



W RIGHT

MACHINE

W-37 ABG AUTOMATIC BAND GRINDER



OPERATOR'S MANUAL

MADE IN THE U.S.A.

W-37 ABG

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.

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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.

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

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-37 ABG

SPECIFICATIONS

STANDARD VOLTAGE:	115 Volt, 1 Phase, 60 HZ
OPTIONAL VOLTAGE:	230 Volt, 1 Phase, 50 HZ
SHIPPING WEIGHT:	120 lbs. (each box is 60 lbs.)
CRATE SIZE:	L 18" X W 18" X H 18" (2 boxes)
AIR REQUIREMENTS:	N / A
STANDARD SAW SIZE:	1" - 3"
OPTIONAL SAW SIZE:	1/2" - 1"
RANGE OF HOOK ANGLE:	0 to 15 Degrees
SPINDLE MOTOR:	1/8 H.P., 1 Phase, 3000 R.P.M. Motor
CAM MOTOR:	1/20 H.P., 1 Phase, 30 R.P.M. Motor



W-37 ABG

Features

The W-37 ABG achieves cost effective automatic sharpening of narrow band saws. Saws that have been considered disposable now can be resharpened many times, which greatly reduces saw cost. Operation is simple and the total labor per resharpening is only a few minutes.

The "W-37 ABG" features include:

- *Straight Line Head Movement*
- *Ball Linear Slide*
- *Built In Saw Support*
- *Quick Open Clamp Jaws*
- *Adjustable Clamp Drag*
- *Precision Cams*
- *Simple to Operate*
- *Excellent Sharpness*
- *Low Maintenance*
- *Quick Setup*

Notice

W-37 ABG 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!

TECHNICAL

Bench mountable, the W-37 ABG is a compact, self contained package with band supports built in. One cam set for a single tooth shape comes standard with the machine. Cam changing time is less than five minutes allowing many band shapes to be sharpened. Built to give years of trouble free service with sealed ball bearings used through out. Straight line movement on the grinding head assures correct tooth geometry as the grind wheel diameter changes.



W-37 ABG

OPTIONS

Band Support with 30" Extension	W-1256-20
Small Bands Support for 1/2" to 1" Bands	Call for Details

COMMON REPLACEMENT PARTS

Finger Arm Pivot Bearing	W-189
Ramp Follower	W-1268
Feed Finger Arm Assy.	W-1267-A
Finger Arm Spring/Head Pivot Spring	W-384
Fixed Clamp Jaw	W-1261
Movable Clamp Jaw	W-1260
Cam Follower	W-188
Saw Guide	W-1259
Bearing Sleeve	W-282
Bearing Bushing	W-283
Grinding Wheel	V-18

PRE SETUP

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.



W-37 ABG

Automatic Band Grinder

The W-37 ABG is designed to profile grind narrow band saw blades. The tooth shape is determined by the cam set that is installed on the machine. If other tooth shapes are required a different cam set will be necessary. Cams can be purchased to accommodate most tooth shapes. Include a sample of the tooth shape when ordering these cams.

The standard machine is set up to grind a 10 degree hook angle. If other angles are required please specify at time of purchase.

Band Guide Assembly

1. Install band guide bar as shown in drawing #1 using the two 5/16 bolts that are included.
2. Install the grinding head at an approximately 10 degree angle as shown in drawing #2. Lock the head by firmly tightening handle (A).
3. The W-37 ABG must be mounted to work surface before using.
4. Install grinding wheel on the machine. All wheels used on this machine must be rated for at least 3500 R.P.M.

Warning

Eye protection must be worn when operating this machine. Grinding wheels can explode and caution must be used when operating this machine.



W-37 ABG

OPERATION

1. Use protractor to set hook angle. This angle must match specified angle for cam. Use clamp for 0 degree.
2. Install the band in the guide bars with the band running between the roller guides. Band must be level. Use protractor to level band with clamp.
3. Adjust knob (B) on drawing #2 until the band gullet is aligned with the index finger as shown on drawing #4.
4. Adjust band guide (J) drawing #1 until the band is level. Be sure that part # W-1268 rides on fixed jaw when index is full forward.
5. Now adjust band guide (I) drawing #1 until there is a 1/8" clearance between the bottom of the band and top of the guide. This step is most important because we can only support the band in two points. If both band guides are contacting the saw, the grind will be erratic because the back of the band is not straight.
6. Start the gear motor and grinding head. Adjustment (C) drawing #2 controls the amount of material that is removed from the face of the tooth, (X) on drawing #3.
7. Knob (D) controls the amount of material that is removed from the back and gullet of the tooth, (Y) on drawing #3.
8. Do not overheat the band when sharpening. If the band is turning blue on the cutting edge or bottom of the gullet, it will soften the band or cause it to crack.

Note: Tooth shape is determined by cam design, wheel shape and the angle the band travels under the wheel. To grind the tooth shape that the cam is designed for, requires the wheel to be dressed on a full radius and the band must be set horizontal.



RIGHT



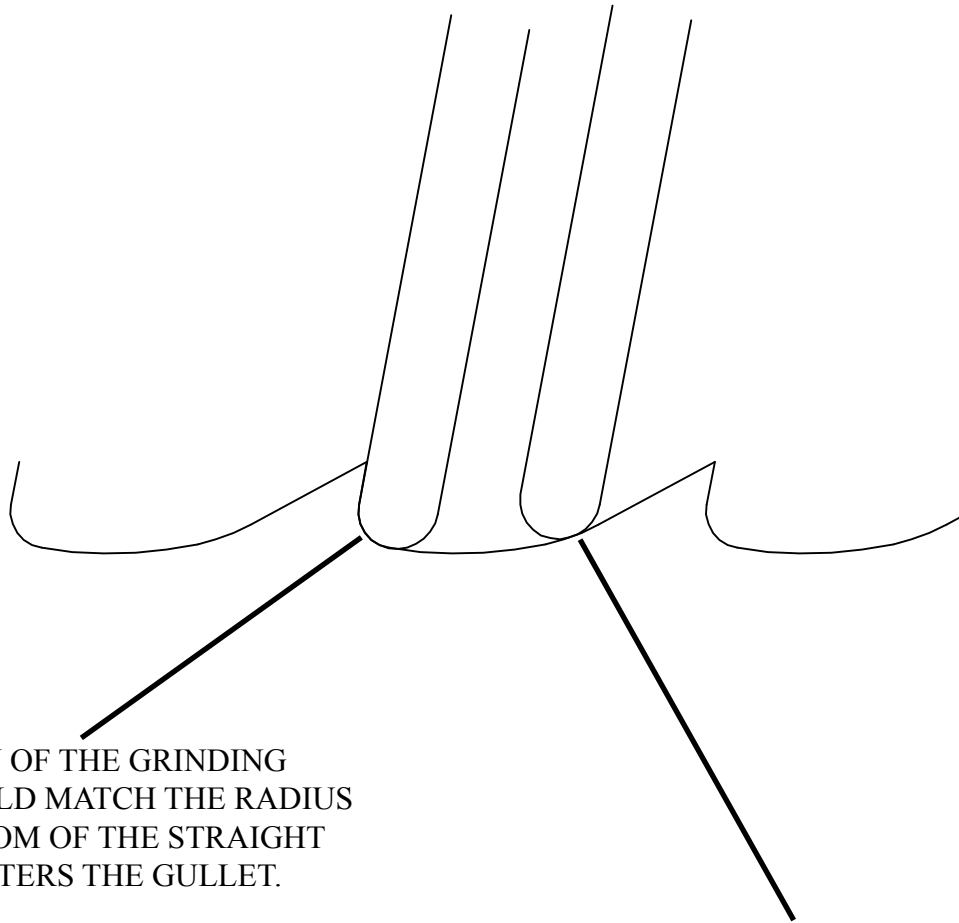
MACHINE

W-37 ABG

DRESSING THE GRINDING WHEEL

NOTE:

USE A DRESSING STONE TO SHAPE THE GRINDING WHEEL.



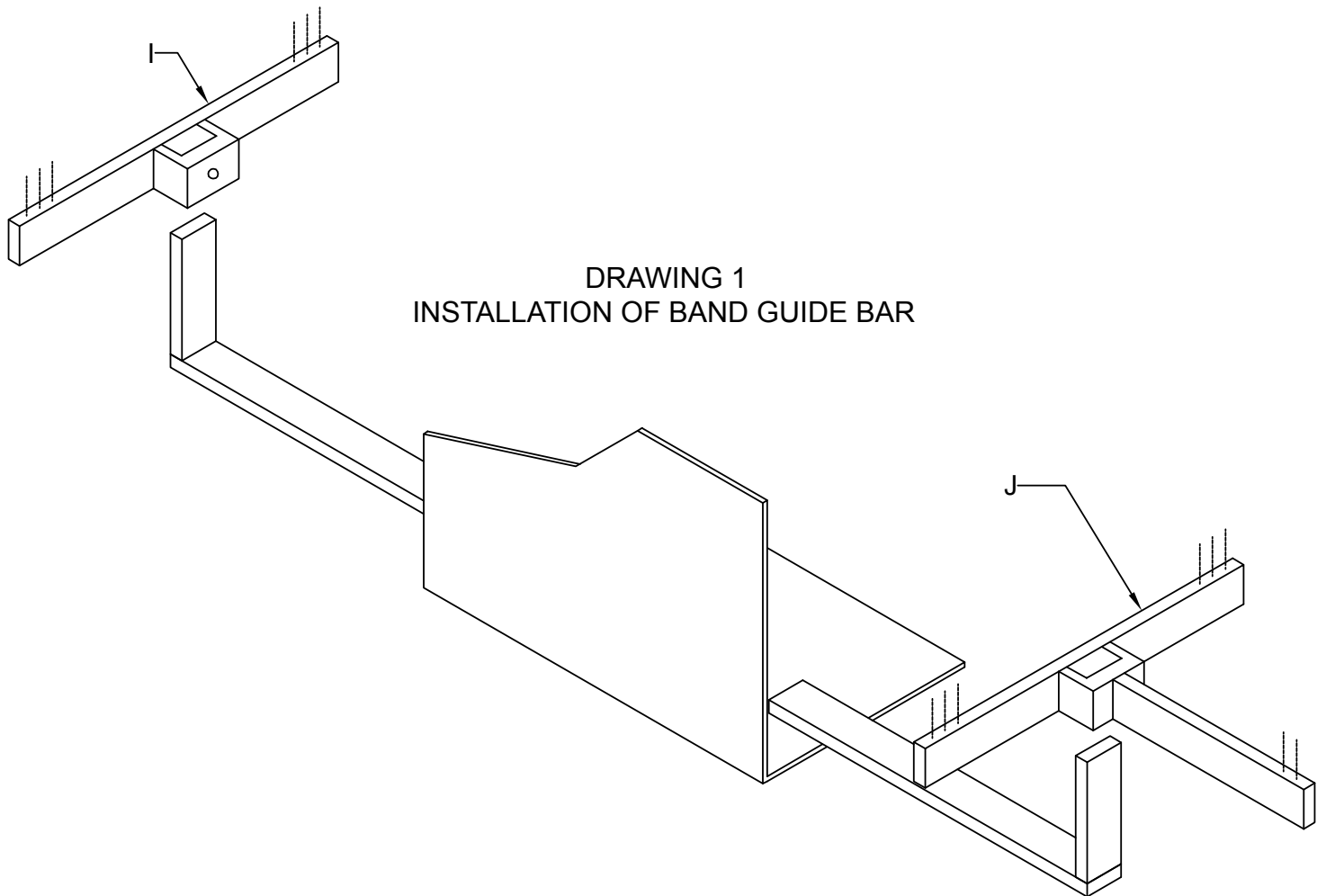
THIS SECTION OF THE GRINDING WHEEL SHOULD MATCH THE RADIUS OF THE BOTTOM OF THE STRAIGHT LINE AS IT ENTERS THE GULLET.

SHAPE THIS SECTION OF THE WHEEL TO CHANGE HOW HARD OF GRIND YOU WANT ON THE BACK ANGLE. REMOVING MATERIAL FROM THE GRINDING WHEEL WILL MAKE THE WHEEL REMOVE LESS MATERIAL FROM THE SAW.



W-37 ABG

BAND GUIDE BAR ASSEMBLY

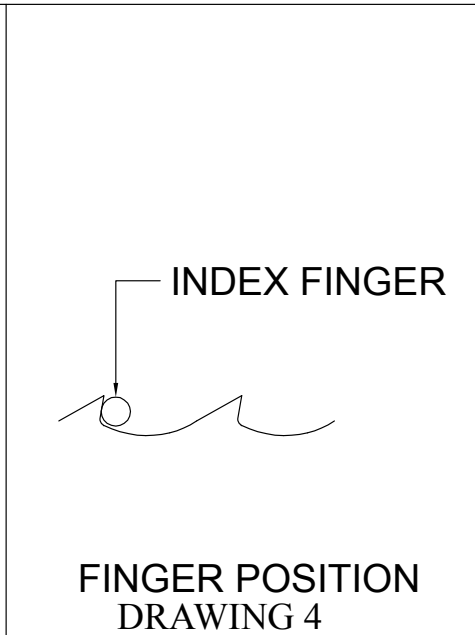
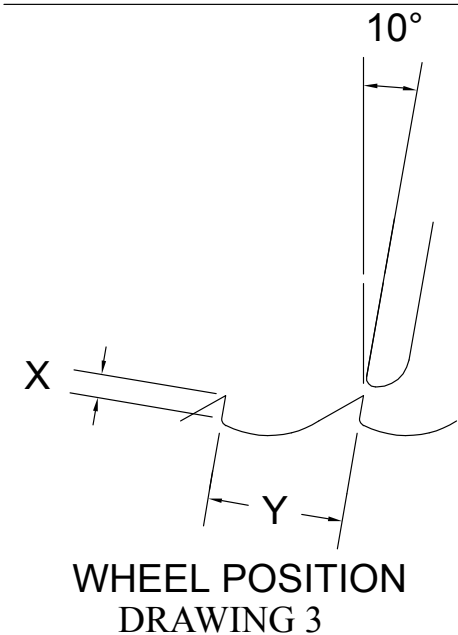
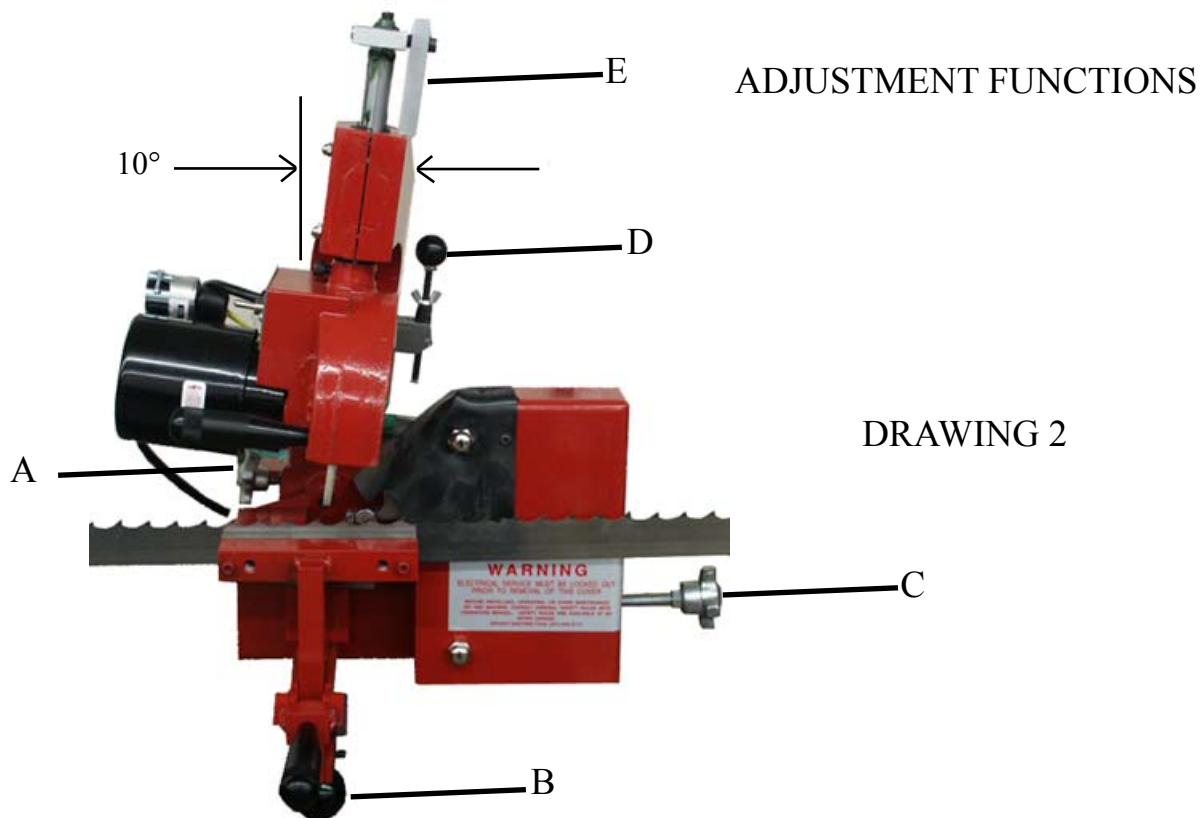


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W-37 ABG

GRINDING WHEEL ADJUSTMENT



W-37 ABG

MAINTENANCE

Care should be taken when cam cover is removed. Do not allow any grinding grit to enter. Be sure that cams are clean and dry and cam followers are regularly maintained.

TROUBLE SHOOTING

CAUTION: DISCONNECT FROM POWER BEFORE OPENING ANY COVER.

Machine will not start with switch on.

1. No power to machine. Is machine plugged in?
2. Check for tripped breaker or blown fuse on outlet.

Band rises as machine cycles.

1. Check to see if band is level and that the band guides are in proper position.
2. Check the runway under the band clamp and adjust properly.

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

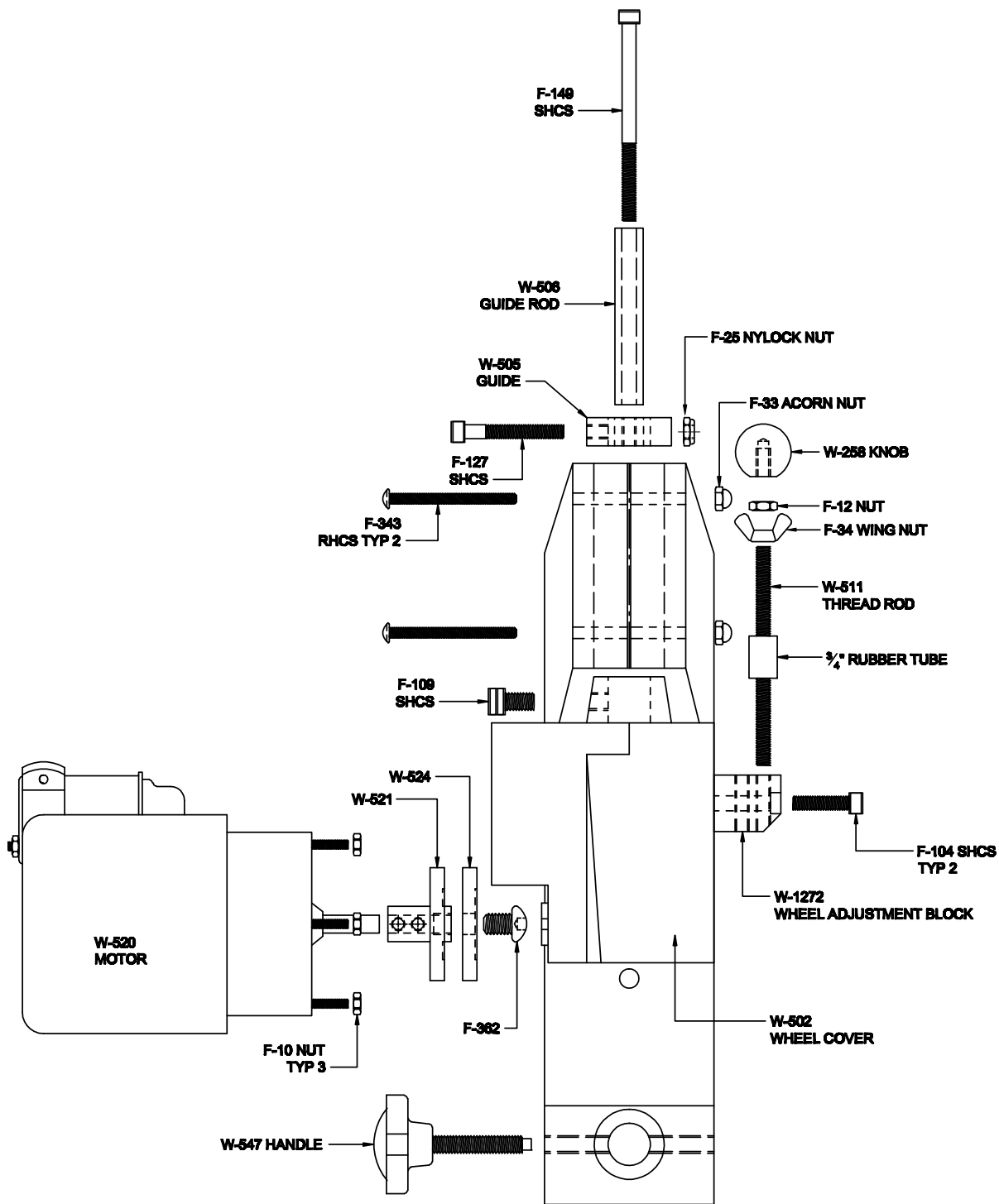
1. Inspect the cam and cam followers. Make sure that the cam rotates fully and that the followers are making full contact with the cam
2. Cam drive motor is defective.

If other problems arise please call us for technical advice. 1 (541) 942-3712.



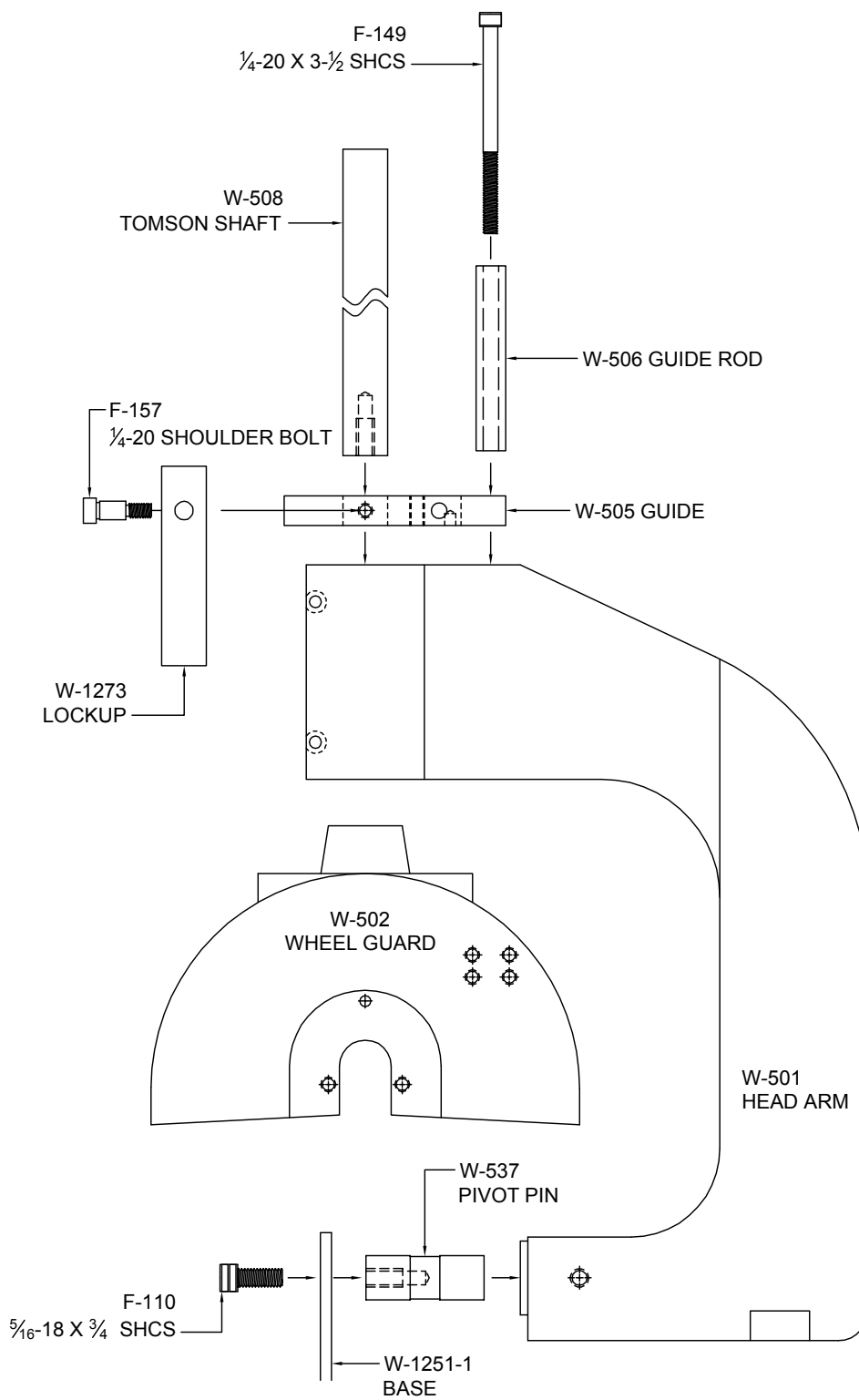
W-37 ABG

FRONT VIEW OF HEAD ASSEMBLY



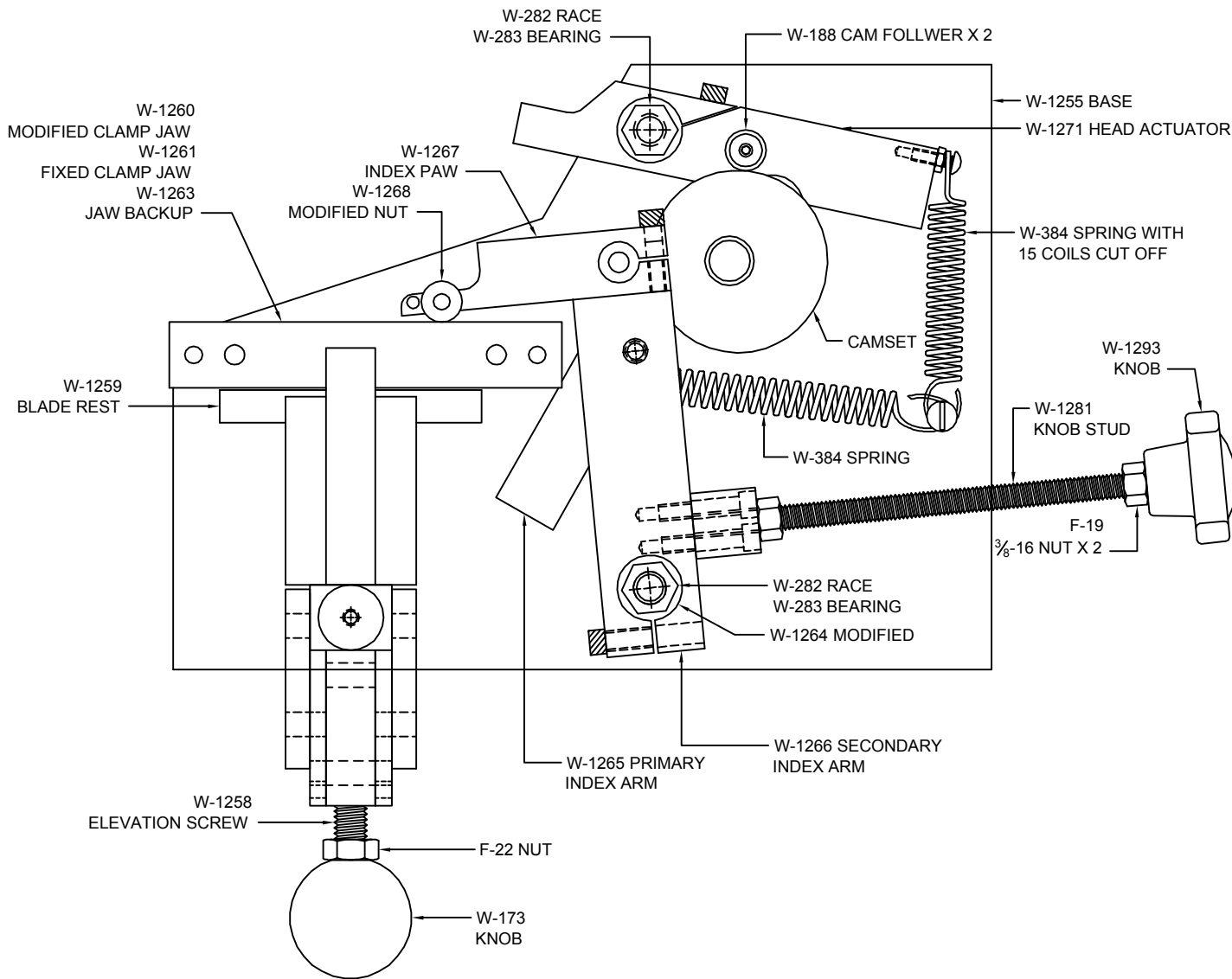
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SIDE VIEW OF HEAD ASSEMBLY



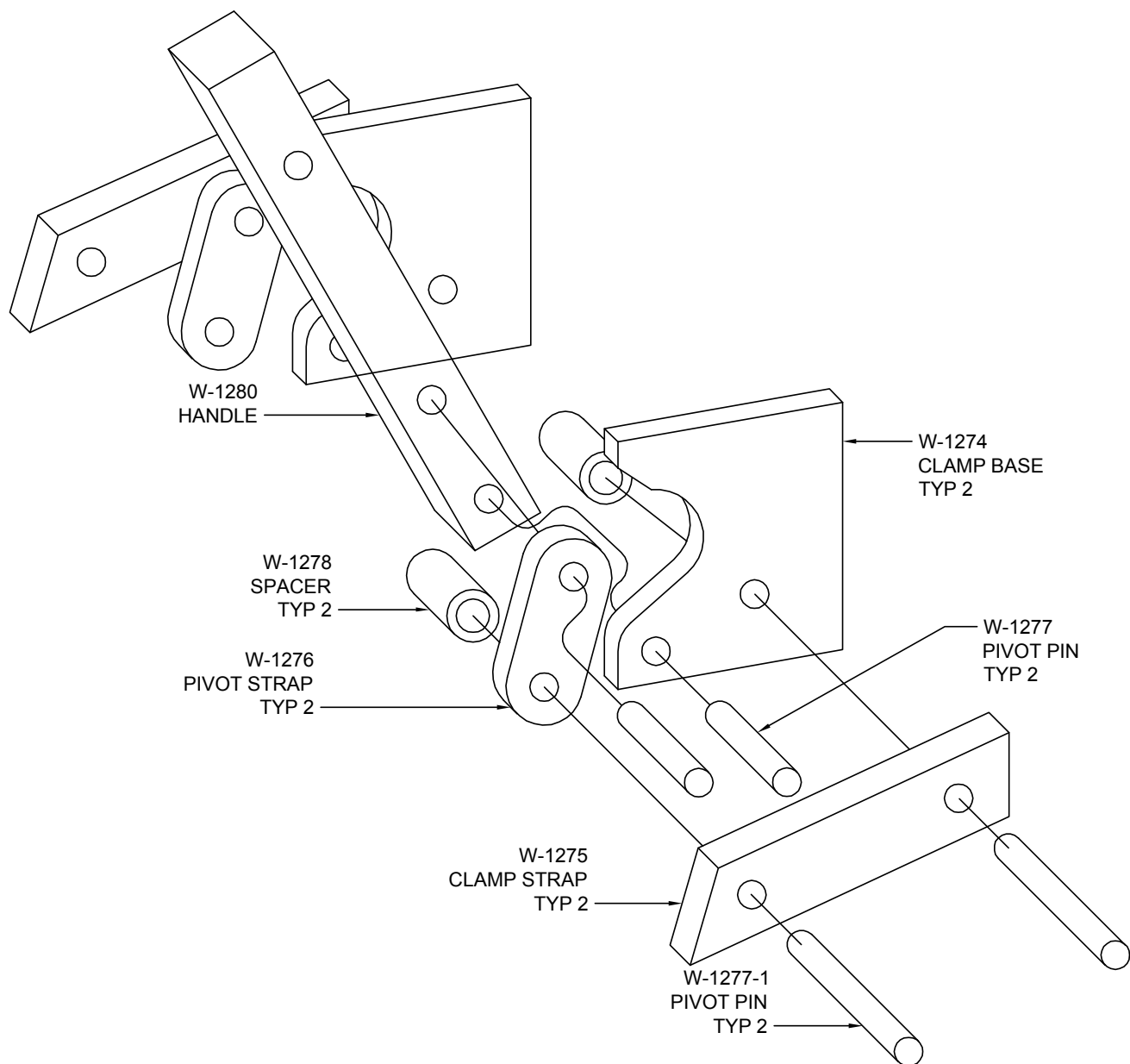
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FRONT VIEW OF CLAMP / INDEX AREA ASSEMBLY



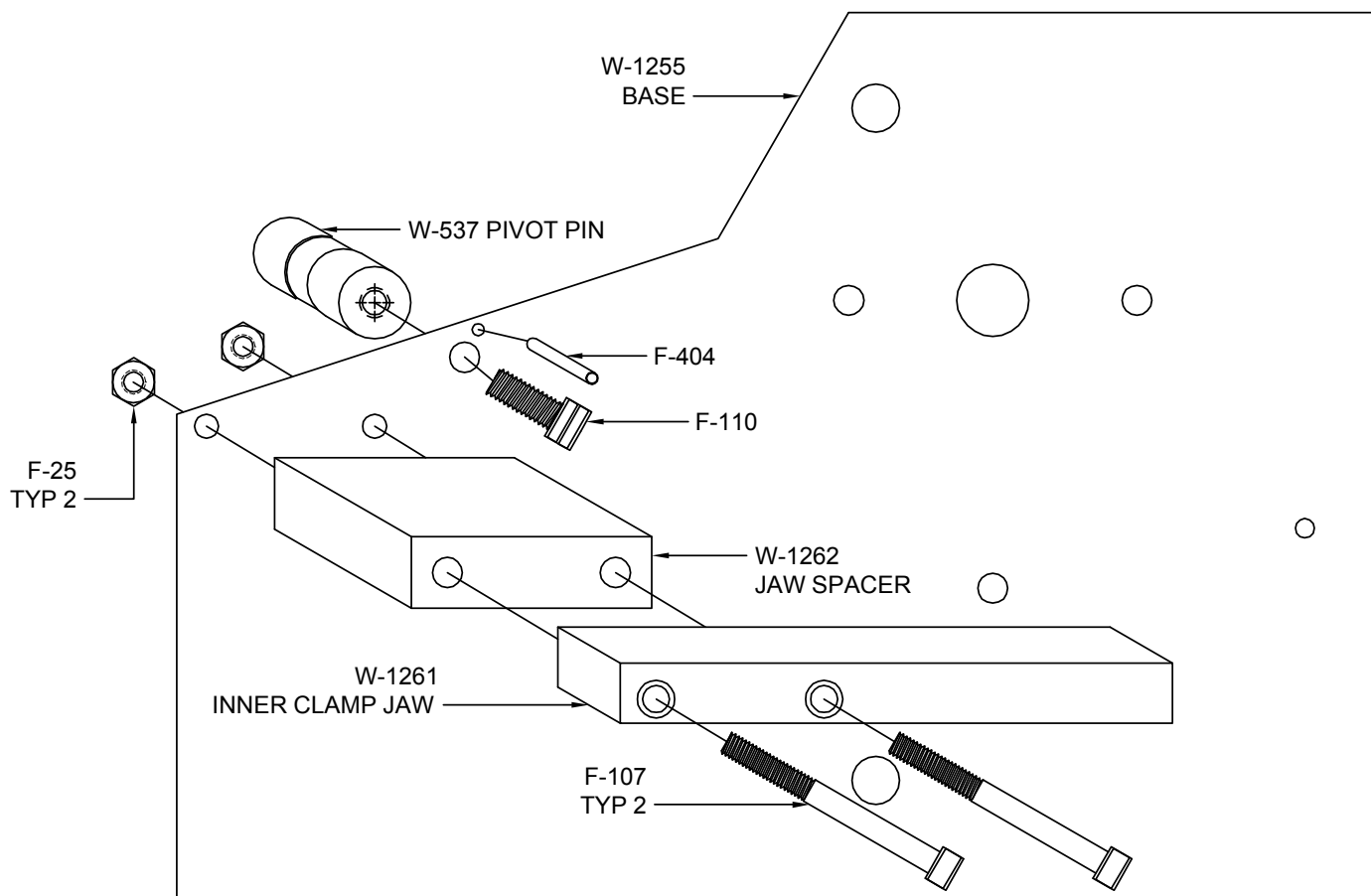
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CLAMP PIVOT ASSEMBLY



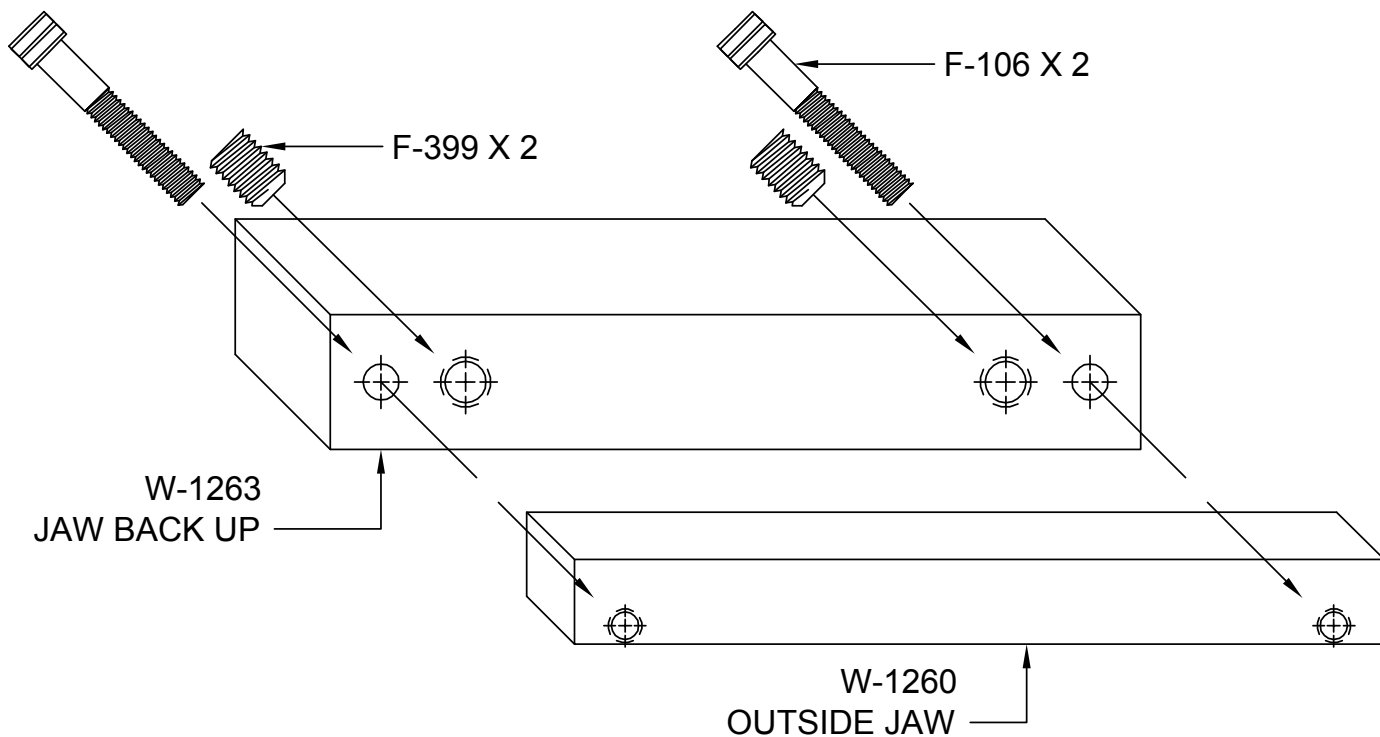
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FIXED CLAMP JAW ASSEMBLY



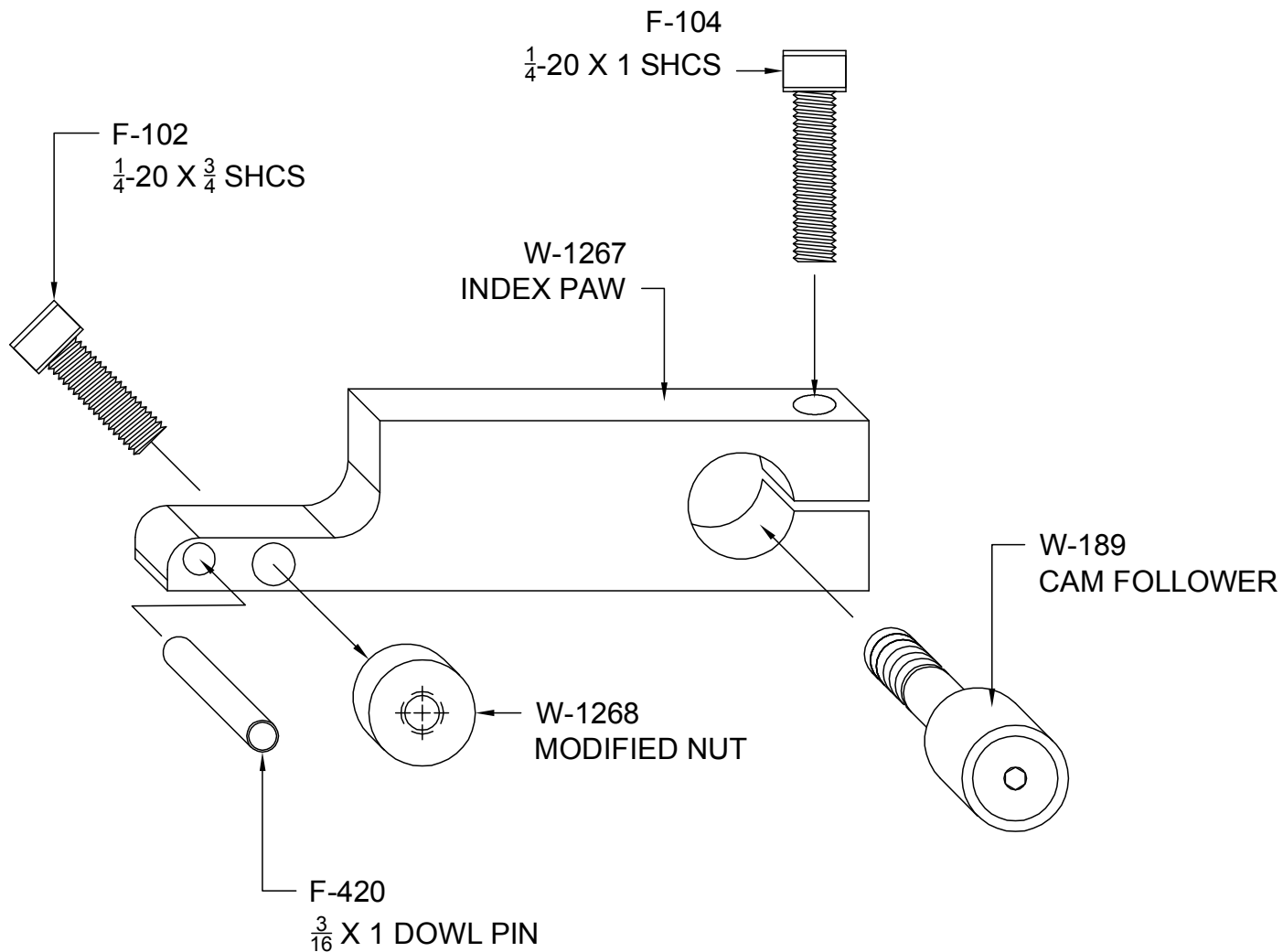
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MOVABLE CLAMP JAW ASSEMBLY



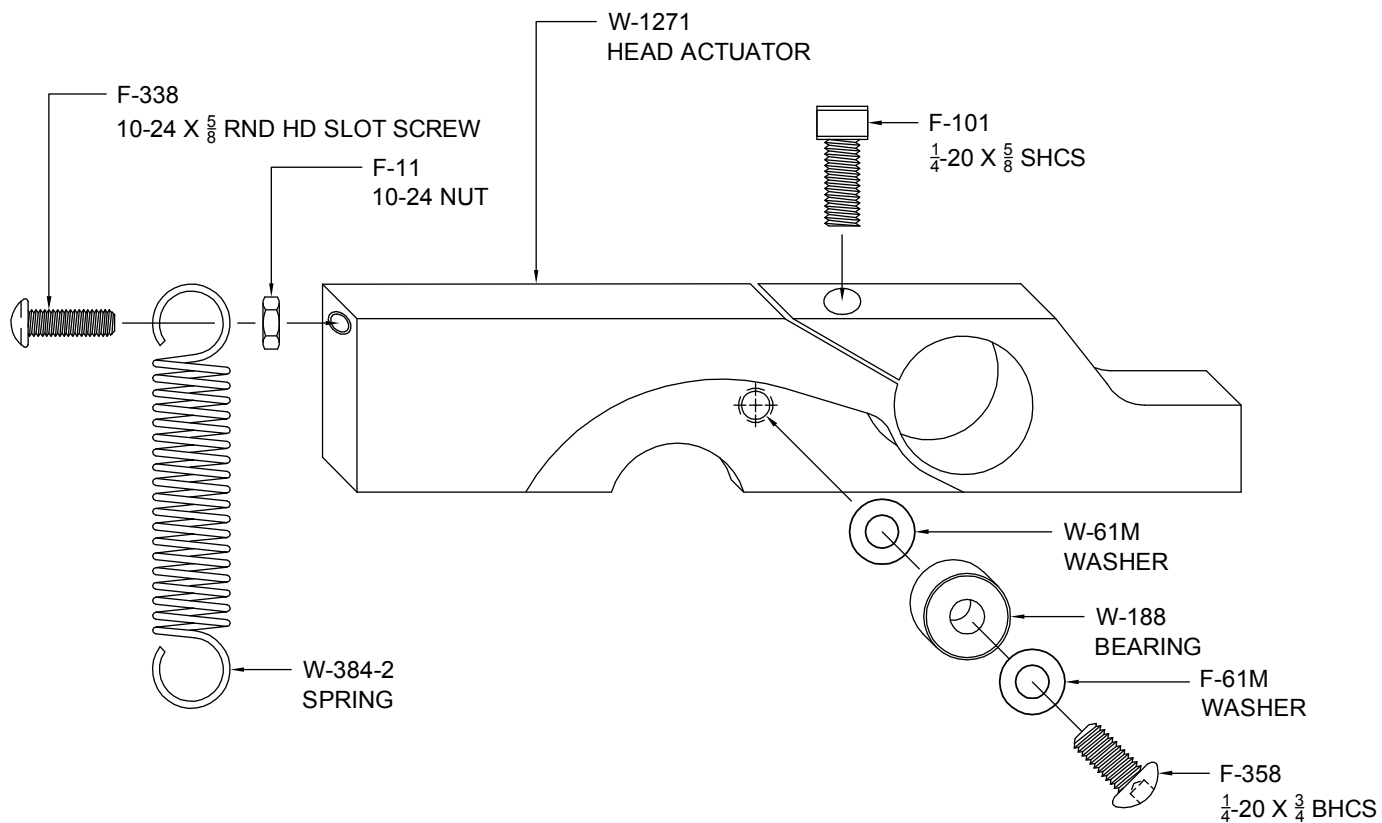
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INDEX PAW ASSEMBLY W-1267-A



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HEAD ACTUATOR ASSEMBLY



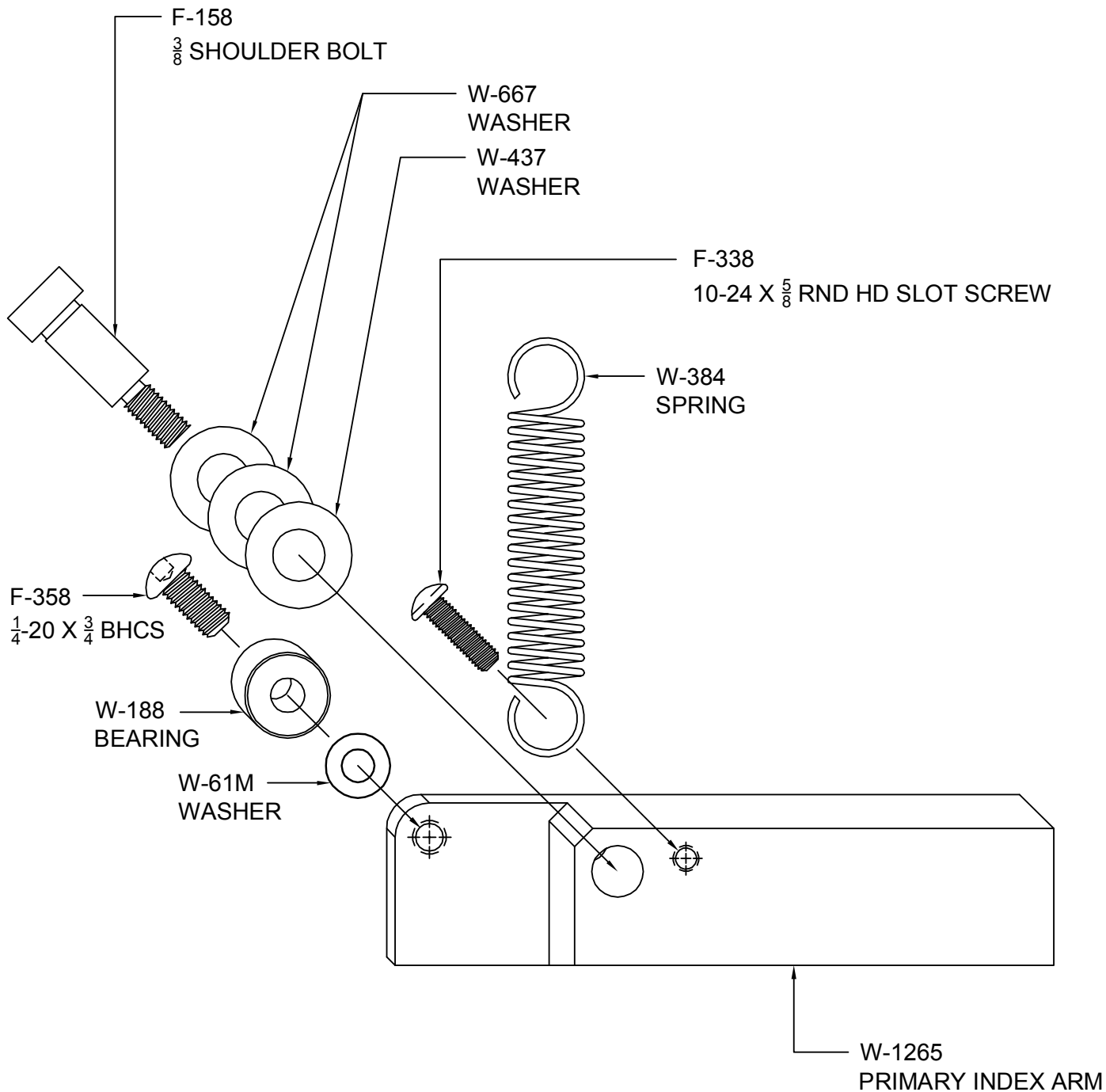
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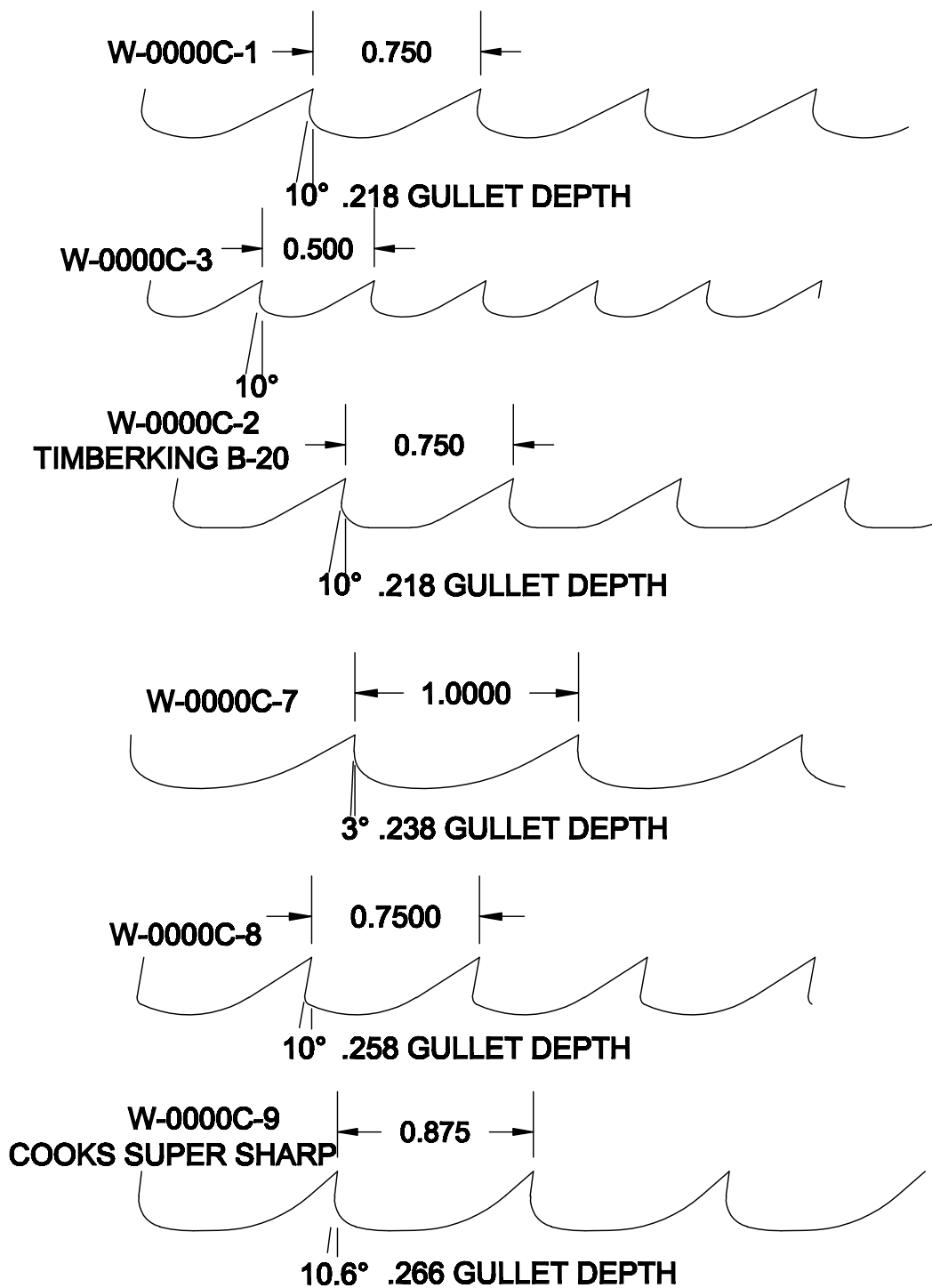
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PRIMARY INDEX ARM ASSEMBLY



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W-37 ABG Band Saw Profiles

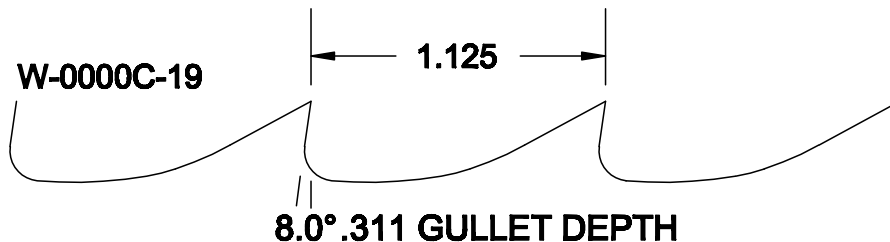
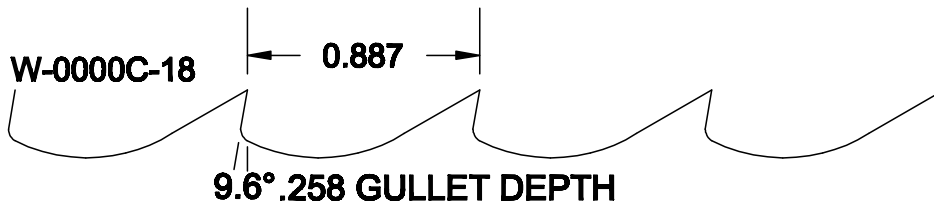
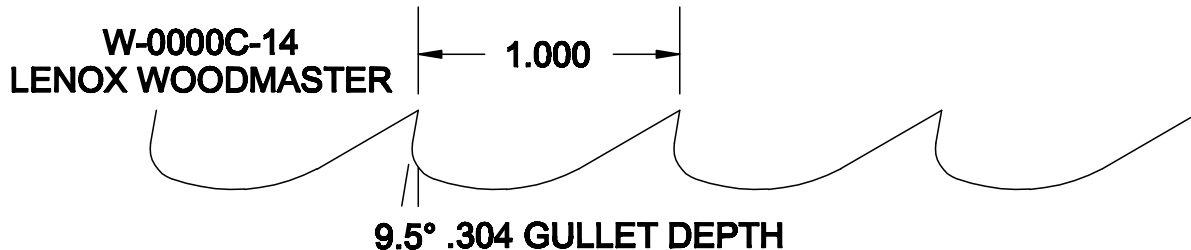
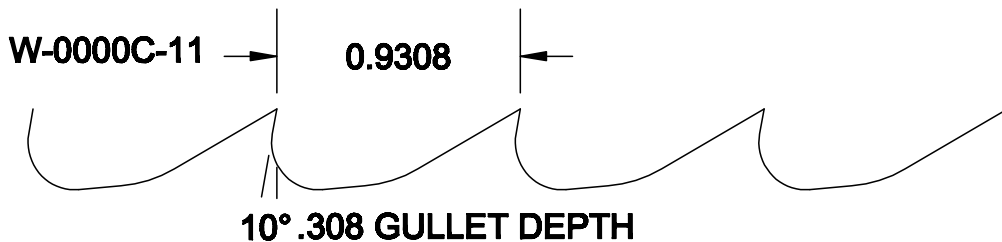
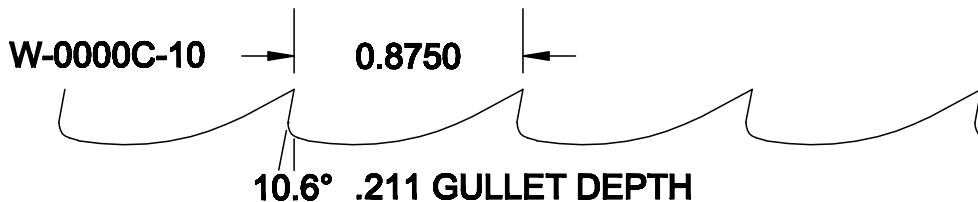


NOTE: SAW PROFILES ON THIS PAGE ARE NOT TO SCALE.
PITCHES OVER 1" REQUIRE P/N W-1265-LP AND W-1266-LP.



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W-37 ABG Band Saw Profiles

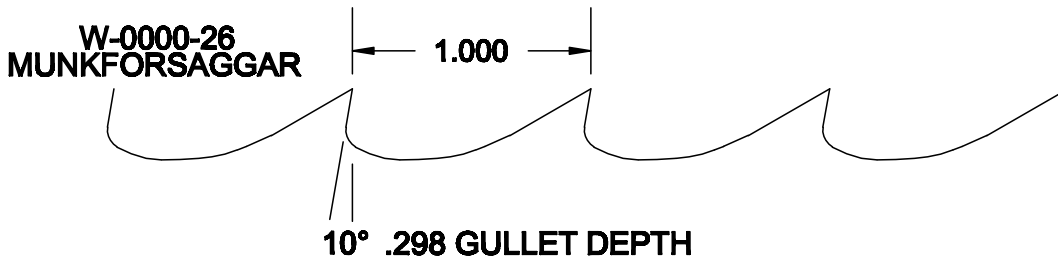
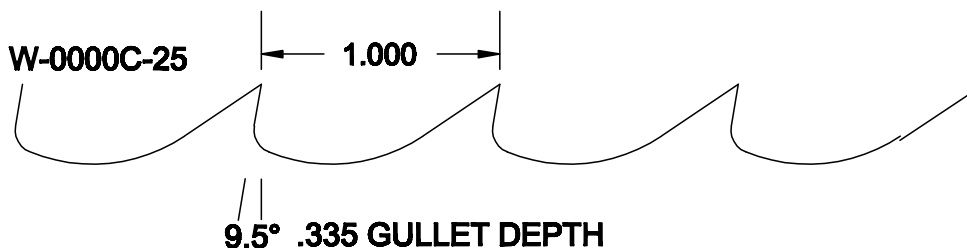
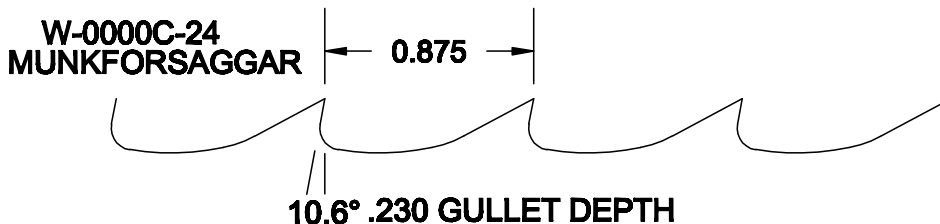
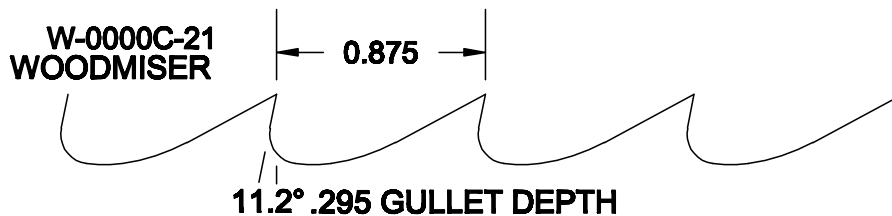
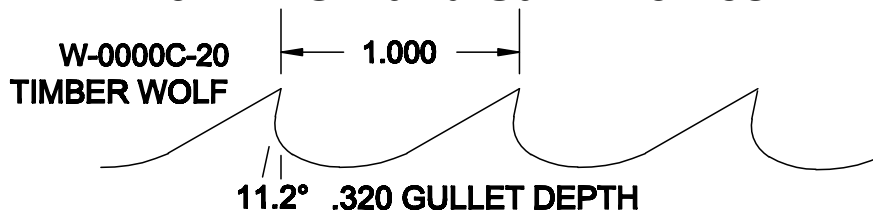


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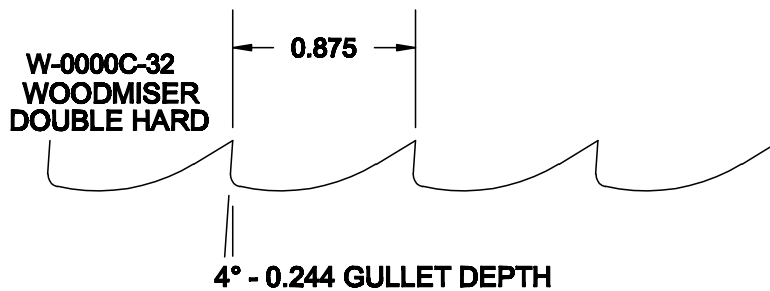
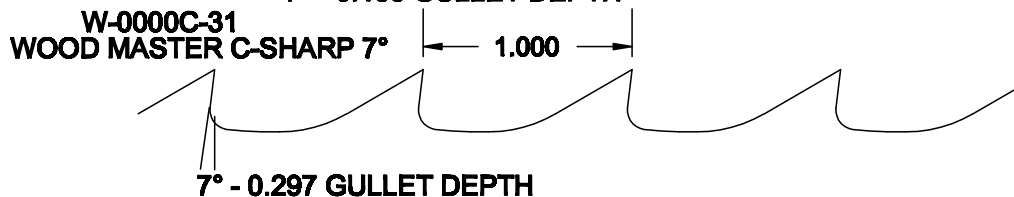
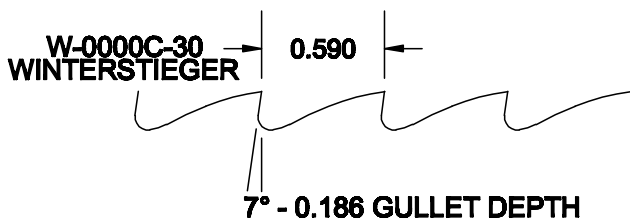
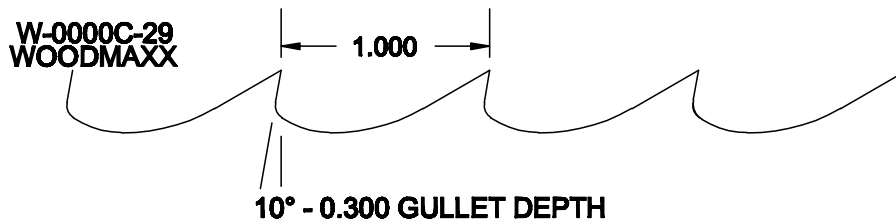
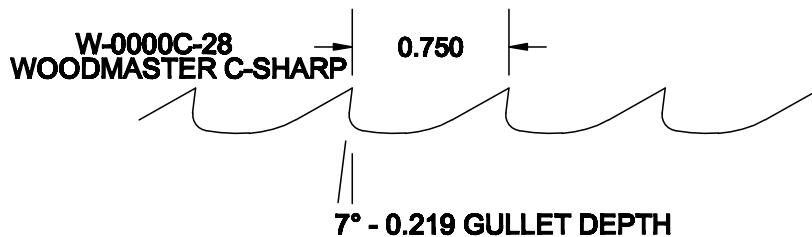
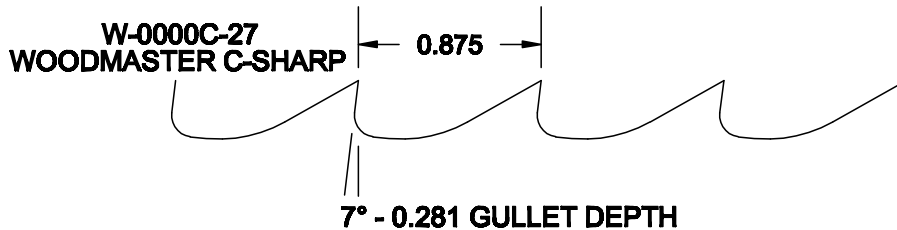


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W-37 ABG Band Saw Profiles

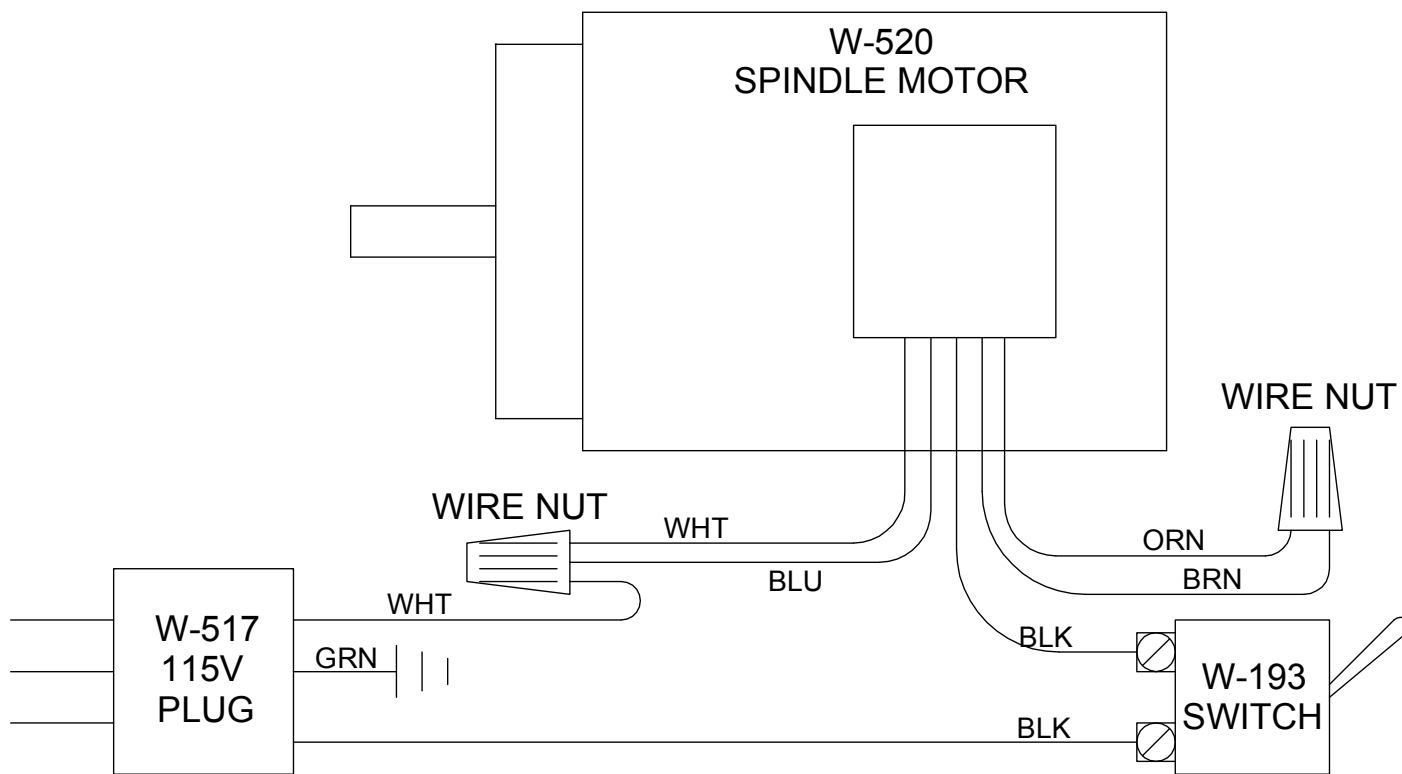


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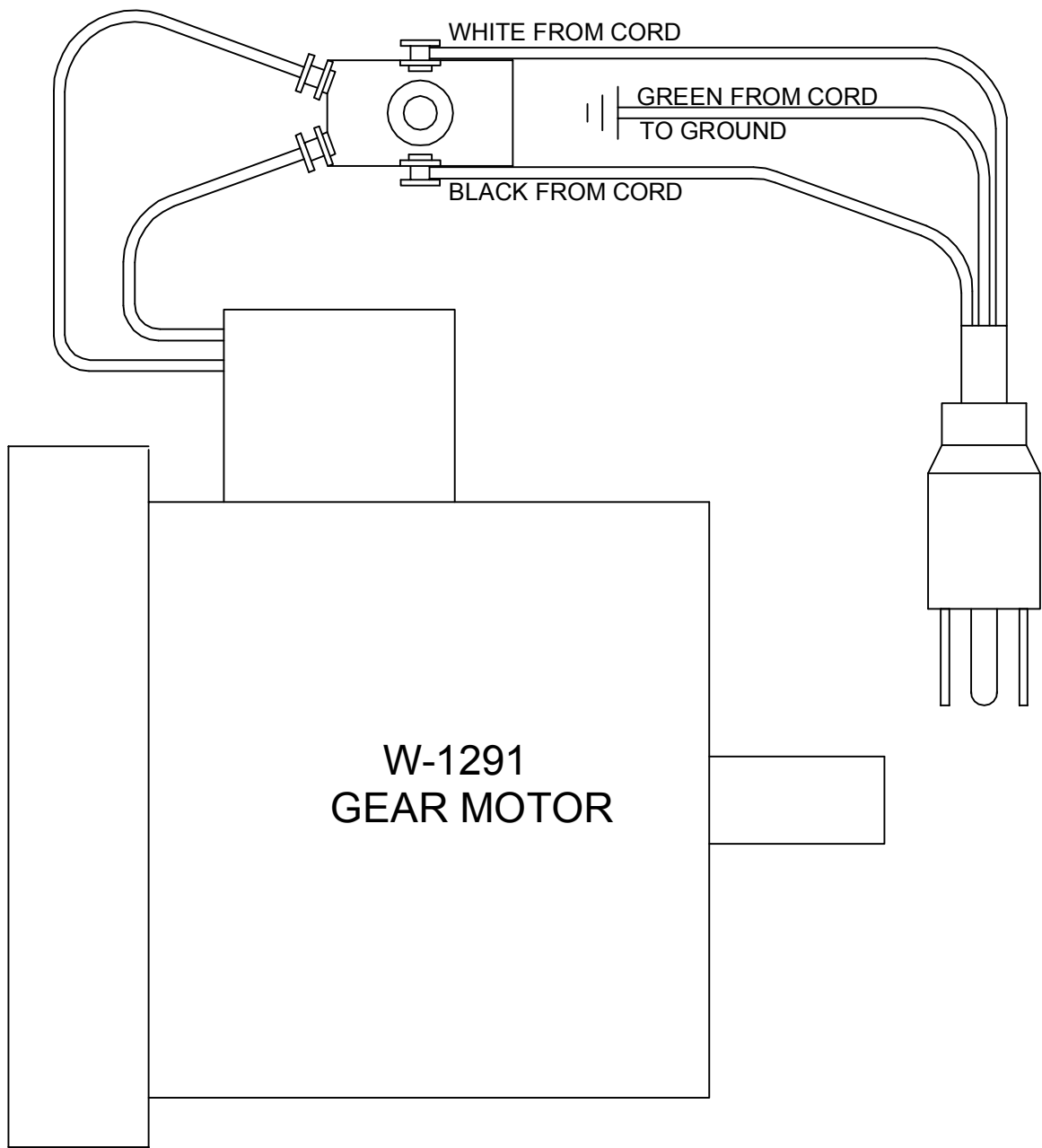
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ELECTRICAL SCHEMATIC



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2 POLE SWITCH



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