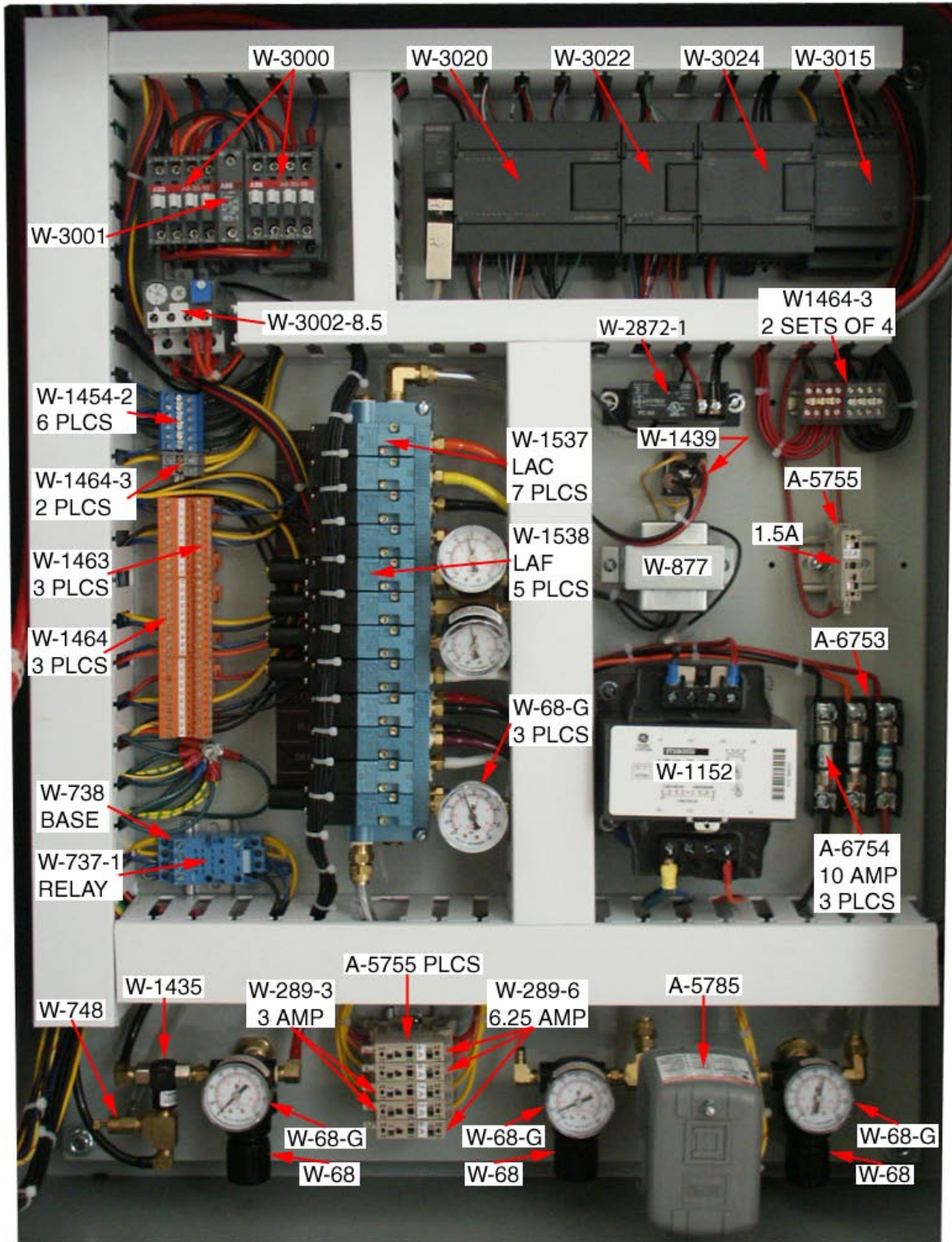
F-4 FACE TOOTH SHARPENER

ELECTRICAL SCHEMATIC (FLOW CHART)



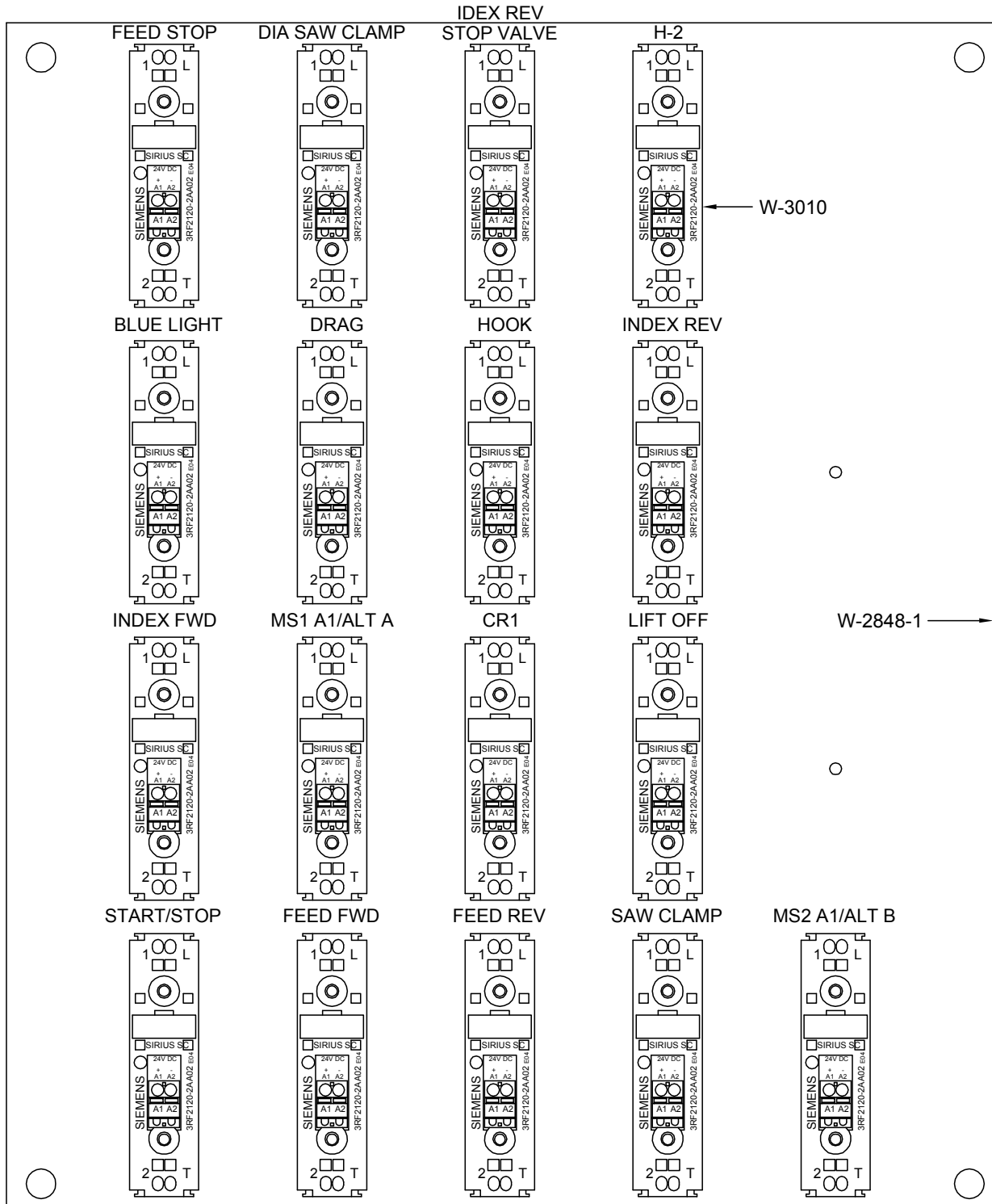
F-4 FACE TOOTH SHARPENER

VIEW OF SUB PANEL



F-4 FACE TOOTH SHARPENER

RELAY PANEL



F-4 FACE TOOTH SHARPENER

PARTS LIST

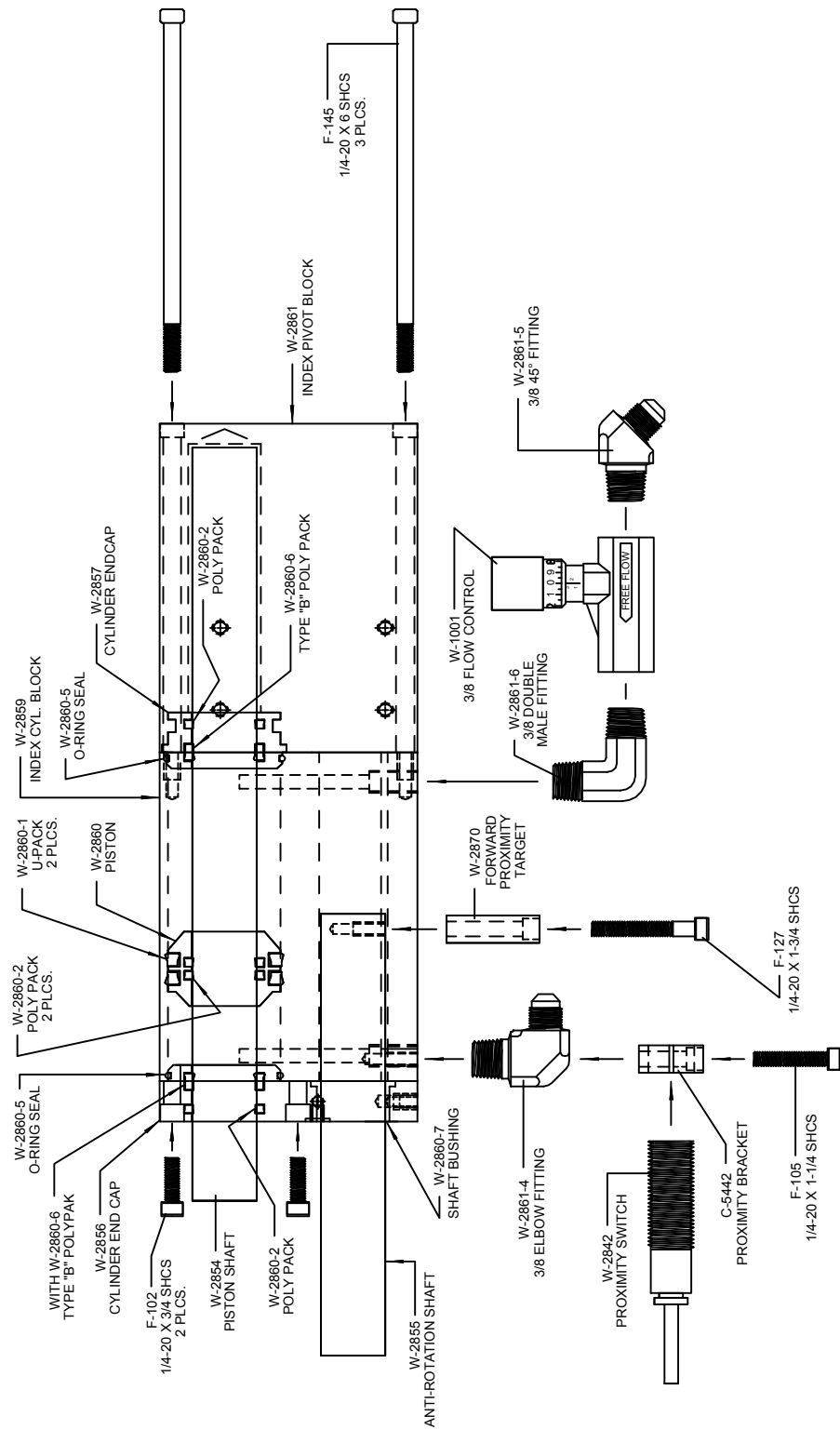
DRAWINGS OF...

Index Assembly
Hook Scale Assembly
Hook Pivot Assembly
Hook Lock Assembly
Coolant Part Diagram
Saw Clamp Assembly
Oil Pot (Feed)
Oil Pot (Index)
Head Assembly
Lift Off Cylinder Assembly
Index Housing Assembly
Saw Slide Assembly
Control Box Components
Base Side Assembly



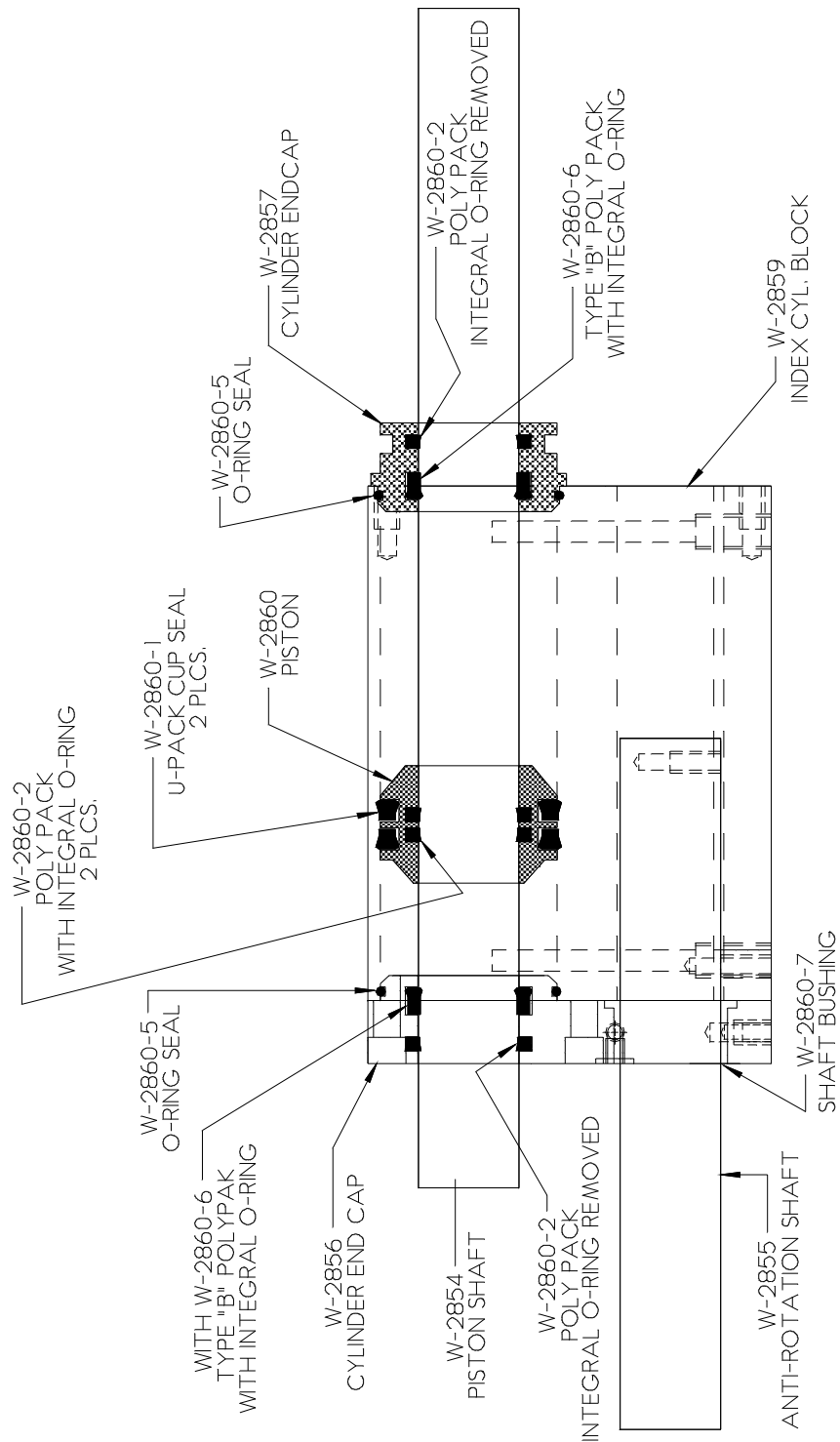
F-4 FACE TOOTH SHARPENER

VIEW OF INDEX CYLINDER ASSEMBLY



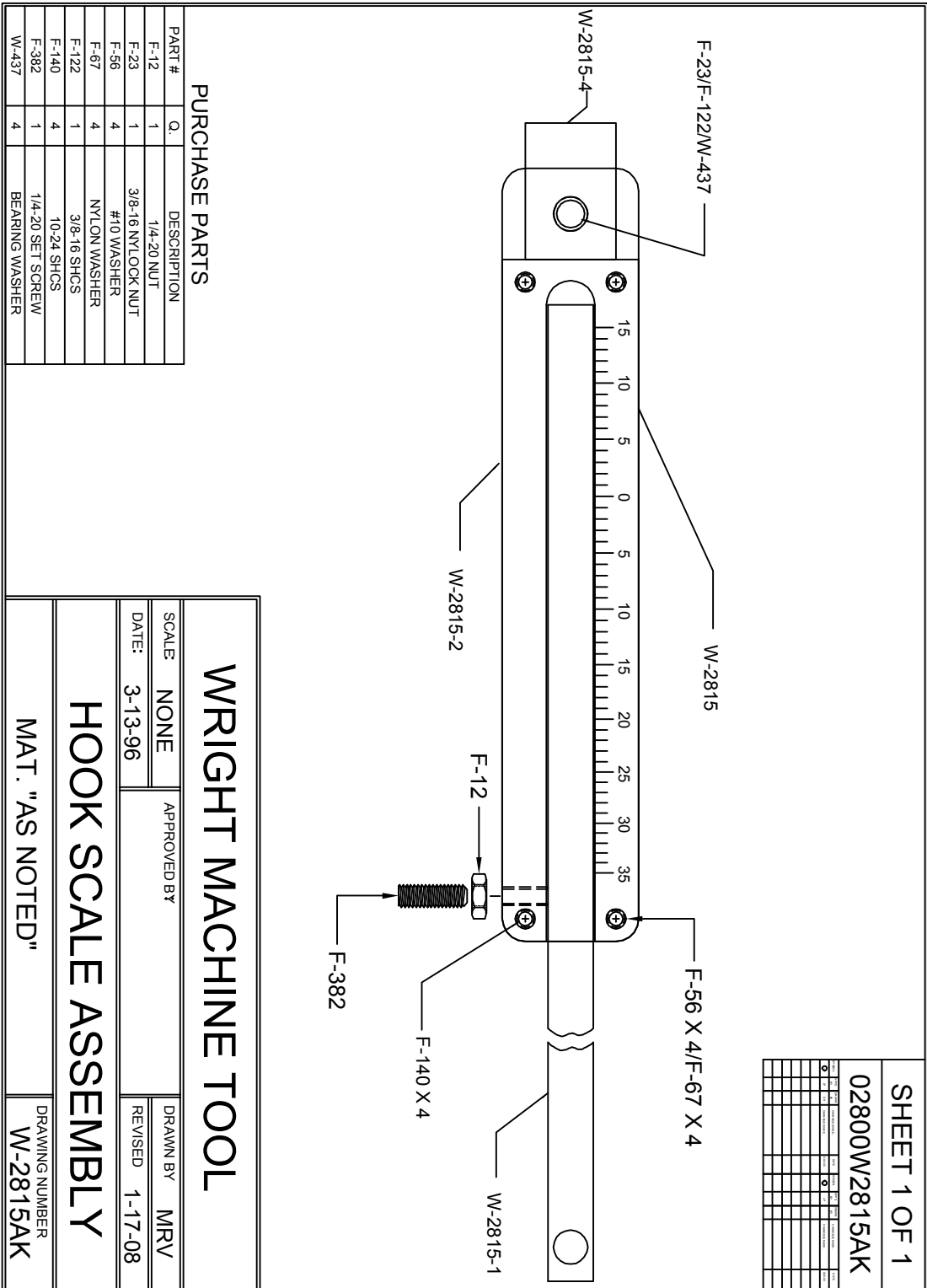
F-4 FACE TOOTH SHARPENER

VIEW OF INDEX CYLINDER ASSEMBLY CONTINUED



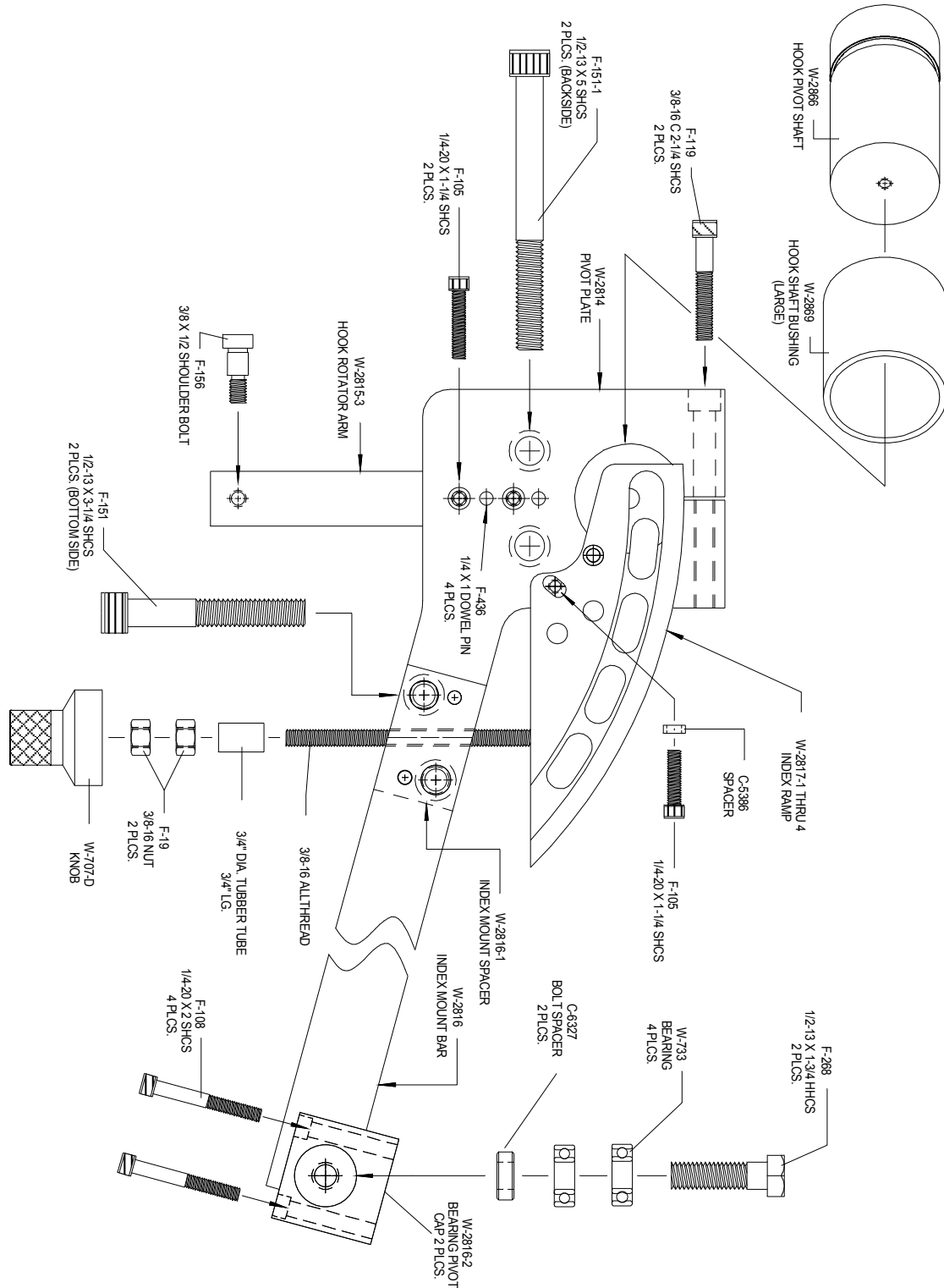
F-4 FACE TOOTH SHARPENER

HOOK SCALE ASSEMBLY



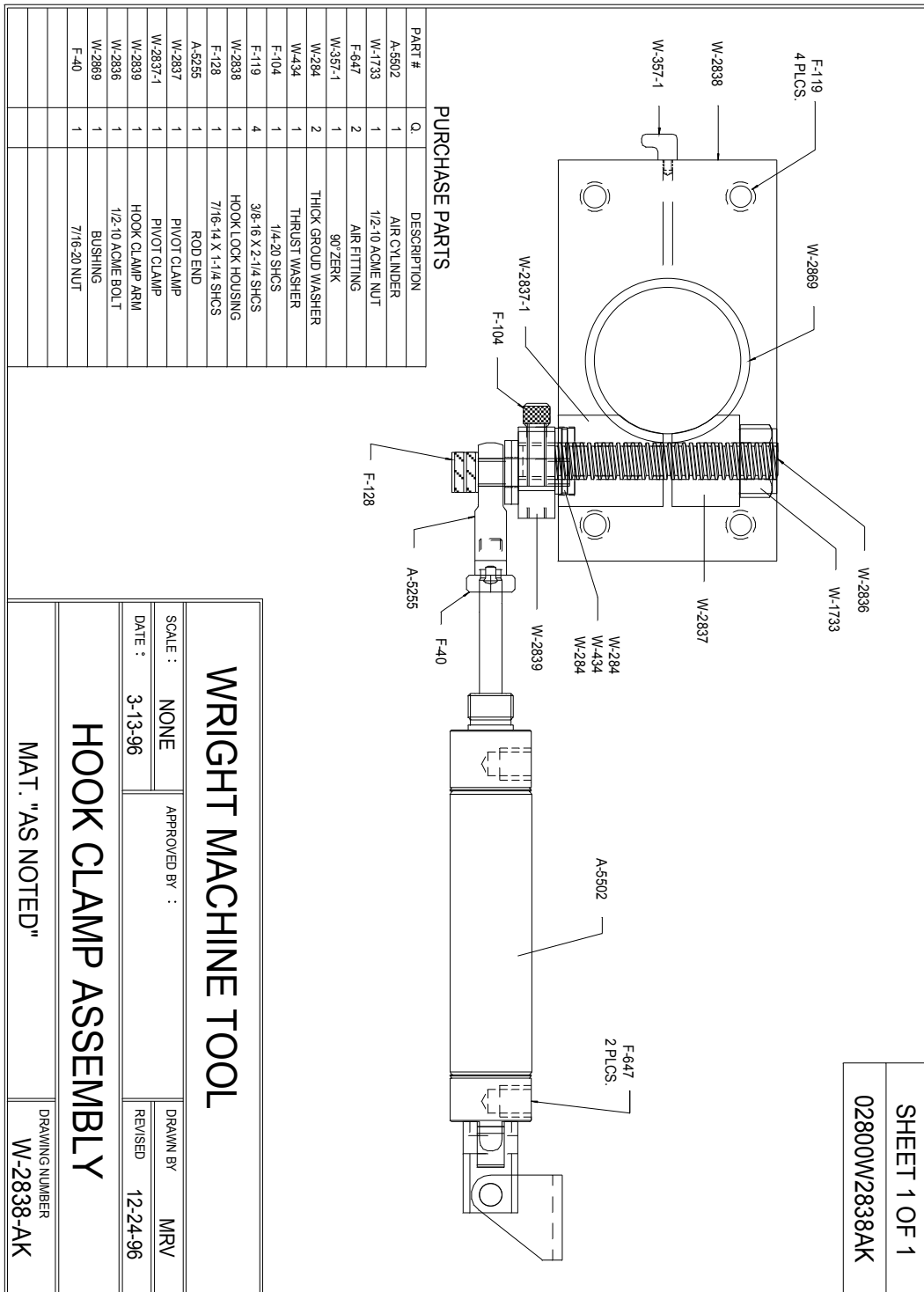
F-4 FACE TOOTH SHARPENER

VIEW OF PIVOT ASSEMBLY



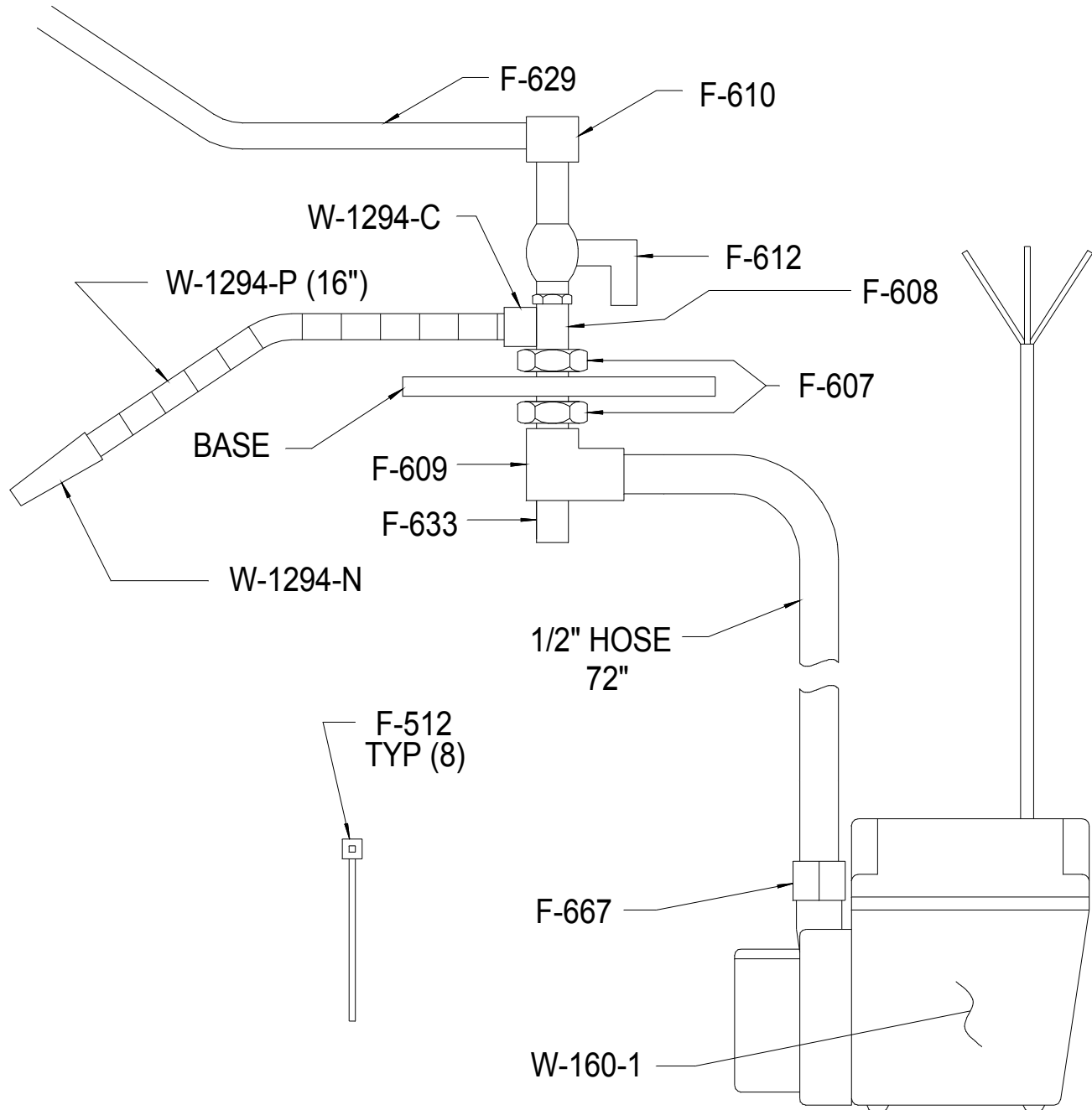
F-4 FACE TOOTH SHARPENER

VIEW OF HOOK CLAMP ASSEMBLY



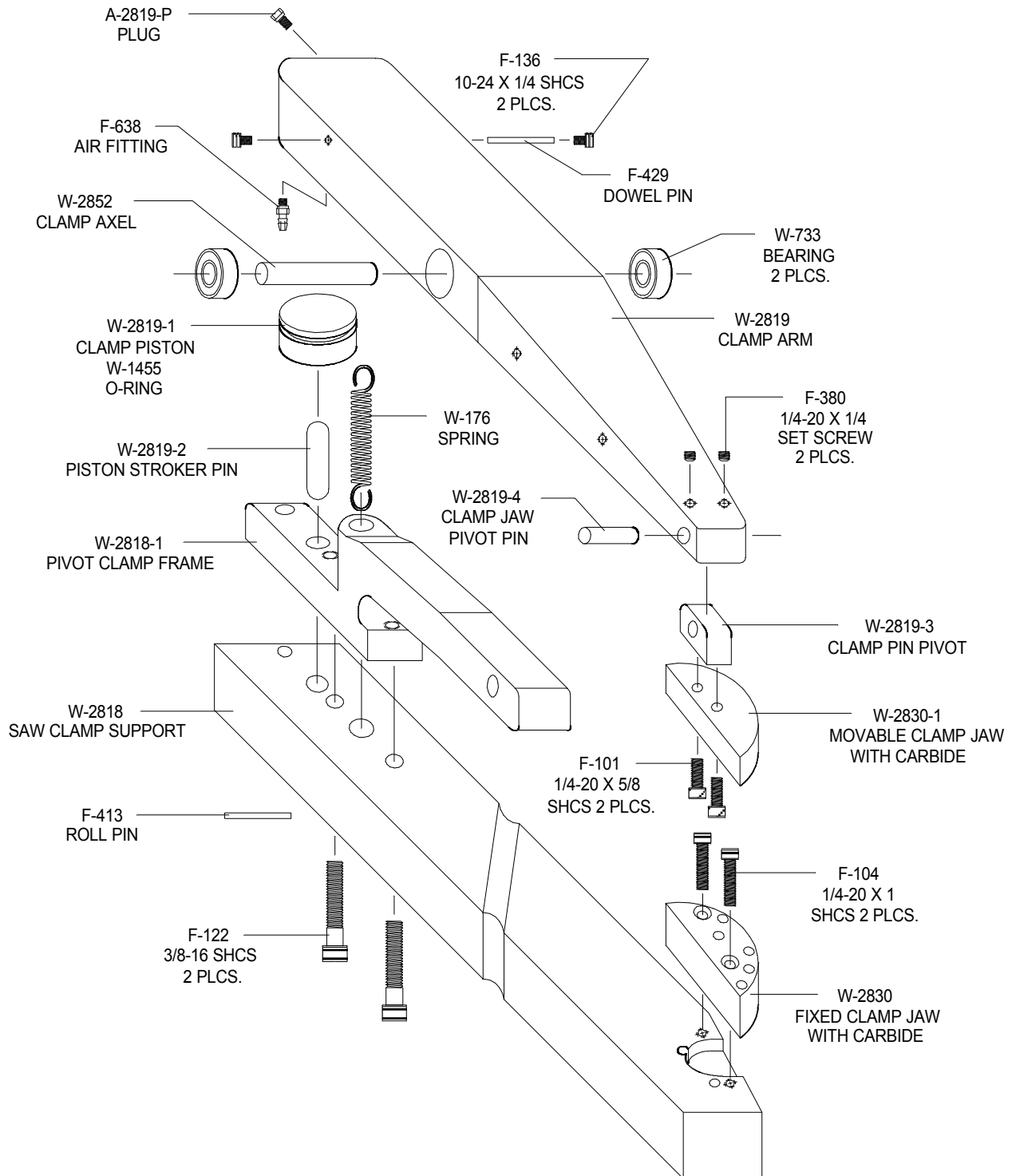
F-4 FACE TOOTH SHARPENER

VIEW OF COOLANT PUMP ASSEMBLY



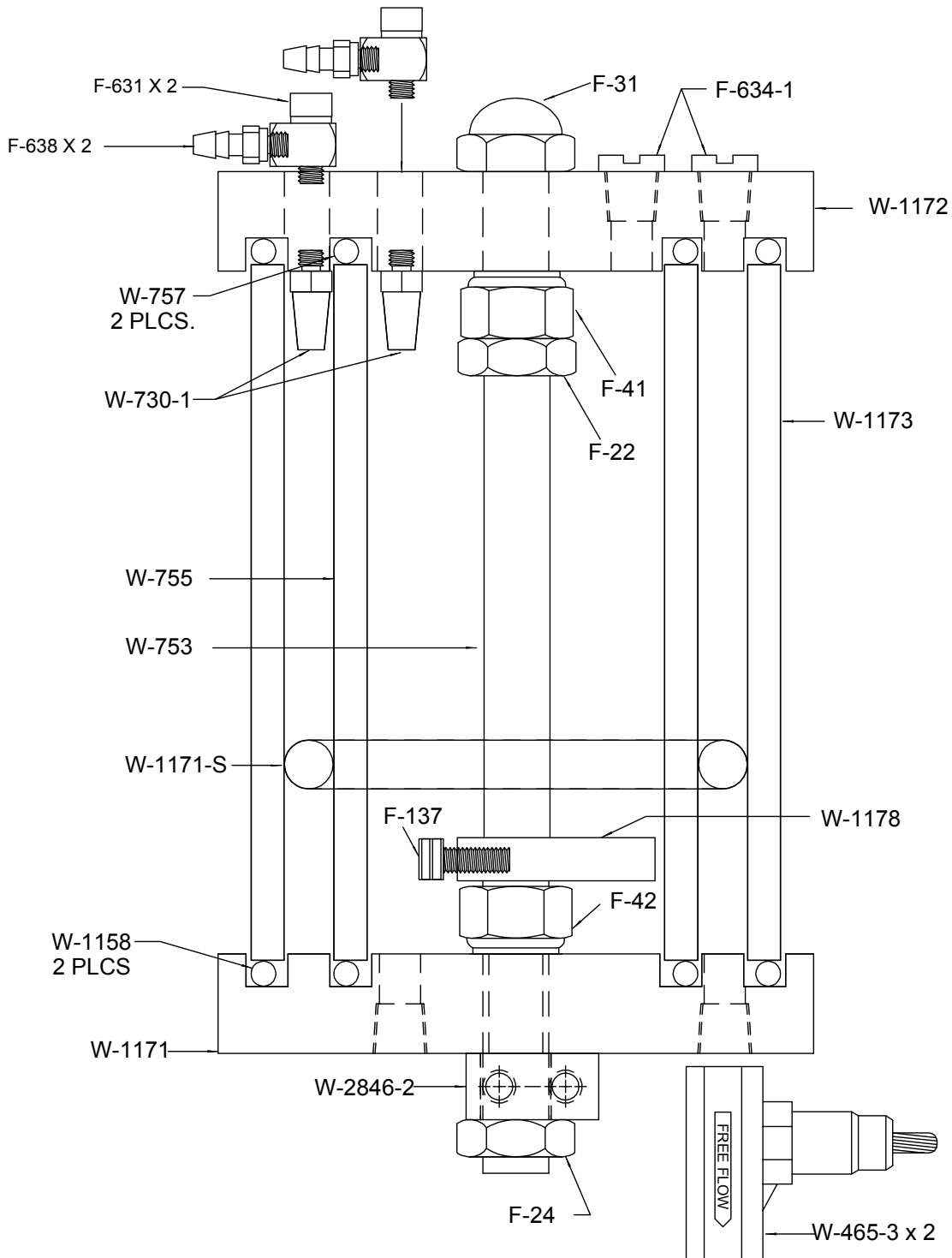
F-4 FACE TOOTH SHARPENER

VIEW OF CLAMP ASSEMBLY



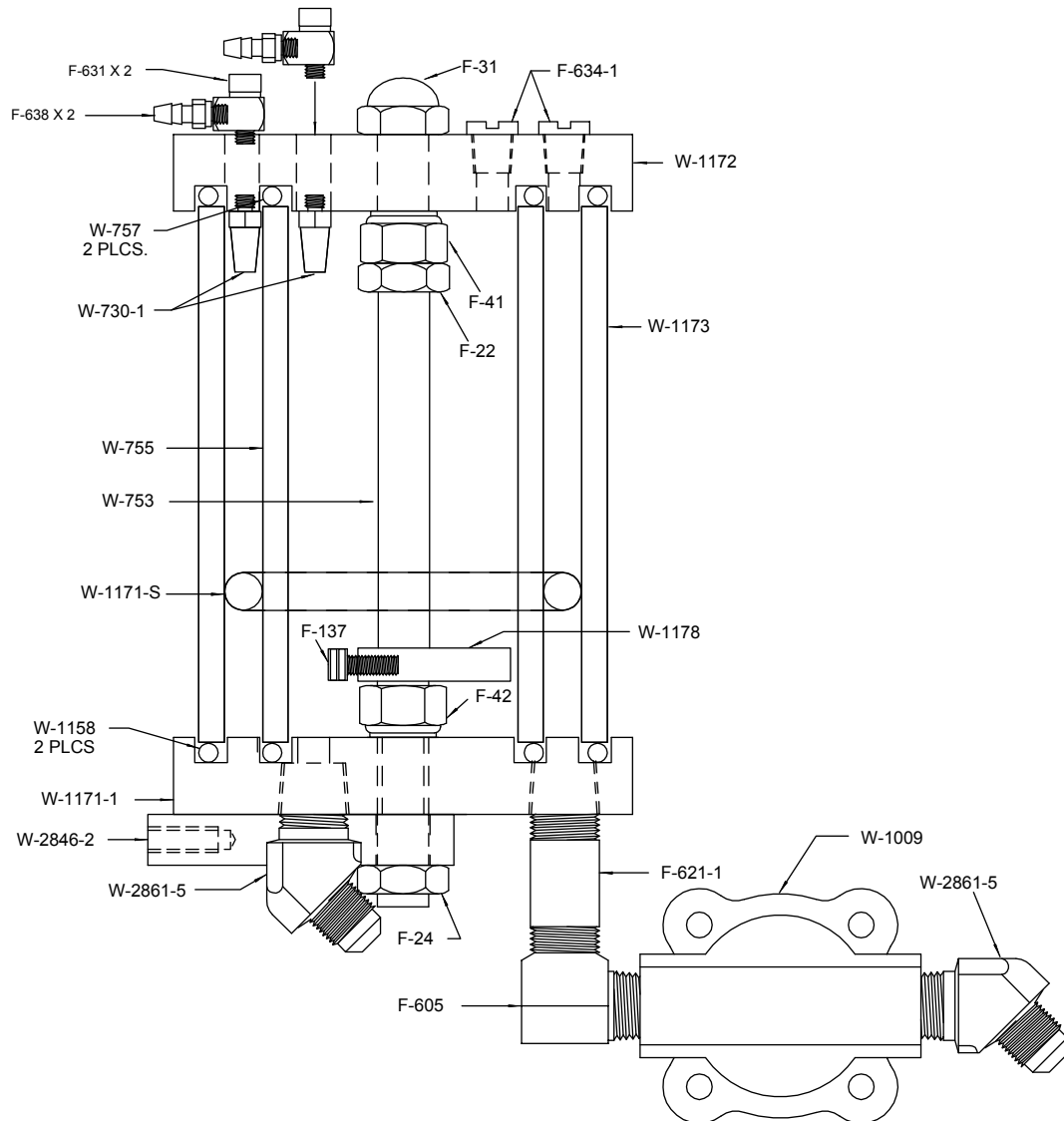
F-4 FACE TOOTH SHARPENER

OIL POT FEED SYSTEM



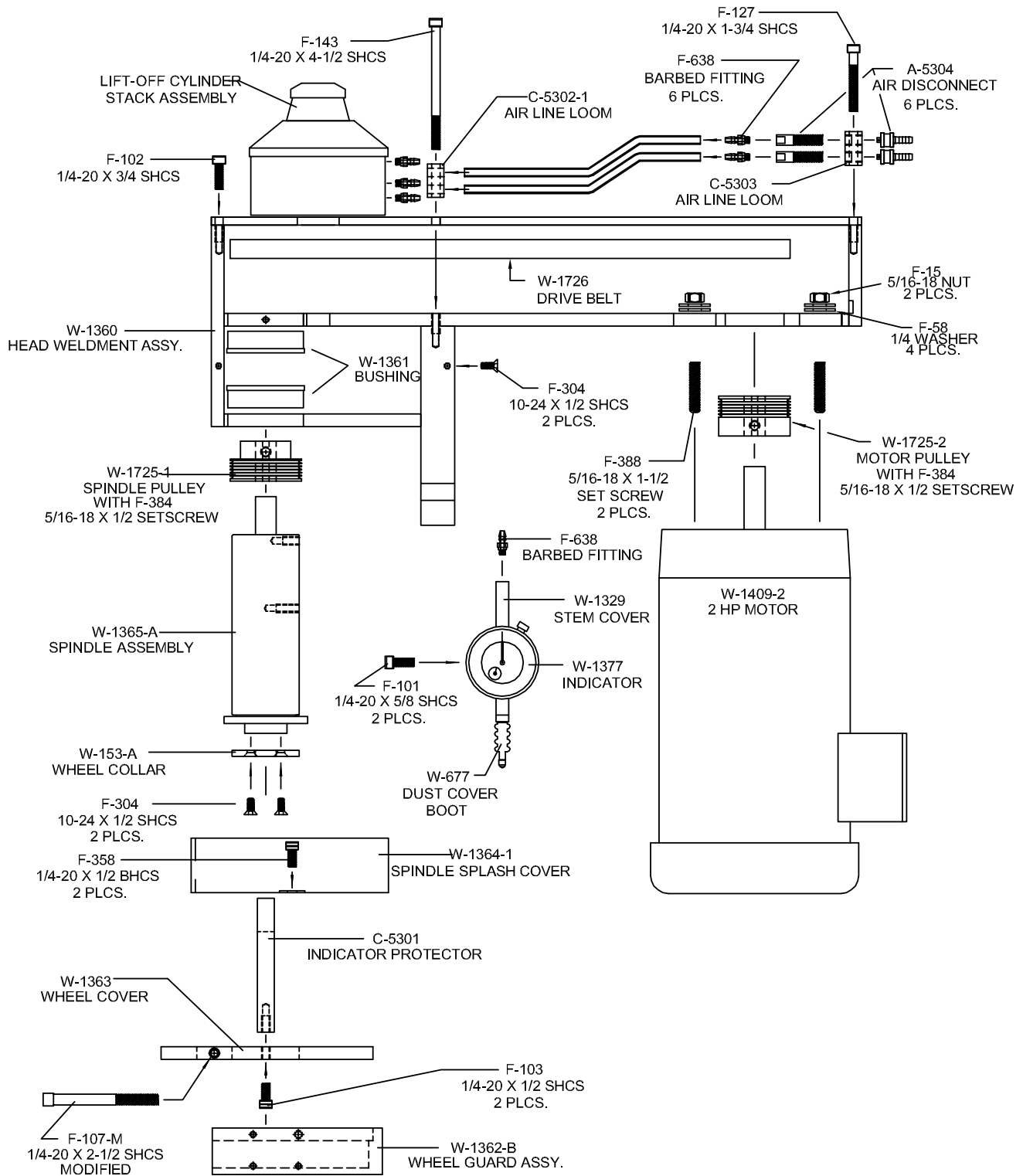
F-4 FACE TOOTH SHARPENER

OIL POT INDEX SYSTEM



F-4 FACE TOOTH SHARPENER

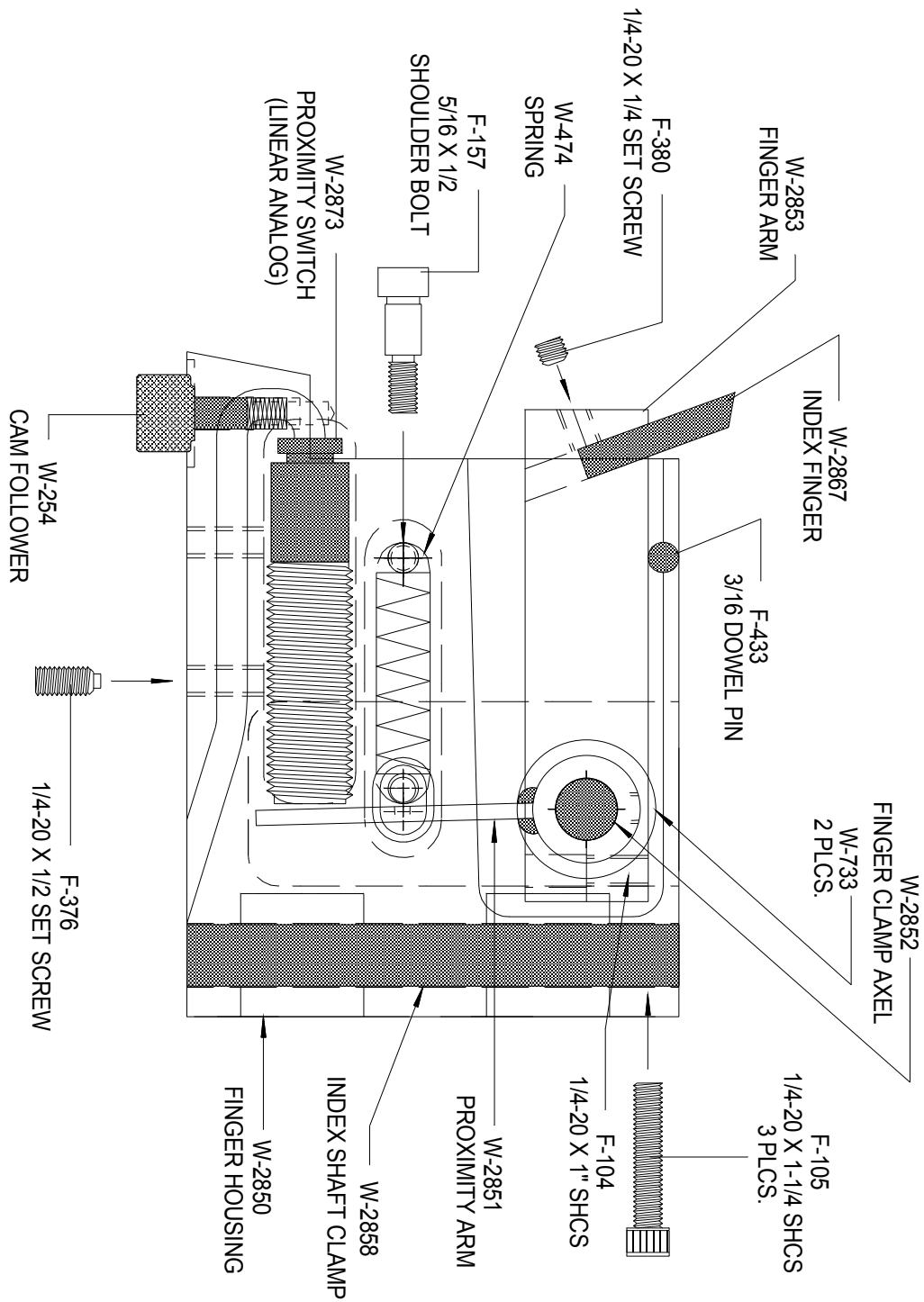
VIEW OF HEAD ASSEMBLY



WM **RIGHT** **M** **ACHINE**

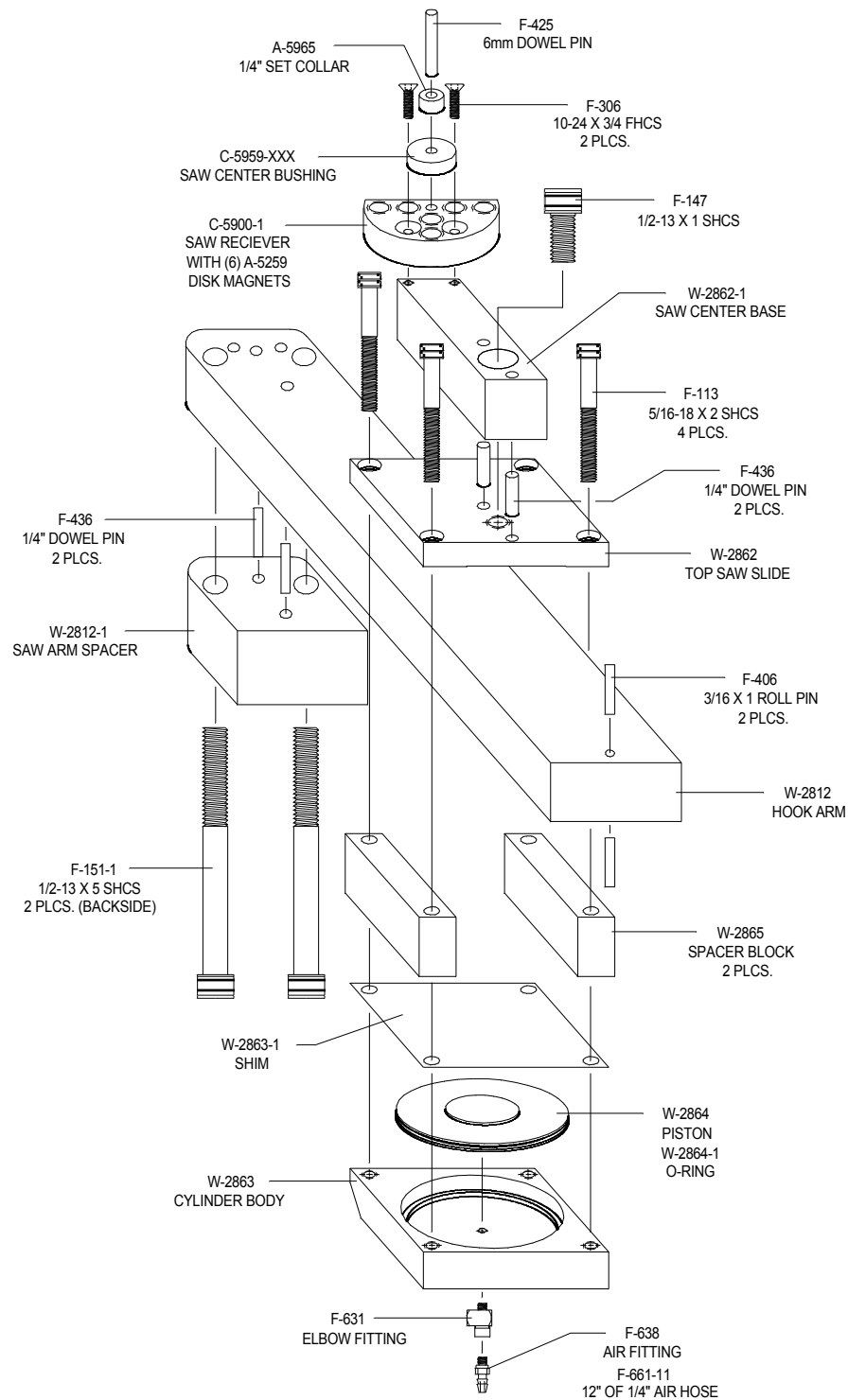
F-4 FACE TOOTH SHARPENER

VIEW OF INDEX HOUSING



F-4 FACE TOOTH SHARPENER

VIEW OF SAW SLIDE



F-4 FACE TOOTH SHARPENER

BASE END VIEW

