

**DEPARTMENT
OF THE ARMY TECHNICAL MANUAL**

**OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS LIST**

FOR

**SAW, POWER HACK
(DON G JENNESS CO, INC)
(3405-00-729-3917)**

**HEADQUARTERS,
DEPARTMENT OF THE ARMY**

MARCH 1978

Technical Manual
No. 9-3405-209-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 30 March 1978

Operator, Organizational, Direct Support and General Support Maintenance Manual Including Repair Parts List
for

SAW, POWER HACK, MODEL 3 HY DUTY
(NSN 3405-00-729-3917)

REPORTING OF ERRORS

You can help improve this manual by calling attention to errors and by recommending improvements and by stating your reasons for the recommendations. Your letter or DA Form 2028-2 (Recommended Changes to Publications and Blank Forms) should be mailed direct to Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished direct to you. For your convenience, preaddressed DA Form 2028-2's are included as final pages of this manual.

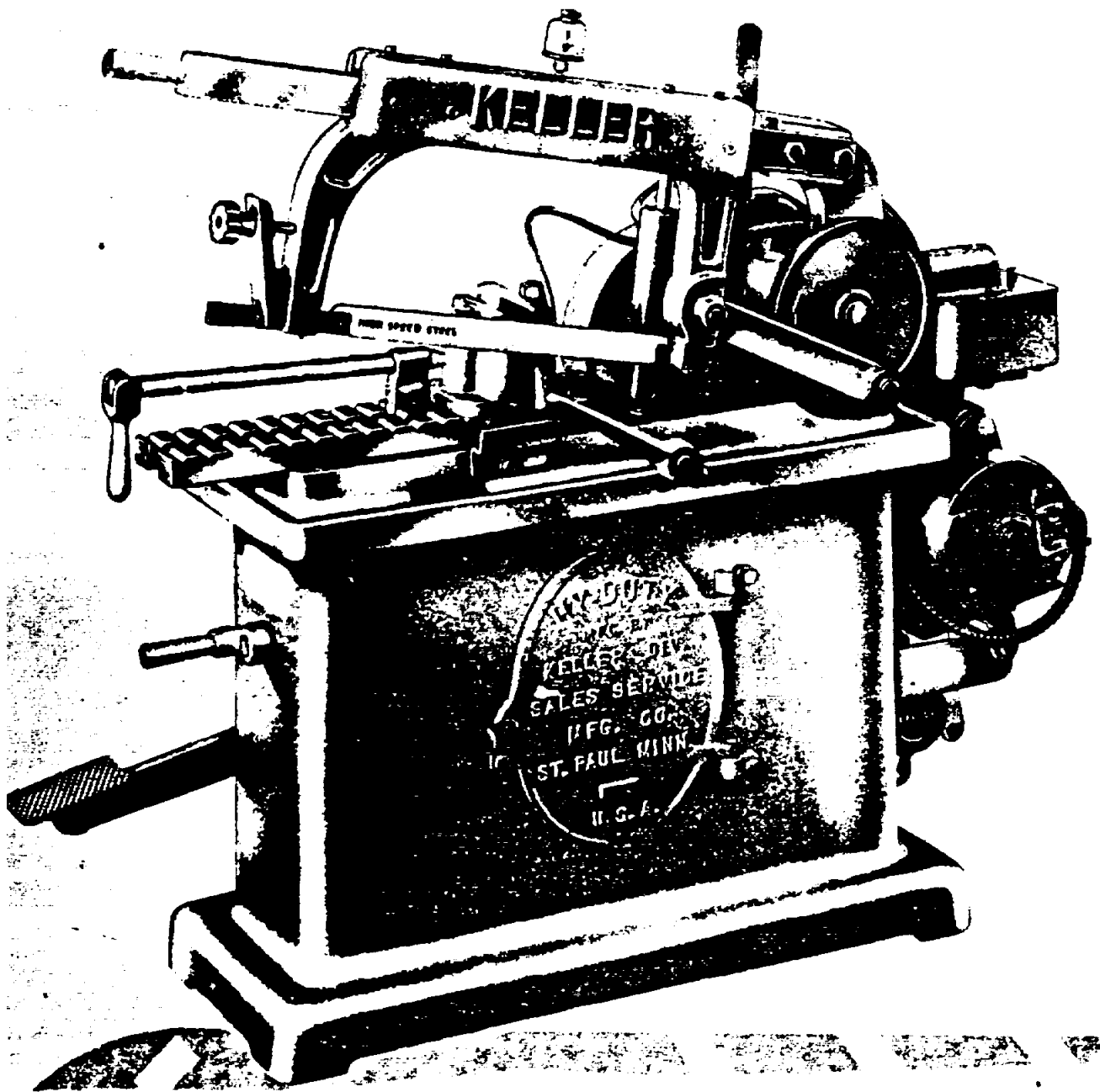
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NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom the saw is issued.

Manufactured by: Don G. Jenness Co., Inc.
3010 E. Olympic Blvd.
Los Angeles, CA 90023

Procured under Contract No: DAAA09-76-M-6043



OPERATING INSTRUCTIONS

The model 3 Hack Saw is an extremely simple machine to operate. However, there are just a few general Instructions which should be followed. All Saws are completely wired, ready to run. However, when connecting reversible motors, be sure crank disc is revolving in counter-clockwise direction. Oil each hole daily except the motor. Do not drop the saw blade on the work.

HYDRAULIC LIFT ADJUSTMENT

Before using machine for the first time, fill Hydraulic Lift Tank to proper oil level as indicated on decal. Use No. 10 Non-Detergent Motor Oil. Run machine 15 to 20 minutes to work the air out of the Hydraulic Lift System.

- **To INCREASE Lift: Lengthen Push Rod with the two jam nuts on cam or eccentric lever.**

- **CAUTION : DO NOT lengthen too far as plunger will bottom on cylinder. The lift should not exceed 1,/-inch at handle end of guide bar.**

- **TO DECREASE Lift: Reverse the Procedure to shorten push rod.**

ADJUSTABLE BRONZE GIBS. Guide bar operates on bronze gibs in saw frame. Gibs may be adjusted by take-up screws in the saw frame to compensate for wear and to maintain proper alignment. The bronze gibs are easily and inexpensively replaced.

TEN HOUR CHECK. After the new saw has been in operation for about ten hours, the bronze gibs should be

tightened to compensate for normal wear in the machine.

HYDRAULIC LIFT is standard equipment on all model 3 Power Hack Saws. This hydraulic lift mechanism automatically lifts blade on return stroke. Blades last longer, run cooler and cut better.

VARIABLE FEED PRESSURE CONTROL. Turn knob clockwise to increase feed pressure for heavy bar stock, etc., and turn counter-clockwise for sawing thinwall, tubing, softer metals, etc. On cabinet base HY Duty models, the maximum feed pressure is 200 lbs. CAUTION : Do not apply excessive pressure to work. Few jobs require over 150 lbs. working pressure. For maximum cutting efficiency, select the correct sawing combination.

The pressure Feed Control is located on the front of the hack saw.

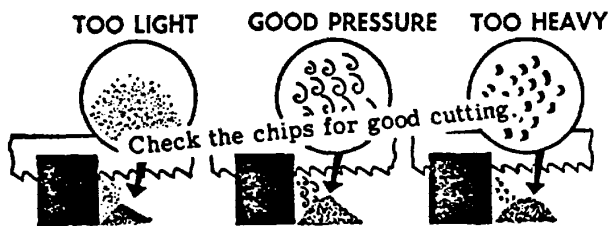
FOR ANGLE CUTTING. Simply swivel the vise up to 45-degrees and tighten, or use an Angle Vise Block which automatically provides a 45 degree angle.

VARI-SPEED DRIVE provides infinite adjustment of cutting speed from 65 to 170 strokes per minute.

HOW TO SELECT AND USE POWER HACK SAW BLADES

Power hack saws automatically take a Full Stroke each time, automatically Lift the blade on reverse stroke and apply steady cutting pressure throughout the length of the stroke.

The proper tensioning of the power hack saw blade is most important. Insufficiently tensioned blades wear rapidly, cut inaccurately and deliver a blank with a poor finish. A blade tensioned too tightly breaks prematurely or pulls out at the pin hole.



If chips are burned you are feeding too heavy. If chips are fine and powdery you are feeding too light. A free cut with curled chips indicate ideal feeding pressure, fastest cutting time and longest blade life.

For most cutting jobs, the all-hard blade is first choice for straight, accurate cutting. The allhard tungsten blade is unexcelled for retaining its sharp teeth. It handles work hardening materials, abrasive materials, stainless, high manganese steels and the low machinability bronzes. Molybdenum blades are good for fast, accurate cutting, but especially on low or medium alloy steels, iron and most non-ferrous metals.

for a better bite, without clogging, by selecting the coarsest tooth for the work. (The feed-pressure-per tooth must be kept below the point of fracturing the teeth.) Large Sections and soft materials require coarse teeth. Thin sections and hard-to-machine materials require fine teeth.

USE HEAVY FEED PRESSURE

Normally you should set the feed pressure as heavy as possible without breaking the teeth or making the blade cut crooked. Excessive pressure and stroke speed increase the cutting rate at the expense of blade wear. (When in doubt, keep pressure at maximum but reduce the stroke speed).

The heaviest practical pressure . . . and the fastest reasonable stroke speed produce the most efficient cutting.

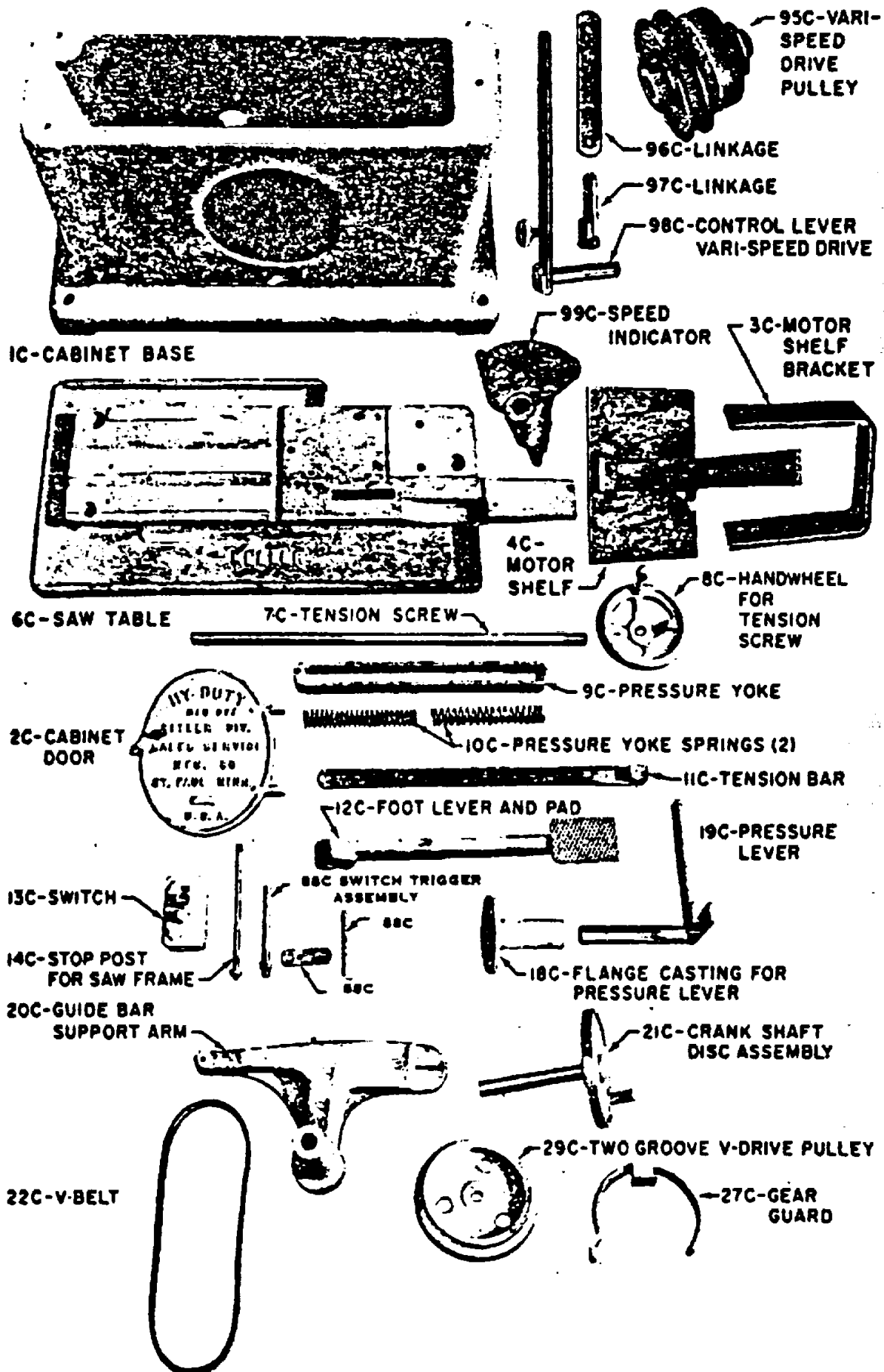
A feed-rate that is too light results in rubbing Instead of cutting; (tooth points overheat, soften and break down).

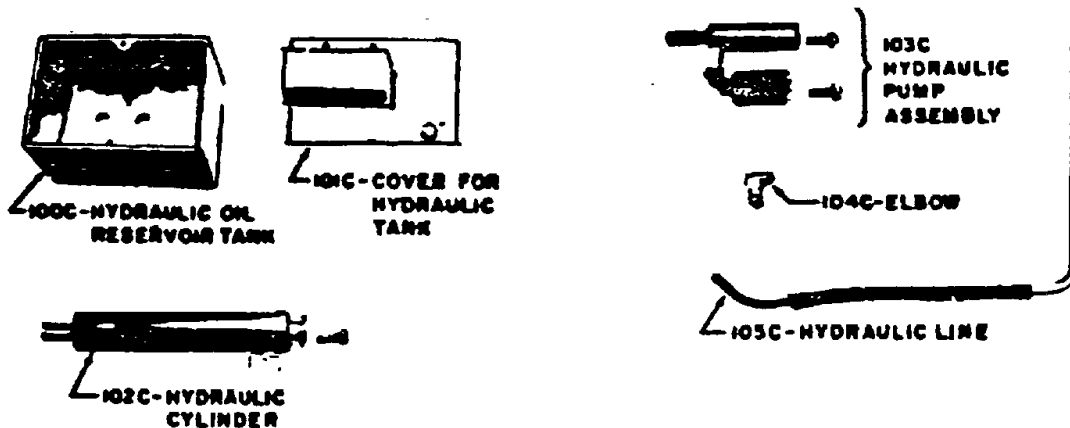
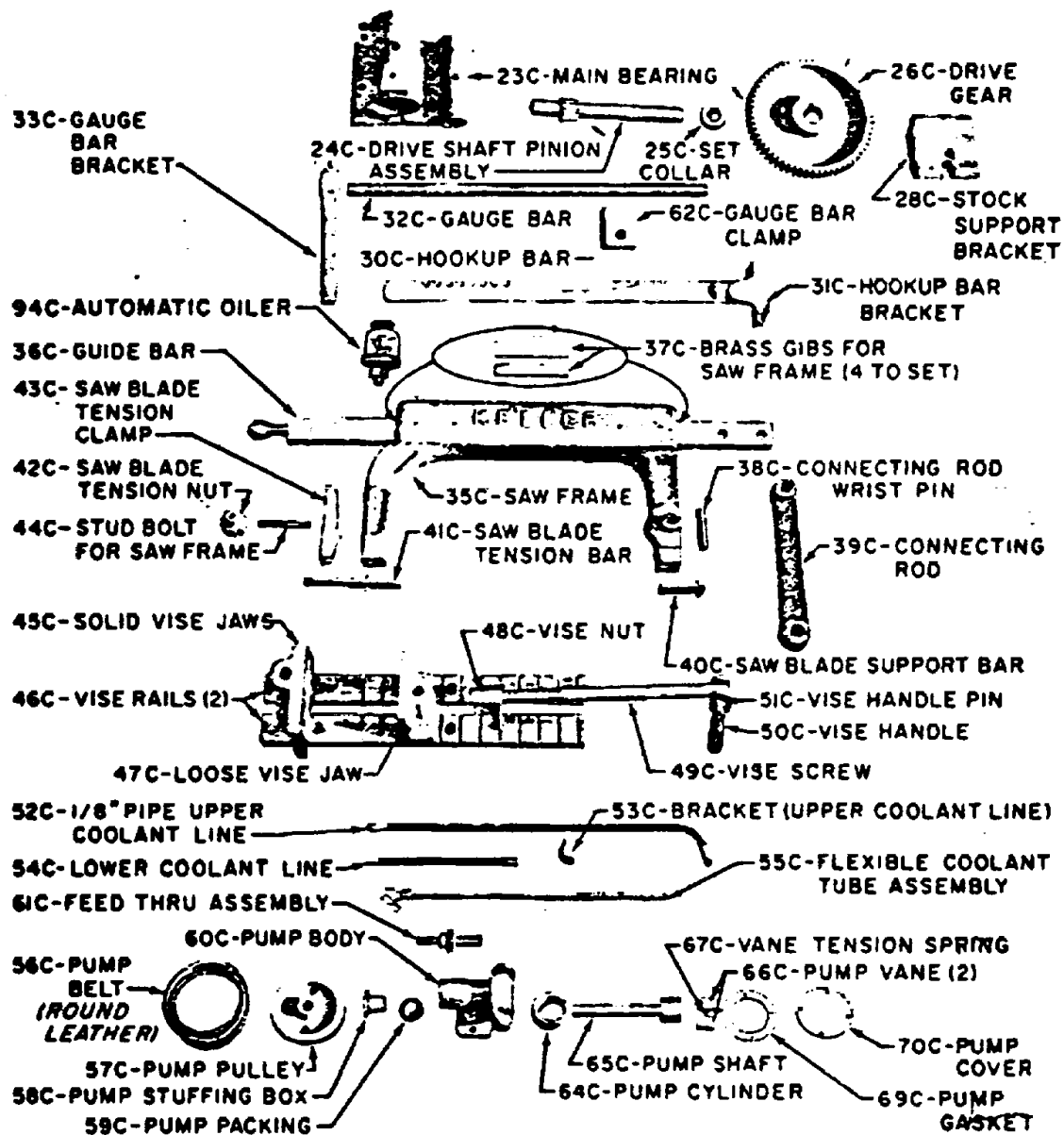
For optimum feed rate: Use heavy feed for hard, very dense material-light feed for thin soft material. For maximum production, you can increase feed by using coarse blades on soft materials. But remember to use moderate feed when straight, accurate cutting is required.

USE PLENTY OF COOLANT

Start the coolant flow before the first cutting stroke. Coolant is needed on all materials (except cast iron, copper and some brasses) to reduce friction, blade wear, and chip clogging. Keep coolant flowing until job is finished and the blade is stopped.

More pressure can be applied





**REPAIR PARTS FOR # 3 HY DUTY
HACK SAW**

1C	Cabinet Base	29C	Two Groove V-Drive Pulley
2C	Cabinet Door	30C	Hookup Bar
3C	Motor Shelf Bracket	31C	Hookup Bar Bracket
4C	Motor Shelf	32C	Gauge Bar
4C1	Spring for Motor Housing Shelf	33C	Gauge Bar Bracket
5C	Motor Shelf Pin	35C	Saw Frame- Only
6C	Sow Table	36C	Guide Bar
7C	Tension Screw set)	37C	Brass Gibs for Saw Frame (4 to
8C	Hand Wheel for Tension Screw	38C	Connecting Rod Wrist Pin
9C	Pressure Yoke	39C	Connecting Rod
10C	Pressure Yoke Springs (2 to set)	A40C	Saw Blade Support Bar
11C	Tension Bar	41C	Saw Blade Tension Bar
12C	Foot Lever Pad Assembly	42C	Saw Blade Tension Nut
13C	Switch	43C	Saw Blade Tension Clamp
14C	Stop Post for Saw Frame	44C	Stud Bolt for Saw Frame
18C	Flange Casting for Pressure Lever	45C	Solid Vise Jaw
19C	Pressure Lever	46C	Vise Rails (2 to set)
20C	Guide Bar Support Arm	47C	Loose Vise Jaw
21C	Crank Shaft Disc Assembly	48C	Vise Nut
22C	V-Belt	49C	Vise Screw
23C	Main Bearing	50C	Vise Handle
24C	Drive Shaft Pinion Assembly	S1C	Vise Handle Pin
25C	Set Collar	52C	1/8" Pipe Upper Coolant Line
26C	Drive Gear	S3C	Bracket (Upper Coolant Line)
27C	Gear Guard	54C	Lower Coolant Line
28C	Stock Support Bracket	55C	Flexible Coolant Tube Assembly

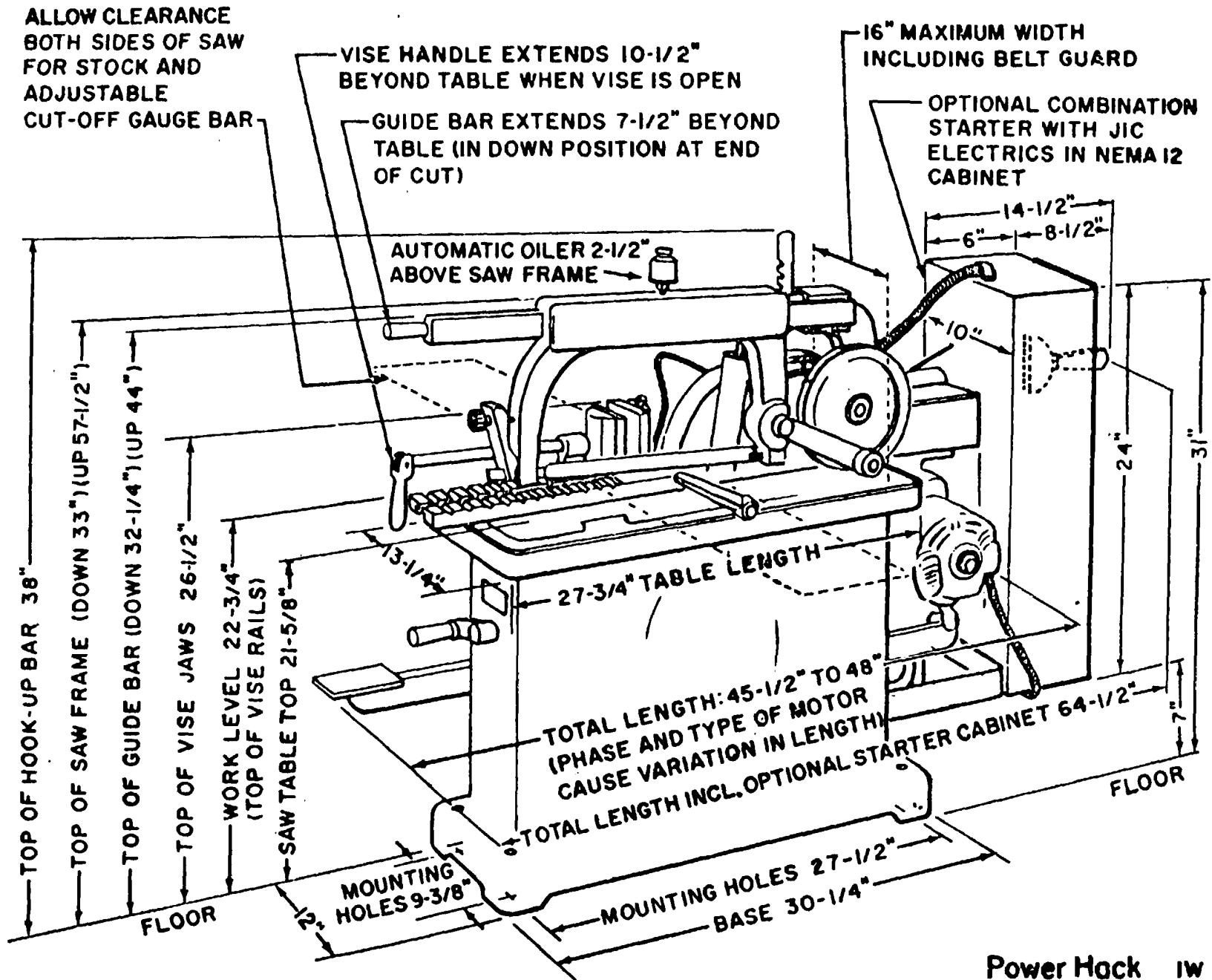
56C Pump Belt (round leather]
57C Pump Pulley (New Style)
58C Pump Stuffing Box
59C Pump Packing
60C Pump Body
Screw
61C Feed Thru Assembly
62C Gauge Bar Clamp
64C Pump Cylinder
(Complete-Less Pulley)
65C Pump Shaft
66C Pump Vane (2 in set)
67C Vane Tension Spring
69C Pump Gasket
70C Pump Cover
88C Switch Trigger Assembly
94C Oil Cup
95C Hi-Lo Pulley
96C Linkage Assembly
99C Speed Indicator

100C Oil Reserve Tank
100C-1 Tank Reservoir Seals
101C Oil Reservoir Cover
101C-1 Victor Seal
106C Hydraulic Pump Yoke Adjusting
107C Vise Complele
108C Saw Frame Complete
109C Coolant Pump

109C-1 Brass Hose Fitting Pump

109C-2 Pump Bushing

109C-3 Pump Arm-toggle (push rod)



Power Hack iw

By Order of the Secretary of the Army:

Official:

J. C. PENNINGTON
Brigadier General, United States Army
The Adjutant General

BERNARD W. ROGERS
General, United States Army
Chief of Staff

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