



W-150 HEAVY DUTY

"E" MODEL AUTOMATIC TOP & FACE GRINDER



OPERATOR'S MANUAL

MADE IN THE U.S.A.

W-150 HD-E TOP & FACE SHARPENER

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W-150 HD-E TOP & FACE SHARPENER

LIMITED WARRANTY

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

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

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



W-150 HD-E TOP & FACE 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. Nonskid 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.



W-150 HD-E TOP & FACE SHARPENER

GENERAL SAFETY RULES (CONTINUED)

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.



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.
6. Deterioration of paint and/or plastic parts.

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

W-150 HD-E TOP & FACE SHARPENER

SPECIFICATIONS

W-150-HD "E" MODEL Automatic Top or Face Grinder for Circular Saws.

STRAIGHT FACE OR TOP:	1 PASS
ALTERNATE:	1 PASS
TRIPLE CHIP:	1 PASS
STANDARD VOLTAGE:	230 Volt, 3 Phase, 60 HZ
OPTIONAL VOLTAGE:	460 Volt, 3 Phase, 60 HZ
SHIPPING WEIGHT:	1,350 lbs
CRATE SIZE:	L 49" X W 44" X H 62"
AIR REQUIREMENTS:	2 C.F.M at 100 psi to 150 psi
STANDARD SAW SIZE:	4"-30" (34" with tank screen removed)
OPTIONAL SAW SIZE:	Up to 54"
SPINDLE MOTOR:	1 H.P., 3 Phase, 3450 R.P.M. Motor



W-150 HD-E TOP & FACE SHARPENER

OPTIONS

Large Bore Option	W-50
Long Index Cam (5-1/8" long index)	W-80
Extra Long Index Cam (6-3/8" long index)	W-81
3 Pin Spline Saw Center	W-450
Spline Bore Saw Center	W-460
Saw Center Washer	W-1320-(specify)
Clamp Assembly for Circle Saws 2" to 5" Dia.	W-1322-SA
Expandable Saw Center with magnets	W-495
Large Saw Option 34" to 36"	W-150 HD-A/36
36" to 54"	W-150 HD-A/54
Small Bands Clamp for 3/4" to 1-3/8" Bands	W-2256
Hollow Point Attachment	W-1500
Facing Wheel	D-36 / B-36 / D-36-5 / B-36-5
Topping Wheel	D-37 / B-37
Dual Grit Topping Wheel	D-37-6-2

COMMON REPLACEMENT PARTS

Finger Arm Pivot Bearing	W-188
Ramp Follower	W-188
Feed Finger	W-259
Finger Boss	W-287
Finger Spring	W-883
Filter Paper	W-588
Fixed Clamp Jaw	W-1322-3
Movable Clamp Jaw	W-1323-3
Feed Ramp	W-1324
Finger Arm	W-1381
Standard Finger Arm Spring	W-300 / W-1453



W-150 HD-E TOP & FACE SHARPENER

PRE SET UP COOLANT

Coolant capacity is 7 to 10 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-588.

RUST DAMAGE IS NOT COVERED BY THE WARRANTY

MOUNTING GRINDING WHEELS

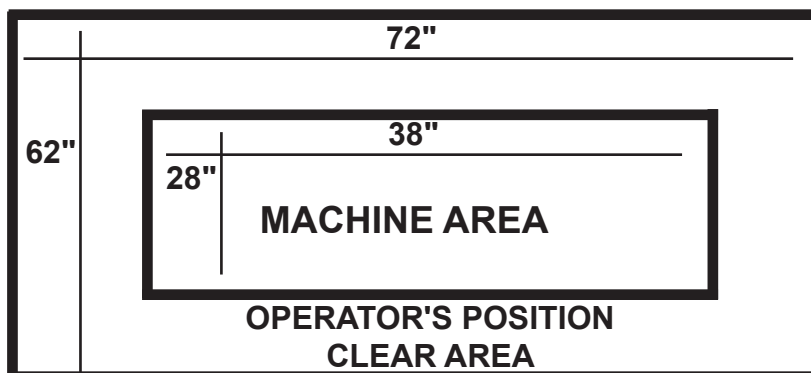
All grinding wheels must be rated for the RPM of this machine. Wheels exposed to higher than rated RPM are dangerous.

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.

The W-150 HD-E uses two wheels. (D-36 for facing and D-37 for topping). Install the D-36 6" diameter facing wheel first with the diamond facing to the left. Then install the D-37 4-1/2" diameter topping wheel with the diamond facing to the right. With those two wheels back to back it will not be necessary to change when going from top to face.

MACHINE INSTALLATION

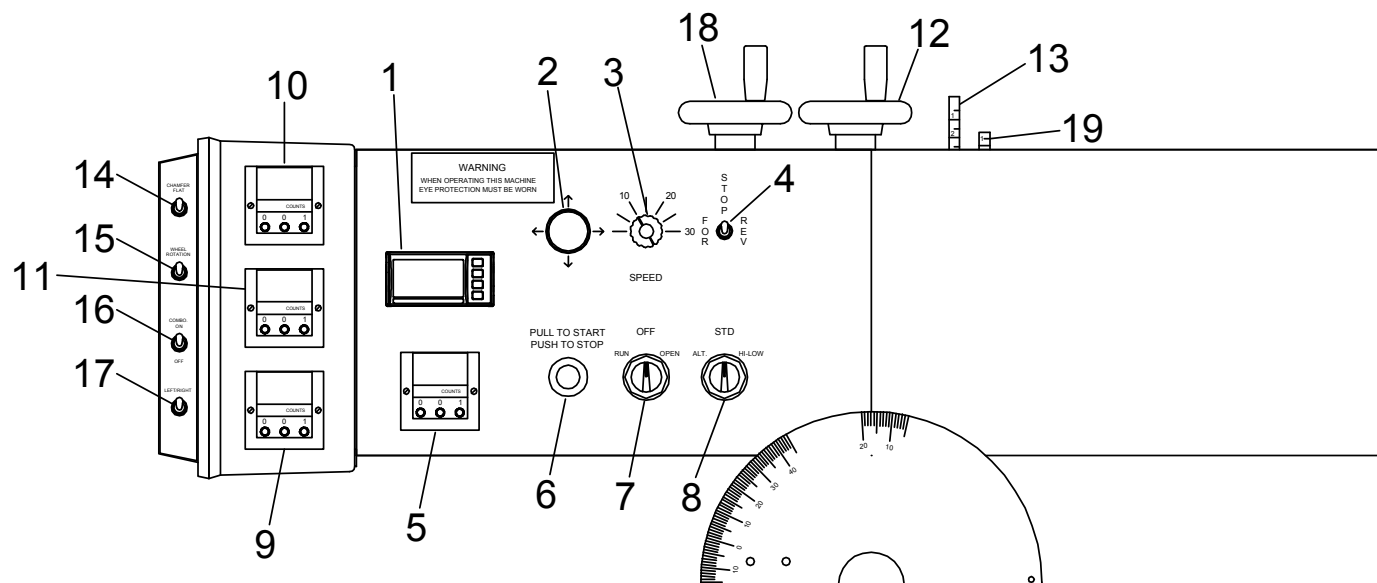
Lifting this machine should only be done with a fork lift under the Coolant Tank. Machine weight is approximately 1,300 pounds.



WRIGHT MACHINE

W-150 HD-E TOP & FACE SHARPENER

CONTROL PANEL

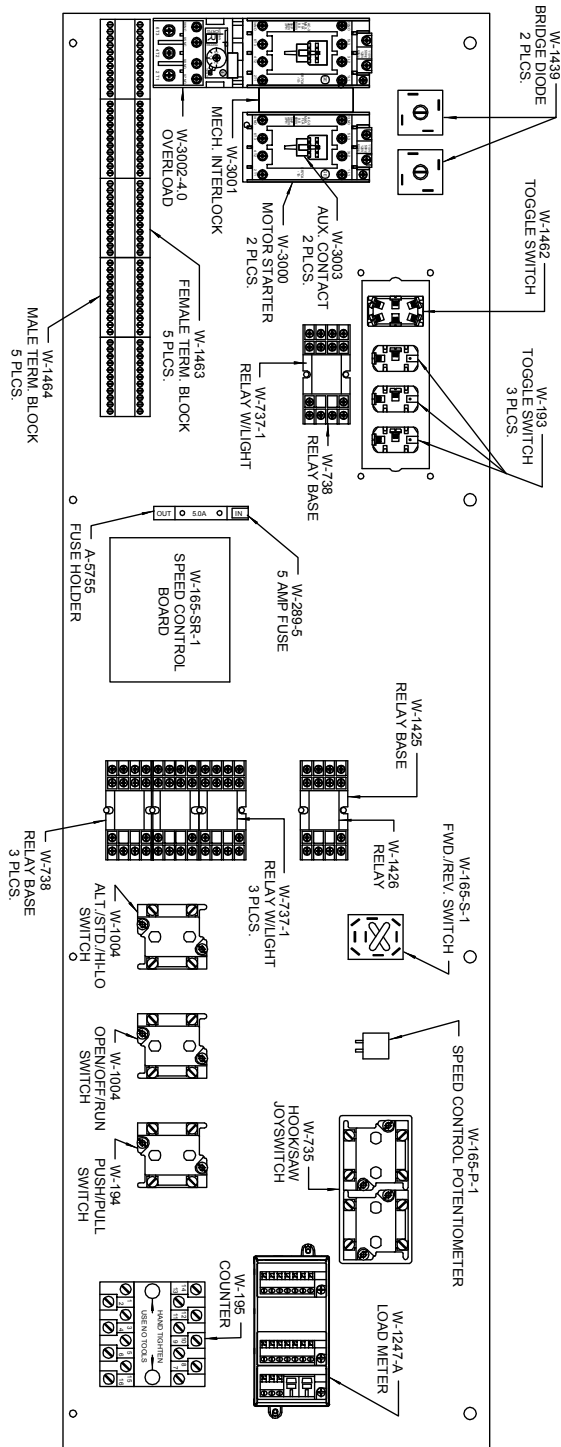


1. Load Meter
2. Hook Angle / Saw Diameter Adjustment (Joy Switch)
3. Speed Control
4. Cycle Switch (For. / Stop / Rev.)
5. Tooth Counter
6. Start Stop
7. Saw Clamp Control (Run / Off / Open)
8. Tooth Style
9. Number of Teeth in Combo Group
10. Alternate Right Tooth Counter
11. Alternate Left Tooth Counter
12. Index Tooth Pitch Adjustment
13. Index Pitch Scale
14. Chamfer Jog Switch
15. Wheel Rotation (Up is Normal)
16. Combo Planer On / Off Switch
17. First Tooth in Combo Planer (Left or Right)
18. Index Tooth Pitch Adjustment, Short Pitch on Combo Planer Only
19. Index Pitch Scale, Short Pitch on Combo Planer Only



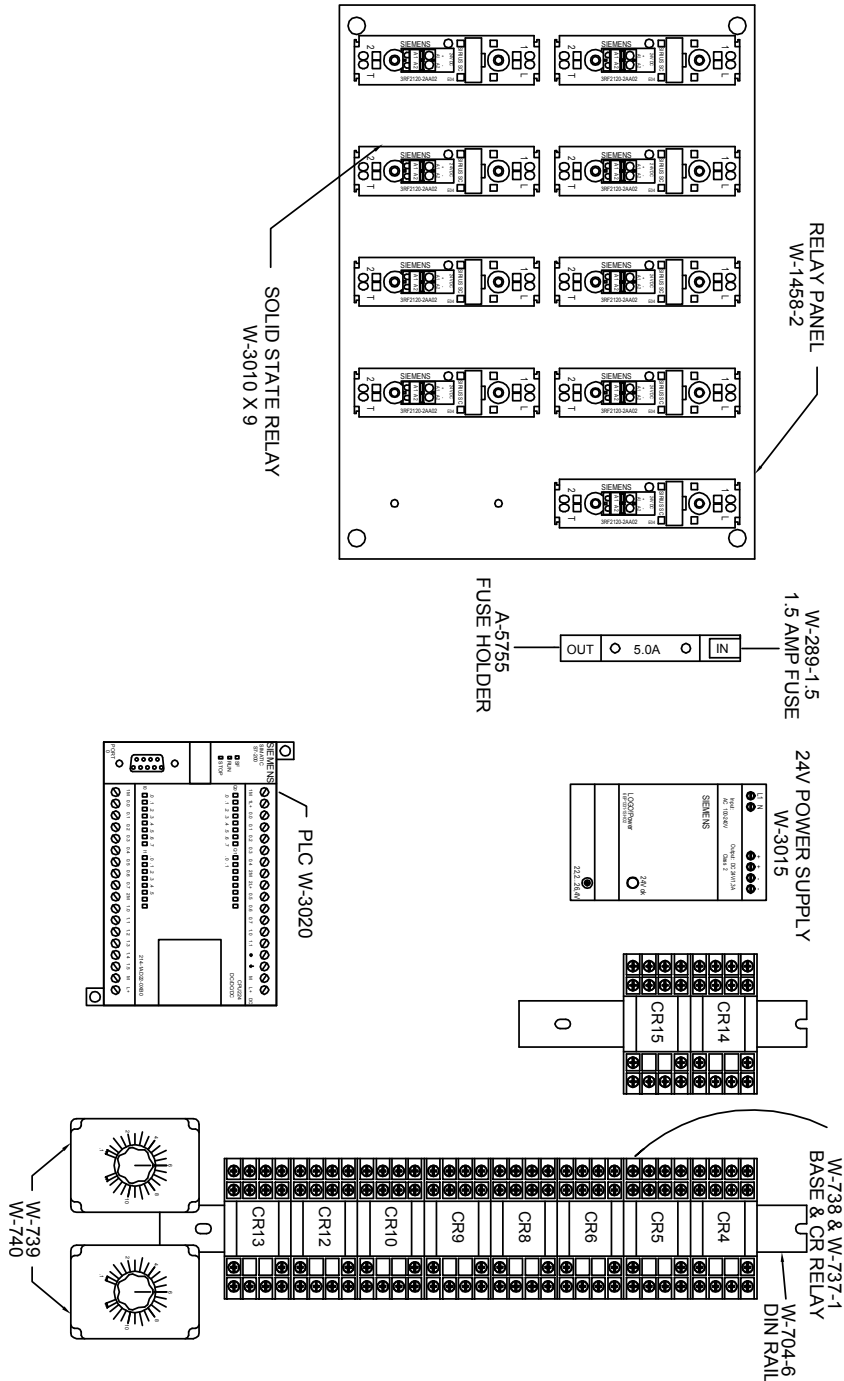
W-150 HD-E TOP & FACE SHARPENER

CONTROL PANEL BACKSIDE



W-150 HD-E TOP & FACE SHARPENER

INSIDE PROGRAMMER BOX



W-150 HD-E TOP & FACE SHARPENER

SET UP SQUARE TOP OR SQUARE FACE

1. The Load Sensor #1 monitors the power required to grind. The Load Sensor #1 is set by turning the black set knobs. The knob on the right side of the sensor controls at what load the forward feed speed is stopped. The knob on the left controls at what load the forward speed starts again. If the machine hits a tooth that is higher than expected, the load Sensor #1 will slow the speed as necessary to reduce the chance of wheel or saw damage.
2. Set hook or back angle by moving the Hook Angle / Saw Diameter Adjustment #2 (Joy Switch) to the left or right.
3. Set Speed Control knob #3 at 5 or the number of teeth per minute that you want to grind.
4. Move the Cycle Switch #4 (For. / Stop / Rev.) to Stop.
5. Set the Counter #5 by turning the set knobs to the number of teeth in the saw + one tooth. Example: If there are 30 teeth in the saw, set the counter to 31.
6. Set the Saw Clamp Control Switch #7 (Run / Off / Open) to Open. This will open the saw clamp jaw.
7. Adjust the Index Pitch Adjustment #12 and read Tooth Pitch on Scale #13.
8. Install proper centering device on the saw lift. The W-150 HD standard cup and cone will accommodate saw bores from 5/8 to 2-1/2 inches. If larger bores are used, a W-50 for saws without keyways or splines or a W-460 for spline or keyway bores will be required.
9. Mount saw on centering device. Move Hook Angle / Saw Diameter Adjustment #2 (Joy Stick) up and the saw lift actuator will move up. Stop the saw lift actuator when the saw tip is above the saw clamp jaw.
10. Move the Saw Clamp Control Switch (Run / Off / Open) to Run. This will close the clamp jaw.



W-150 HD-E TOP & FACE SHARPENER

SET UP SQUARE TOP OR SQUARE FACE (Continued)

11. The W-150 HD E automatically shuts off with the finger stopped at the positive stop. If the machine has been stopped before finishing the cycle, it will be necessary to jog the machine forward to get into the normal stop position.
12. Place the saw tip against the index finger and set the height sensor on top of the tooth. Move the Hook Angle / Saw Diameter Adjustment #2 (Joy Stick) up and the sensor will automatically stop the saw lift actuator. Rotate the sensor out of the way.
13. Pull the Start / Stop Switch #6 and the machine will start. Move the Cycle Switch #4 (Fwd. / Stop / Rev.) to Fwd.. The index will place the tip in position and the grinding head will start moving down. Move the in feed knob as necessary to keep the grinding wheel from hitting the saw. The Cycle Switch #4 (Fwd. / Stop / Rev.) has safety overtravel so you must release at stop before repositioning to Fwd. / Rev..
14. Watch the dial indicator that shows wheel position. When the indicator moves, stop the feed by moving the Cycle Switch #4 (For. / Stop / Rev.) to Stop.. The movement of the indicator demonstrates when the lift off has occurred. The grind depth knob (black handle next to motor) is turned until the wheel is past the carbide tip.
15. Move the Cycle Switch #4 (For. / Stop / Rev.) to For. and the machine will index to the next tooth. It may be necessary to adjust the index guide ramp if the index finger does not follow the saw radius. Only make this adjustment with the machine off.
16. Move the Cycle Switch #4 (For. / Stop / Rev.) to Stop when the grinding wheel is over the saw tip. Turn the in feed knob until the wheel touches the tip. Turn coolant On and in feed as needed. Move the Cycle Switch (For. / Stop / Rev.) back to For..

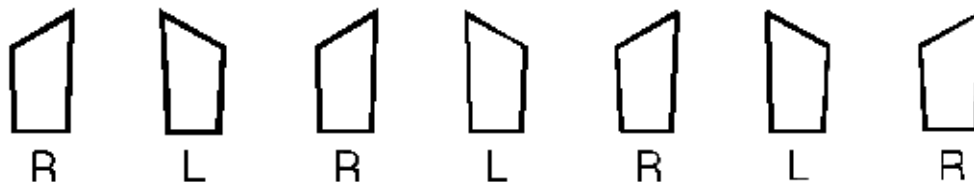
SHUT DOWN

17. When the machine is NOT being used, move the saw clamp control switch #7 (Run / Off / Open) to Off. This shuts down most of the circuitry.



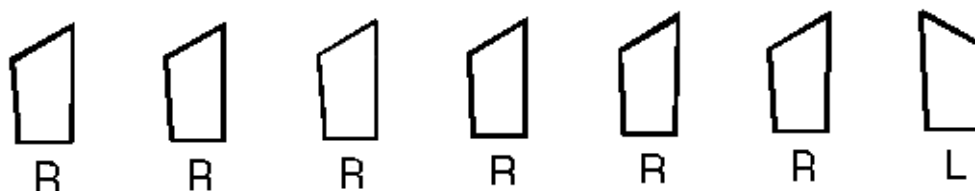
W-150 HD-E TOP & FACE SHARPENER

ALTERNATE TOP SAWS



1. Set grind mode switch #8 to Alternate.
2. The plate thickness knob is located between the grinding wheel cover and the spindle motor. This knob must be adjusted on alternates. Turn the knob as far as possible clockwise, this is zero plate thickness. Then back out the knob until the proper thickness is set. Example: .120 plate would be, 1 turn = .100 and then on to .020 for a thickness of .120. To be accurate you must be turning out the plate thickness knob to eliminate backlash error.
3. Included with this machine is a stack of eight alternate angle washers located on the upper right hand corner of the base of the machine. To set the alternate angle, remove the wing nut that holds the cover on the alternate adjustment. It is to the right of the plate thickness adjustment. Remove the degree washer and install the washer for the degree desired. Reinstall the cover with wing nut.
4. Set alternate counters #10 and #11 to 1 and 1. This will make the machine grind 1 left tooth then 1 right tooth.
5. The first tooth to be ground will be a right.








PATTERN SAWS



1. Set grind mode switch #8 to alternate.
2. Set alternate counter #10 to the number of right teeth in the pattern.
3. Set alternate counter # 11 to the number of left teeth in the pattern.
4. Place the first right tooth against the index finger and start machine.



W-150 HD-E TOP & FACE SHARPENER

STD 3-CHIP RAKER SWITCH A,B,C ARE DOWN	
ALT. POINT RAKER ALT. POINT RAKER SWITCH A IS UP,B AND C ARE DOWN	
ALT. TOPS SAME HEIGHT ALT. BREAKS LOWER 2 PASS GRIND SWITCH B IS UP,A AND C ARE DOWN	
SAW WITH ALL 3-CHIP SWITCH C IS UP,A AND B ARE DOWN	
ALT. TOPS SAME HEIGHT ALT. BREAKS LOWER 2 PASS GRIND SWITCH A AND B ARE UP,C IS DOWN	
ALT. TOPS SAME HEIGHT ALT. BREAKS LOWER 2 PASS GRIND SWITCH A, B AND C ARE UP	
3-CHIP RAKER RAKER SWITCH B AND C ARE UP,A IS DOWN	



W-150 HD-E TOP & FACE SHARPENER

-Std.-

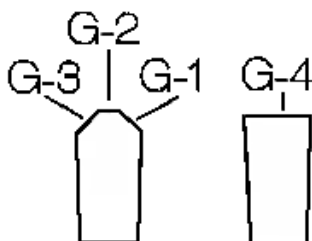
COMPLEX SAWS

(LEARNING TO OPERATE AN E MODEL)

NOTE: It is very important during the first week of operation to only grind Alternate or Straight saws. This will greatly reduce frustrations and speed up the learning process.

DO NOT start the learning process on this machine by trying to grind complex saws. The following instructions for complex saws are written for those with a good understanding of simple saws.

TRIPLE CHIP SAWS



1. Combo Planer Switch #16 must be off.
2. Place Tooth Style #8 to Hi-Low.
3. Set alternate angle.
4. Set the back angle.
5. Chamfer Jog #14 should be in the down position.
6. Set the saw plate thickness.
7. Mount the saw and set the saw height.

NOTE: The height of the saw changes the relationship between chamfers (G-1) and (G-3) and the chamfer flat (G-2). Use of the Saw Height Sensor is mandatory.

8. Start the machine, the first surface to be ground will be (G-1) inside chamfer. Do not grind this surface, only check depth of stroke to see that the grinding wheel passes over the carbide.



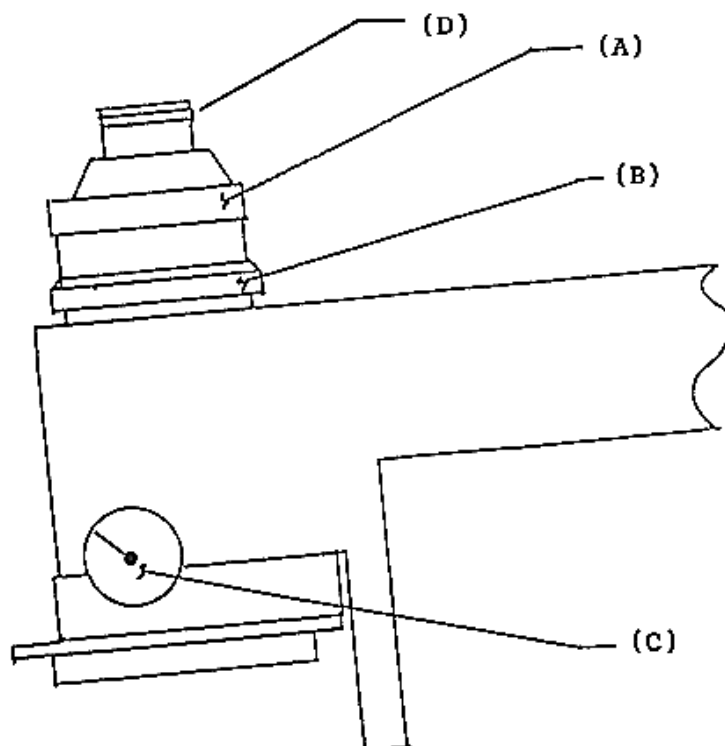
W-150 HD-E TOP & FACE SHARPENER

-Std.-

COMPLEX SAWS (CONTINUED)

9. The next surface to be ground will be (G-2) chamfer flat. Place cycle switch #4 to stop when over the chamfer flat (G-2) In-Feed (D) until carbide is touched. Set indicator (C) on 0.

10. The next surface to be ground will be (G-3). The amount of removal is determined by ring (B). Stop over chamfer (G-3). To move ring (B) Chamfer Switch #14 must be moved to the up position, turn ring (B) as needed then return Chamfer Jog #14 to the normal or down position. If adjustment beyond range of movement then proceed to reverse procedure. See next page.



11. The machine will index to raker tooth (G-4). Turn ring (A) to set height difference of the raker tooth. Watch indicator (C) as you adjust ring (A). Normally the raker tooth is .010 to .015 lower than the chamfer flat.

12. If the next triple chip saw is located to approximately the same height no adjustment of ring (A) or (B) should be necessary.



W-150 HD-E TOP & FACE SHARPENER

-Rev.-

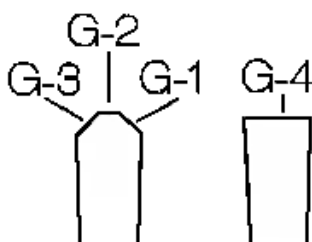
COMPLEX SAWS

(LEARNING TO OPERATE AN E MODEL)

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TRIPLE CHIP SAWS



1. Combo Planer Switch #16 must be off.
2. Place Tooth Style #8 to Hi-Low.
3. Set alternate angle.
4. Set the back angle.
5. Chamfer Jog #14 should be in the up position.
6. Set the saw plate thickness.
7. Mount the saw and set the saw height.

NOTE: The height of the saw changes the relationship between chamfers (G-1) and (G-3) and the chamfer flat (G-2). Use of the Saw Height Sensor is mandatory.

8. Start the machine, the first surface to be ground will be (G-1) inside chamfer. Place Cycle Switch #4 to stop when over the chamfer. Infeed (D) until the carbide is touched.



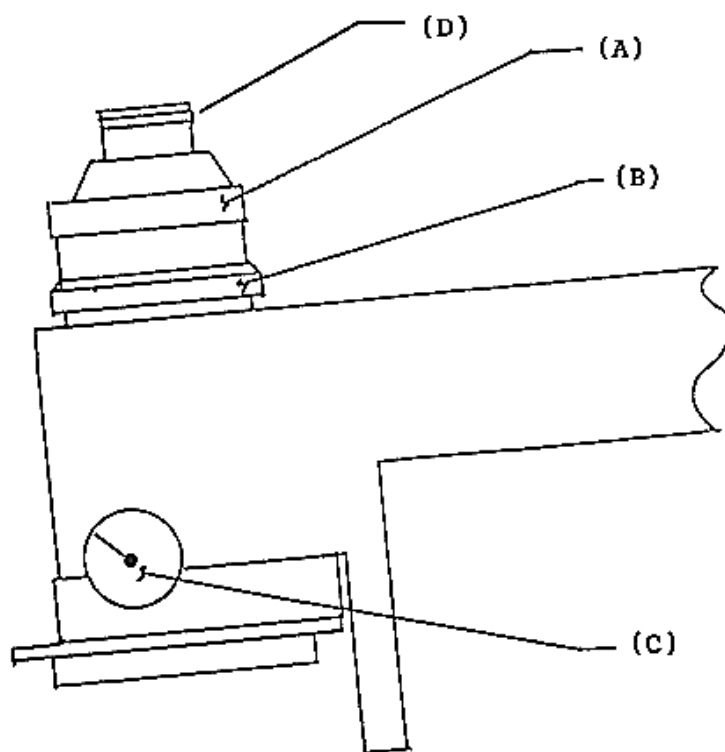
W-150 HD-E TOP & FACE SHARPENER

-Rev.-

COMPLEX SAWS (CONTINUED)

9. The next surface to be ground will be (G-2) chamfer flat. The amount of removal is determined by ring (B). Stop over chamfer (G-2). To move ring (B) Chamfer Switch #14 must be moved to the down position, turn ring (B) as needed then return Chamfer Jog #14 to the up position. Set indicator (C) on 0.

10. The machine will then grind (G-3).



11. The machine will index to raker tooth (G-4). Turn ring (A) to set height difference of the raker tooth. Watch indicator (C) as you adjust ring (A). Normally the raker tooth is .010 to .015 lower than the chamfer flat.

12. If the next triple chip saw is located to approximately the same height no adjustment of ring (A) or (B) should be necessary.

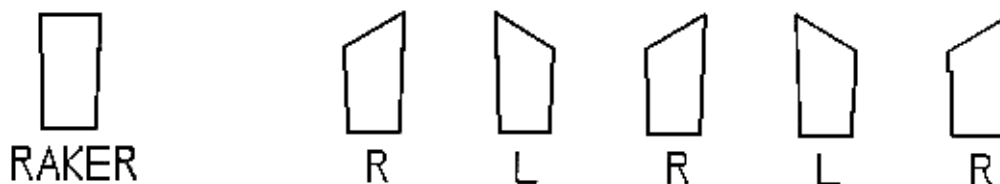
W-150 HD-E TOP & FACE SHARPENER

COMPLEX SAWS (LEARNING TO OPERATE AN E MODEL)

NOTE: It is very important during the first week of operation to only grind Alternate or Straight saws. This will greatly reduce frustrations and speed up the learning process.

DO NOT start the learning process on this machine by trying to grind complex saws. The following instructions for complex saws are written for those with a good understanding of simple saws.

COMBO PLANERS



1. Set Tooth style #8 to Alternate.
2. Turn on Combo Planer switch #16.
3. Set Alternate Counters #10 and #11 both to 1.
4. Set Combo Group Counter #9 to the number of teeth in the group.
5. Set the Long Tooth Pitch Adjustment #12 and read the Long Tooth Pitch on Scale #13.
6. Set the Short Tooth Pitch Adjustment #18 and read Short Tooth Pitch on Scale #19.
7. Set Alternate Angle.
8. Set Plate Thickness.



W-150 HD-E TOP & FACE SHARPENER

COMPLEX SAWS

(Continued)

10. The Left/Right Switch is used for manually selecting Left or Right Alternate Angles. If the pattern is broken and each group starts on a different side, select the Combo Toggle Switch to Broken. If the kerf is less than .112 set the Combo Toggle to Narrow. If the kerf is wider than .112 set the Combo Toggle to Wide.

11. Place the raker tooth against the Index Finger.

12. Wide Kerf Saws: Start machine and cycle "Fwd." until the wheel is above the first alternate tip. Cycle head down by turning knob "D" counterclockwise until the wheel just touches the tip of the saw. Then set the dial indicator to zero. Cycle switch Fwd. until wheel is over Raker tooth. Adjust ring "A" counterclockwise for height difference then cycle Fwd. Adjusting knob "D" will move both rings "A" and "B" and their adjustments together. The difference is set unless ring "A" is repositioned to increase the grind for cleanup purposes.



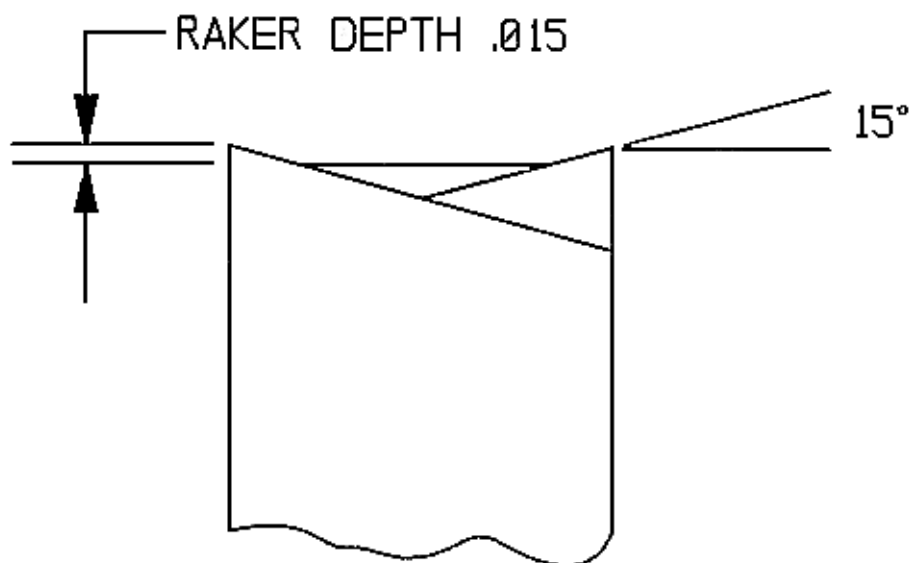
COMBO SWITCHES LOCATED ON RIGHT SIDE OF CONTROL PANEL

13. Thin Kerf Saws: Cycle head down until knob "D" touches raker angle. Turn dial indicator to "0" reference point and then cycle "FWD" to first alternate. Turn ring "A" counterclockwise for height difference.



W-150 HD-E TOP & FACE SHARPENER

COMBO SAW RAKER DEPTH CHART



KERF	DIRECTION HEAD MOVES TO GRIND RAKER	AMOUNT HEAD MOVES TO GIVE .015 RAKER DEPTH
.215	DOWN	.014
.200	DOWN	.012
.185	DOWN	.010
.171	DOWN	.008
.156	DOWN	.006
.141	DOWN	.004
.127	DOWN	.002
.112	--- 0 ---	.000
.097	UP	.002
.083	UP	.004
.068	UP	.006



W-150 HD-E TOP & FACE SHARPENER

PERFORMANCE

1. SAW BLADE DIMENSIONS:

- * Minimum saw diameter 4 inches.
- * Maximum saw diameter 30 inches. (34" with tank screen removed)
- * Maximum saw thickness to 3/8 inches.
- * Maximum tooth pitch straight 4-1/2 inches.
- * Alternate top or face angle 0 to 45 degrees.
- * Top angle +5 to +25 degrees.
- * Face angle -10 to +45 degrees.
- * Bore 5/8" to 2.5" standard, 1/2" to 10" optional.
- * Teeth per minute 0 to 29. Note: complex tips, such as "Alternates", "Combination tips", and "triple chips" will run much slower.

2. SPEEDS:

- * Average set up time approximately 2 minutes.
- * Reload time less than 1 minute.
- * Grinding speed (average resharpener) 11 teeth per minute.

The above speeds were accomplished by an experienced operator. The saw used for these average speeds was 24 inches in diameter with 40 teeth, .087 plate thickness, .125 kerf. Larger saws, thicker plate or kerf will require somewhat slower speeds.



W-150 HD-E TOP & FACE SHARPENER

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. If equipped with, and when not in use, leave the enclosure door open. This eliminates humidity build up in the enclosure.
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.
6. Do not use oilers. Do not use synthetic compressor oil or severe valve damage will occur. Use only water based grinding coolant.

MAINTENANCE

DAILY

1. Check coolant level and filter.
2. Clean control panel, ramp, sawlift, and grinding head.
3. Check and / or drain air filter water trap.

WEEKLY

1. Check coolant tank for and remove carbide buildup.
2. Replace coolant filter.
3. Inspect feed finger for wear.

MONTHLY or 50,000 CYCLES

1. Inspect ramp and clamp jaws for wear.
2. Clean and lube W-287 finger boss.
3. Lube clamp arm pivot and plate thickness slide plate spacer.
4. Spindle housing / bushings - lube.
5. Head feed adjust lead screw - clean / lube (W-1336).
6. Spindle adjust lead screw - lube (W-1368, W-1368-1).
7. If equipped, clean lube height sensor shaft (anti-seize best!).

EVERY 6 MONTHS or 500,000 CYCLES

1. Inspect spindle drive belt.
2. Clean spindle motor fan / housing.
3. Lube index shaft bearings.
4. Lube rear head feed shaft bearing.
5. Plate thickness pivot and slide plate spacer - lube.
6. Linear slide bearing 1 1-1/2 pump.
7. "E" model lube dampener mount



W-150 HD-E TOP & FACE SHARPENER

MAINTENANCE / TROUBLE SHOOTING

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

Drain water from air filter every day. More often may be required if air is wet or dirty.

TROUBLE SHOOTING

CAUTION: DISCONNECT FROM POWER BEFORE OPENING ANY COVER.

Machine will not start when start button is pulled or machine will not function, nothing works.

1. No power to machine.
2. Open rear cam cover. On door next to large transformer is an in line fuse holder, pull top to open, replace with six amp fuse.

Machine stops as soon as start button is released.

1. Counter is set to zero.
2. Overload tripped on motor starter (white button). Overload is located inside control console right side bottom.

Machine starts but does not cycle, feed, or index.

1. Check load meter setting.
2. Check the fuse behind control console.
3. Index is bound.
4. Cam drive motor is defective.
5. Circuit board is defective.

Coolant does not flow when switch is on.

1. Check to be certain coolant is in the tank.
2. Valve is closed.
3. Blow air through nozzle to clean obstruction.
4. Coolant pump may be clogged.
5. Coolant pump may be defective.



W-150 HD-E TOP & FACE SHARPENER

TROUBLE SHOOTING (Continued)

Machine will run only when start button is held out.

1. Motor overload is tripped or the counter is set on zero. If motor overload is tripped then manually depress white button on overload to reset. Reset overload inside control console right side bottom.

Machine runs but will not go through it's cycle.

1. The left knob on the load meter may be set too low.
2. Fuses to cam motor are blown. Open the control panel on the front of the machine. On the left side are two in line fuse holders replace as necessary with five amp fast-blow fuses. If this fuse blows more than twice in six months **CALL US** for adjustment recommendations.

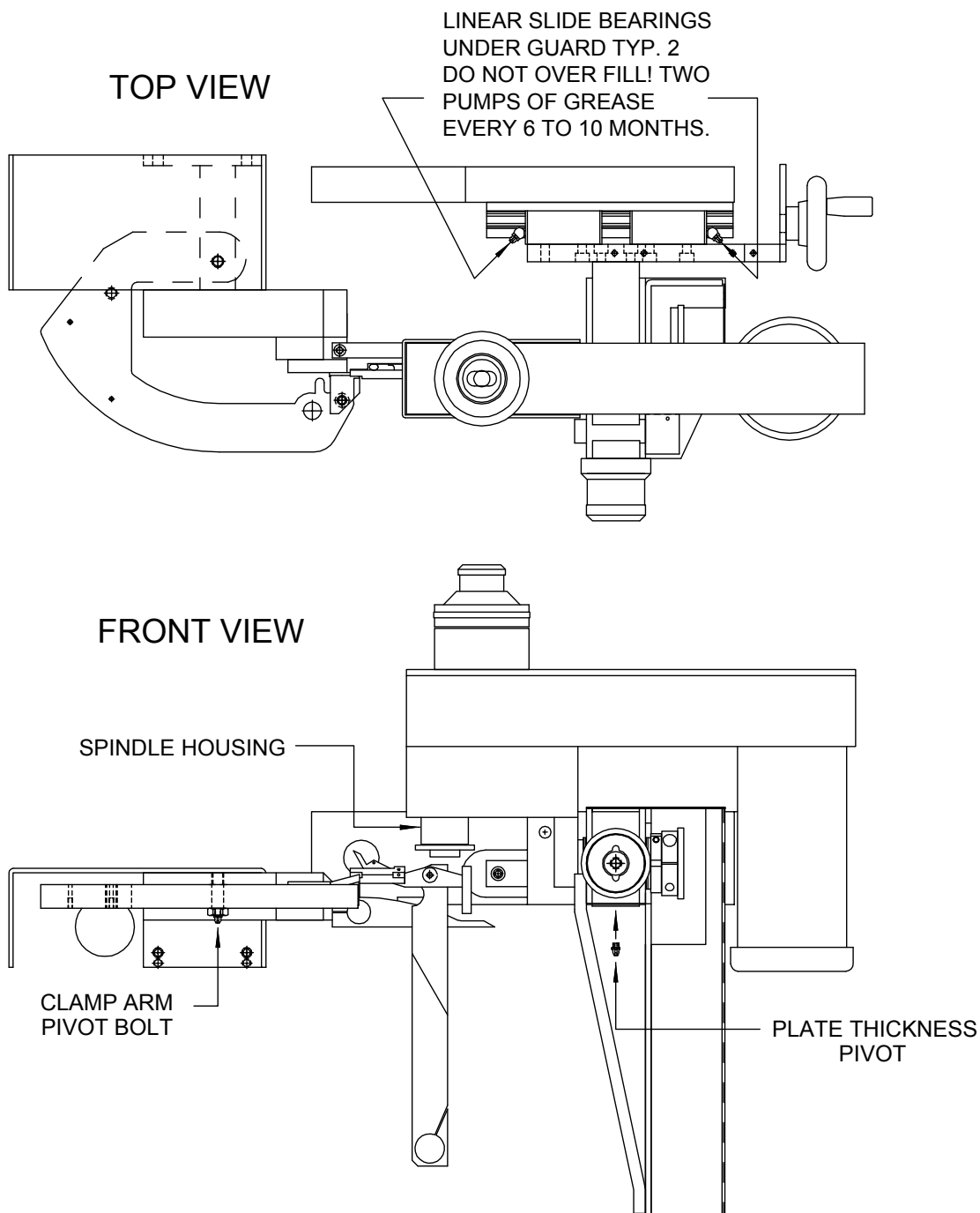
If other problems arise please call us for technical advice. (541) 942-3712.



W-150 HD-E TOP & FACE SHARPENER

LUBRICATION POINTS

Use grease type UNOBA EP GREASE 2 (Spec. #NLGI 2) or similar grade general purpose grease.

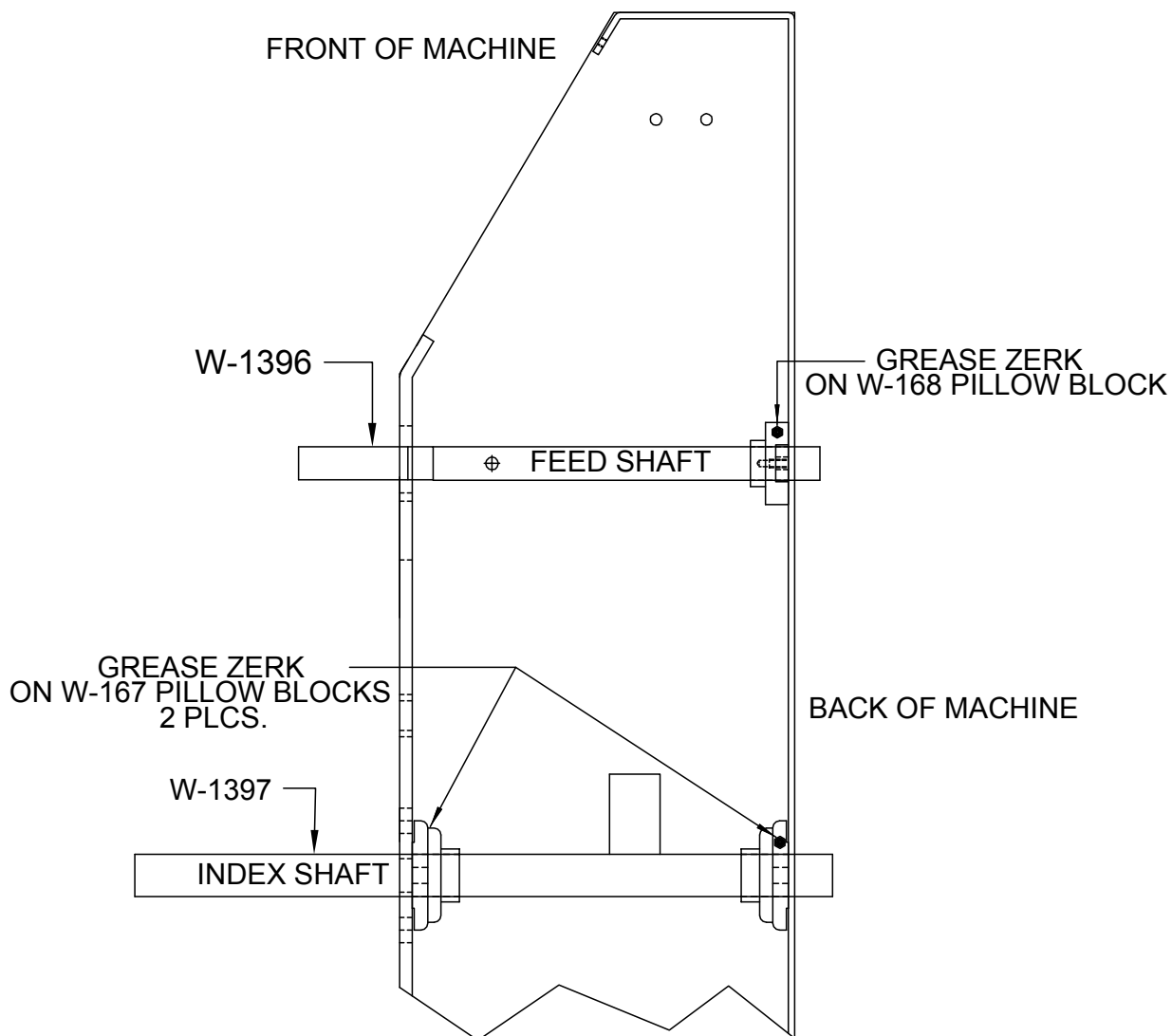


WM **RIGHT** **M** **ACHINE**

W-150 HD-E TOP & FACE SHARPENER

LUBRICATION POINTS (Inside of Base)

Use grease type UNOBA EP GREASE 2 (Spec. #NLGI 2) or similar grade general pupose grease.



W-150 HD-E TOP & FACE SHARPENER

ADJUSTING THE FRONT INDEX ARM

Begin by checking feed arm against the positive stop set screw using the 1/4" center hole from the 2" hook pivot shaft as the reference point. See figure (i-1). This will ensure correct full forward alignment with the hook pivot. Adjust as needed.

To find the "Starting" reference point of the index cam follower you must use a straight edge held against the two cap screw on the cam set and rotate the camset by hand until the center of the cam follower is aligned with the edge of the straight edge. See figure (i-2). This "Starting" point will compensate for front arm "Pull Back" when retightening. Each machine may require more or less compensation.

To set the feed finger correctly to the clamp jaws you must loosen the front arm pinch bolts, position and hold the finger against positive stop set screw, lay out an .085 steel ruler on the extension beyond the face of the ruler. Tighten the pinch bolts and there should be about 1/8" of "Pull Back". Start the machine and cycle several tips. At the shut off point check tension of the arm by pulling with both hands; it should be barely able to move from the positive stop set screw.

These settings will help ensure consistent indexing critical to satisfactory face grinding.

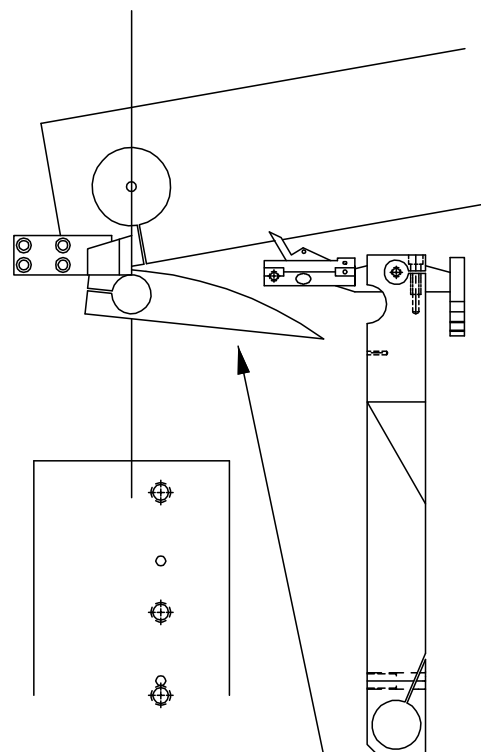


W-150 HD-E TOP & FACE SHARPENER

ADJUSTING THE FRONT INDEX ARM CONTINUED

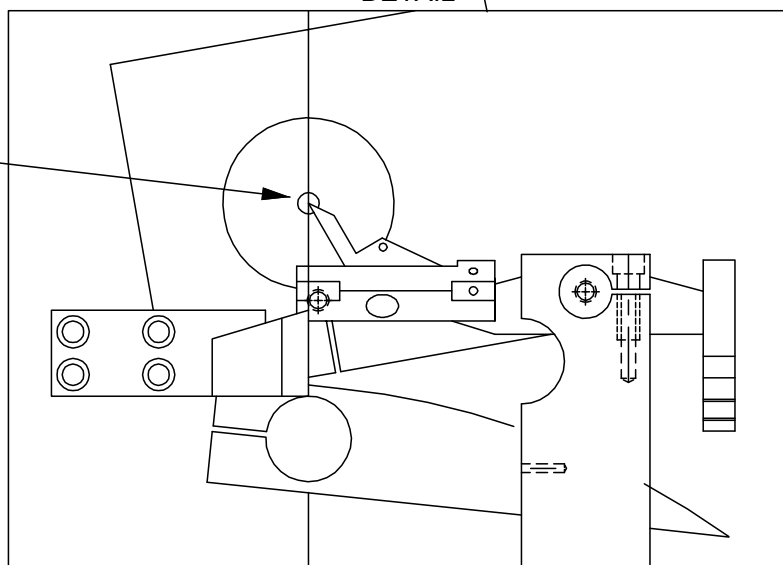
ADJUSTMENT OF POSITIVE STOP SHOULD BE CORRECT WHEN THE FEED FINGER IS ALIGNED WITH THE CENTERLINE OF THE MAIN PIVOT SHAFT.

FIGURE (i-1)



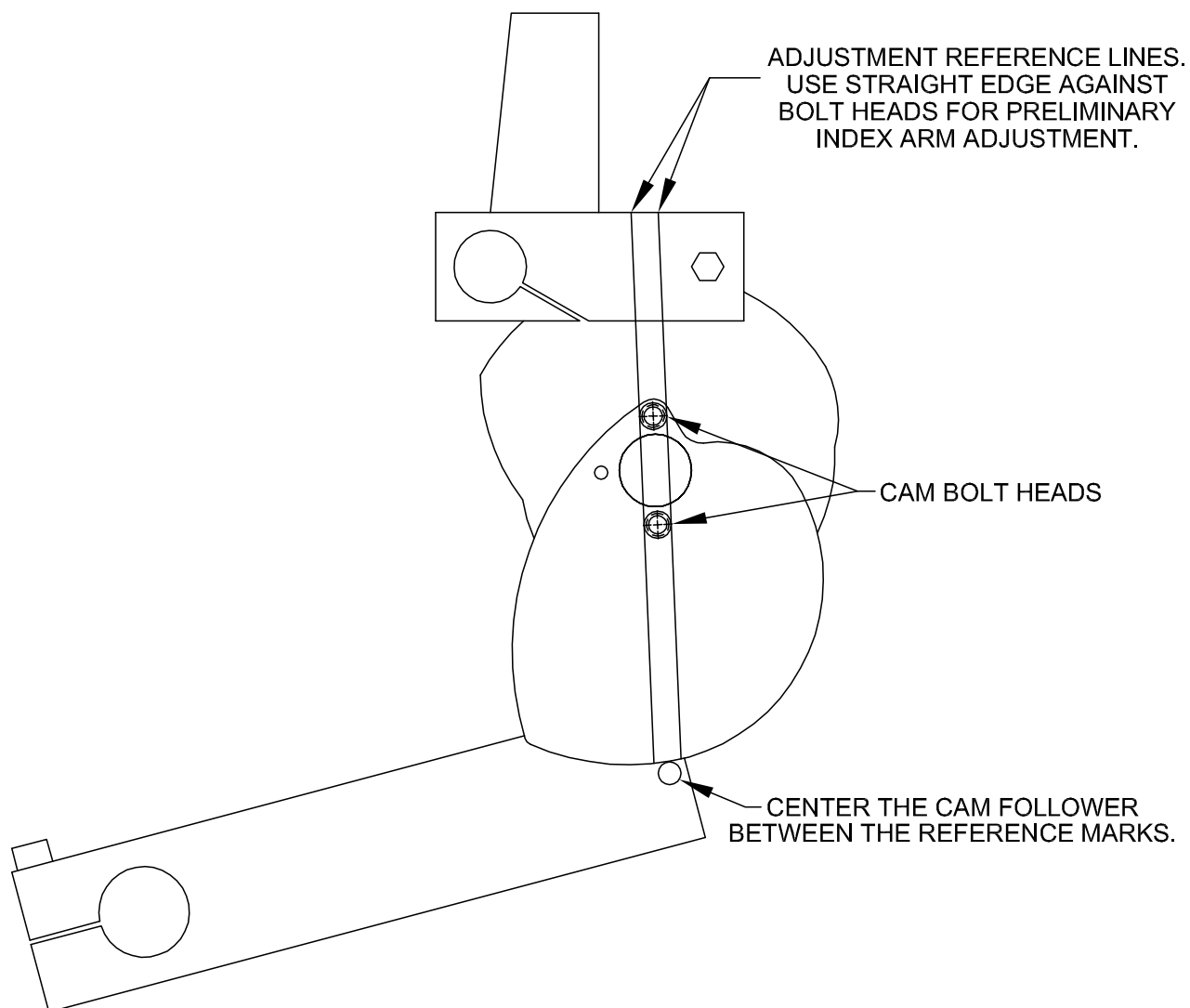
DETAIL

A 1/4" X 8" DOWEL ROD INSERTED INTO THE CENTER HOLE WILL SERVE AS A VISUAL REFERENCE POINT.



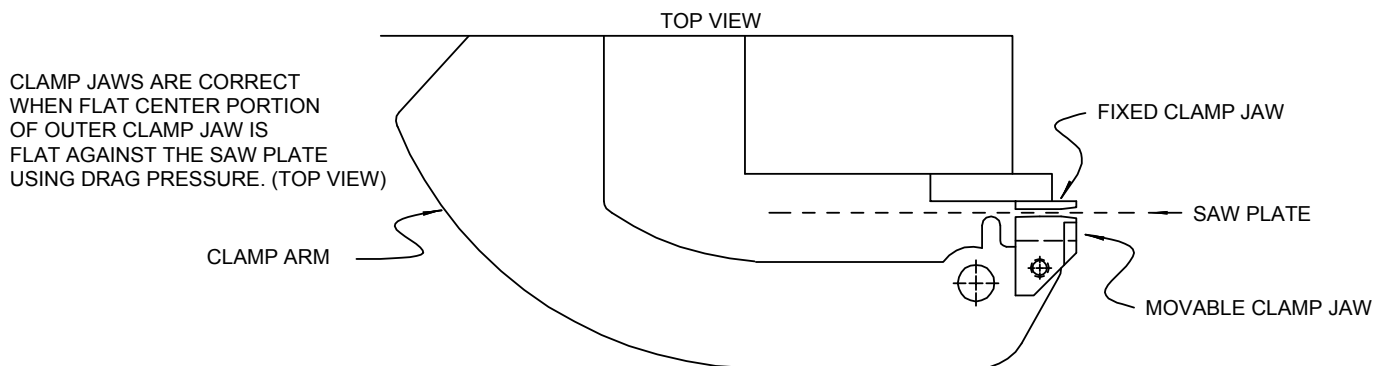
W-150 HD-E TOP & FACE SHARPENER

FIGURE (i-2)

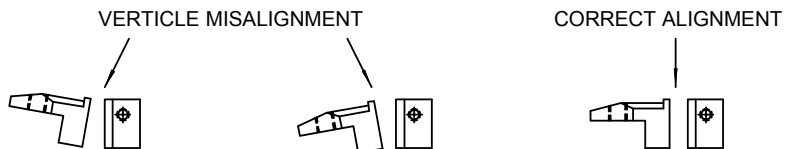


W-150 HD-E TOP & FACE SHARPENER

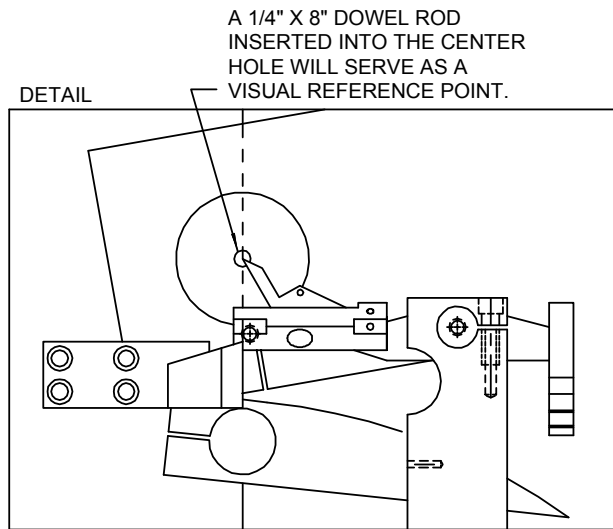
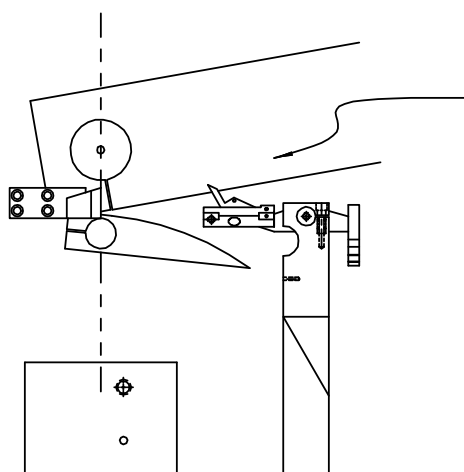
SAW CLAMP ASSEMBLY



VIEWING FROM THE RIGHT END OF THE MACHINE, CHECK THE VERTICAL ALIGNMENT OF THE FIXED/OUTER CLAMP JAW. SHIM THE OUTER CLAMP JAW TO CORRECT FOR EXCESSIVE MISALIGNMENT.



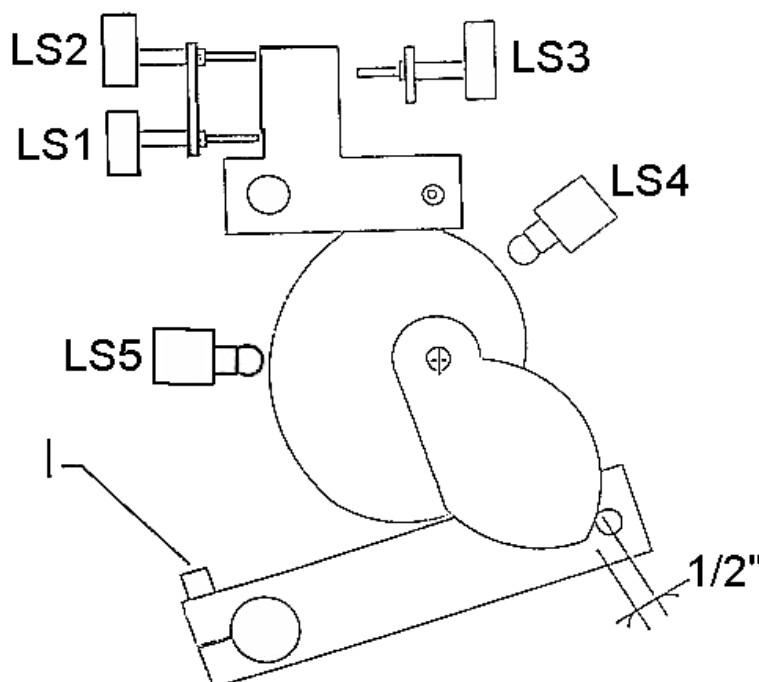
ADJUSTMENT OF POSITIVE STOP SHOULD BE CORRECT WHEN THE FEED FINGER IS ALIGNED WITH THE CENTERLINE OF THE MAIN PIVOT SHAFT.



W-150 HD-E TOP & FACE SHARPENER

LIMIT SWITCH ADJUSTMENT

The limit switches actuated by the cams, control the function of the machine. If the machine does not function correctly check the limit switch for proper adjustment.



LS1. Trips at full index forward. When it trips (pushed in) the clamp pressure goes to drag pressure. When the cam is at the hi-point LS-1 untrips allowing clamp pressure back to full pressure.

LS2. Trips when index is 1/4" from full forward. This makes the counter count, and is the normal stop position. It also actuates the lift off toward the tooth. LS-2 untrips 1/2" from hi-point of cam.

LS3. Trips 1/16" before grinding head is full in. This resets the latch relays which actuates lift off away from the tooth.

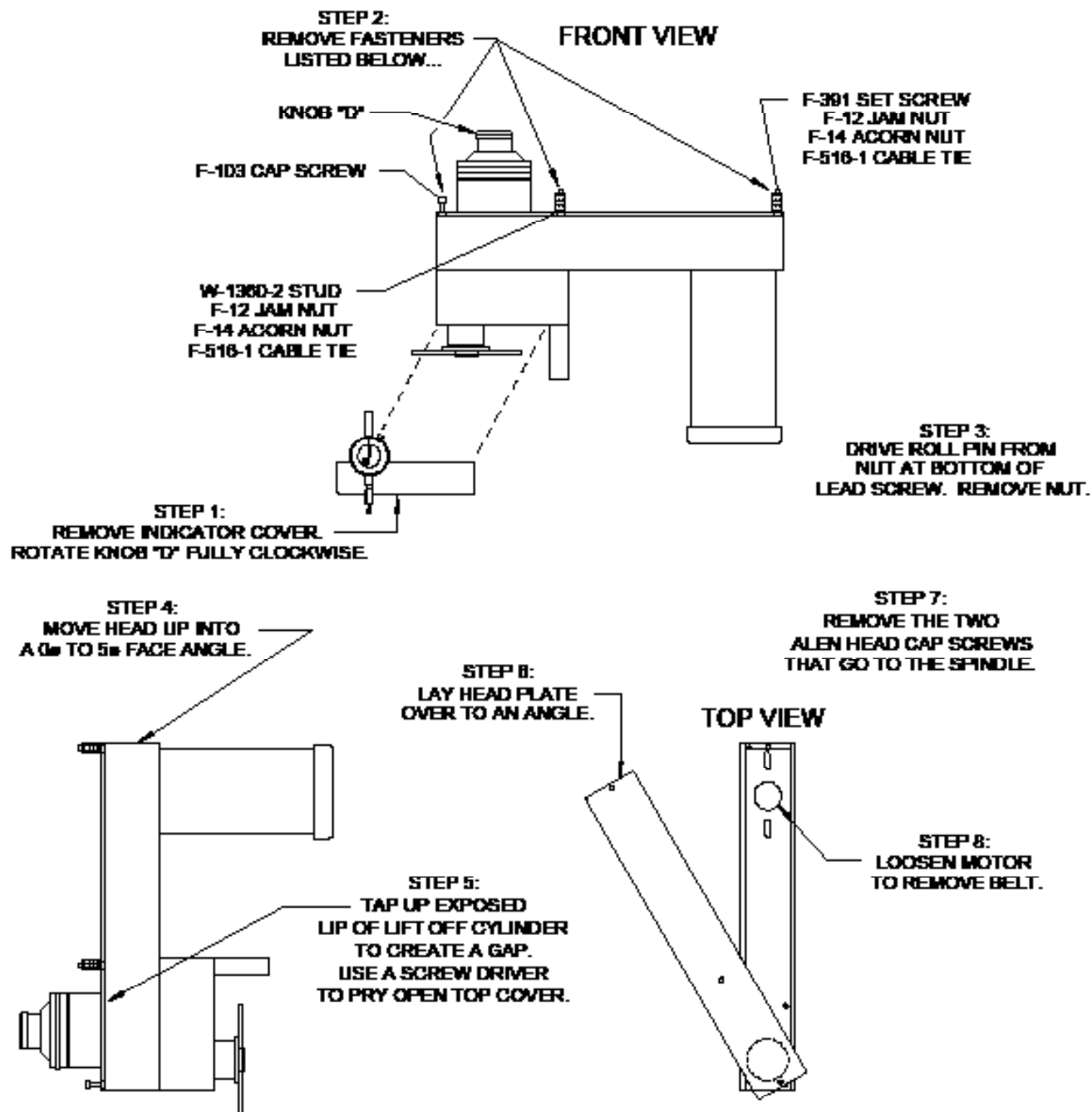
LS4. Trips .375 after the grinding head is full in. This is the point that the alternate angle or Hi-Low shifts.

LS5. Trips about .400" after grinding head is full in with cams turning clockwise.



W-150 HD-E TOP & FACE SHARPENER

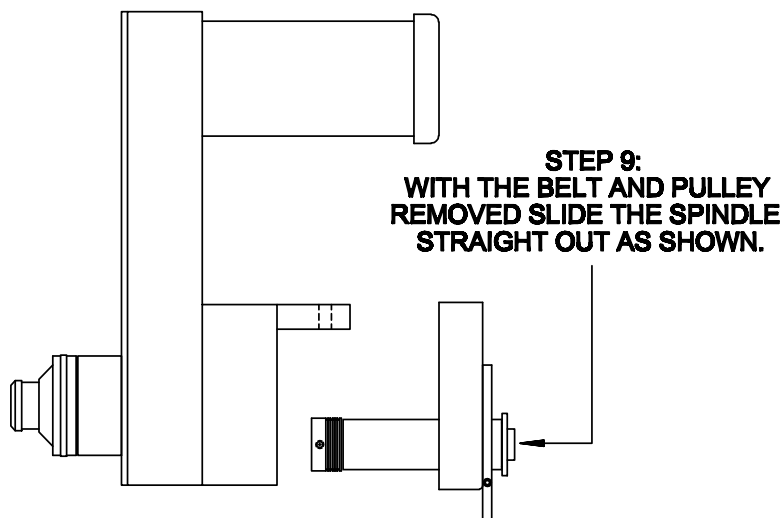
NOTE: DISCONNECT POWER FIRST! SPINDLE INSTALLATION INSTRUCTIONS



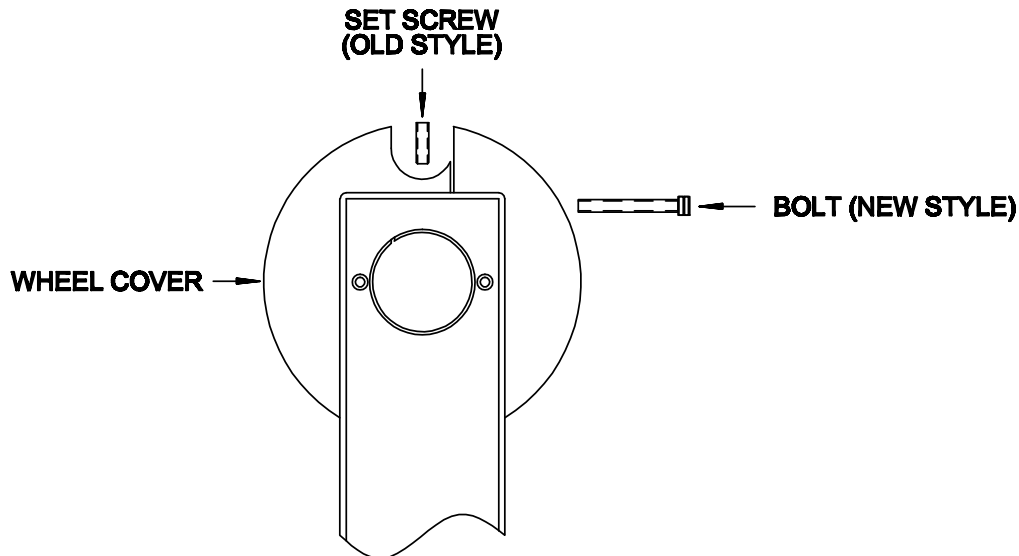
WM RIGHT **M**ACHINE

W-150 HD-E TOP & FACE SHARPENER

NOTE: DISCONNECT POWER FIRST!
SPINDLE INSTALLATION INSTRUCTIONS CONTINUED



INSTALL THE NEW SPINDLE IN THE SAME MANNER AS SHOWN IN STEPS 1-9.
BE SURE THE BELT LINES UP IN BELT GROOVES ON THE MOTOR AND SPINDLE PULLEYS.

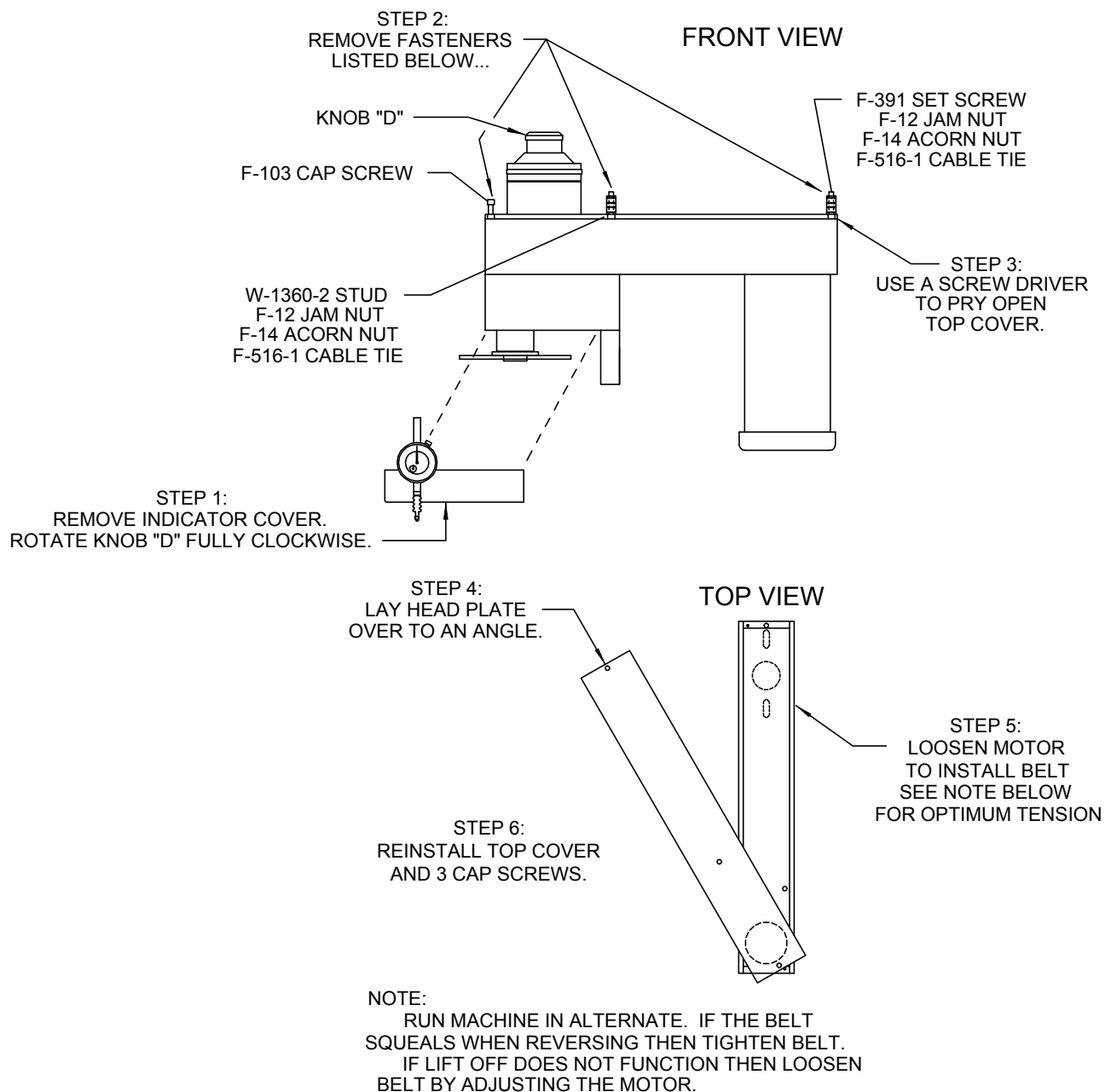


NOTE: ON THE WHEEL COVER SET SCREW - JUST RUNNING IT UP SNUG IS ALL THAT IS NEEDED.
OVERTIGHTENED SET SCREW WILL HARM SPINDLE.
ON LATER MACHINES THE SET SCREW WAS REPLACED BY A SPLIT GUARD AND SOCKET HEAD CAP SCREW.
THE NEW STYLE SHOULD ONLY BE SNUG AND NOT OVERTIGHTENED.

WM RIGHT MACHINE

W-150 HD-E TOP & FACE SHARPENER

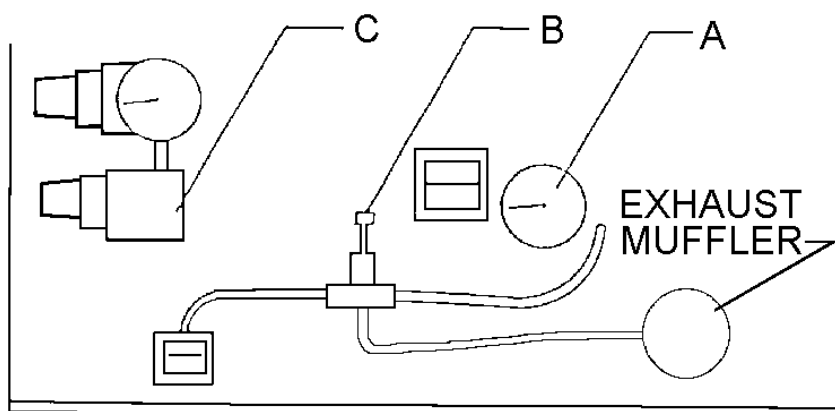
NOTE: DISCONNECT POWER FIRST! BELT REPLACEMENT INSTRUCTIONS



W-150 HD-E TOP & FACE SHARPENER

UNEVEN GRINDING

1. Is the saw free of rust and pitch.
2. Set tooth counter on 2. Start machine by selecting Run open rear cam cover. Check bleeder "B" to exhaust muffler. It should be exhausting some air. Regulator "C" controls drag pressure and is set at 10 lbs. A lower than 10 lbs. setting may be necessary for some saws to index smoothly. Example: Strob saws or Negative face saws. To check, mount saw, turn selector to run, then turn the saw by hand and see if it turns smoothly with about 10 - 15 lbs. of drag. If it does not, check the saw for plate damage or for saw center binding.
3. The index finger must contact the positive stop. For this adjustment see page 21.

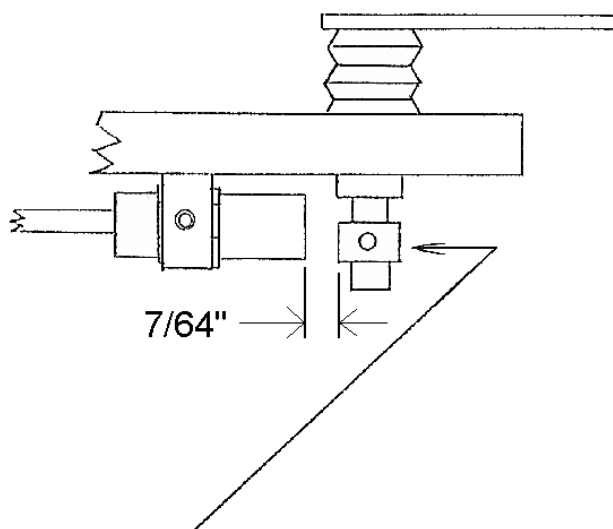


INSIDE OF REAR CAM COVER

W-150 HD-E TOP & FACE SHARPENER

HEIGHT SENSOR ADJUSTMENT

It may be necessary to set the location of the saw to a different height, adjustment shown below. Set sensor to stop saw when tip is $1/8$ " above top of new feed finger.



Loosen set screw and move collar up if you want the tooth lower. Down if you want it higher.

W-150 HD-E TOP & FACE SHARPENER

PLATE THICKNESS ADJUSTMENT

Due to wear of the clamp jaw and lead screw it may become necessary to recalibrate the plate thickness.

Step 1. After grinding an alternate top saw that is round and has even side clearance check the tooth height to see if the left and right teeth are the same height. This should be done on a run out test stand.

DIFFERENCE IN HEIGHT

	.001	.005	.010	.015
15 DEG	.002	.010	.020	.030
20 DEG	.0015	.007	.015	.021
25 DEG	.001	.005	.010	.015
30 DEG	.0009	.004	.009	.013

Step 2. Where the difference in tooth height and degree of top bevel cross is the amount that the plate thickness needs to be corrected.

EXAMPLE: .010 difference in height, 20 deg. bevel = .015.

Step 3. Note the number that the plate thickness is reading then loosen the set screw that locks the knob, and pull the knob straight out.

Step 4. If tooth A is high using example in Step 2., minus .015 from the reading that was on plate thickness and slide knob straight back on and lock.

Example: Plate thickness .125 - .015 = set on .110. If B is high add the plate thickness.

Step 5. Now set knob to actual saw plate thickness and grind saw.

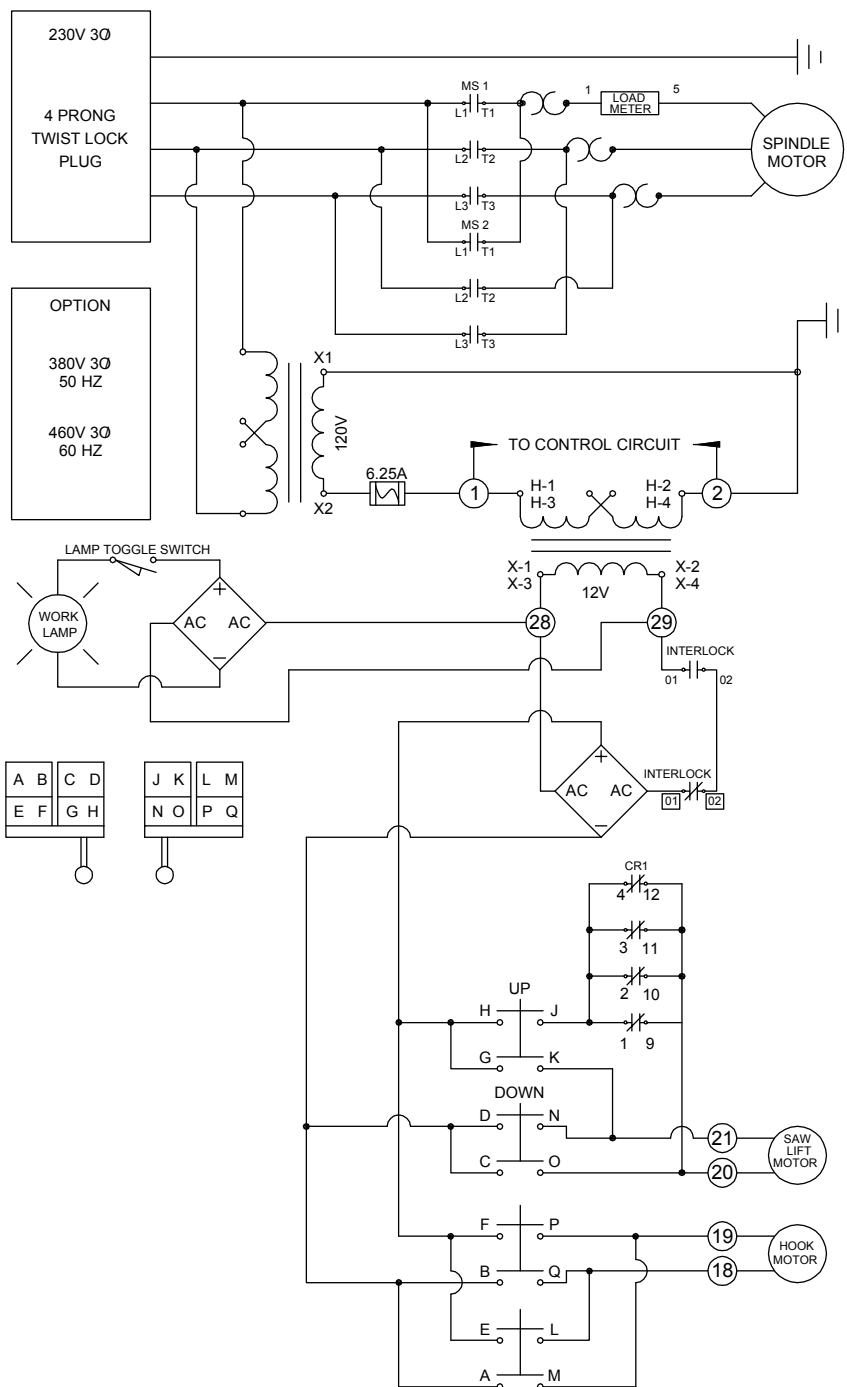
Note: The saw being checked must have the same side clearance.

Note: When the plate thickness is turned full in it may not stop exactly at 0. This causes no problem and DO NOT adjust to get it to stop at 0.



W-150 HD-E TOP & FACE SHARPENER

ELECTRICAL SCHEMATIC



W-150 HD-E TOP & FACE SHARPENER

ELECTRICAL SCHEMATIC

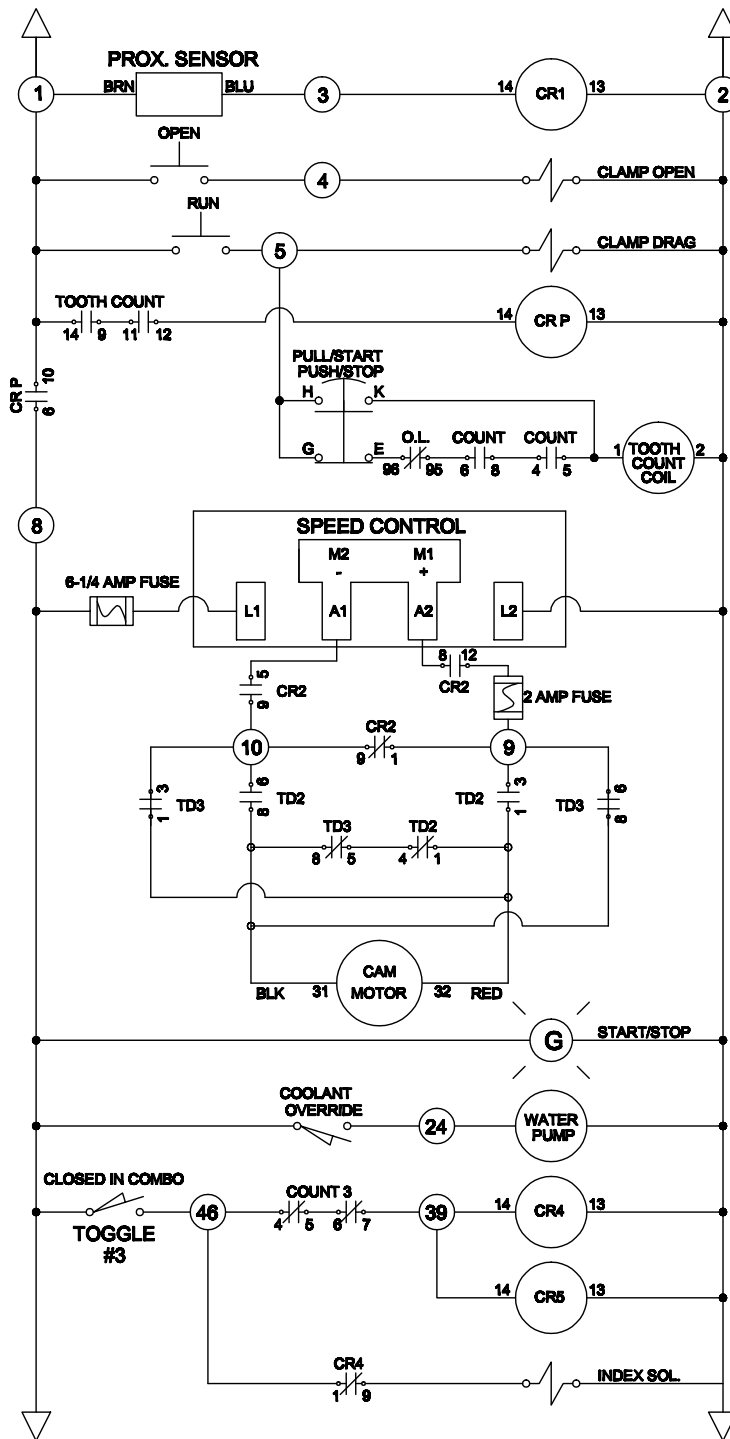
LS1
UNTRIPS HIGH POINT INDEX CAM

LS2
UNTRIPS WHEN FINGER 1/4" FROM FORWARD STOP

LS3
TRIPS 1/16" BEFORE HEAD FULL IN

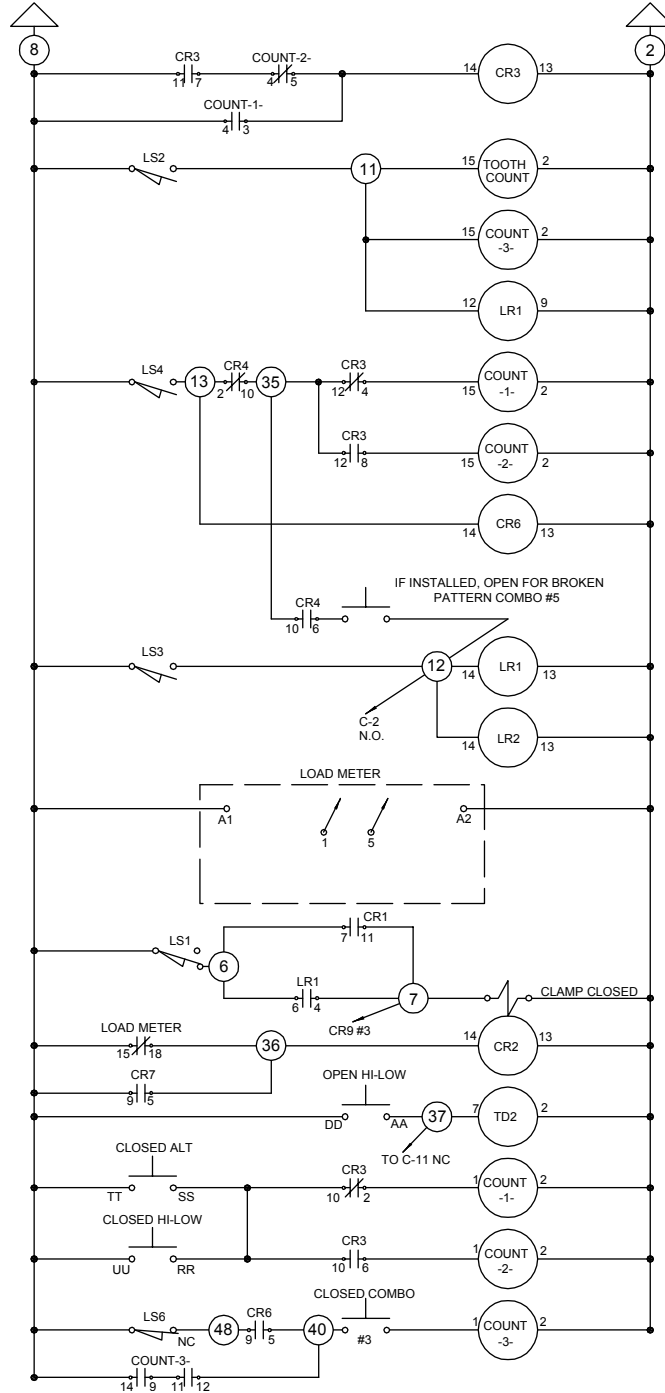
LS4
TRIPS 3/8" AFTER HEAD FULL IN

LS5
INDEX 1/2" BEFORE FULL FORWARD



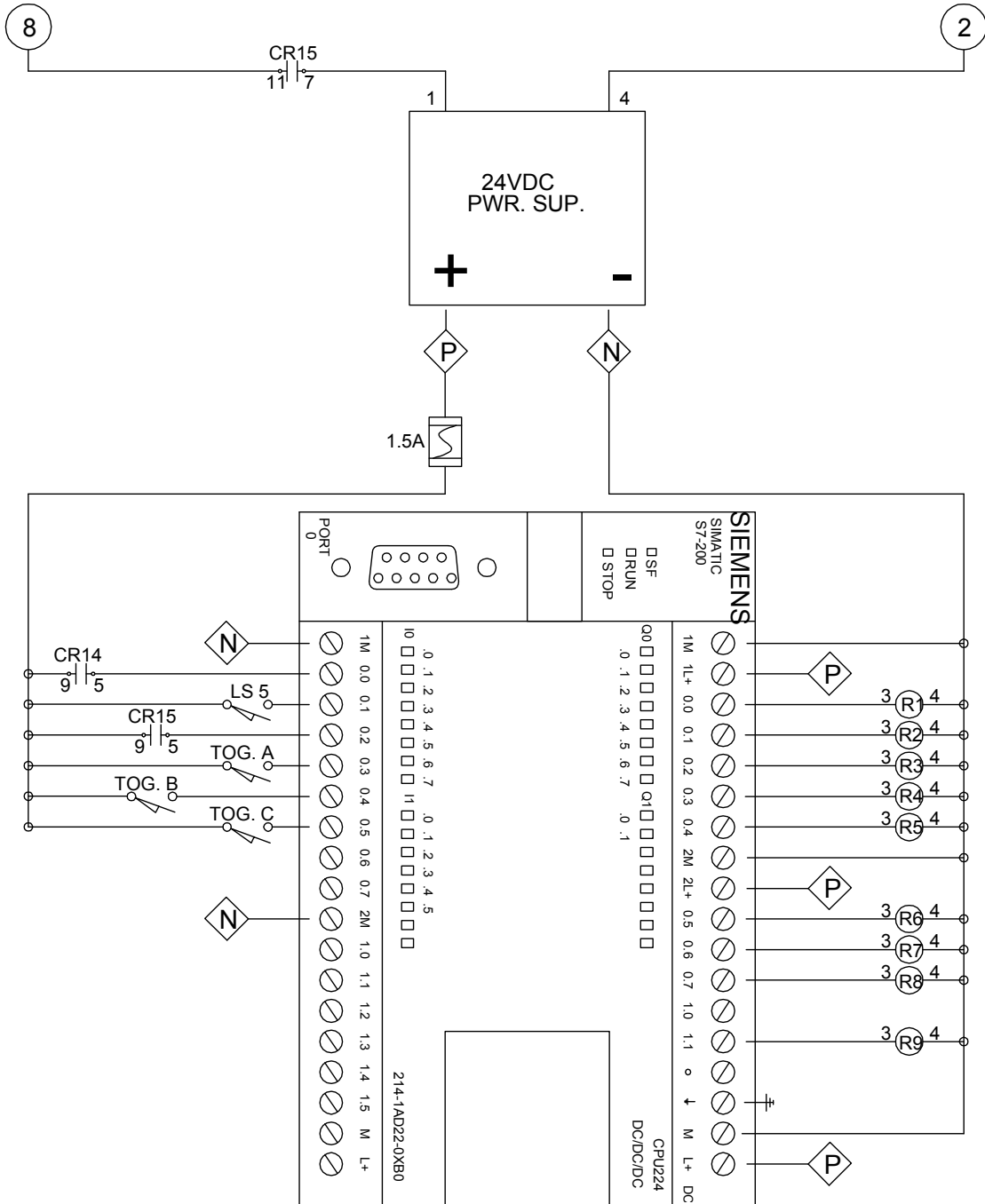
W-150 HD-E TOP & FACE SHARPENER

ELECTRICAL SCHEMATIC



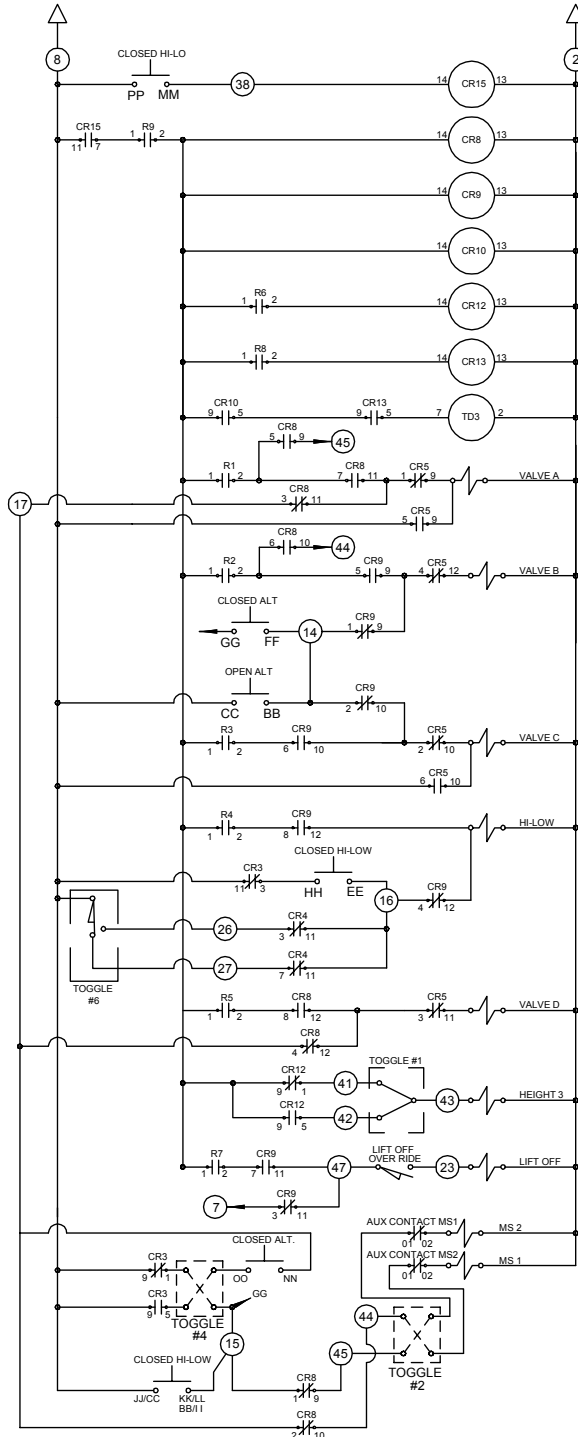
W-150 HD-E TOP & FACE SHARPENER

ELECTRICAL SCHEMATIC



W-150 HD-E TOP & FACE SHARPENER

ELECTRICAL SCHEMATIC



W-150 HD-E TOP & FACE SHARPENER

CONVERTING SERVICE VOLTAGE

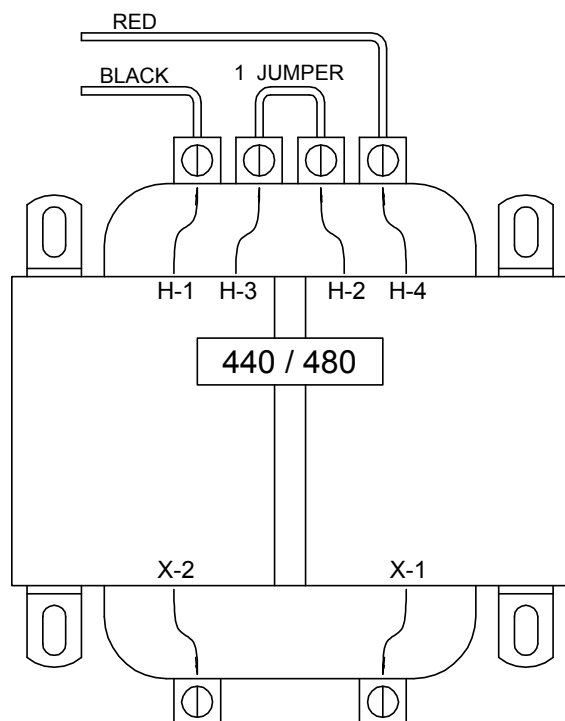
*** NOTE: DISCONNECT POWER FIRST! ***

Converting 220V to 440V

MOTOR CONNECTIONS

LINE 1 WHITE
 LINE 2 RED
 LINE 3 BLACK

JUMP TOGETHER 6 & 9
 5 & 8
 4 & 7



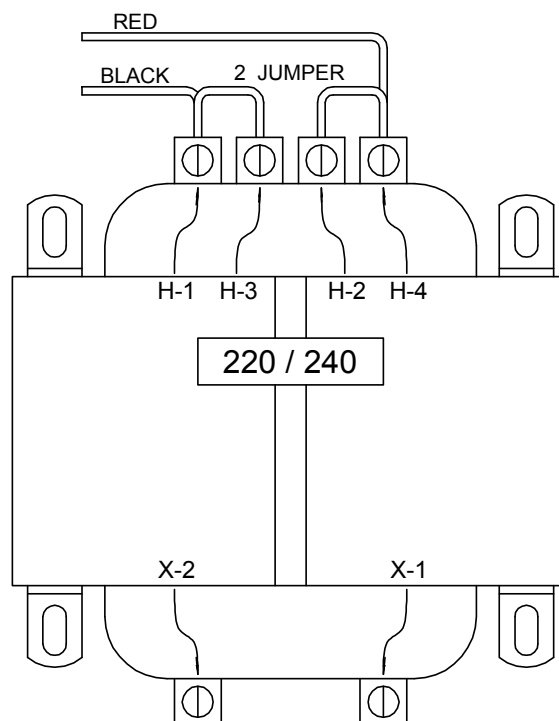
SET MOTOR STARTER
 OVERLOAD AT 3 - 3.2

Converting 440V to 220V

MOTOR CONNECTIONS

LINE 1+7 WHITE
 LINE 2+8 RED
 LINE 3+9 BLACK

JUMP TOGETHER 4, 5, 6



SET MOTOR STARTER
 OVERLOAD AT 4 - 4.1



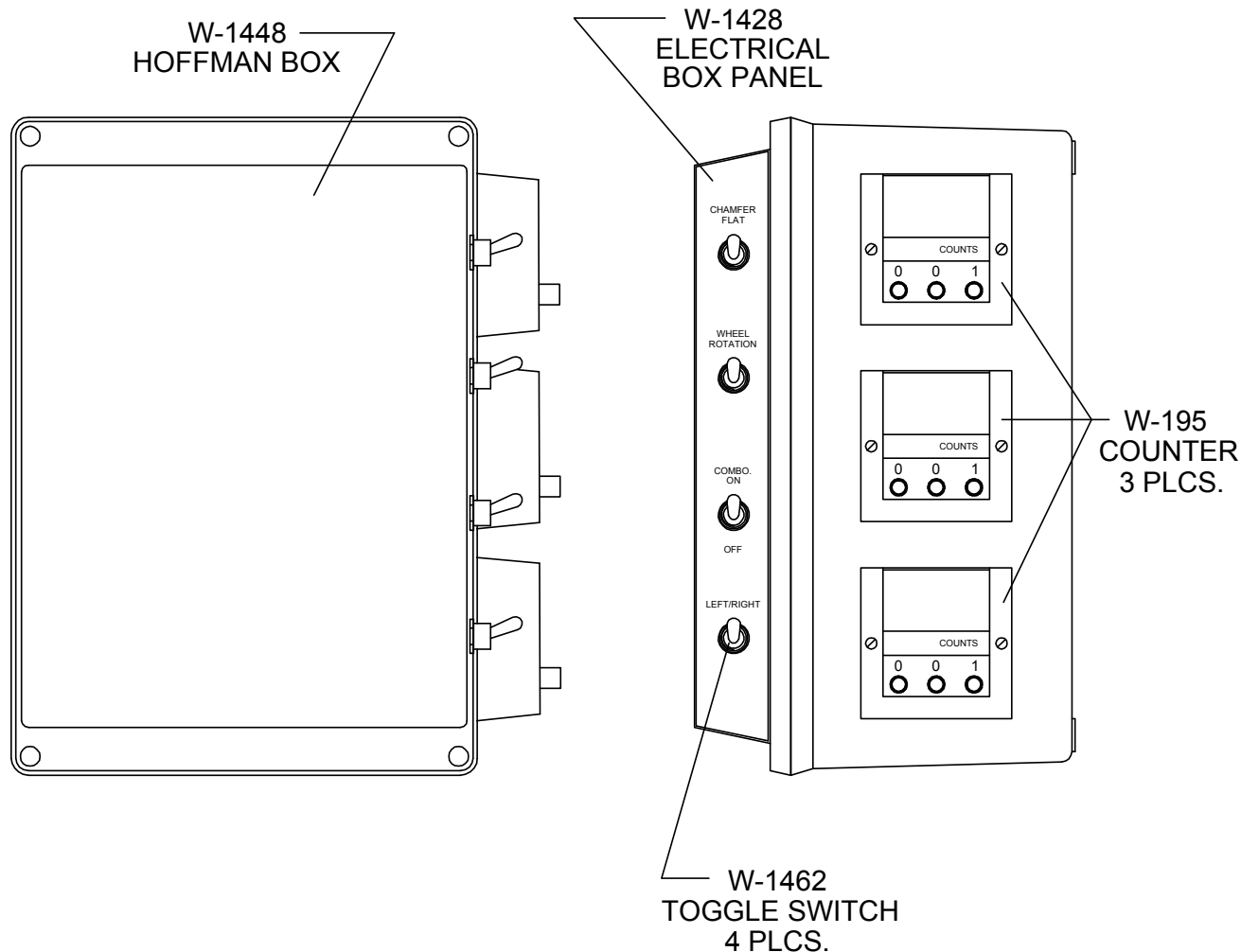
W-150 HD-E TOP & FACE SHARPENER

PARTS LIST

The following parts lists are areas within the machine broken down into various individual assemblies.

COUNTER BOX

QTY	PART NUMBER	DESCRIPTION
1	W-1448	HOFFMAN BOX
4	W-1462	TOGGLE SWITCH
3	W-195	COUNTER
1	W-1428	ELECTRICAL BOX PANEL
4	W-1497	SWITCH BOOT

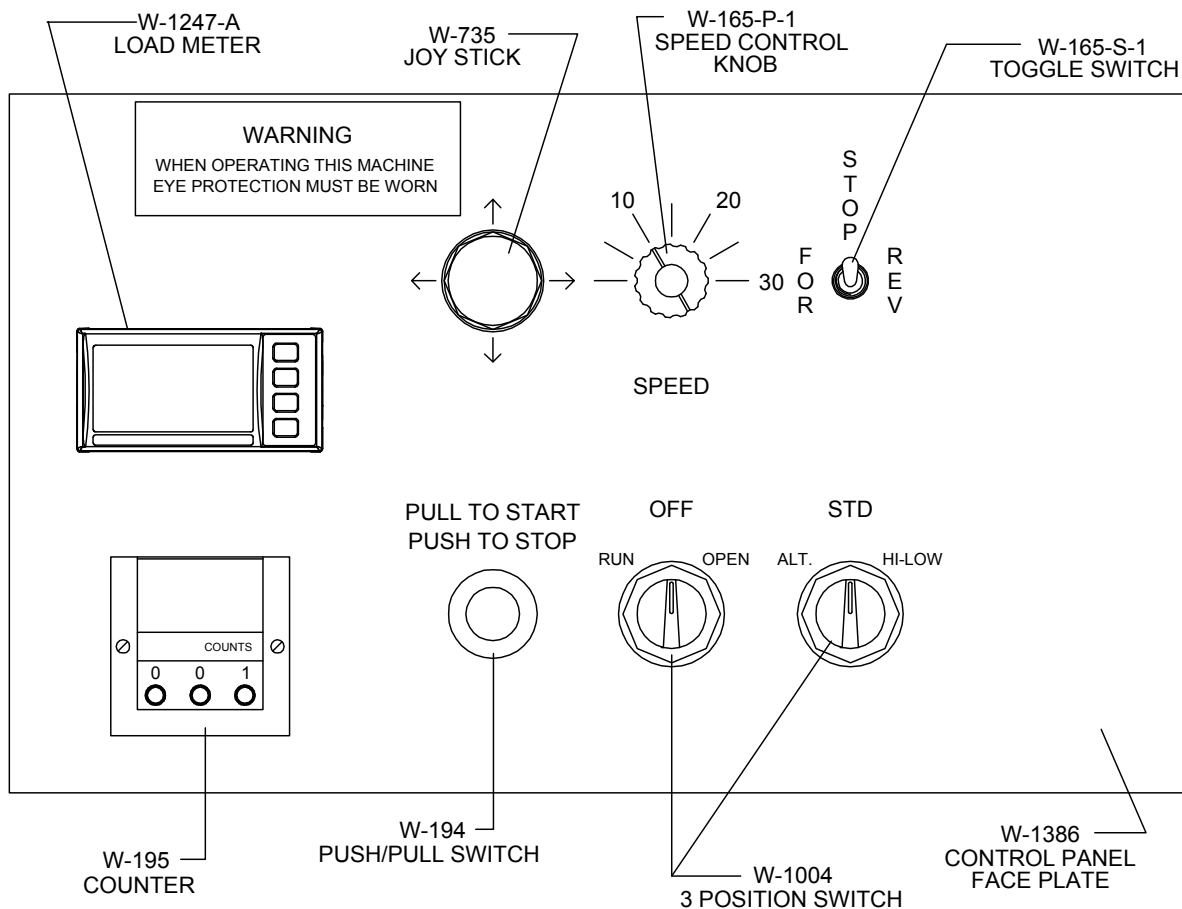


WM **RIGHT** **M** **ACHINE**

W-150 HD-E TOP & FACE SHARPENER

OUTSIDE CONTROL PANEL (LEFT SIDE)

QTY	PART NUMBER	DESCRIPTION
1	W-1427-A	LOAD METER
1	W-735	JOY STICK
1	W-1497	BOOT FOR TOGGLE SWITCH
1	W-165-S-1	TOGGLE SWITCH
1	W-165-P-1	SPEED CONTROL KNOB
1	W-195	COUNTER
1	W-194	PUSH PULL SWITCH
2	W-1004	3 POSITION SWITCH
1	W-1386	CONTROL PANEL FACE PLATE

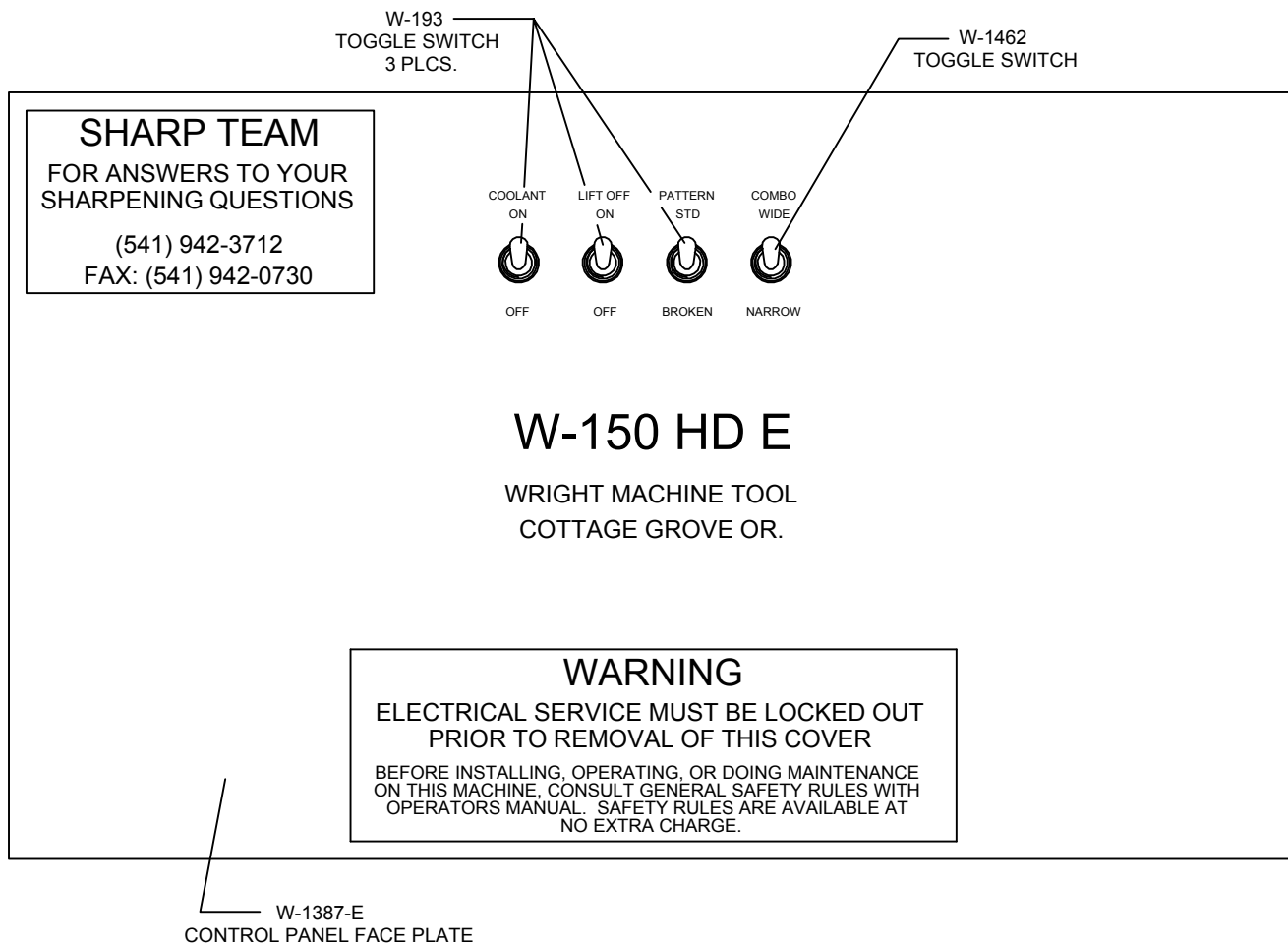


WM **W**RIGHT **M**ACHINE

W-150 HD-E TOP & FACE SHARPENER

OUTSIDE CONTROL PANEL (RIGHT SIDE)

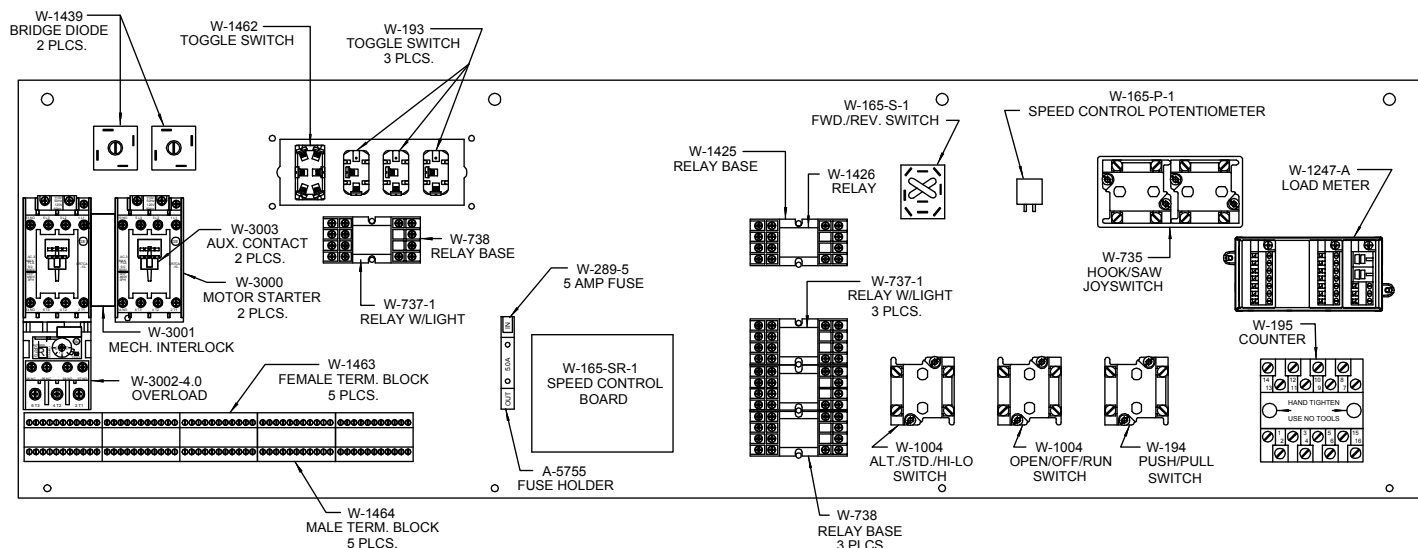
QTY	PART NUMBER	DESCRIPTION
3	W-193	TOGGLE SWITCH
1	W-1462	TOGGLE SWITCH
1	W-1387-E	CONTROL PANEL FACE PLATE
4	W-1497	SWITCH BOOT



W-150 HD-E TOP & FACE SHARPENER

INSIDE CONTROL PANEL

QTY	PART NUMBER	DESCRIPTION
2	W-1439	DIODE
2	W-3000	MOTOR STARTER
1	W-3001	MECHANICAL INTERLOCK
1	W-3002-4.0	OVERLOAD
2	W-3003	AUX. CONTACT
1	W-165-SR-1	SPEED CONTROL BOARD
1	W-1425	RELAY BASE
1	W-1426	RELAY
4	W-738	RELAY BASE
4	W-737-1	RELAY WITH LIGHT
1	W-289-5	5 AMP FUSE
1	A-5755	FUSE HOLDER
1	W-1427-A	LOAD METER



W-150 HD-E TOP & FACE SHARPENER

GRINDING HEAD

QTY	PART NUMBER	DESCRIPTION
1	W-1372-E	LIFT OFF CYLINDER STACK ASSEMBLY
1	W-1725-2	MOTOR PULLEY
1	W-1725-1	SPINDLE PULLEY
1	W-1726	SPINDLE BELT
1	W-1368-1	LEAD SCREW
1	W-1409-1	SPINDLE MOTOR
2	W-437	GROUND WASHER
2	W-667	GROUND WASHER
1	W-677	DUST BOOT
2	W-436	THRUST BEARING
1	W-1365-A	SPINDLE ASSEMBLY
1	W-1367	LEAD SCREW ATTACHMENT
1	W-1377	INDICATOR
1	W-1329	INDICATOR COVER
4	F-304	SCREW
1	W-153-A	WHEEL HUB NUT
2	F-369	WHEEL COLLAR SCREW
1	W-1364-1	SPINDLE SPLASH COVER
1	W-1363-1	WHEEL COVER
1	F-107-M	WHEEL COVER SCREW
1	F-101	HEAD MOUNT SCREW
1	F-143	AIR LINE SCREW
1	C-5302	AIR LINE LOOM
1	F-127	AIR LINE SCREW
1	C-5303	AIR LINE LOOM
4	F-358	SCREW
2	W-1361	BUSHING
1	W-1360	HEAD WELDMENT
2	F-18	JAM NUT
2	F-60	1/4 WASHER
2	F-15	5/16 NUT
6	A-5304	AIR DISCONNECT
6	F-638	BARBED FITTING



W-150 HD-E TOP & FACE SHARPENER

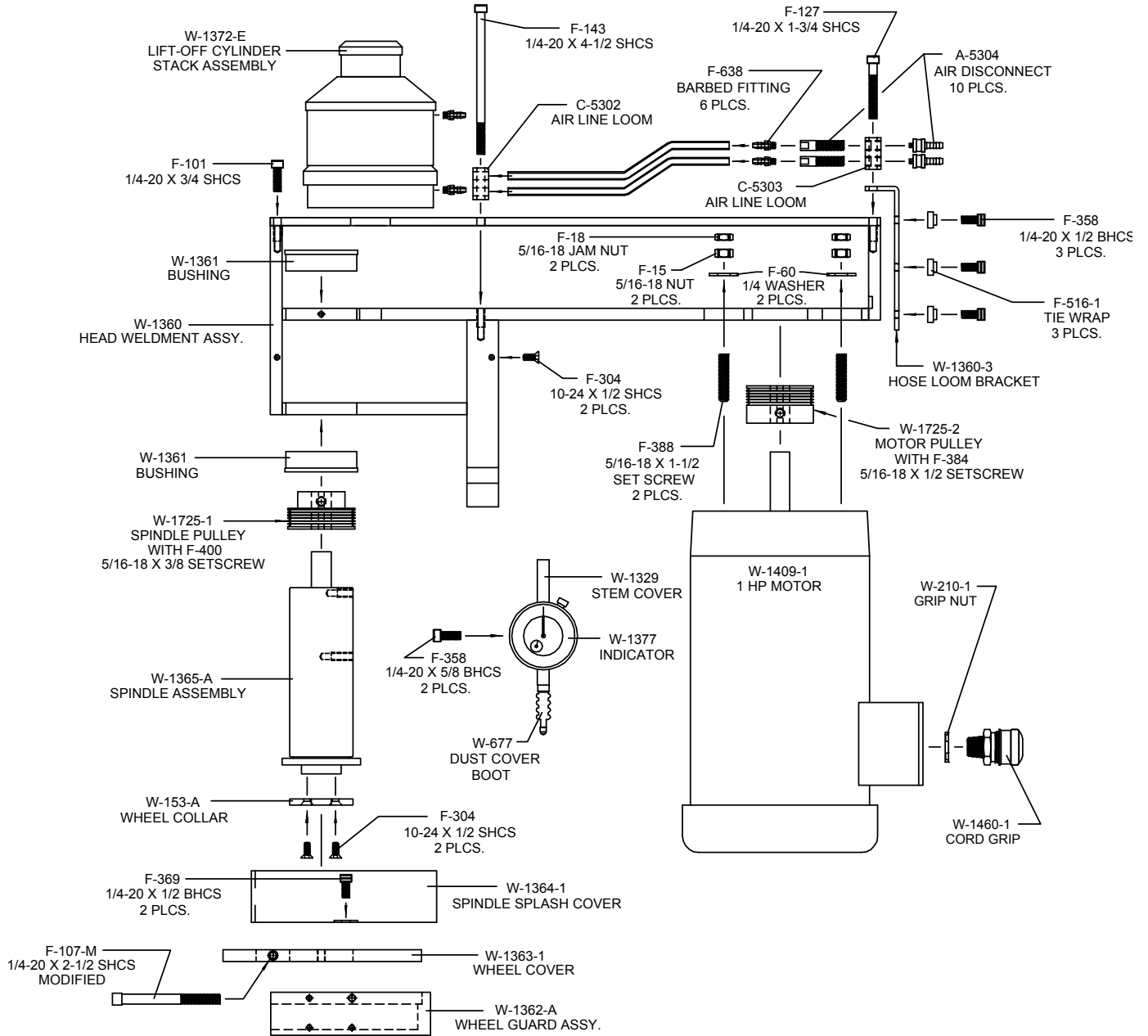
GRINDING HEAD

QTY	PART NUMBER	DESCRIPTION
3	F-516-1	CABLE TIE
1	W-1360-3	HOSE LOOM BRACKET
2	F-388	SET SCREW
1	W-1409-1	1 H.P. MOTOR
1	W-210-1	GRIP NUT
1	W-1460-1	CORD GRIP
1	W-1362-A	WHEEL GUARD ASSEMBLY



W-150 HD-E TOP & FACE SHARPENER

GRINDING HEAD



W-150 HD-E TOP & FACE SHARPENER

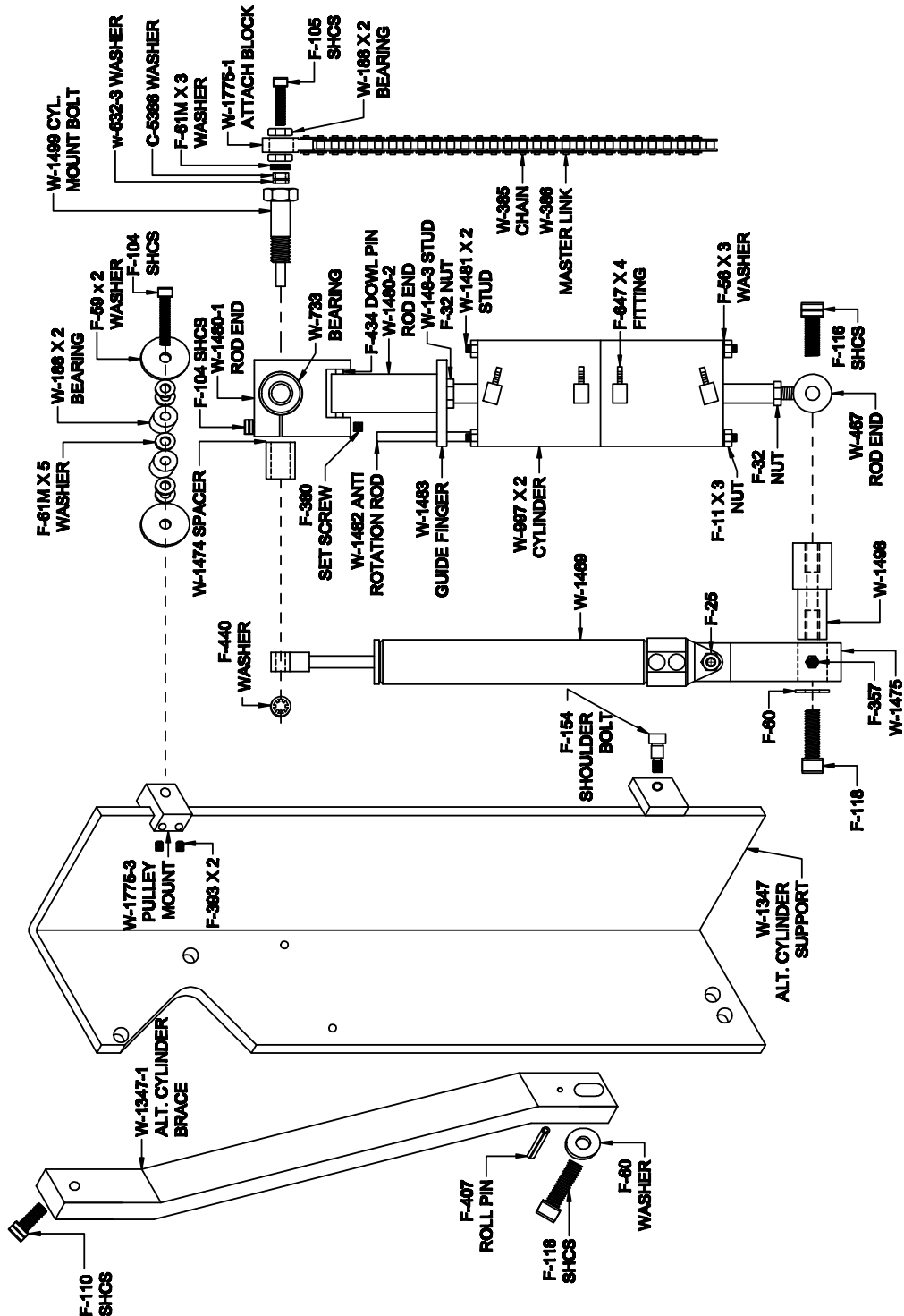
ALTERNATING CYLINDER ASSEMBLY

QTY	PART NUMBER	DESCRIPTION
4	F-11	NUT
1	F-25	NUT
2	F-32	3/8 JAM NUT
4	F-56	#10 WASHER
1	F-60	WASHER
1	F-104	1/4 SCREW
1	F-116	SHCS
1	F-118	SHCS
1	F-380	1/4 SET SCREW
4	F-647	ELBOW FITTING
1	F-440	ROD END KEEPER
1	W-357	ZIRK
1	W-467	ROD END
1	W-733	BEARING
2	W-997	CYLINDER
1	W-1469	DAMPENER CYLINDER
1	W-1475	SPACER
1	W-1480-1	ROD END
1	W-1480-2	ROD END
2	W-1480-3	STUD
1	W-1482	ANTI-ROTATION ROD
1	W-1483	GUIDE FINGER
1	W-1498	CYLINDER MOUNT
1	W-1499	BOLT



W-150 HD-E TOP & FACE SHARPENER

ALTERNATING CYLINDER ASSEMBLY



W-150 HD-E TOP & FACE SHARPENER

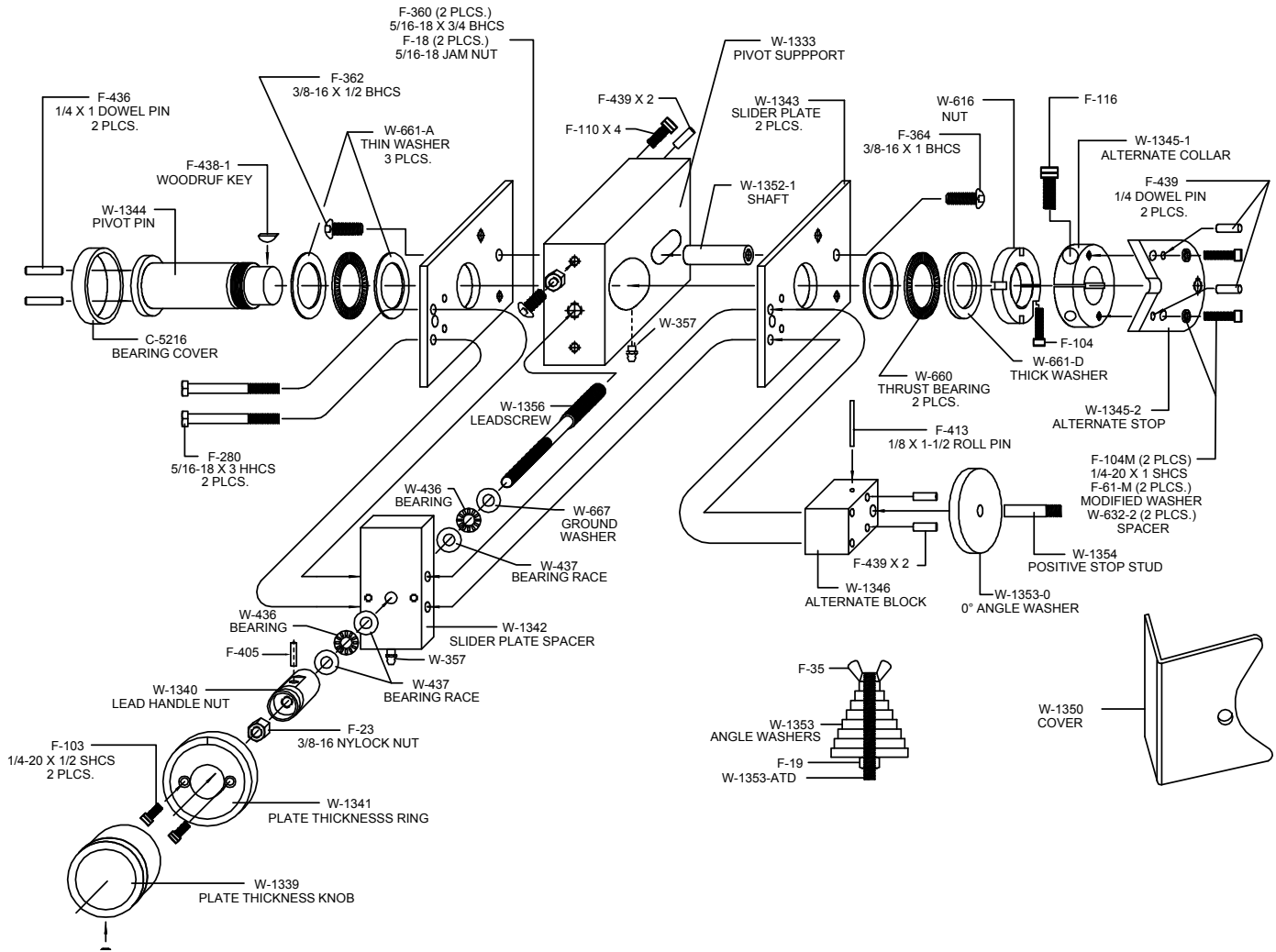
PLATE THICKNESS ASSEMBLY

QTY	PART NUMBER	DESCRIPTION
1	W-1333	PIVOT SUPPORT
2	W-1343	SLIDER PLATE
1	W-1346	ALTERNATE BLOCK
1	W-1354	POSITIVE STOP STUD
1	F-413	ROLL PIN
1	F-104	1/4" SCREW
2	F-61-M	MODIFIED WASHER
2	W-632-2	SPACER
1	W-1345-2	ALTERNATE STOP
1	W-661-D	THICK GROUND WASHER
2	W-660	THRUST BEARING
3	W-661-A	THIN GROUND WASHER
1	W-616	SPANNER NUT
1	W-1345-1	ALTERNATE COLLAR
4	F-439	1/4" DOWEL PIN
1	F-364	3/8" SCREW
1	W-1352-1	SHAFT
2	F-280	5/16" BOLT
1	F-362	3/8" SCREW
1	F-438-1	WOODRUF KEY
2	F-436	1/4" DOWEL PIN
1	W-1344	PIVOT PIN
1	C-5216	BEARING COVER
2	F-360	5/16" SCREW
2	F-18	5/16" JAM NUT
1	W-1356	LEADSCREW
2	W-436	BEARING
1	W-667	GROUND WASHER
3	W-437	BEARING RACE
1	W-1340	LEAD HANDLE NUT
1	F-23	3/8" NUT
2	F-103	1/4" SCREW
1	W-1341	PLATE THICKNESS RING
1	W-1339	PLATE THICKNESS KNOB
1	F-385	5/16" SET SCREW
2	F-357	ZIRK
1	F-405	ROLL PINS



W-150 HD-E TOP & FACE SHARPENER

PLATE THICKNESS ASSEMBLY



W-150 HD-E TOP & FACE SHARPENER

LIFT OFF CYLINDER STACK ASSEMBLY

QTY	PART NUMBER	DESCRIPTION
1	F-36	3/8" NUT
3	F-405	PIN
2	W-667	THICK WASHER
2	W-436	THRUST WASHER
2	W-437	THIN BEARING RACE
1	W-1367	LEAD SCREW ATTACHMENT
1	W-357-1	45° ZERK FITTING
2	F-127	1/4" BOLT
1	F-379	1/4" SET SCREW
1	W-1368-1	LEADSCREW
1	W-1358	BACKLASH NUT
8	F-68	SPRING WASHER
1	W-1452	SNAP RING
2	W-1456	O-RING
1	W-1479	CYLINDER CAP
6	F-638	BARBED FITTING
1	W-1477	CYLINDER BODY
1	W-1476	ADJUSTMENT RING
2	W-1455	O-RING
1	W-1478	PISTON
2	F-101	1/4" SCREEN
1	W-1372	HOUSING
2	W-1414	O-RING
2	F-631	90° AIR FITTING
1	W-1415	O-RING
1	W-1373-A	LARGE PISTON
1	W-1374	LARGE END CAP
1	W-1412	O-RING
1	W-1375-1	SMALL PISTON
2	W-1411	O-RING
1	W-1413	O-RING
1	W-1417	SNAP RING
1	W-1418	SNAP RING
2	F-375-1	1/4" SET SCREW
1	W-1370-1	HI-LOW RING
1	W-1369	KNOB
1	F-392-M	1/2" SET SCREW



W-150 HD-E TOP & FACE SHARPENER

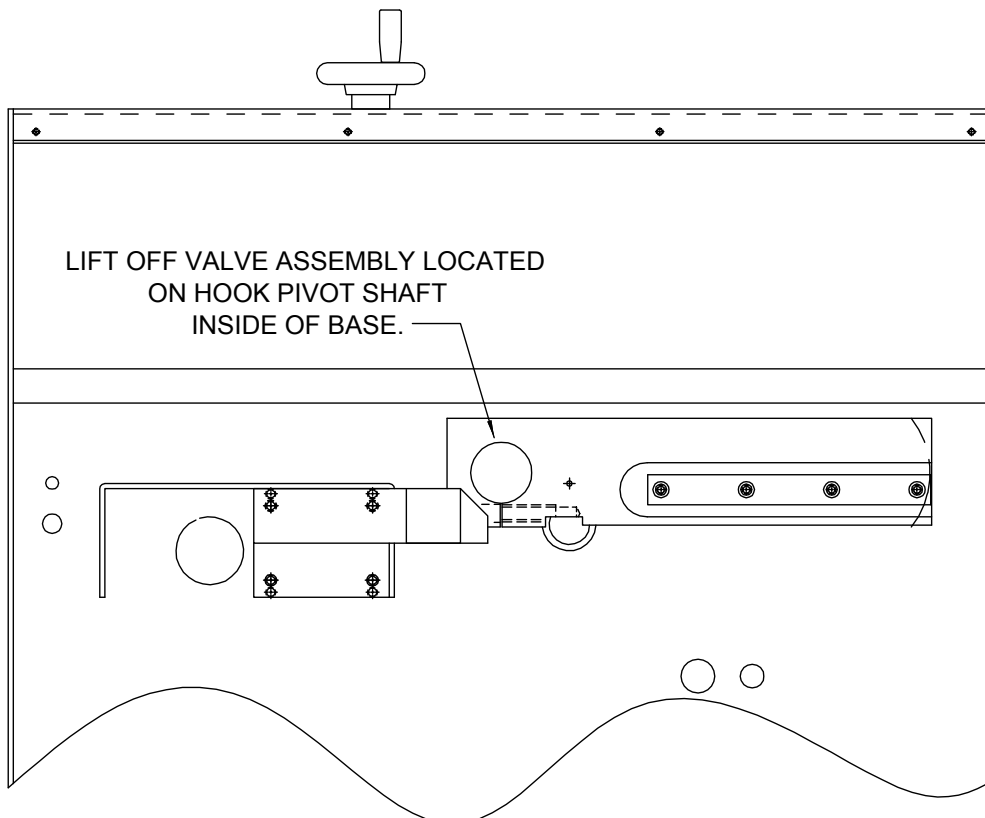
LIFT OFF VALVE ASSEMBLY

QTY	PART NUMBER	DESCRIPTION
1	W-1441	SOLENOID VALVE
2	F-610	STREET ELBOW
1	F-644	REDUCER FITTING
2	F-660	1/8 NPT ADAPTER
3	F-620	ELBOW FITTING
1	F-609	"T" FITTING
3	F-627	MALE CONNECTOR
1	W-477-1	ROLLER ACTUATOR
1	W-1433	4 WAY PUSH BUTTON VALVE
1	W-1388	MOUNTING PLATE
2	F-640	BARBED FITTING
2	F-109	5/16" SCREW

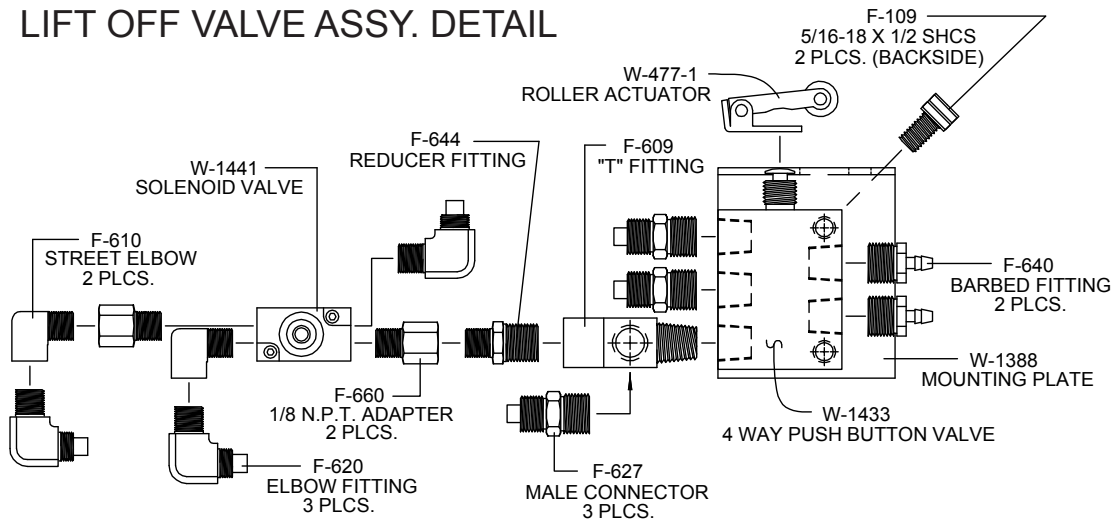


W-150 HD-E TOP & FACE SHARPENER

LIFT OFF VALVE ASSEMBLY



LIFT OFF VALVE ASSY. DETAIL



W-150 HD-E TOP & FACE SHARPENER

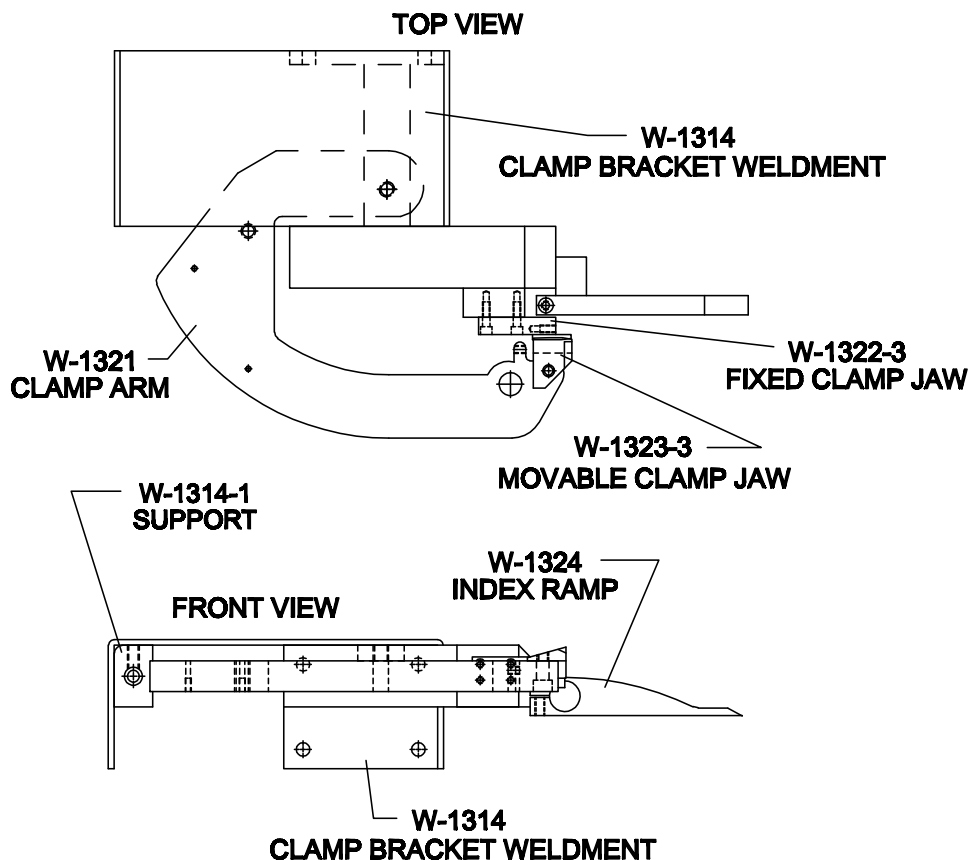
SAW CLAMP ASSEMBLY

QTY	PART NUMBER	DESCRIPTION
1	C-5445	DUST CAP
1	W-1325	HEIGHT SENSOR ARM
1	W-1322-4	FIXED CLAMP JAW WITH CARBIDE
1	W-1323-4	MOVABLE CLAMP JAW WITH CARBIDE FOR
2	W-435	GROUND WASHER
2	W-434	THRUST BEARING
1	F-267-M	MODIFIED BOLT
2	W-284	GROUND WASHER
1	W-1328	CYLINDER BUMPER
1	W-1402	CYLINDER
1	W-1403	CYLINDER ROD END
1	W-1324	INDEX RAMP
1	W-1326	SENSOR SHAFT
1	W-231	SET COLLAR
1	W-1404	PROXIMITY SENSOR
1	W-1314-1	SUPPORT BLOCK
1	W-357	ZIRK
1	W-31	1/2-13 ACORN NUT
2	F-378	SET SCREW
1	F-110	5/16-18 SHCS
2	F-333	10-24 SLOTTED SCREW
2	F-56	#10 WASHER



W-150 HD-E TOP & FACE SHARPENER

SAW CLAMP ASSEMBLY



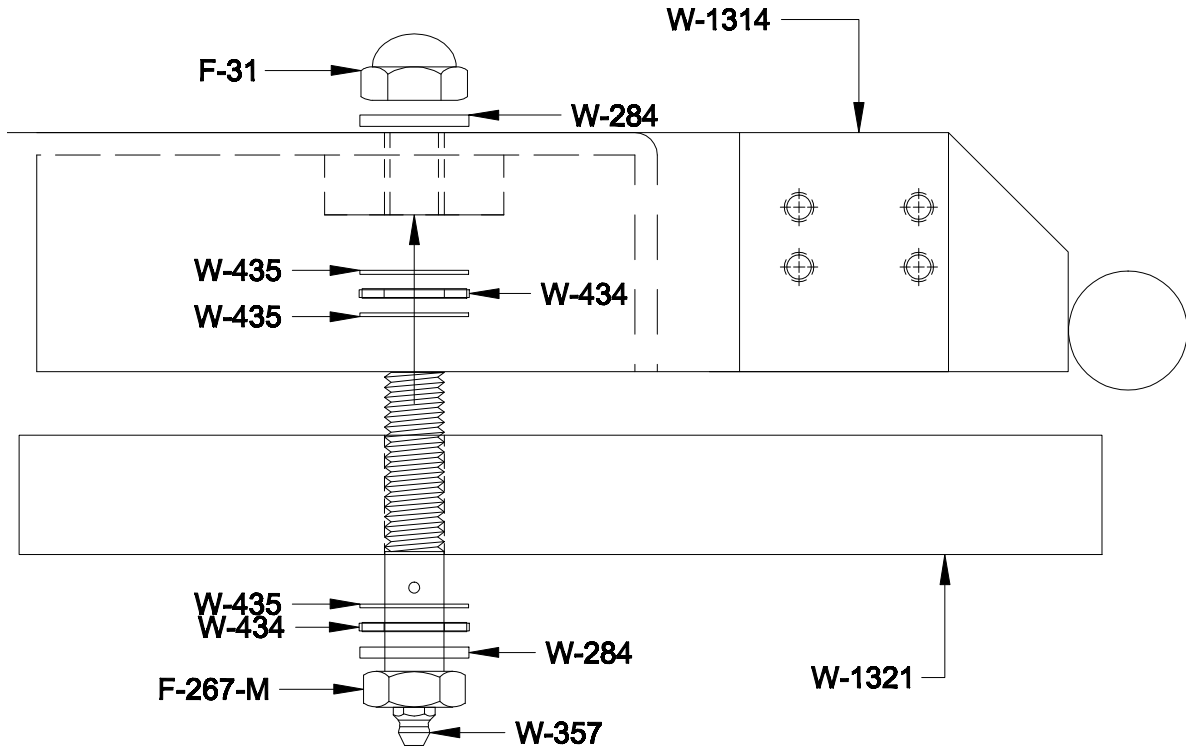
MISC. PARTS INCLUDE ...

QU.	PART #	DESCRIPTION
1	F-24	1/2-20 JAM NUT
4	F-102	1/4-20 X 3/4 SHCS
1	F-116	3/8-16 X 1 SHCS
1	F-268	1/2-13 X 1-3/4 HHCS
2	F-619	AIR FITTING
1	F-267-M	PIVOT BOLT MODIFIED
1	W-357	GREASE ZERK FITTING
3	W-284	WASHER
3	W-435	THIN GROUND WASHER
2	W-434	THRUST BEARING WASHER
1	F-31	ACORN NUT
1	F-110	RAMP PINCH BOLT
2	F-378	SET SCREW FOR JAWS
1	W-1328	5/8 RUBBER HOSE
1	W-1402	CYLINDER
1	W-1403	ROD END
1	C-5445	SENSOR SHAFT COVER

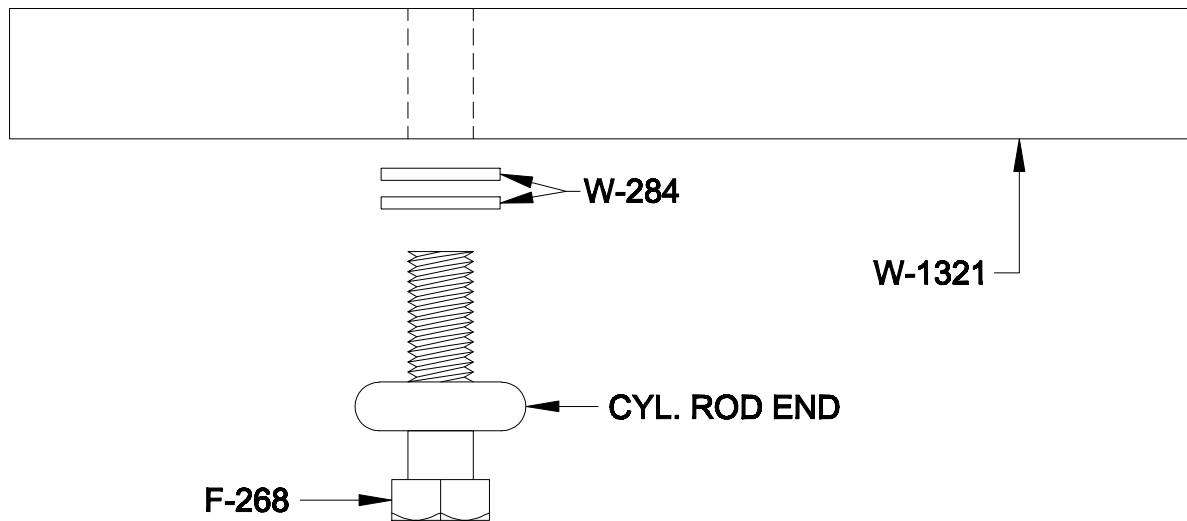
WM **RIGHT** **M** **ACHINE**

W-150 HD-E TOP & FACE SHARPENER

CLAMP ARM PIVOT



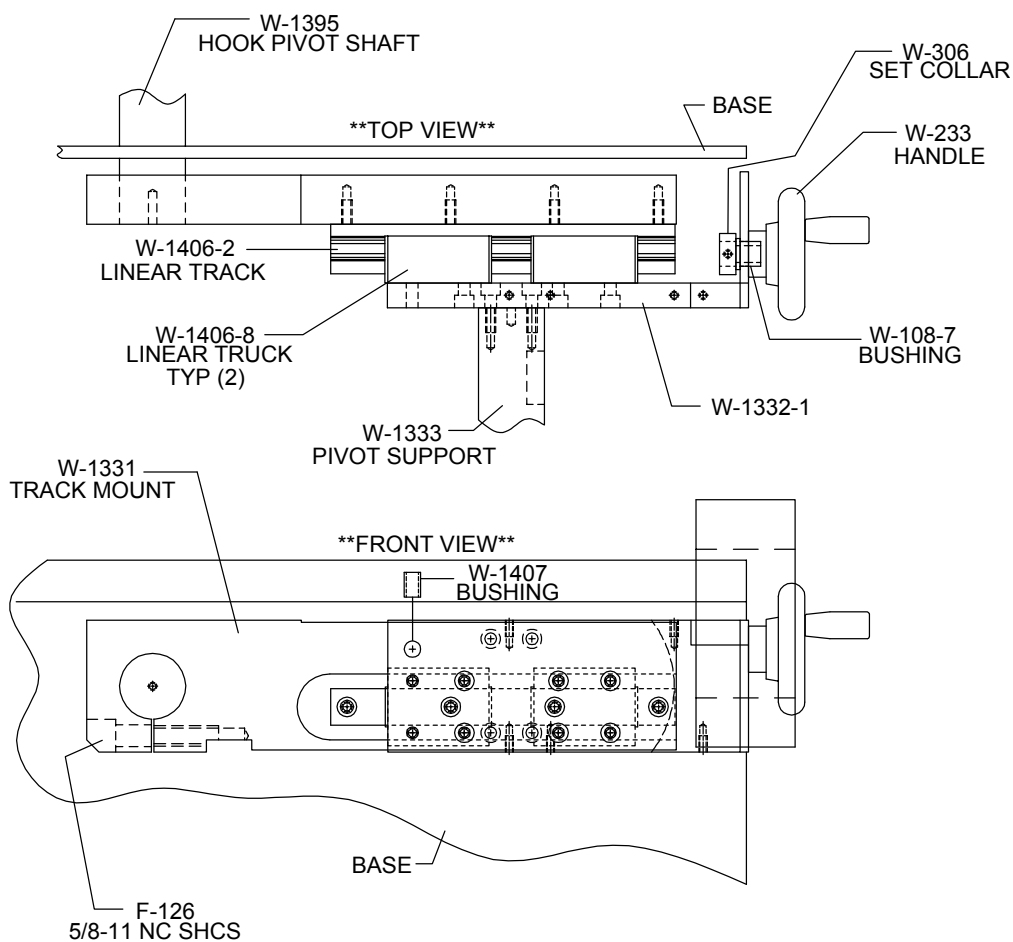
CLAMP ARM CYLINDER ROD END



W-150 HD-E TOP & FACE SHARPENER

FEED SYSTEM ASSEMBLY

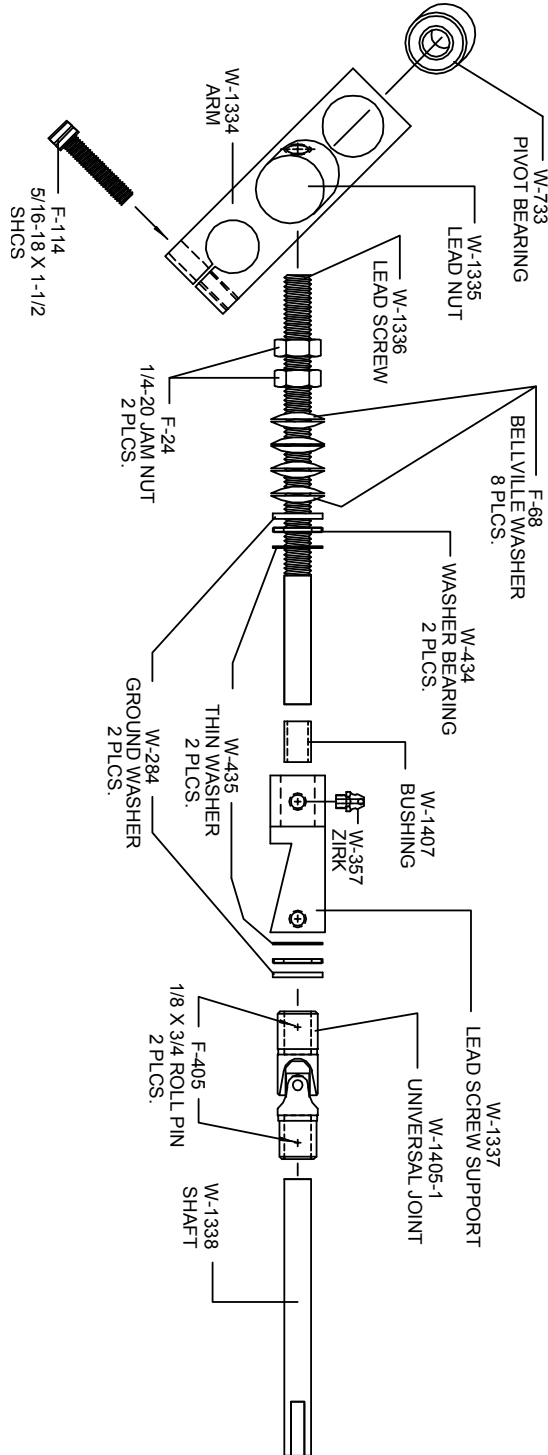
QTY	PART NUMBER	DESCRIPTION
1	W-1395	HOOK PIVOT SHAFT
1	W-1406-2	LINEAR TRACK
2	W-1406-8	LINEAR TRUCK
1	W-1333	PIVOT SUPPORT
1	W-1332-1	BEARING MOUNT PLATE
1	W-233	HANDLE
1	W-1331	TRACK MOUNT
1	F-126	5/8" BOLT
1	W-1309	TRACK COVER
1	W-1311	TRACK COVER
1	W-158-M	PIVOT BOLT MODIFIED



WM **RIGHT** **MACHINE**

W-150 HD-E TOP & FACE SHARPENER

FEED SYSTEM ASSEMBLY CONTINUED



W-150 HD-E TOP & FACE SHARPENER

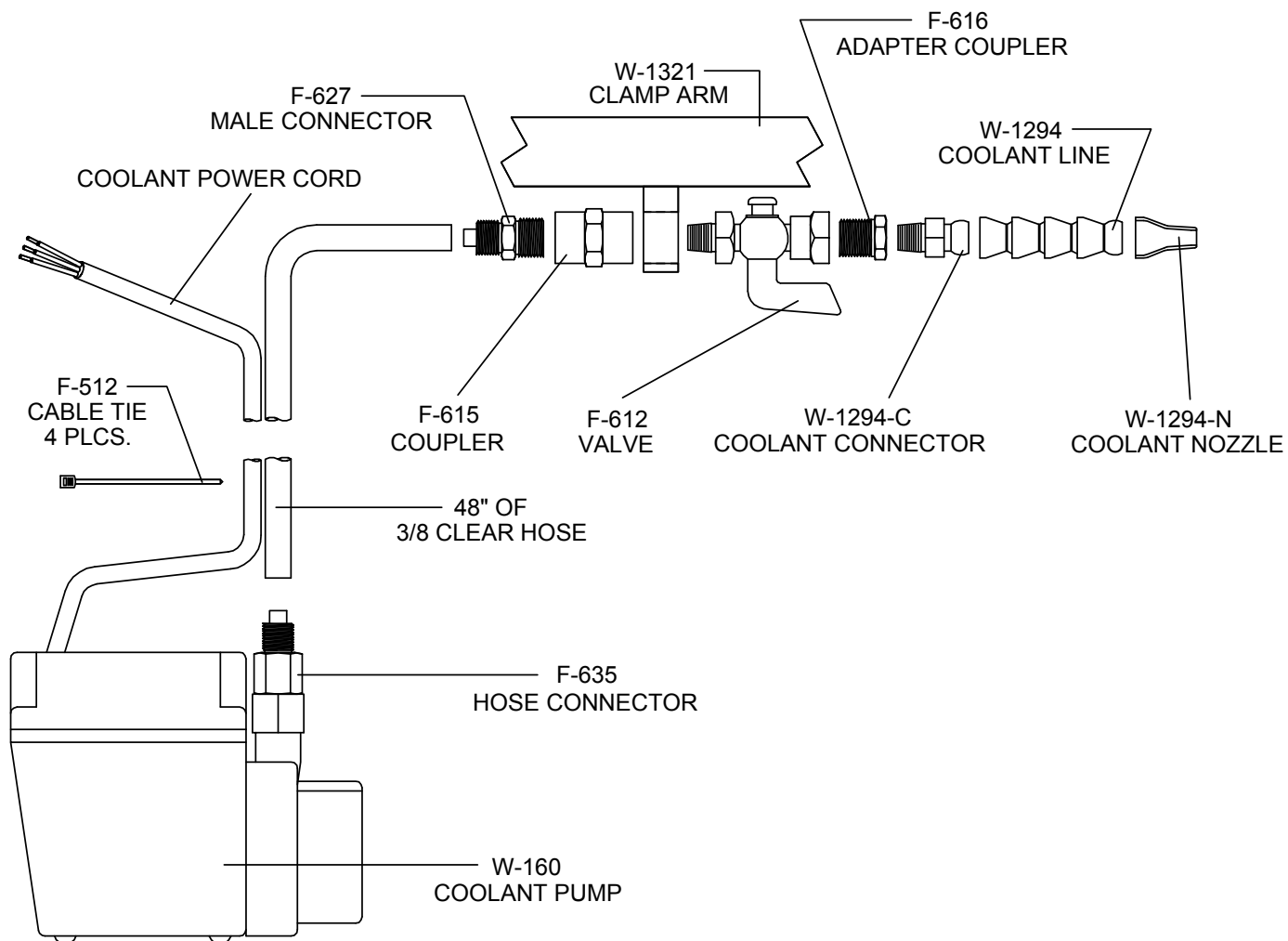
COOLANT SYSTEM

QTY	PART NUMBER	DESCRIPTION
1	F-612	WATER VALVE
20 PCS.	W-1294	COOLANT LINE
1	W-1294-C	COOLANT CONNECTOR
1	W-1294-N	COOLANT NOZZLE
48"	F-632	3/8 CLEAR FLEX COOLANT HOSE
1	W-160	COOLANT PUMP
4	F-512	CABLE TIE
1	F-635	CONNECTOR FITTING
1	F-615	COUPLER
1	F-616	ADAPTER COUPLER
1	F-627	MALE HOSE CONNECTOR



W-150 HD-E TOP & FACE SHARPENER

COOLANT SYSTEM ASSEMBLY



WM **RIGHT** **MACHINE**

W-150 HD-E TOP & FACE SHARPENER

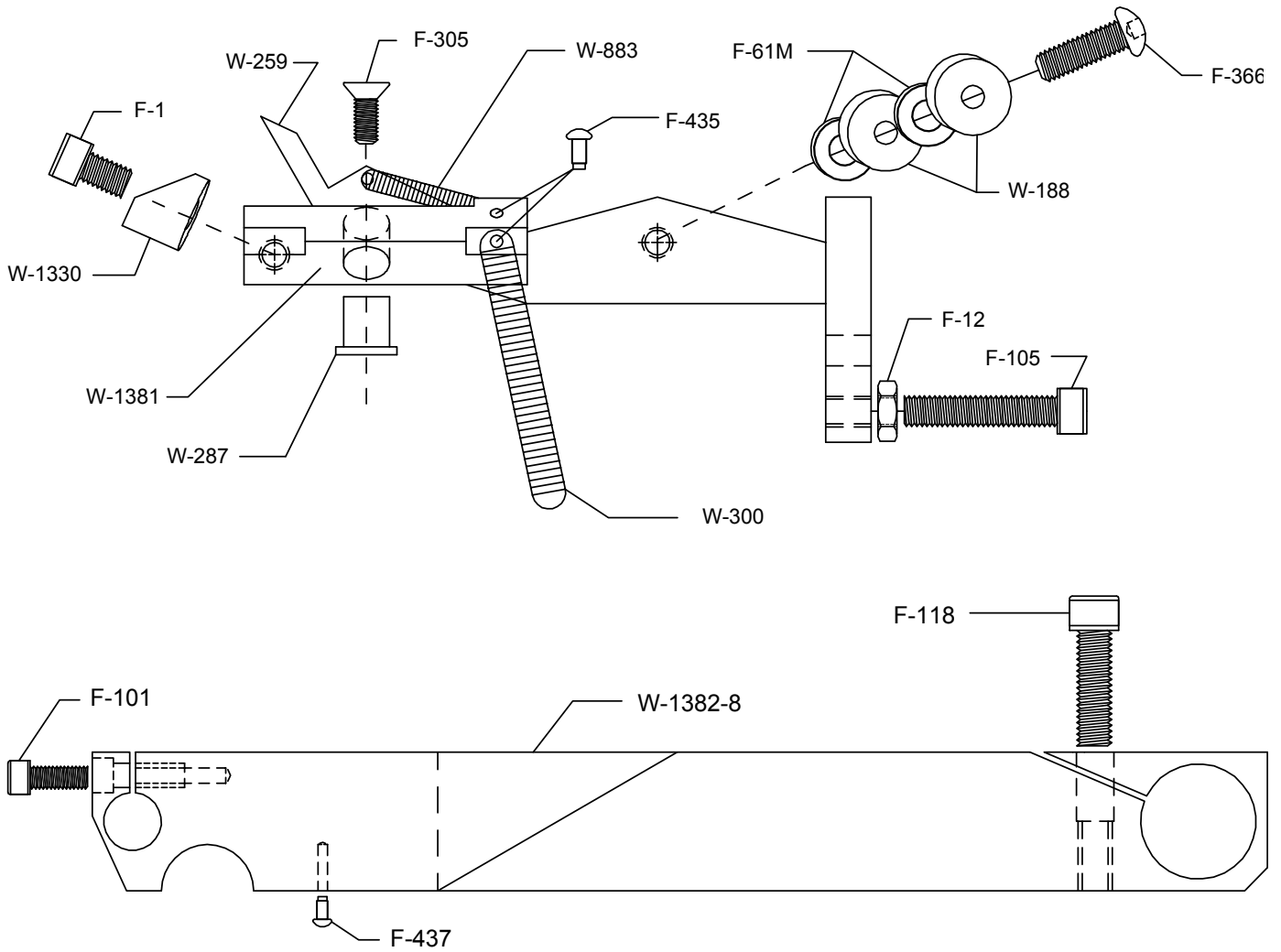
W-1381-E INDEX FINGER ASSEMBLY

QTY	PART NUMBER	DESCRIPTION
2	F-61-M	#12 WASHER MODIFIED
1	F-305	10-24 X 3/8 FHCS
1	F-366	1/4-20 X 3/4 BHCS
2	F-435	#4 X 1/4 DRIVE SCREW
1	F-105	1/4-20 X 1-1/4 SHCS
1	F-12	1/4-20 JAM NUT
1	F-101	1/4-20 X 3/4 SHCS
2	F-118	5/16-18 X 1-1/4 SHCS
1	F-437	#4 X 5/16 DRIVE SCREW
2	W-188	INDEX BEARING SEALED
1	W-300	RAMP SPRING
1	W-259	FEED FINGER
1	W-1381	FINGER ARM
1	W-883	SPRING RETURN
1	W-287	FINGER PIVOT
1	W-1382-8	INDEX ARM



W-150 HD-E TOP & FACE SHARPENER

INDEX ASSEMBLY



W-150 HD-E TOP & FACE SHARPENER

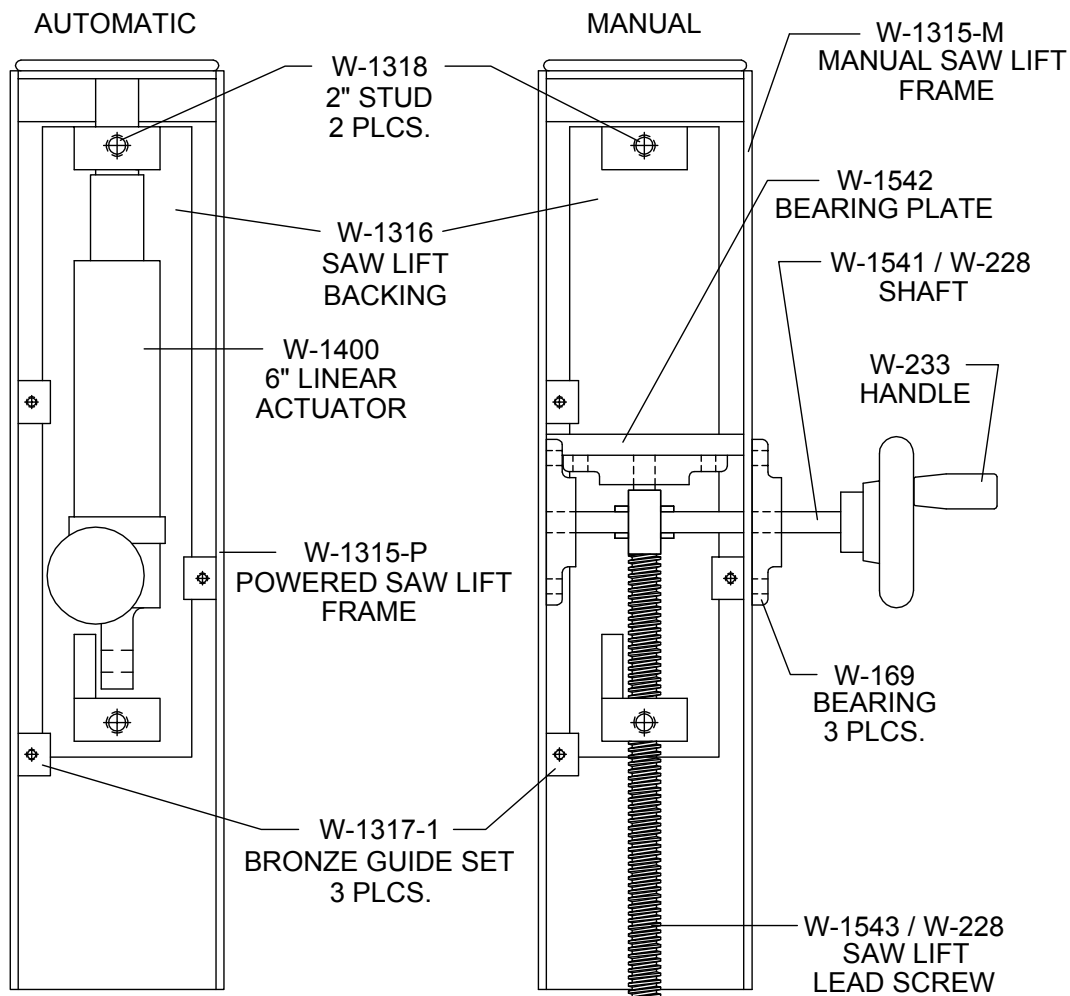
SAW LIFT

QTY	PART NUMBER	DESCRIPTION
1	W-178	SPRING
3	W-1317-1	BRONZE GUIDE BLOCK
3	F-106	ALLEN CAP SCREW
2	W-1318	2" STUD
1	W-1316	SAWLIFT BACKING
1	W-1400	6" LINEAR ACTUATOR (AUTOMATIC ONLY)
1	W-1315-P	SAWLIFT FRAME (AUTOMATIC ONLY)
1	W-1315-M	SAWLIFT FRAME (MANUAL ONLY)
1	W-1542	BEARING PLATE
1	W-1541	SHAFT (MANUAL ONLY)
1	W-233	HANDLE (MANUAL ONLY)
3	W-169	PILLOW BLOCK BEARING (MANUAL ONLY)
1	W-1543	SAWLIFT LEAD SCREW (MANUAL ONLY)
3	F-60	5/16 WASHER
1	F-388	5/16-18 SET SCREW
1	F-388-1	5/16-18 SET SCREW
2	F-15	5/16-18 NUT
1	F-101	1/4-20 SHCS



W-150 HD-E TOP & FACE SHARPENER

SAWLIFT ASSEMBLY (BACK SIDE OF SAWLIFT)



MISC. PARTS INCLUDE . . .

QU.	PART #	DESCRIPTION	QU.	PART #	DESCRIPTION
1	F-12	1/4" JAM NUT	5	F-517	BELLEVILLE WASHER
2	F-26	1/2" NUT	1	W-178	SPRING INDEX RETURN
1	F-22	1/2" JAM NUT	1	W-231	1/2" SET COLLAR
3	W-632-3	WASHER	1	W-284	THRUST WASHER
2	F-271	1/2-13 X 2-1/4 HHCS	1	W-1493	WAX GASKET

WM **RIGHT** **MACHINE**

W-150 HD-E TOP & FACE SHARPENER

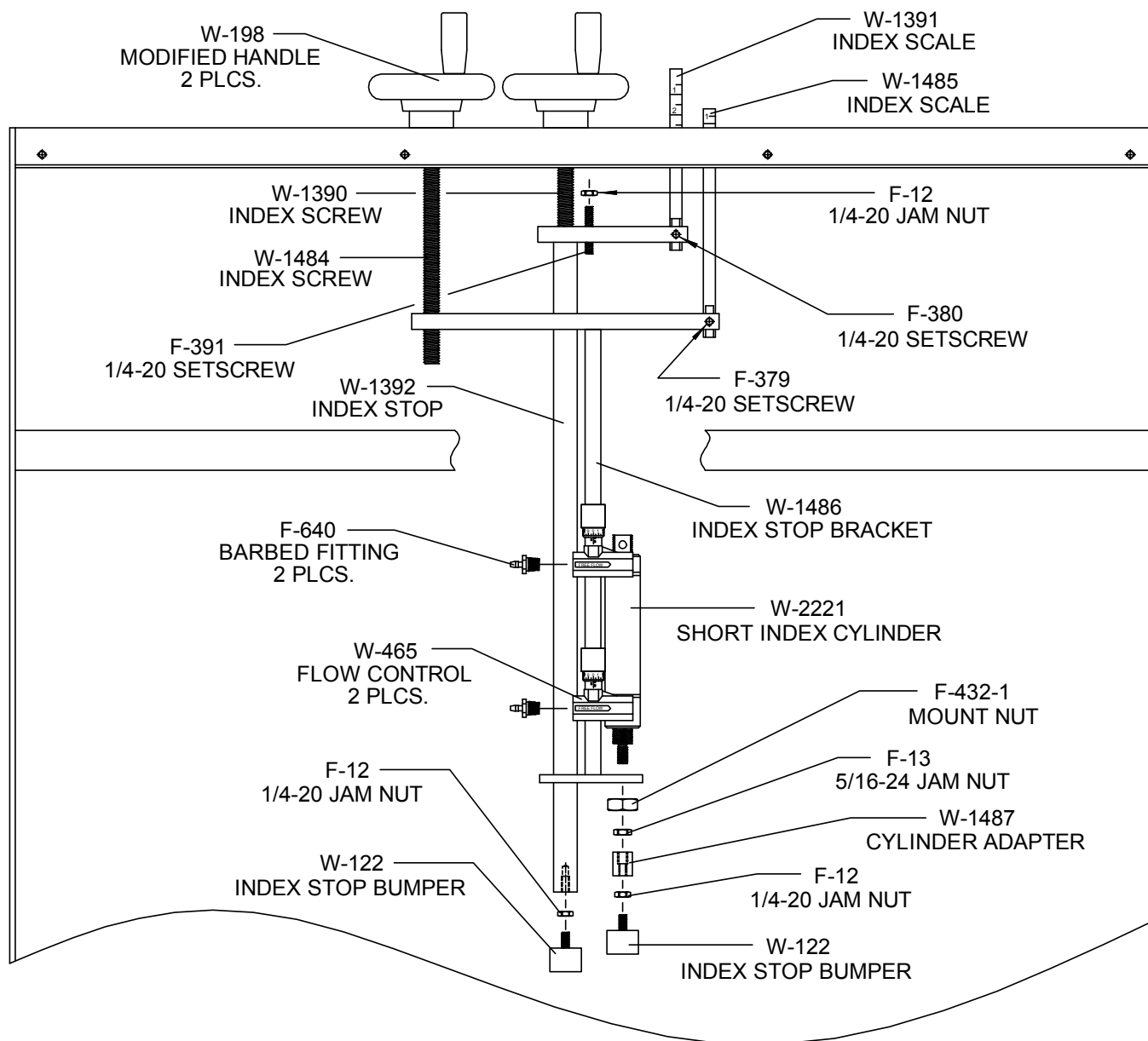
INDEX ADJUSTMENT ASSEMBLY INSIDE BASE

QTY	PART NUMBER	DESCRIPTION
2	W-198	MODIFIED HANDLE
1	W-1391	INDEX SCALE
1	W-1485	INDEX SCALE
1	W-1390	INDEX SCREW
3	F-12	1/4-20 JAM NUT
1	F-13	5/16-24 JAM NUT
1	F-391	1/4-20 SET SCREW
1	F-380	1/4-20 SET SCREW
1	F-379	1/4-20 SET SCREW
1	W-1392	INDEX STOP
1	W-1486	INDEX STOP BRACKET
1	W-2221	SHORT INDEX CYLINDER
2	F-640	BARBED FITTING
2	W-465	FLOW CONTROL
2	W-122	INDEX STOP BUMPER
1	F-432-1	CYLINDER MOUNT NUT
1	W-1487	CYLINDER ADAPTER
16	F-68	SPRING WASHER
4	F-22	NUT
4	W-434	THRUST BEARING
4	W-435	THIN WASHER
4	W-284	THICK WASHER



W-150 HD-E TOP & FACE SHARPENER

INDEX ADJUSTMENT ASSEMBLY INSIDE BASE



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

W-150 HD-E TOP & FACE SHARPENER

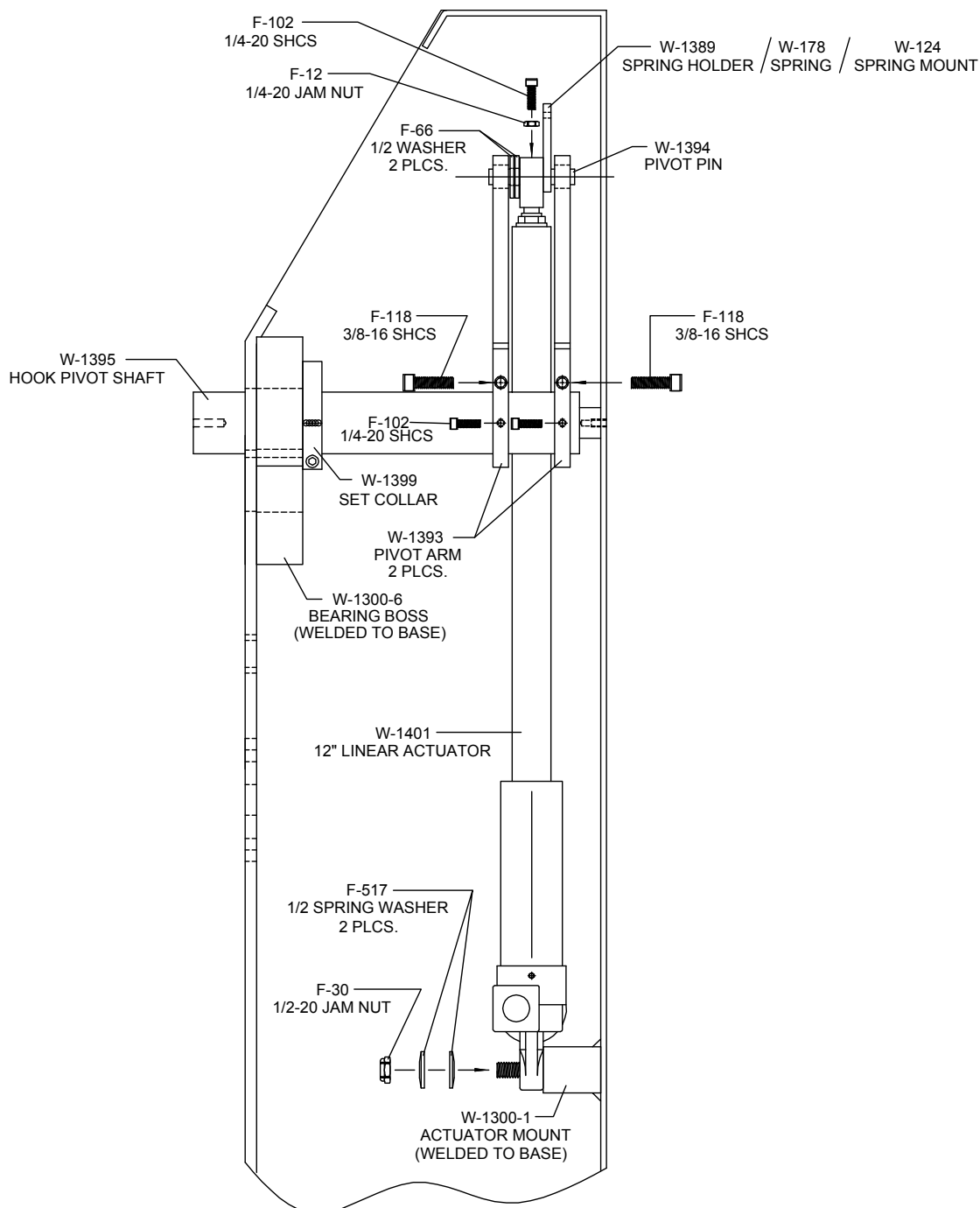
HOOK SHAFT ACTUATOR ASSEMBLY INSIDE BASE

QTY	PART NUMBER	DESCRIPTION
1	W-1389	SPRING HOLDER
1	W-1394	PIVOT PIN
2	F-66	1/2" WASHER
2	F-118	3/8-16 CAP SCREW
1	W-1395	HOOK PIVOT SHAFT
1	W-1399	SET COLLAR
2	W-1393	PIVOT ARM
1	W-1401	12" LINEAR ACTUATOR
2	F-517	1/2" SPRING WASHER
1	F-30	1/2-20 JAM NUT
3	F-102	1/4-20 SHCS



W-150 HD-E TOP & FACE SHARPENER

HOOK SHAFT ACTUATOR ASSEMBLY INSIDE BASE



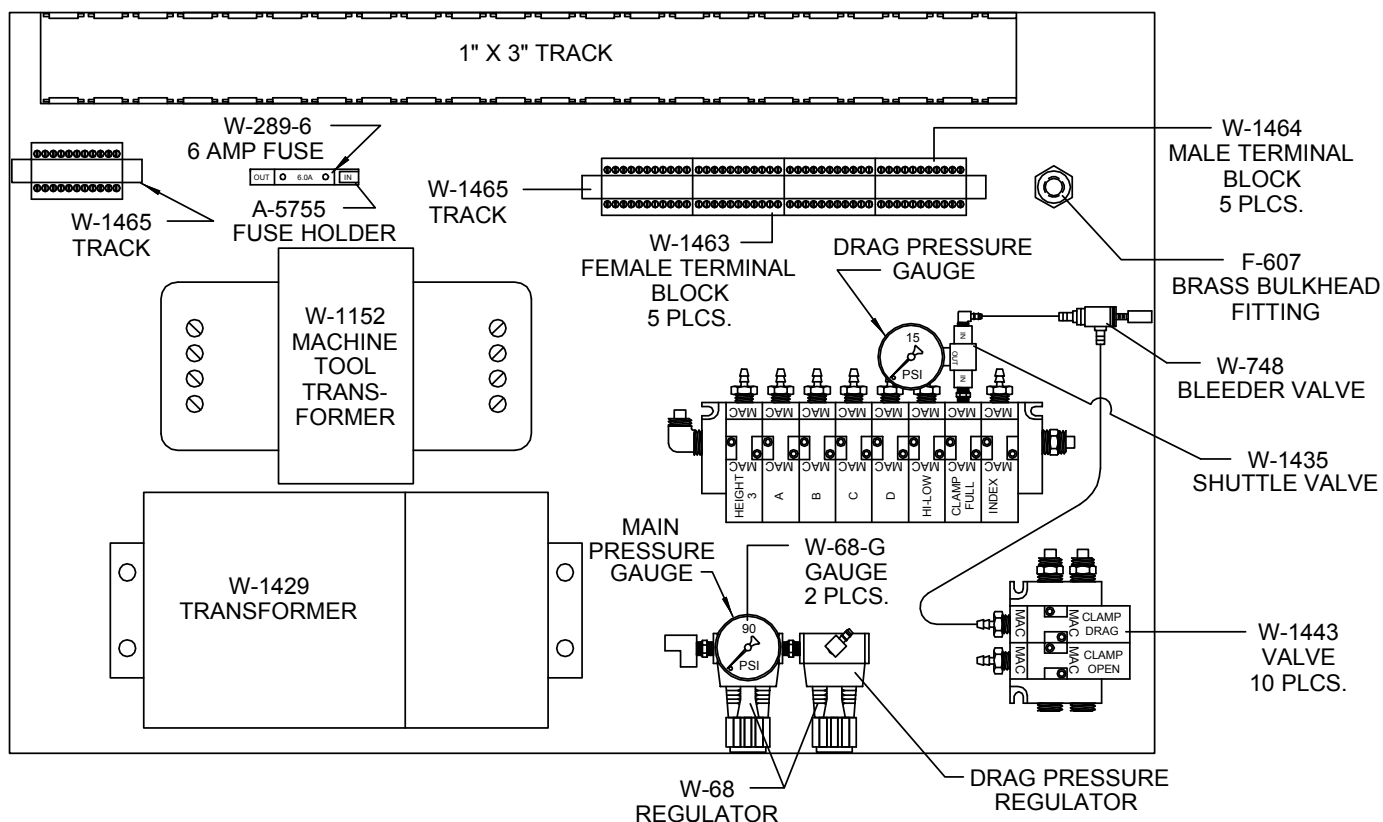
WM **RIGHT** **MACHINE**

W-150 HD-E TOP & FACE SHARPENER

INSIDE REAR DOOR

QTY	PART NUMBER	DESCRIPTION
1	W-1429	TRANSFORMER (BUCK BOOST)
1	W-1152	TRANSFORMER (MACHINE TOOL)
1	W-289-6	6-1/4 AMP FUSE
2	W-68	REGULATOR
2	W-68-G	GAUGE
10	W-1443	VALVE
10	W-1443-1	SOLENOID FOR VALVE
1	W-1435	SHUTTLE VALVE

SUB PANEL ASSEMBLY (INSIDE REAR DOOR)



WRIGHT MACHINE

W-150 HD-E TOP & FACE SHARPENER

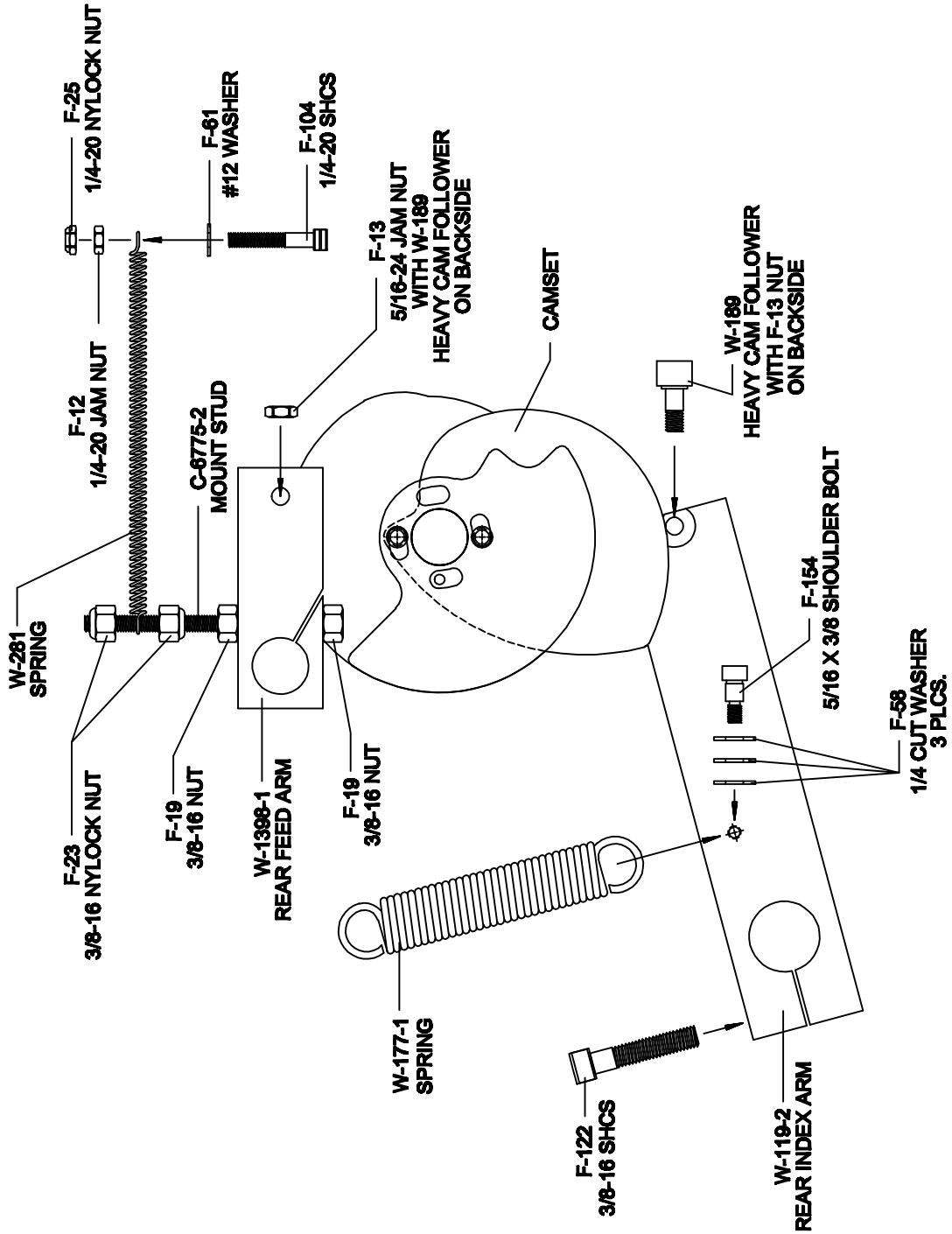
CAM AREA

QTY	PART NUMBER	DESCRIPTION
3	W-1438	LIMIT SWITCH (MICRO)
3	W-1437	PLUNGER FOR MICRO
2	W-731	LIMIT SWITCH
1	W-281	SPRING
1	W-221	INDEX CAM
1	W-220	CAM HUB
1	W-1383	FEED CAM
2	W-189	CAM FOLLOWER
1	W-177-1	NEW STYLE INDEX RETURN SPRING
2	F-13	5/16-24 JAM NUT
1	F-154	5/16 X 3/8 SHOULDER BOLT
3	F-58	1/4 CUT WASHER
1	W-119-2	REAR INDEX ARM
1	F-122	3/8-16 BOLT
1	F-116	3/8-16 BOLT
1	W-1398	REAR FEED ARM
3	F-12	1/4-20 JAM NUT
2	F-61	#12 WASHER
1	F-104	1/4-20 BOLT
1	F-102	1/4-20 BOLT
2	F-112	CAM SET BOLTS
1	F-384	CAM HUB SET SCREW



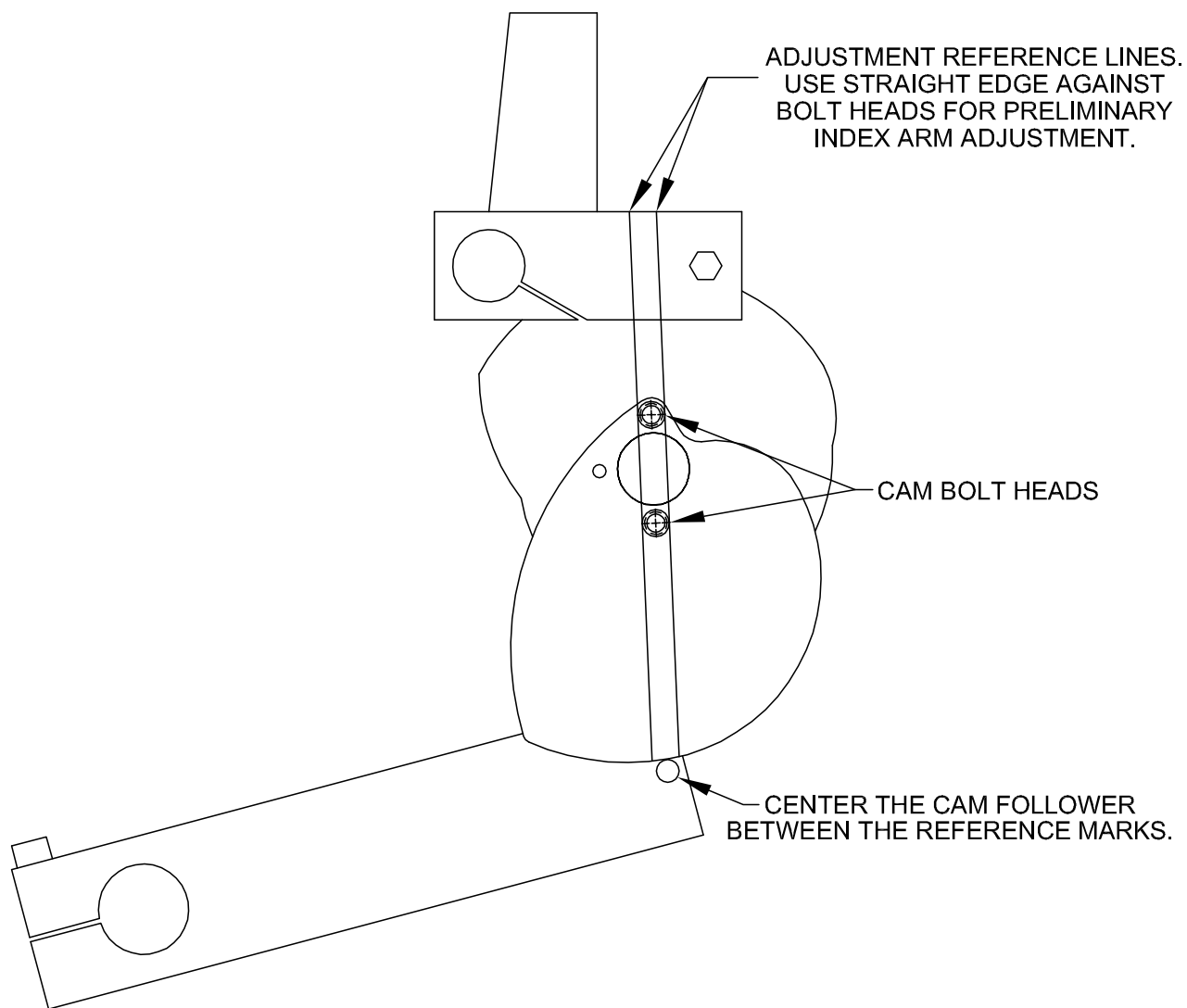
W-150 HD-E TOP & FACE SHARPENER

CAM AREA



W-150 HD-E TOP & FACE SHARPENER

CAM ADJUSTMENT



W-150 HD-E TOP & FACE SHARPENER

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W-150 HD-E TOP & FACE SHARPENER

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