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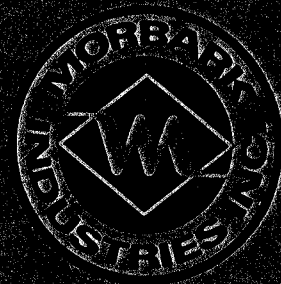
15" SHEAR

Operators/Parts Manual

PETTIBONE MICHIGAN CORP.

15" Shear s/n 1198

Customer Copy



Whitt. Mich. 48896

15" FELLER BUNCHER SHEAR

Customer Pettibone Michigan Corporation S/N 1198

P/O No. 113996 W/O No. 8800 Completion Date 8-1-79

| CYLINDERS | | GRABBER BUSHINGS | KNIFE HOLDER BUSHINGS |
|-----------|--|---|---|
| QUAN. | | | |
| 3 | <input checked="" type="checkbox"/> 2510 Jarp | <input checked="" type="checkbox"/> 23128 - 050 | <input checked="" type="checkbox"/> 23128 - 060 |
| 2 | <input type="checkbox"/> DY 512 - 9 | <input type="checkbox"/> Other | <input type="checkbox"/> Other |
| 2 | <input type="checkbox"/> 5512 | _____ | _____ |
| 2 | <input checked="" type="checkbox"/> 612 Aurelius | _____ | _____ |
| | <input type="checkbox"/> Other | | |
| | _____ | | |
| | _____ | | |

| GATHERING FINGER BUSHINGS | SPRING | TRACTOR |
|---|---|---|
| <input checked="" type="checkbox"/> 23128 - 050 | <input checked="" type="checkbox"/> 24741 - 611 | <input type="checkbox"/> MANUFACTURER |
| <input type="checkbox"/> Other | <input type="checkbox"/> Other | <input type="checkbox"/> <u>Pettibone</u> |
| _____ | _____ | <input type="checkbox"/> MODEL |
| _____ | _____ | <input type="checkbox"/> <u>800 Hydra Mower</u> |

- ☐ Tree Limiter
 ☐ Additional Gathering Finger
 ☐ Air Divertor Valve
 ☐ Solenoid Divertor Valve
 12V ☐ 24V ☐

Notes:

Checked By: Dave Helms Date: 8-1-79

WARRANTY

MORBARK INDUSTRIES, INC., Winn, Michigan 48896 ("MORBARK") warrants to the original purchaser that this product will be free from defects in materials and workmanship, under normal use and service, for a period of ninety (90) days from the date of original delivery following purchase. This limited warranty is expressly conditioned on the purchaser's use of the product in conformance with the instructions provided with this product. This Limited Warranty is void if the product has been damaged by accident or unreasonable use, neglect, improper service or other cause not arising out of defects in material or workmanship. MORBARK will not repair or replace the product or be responsible for any damages or injury to persons or property resulting from any attempt by the purchaser or by any unauthorized person or service personnel, to repair, adjust, assemble or otherwise tamper with the product, or its wiring, controls or components. Excluded from this warranty are engines and engine components, hydraulic motors and pumps, batteries, tools, and electrical equipment, other similar equipment not manufactured by MORBARK INDUSTRIES are covered only by the standard warranties of the manufacturers of such equipment and are not under warrantee by Morbark Industries. Such items or components, while not covered by this limited warranty, may in some instances be covered by warranties of the manufacturers of such items or components, but MORBARK makes no representations and assumes no responsibility in this regard.

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NO EXPRESS OR IMPLIED WARRANTY, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, SHALL EXTEND FOR ANY PERIOD OF TIME GREATER THAN 90 DAYS FROM THE DATE OF ORIGINAL DELIVERY OF THIS PRODUCT. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

MORBARK SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES IF THIS PRODUCT IS DEFECTIVE OR DOES NOT CONFORM WITH ANY EXPRESS OR IMPLIED WARRANTY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

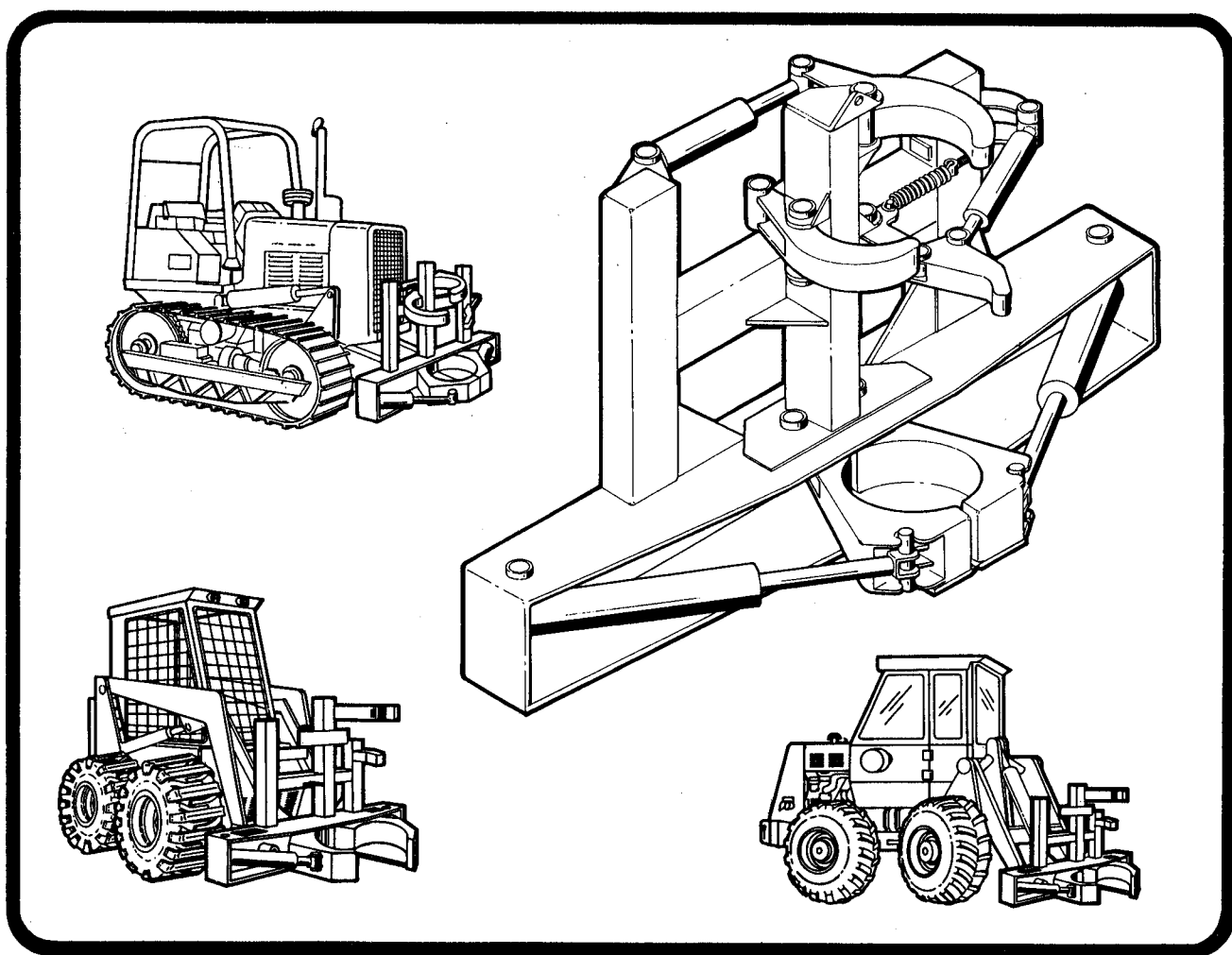
NO representative, agent or dealer of MORBARK has authority to modify, expand or extend this warranty in any manner.

This warrant gives you specific legal rights, and you may also have other rights which vary from state to state.

| | |
|-------------------|---------------------|
| DEALER NAME _____ | CUSTOMER NAME _____ |
| BY _____ | BY _____ |
| TITLE _____ | TITLE _____ |
| DATE _____ | DATE _____ |

MORBARK 15" **FELLER BUNCHER** **SHEAR**

OPERATORS/PARTS MANUAL



MORBARK INDUSTRIES INC.

BOX 1000 WINN, MICHIGAN 48896 USA
TELEPHONE 517 866-2381 TELEX 227-443



...the Chiparvestor people

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FOREWORD

This booklet has been written to provide the owner/operator with the basic information essential to the operation, maintenance and routine servicing of the Morbark 15" Feller Buncher Shear. Keep this book where the operator will be able to refer to it frequently.

The operator should read this manual thoroughly and familiarize himself with the equipment before attempting to operate.

The description and specifications contained in this manual were in effect at the time the book was approved for printing. Morbark reserves the right to discontinue model lines at any time, or change specifications or design, without notice and without incurring obligation.

The serial number of your Morbark Feller Buncher Shear is stamped on a plate welded to the top of the finger cylinder lug, located on the upper right frame support.

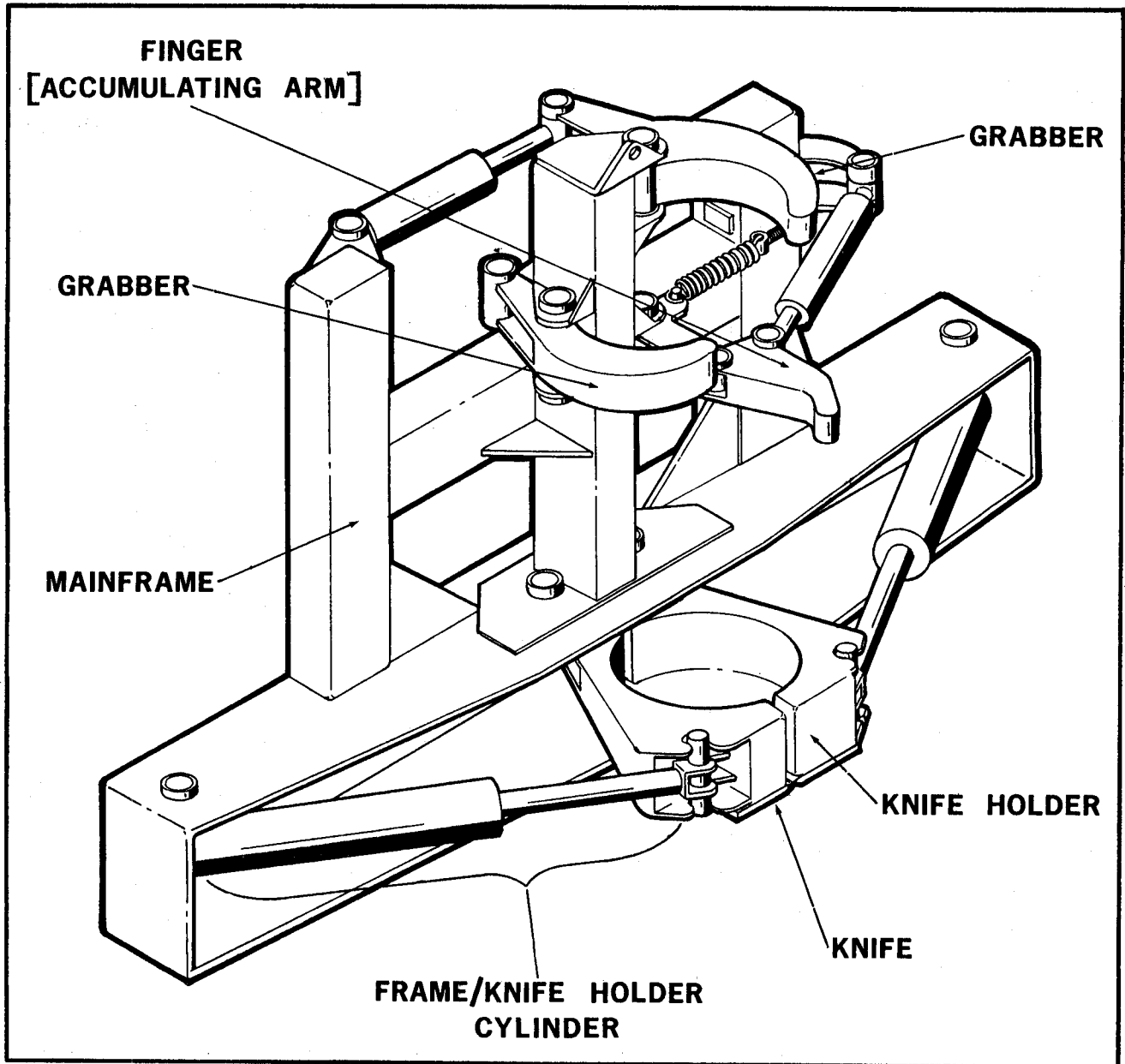
For additional information not contained within the operators and parts manuals of this booklet, contact your nearest Morbark Parts Center.

If for any reason you find it necessary to correspond with Morbark concerning questions about your Shear, be sure the following information is complete: (This also applies when ordering parts through your local Morbark Parts Center).

- Serial Number (of particular machine being serviced)
- Part Number (series located on left of parts lists)
- Part Name (located under DESCRIPTION on parts lists)
- Shipping Method (Both method and routing must be specified or shipment will be sent at shipping department's discretion.)



GETTING FAMILIAR WITH YOUR NEW SHEAR



In order to categorize the assemblies that make up your Morbark Shear, they have been broken down as follows: (This will assist you also in understanding the terminology used in the Operators' instructions section of this manual.)

GRABBER

This is the support which acts as a pincher to control timber movement after the initial cut and when transporting the felled tree or trees.

KNIFE HOLDER

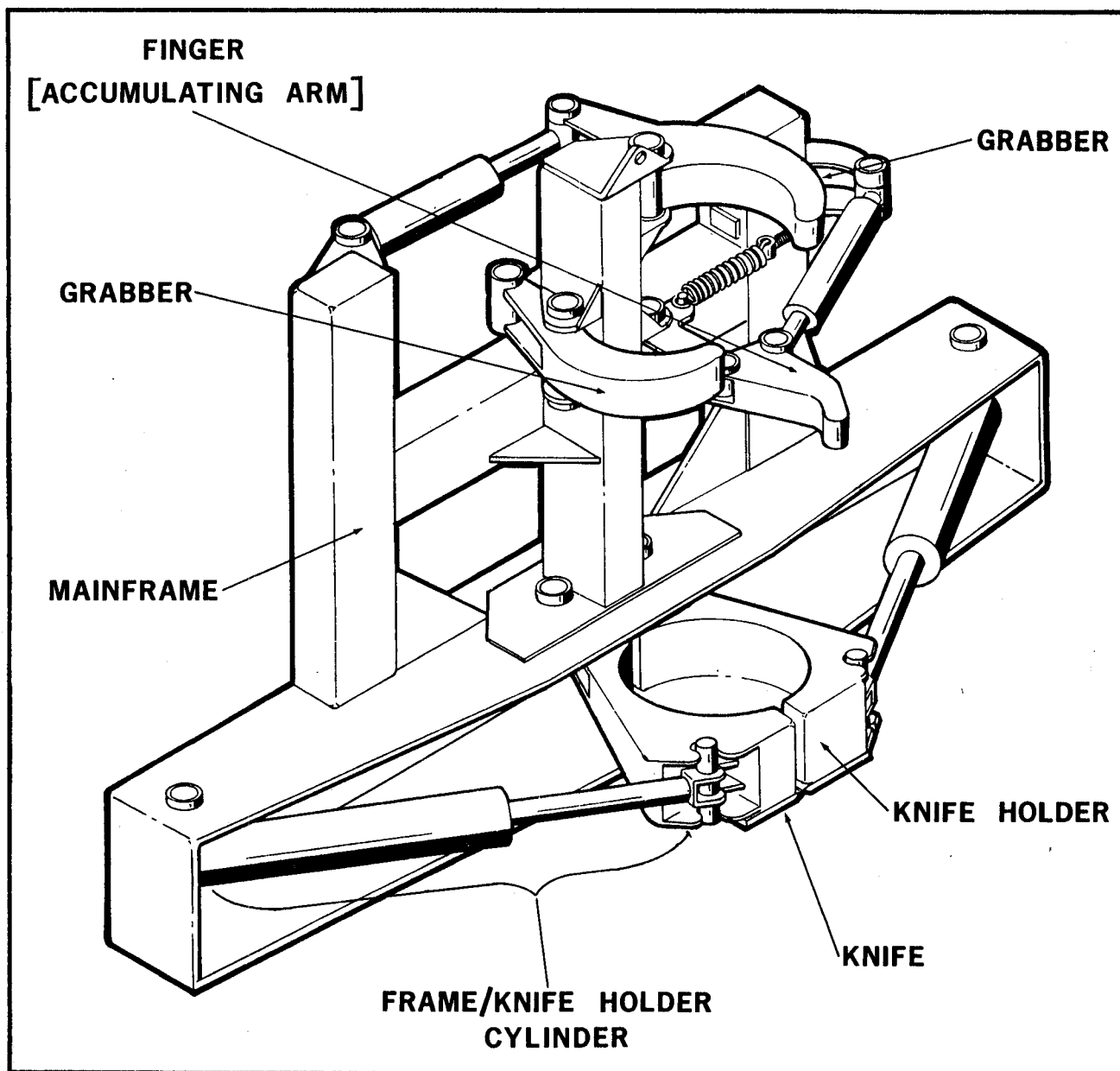
Enables the knife to remain stationary and lets the operator know the approximate tree size the shear is capable of handling.

FINGER (ACCUMULATING ARM)

This Morbark patented feature permits the operator to shear and collect several small trees or two or three medium size trees, in succes-

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sive and continuous motion before bunching.

KNIVES

Precisioned machined blades which are removable for re-sharpening.

FRAME/KNIFE HOLDER CYLINDER

Hydraulically accutuated cylinder which con-

trols the force needed to shear timber in harvesting operations. There are three different sizes of cylinders available (See hydraulic components section) with appropriate seal kits.

MAIN FRAME

The main frame is a weldment assembly to which all other assemblies are mounted.

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OPERATING INSTRUCTIONS

TREE SHEARING

A pre-planned pattern for tree felling should first be established before proceeding with tree felling and bunching operation. This pattern may vary according to existing conditions, such as:

1. Tree row spacing in plantation forest, random, or clear cutting.
2. Type of terrain — hilly, level, sandy, swampy.
3. Diameter and height of trees to be felled.
4. Type of trees to be felled — hardwood, softwood.
5. Location of landing/chipping site.
6. Hauling distance to clear area.

The following illustrations are recommended tree felling and bunching patterns, designed to cut cycle time to a minimum and take full advantage of the Morbark Shear's unique maneuverability features.

TREE SIZES

The Morbark Shear will cut trees up to the following sizes: Softwood (Pine, Fir, Spruce, etc.) Maximum trunk diameter at base . . . 15". Hardwood (Maple, Birch, Oak, etc.) Maximum trunk diameter at base . . . 12"-15". These sizes are based on average core density, some may be extremely hard or soft. This would affect the maximum cutting size. Cutting a tree very close to the root base, particularly with hardwoods, sometimes may prove difficult due to the trunk's "flare" at this point. When this occurs, raising the shear cutting blade above the flare will facilitate in easier cutting of the trunk.

PLANTATION CUTTING (6 foot row spacing)

First, clear an area near the trees to be removed. Start removing trees from one row as shown in (Fig. 1). Pre-bunch trees in the

cleared area, with butts facing toward the landing. Pre-bunch only as many trees as can be picked up by the skidder. To clear the next pre-bunching area, remove one or two trees from adjacent row. Continue removing trees in the original row and pre-bunch as many trees in the cleared area as the skidder can pick up, then proceed to clear the next pre-bunching area.

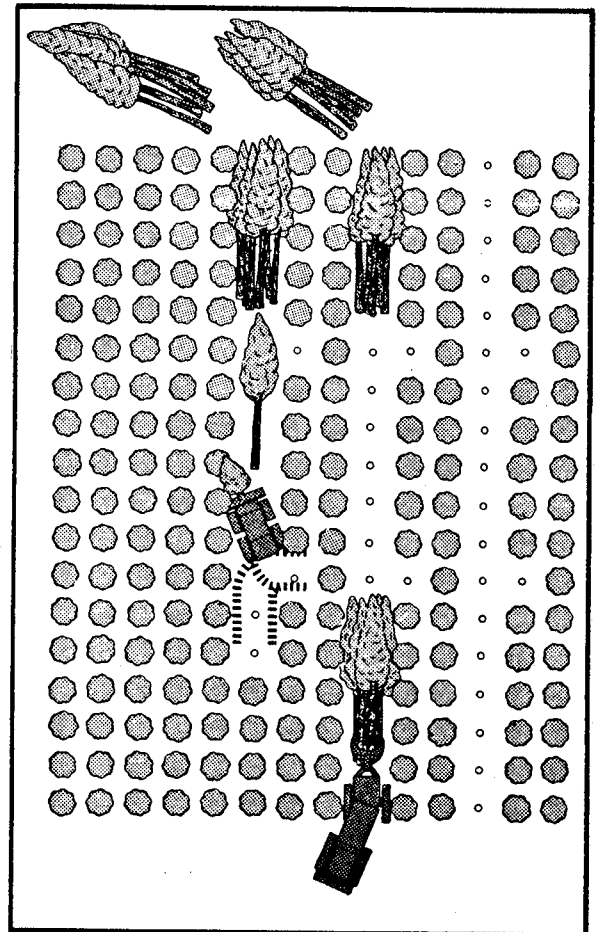


Figure 1

PLANTATION CUTTING (12 foot row spacing)

Follow the same pattern as in 6 foot row spacing. Cut trees can be pre-bunched to the side as shown in Fig. 2, with butts toward the landing.

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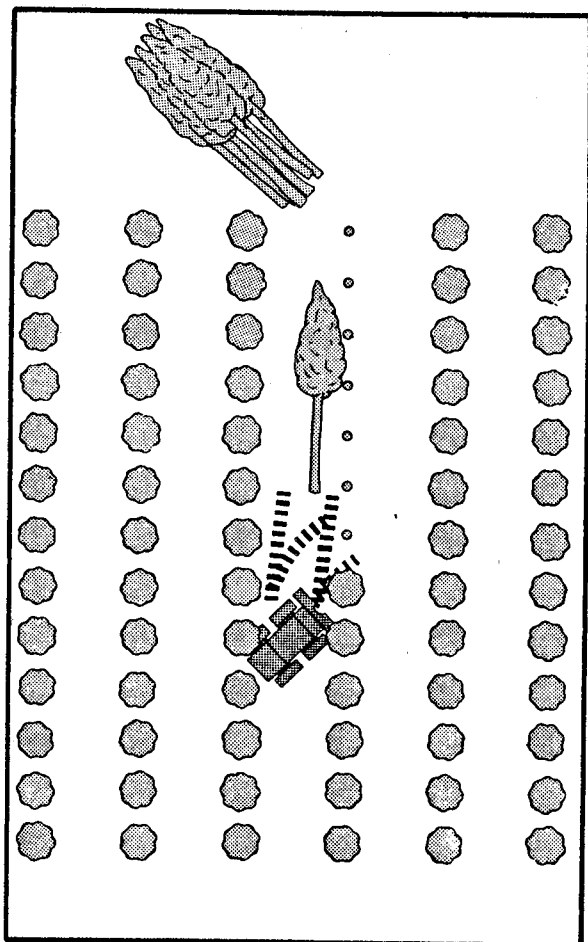


Figure 2

CLEAR CUTTING

In the clear operation, start by clearing an area for prebunching of cut trees. The cleared area should be within easy approach of the landing. Removed trees may be pre-bunched according to size if desired, with butts always facing toward landing. (See Fig. 3).

THINNING (Random Cutting)

Thinning operation usually involves taking only selected trees at the Shear operator's discretion, or trees previously marked for removal. An area must first be cleared, preferably at or near the landing. Cut the trees which have been selected, or marked, for cutting. Fig. 4 shows a typical natural stand

cutting pattern for this type of tree shearing operation. Avoid trees which are too large to cut with the Feller Buncher Shear.

SLOPE CUTTING OPERATION

Slope cutting requires more experience in operating the Morbark Shear than in level terrain cutting. Special care must be used due to the unbalanced effect when ascending or descending sloped terrain.

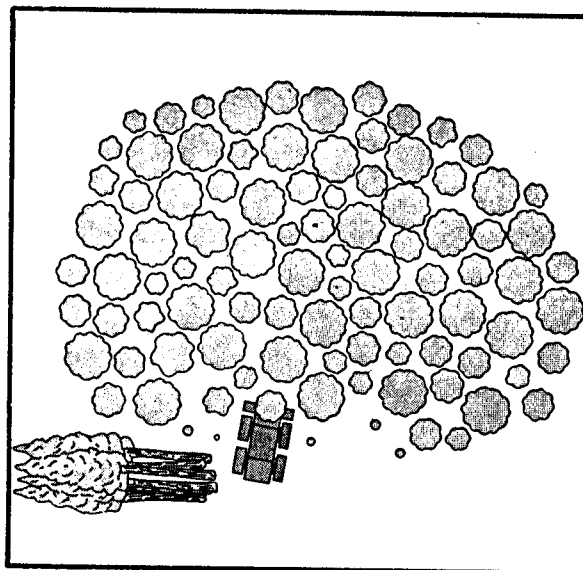


Figure 3

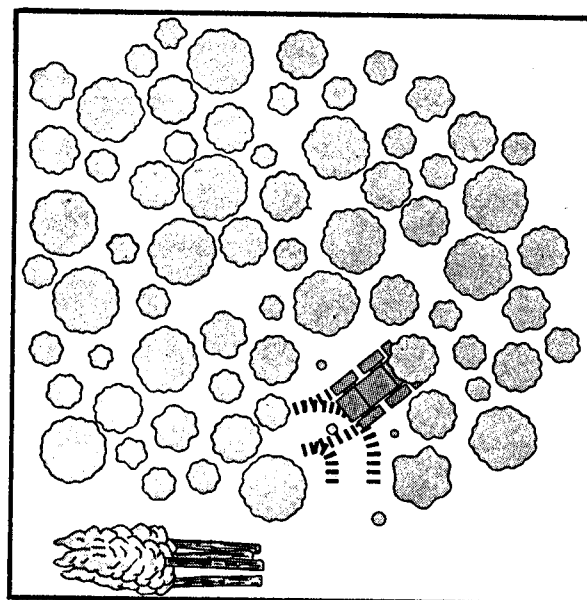


Figure 4



SLOPE CUTTING, CONT.

New Morbark Shear operators should not attempt slope cutting of trees until they have gained experience and are completely familiar with the operation of the machine. Trees to be removed on sloping terrain should always be approached directly from above or from below the tree, never from the side. The Shear must be tilted to forward or back to properly grasp the tree in a vertical position. (See Fig. 5 & 6)

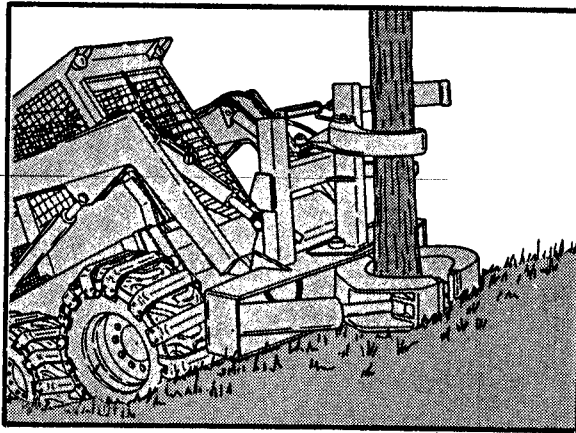


Figure 5

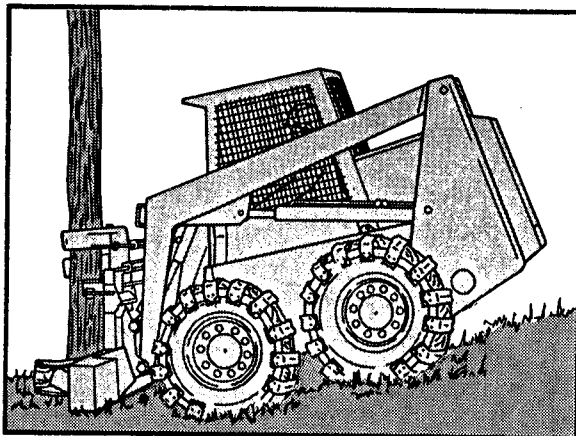


Figure 6

Carrying out trees up or down a slope calls for special care. When carrying trees down hill, tilt shear back so that the tree is leaning back, or over the machine (Fig. 7). When carrying trees uphill, tilt Shear out, so that the tree leans away from the machine (Fig. 8).

Never attempt to turn or pivot the tractor while on a slope. Wait until reaching level ground before turning. Remember to periodically check hydraulic hoses for good connection. "Cycle" Shear cutting jaws and "Grabber" arms to clear out any air which may be trapped in cylinders.

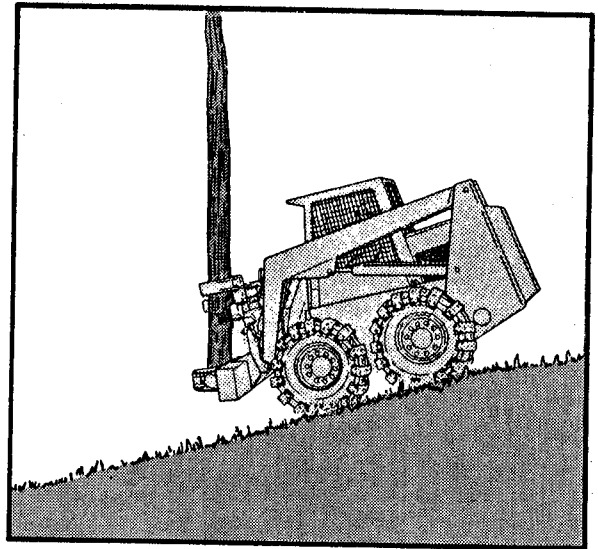


Figure 7

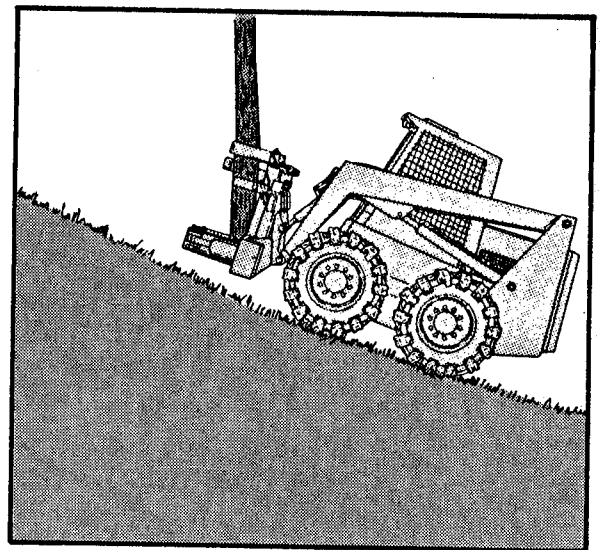


Figure 8

CARRYING TREES

Trees should be carried nearly vertical and as low as possible, allowing sufficient height to clear stumps, rocks, etc. Safe ground speed

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TREE CARRYING, CONT.

of the tractor is dependent upon the type of terrain. Use caution when carrying the trees, especially when driving over uneven terrain.

APPROACHING SELECTED TREE (Fig. 9)

1. Open gathering arm fully.
2. Open Shear cutting jaws and "grapple" arms fully.
3. Approach tree with Shear raised 2-3 inches off ground.

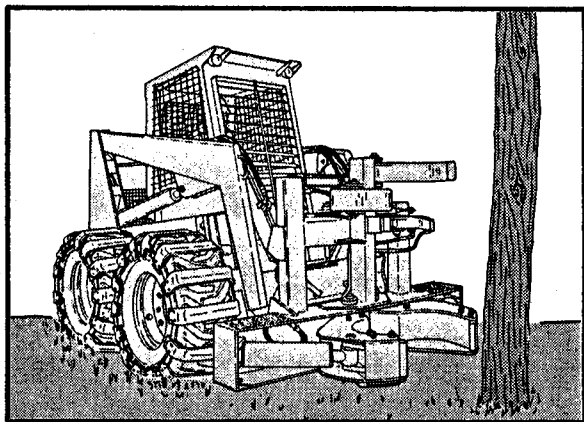


Figure 9

CUTTING POSITION (Fig. 10)

1. Lower Shear to the ground and drive forward to engage tree fully.
2. Tilt Shear if necessary, so that "grapple" arms will be vertically in line with tree.

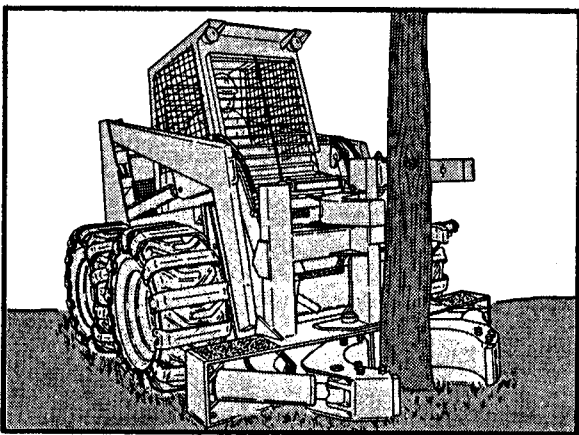


Figure 10

CLAMPING AND CUTTING

1. Actuate Shear to cut tree. The "grapple" arms will clamp the tree as soon as cutting blades begin to cut into tree.
2. Apply slight pressure on tilt lever to "nudge" the tree as blades complete the cut. This action will help separate the tree from the stump.

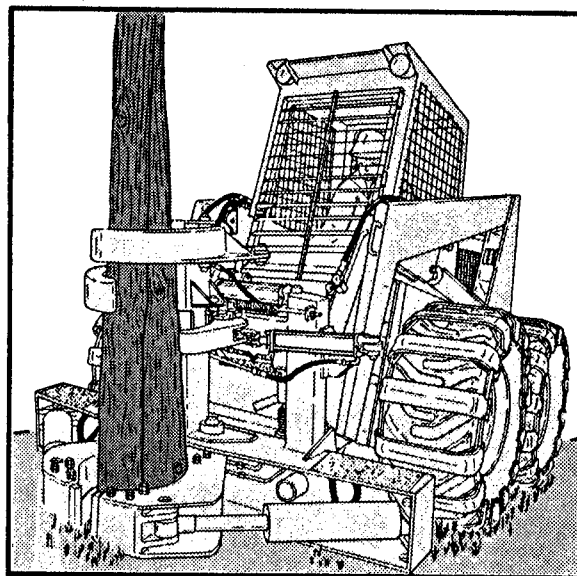


Figure 11

USING THE GATHER ARM

The gathering arm must be opened each time another tree is cut and added, and closed again when the Shear is opened for the next tree. (Fig. 11) Use of the gathering arm will reduce the number of trips to the bunching area.

PRE-PILING (BUNCHING)

Pre-piling or bunching is done at a cleared area where the shearing operation is taking place and within access of the chipping area of the landing. The butts (bottom end of tree) must face toward the direction being hauled and must be placed evenly in line. The number of trees pre-piled is dependent upon the capacity of the skidder.



TO DEPOSIT A TREE:

1. When approaching pile, tilt Shear out.
Raise Shear as required.
2. Stop machine at end of pile and open the Shear to release tree (Fig. 12).
3. Do not attempt to stop a tree in mid-fall.
4. Lower shear before proceeding forward or backward. This will facilitate the machine operator in preparing for further tree shearing.

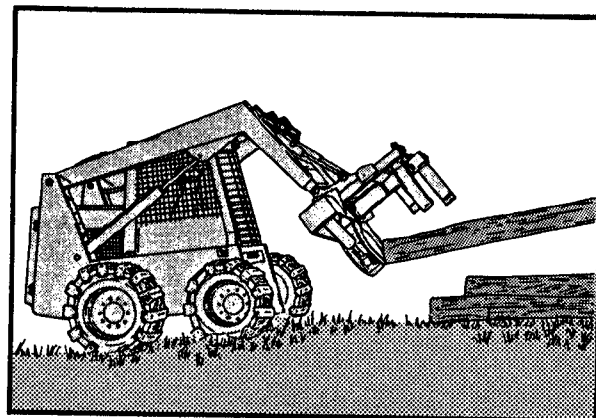
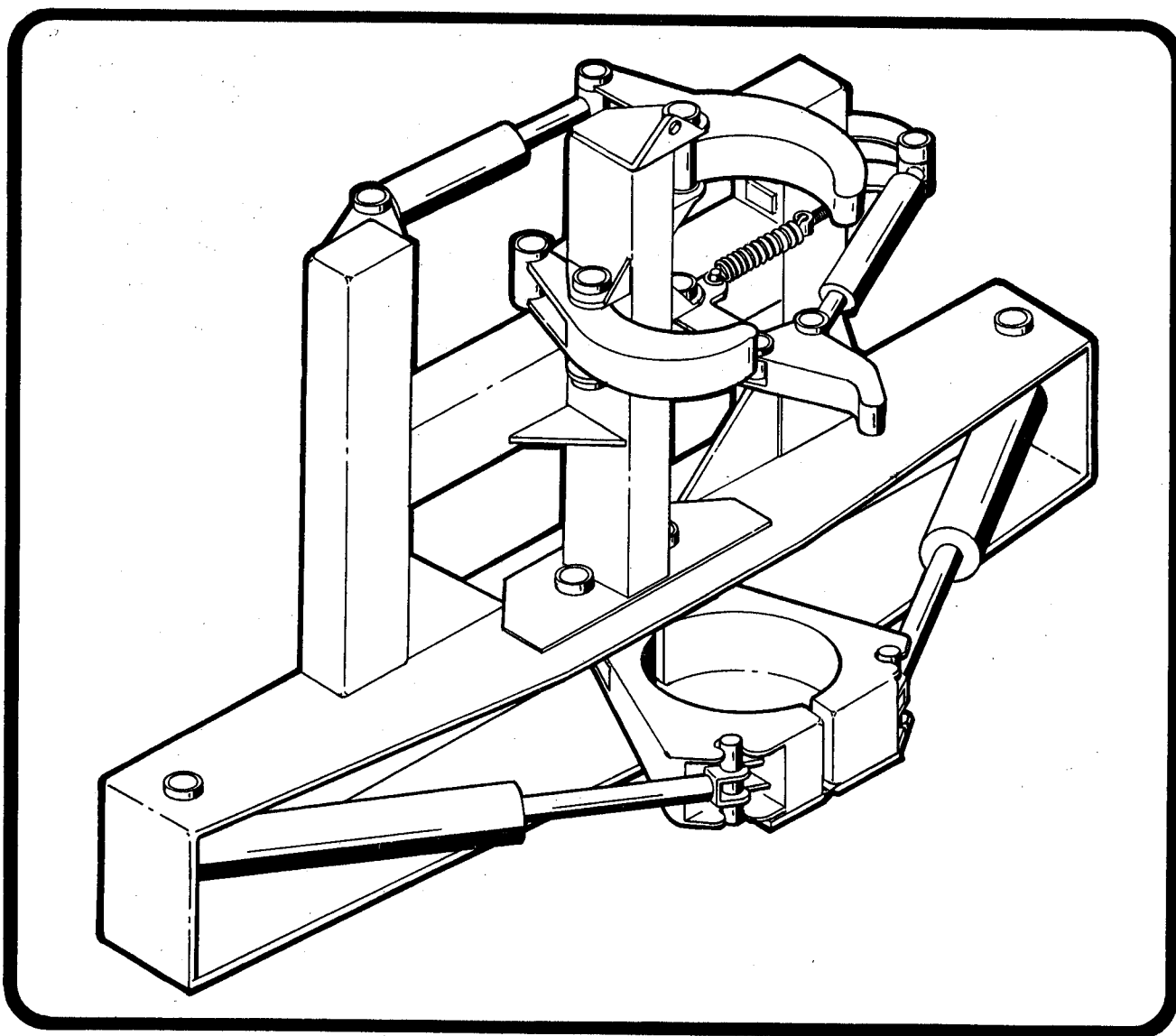


Figure 12



MECHANICAL

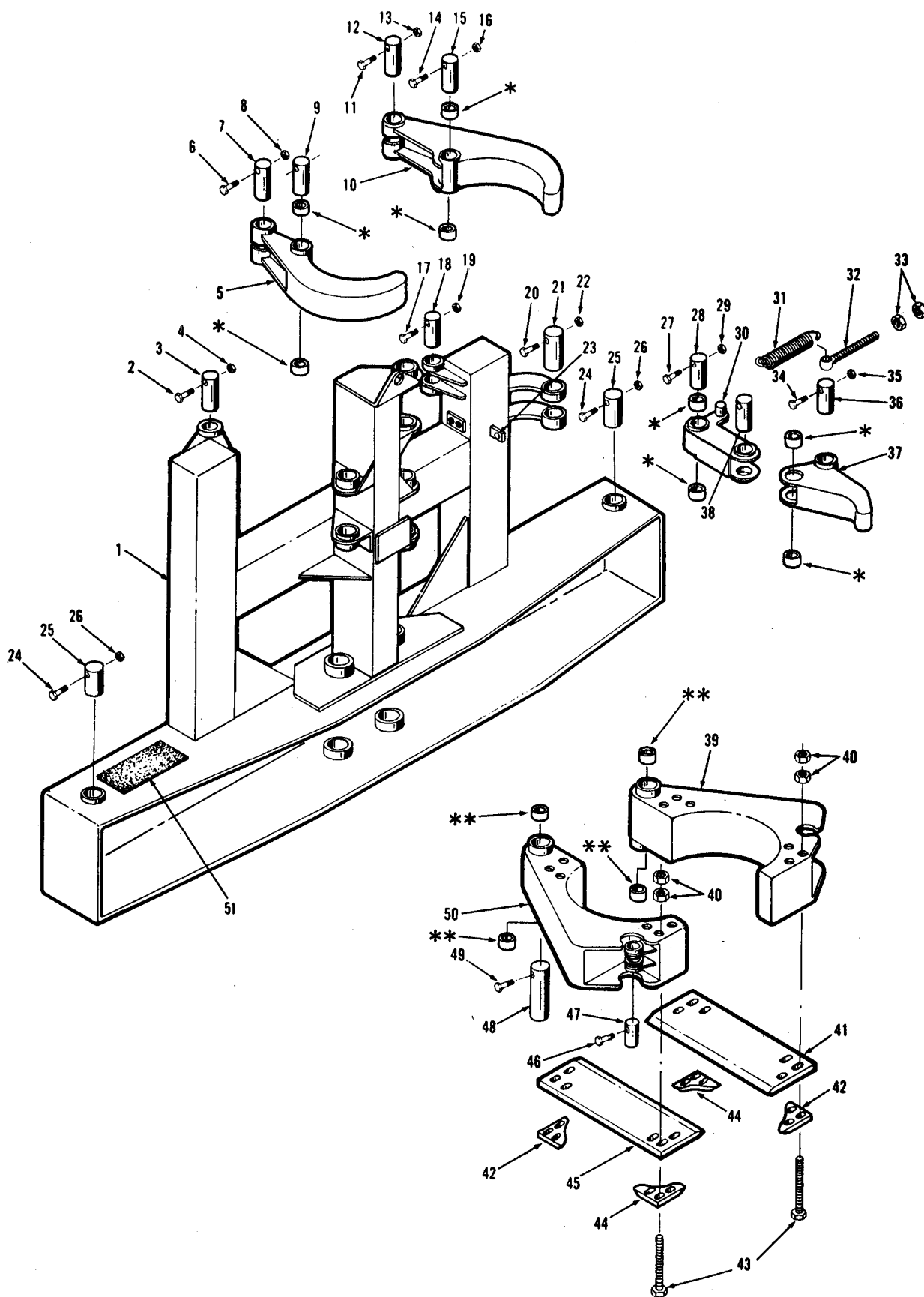
PARTS



This section gives a complete listing of parts used in manufacturing the Morbark Shear. All gussets, braces and pivots are considered part of the mainframe. If for any reason, a replacement of one of these parts is necessary, a complete description of the part should be included.



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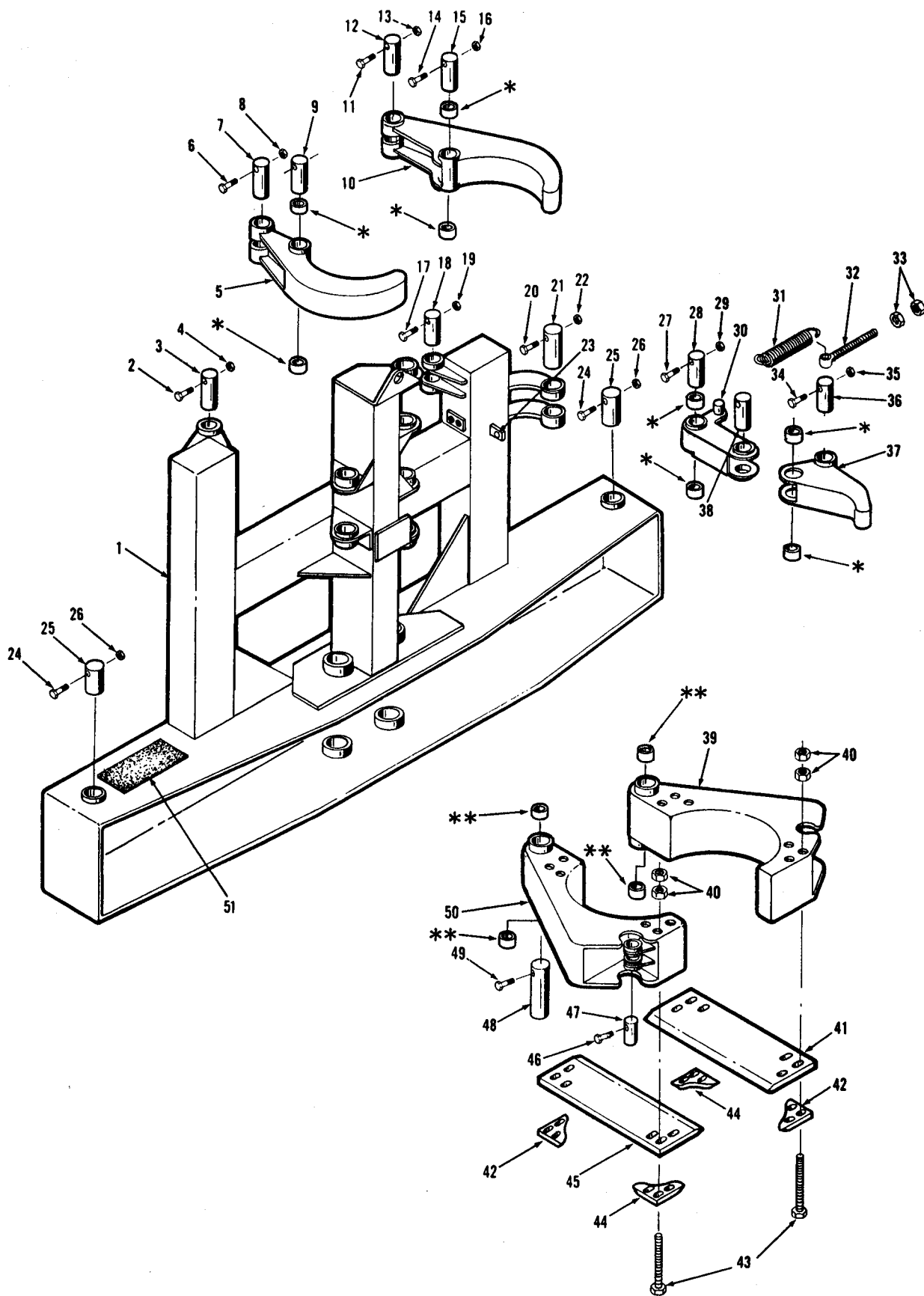
MECHANICAL PARTS

| ITEM NO. | PART NO. | DESCRIPTION | QTY. REQ'D. |
|----------|----------------|--|-------------|
| 1 | 010 D 0228 G00 | Mainframe (Not a Replacement Item) | 1 |
| 2 | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 | 1 |
| 3 | 39239-055 | Pin (Grabber Cylinder to Frame) | 1 |
| 4 | 21731-006 | Nut 3/8" UNC Standard | 1 |
| — | 21171-111 | Washer-Lock 3/8" (Not Shown) | 1 |
| 5 | 010 B 0225 G01 | Grabber | 1 |
| * | 23128-050 | Bushing-Solid Steel | 2 |
| 6 | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 | 1 |
| 7 | 39239-060 | Pin (Cylinder to Grabber) | 1 |
| — | 21171-111 | Washer-Lock 3/8" (Not Shown) | 1 |
| 8 | 21731-006 | Nut 3/8" UNC Standard | 1 |
| 9 | 39239-065 | Pin - (Grabber to Frame) | 1 |
| — | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 (Not Shown) | 1 |
| — | 21731-006 | Nut 3/8" UNC (Not Shown) | 1 |
| — | 21171-111 | Washer-Lock 3/8" (Not Shown) | 1 |
| 10 | 010 B 0225 G00 | Grabber - Finger Side | 1 |
| * | 23128-050 | Bushing - Solid Steel | 2 |
| 11 | 21612-438 | Bolt - 3/8" x 3" UNC Grade 8 | 1 |
| 12 | 39239-060 | Pin (Cylinder to Grabber) | 1 |
| — | 21171-111 | Washer - Lock 3/8" (Not Shown) | 1 |
| 13 | 21731-006 | Nut 3/8" UNC | 1 |
| 14 | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 | 1 |
| 15 | 39239-065 | Pin (Grabber to Frame) | 1 |
| — | 21171-111 | Washer-Lock 3/8" (Not Shown) | 1 |
| 16 | 21731-006 | Nut 3/8" UNC | 1 |
| 17 | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 | 1 |
| 18 | 39239-055 | Pin (Grabber Cylinder to Frame) | 1 |
| — | 21171-111 | Washer-Lock 3/8" (Not Shown) | 1 |
| 19 | 21731-006 | Nut 3/8" UNC | 1 |
| 20 | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 | 1 |
| 21 | 39239-055 | Pin (Finger Cylinder to Frame) | 1 |
| — | 21171-111 | Washer-Lock 3/8" (Not Shown) | 1 |
| 22 | 21731-006 | Nut 3/8" UNC | 1 |
| 23 | 010 A 0131 H00 | Lug - Spring Tension | 1 |
| 24 | 21612-440 | Bolt 3/8" x 3 1/2" UNC Grade 8 | 2 |
| 25 | 39239-070 | Pin (Knife Cylinder to Frame) | 2 |
| — | 21171-111 | Washer-Lock 3/8" (Not Shown) | 2 |
| 26 | 21731-006 | Nut 3/8" UNC | 2 |
| 27 | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 | 1 |
| 28 | 39239-065 | Pin-Finger Holder to Frame | 1 |
| — | 21171-111 | Washer-Lock 3/8" (Not Shown) | 1 |
| 29 | 21731-006 | Nut 3/8" UNC | 1 |
| 30 | 010 B 0110 G00 | Finger Holder | 1 |
| * | 23128-050 | Bushing-Solid Steel | 2 |
| 31 | 24741-611 | Spring - Finger Holder Tension | 1 |

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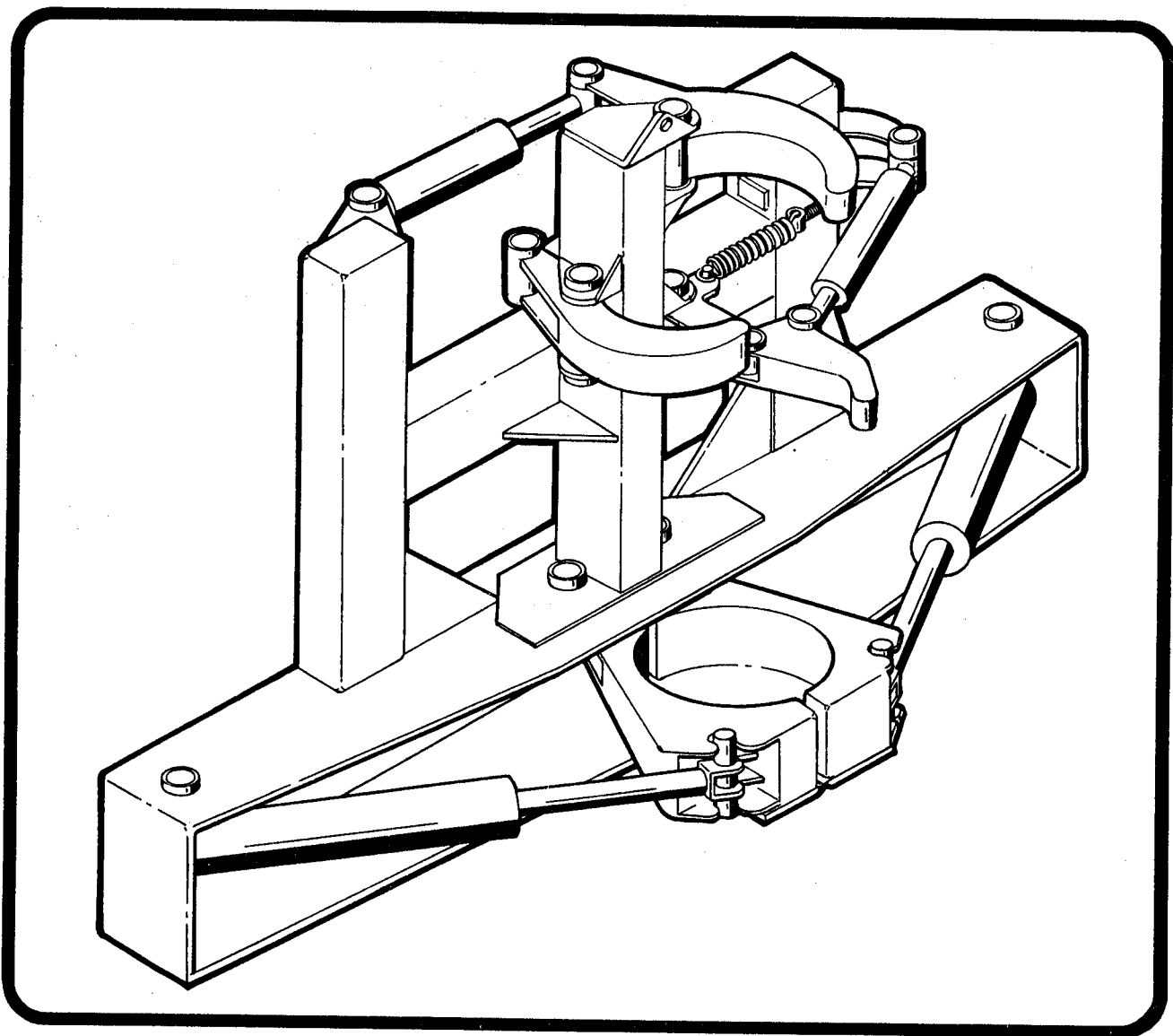


MECHANICAL PARTS

| ITEM NO. | PART NO. | DESCRIPTION | QTY. REQ'D. |
|----------|----------------|--|-------------|
| 32 | 21711-038 | Eye Bolt 5/8 x 8 | 1 |
| 33 | 21731-040 | Nut 5/8" UNC | 2 |
| 34 | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 | 1 |
| — | 21171-111 | Washer - Lock 3/8" (Not Shown) | 1 |
| 35 | 21731-006 | Nut 3/8" UNC | 1 |
| 36 | 39239-055 | Pin - Cylinder to Finger | 1 |
| 37 | 010 C 0239 G00 | Finger | 1 |
| 38 | 39239-060 | Pin - Finger Holder to Finger | 1 |
| * | 23128-050 | Bushing - Solid Steel | 2 |
| — | 21612-438 | Bolt 3/8" x 3" UNC Grade 8 | 1 |
| — | 21171-111 | Washer - Lock 3/8" (Not Shown) | 1 |
| — | 21731-006 | Nut 3/8" UNC (Not Shown) | 1 |
| 39 | 010 D 0003 G00 | Knife Holder - Finger Side | 1 |
| ** | 23128-060 | Bushing - Solid Steel | 2 |
| 40 | 21731-071 | Nut 3/4" UNC Grade 8 | 24 |
| 41 | 010 B 0027 H00 | Knife | 1 |
| 42 | 010 A 0018 H00 | Knife Holder Plate (Right Front & Left Rear) | 2 |
| 43 | 21611-478 | Bolt 3/4" x 11 1/8 UNC Grade 8 | 12 |
| 44 | 010 A 0286 H00 | Knife Holder Plate (Left Front & Right Rear) | 2 |
| 45 | 010 B 0027 H00 | Knife | 1 |
| 46 | 21612-440 | Bolt 3/8" x 3 1/2" UNC Grade 8 | 2 |
| 47 | 39239-070 | Pin - Cylinder to Knife Holder | 2 |
| 48 | 39239-075 | Pin - Knife Holder to Frame | 2 |
| 49 | 21612-440 | Bolt 3/8" x 3 1/2" UNC Grade 8 | 2 |
| — | 21171-111 | Washer - Lock 3/8" (Not Shown) | 2 |
| — | 21731-006 | Nut 3/8" (Not Shown) | 2 |
| 50 | 010 D 0003 G01 | Knife Holder | 1 |
| ** | 23128-060 | Bushing - Solid Steel | 2 |
| 51 | 010 A 0267 H00 | Safety Tread 6" x 12" | 2 |



HYDRAULIC COMPONENTS

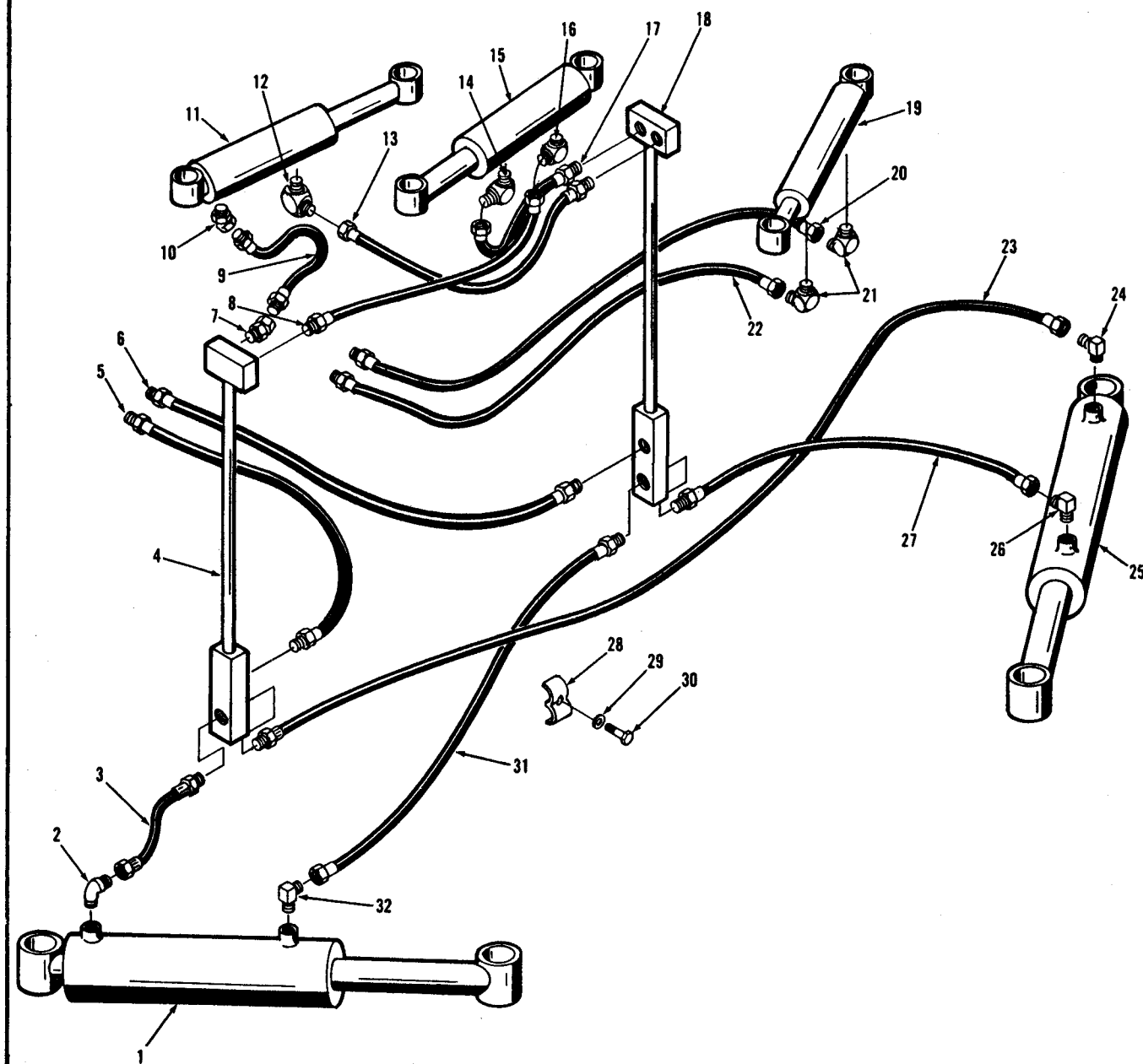


The Morbark Shear has relatively few hydraulic components. Therefore, it must be understood that this equipment is only an attachment for an adequate hydraulic system.

The standard Morbark Shear is manufactured for permanent mounting to a vehicle. However, a quick disconnect set-up may be ordered.



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HYDRAULIC COMPONENTS

| ITEM NO. | PART NO. | DESCRIPTION | QTY. REQ'D. |
|---|------------------------|--|--------------|
| *1-A | 26815-015 | Cylinder (DY 512-9) Frame to Knife Holder | 1 |
| *1-B | 26815-025 | Cylinder (5512) Frame to Knife Holder | 1 |
| *1-C | 26815-035 | Cylinder (612) Frame to Knife Holder | 1 |
| 2 | 26511-433 | 37° Flare Fitting ½ NPT x ¾ 45° | 1 |
| 3 | 26581-404 | Hose ½ x 16" | 1 |
| 4 | 010 A 0051 G00 | Hydraulic Block Assy. (Not a Replacement Item) | 1 |
| 5 | (Order by Description) | Hose ¾" | 1 |
| 6 | (Order by Description) | Hose ¾" | 1 |
| 7 | 26511-433 | 37° Flare Fitting ½ NPT x ¾ 45° | 1 |
| 8 | 26581-413 | Hose ½ x 33" | 1 |
| 9 | 26581-454 | Hose ½ x 13" | 1 |
| 10 | 26511-427 | 37° Flare Fitting 3/8 NPT x 3/4 45° | 1 |
| *11 | 26815-005 | Cylinder - 2510 Jarp | 1 |
| 12 | 26511-467 | 37° Glare Fitting 3/8 NPT x 3/4 90° | 1 |
| 13 | 26581-409 | Hose ½ x 23" | 1 |
| 14 | 26511-467 | 37° Flare Fitting 3/8 NPT x 3/4 90° | 1 |
| *15 | 26815-005 | Cylinder - 2510 Jarp | 1 |
| 16 | 26511-467 | 37° Flare Fitting 3/8 NPT x 3/4 90° | 1 |
| 17 | 26581-403 | Hose ½ x 15½ | 1 |
| 18 | 010 A 0051 G00 | Hydraulic Block Assy. (Not a Replacement Item) | 1 |
| *19 | 26815-005 | Cylinder - 2510 Jarp | 1 |
| 20 | (Order by Description) | Hose ½" | 1 |
| 21 | 26511-467 | 37° Flare Fitting 3/8 NPT x 3/4 90° | 2 |
| 22 | (Order by Description) | Hose ½" | 1 |
| 23 | 26581-416 | Hose - ½ x 56" | 1 |
| 24 | 26511-433 | 37° Flare Fitting ½" NPT x ¾ 45° | 1 |
| *25-A | 26815-015 | Cylinder (DY 512-9) | 1 |
| *25-B | 26815-025 | Cylinder (5512) | 1 |
| *25-C | 26815-035 | Cylinder (612) | 1 |
| 26 | 26511-473 | 37° Flare Fitting ½ NPT x ¾ 90° | 1 |
| 27 | 26581-407 | Hose ½" x 21" | 1 |
| 28 | 701 A 0074 H00 | Bracket - Hose Mounting | 4 |
| 29 | 21171-111 | Washer - Lock 3/8 | 4 |
| 30 | 21612-434 | Bolt 3/8 x 1½ UNC Grade 8 | 4 |
| 31 | 26581-416 | Hose ½" x 56" | 1 |
| 32 | 26511-473 | 37° Flare Fitting ½" NPT x ¾ 90° | 1 |
| * BUSHING IS AVAILABLE AS A REPLACEMENT PART P/N 23A-114 2 REQ'D | | | |
| ** BUSHING IS AVAILABLE AS A REPLACEMENT PART P/N 23A-118 2 REQ'D | | | |
| CYLINDER REPAIR KITS | | | |
| CYLINDER | ROD NO. | PISTON NO. | SEAL KIT NO. |
| 2510 Jarp | 26815-065 | 26815-049 | 26815-053 |
| DY 512-9 | 26815-052 | 26815-051 | 26815-059 |
| 5512 | 26815-068 | 26815-050 | 26815-060 |
| 612 | 26815-073 | 26815-082 | 26815-071 |



MAINTENANCE

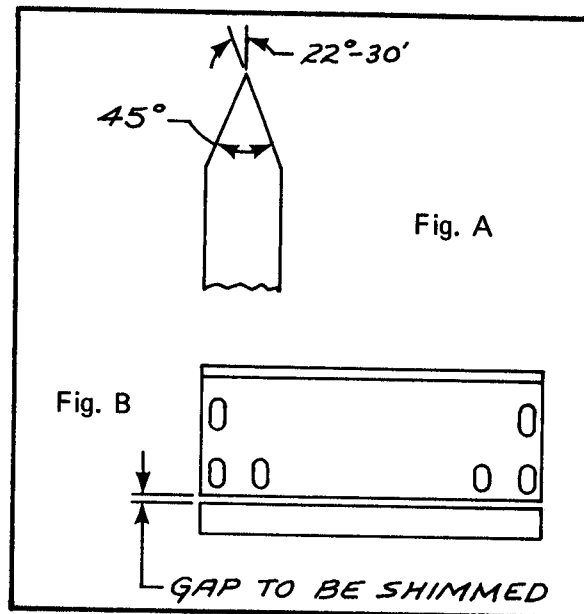
KNIFE SHARPENING

Dull knives require more force to shear. Knives should be sharpened every 640 hours depending on the type of material being sheared.

Knives can be removed by unfastening six bolts on each knife. Knives should be ground on a fixture type grinder. (This should not be attempted by the use of a hand grinder.) The angle at which the knives are sharpened should be 45° included, or $22^\circ - 30^\circ$ on each side. (See Fig. A). After sharpening knives, assemble knives to knife holder using the following procedure:

- 1) With knife holders shut and tips of holder touching, slide knives toward center until they meet.
- 2) Tighten six bolts on each knife and then tighten jam nuts.
- 3) Use keystone or any type shim between knife and backer bar. (See Fig. B). We suggest welding shim into place.

Knives may be sharpened as many times as required as long as they still touch in center without running out of elongate in bolt holes.



LUBRICATION

Lubricate all shear fittings every 10 hours of use. Apply lubricant until excess appears. Use good multi-purpose lubricant. (See Fig. 13)

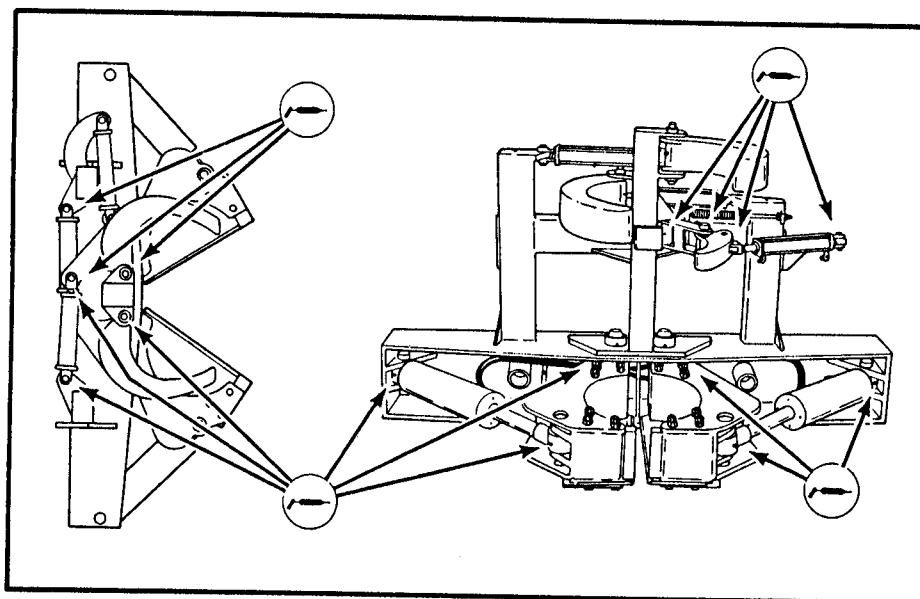


Figure 13



SPECIFICATIONS

| GENERAL DIMENSIONS | | SHEARING CAPACITY | | |
|---|------------------------------|-------------------|-------------------------|-------------------------|
| WIDTH | 36" without mounting bracket | MAJOR CATEGORY | Softwood (Conifer) | Hardwood (Deciduous) |
| LENGTH | 87" | | | |
| HEIGHT | 57" | SPECIES | Pine, Fir, Spruce, Etc. | Maple, Birch, Oak, Etc. |
| WEIGHT | 2300 lbs. * | | | |
| * Without tree limiter, without mounts Note: Different Mounts May Alter Weight | | MAXIMUM DIAMETER | 15" at Base | 12"-15" at Base |

| HYDRAULIC REQUIREMENTS | | FIELD-TESTED APPLICATIONS | |
|--|--|--|----------------|
| OIL CAPACITY | 35-40 gpm GPM | MANUFACTURER | |
| | | John Deere | Allis Chalmers |
| PSI LEVEL | 2100-2600 * | Case | Timberjack |
| | | Clark Ranger | Caterpillar |
| VALVES | 2 4-Way-3 Position Spring to Center | Michigan | Melroe |
| | | <i>Note: Morbark will install Feller Buncher Shear on any equipment provided by manufacturer as long as it meets minimum hydraulic requirements.</i> | |
| <i>* Note: When using lower PSI Systems than above, consult a Morbark Shear Engineer</i> | | | |

