

TF-2 TOP AND FACE SHARPENER OPERATOR'S MANUAL



MADE IN THE U.S.A.



TALON TF-2 TOP & FACE SHARPENER

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TALON TF-2 TOP & FACE SHARPENER

LIMITED WARRANTY

This machine is warranted against defects in workmanship and materials under normal use and proper maintenance, for three years after date of purchase or 3,000,000 tips, whichever comes first. 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
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TALON TF-2 TOP & FACE SHARPENER

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



TALON TF-2 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.



TALON TF-2 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.

SPECIFICATIONS

Talon TF-2, an Automatic Top or Face Grinder Programmable for many tooth geometries.

FLATS:	1 Pass
ALTERNATES:	1 Pass
TRIPLE CHIP:	3 Passes
STANDARD VOLTAGE:	230 Volt, 3 Phase, 50/60 HZ
OPTIONAL VOLTAGE:	As Requested
SHIPPING WEIGHT:	2,200 lbs.
MACHINE WEIGHT:	1,900 lbs.
MACHINE SIZE:	L 54" X W 35" X H 74"
AIR REQUIREMENTS:	2 C.F.M. at 80 psi to 100 psi
STANDARD SAW SIZE:	4" to 34"
SPINDLE MOTOR:	(1) 2 h.p. 3450 RPM Motor
CIRCUIT SIZE:	230 VOLTS 15 A



TALON TF-2 TOP & FACE SHARPENER

FEATURES

The Wright Machine Tool "TALON TF-2" features massive construction with a weight of over 2,000 lbs. but uses only 15 square feet of floor space. Central lubrication system reduces maintenance requirements and increases machine life. The precision 2 horsepower grinding head moves on a robust double track multi-track linear slide system powered by hydraulic controlled feed, giving high accuracy and productivity. The enclosed grind cabinet improves the work environment by containing noise and coolant.

The "TALON TF-2" features include:

- *10 G.P.M. Filtered Flood Coolant*
- *Totally Enclosed*
- *Low Voltage Work Lights*
- *Precision 2 H.P. Spindle Motor*
- *Dual Pressure Saw Clamp*
- *Precision Multi Bearing Spindles*
- *Auto Central Lubrication System*
- *External Pitch Adjustment*
- *Lift Off Grind*
- *External Plate Thickness Adjustment*

Notice

TALON TF-2 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 therefore 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!



TALON TF-2 TOP & FACE SHARPENER

OPTIONS

LARGE BORE OPTION	W-50
3 PIN SAW CENTER	W-450
SPLINE BORE SAW CENTER	W-460
SAW CENTER WASHER	W-1320-(specify)
FACE WHEEL	D-25
TOP WHEEL	D-37-6-2

COMMON REPLACEMENT PARTS

FINGER ARM PIVOT BEARING	W-188
RAMP FOLLOWER	W-1330
FEED FINGER	W-259-1
FINGER BOSS	W-287
FINGER SPRING	W-280
FINGER ARM SPRING	W-384-1
FILTER PAPER	A-5825
FIXED CLAMP JAW	W-1322-1
FEED RAMP	W-1324

STANDARD ACCESSORIES

1 - 1/4 TEE HANDLE KEY	A-5920
1 - 13 PC. ALLEN WRENCH SET	A-5923
8 - 5 Through 40° ALTERNATING ANGLE WASHERS	X-Z-04
9 - SAW BUSHING SIZES 1/2", 5/8", 3/4", 1", 1-1/8", 30mm, 1-1/4", 1-3/8", 1-1/2".	X-Z-02
1 - MAGNETIC SAW RECEIVER 1/2" TO 1-1/2"	X-Z-03
2 - COOLANT FILTERS	A-5825
3 - WHEEL POSITION STOPS	



TALON TF-2 TOP & FACE SHARPENER

PRE SET UP COOLANT

Coolant capacity is 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 # A-5825.

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.

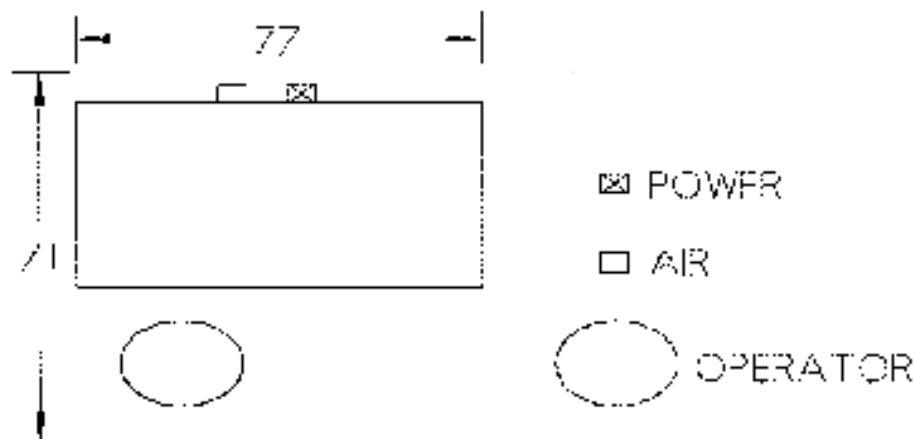
The TALON TF-2 can use 2 wheels. (D-36 for facing and D-37 for topping). Install the D-36 6" diameter facing wheel first with the diamond facing to the left. Then install the D-37 4-1/2" diameter topping wheel with the diamond facing to the right. With those 2 wheels back to back it will not be necessary to change when going from top to face. Individual face or topping wheels are also available.

Manufacturer recommends that separate 6" wheels be used for topping and facing. D-37-6-2 for topping. D-50 or D-51 for facing.

MACHINE INSTALLATION

Lifting this machine should only be done with a forks under the Machine base. Machine weight is approximately 1,900 pounds.

RECOMMENDED FLOOR SPACE FOR MACHINE AND OPERATOR



WM RIGHT MACHINE

TALON TF-2 TOP & FACE SHARPENER

AIR SUPPLY

Your Talon TF-2 uses pneumatic and low voltage D.C. actuators to supply machine movements. These movements are superior to hydraulic controlled grinding machines.

Advantages of Pneumatic vs. Hydraulic...

1. Does not add vibration to Grinding machine which improve finish, speed and accuracy.
2. Does not build up heat which increases accuracy and eliminates a need for " warm up".
3. No oil to dispose of.
4. No oil leaks.
5. Easy and inexpensive to repair.
6. Safety.

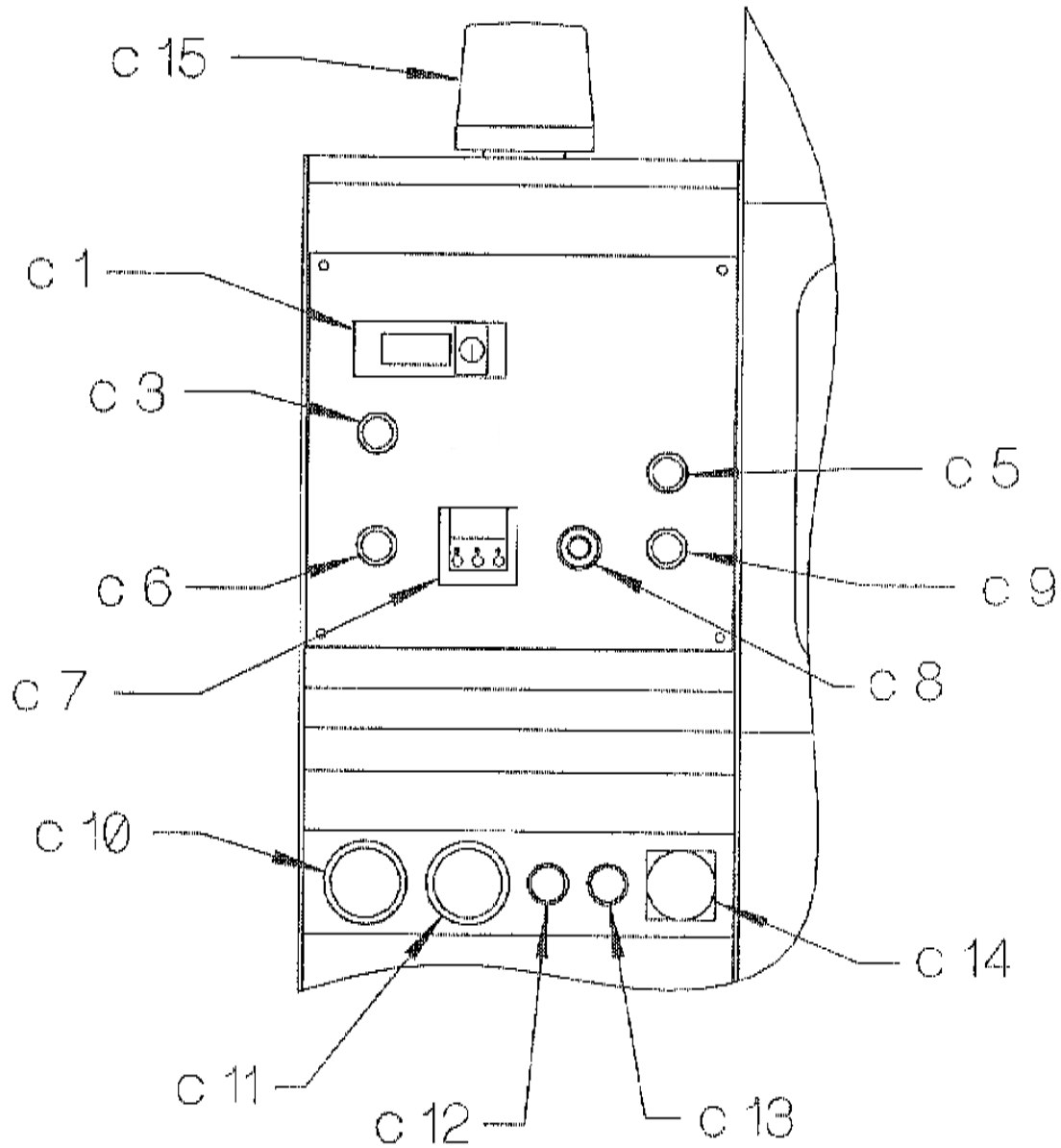
Your Pneumatic system should give years of trouble free operation if the following rules are followed.

1. Air pressure must be above 80 psi at all times during operation.
2. Do not use a oiler in the air line.
3. Do not use synthetic oil for lubrication as it can attack the o-rings in the machine.
4. The air should be reasonably dry and free of scale.
5. The air line to the machine must be 3/8 ID hose or larger.



TALON TF-2 TOP & FACE SHARPENER

CONTROL PANEL



TALON TF-2 TOP & FACE SHARPENER

CONTROL PANEL (continued)

c-1. TOTALIZER: The tooth totalizer will keep a tally of the total teeth ground.

c-3. PROGRAM SELECTOR:

c-5. EMERGENCY STOP: The panic stop is depressed if an emergency situation arises. Do not use this as a normal stop button.

c-6. START / STOP: Pull to start / push to stop. If the joy switch is in auto when started the machine will index and then start it's grind cycle. If the joy switch is out of auto and the start button is pulled a second time the coolant will shut off. To restart the coolant pull the start button again or place the joy switch in to automatic.

c-7. TOOTH COUNTER: The tooth counter is normally set for the number of teeth in the saw. To reset the counter during automatic operation, pull the start button and the counter will return to 0.

c-8. JOY SWITCH: When the machine is not running the joy switch controls the saw movement. (IN) moves the saw up, (OUT) moves the saw down. To position the saw height, place the height sensor on the index finger and hold the joy switch to (IN), the saw will raise to position and lock. When the machine is running the joy switch controls manual index or feed or starts the automatic cycle. If you are unsure of the program, step the machine through the cycle 1 tooth at a time. Index/Feed, etc.

Note: The height sensor must be rotated out of the grind area and rested on the dowel pin when not in use.

c-9. HOOK: angle switch operates at full speed (13 degrees per second) when the machine is off and at 1/2 degree per second when the machine is running. Hook angle can be jogged (with care) during the grind cycle.

c-10. INDEX PITCH: To adjust the tooth pitch, pull the pitch adjustment knob out and turn to desired pitch length. Do not adjust while the machine is cycling.



TALON TF-2 TOP & FACE SHARPENER

CONTROL PANEL (continued)

c-11. PLATE THICKNESS: Turn the plate thickness full clockwise, this is 0 plate thickness position. Turn the plate thickness knob counter clockwise to the thickness of the plate being ground. Each turn equals .100.

c-12 / 13. FEED SPEED ADJUSTMENTS: Two speed knobs control the traverse speed forward and reverse. If lift off is in the yes position, feed reverse (the right knob) should be full open. The forward speed control is on the left. The normal range of grinding speed will be 1 to 3 turns open on forward speed.

c-14. ELECTRICAL DISCONNECT: The main power disconnects all power components in the machine. This should be used for extended time shutdown.

c-15. 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, off 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.



TALON TF-2 TOP & FACE SHARPENER

SETUP CHECKLIST

1. Select the desired program
2. Set the number of teeth.
3. Set the hook / back angle.
4. Set the tooth pitch.
5. Set the plate thickness.
6. Set the forward speed 1 to 2 turns open.
7. Install the proper saw bushing.
8. Position the saw.
9. Install the wheel position stops.
10. Install the proper bevel angle washer, if bevels are being ground.
11. Close the door.
12. Pull start.
13. Move the joy switch to index, check index pitch adjustment.
14. Place in auto.
15. Grind the saw.

RELOAD CHECK LIST

1. Open door.
2. Remove saw.
3. Install next saw, close the door.
4. Pull start.



TALON TF-2 TOP & FACE SHARPENER

TALON TF-2 (SETUP)

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

NOTE: If the air pressure to the machine drops below 75lbs. the machine will stop feed forward until the air pressure returns to required pressure of 90lbs.

1. Select the desired grind program from the chart at the back of this manual. Set the grind program to that selection. If the machine is in face position and a Top Grind program is selected the machine will not feed forward.
2. Set the tooth counter c-7 to the number of teeth required.
3. Place the joy switch c-8 in the center position.
4. Set the Hook / Back angle by moving Hook angle switch c-9.
5. Adjust the index pitch c-10.
6. Determine the plate thickness and adjust c-11 as required. To remove back lash always be turning counter clockwise for final adjustment.
7. Adjust the feed speed c-12 to 1 turn open.
8. Turn the electrical disconnect c-14 to **ON**.
9. **Install the proper saw bushing and mount the saw.**



TALON TF-2 TOP & FACE SHARPENER

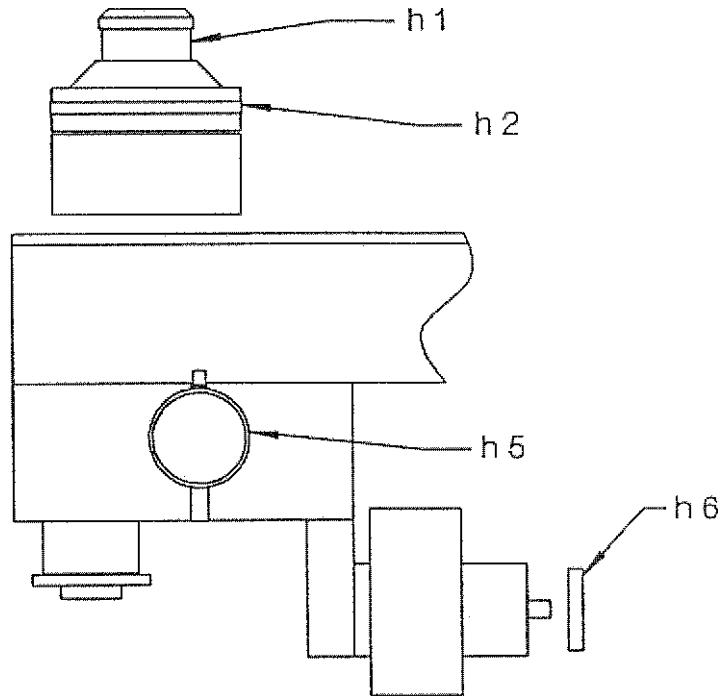
Talon TF-2 (Setup continued)

- 10.** Place the height sensor on the index finger and hold the joy switch c-8 to IN. The saw will rise to position and lock. Rotate the height sensor out of the way resting on the coolant arm bracket. This locks to the height adjustment.
- 11.** Install the wheel position stop that matches the wheel and grind position. 6" top - 6" face - 4.5" top stops are adjustable and are located between head and base and above slide system.
- 12.** Install the proper bevel angle washer on 3/8 pin. See page 13 (h6)
- 13.** Position the correct tooth against the index finger. This is shown on the grind program chart diagram.
- 14.** Pull the **START / STOP** c-6 to start the machine.
- 15.** Move the joy switch c-8 to index until the index is full forward. If the index finger does not follow the radius of the saw adjust the index guide ramp as necessary with the 1/4 hex Tee handle.
- 16.** Move the joy switch c-8 to IN. This will move the grinding head forward. Adjust the infeed W-1 until proper removal is achieved. See page 13 for (h1).
- 17.** Finish grinding the set up tooth.
- 18.** Index to the next tooth.
- 19.** Place joy switch **IN** to **AUTOMATIC**. The machine will complete the saw.



TALON TF-2 TOP & FACE SHARPENER

GRINDING HEIGHT ADJUSTMENTS



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

h-2. Adjust lift off stroke when face grinding.

h-5. Indicator.

h-6. Bevel angle adjustment. Zero through 40 degree washers are stored in the tool drawer.

TALON TF-2 TOP & FACE SHARPENER

THINGS TO CHECK IF PROBLEMS EXIST

MACHINE DOES NOT CYCLE.

1. Air pressure 90psi does not drop below 75psi at any time. Pressure switch will stop cycle if air pressure is too low.
2. Are flow controls c-12, c-13 (page 7) open?
3. Stop blocks in place and adjusted.
4. Be sure index is working properly forward and reverse.
5. Check fuses on output panel.
6. Be sure feed forward and feed reverse proximity switches are tripping.
7. Be sure index proximity switch is tripping.

MACHINE DOES NOT RUN.

1. Machine plugged in?
2. Main disconnect on c-14, page 7.
3. Panic button.
4. Check overload on power panel inside side door.
5. Check fuses 10 amp in line and 8 amp on primary and secondary side of machine tool transformer check fuses on output panel.

MACHINE DOES NOT INDEX.

1. Check air pressure.
2. Stop block in place.
3. Check for hang up if not moving free with air disconnected.

SAW LIFT DOES NOT MOVE.

1. Be sure that sensor is in the proper position.
2. Be sure proximity switch is on while moving up or down.



TALON TF-2 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 in the enclosure.
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.
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 and inspect pulleys.
2. Inspect pulleys for wear.



TALON TF-2 TOP & FACE SHARPENER

CENTRAL LUBRICATOR SYSTEM C-6060

Description

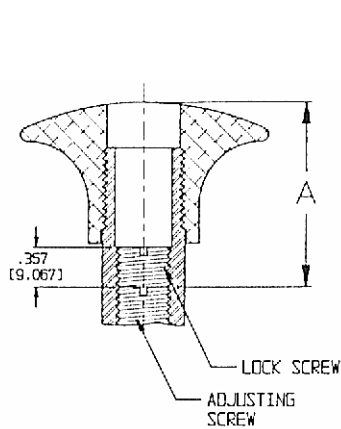
This unit pumps once every fifteen minutes of operation. To manually lubricate pull knob up. Lubricator is located at the left end of the machine under the top cover.

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



TALON TF-2 TOP & FACE SHARPENER

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



TALON TF-2 TOP & FACE SHARPENER

GRIND SPEED TALON TF-2

* CYCLE TIME IN SEC. PER TIP	TEETH PER MINUTE	FEED RATE INCH PER MIN.DEPTH OF CUT.	**MAX. RECOMMENDED 180 GRIT WHEEL
2.1	29	17.2	.006
2.5	24	12.6	.020
2.9	21	9.9	.030
3.3	18	8.2	.036
3.7	16	7.0	.043
4.1	15	6.1	.049 +
5.0	12	4.7	.049 +
6.0	10	3.8	.049 +
8.0	7.5	2.4	.049 +

* 10° ATB TOP 1-1/4 PITCH
.315 TOTAL HEAD MOVEMENT
3/16 DIAMOND SECTION
10 GPM COOLANT FLOW
OFF CARBIDE TIME IS 1.01 SEC.

** GRINDING WHEEL QUALITY,
CONCENTRATION, AND BOND HARDNESS
MAY REQUIRE REDUCED DEPTH OF CUT.



TALON TF-2 TOP & FACE SHARPENER

PROGRAM FLAT

This program is for flat top or flat face sharpening. No pre set heights are required.

1. Set grind program C-3 on control panel to Right/Flat or Left to change wheel rotation.
2. Set back angle (hook angle if face sharpening) at hook switch C-9 on control panel.
3. Set # of teeth to be sharpened on tooth counter. C-7 on control panel.
4. Install 0° washer located inside of tool drawer to the H-6 location.
5. Load saw. Use proper bushing located in tool drawer. Tool drawer is located under bottom row of adjustments, just under the control panel.
6. Use height sensor to set saw height. The height sensor arm is located above and behind the fixed clamp jaw. Rotate the arm so it is near the index finger. Then rotate the saw so the height sensor arm will rest on the tooth. Hold the joystick C-8 to in to move the saw up until the arm is lifted by the saw to the proper height (the saw lift will stop automatically). Now rotate the arm so it rests against pin behind height sensor arm. The saw is now at the proper height.
7. Pull start button C-6 on control panel. Note that the coolant can be toggled on/off with the start button, while putting the joystick into automatic will always turn the coolant on.
8. Set index pitch. This is done by holding the joystick C-8 to index, while turning knob C-10 to the desired setting. Make sure that C-10 locks into position before releasing C-8 to the center position. This process may need to be repeated to fine tune the index system.
9. Index the set up tooth into position.
10. Turn the spindle motor on by briefly jogging the joystick C-8 to the IN position. Adjust feed speed forward C-12 to desired speed. Use caution not to let the grinding wheel contact the carbide too hard. You can also adjust feed reverse C-13 at this time. Typically C-13 is adjusted fully open.
11. While adjusting feed speeds, the stroke length can also be set. When using a 6" top wheel select the 6" top stroke adjustment block. When using a 6" face wheel select the 6" face stroke adjustment block. When using wheel combination and a 4.5" top wheel select a 4.5" adjustment block. The stroke length can be adjusted by turning the knurled knobs on the selected block. This block is located between grind head and base and to the right of the hook scale.



TALON TF-2 TOP & FACE SHARPENER

PROGRAM FLAT (Continued)

12. Turn H1 infeed knob for desired carbide removal. The dial indicator H5 can be used to set the specific amount of material removal.
13. When the set up is complete, then select AUTO on joystick C-8.

PROGRAM LEFT

This program is used for left top, or left flat face sharpening.

1. Set grind program C-3 on control panel to Left.
2. Set back angle (hook angle if face sharpening) at hook switch C-9 on control panel.
3. Set # of teeth to be sharpened on tooth counter. C-7 on control panel.
4. Load saw. Use proper bushing located in tool drawer. Tool drawer is located under bottom row of adjustments, just under the control panel.
5. Use height sensor to set saw height. The height sensor arm is located above and behind the fixed clamp jaw. Rotate the arm so it is near the index finger. Then rotate the saw so the height sensor arm will rest on the tooth. Hold the joystick C-8 to in to move the saw up until the arm is lifted by the saw to the proper height (the saw lift will stop automatically). Now rotate the arm so it rests against pin behind height sensor arm. The saw is now at the proper height.
6. Install desired bevel angle washer onto H6. Washers are located in tool drawer.
7. Pull start button C-6 on control panel. Note that the coolant can be toggled on/off with the start button, while putting the joystick into automatic will always turn the coolant on.
8. Set index pitch. This is done by holding the joystick C-8 to index, while turning knob C-10 to the desired setting. Make sure that C-10 locks into position before releasing C-8 to the center position. This process may need to be repeated to fine tune the index system.
9. Index the set up tooth into position.
10. Turn the spindle motor on by briefly jogging the joystick C-8 to the IN position. Adjust feed speed forward C-12 to desired speed. Use caution not to let the grinding wheel contact the carbide too hard. You can also adjust feed reverse C-13 at this time. Typically C-13 is adjusted fully open.



TALON TF-2 TOP & FACE SHARPENER

PROGRAM LEFT (Continued)

11. While adjusting feed speeds, the stroke length can also be set. When using a 6" top wheel select the 6" top stroke adjustment block. When using a 6" face wheel select the 6" face stroke adjustment block. When using wheel combination and a 4.5" top wheel select a 4.5" adjustment block. The stroke length can be adjusted by turning the knurled knobs on the selected block. This block is located between grind head and base and to the right of the hook scale.
12. Turn H1 infeed knob for desired carbide removal. The dial indicator H5 can be used to set the specific amount of material removal.
13. When the set up is complete, then select AUTO on joystick C-8.

PROGRAM RIGHT

This program is used for right top, or right flat face sharpening.

1. Set grind program C-3 on control panel to Right.
2. Set back angle (hook angle if face sharpening) at hook switch C-9 on control panel.
3. Set # of teeth to be sharpened on tooth counter. C-7 on control panel.
4. Load saw. Use proper bushing located in tool drawer. Tool drawer is located under bottom row of adjustments, just under the control panel.
5. Use height sensor to set saw height. The height sensor arm is located above and behind the fixed clamp jaw. Rotate the arm so it is near the index finger. Then rotate the saw so the height sensor arm will rest on the tooth. Hold the joystick C-8 to in to move the saw up until the arm is lifted by the saw to the proper height (the saw lift will stop automatically). Now rotate the arm so it rests against pin behind height sensor arm. The saw is now at the proper height.
6. Install desired bevel angle washer onto H6. Washers are located in tool drawer.
7. Pull start button C-6 on control panel. Note that the coolant can be toggled on/off with the start button, while putting the joystick into automatic will always turn the coolant on.
8. Set index pitch. This is done by holding the joystick C-8 to index, while turning knob C-10 to the desired setting. Make sure that C-10 locks into position before releasing C-8 to the center position. This process may need to be repeated to fine tune the index system.



TALON TF-2 TOP & FACE SHARPENER

PROGRAM RIGHT (Continued)

9. Index the set up tooth into position.
10. Turn the spindle motor on by briefly jogging the joystick C-8 to the IN position. Adjust feed speed forward C-12 to desired speed. Use caution not to let the grinding wheel contact the carbide too hard. You can also adjust feed reverse C-13 at this time. Typically C-13 is adjusted fully open.
11. While adjusting feed speeds, the stroke length can also be set. When using a 6" top wheel select the 6" top stroke adjustment block. When using a 6" face wheel select the 6" face stroke adjustment block. When using wheel combination and a 4.5" top wheel select a 4.5" adjustment block. The stroke length can be adjusted by turning the knurled knobs on the selected block. This block is located between grind head and base and to the right of the hook scale.
12. Turn H1 infeed knob for desired carbide removal. The dial indicator H5 can be used to set the specific amount of material removal.
13. When the set up is complete, then select AUTO on joystick C-8.

PROGRAM ALTERNATE

This program is used for alternate face, or alternate top sharpening.

1. Set grind program C-3 on control panel to ALT.
2. Set back angle (hook angle if face sharpening) at hook switch C-9 on control panel.
3. Set # of teeth to be sharpened on tooth counter. C-7 on control panel.
4. Load saw. Use proper bushing located in tool drawer. Tool drawer is located under bottom row of adjustments, just under the control panel.
5. Use height sensor to set saw height. The height sensor arm is located above and behind the fixed clamp jaw. Rotate the arm so it is near the index finger. Then rotate the saw so the height sensor arm will rest on the tooth. Hold the joystick C-8 to in to move the saw up until the arm is lifted by the saw to the proper height (the saw lift will stop automatically). Now rotate the arm so it rests against pin behind height sensor arm. The saw is now at the proper height.
6. Set plate thickness C-11 to proper plate setting. Use micrometer to measure the thickness of the saw. Turn C-11 so that the numbers match the readings on the micrometer.



TALON TF-2 TOP & FACE SHARPENER

PROGRAM ALTERNATE (Continued)

7. Install desired bevel angle washer onto H6. Washers are located in tool drawer. Note that no washer is necessary for a 45° bevel.
8. Pull start button C-6 on control panel. Note that the coolant can be toggled on/off with the start button, while putting the joystick into automatic will always turn the coolant on.
9. Set index pitch. This is done by holding the joystick C-8 to index, while turning knob C-10 to the desired setting. Make sure that C-10 locks into position before releasing C-8 to the center position. This process may need to be repeated to fine tune the index system.
10. Index the set up tooth into position. This tooth must be right.
11. Turn the spindle motor on by using the joystick C-8 to the IN position. Adjust feed speed forward C-12 to desired speed. Use caution not to let the grinding wheel contact the carbide too hard. You can also adjust feed reverse C-13 at this time. Typically C-13 is adjusted fully open.
12. While adjusting feed speeds, the stroke length can also be set. When using a 6" top wheel select the 6" top stroke adjustment block. When using a 6" face wheel select the 6" face stroke adjustment block. When using wheel combination and a 4.5" top wheel select a 4.5" adjustment block. The stroke length can be adjusted by turning the knurled knobs on the selected block. This block is located between grind head and base and to the right of the hook scale.
13. Turn H1 infeed knob for desired carbide removal. The dial indicator H5 can be used to set the specific amount of material removal.
14. When face sharpening, a slight correction of the plate thickness C-11 may be necessary to achieve equal removal on left to right face bevels.
15. Stop by pushing C-6 then start by pulling C-6 until green light comes on. Move joy switch to INDEX to position right tooth.
16. Move the joy switch C-8 to IN to move grinding wheel across the carbide until lift off engages. Then move joy switch to OUT until the head stops. The grinding head should now bevel left.
17. Move joy switch C-8 to INDEX for the next tooth to be ground.
18. Move joy switch C-8 to IN to move grinding wheel across the carbide until lift off engages. Then move joy switch to OUT until head stops. The grinding head should now bevel right.



TALON TF-2 TOP & FACE SHARPENER

PROGRAM ALTERNATE (Continued)

20. If removal is even then place joy switch C-8 to AUTO.

PROGRAM CHAMFER

This program is used for the tops of chamfer teeth.

1. Set grind program C-3 on control panel to Chamfer.
2. Set back angle at hook switch C-9 on control panel.
3. Set # of teeth to be sharpened on tooth counter. C-7 on control panel.
4. Load saw. Use proper bushing located in tool drawer. Tool drawer is located under bottom row of adjustments, just under the control panel.
5. Use height sensor to set saw height. The height sensor arm is located above and behind the fixed clamp jaw. Rotate the arm so it is near the index finger. Then rotate the saw so the height sensor arm will rest on the tooth. Hold the joystick C-8 to in to move the saw up until the arm is lifted by the saw to the proper height (the saw lift will stop automatically). Now rotate the arm so it rests against pin behind height sensor arm. The saw is now at the proper height.
6. Set plate thickness C-11 to proper plate setting. Use micrometer to measure the thickness of the saw. Turn C-11 so that the numbers match the readings on the micrometer.
7. Install desired bevel angle washer onto H6. Washers are located in tool drawer. Note that no washer is necessary for a 45° bevel.
8. Pull start button C-6 on control panel. Note that the coolant can be toggled on/off with the start button, while putting the joystick into automatic will always turn the coolant on.
9. Set index pitch. This is done by holding the joystick C-8 to index, while turning knob C-10 to the desired setting. Make sure that C-10 locks into position before releasing C-8 to the center position. This process may need to be repeated to fine tune the index system.
10. Index the set up tooth into position.
11. Turn the spindle motor on by briefly jogging the joystick C-8 to the IN position. Adjust feed speed forward C-12 to desired speed. Use caution not to let the grinding wheel contact the carbide. You can also adjust feed reverse C-13 at this time. Typically C-13 is adjusted fully open.



TALON TF-2 TOP & FACE SHARPENER

PROGRAM CHAMFER (Continued)

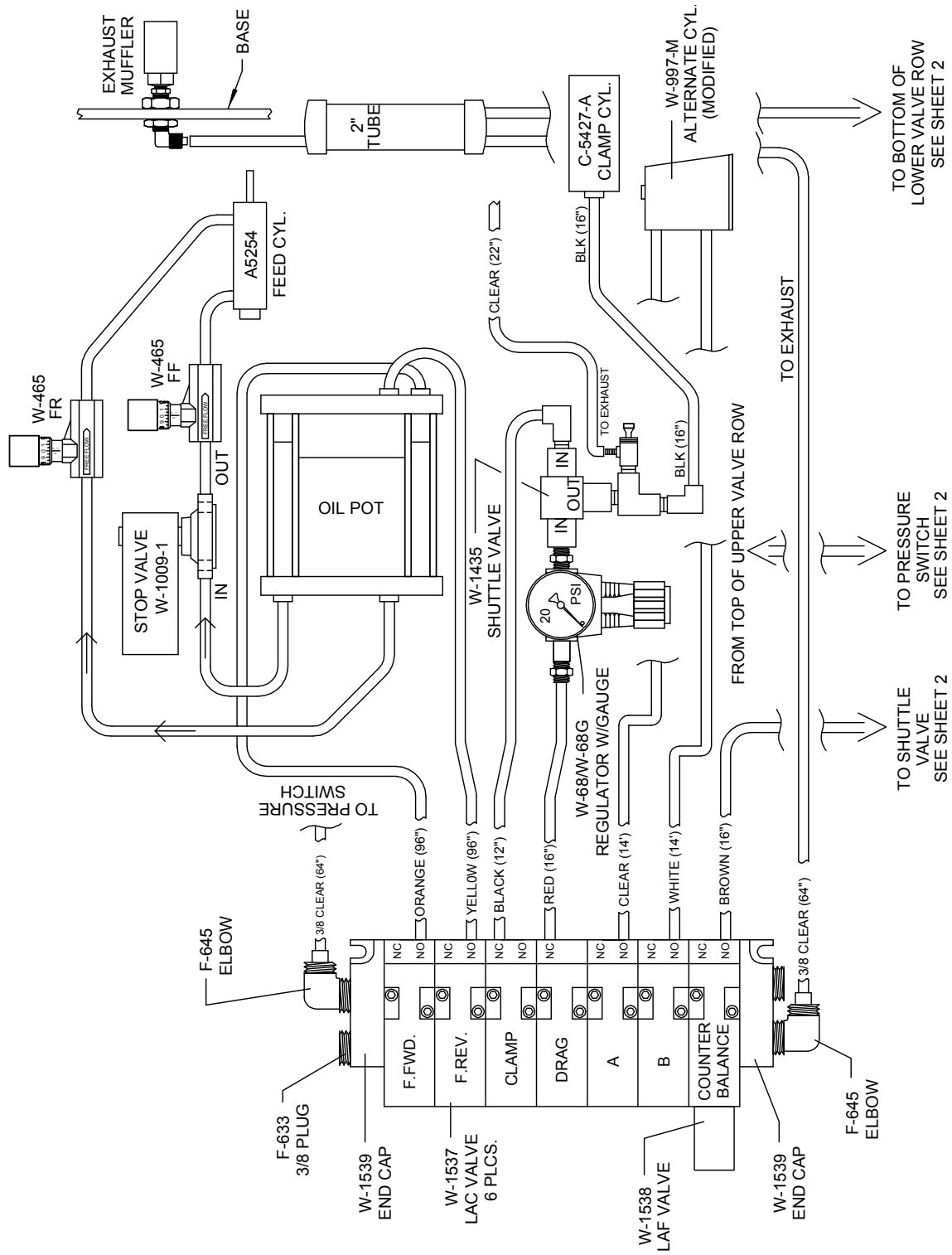
12. While adjusting feed speeds, the stroke length can also be set. When using a 6" top wheel select the 6" top stroke adjustment block. When using a 6" face wheel select the 6" face stroke adjustment block. When using wheel combination and a 4.5" top wheel select a 4.5" adjustment block. The stroke length can be adjusted by turning the knurled knobs on the selected block. This block is located between grind head and base and to the right of the hook scale.
13. Turn H-1 infeed knob for desired carbide removal, using dial indicator H-5 for monitoring the amount of removal.
14. Move the joystick C-8 to IN to move the grinding wheel across the carbide until lift off engages. Then move joystick to OUT until head stops. Head should now bevel right. Use H-3 on lift off assembly to adjust the amount of chamfer by briefly jogging the joystick to IN while turning the H-3 ring. Continue this until the H-3 is adjusted to the desired amount. After H-3 is adjusted, hold the joystick to IN until the grinding head lifts off, then move the joystick to OUT.
15. Head should now bevel left. Check to see that carbide removal matches on left and right bevels. This is done by inspecting the tooth that you just ground.
16. If removal is even, place joy switch C-8 to AUTO.

Note: **HI-LOW** program is available only as an option.



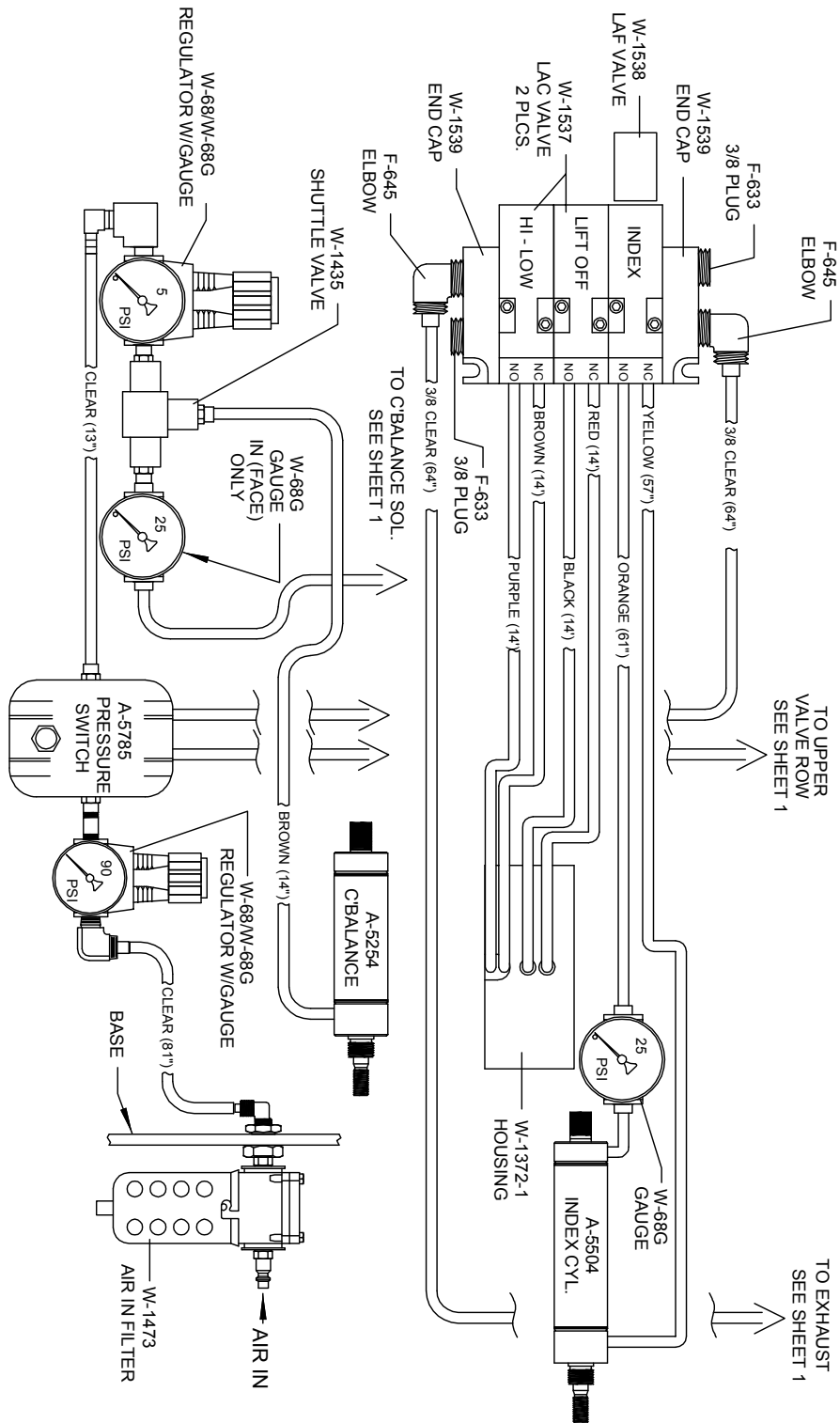
TALON TF-2 TOP & FACE SHARPENER

AIR SCHEMATIC (SHEET 1)



TALON TF-2 TOP & FACE SHARPENER

AIR SCHEMATIC (SHEET 2)

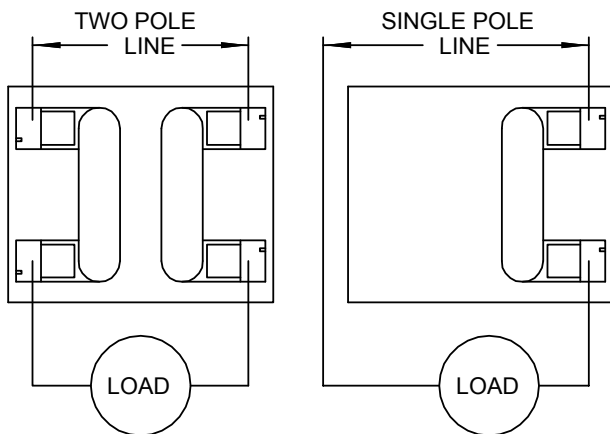


TALON TF-2 TOP & FACE SHARPENER

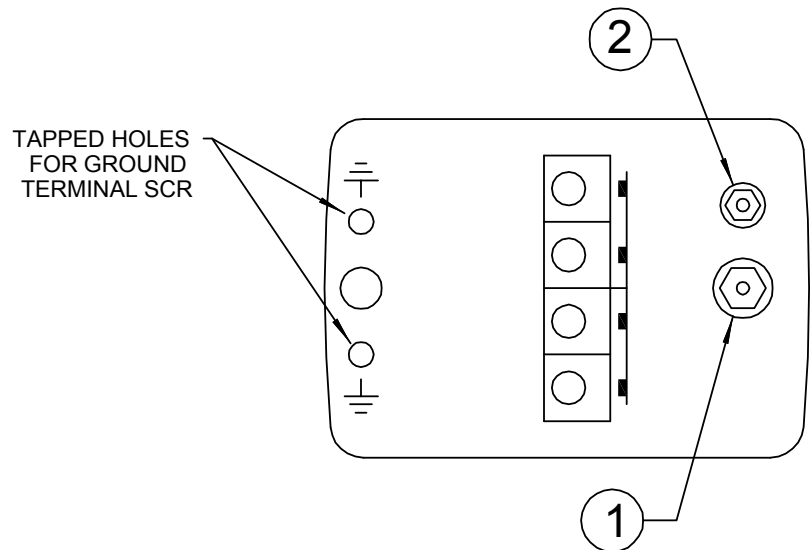
ADJUSTING AIR PRESSURE SWITCH (A-5785)

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



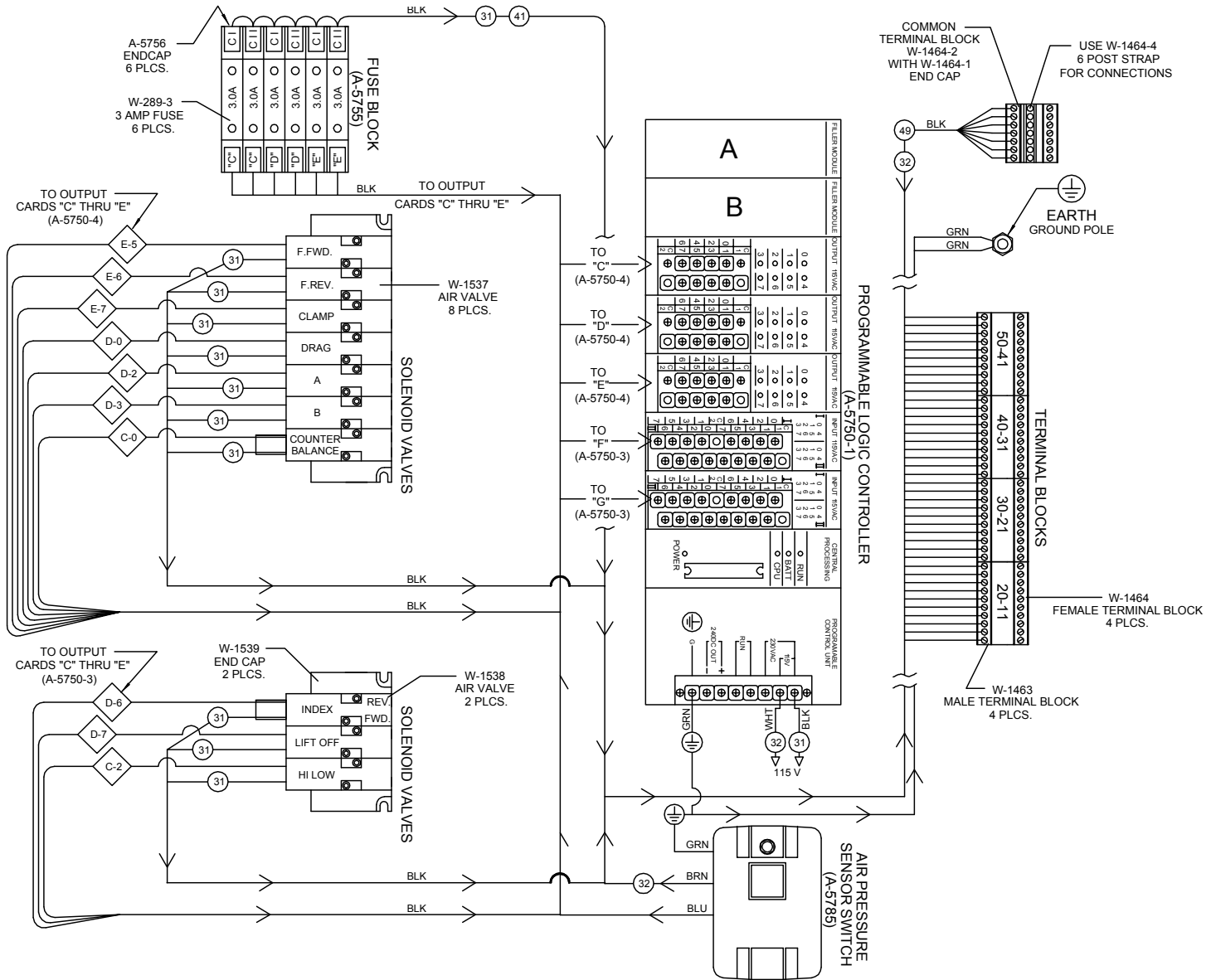
ADJUST IN PROPER SEQUENCE

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.

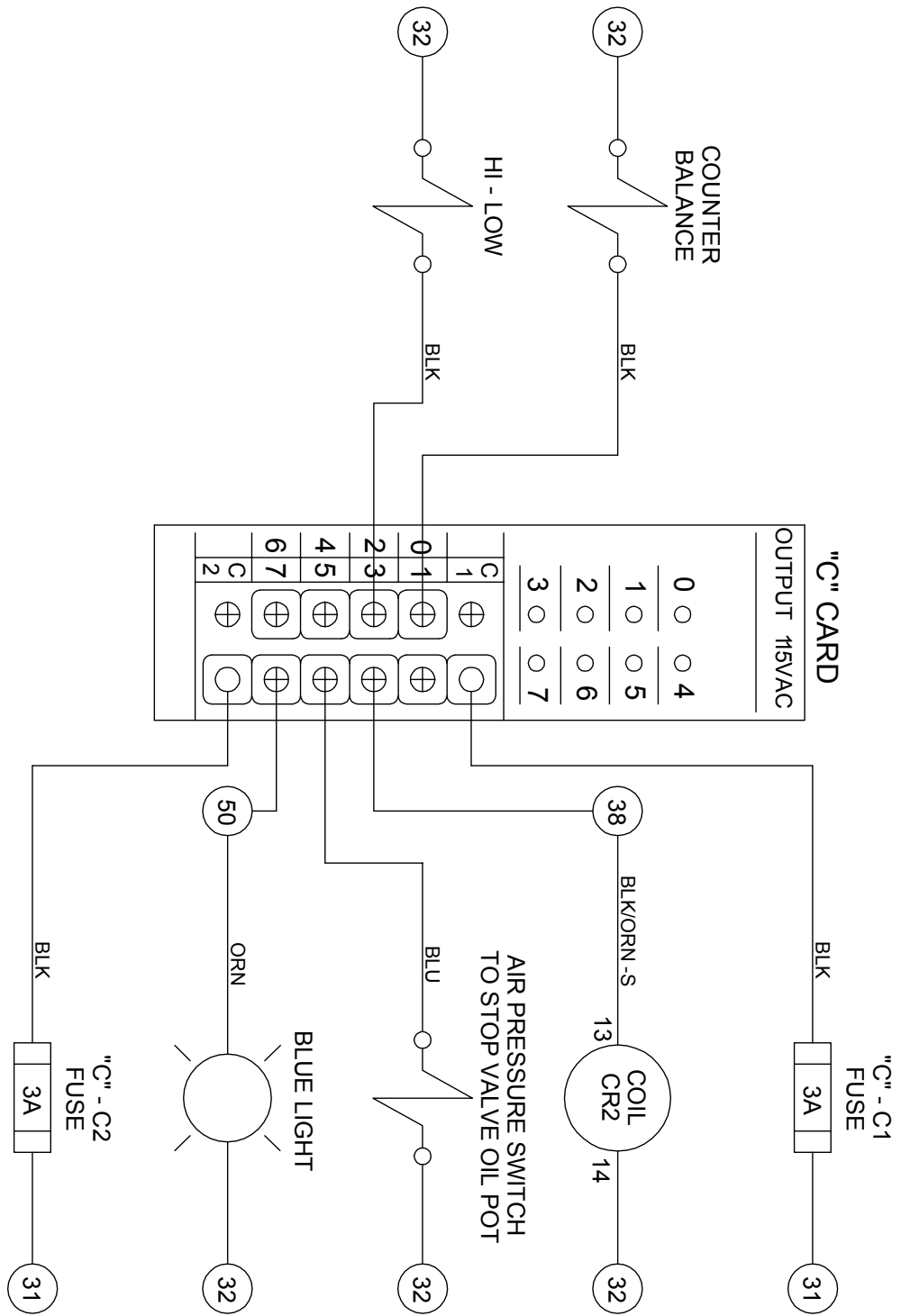
TALON TF-2 TOP & FACE SHARPENER

OUTPUT PANEL WIRING SCHEMATIC



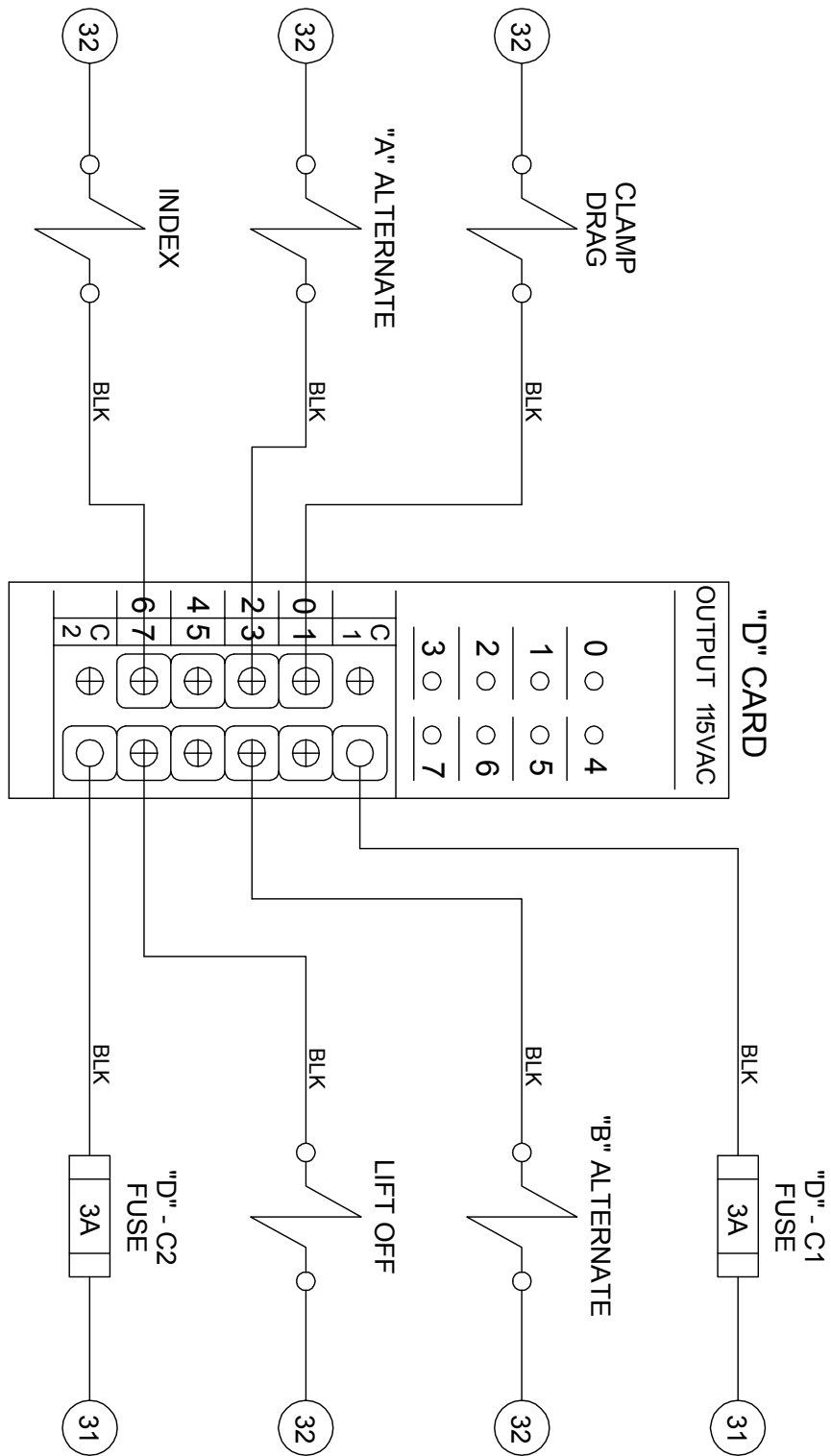
TALON TF-2 TOP & FACE SHARPENER

"C" CARD SCHEMATIC



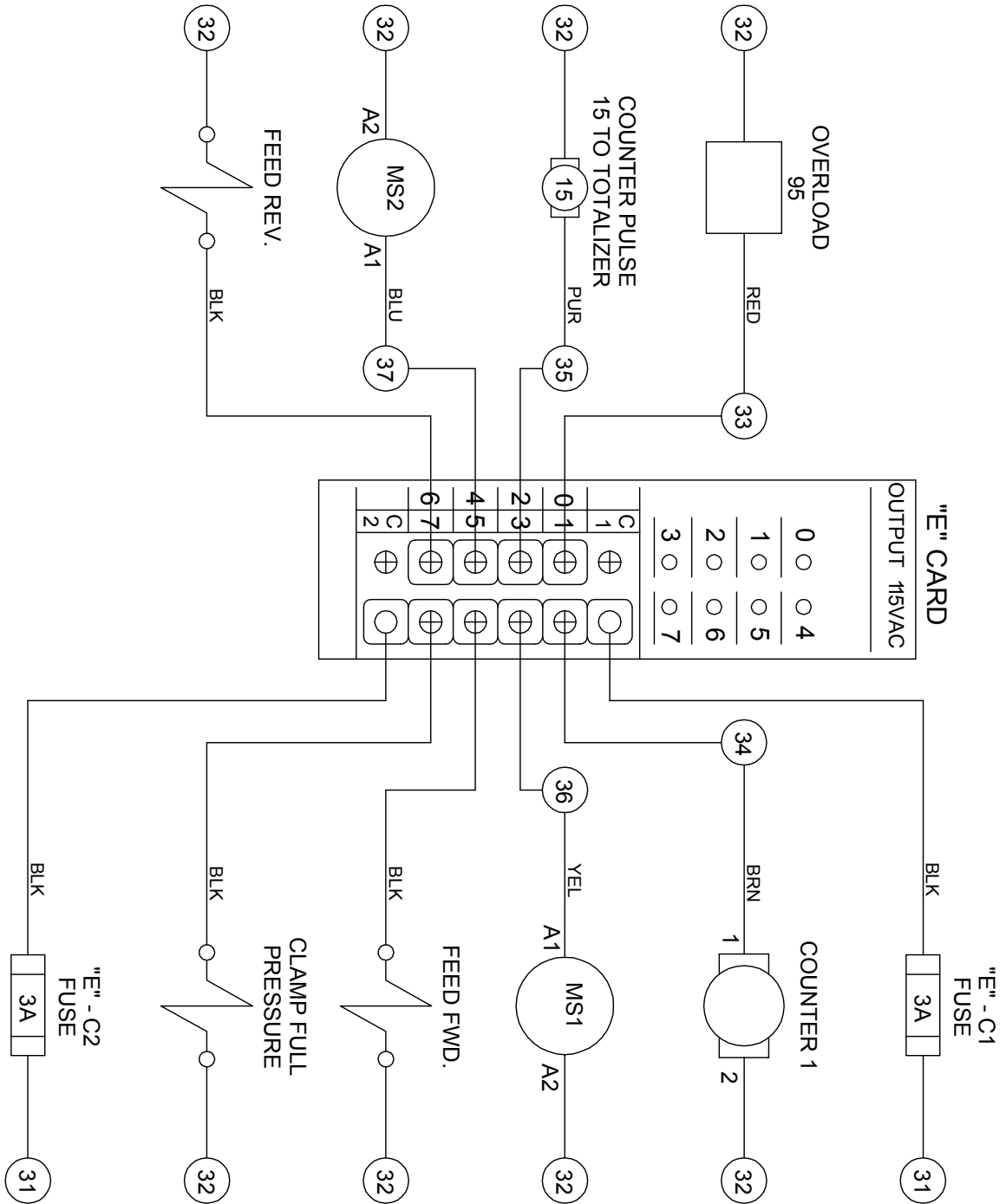
TALON TF-2 TOP & FACE SHARPENER

"D" CARD SCHEMATIC



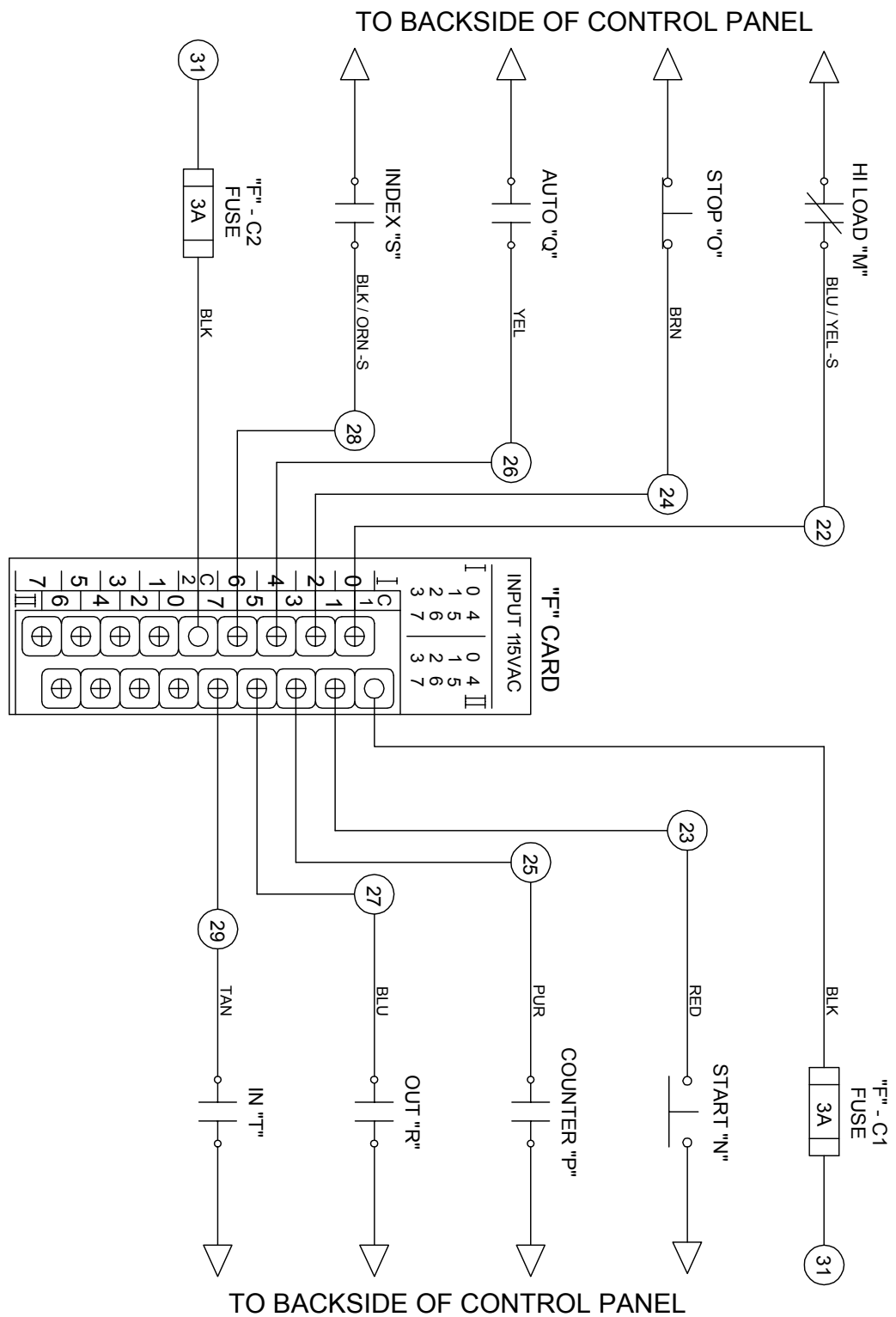
TALON TF-2 TOP & FACE SHARPENER

"E" CARD SCHEMATIC



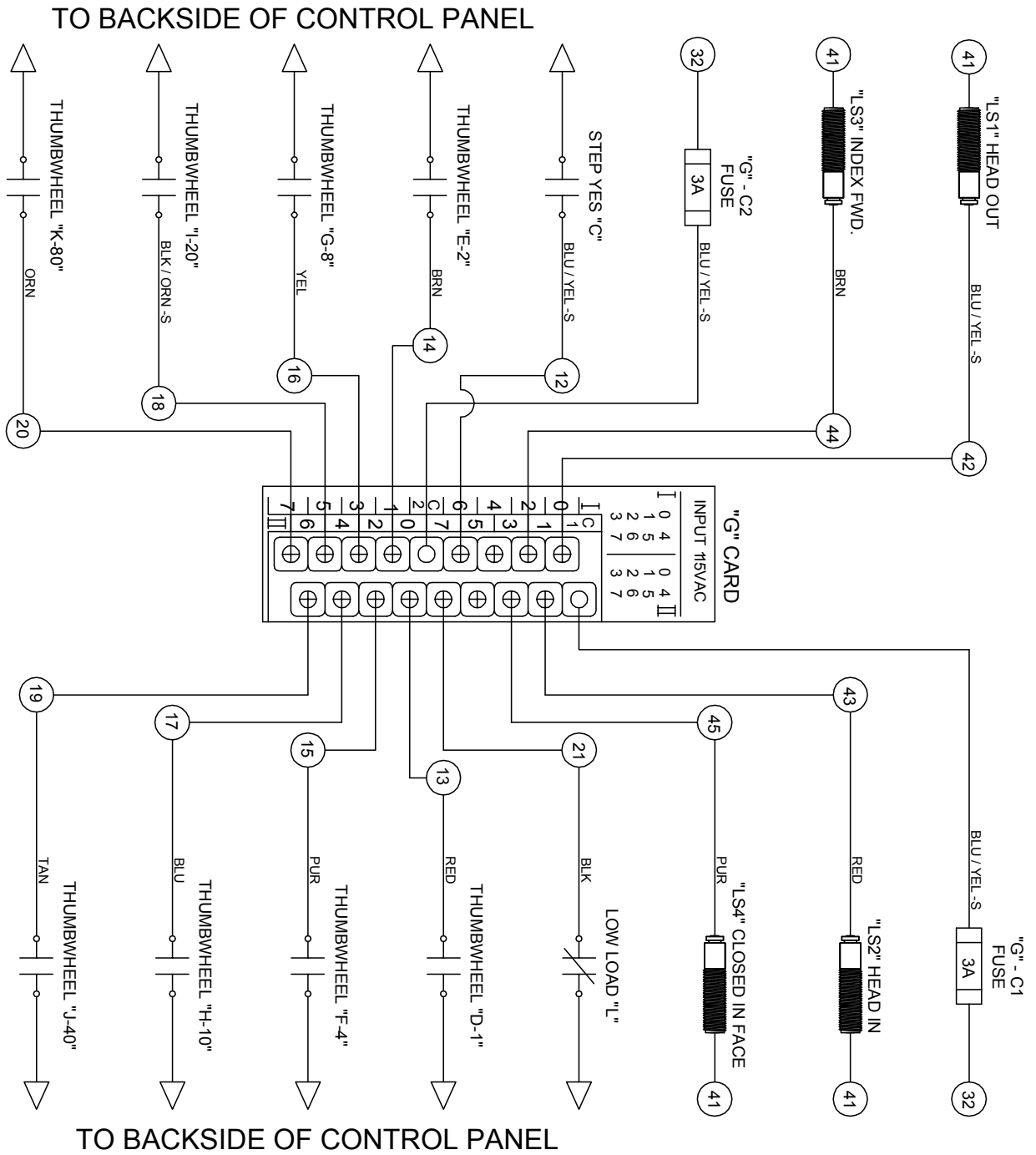
TALON TF-2 TOP & FACE SHARPENER

"F" CARD SCHEMATIC



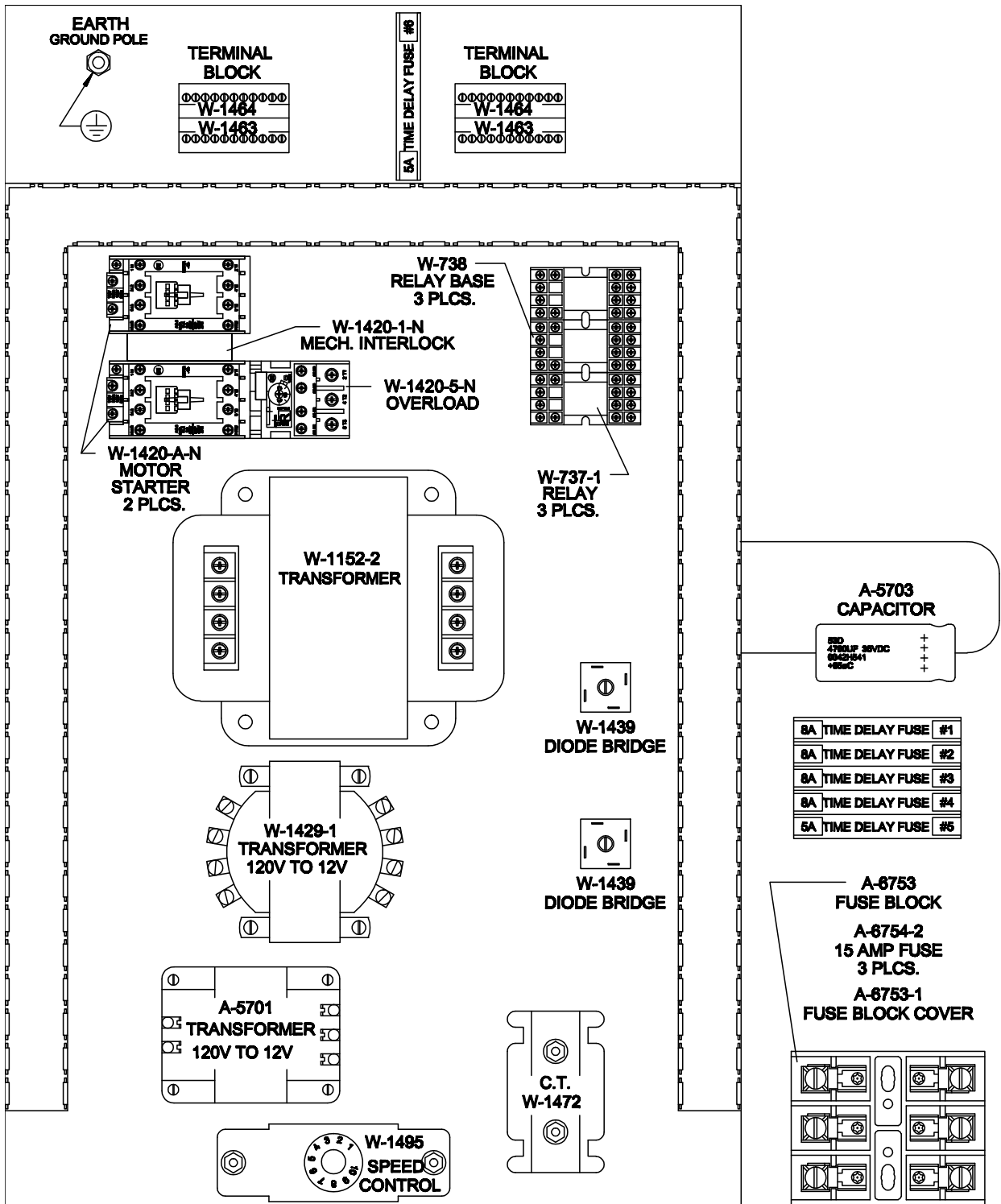
TALON TF-2 TOP & FACE SHARPENER

"G" CARD SCHEMATIC



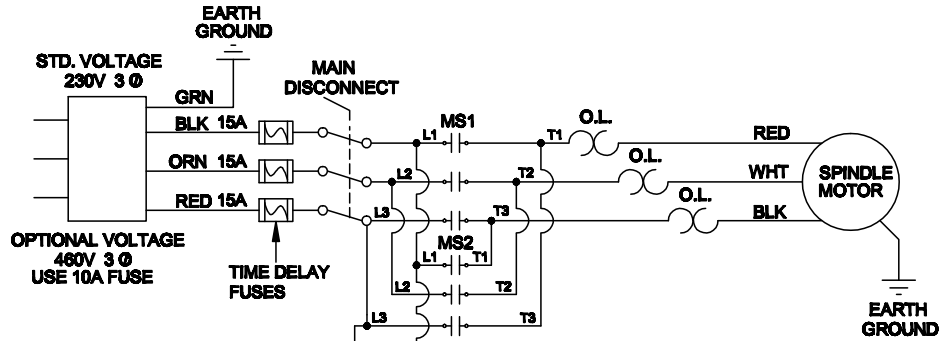
TALON TF-2 TOP & FACE SHARPENER

POWER PANEL

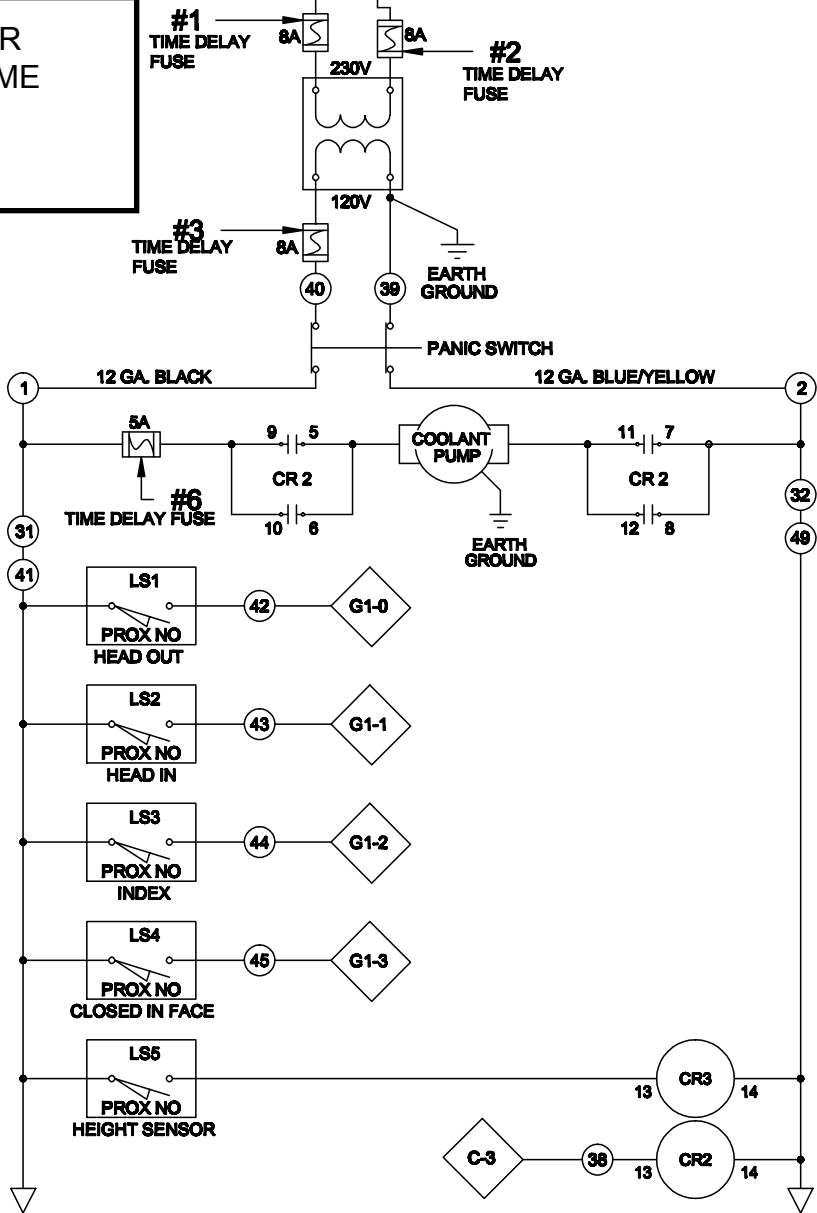


TALON TF-2 TOP & FACE SHARPENER

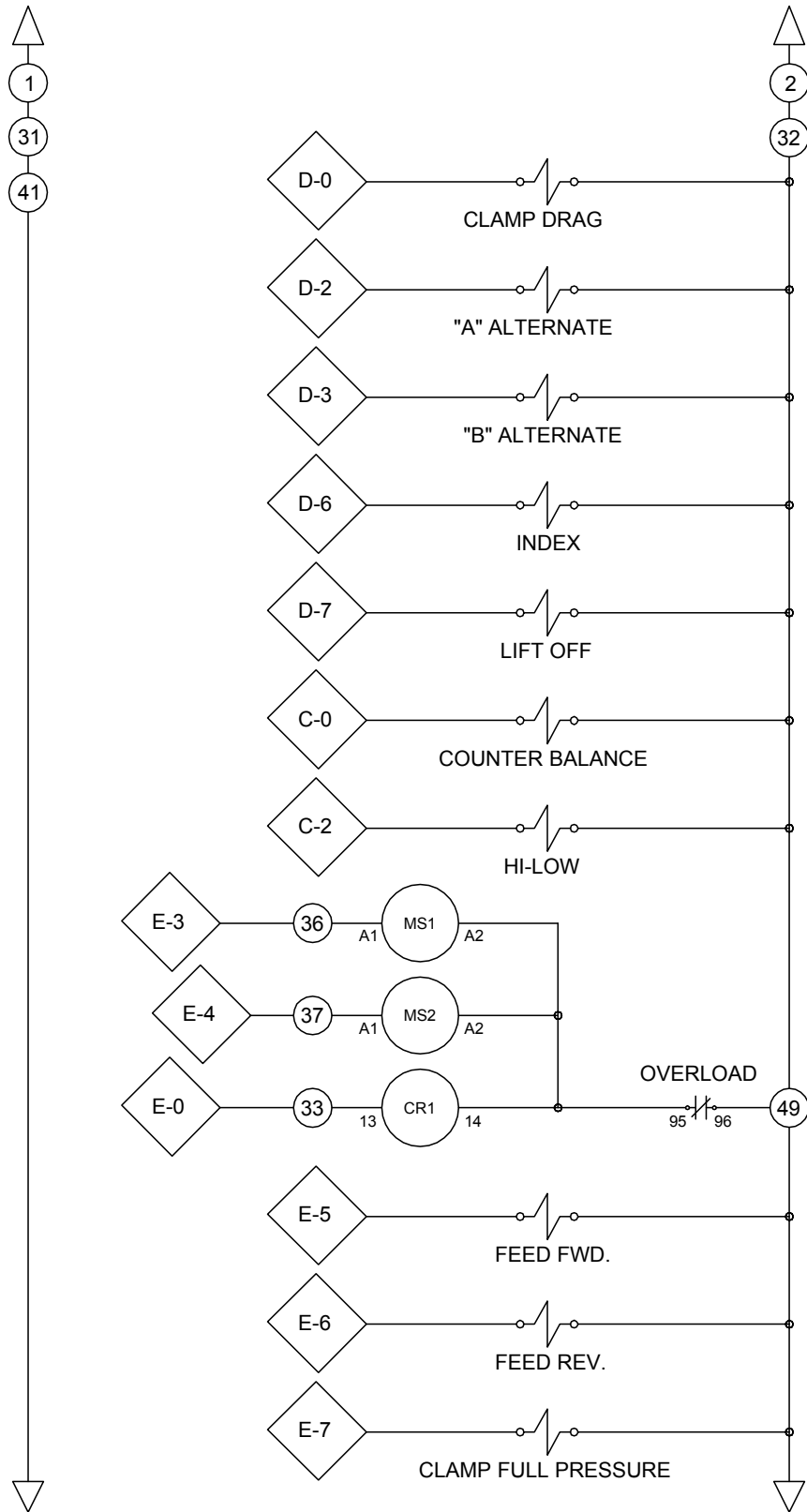
ELECTRICAL SCHEMATICS



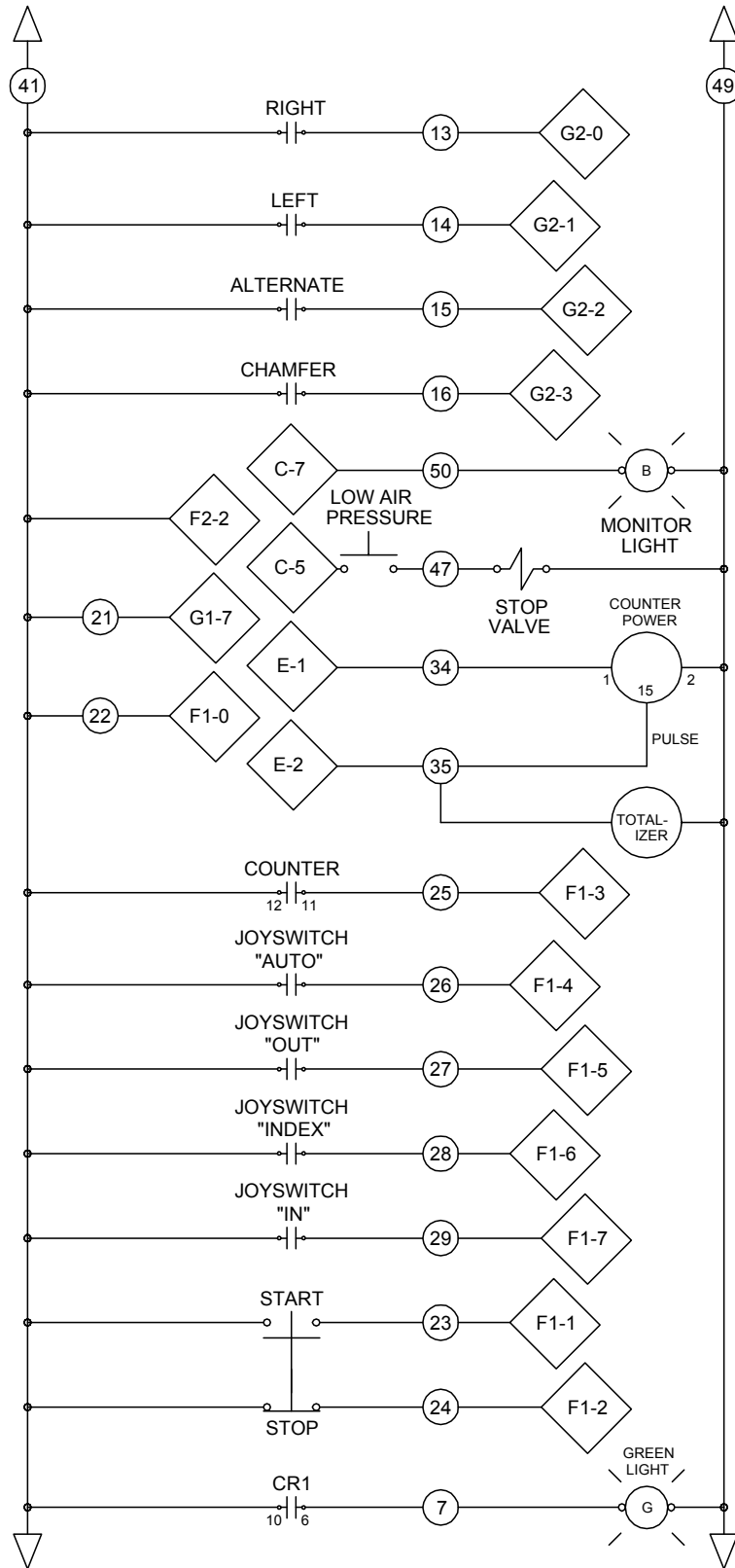
SEE PAGE 39 FOR LOCATION OF TIME DELAY FUSES #1 THRU #6



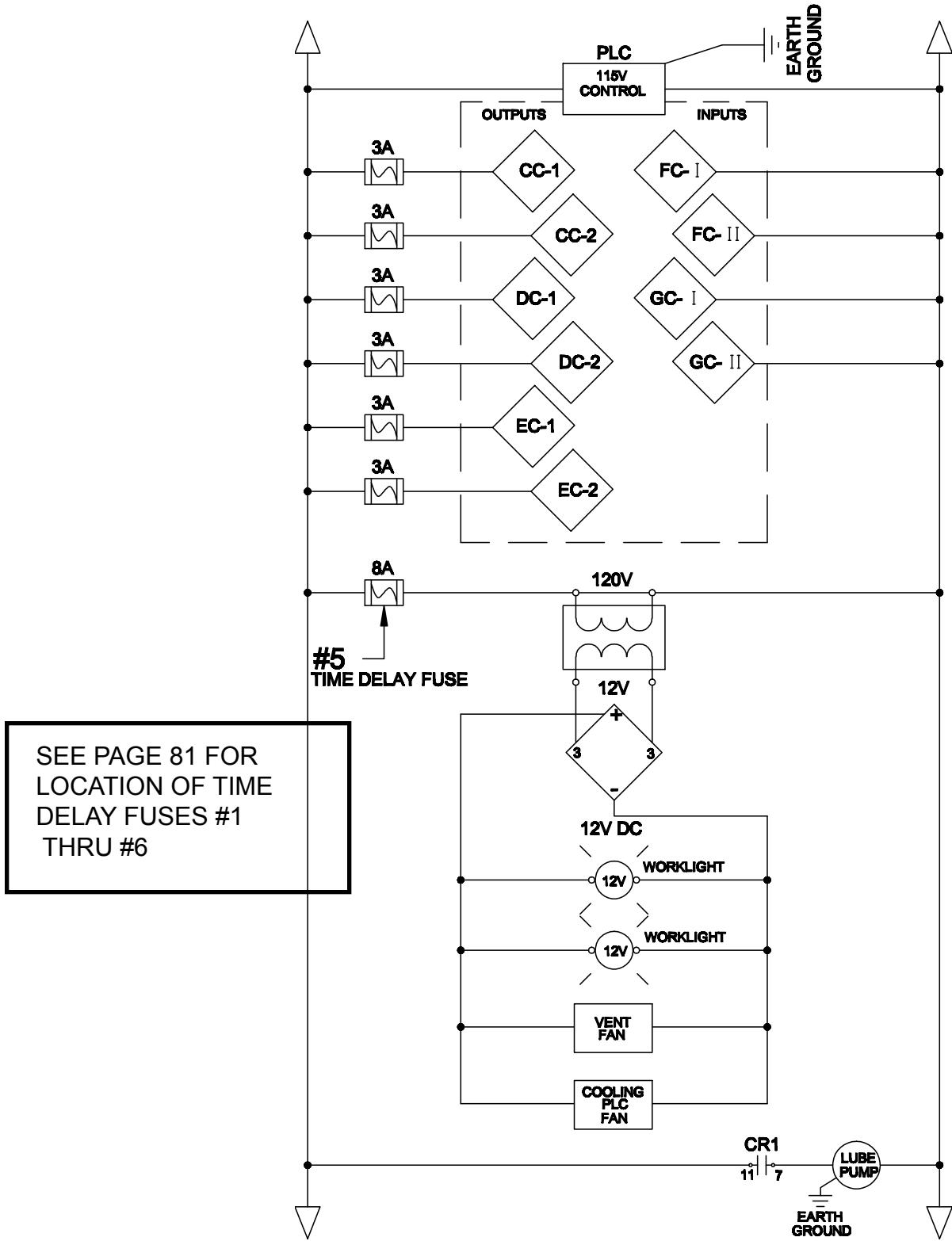
TALON TF-2 TOP & FACE SHARPENER



TALON TF-2 TOP & FACE SHARPENER



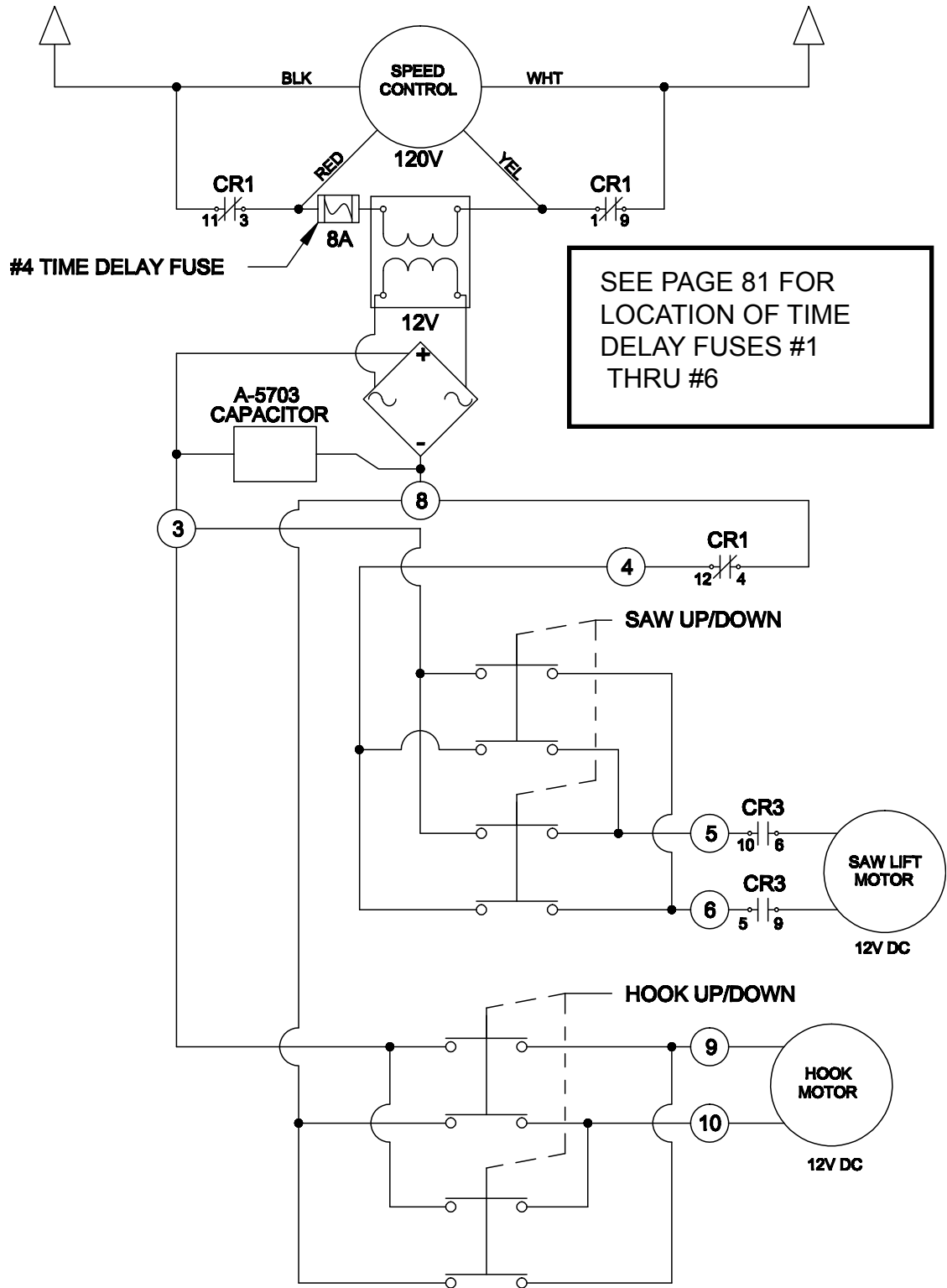
TALON TF-2 TOP & FACE SHARPENER



SEE PAGE 81 FOR
LOCATION OF TIME
DELAY FUSES #1
THRU #6



TALON TF-2 TOP & FACE SHARPENER



TALON TF-2 TOP & FACE SHARPENER

NOTE: DISCONNECT POWER FIRST!
CONVERTING 230V TO 440V

WIRING CHANGE FOR MOTOR

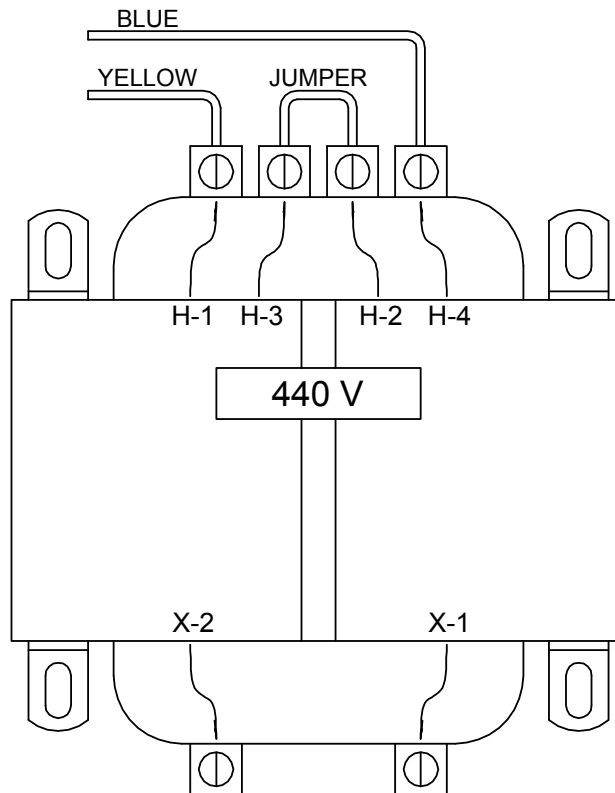
LINE 1 WHITE
 LINE 2 RED
 LINE 3 BLACK

SET MOTOR STARTER
 OVERLOAD AT 3.2

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.

WM RIGHT MACHINE

TALON TF-2 TOP & FACE SHARPENER

PARTS LIST

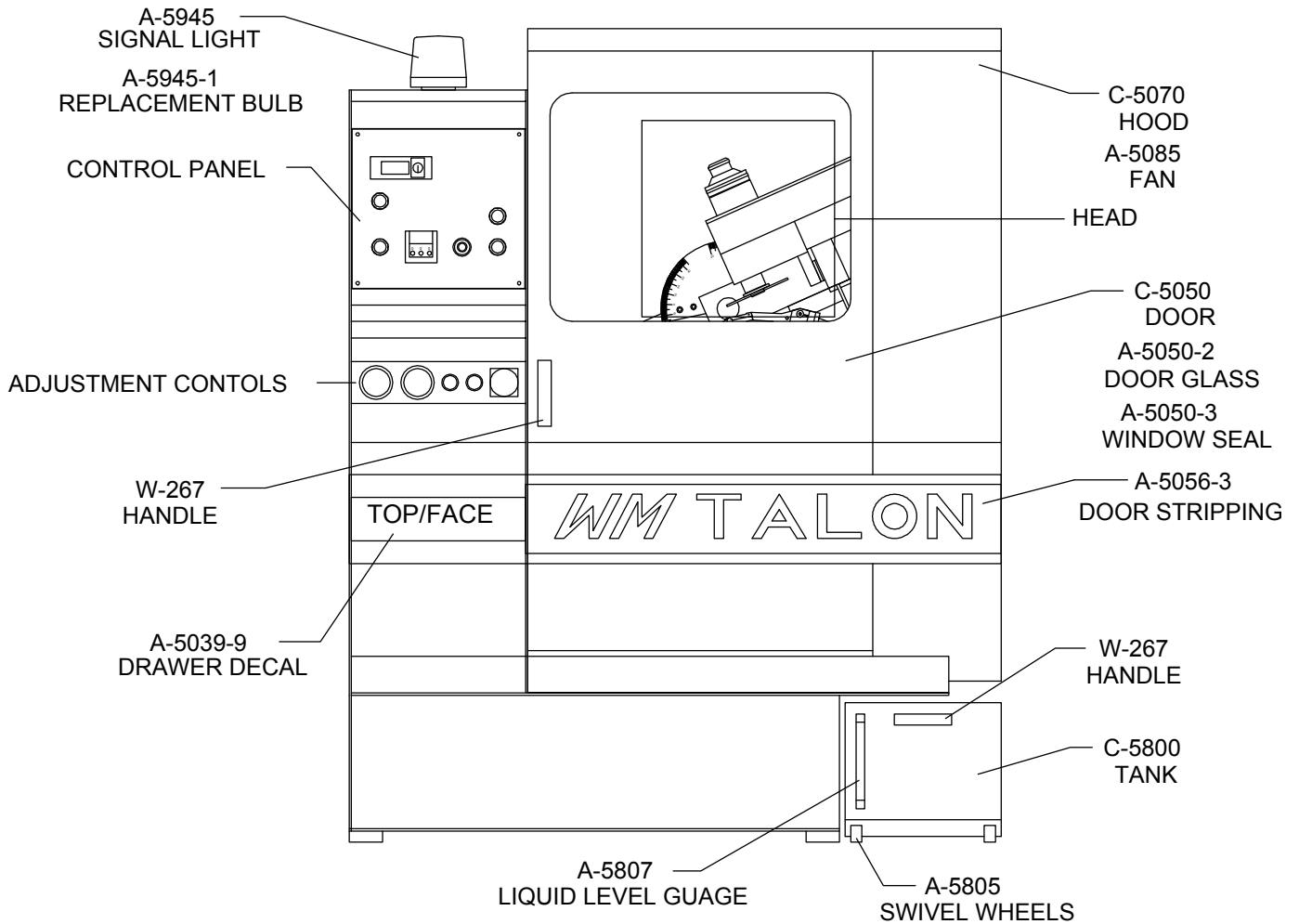
DRAWINGS OF...

Base Layout
Control Panel Assembly
Index Arm Assembly
Index Cylinder Assembly
Index Adjustment Assembly
Speed Control Assembly
Hook Actuator Assembly
Stroke Assembly
Plate Thickness Knob Assembly
Plate Thickness Sprocket Assembly
Feed System Assembly
Alternate Assembly
Counter Balance Assembly
Lift Off Cylinder Stack Assembly (H-3)
Head Assembly
Saw Clamp Assembly
Sawlift Assembly



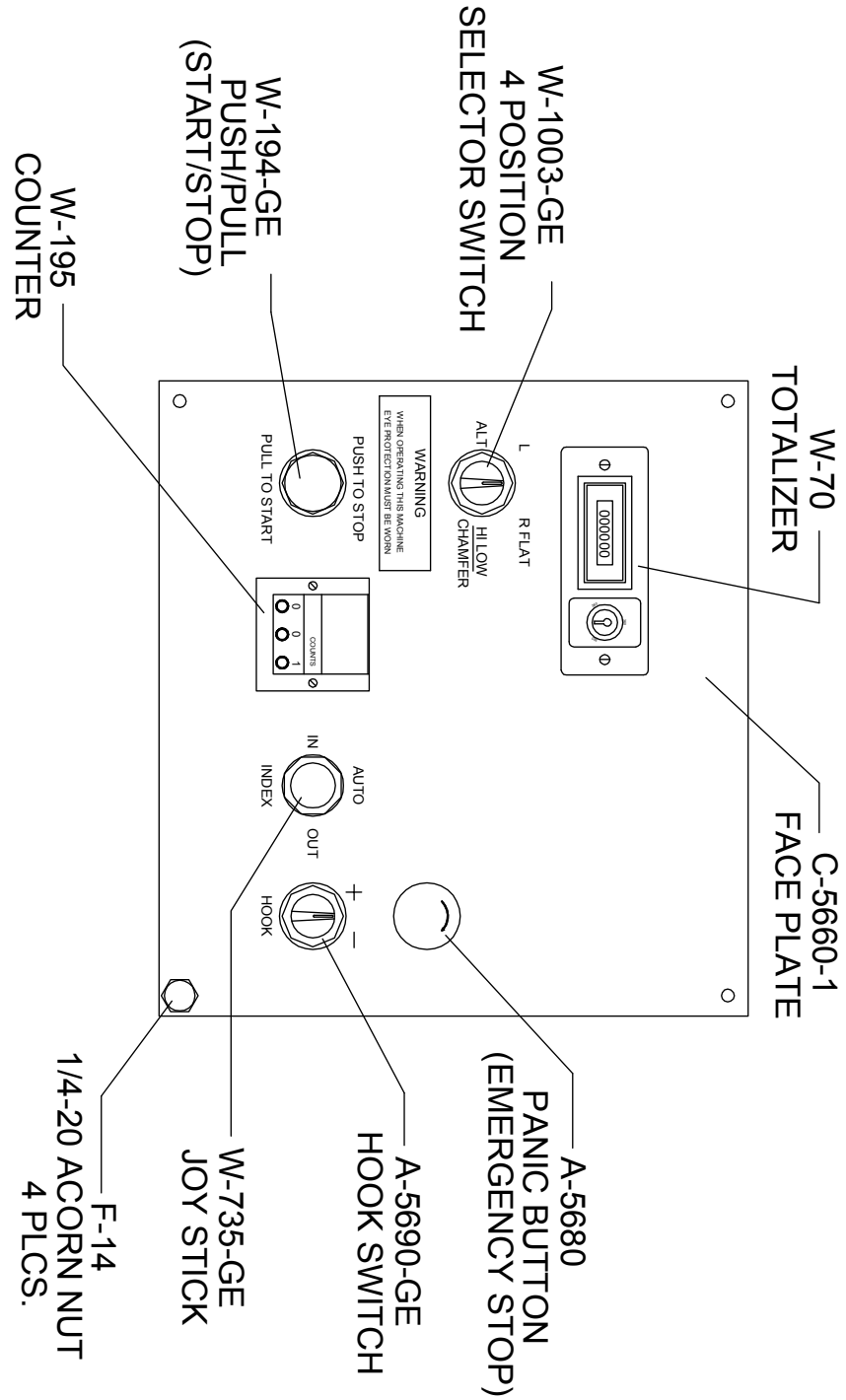
TALON TF-2 TOP & FACE SHARPENER

BASE ASSEMBLY LAYOUT



TALON TF-2 TOP & FACE SHARPENER

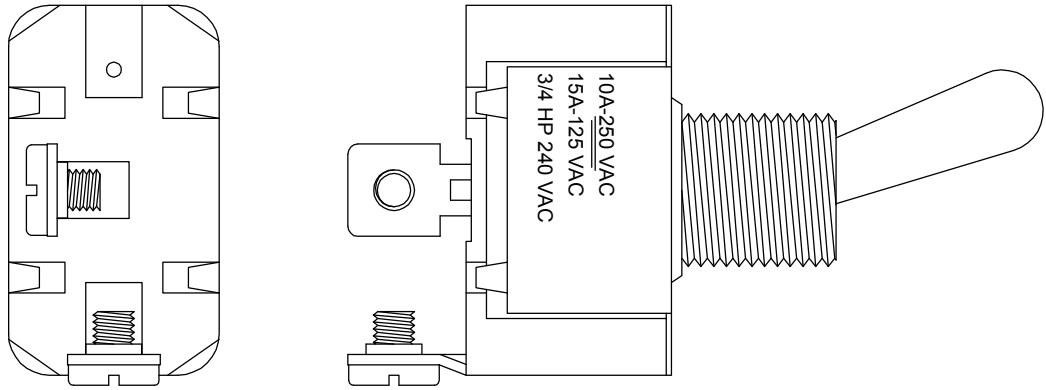
CONTROL PANEL COMPONENTS



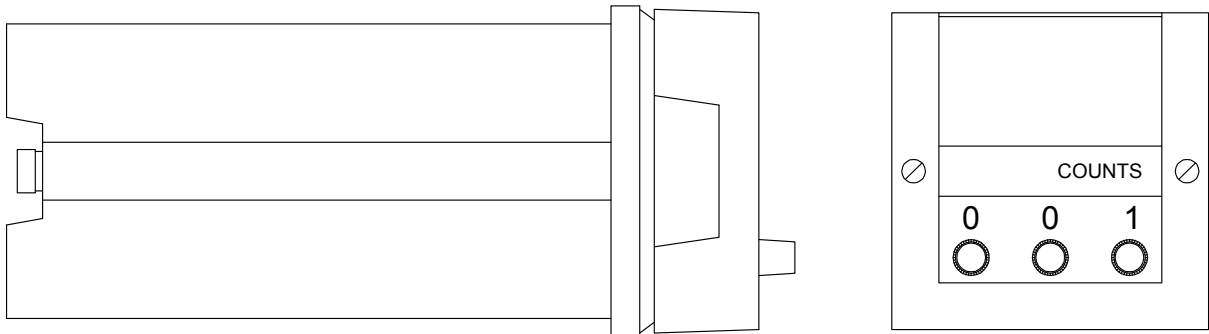
TALON TF-2 TOP & FACE SHARPENER

CONTROL PANEL COMPONENTS CONTINUED

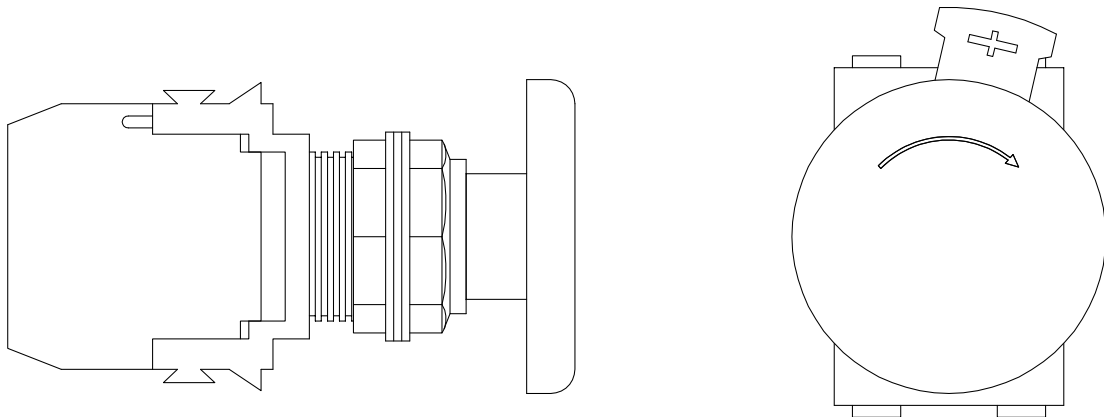
4 POSITION SELECTOR SWITCH - W-1003-GE



COUNTER
COMPLETE - W-195
COVER ONLY - W-195-1



EMERGENCY STOP (PANIC BUTTON) - A-5680

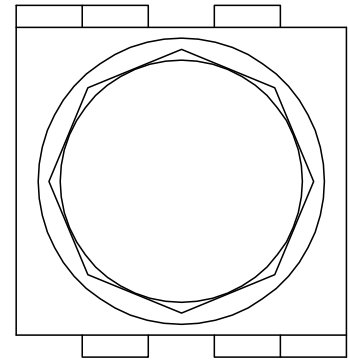
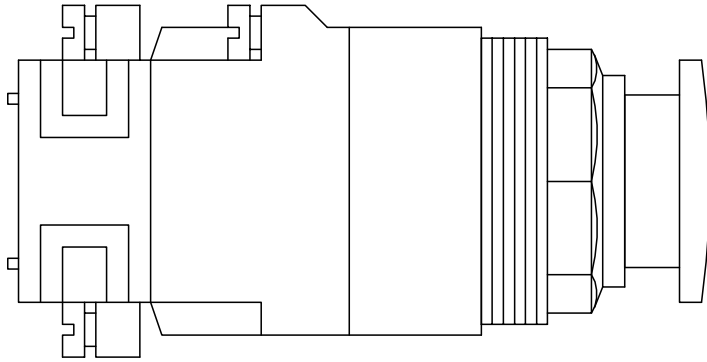


WM RIGHT **M**ACHINE

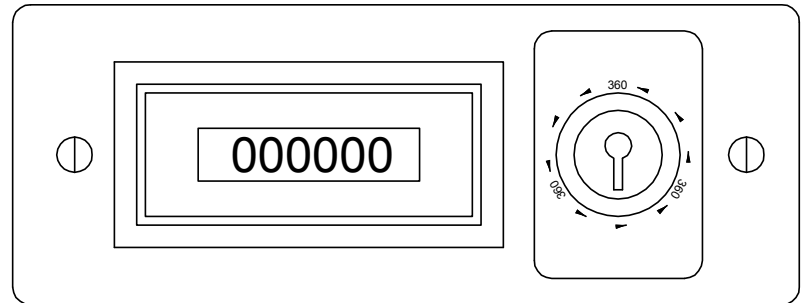
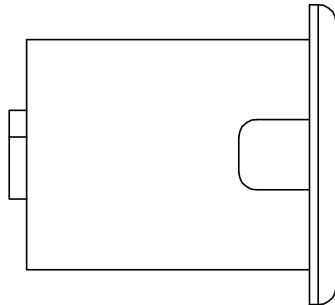
TALON TF-2 TOP & FACE SHARPENER

CONTROL PANEL COMPONENTS CONTINUED

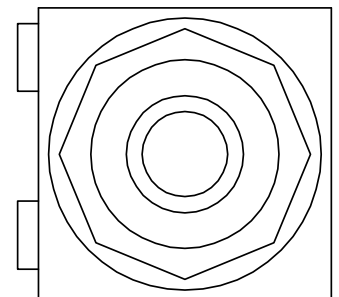
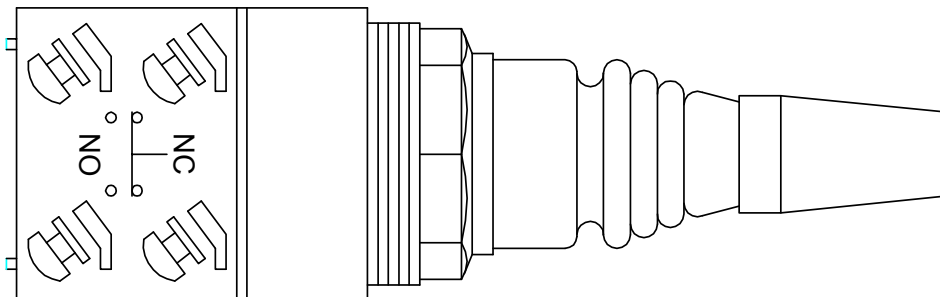
PUSH / PULL : START / STOP BUTTON - W-194-GE



TOTALIZER - W-70



JOY SWITCH - W-735-GE

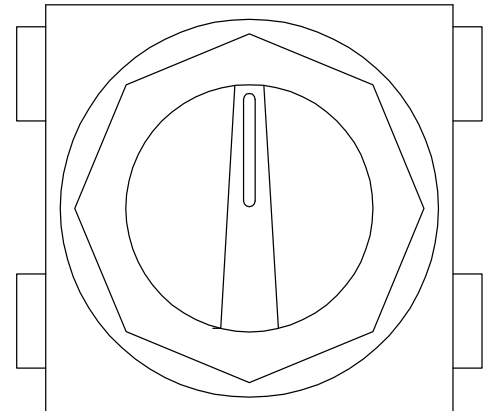
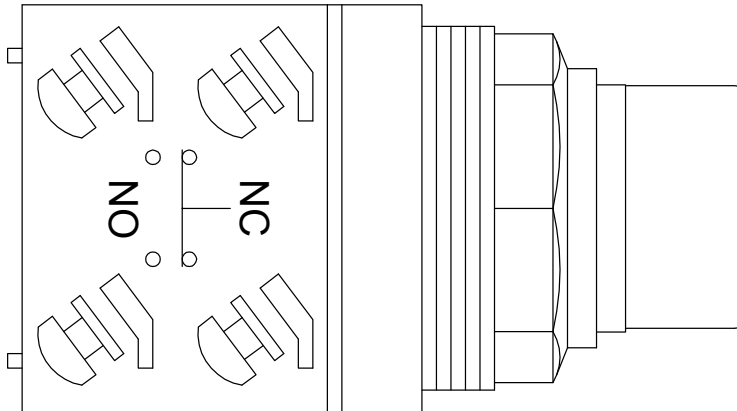


WM RIGHT **M**ACHINE

TALON TF-2 TOP & FACE SHARPENER

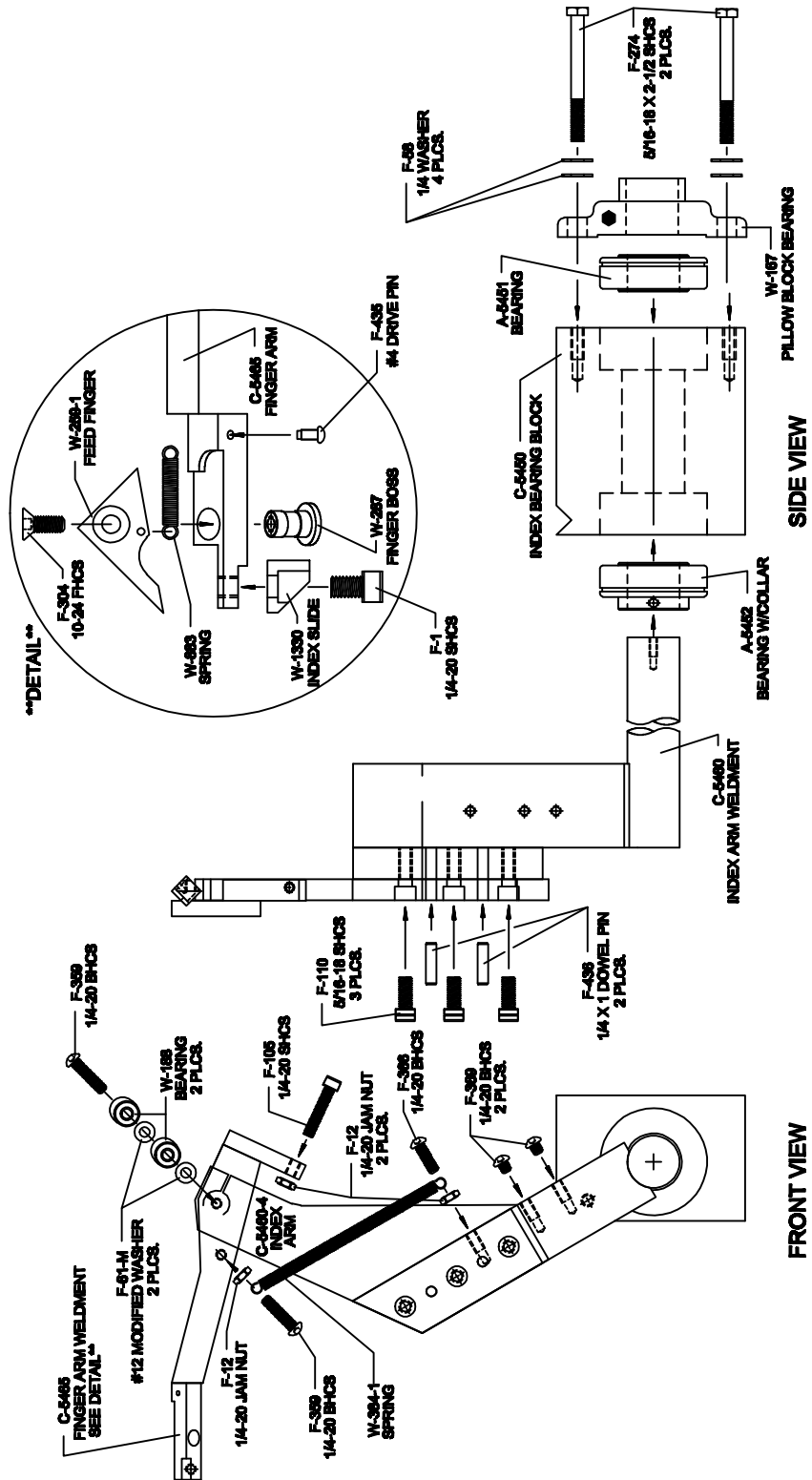
CONTROL PANEL COMPONENTS CONTINUED

HOOK SWITCH - A-5690-GE



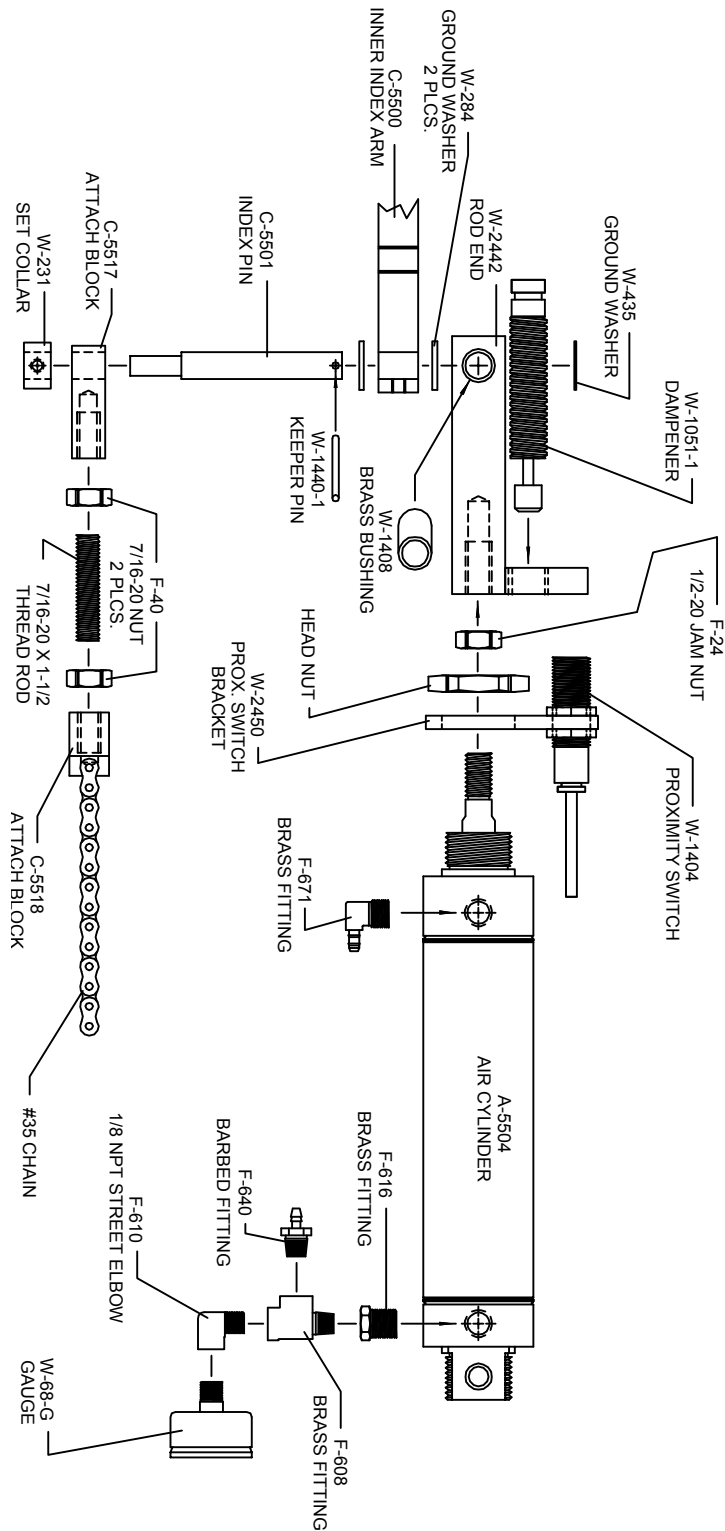
TALON TF-2 TOP & FACE SHARPENER

INDEX ARM ASSEMBLY



TALON TF-2 TOP & FACE SHARPENER

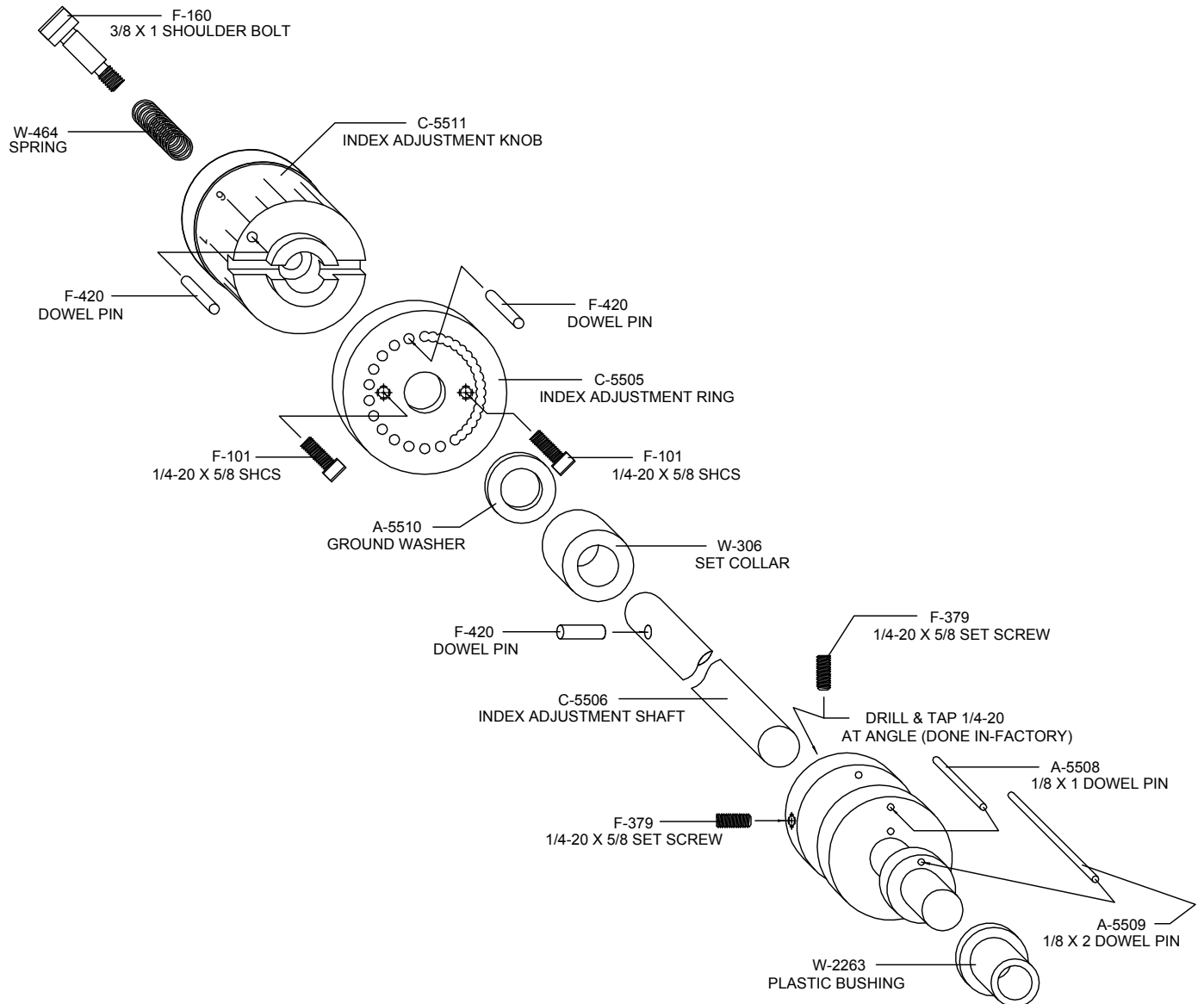
INDEX CYLINDER ASSEMBLY



WM RIGHT MACHINE

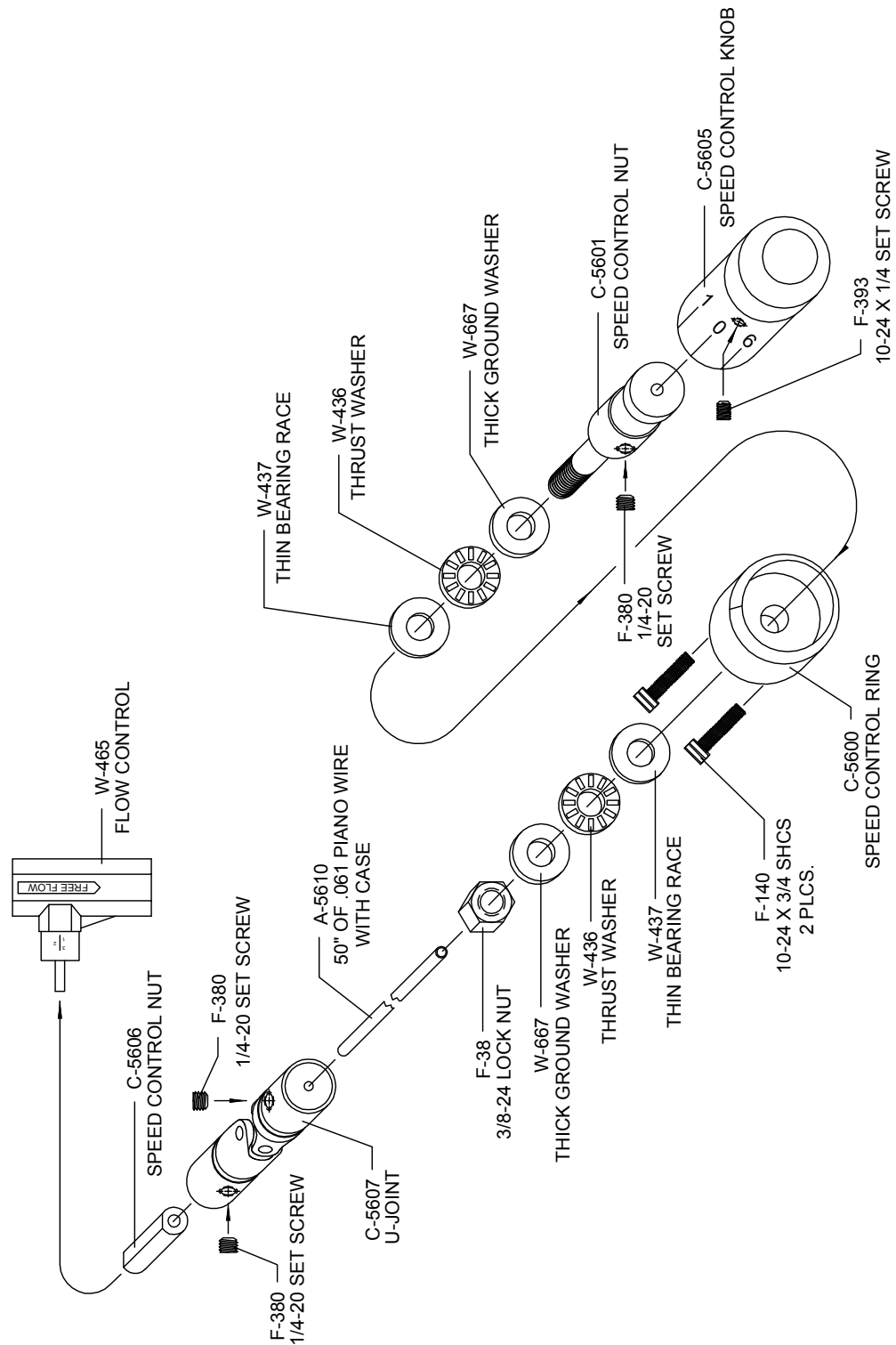
TALON TF-2 TOP & FACE SHARPENER

INDEX ADJUSTMENT ASSEMBLY



TALON TF-2 TOP & FACE SHARPENER

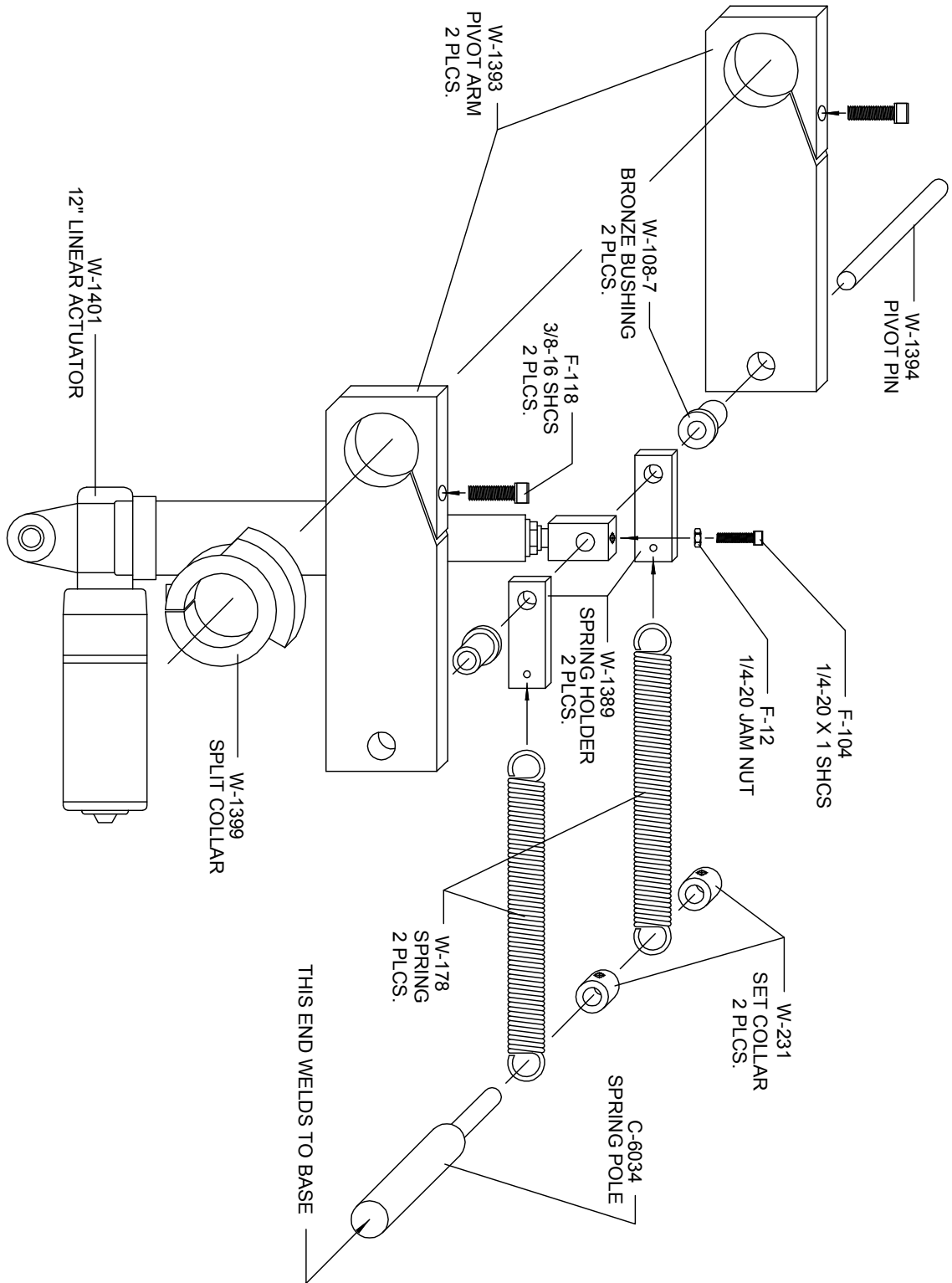
SPEED CONTROL ASSEMBLY



WM RIGHT **M**ACHINE

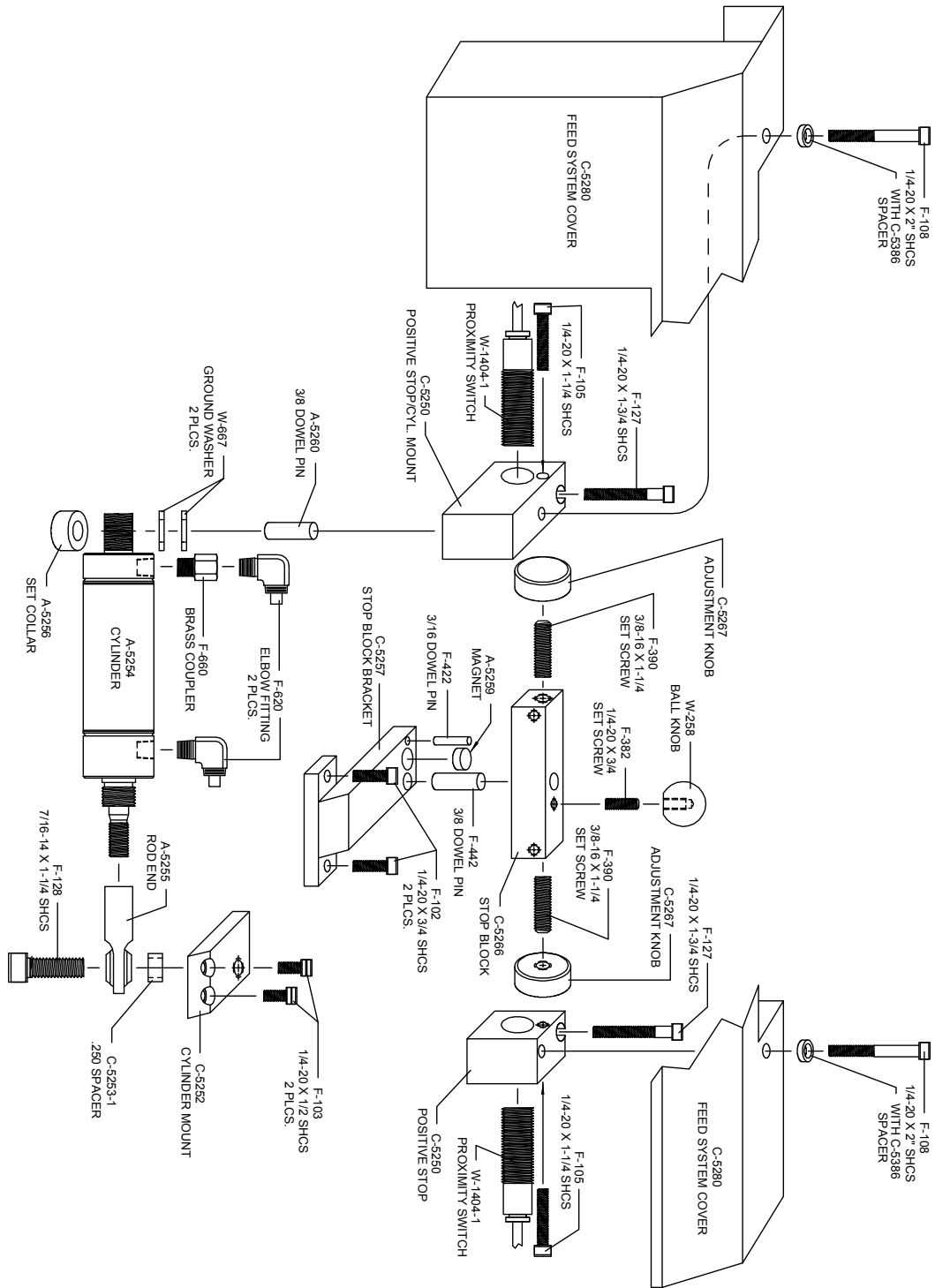
TALON TF-2 TOP & FACE SHARPENER

HOOK ACTUATOR ASSEMBLY



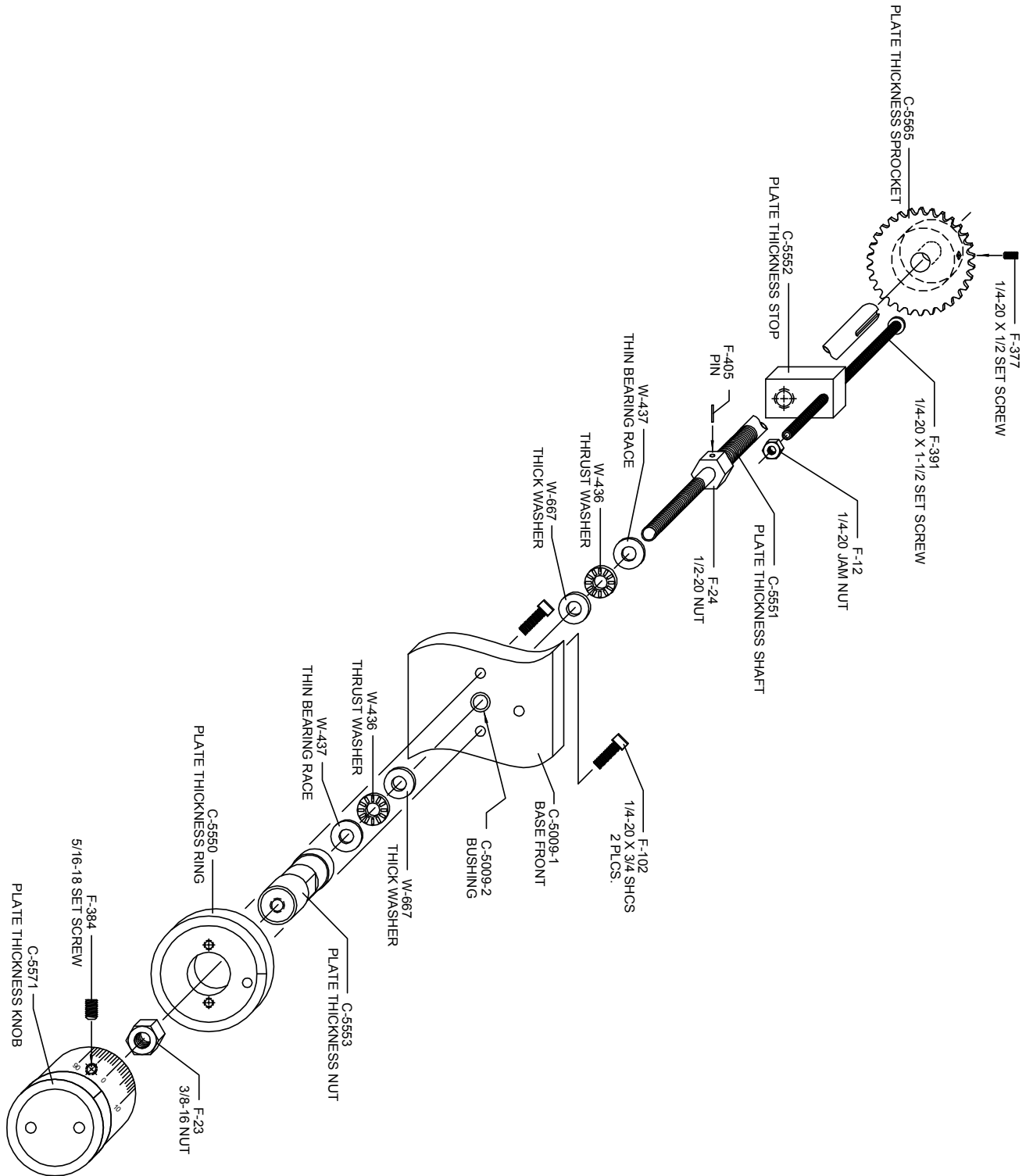
TALON TF-2 TOP & FACE SHARPENER

STROKE ASSEMBLY



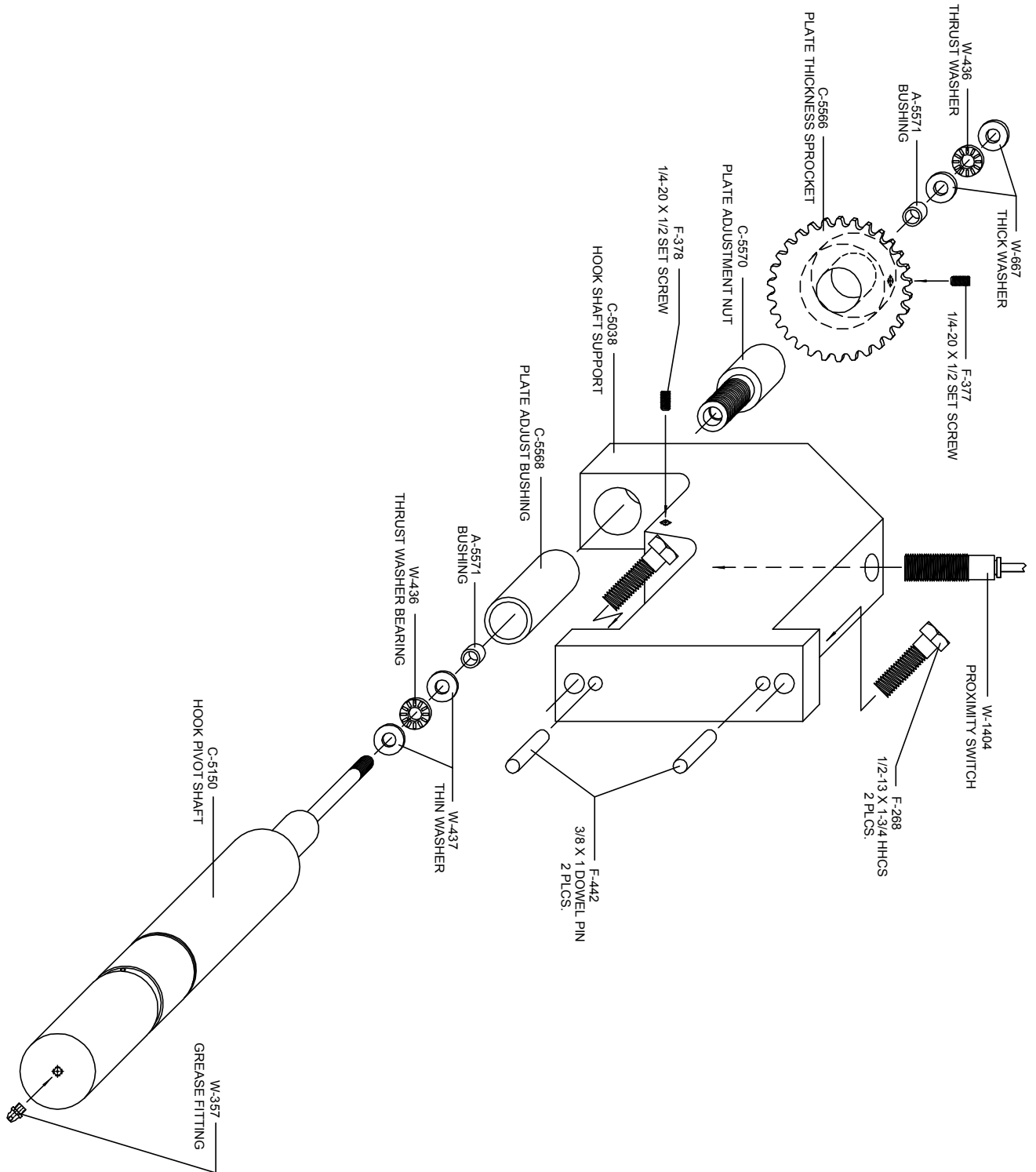
TALON TF-2 TOP & FACE SHARPENER

PLATE THICKNESS KNOB ASSEMBLY



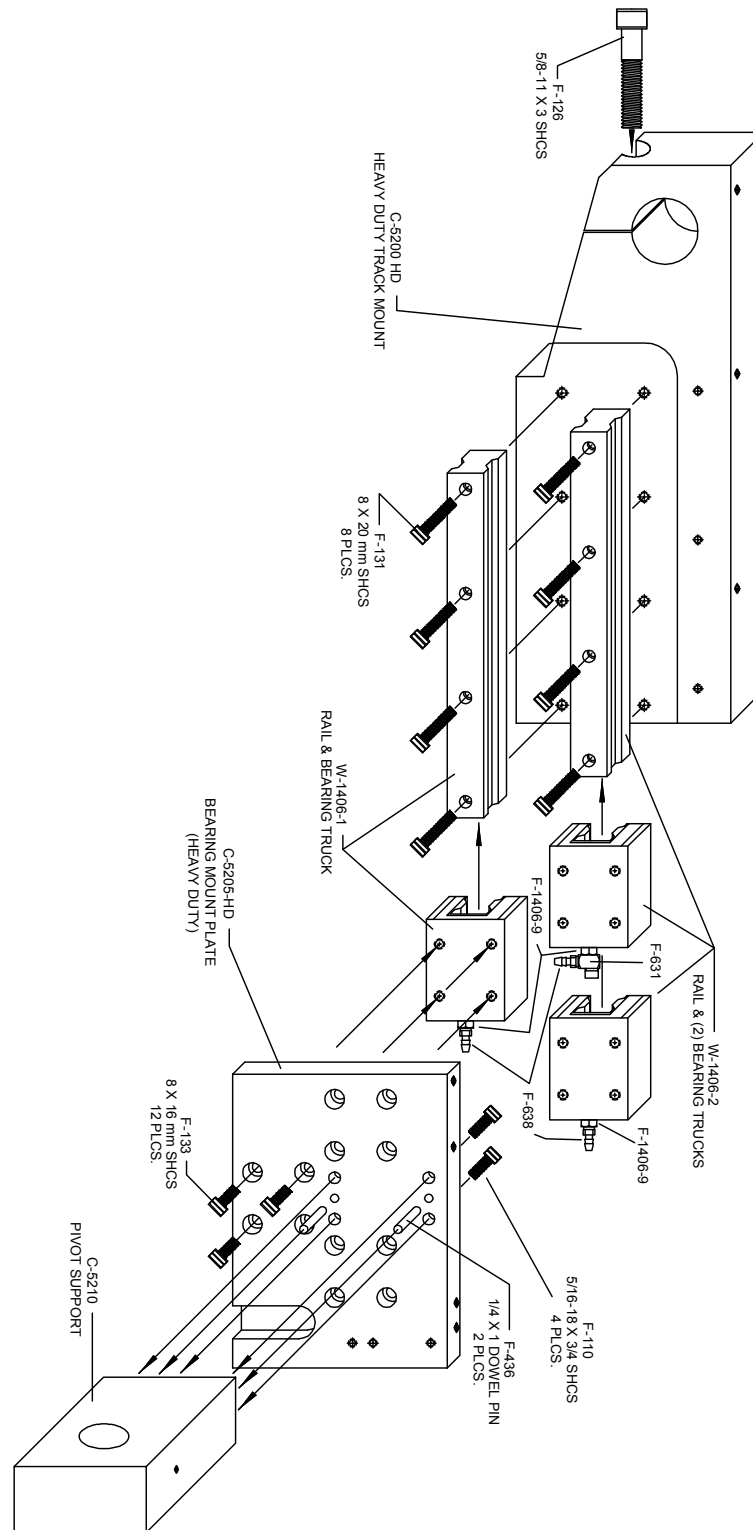
TALON TF-2 TOP & FACE SHARPENER

PLATE THICKNESS SPROCKET ASSEMBLY



TALON TF-2 TOP & FACE SHARPENER

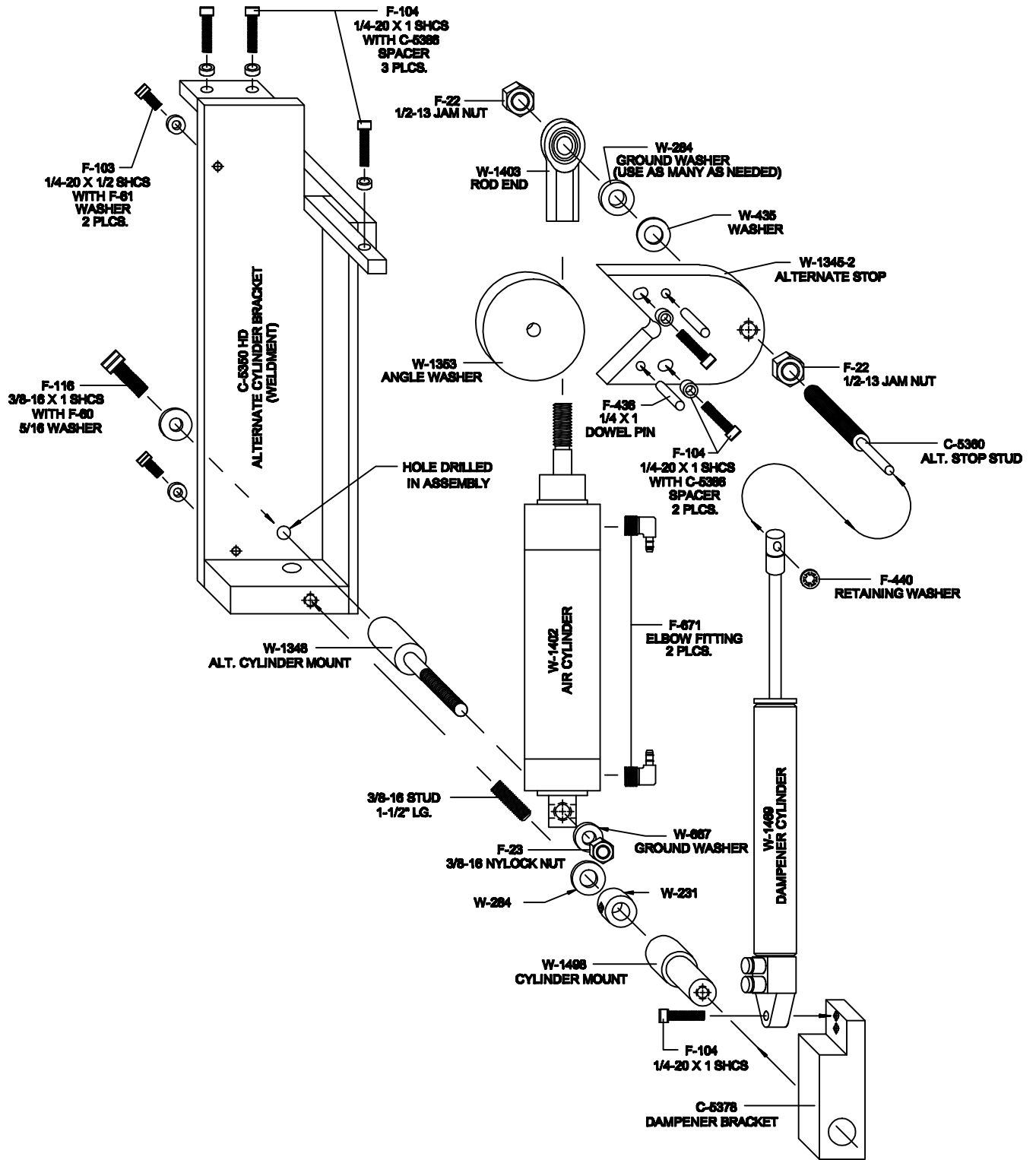
FEED SYSTEM ASSEMBLY



WM **RIGHT** **MACHINE**

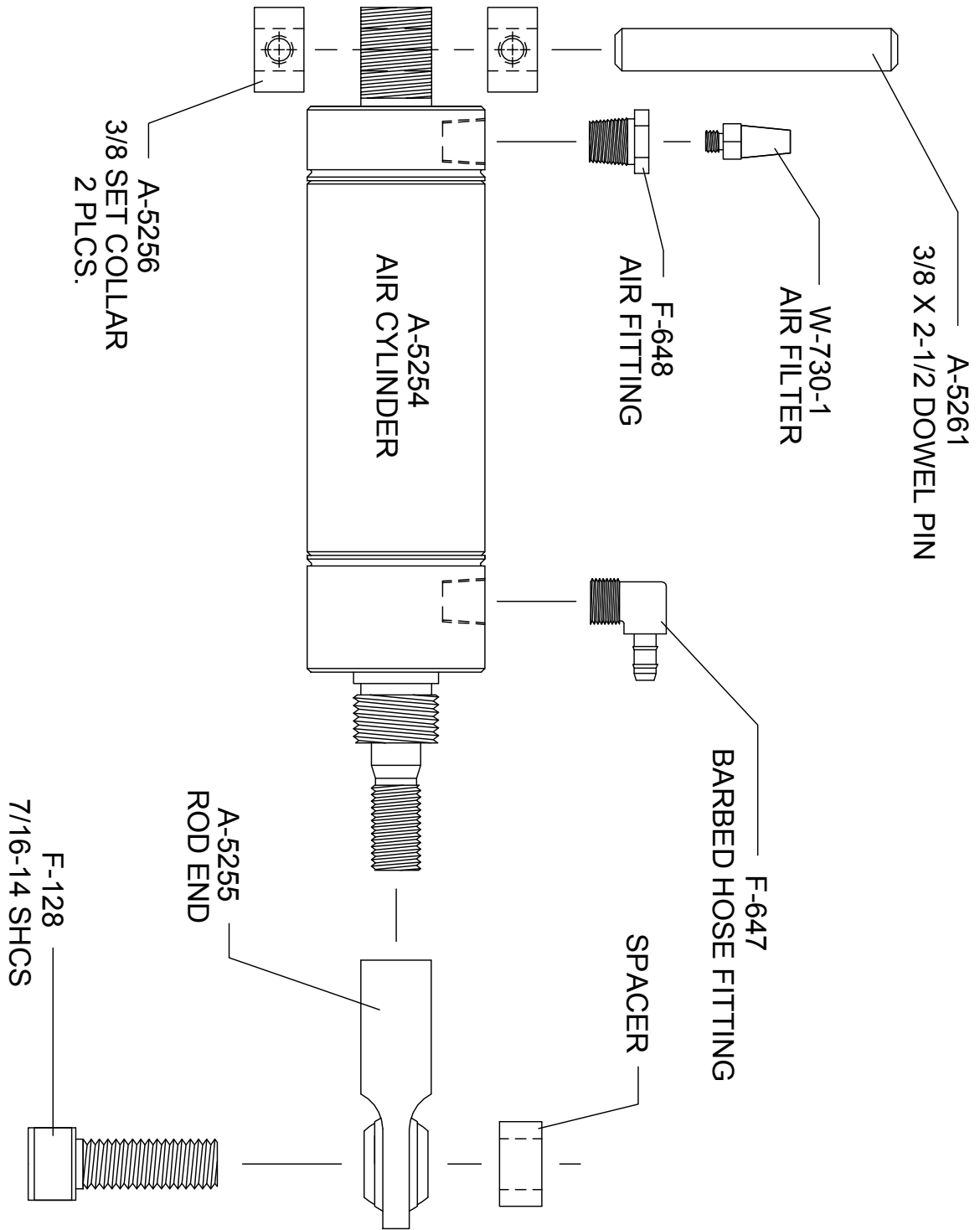
TALON TF-2 TOP & FACE SHARPENER

COUNTER BALANCE ASSEMBLY



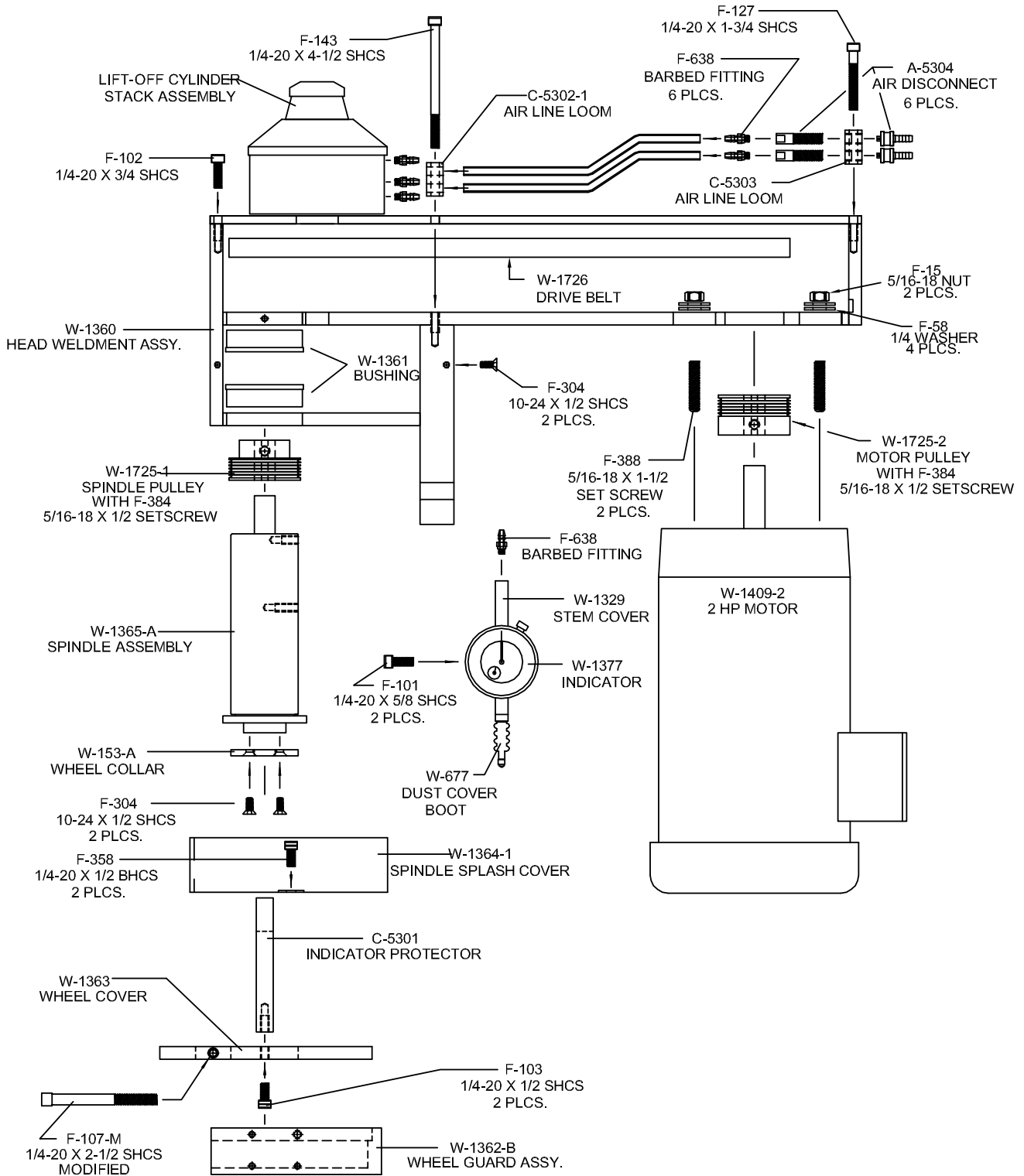
TALON TF-2 TOP & FACE SHARPENER

COUNTER BALANCE CYLINDER ASSEMBLY



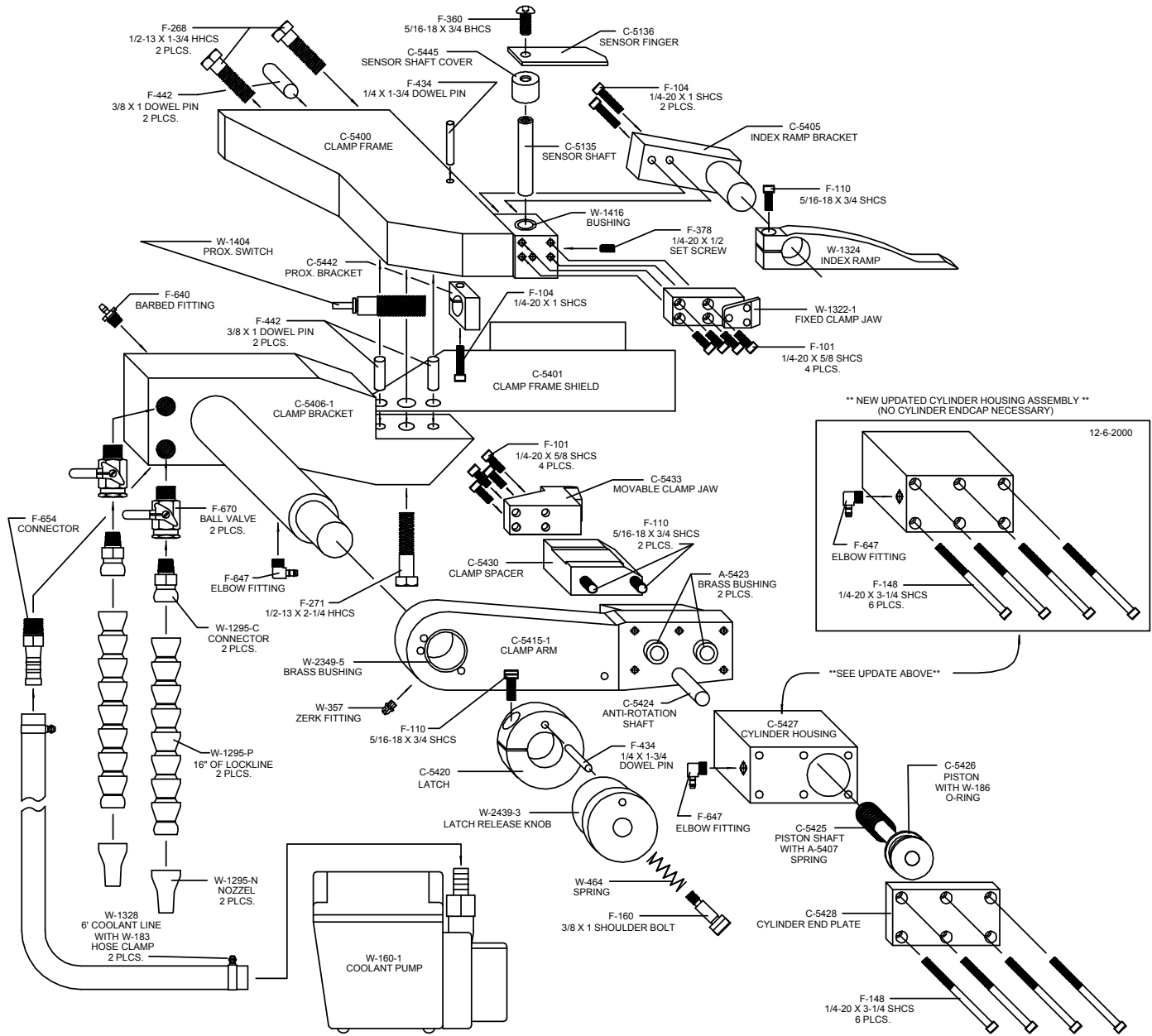
TALON TF-2 TOP & FACE SHARPENER

HEAD ASSEMBLY



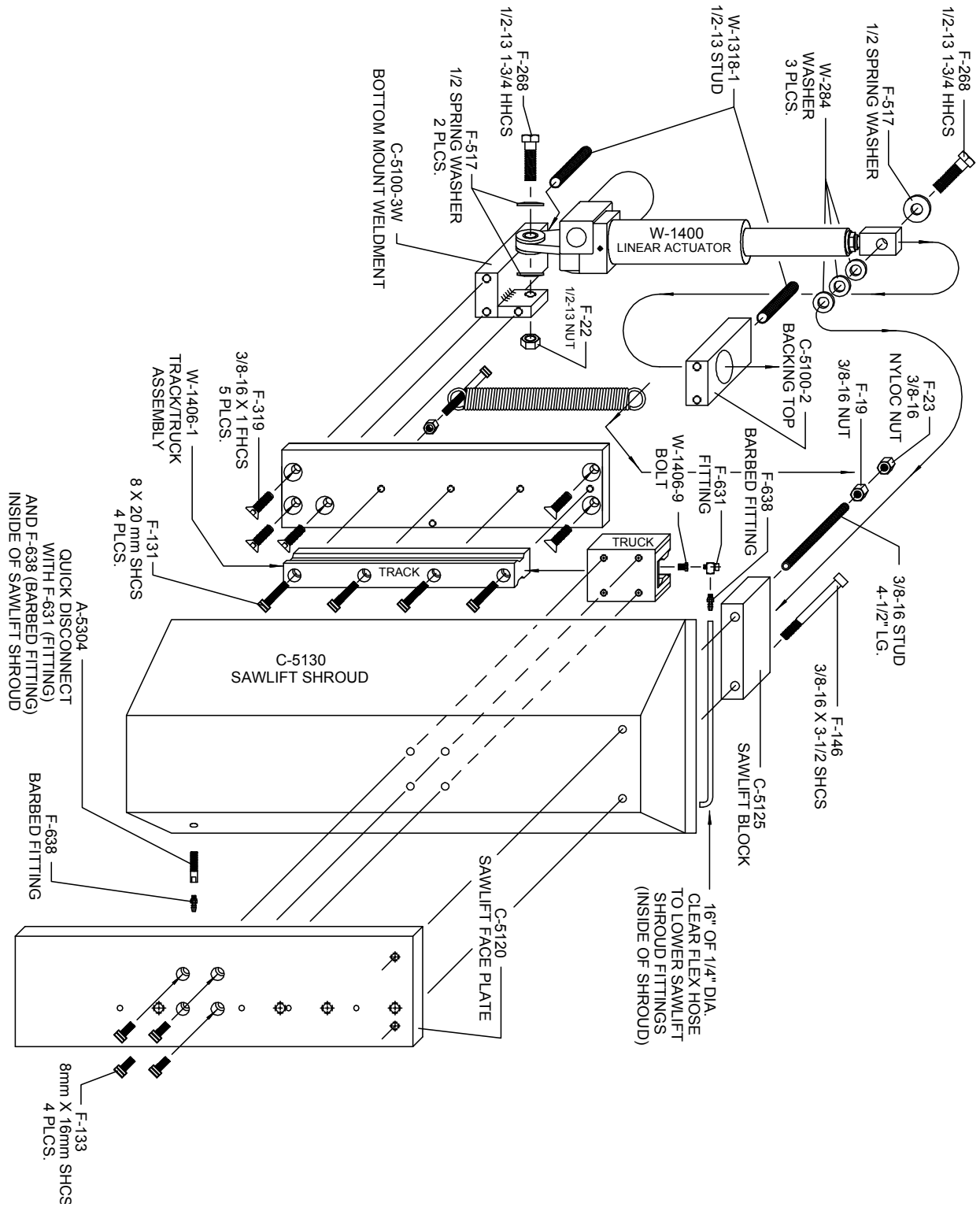
TALON TF-2 TOP & FACE SHARPENER

SAW CLAMP ASSEMBLY



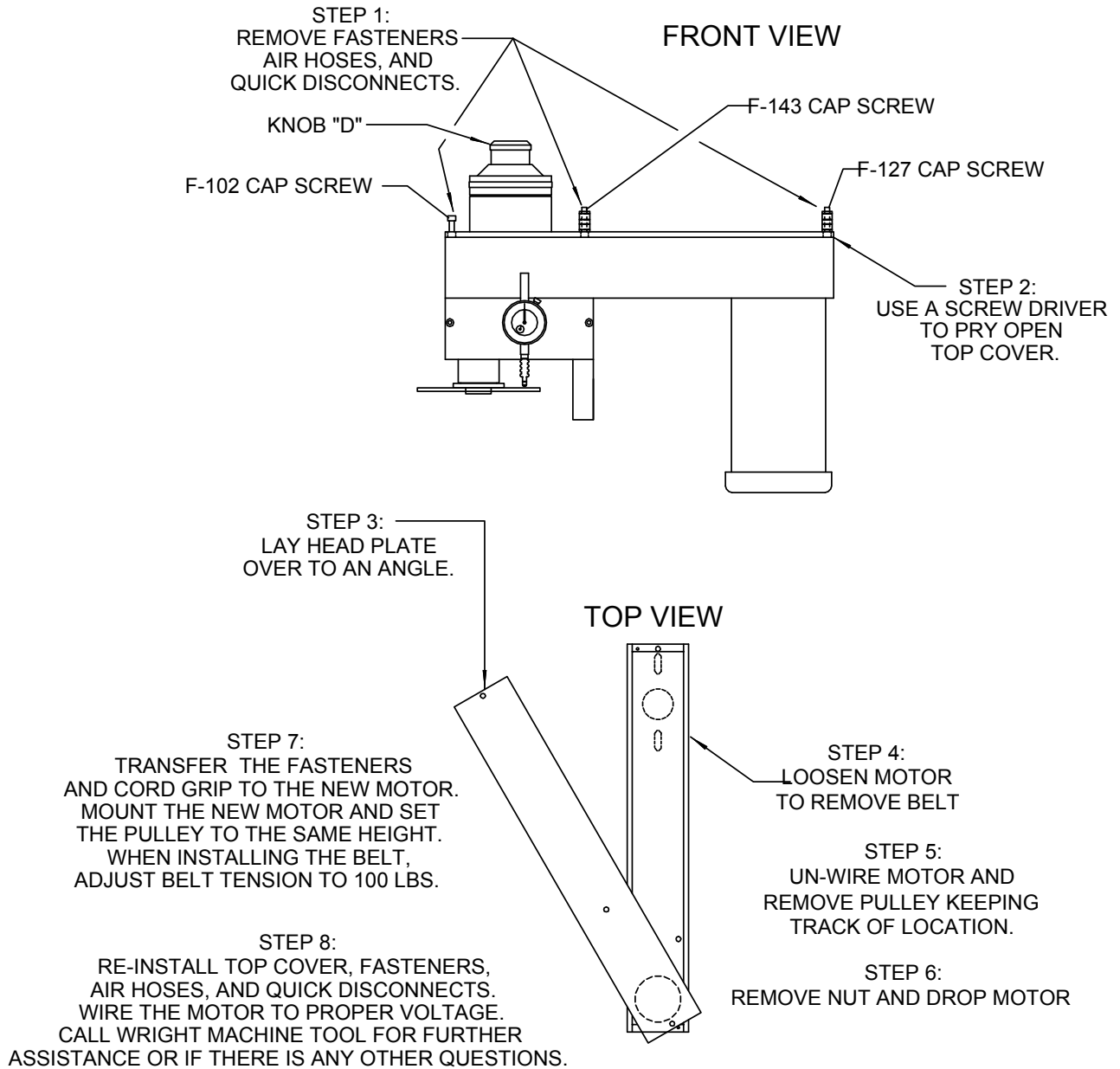
TALON TF-2 TOP & FACE SHARPENER

SAWLIFT ASSEMBLY



TALON TF-2 TOP & FACE SHARPENER

NOTE: DISCONNECT POWER FIRST! MOTOR REPLACEMENT INSTRUCTIONS

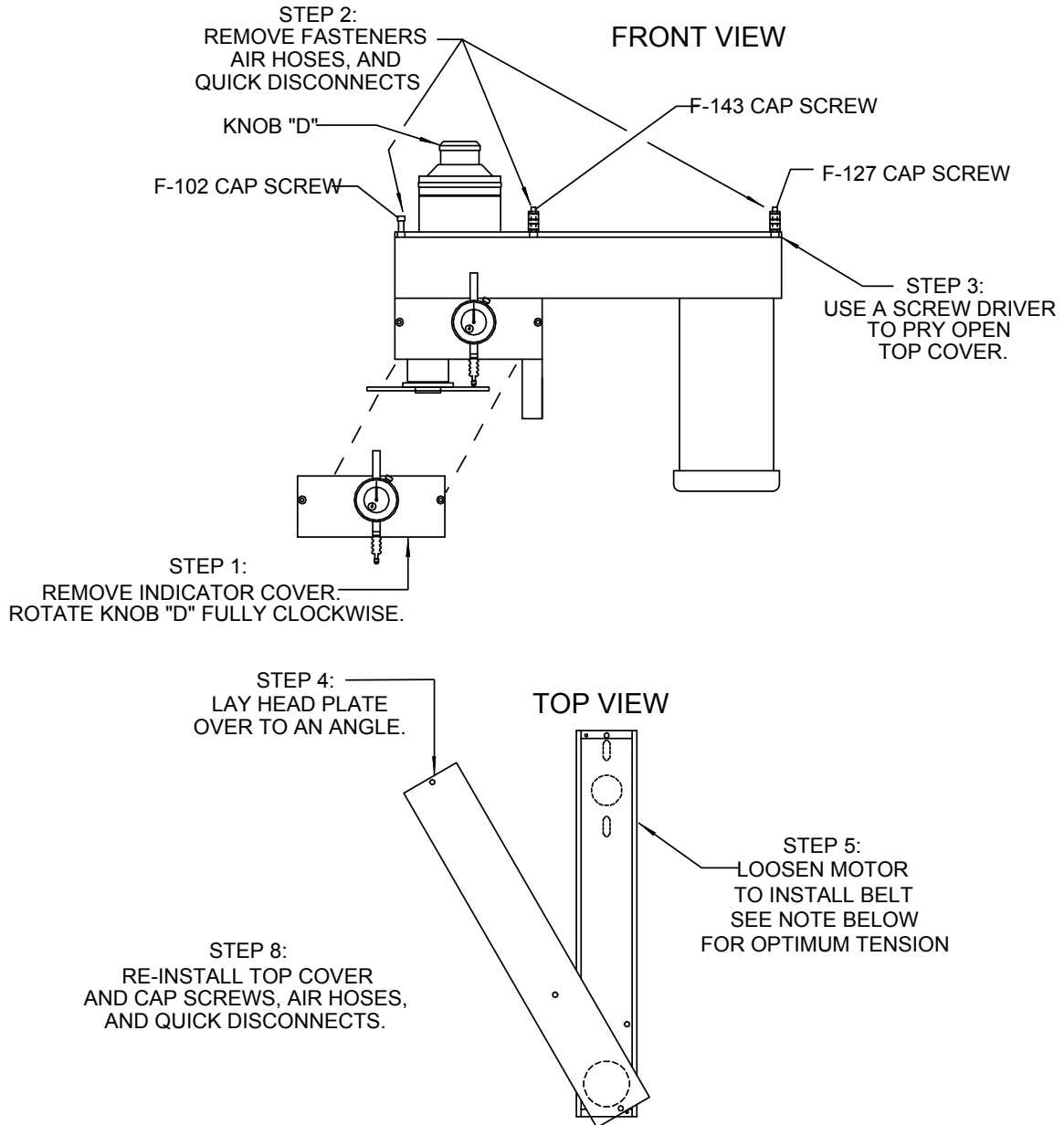


NOTE:
RUN MACHINE IN ALTERNATE. IF THE BELT
SQUEALS WHEN REVERSING THEN TIGHTEN BELT.
IF LIFT OFF DOES NOT FUNCTION THEN LOOSEN
BELT BY ADJUSTING THE MOTOR.



TALON TF-2 TOP & FACE SHARPENER

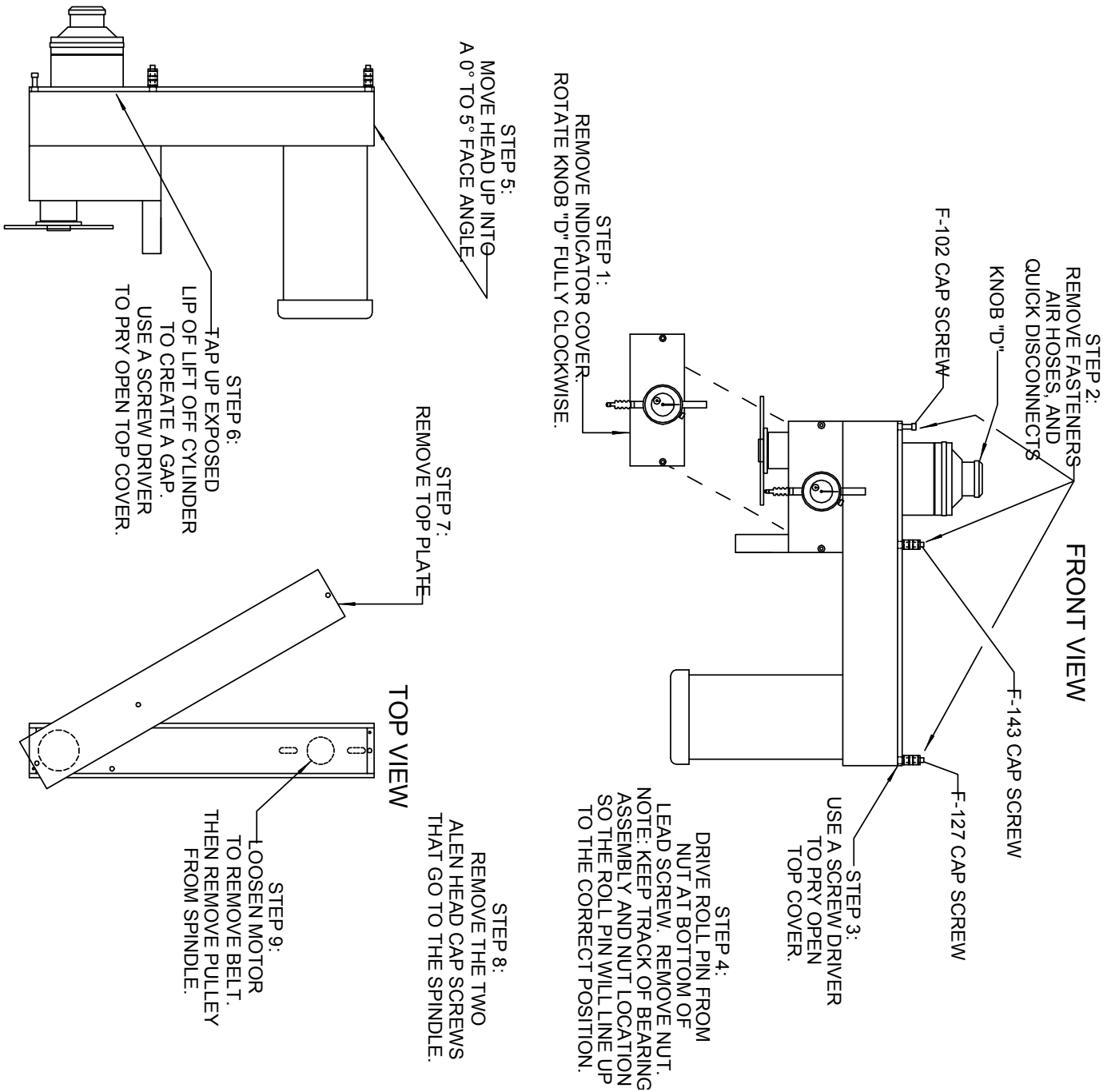
NOTE: DISCONNECT POWER FIRST! BELT REPLACEMENT INSTRUCTIONS



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.

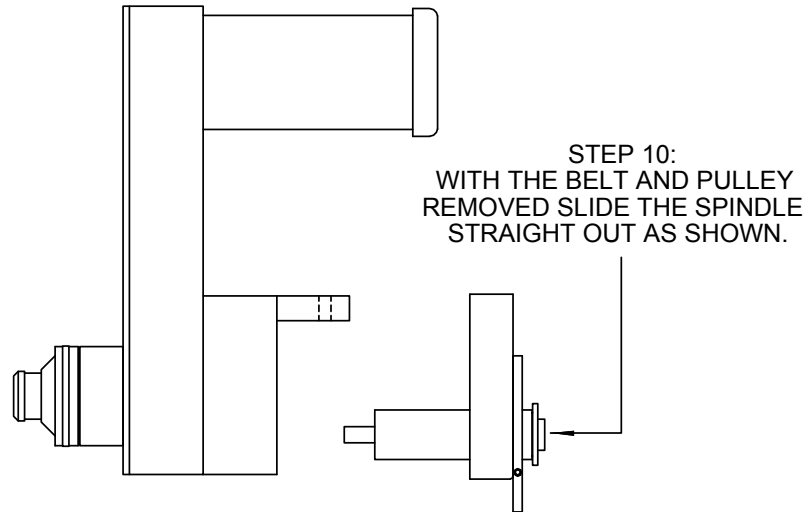
TALON TF-2 TOP & FACE SHARPENER

NOTE: DISCONNECT POWER FIRST! SPINDLE REPLACEMENT INSTRUCTIONS

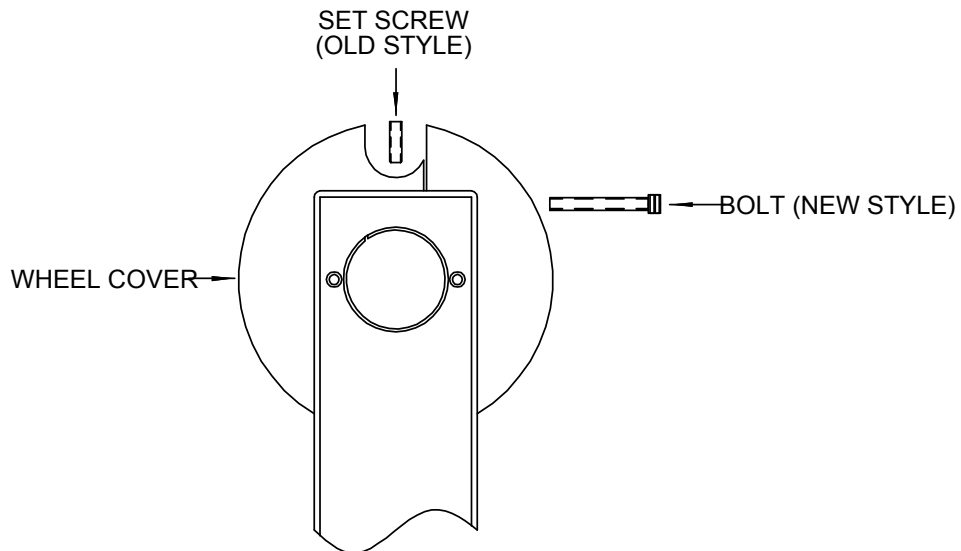


TALON TF-2 TOP & FACE SHARPENER

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.

TALON TF-2 TOP & FACE SHARPENER

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