DEPARTMENT
OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT

AND GENERAL SUPPORT MAINTENANCE

MANUAL INCLUDING REPAIR PARTS LIST

FOR

SAW, POWER HACK

MODEL 3 HY DUTY

(KELLER MANUFACTURING) (3405-00-729-3917)

HEADQUARTERS,
DEPARTMENT OF THE ARMY
NOVEMBER 1980

TECHNICAL MANUAL
No.9-3405-214-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON DC, *28 November 1980*

OPERATOR'S ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS LIST FOR SAW, POWER HACK MODEL 3 HY DUTY (KELLER MANUFACTURING) (NSN 3405-00-729-3917)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299.A reply will be furnished directly to you.

NOTE

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

Manufactured by: Keller Manufacturing
1428 Cliff Road
Burnsville, MN 55337
Procured under Contract No.DAAA09-78-C-4970

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

INSTRUCTIONS FOR REQUISTIONING PARTS

NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Numbers, it is mandatory that the following information be furnished the supply officer

1 - Manufacturer' s Federal Supply Code Number - 6A606 N

2 - Manufacturer's Part Number exactly as listed herein.

3 - Nomenclaturer's exactly as listed herein, including dimensions, if necessary.

4 - Manufacturer's Model t umber - Model 3 HY DUTY

5 - Manufacturer's Serial Number (End Item)

6 - Any other information such as Type, Frame Number, and Electrical Characteristics, if applicable.

7 - If DD Form 1348 is used, fl11 in all blocks except- 4, 5, 6, and remark field in accordance with Al 725-50.

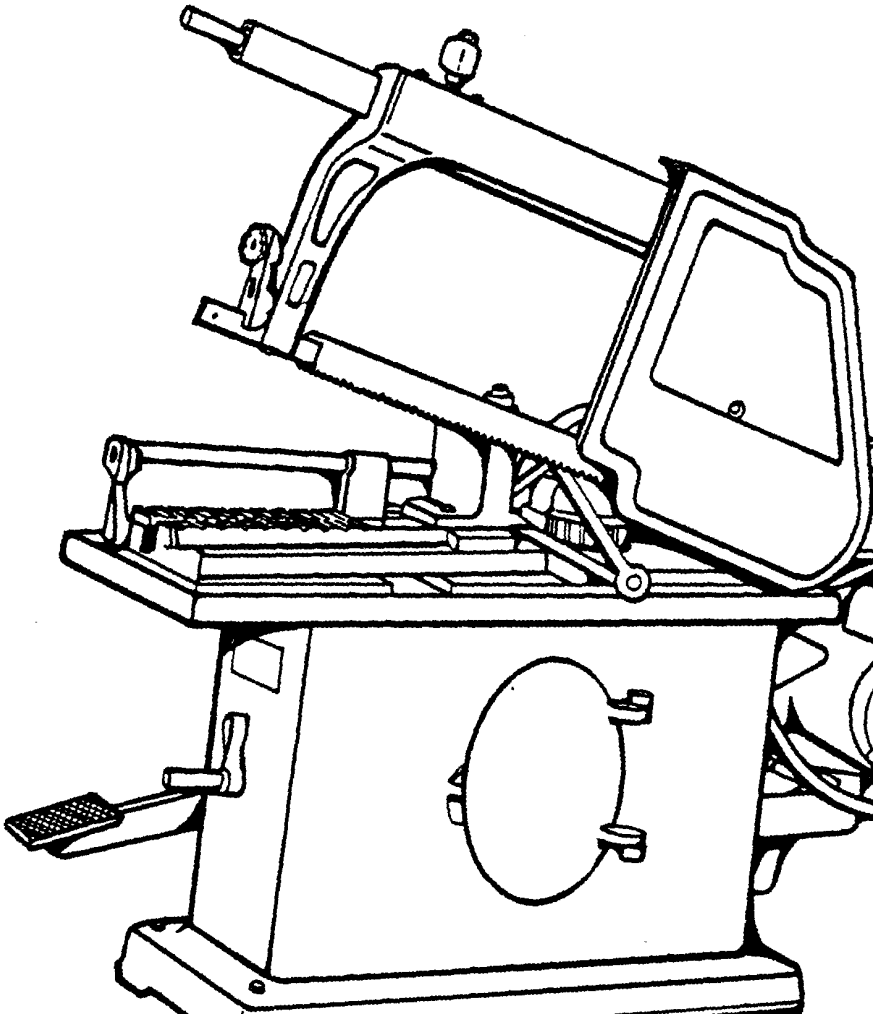
Complete Form as Follow:

(a) In blocks 4, 5, 6, list manufacturer's Federal Supply Code Number - 6A606 N followed by a colon and manufacturer's Part Number for the repair part.

(b) Complete Remarks field as follows:
Noun: (nomenclature of repair part)
For: NSN: 3405-00-729-3917
Manufacturer: Keller Manufacturing

Model: 3 EY DUTY
Serial: (of end item)

Any other pertinent information such as Frame Number, Type. Dimensions, etc.



OPERATING INSTRUCTIONS

This saw is an extremely simple machine to operate. However, there are just a few general instructions which should be followed. This saw is completely wired, ready to run. However, when connecting reversible motors, be sure crank disc is revolving in counterclockwise direction as shown by the arrow. 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 1/8-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 of the machine.

HYDRAULIC LIFT. The hydraulic lift mechanism automatically lifts blade on return stroke. Blades last longer, run cooler and cut better.

VARIABLE FEED PRESSURE CONTROL. Simply 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. Follow the suggestions listed on page 3.The pressure Feed Control is located on the front of the Hy-Duty models.

FOR ANGLE CUTTING. Simply swivel the vise up to 45 degrees and tighten.

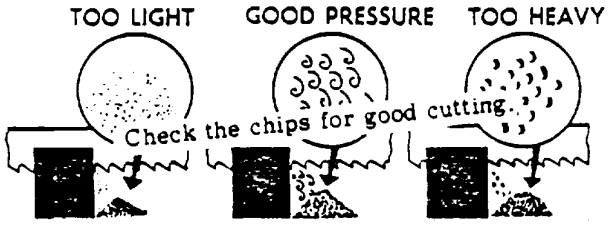
provides a 45 degree angle.

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 finding too heavy. If chips are fine and Wry you are feeding too light. Act with nicely curled chips indicates ideal feeding pressure, fastast cutting time and longest blade life.

For most cutting jobs, the all-hard blade is first choice for straight, accurate cutting. The all- hard 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.

You gain more by selecting the COARSEST TOOTH for the work. This is necessary for good chip appearance as more pressure can be applied for a better bite, without clogging.(Of course, 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.

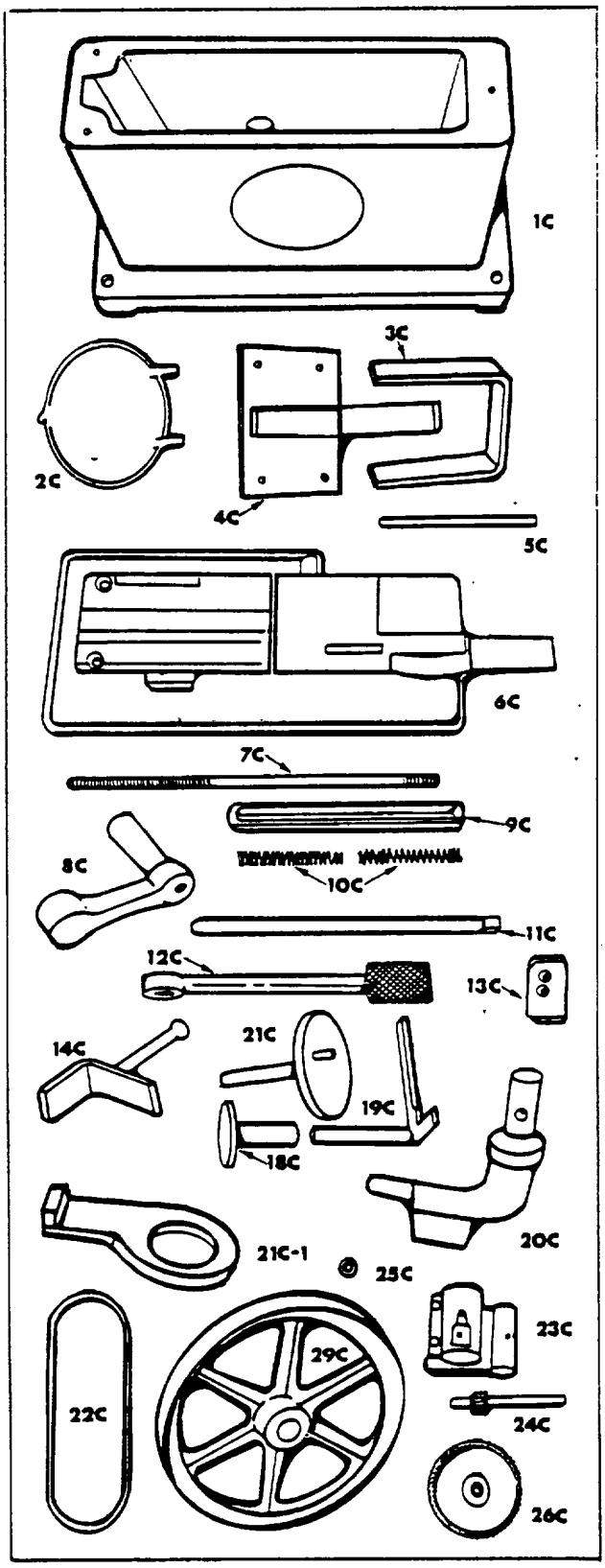
A feed-rate that is too light results in rubbing instead of cutting; (tooth points overheat, soften and break down). For optimum feed rate: Use heavy feed for hard, very dense material-light feed for thin, soft material. For maximum production, you can increase feed by using coarse blades on soft materials. But remember to use moderate feed when straight, accurate cutting is required.

USE PLENTY OF COOLANT

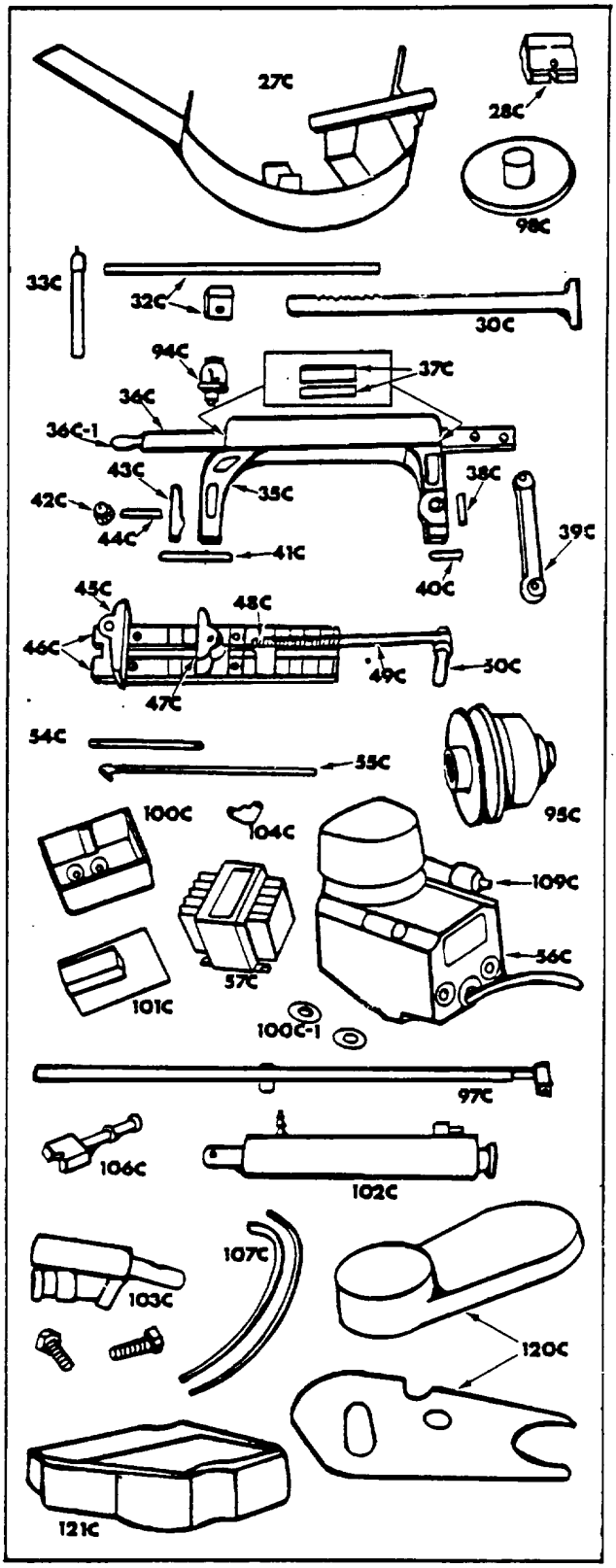
Start the coolant flow before the first cutting stroke. Coolant is needed on all materials (except cast iron, copper and some brasses) to reduce friction, blade wear, and chip clogging. Keep coolant flowing until job is finished and the blade is stopped.

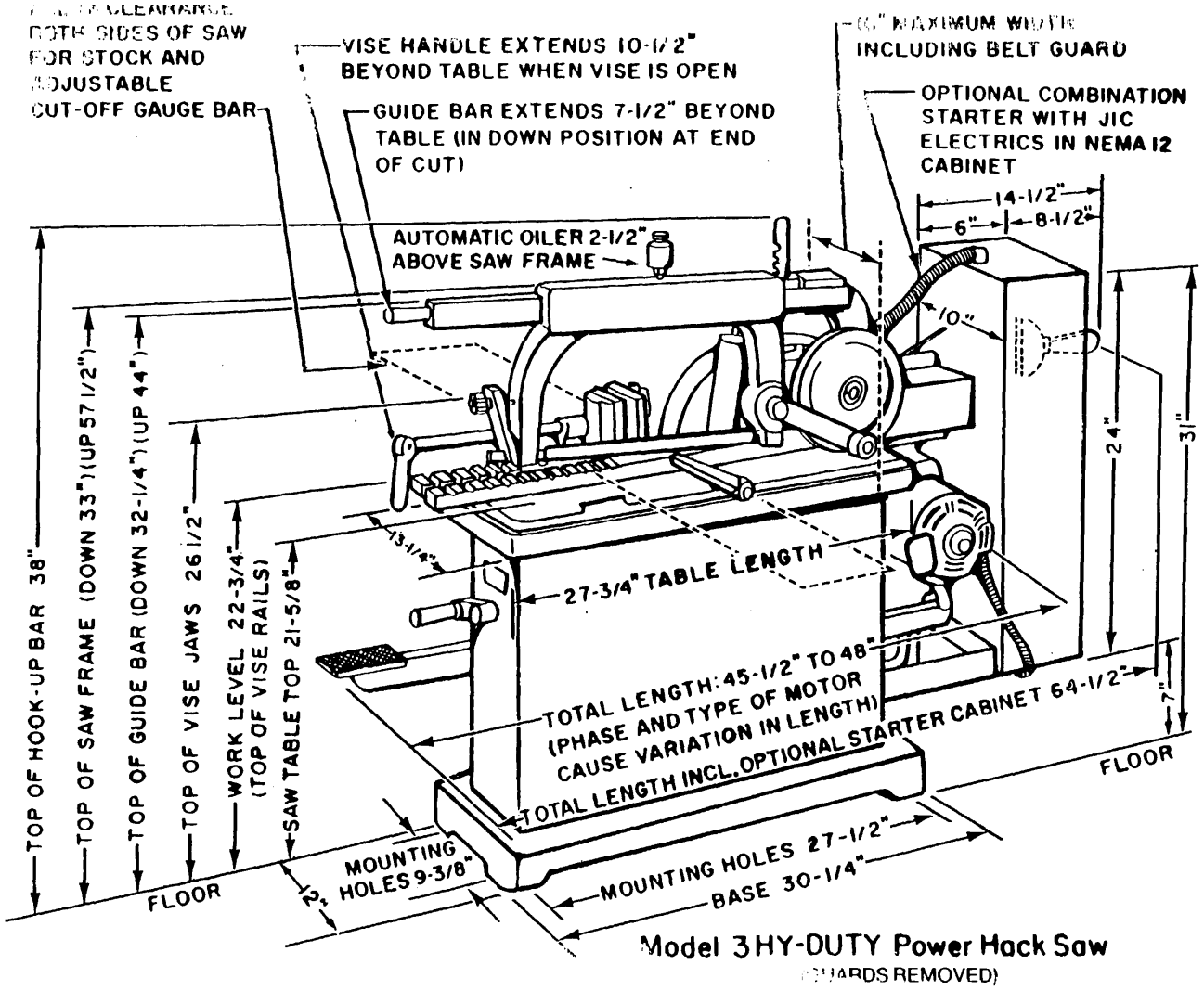
REPAIR PARTS
FOR #3 HY DUTY
HACK SAW

1C	Cabinet Base
2C	Cabinet Door
3C	Motor Shelf Bracket
4C	Motor Shelf
5C	Motor Shelf Pin
6C	Saw Table
7C	Tension Screw
8C	Tension Screw Handle
9C	Pressure Yoke
10C	Pressure Yoke Springs (2 to set)
11C	Tension Bar
12C	Foot Lever Pad Assembly
13C	Switch
14C	Stop Post and Shut-Off Assembly
18C	Flenge Casting for Pressure Lever
19C	Pressure Lever
20C	Guide Bar Support Arm
21C	Crank Shaft Disc Assembly
21C-1	Hydraulic Pump Cam Lever
22C	V-Belt
23C	Main Bearing
24C	Drive Shaft Pinion Assembly
25C	Set Collar
26C	Drive Gear
29C	V-Drive Pulley



27C Gear Guard
28C Stock Support Bracket
30C Hookup Bar Assembly
32C Gauge Bar Clamp
330 Gauge Bar Assembly
35C Saw Frame-Only
36C Guide Bar
36C-1 Guide Bar Handle & Pin
37C Brass Gibs for Saw Frame (4 to set)
38C Connecting Rod Wrist Pin
3SC Connecting Rod
40C Saw Blade Support Bar
41C Saw Blade Tension Bar
42C Saw Blade Tension Nut
43C Saw Blade Tension Clamp
44C Stud Bolt for Saw Frame
45C Solid Vise Jaw
46C Vise Rails (2 to set)
47C Loose Vise Jaw
48C Vise Nut
49C Vise Screw Assembly
50C Vise Complete
54C Lower Coolant Line
55C Flexible Coolant Tube Assembly
56C Coolant Pump
57C Transformer for Coolant Pump (Required only on Three Phase Electrics)
94C Automatic Oiler
95C Hi-Lo Motor Pulley
97C Variable Speed Control Assembly
98C Handwheel for Variable Speed Control
100C Oil Reservoir Tank
100C-1 Tank Reservoir Seals
101C Oil Reservoir Cover
102C Hydraulic Cylinder Assembly
103C Hydraulic Pump Assembly
104C Hydraulic Pump Elbow
106C Hydraulic Pump Push Rod
107C Hydraulic Lines
109C Brass Hose Fitting Pump
120C Belt Guard Assembly
121C Crank Disc Guard





Model 3HY-DUTY Power Hack Saw
(GUARDS REMOVED)

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