W-150 MANUAL SHOP MODEL

OPERATOR'S MANUAL

MADE IN THE U.S.A.

W-150 MANUAL SHOP MODEL

Contents

WRIGHT MACHINE

W-150 MANUAL SHOP MODEL

Limited Warranty...

These machine are 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., shipping costs prepaid will be repaired or replaced, at WRIGHT MACHINE TOOL CO. option.

Performance Warranty...

Performance specifications are based on use of our grinding wheels and coolant. No performance warranty can be given unless our recommended grinding wheels and coolant are used.

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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.

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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.

W-150 MANUAL SHOP MODEL

SPECIFICATIONS

W-150 MANUAL SHOP MODEL Automatic Top or Face Grinder for Circular Saws.

STANDARD VOLTAGE:	230 Volt, 3 Phase, 50/60 HZ
OPTIONAL VOLTAGE:	230/460 Volt, 3 Phase ,50/60 HZ
SHIPPING WEIGHT:	800 lbs
CRATE SIZE:	L 73" X W 43" X H 57"
AIR REQUIREMENTS:	2 CFM at 80 psi / 6 bar
STANDARD SAW SIZE:	6"-36"
SPINDLE MOTOR:	3/4 HP, 1 Phase, 3450 R.P.M. Motor
OPTIONAL MOTOR:	1 HP, 3 Phase, 3450 R.P.M. Motor
MAXIMUM PITCH:	6"
POWER CONSUMPTION:	1.5 kva

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PERFORMANCE

1. SAW BLADE DIMENSIONS:

* Minimum saw diameter 6 inches.
* Maximum saw diameter 34 inches.
* Maximum saw thickness to 3/4 inches.
* Maximum tooth pitch straight 6 inches.
* Alternate top angle 0 to 45 degrees.
* Alternate face angle 0 to 15 degrees.
* Top(Back) angle +5 to +20 degrees.
* Face(Hook) angle -10 to +30 degrees.
* Bore 5/8" to 2.5" standard, 2.5" to 10" optional.
* Teeth per minute 0 to 30.

2. SPEEDS:

* Average set up time approximately 1 minutes.
* Reload time less than 1 minute.

3. TECHNICAL

The W-150 Manual Shop Model is a machine that can grow with your needs. Field retrofittable automation turns this manual machine into a W-150 Standard Automatic. This allows all the labor savings of an automatic machine with the minimal capital outlay. When automated all the fast setup features of a manual machine are retained. When changing from top to face no changing of the grinding wheel is required. Precision performance, versatility, fast setup, easy to learn operation, and low maintenance makes this the perfect machine for your manual top or face sharpening requirements.

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Features

Manual circular saw sharpening has never been this easy or quick. The "W-150 Manual Shop Model" combines fast setup with accuracy giving you sharper saws with less labor. Features usally reserved for automatic machines like saw clamping, auto retract finger, filtered flood coolant, etc., make the W-150 Manual Shop Model extremely good in value.

The "W-150 Manual Shop Model" features include:

- *Filtered Full Flood Coolant*
- *Precision Spindle*
- *Poly Rib Belt Drive*
- *Low Voltage Work Light*
- *3/4 H.P. Spindle Motor*
- *Air Powered Saw Clamp*
- *Auto-Retract Index Stop*
- *Micrometer Plate Thickness*
- *Precision Bevel Angle*
- *Dial Indicated Infeed*

Safety First!

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OPTIONS

Large Bore Option:	W-50
3 Pin Spline Saw Center:	W-450
Spline Bore Saw Center:	W-460
Expandable Saw Center with magnets:	W-495
Round Run Out Option:	W-84-A

COMMON REPLACEMENT PARTS

Topping Feed Finger:	W-558
Facing Feed Finger:	W-886

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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-587.

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.

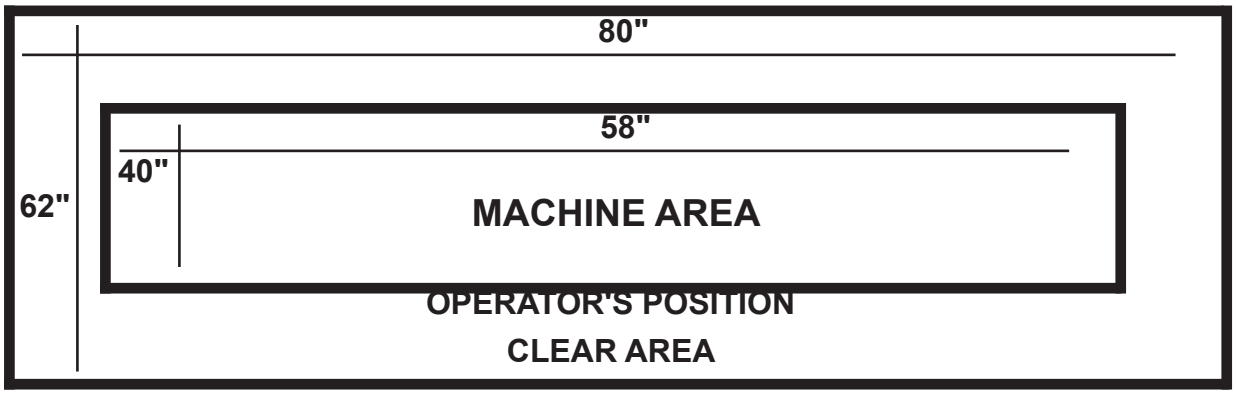
The W-150 Manual Shop Model uses one 8" diameter wheel (D-26 for facing and topping).

MACHINE INSTALLATION

Lifting this machine should only be done with a fork lift under the Coolant Tank.

Machine weight is approximately 700 pounds.

RECOMMENDED FLOOR SPACE FOR MACHINE AND OPERATOR



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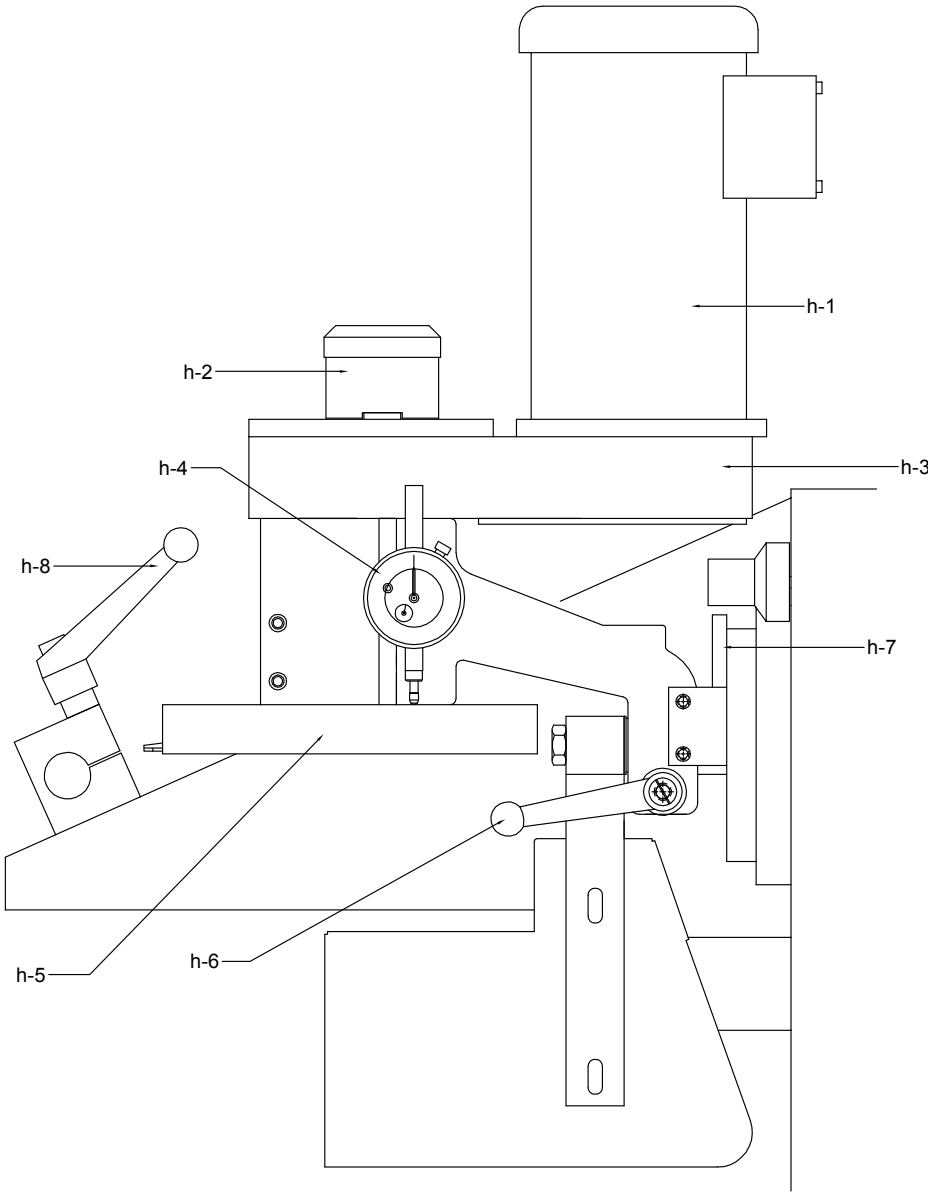
HEAD ASSEMBLY



h-1	W-362-1	Motor
h-2	W-1339-2	Grind Infeed C.C.W. = More Removal
h-3	W-2420-W	Belt Guard
h-4	W-1377-A	Dial Indicator (Shows wheel movent in .001")
h-5	W-1362-1	Wheel Guard
h-6	W-240	Bevel Lock
h-7	W-850	Bevel Washers
h-8	W-240	Hook Pivot Handle/Plate Thickness Lock

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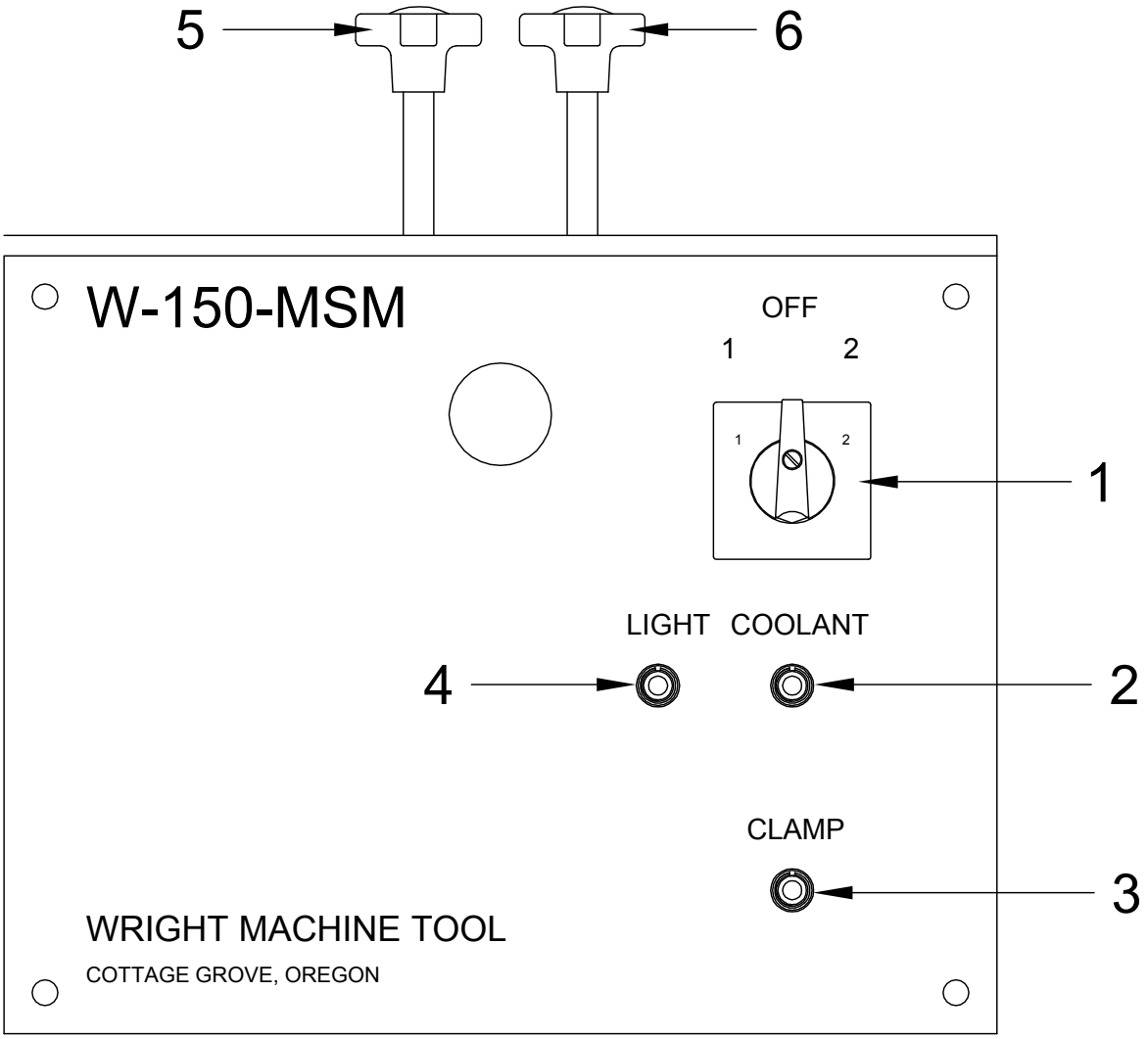
CONTROL PANEL



1. **ON-OFF SWITCH.** Spindle rotation is clockwise in position #1, counter clockwise in position #2. The wheel should turn away from the high point of alternate saws.
2. **COOLANT ON-OFF.** When grinding, use as much coolant/water as possible on the tip being ground. This gives the sharpest possible tooth with the least wheel wear.
3. **CLAMP SWITCH.**
4. **LIGHT SWITCH.**
5. **FORWARD STOP.**
6. **REAR STOP.**

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SET UP - FACE GRINDING

1. The top grinding finger must be retracted and locked with a C clip.

2. Set the hook angle by loosening the hook pivot and scale lock. Read the hook angle on the scale rod.

3. Set the bevel angle by loosening the bevel lock and installing the desired bevel angle washer H-7.

4. Adjust the rear stop (turn counter clockwise) until the facing finger automatically extends.

5. Mount the saw with the face of the tooth up. Saws smaller than 10" will require the use of the small saw fixture.

6. Adjust the saw diameter until the tooth is slightly beyond the facing finger.

7. Start the motor. Position # 1 is for flat or right bevels, #2 is for left bevels.

8. The saw magnet is energized by moving the magnet toggle switch to the up position.

9. Depress the clamp de-energized button on the end of the feed handle. This will allow the operator to rotate the saw clockwise until the tooth is past the facing finger. Rotate the saw counter clockwise against the facing finger, release the clamp button and the saw will be held in the grind position.

10. Pull the feed handle and the grinding head will move forward. The facing finger will retract automatically.

11. To grind more carbide, turn the infeed knob (h-2) counter clockwise. See indicator (h-4).

12. Adjust the forward stop (5) so the wheel passes fully over the tooth.

13. Turn on the coolant.

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SET UP
FLAT TOP GRINDING

1. Turn the rear stop (6) clockwise until the facing finger automatically retracts.
2. The top grinding finger must be extended by unlocking the C clip.
3. Set the back angle by loosening (h-8).
4. Set the bevel angle by loosening the bevel lock (h-6) and setting the desired angle.
5. Mount the saw with the face of the tooth against the top grind finger.
6. Start the machine. On alternate top saws the wheel should rotate toward the high point of the tooth.

ALTERNATE TOP SAWS

1. Set bevel angle by using the required Angle Washer (h-7).
2. Loosen the plate thickness lock handle (h-8) and turn the plate thickness knob full clockwise. This is 0 plate thickness.
3. Turn the plate thickness knob counter clockwise until the saw plate thickness is set.
4. Wheel rotation should be toward the high side of the tip.

MAINTENANCE

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

Drive belts should be inspected and cleaned every 3 months.

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

All bare metal surfaces should be cleaned and oiled regularly.

1. Grease dovetail slide zerk fittings on spindle housing.
2. Grease index pivot zerk fitting every 400 hours of use.

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REPLACEMENT OF W-150 MANUAL SHOP MODEL SPINDLE (P.N. W-2416).

1. Turn the grinding head to 45° so the bottom of the guard is facing you.

2. Take out the wing bolts and remove the bottom guard.

3. Take off the grinding wheel.

4. Take bolts out of cover where the infeed knob is.

5. Unscrew the infeed knob.

6. Loosen the cap screws on the spindle housing with a 3/16 inch allen wrench.

7. Loosen the belt by moving motor forward.

8. The spindle will now pull out.

9. Clean the housing before installing the new spindle.

10. Note location of pulley and install on the new spindle.

11. Install the new spindle.

12. Snugly tighten the cap screws. <u>Important: DO NOT OVERTIGHTEN.</u>

13. Install the grinding wheel and the bottom of the guard.

14. Install infeed assembly and retension the belt

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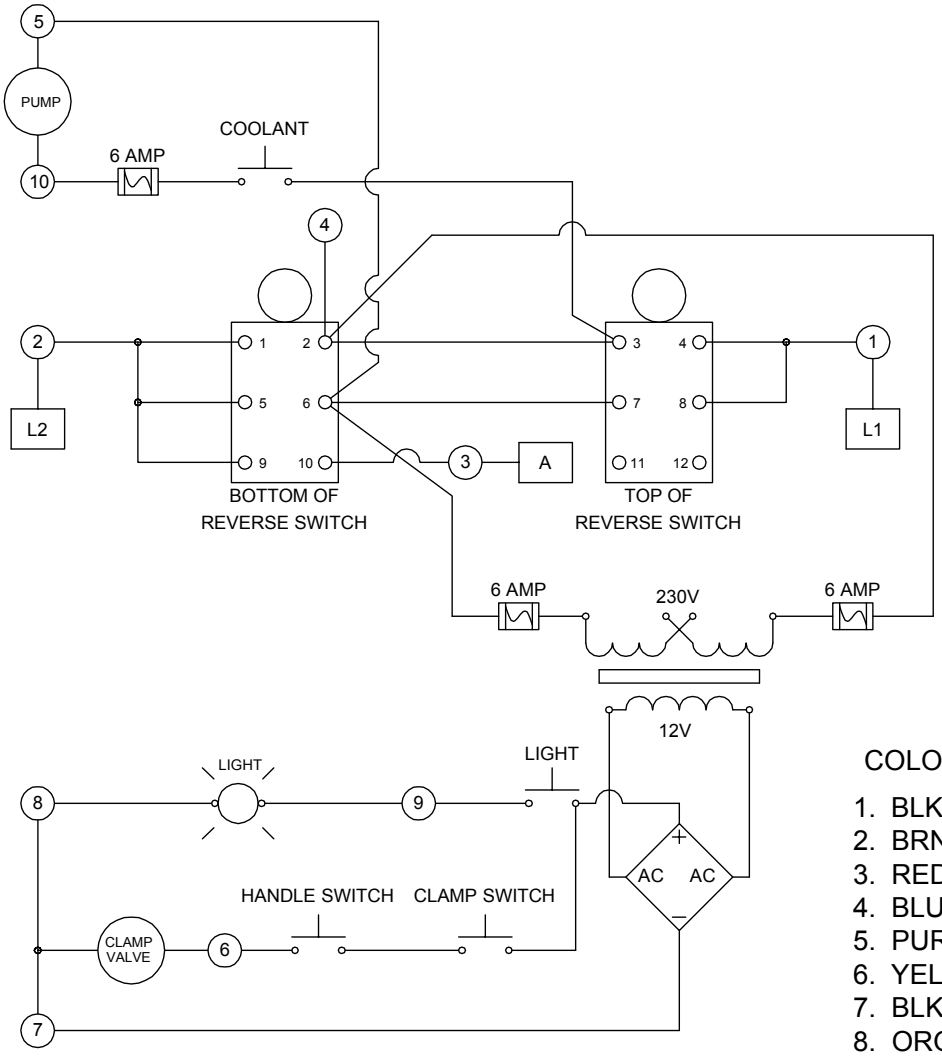
WIRING DIAGRAM



COLOR CODE:

1. BLK
2. BRN
3. RED
4. BLU/YEL
5. PUR
6. YEL
7. BLK/ORG
8. ORG
9. YEL/RED

NOTES ON COMPONENT WIRING...

1. L1 = BLACK FROM CORD
2. L2 = WHITE FROM CORD
3. A = RED FROM MOTOR
4. T1 = BLACK FROM MOTOR
5. T4/PUMP = WHITE FROM MOTOR/BLUE FROM PUMP
6. AIR CLAMP VALVE
7. AIR CLAMP VALVE
8. LIGHT
9. LIGHT
10. PUMP = BROWN FROM PUMP

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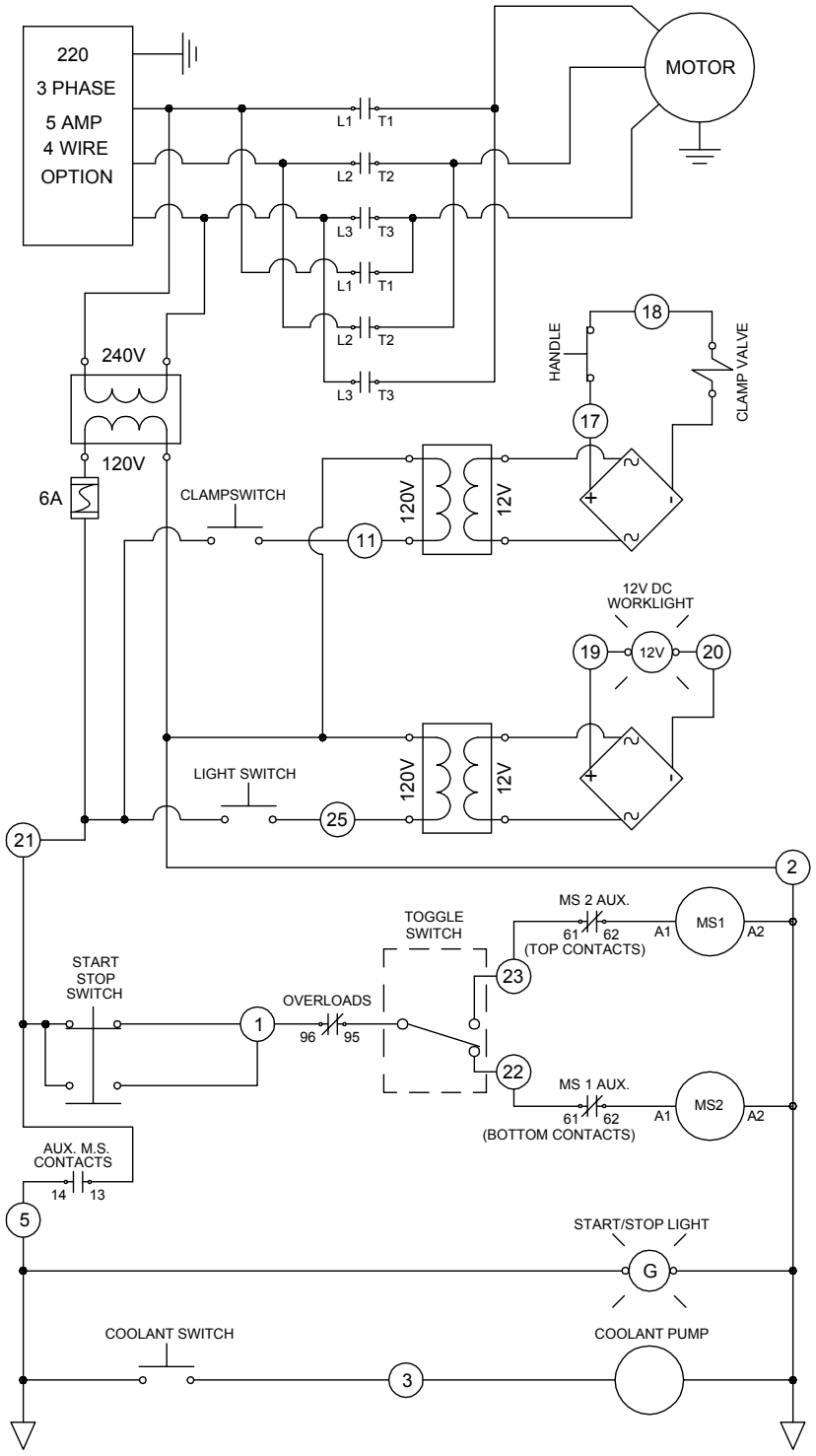
WIRING DIAGRAM (3 PHASE OPTION)

TERMINAL COLOR CODE

1	BLACK
2	BLUE/YELLOW
3	RED
4	BROWN
5	PURPLE
6	YELLOW
7	BLUE
8	BLACK/ORANGE
9	YELLOW/RED
10	ORANGE
11	BLACK
12	BLUE/YELLOW
13	RED
14	BROWN
15	PURPLE
16	YELLOW
17	BLUE
18	BLACK/ORANGE
19	YELLOW/RED
20	ORANGE
21	BLACK
22	BLUE/YELLOW
23	RED
24	BROWN
25	PURPLE
26	YELLOW
27	BLUE
28	BLACK/ORANGE
29	YELLOW/RED
30	ORANGE



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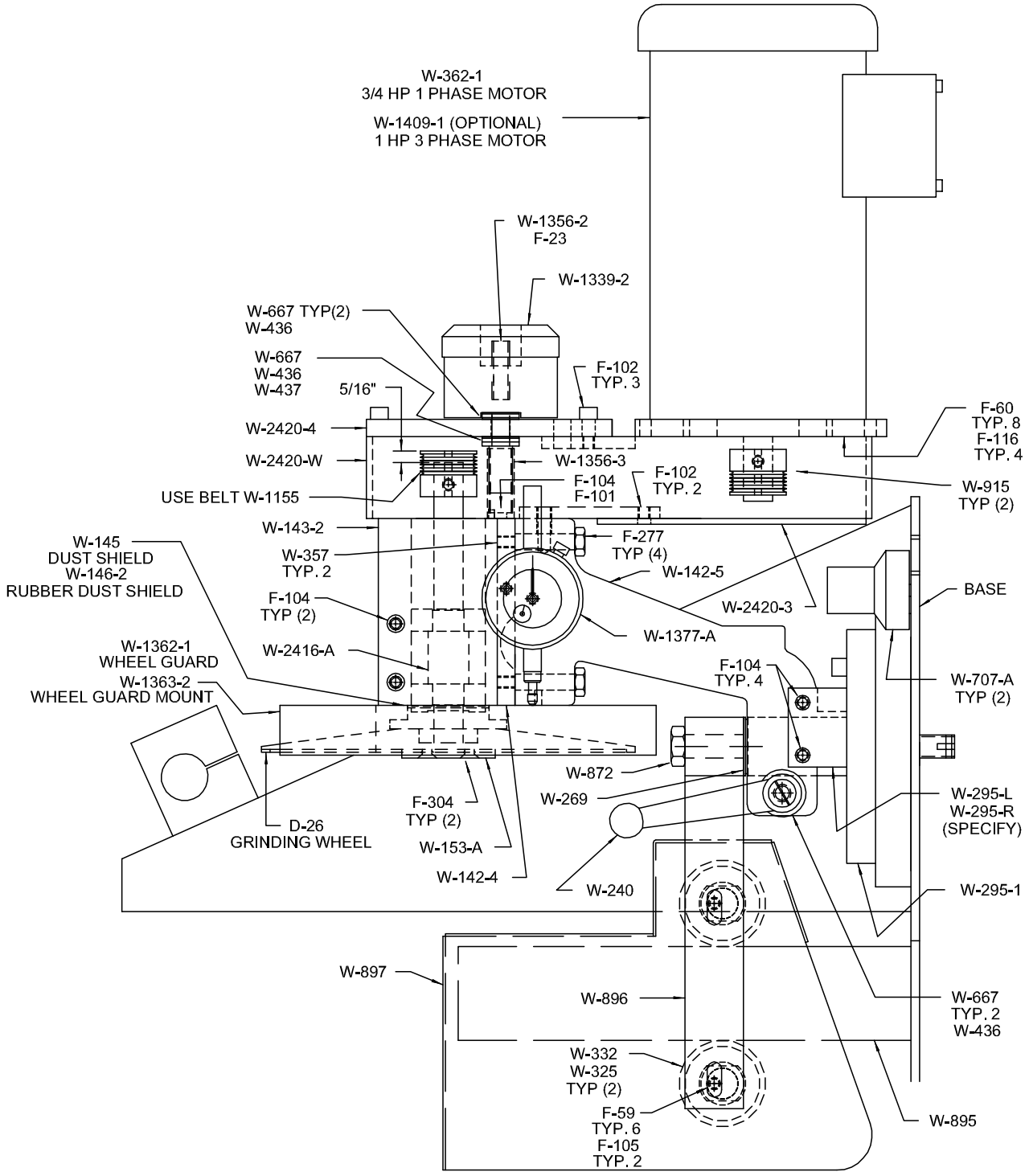
HEAD ASSEMBLY PART NUMBERS



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HEAD ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
1	D-26	Diamond Grinding Wheel
1	F-23	3/8-16 Nylock Nut
6	F-59	1/4 Fender Washer
8	F-60	5/16 Washer
1	F-101	1/4-20 SHCS
5	F-102	1/4-20 SHCS
7	F-104	1/4-20 SHCS
2	F-105	1/4-20 SHCS
4	F-116	3/8-16 SHCS
1	F-272	1/2-13 HHCS
4	F-277	1/4-20 HHCS
4	F-304	10-24 FHCS
2	F-384	5/16-18 Set Screw
1	W-142-4	Dove Tail
1	W-142-5	Grinding Head
1	W-143-2	Grinding Head Spindle Housing
1	W-145	Dust Shield (large)
1	W-146-2	Rubber Dust Shield
1	W-153-A	Wheel Nut Collar
1	W-240	Handle
1	W-269	Snap Ring
1	W-295-L	Alternate Stop Left
1	W-295-R	Alternate Stop Right
1	W-195-1	Head Bracket
2	W-325	Ecentric
2	W-332	Bearing
2	W-357	Zerk Fitting
1	W-362-1	3/4 h.p. Single Phase Motor
2	W-436	Thrust Bearing
4	W-667	Ground Washer
2	W-707-A	Feed Speed Knob
1	W-850	Alternate Angle Washers
1	W-872	Spring Clip
1	W-895	Bearing Slide
1	W-896	Bearing Bracket
1	W-897	Bearing Shield

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HEAD ASSEMBLY PART NUMBER LIST CONTINUED

Qu.	Part #	Description
2	W-915	Drive Pulley
1	W-1155	Drive Belt
1	W-1339-2	Infeed Knob
1	W-1356-2	Lead Screw
1	W-1356-3	Lead Screw Nut
1	W-1362-1	Wheel Guard
1	W-1363-2	Wheel Cover
1	W-1377-A	Dial Indicator Kit
1	W-1409-1	1 h.p. 3 Phase Motor (optional)
1	W-2416-A	Spindle Assembly Complete
1	W-2420-W	Belt Shroud Weldment
1	W-2420-3	Lower Shroud Cover
1	W-2420-4	Upper Shroud Cover

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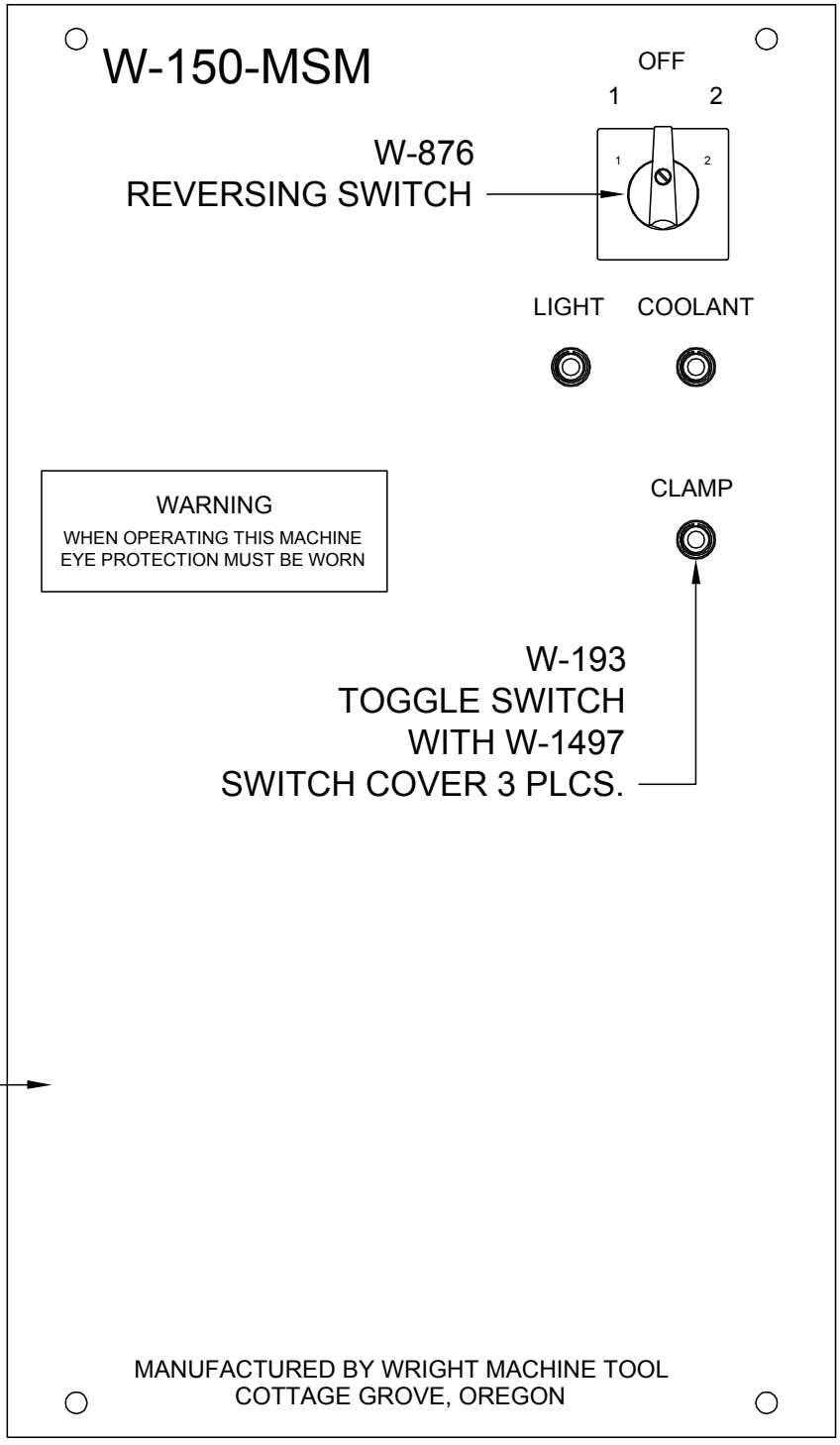
CONTROL PANEL ASSEMBLY



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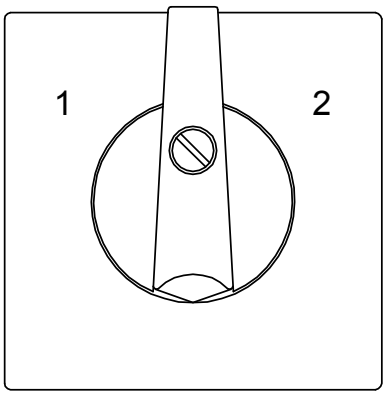
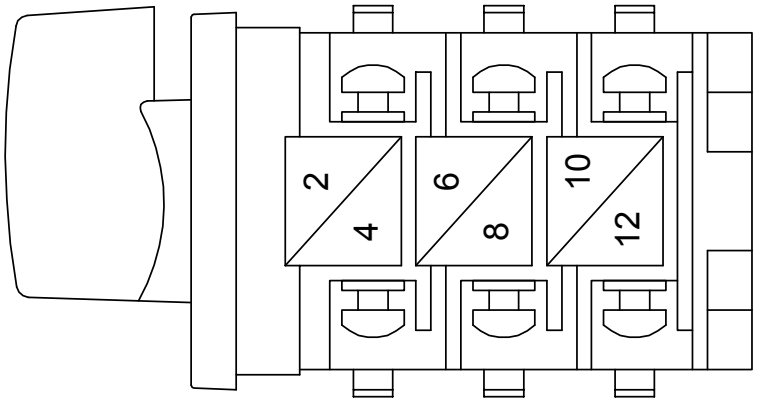
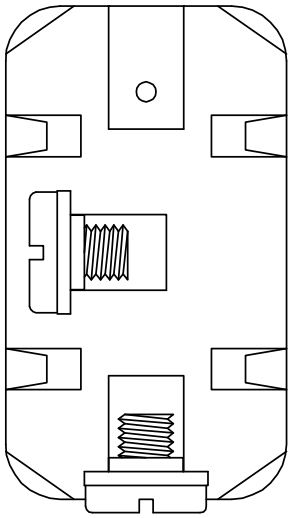
CONTROL PANEL COMPONENTS

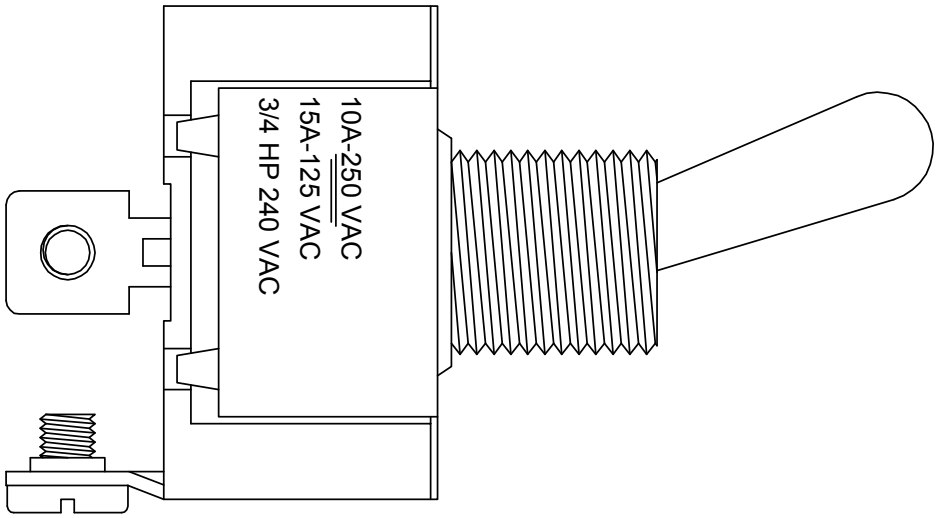
REVERSING SWITCH: W-876





2 POSITION TOGGLE SWITCH: W-193
(3 PLCS.)





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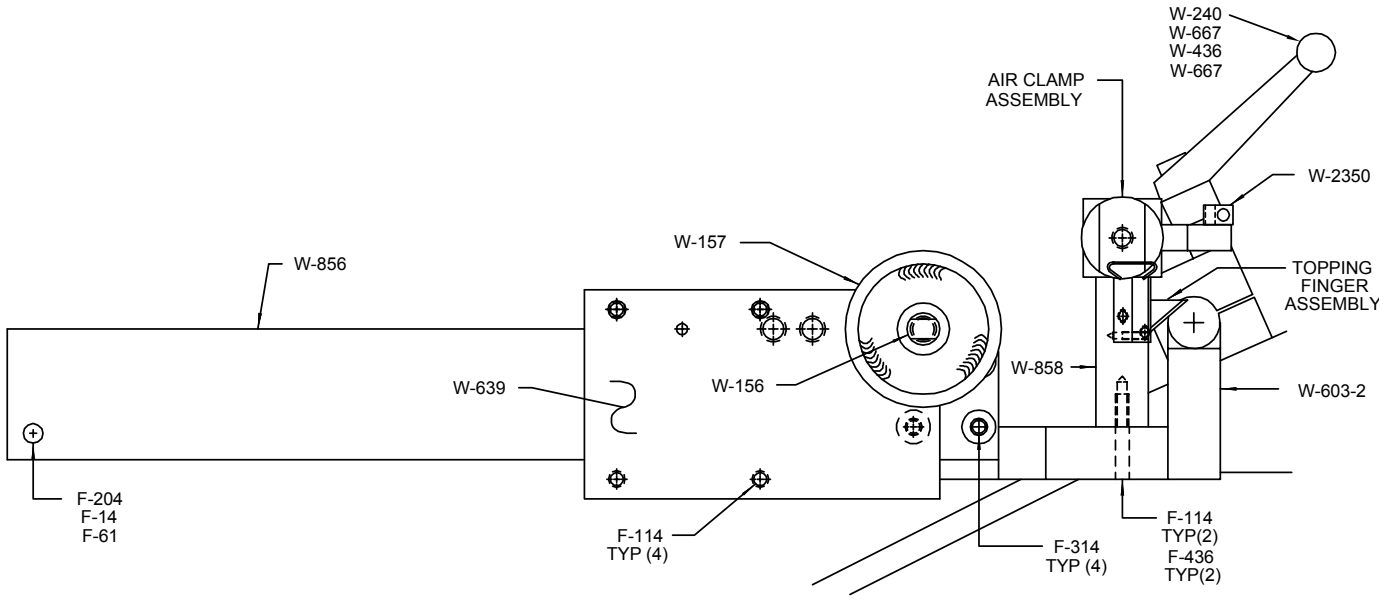
SAW SUPPORT SYSTEM ASSEMBLY



W-150 MANUAL SHOP MODEL

SAW SUPPORT ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
2	F-14	1/4-20 Acorn Nut
1	F-61	#12 Washer
6	F-114	5/16-18 x 1-1/2 SHCS
1	F-202	1/4-20 Carriage Bolt
4	F-314	5/16-18 x 1" FHCS
2	F-436	1/4" Dowel Pin
1	W-156	Cone Bolt
1	W-157	Cup
2	W-240	Handle
1	W-436	Thrust Washer Bearing
1	W-639	Saw Slide Front
2	W-667	Ground Washer
1	W-856	Saw Arm
1	W-858	Mount Arm

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PLATE THICKNESS ASSEMBLY

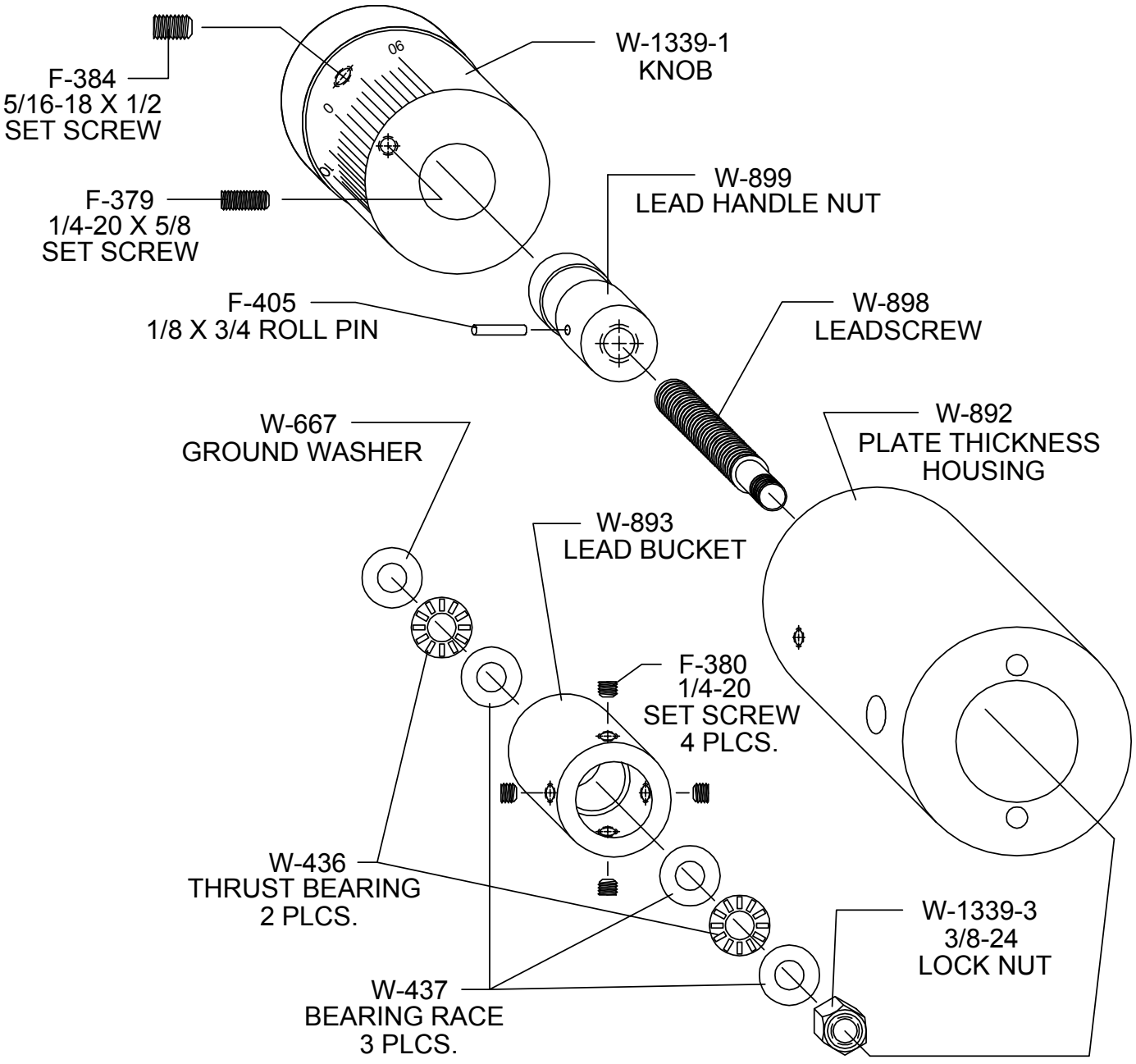

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PLATE THICKNESS ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
1	F-38	3/8-24 Lock Nut
1	F-379	1/4-20 x 5/8 Set Screw
4	F-380	1/4-20 Set Screw
1	F-384	5/16-18 x 1/2 Set Screw
1	F-405	1/8 x 3/4 Roll Pin
2	W-436	Thrust Bearing
3	W-437	Bearing Race
1	W-667	Ground Washer
1	W-892	Plate Thickness Housing
1	W-893	Lead Bucket
1	W-898	Lead Screw
1	W-899	Lead Handle Nut
1	W-1339-1	Knob

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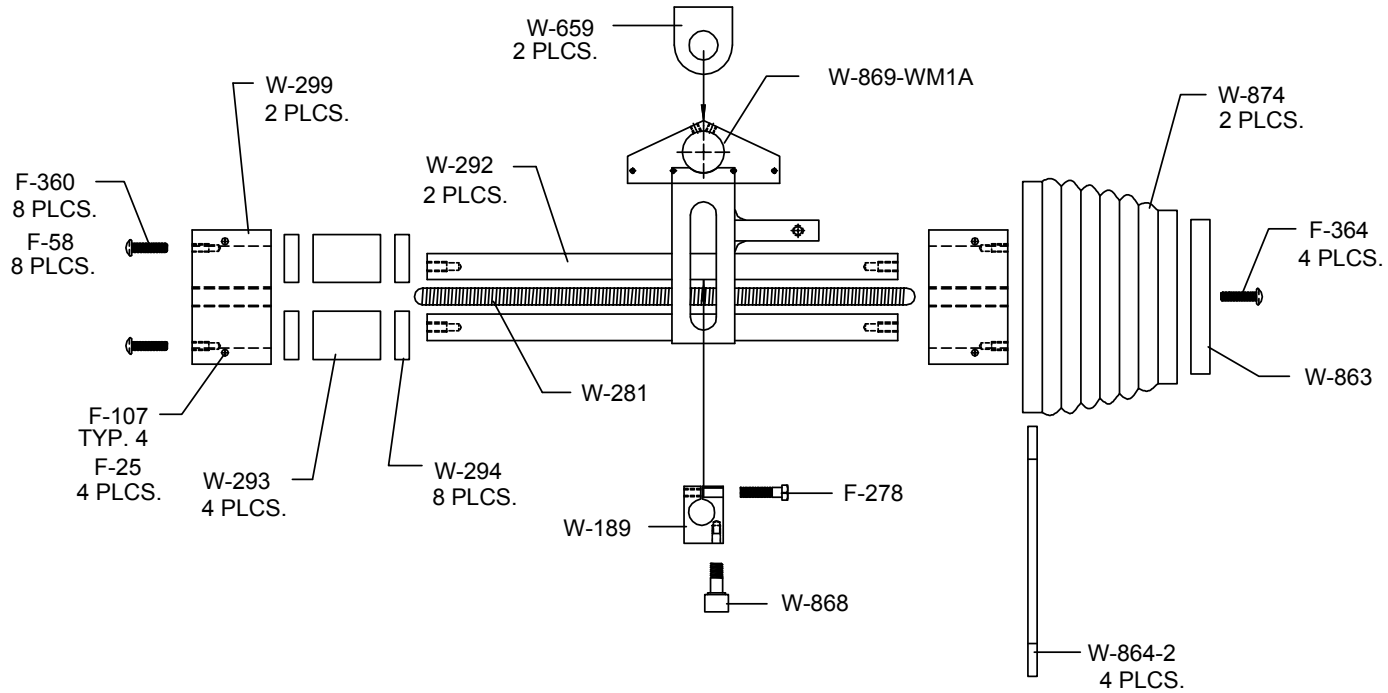
FEED SYSTEM ASSEMBLY



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FEED SYSTEM ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
4	F-25	1/4-20 Jam Nut
8	F-58	1/4 Cut Washer
4	F-107	1/4-20 SHCS
1	F-278	5/16-18 HHCS
8	F-360	5/16-18 BHCS
4	F-364	3/8-16 BHCS
1	W-189	Cam Follower (Heavy)
1	W-281	Spring
2	W-292	Head Shaft
4	W-293	Head Bearing
8	W-294	Seals
2	W-299	Bearing Block
2	W-659	Pillow Block Bearing
1	W-863	Bellow End Plate
1	W-864	Bellow Clamp
4	W-864-2	Bellow Clamp
1	W-868	Feed Roller Clamp
1	W-869-WM1A	Feed Shaft Weldment
2	W-874	Bellow

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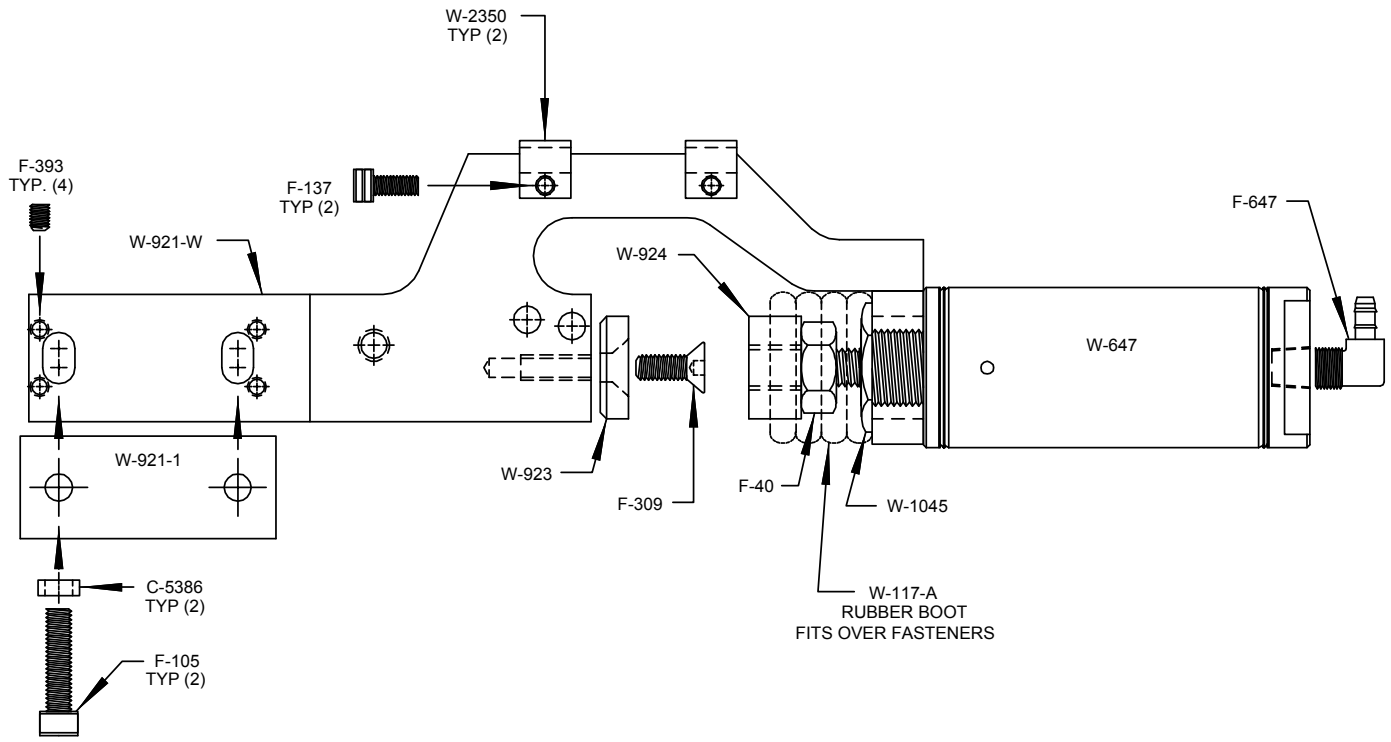
AIR CLAMP ASSEMBLY (W-921-A)



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AIR CLAMP ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
2	C-5386	Spacer
1	F-40	7/16-20 Jam Nut
2	F-105	1/4-20 SHCS
2	F-137	10-24 SHCS
1	F-309	1/4-20 SHCS
4	F-393	10-24 Set Screw
1	F-647	Elbow Fitting
1	W-117-A	Rubber Boot
1	W-647	Air Cylinder
1	W-921-1	Spacer Plate
1	W-923	Fixed Clamp Jaw
1	W-924	Movable Clamp Jaw
1	W-1045	Cylinder Nut
2	W-2350	Hose Holder

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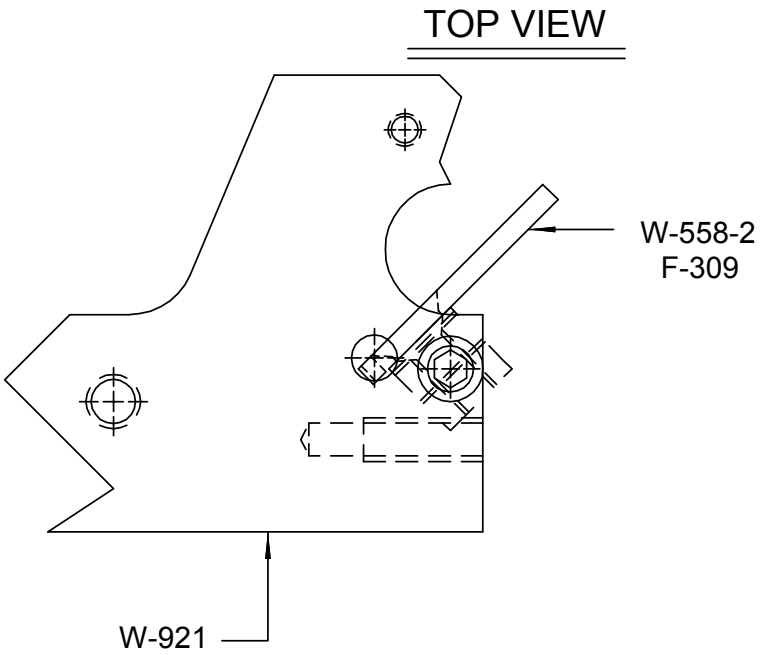
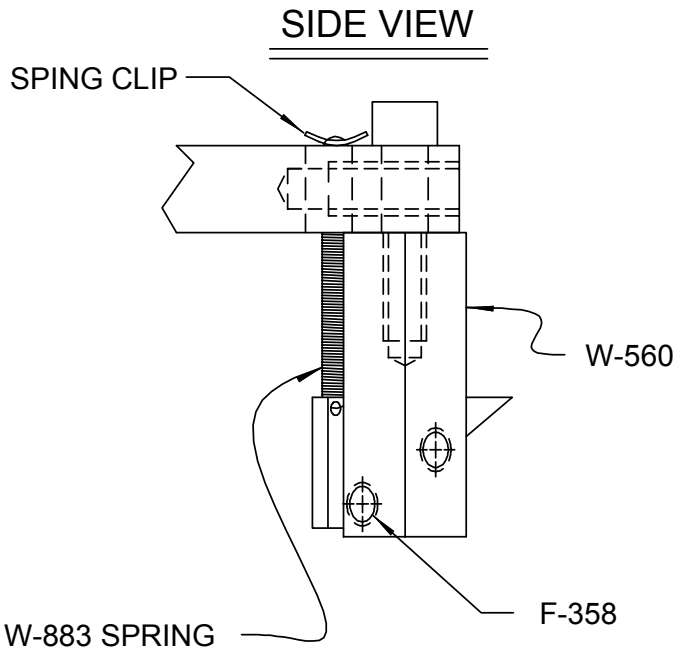
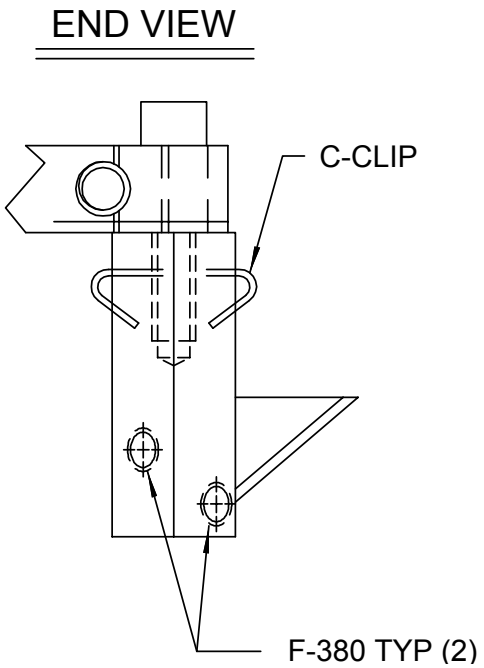
TOPPING FINGER ASSEMBLY







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TOPPING FINGER ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
1	F-309	1/4-20 FHCS
1	F-358	1/4-20 BHCS
2	F-380	1/4-20 Set Screw
1	F-384	5/16-18 Set Screw
1	W-558-2	Topping Finger
1	W-560	Finger Arm
1	W-883	Spring

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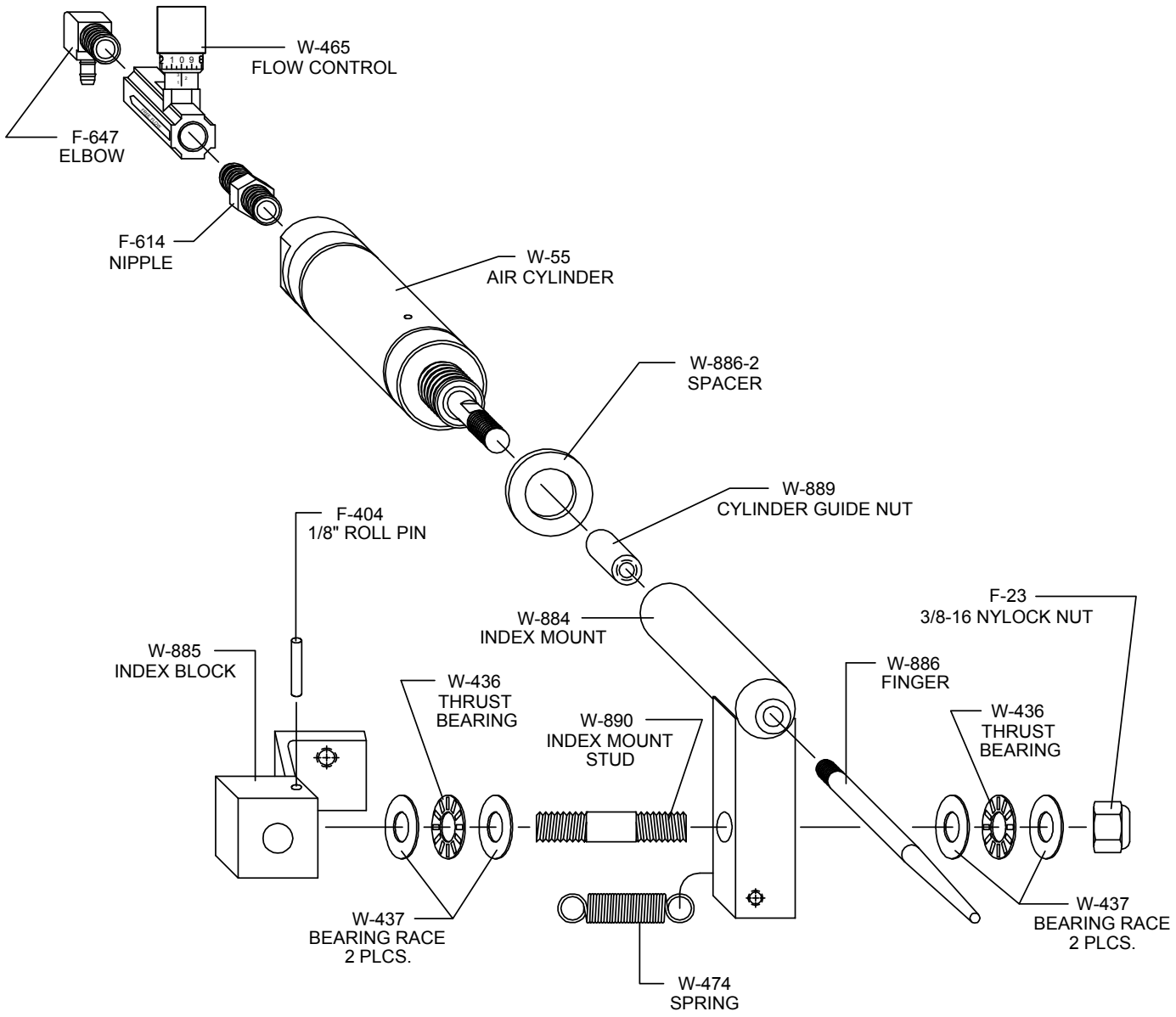
AIR FEED FINGER ASSEMBLY



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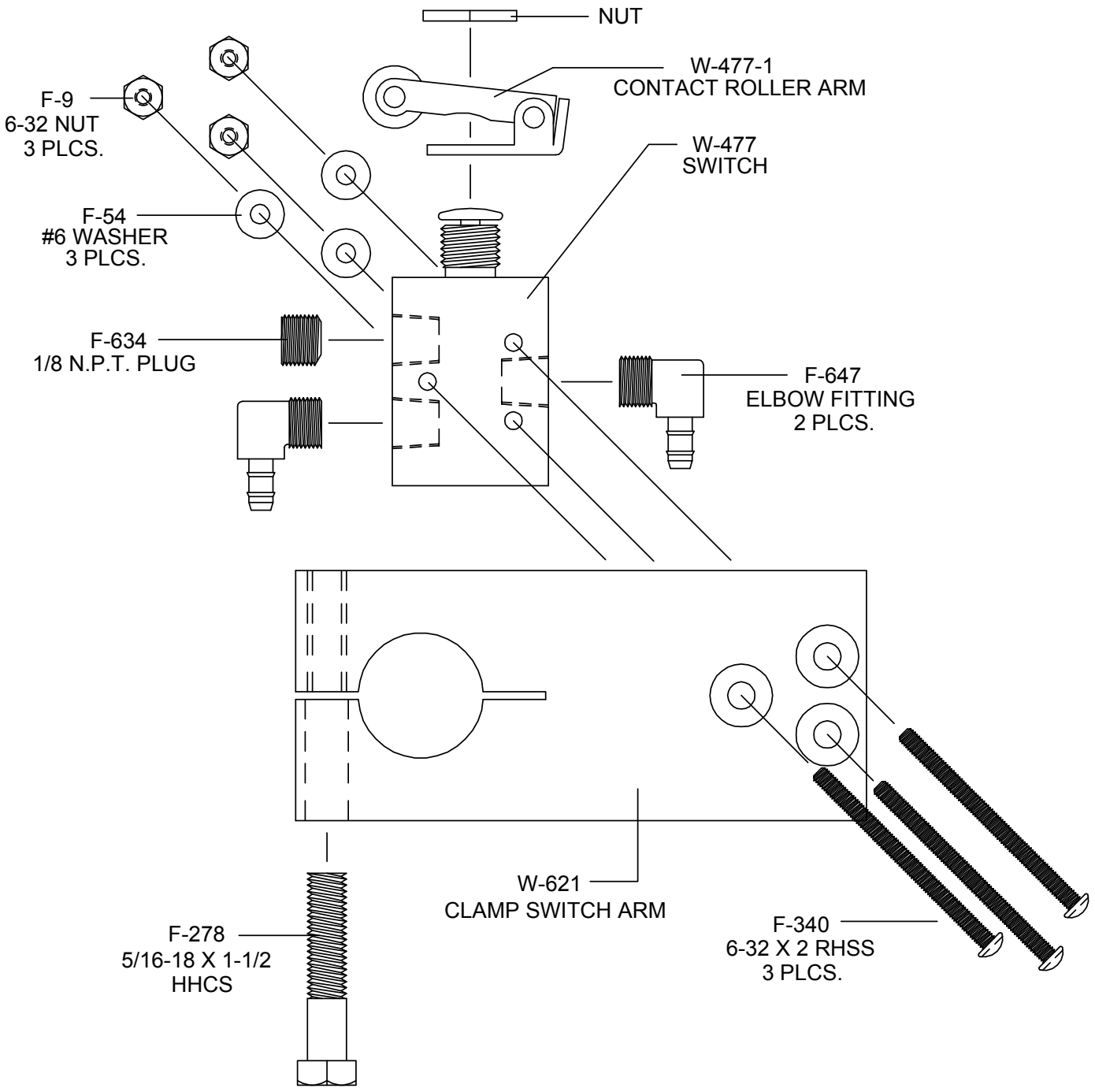
AIR FEED FINGER ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
1	F-23	3/8-16 Nylock Nut
1	F-404	1/8 x 1/2 Roll Pin
1	F-614	1/8 N.P.T. Hex Nipple
1	F-647	Elbow Fitting
1	W-55	Air Cylinder (with spring return)
2	W-436	Thrust Bearing
4	W-437	Bearing Race
1	W-465	Flow Control
1	W-884	Index Mount
1	W-885	Index Block
1	W-886	Index Finger
1	W-886-2	Index Finger Spacer
1	W-889	Cylinder Guide Nut
1	W-890	Index Mount Stud
1	W-474	Spring

W-150 MANUAL SHOP MODEL

AIR SWITCH ASSEMBLY



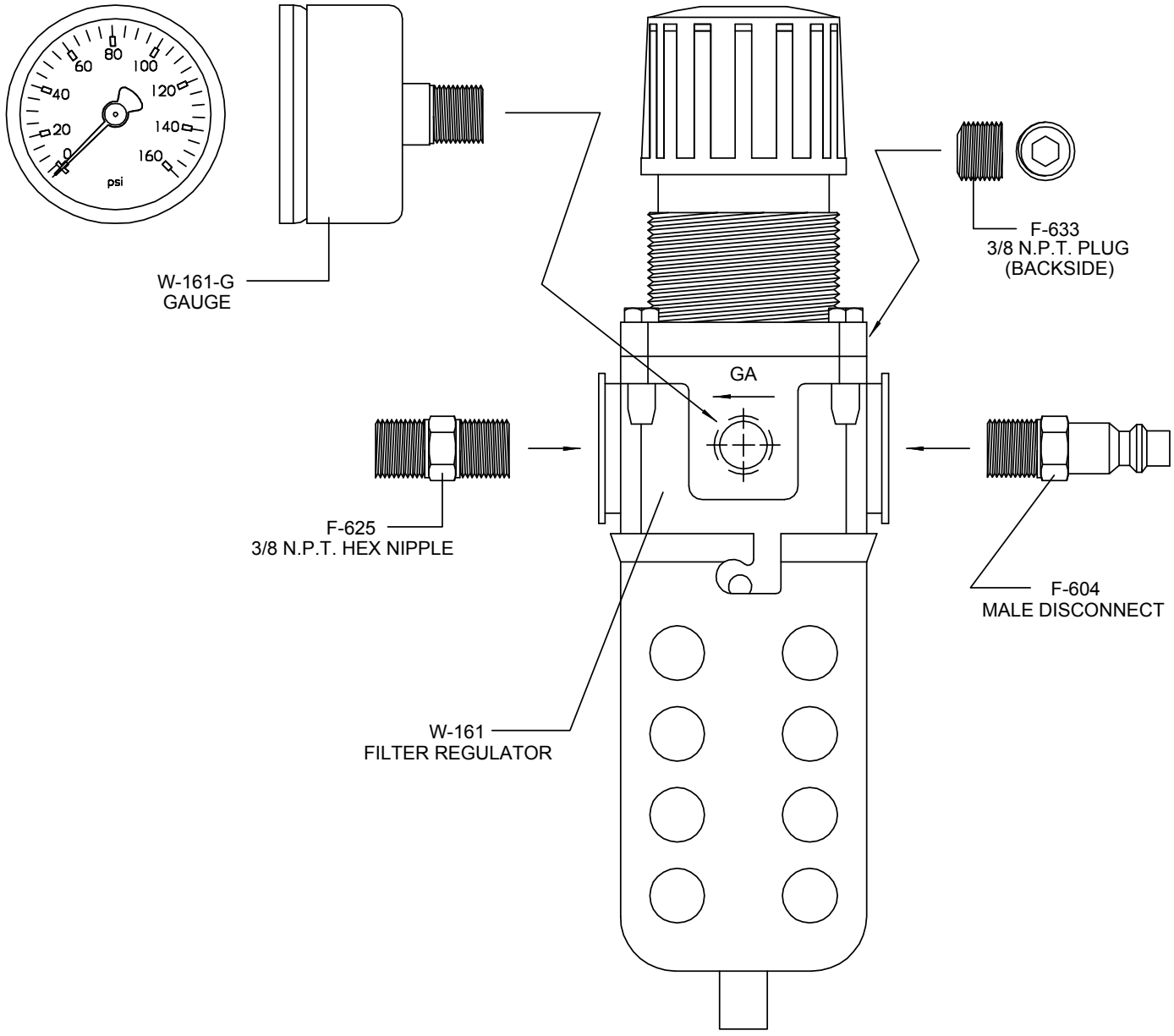
W-150 MANUAL SHOP MODEL

AIR SWITCH ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
3	F-9	6-32 Nut
3	F-54	#6 Washer
1	F-278	5/16-18 x 1-1/2 Hex Head Cap Screw
3	F-340	6-32 Round Head Slotted Screw
1	F-634	1/8 N.P.T. Plug
2	F-647	1/8 N.P.T. Elbow Fitting
1	W-477	Air Switch
2	W-621	Clamp Switch Arm

W-150 MANUAL SHOP MODEL

AIR IN/FILTER REGULATOR ASSEMBLY



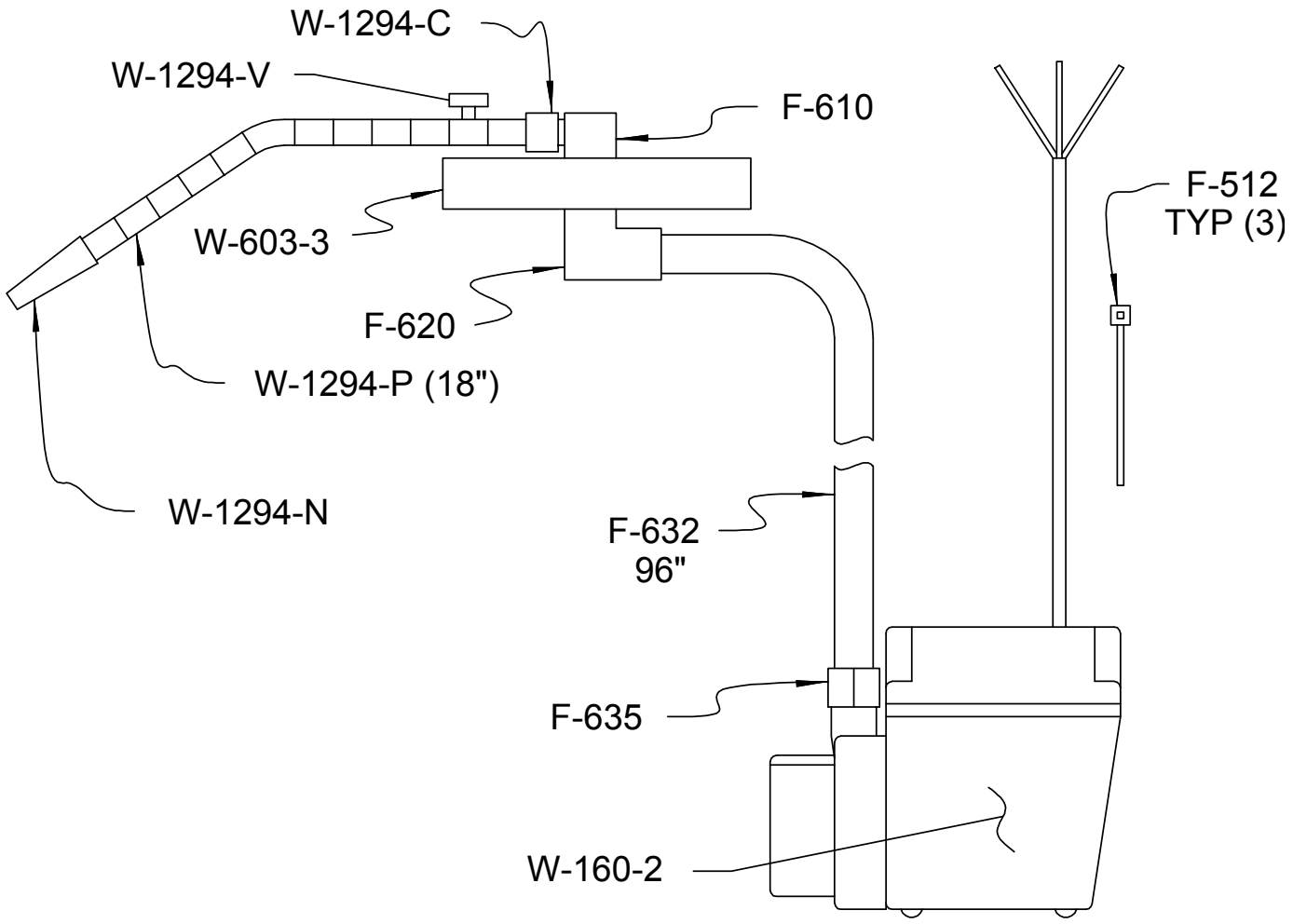
W-150 MANUAL SHOP MODEL

AIR IN/FILTER REGULATOR PART NUMBER LIST

Qu.	Part #	Description
1	F-604	Male Disconnect
1	F-625	3/8 Hex. Nipple Fitting
1	F-633	3/8 N.P.T. Plug
1	W-161	Filter Regulator
1	W-161-G	Gauge

W-150 MANUAL SHOP MODEL

COOLANT PUMP ASSEMBLY



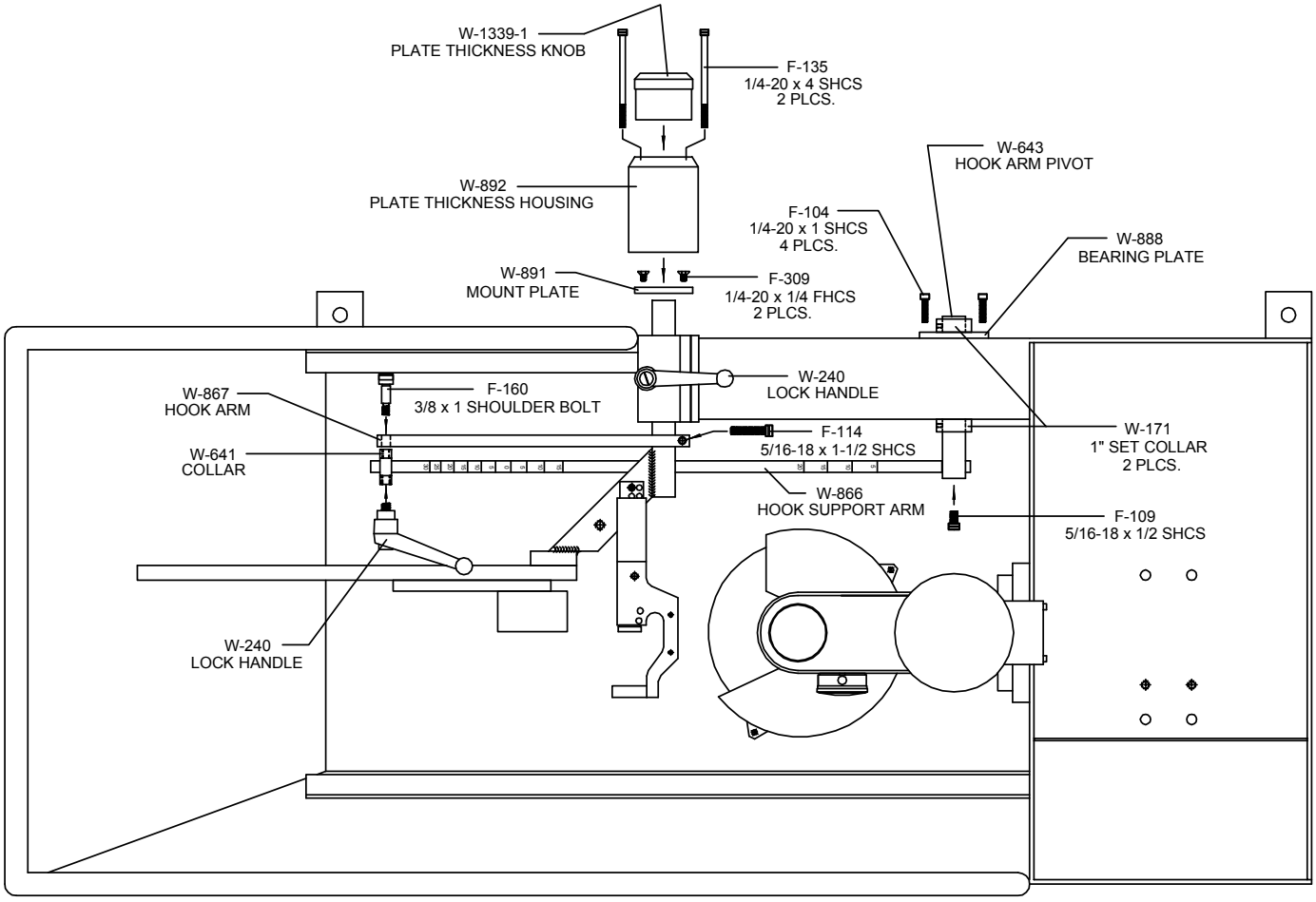
W-150 MANUAL SHOP MODEL

COOLANT ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
3	F-512	Cable Tie
1	F-610	1/8 N.P.T. Street Elbow
1	F-620	Elbow Fitting
96"	F-632	3/8 Tubing (Hard White)
1	F-635	Connector Nut
1	W-160-2	230V. Coolant Pump
1	W-603-3	Saw Arm Pivot Bracket
1	W-1294-C	1/8 N.P.T. Connector
1	W-1294-N	1/4" Nozzle
15"	W-1294-P	Coolant Pipe
1	W-1294-V	1/4" In-Line Valve

W-150 MANUAL SHOP MODEL

HOOK ASSEMBLY
(TOP VIEW OF BASE)



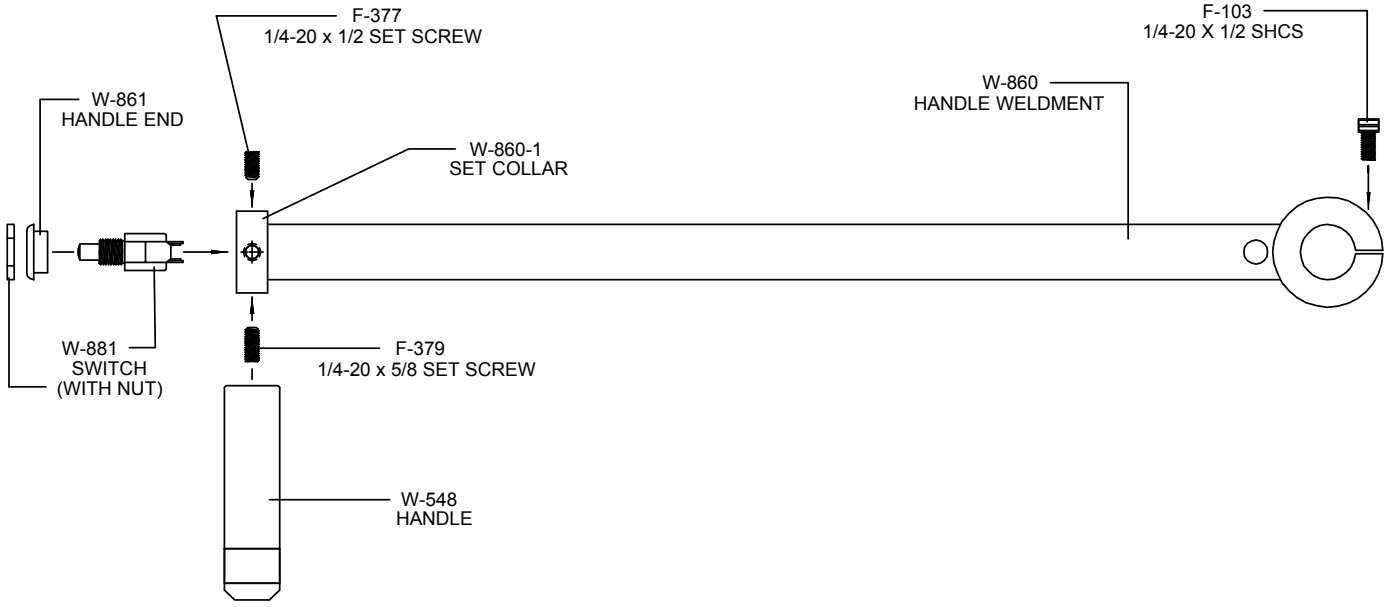
W-150 MANUAL SHOP MODEL

HOOK ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
4	F-104	1/4-20 x 1 Socket Head Cap Screw
1	F-109	5/16-18 x 1/2 Socket Head Cap Screw
1	F-114	5/16-18 x 1-1/2 Socket Head Cap Screw
2	F-135	1/4-20 x 4 Socket Head Cap Screw
1	F-160	3/8 x 1 Shoulder Bolt
2	F-309	1/4-20 x 1/4 Flat Head Cap Screw
2	W-171	1" Set Collar
2	W-240	Lock Handle
1	W-641	Collar
1	W-643	Hook Arm Pivot
1	W-866	Hook Support Arm
1	W-867	Hook Arm
1	W-888	Bearing Plate
1	W-891	Mount Plate
1	W-892	Plate Thickness Housing
1	W-1339-1	Plate Thickness Knob

W-150 MANUAL SHOP MODEL

HANDLE ASSEMBLY



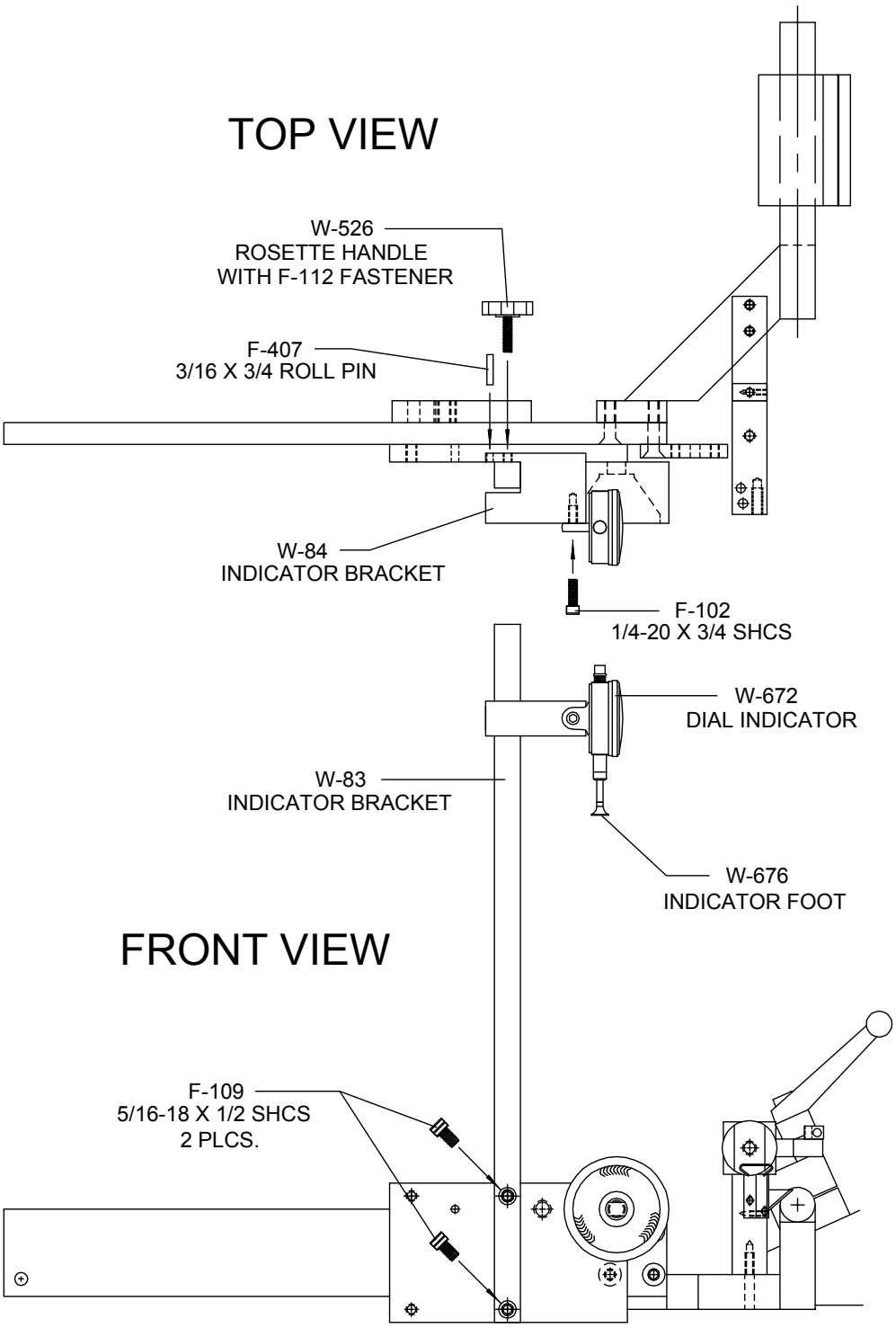
W-150 MANUAL SHOP MODEL

HANDLE ASSEMBLY PART NUMBER LIST

Qu.	Part #	Description
1	F-103	1/4-20 x 1/2 Socket Head Cap Screw
1	F-377	1/4-20 x 1/2 Set Screw
1	F-379	1/4-20 x 5/8 Set Screw
1	W-548	Handle
1	W-860	Handle Weldment
1	W-860-1	Set Collar
1	W-861	Handle End
1	W-881	Switch

W-150 MANUAL SHOP MODEL

W-84-A ROUND RUN-OUT DIAL INDICATOR OPTION



W-150 MANUAL SHOP MODEL

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