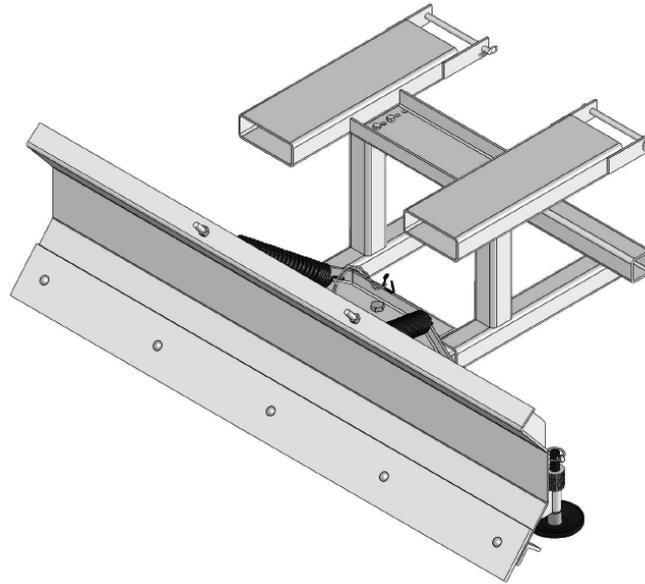




VESTIL MANUFACTURING CORP.

2999 North Wayne Street, P.O. Box 507, Angola, IN 46703
 Telephone: (260) 665-7586 -or- Toll Free (800) 348-0868
 Fax: (260) 665-1339
www.vestilmfg.com e-mail: sales@vestil.com

FORK-MOUNTED SNOW PLOW, MODEL SPB-N-72
INSTRUCTION MANUAL



RECEIVING INSTRUCTIONS:

After delivery, IMMEDIATELY remove the packaging from the Drum-Grab in a manner that preserves the packaging and maintains the orientation of the product in the packaging; then inspect the product closely to determine whether it sustained damage during transport. **If damage is discovered during the inspection, immediately record a complete description of the damage on the bill of lading.** If the product is undamaged, discard the packaging.

NOTES:

- 1) Compliance with laws, regulations, codes, and non-voluntary standards enforced in the location where the product is *used* is exclusively the responsibility of the owner/end-user.
- 2) VESTIL is **not liable** for any injury or property damage that occurs as a consequence of failing to apply either:
 - a) Instructions in this manual; or b) information provided on labels affixed to the product. Neither is Vestil responsible for *any* consequential damages sustained as a result of failing to exercise sound judgment while assembling, installing, using or maintaining this product.

<u>Table of Contents</u>	<u>Page</u>
Hazard identification: explanation of signal words.....	2
Safety Guidelines.....	2
Exploded parts diagram.....	3
Bill of materials.....	4
Installation & use instructions.....	4 - 5
Maintenance.....	6
Label placement diagram.....	6
Limited warranty.....	7

Hazard Identification: explanation of SIGNAL WORDS

This manual uses SIGNAL WORDS to qualify the likelihood of personal injuries as well as the probable seriousness of those injuries if the product is misused in the ways described. Other signal words call attention to uses of the product likely cause property damage. The signal words used appear below along with the meaning of each word:



Identifies a hazardous situation which, if not avoided, **WILL** result in **DEATH** or **SERIOUS INJURY**. Use of this signal word is limited to the most extreme situations.



Identifies a hazardous situation which, if not avoided, **COULD** result in **DEATH** or **SERIOUS INJURY**.



Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE** injury.



Identifies practices likely to result in product/property damage, such as operation that might damage the product.

Each person who assembles, installs, uses, or maintains this product should read the entire manual **in advance and fully understand the directions**. **If after reading the manual you do not understand an instruction, ask your supervisor or employer for clarification, because failure to adhere to the directions in this manual might result in serious personal injury.**

SAFETY GUIDELINES

Vestil diligently strives to identify foreseeable hazards associated with the use of its products. However, material handling is inherently dangerous and no manual can address every conceivable risk. The end-user ultimately is responsible for exercising sound judgment at all times.



Electrocution might result if any part of the plow or fork truck contacts electrified wires. Reduce the likelihood of electrocution by applying **common sense**:

- DO NOT *contact* electrified wires with any part of the plow or the fork lift.
- Always inspect the area where the plow will be used beforehand.



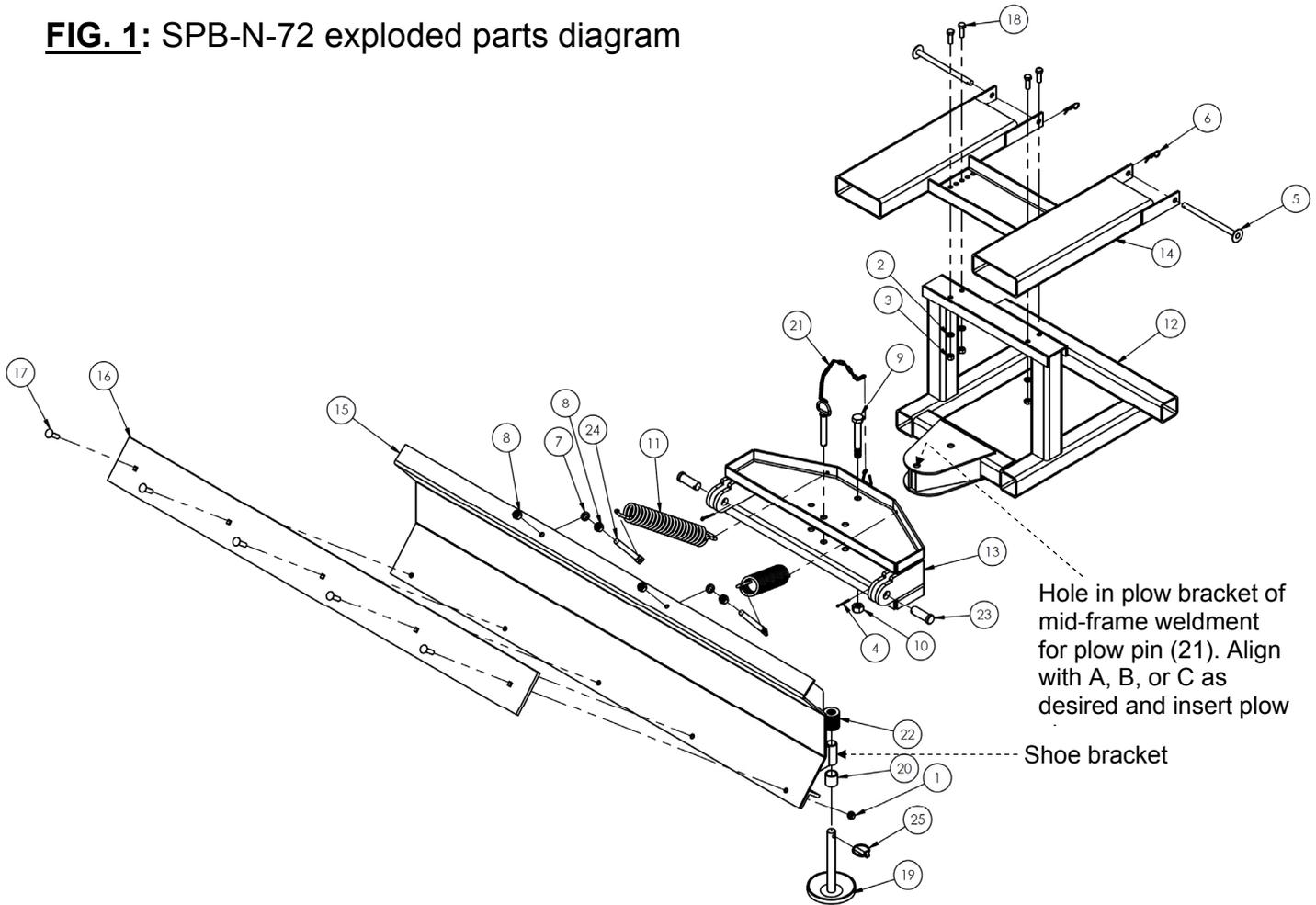
If this product is used improperly or carelessly, the operator and/or bystanders might sustain serious personal injuries or even be killed. To reduce the likelihood of injury:

- **Failure to read and understand the entire manual before assembling, installing, using or servicing the product is a misuse of the product. Misuse automatically voids the Limited Warranty.**
- DO NOT exceed the maximum rated load (see Label 287 on product).
- **ALWAYS** inspect the plow before each use according to the inspection procedures described in “Maintenance” on p. 5. In particular, look for signs of excessive wear, damage, or distortion. Check all fasteners and confirm that they are securely tightened and undamaged.
- Review the safety messages included in the manual(s) for your fork truck and operate it according to the instructions while using this plow (fork attachment).
- DO NOT stand or walk, or allow any other person to stand or walk, beneath an elevated plow. Always maintain ample separation between the plow and all other persons involved with plowing operations.
- **ONLY** use the plow to move snow. DO NOT use the plow to push equipment, vehicles, pallets, etc.
- DO NOT leave the fork truck unattended if the plow is elevated. Always lower the forks until the plow rests firmly on the ground.
- DO NOT plow nearby or towards any person. Personnel should remain at a safe distance from the fork lift and plow while the plow is in use.
- DO NOT remove or obscure any label. Verify the placement and legibility of all labels as shown in the Label Placement Diagram on p. 6. DO NOT use this device **UNLESS** all product labels are readable, undamaged, and fastened securely to the plow.
- DO NOT modify—including disassembling and reassembling—the plow in any way **UNLESS** you first obtain written approval from Vestil. Unauthorized modifications automatically void the limited warranty (see p. 7) and might make the plow unsafe to use.



- Proper use, maintenance, and storage are essential for this product to function properly.
- Always use this product in accordance with the instructions in this manual and consistent with any training applied to fork truck operation at your workplace
 - Periodically lubricate moving parts.

FIG. 1: SPB-N-72 exploded parts diagram



Bill of Materials:

Item no.	Part no.	Description	Quantity
1	36039	½ - 13 UNC gr. 5 hex nut	5
2	33626	½ in. z-plated lock washer	4
3	36110	½ - 13 z-plated hex nut	4
4	65127	3/16 in. x 2in. z-plated cotter pin	2
5	14-612-001	Weldment lock pin	2
6	45286	1/8 in. x 2 5/8 in. #11 hitch pin clip	2
7	33630	Medium split lock washer	2
8	36114	5/8 in. - 11 UNC z-plated hex nut	4
9	15374	3/4 in. -10 x 5 1/2 in. hex cap screw	1
10	0147910	3/4 in. -10 grade 8 hex nut	1
11	08-146-002	LM-OBT spring	2
12	47-514-001	Mid-frame weldment	1
13	47-514-003	Plow attachment frame weldment	1
14	47-528-004	Fork pocket weldment	1
15	47-514-002	Blade frame weldment	1
16	47-017-006	Bar stiffener	1
17	21826	½ in. - 13 UNC x 2 in. grade 5 z-plated carriage bolt	5
18	15209	½ in. - 13 x 1 1/2 in. HHCS z-plated grade 8 bolt	4
19	47-157-001	Snow plow shoe	2
20	47-157-001-A	Snow plow shoe bushing	2
21	47-612-001	Plow pin with chain weldment	1
22	47-157-001-B	Snow plow shoe spacer-washer	34
23	47-112-001	01 x 3 1/4 in. clevis pin	2
24	47-145-001	5/8 in. - 11 hanger bolt	2
25	47-157-001-C	7/16 in. diameter lynch pin	2

Installation and use instructions:

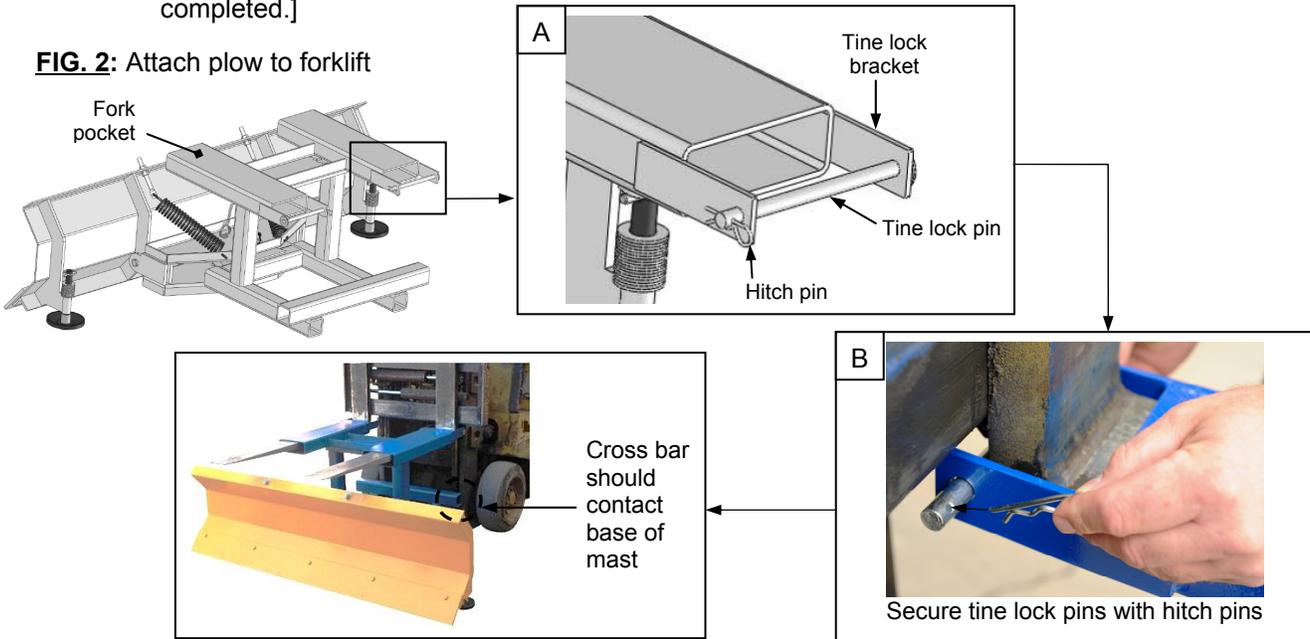
Step 1: Mount the plow on the tines of your forklift.

(A) Remove the locking pins from the tine lock brackets, by first pulling out the hitch pins and then pulling out the lock pins (see frame A below). Adjust the positions of the tines of your lift truck to match the locations of the fork pockets; then slowly drive the truck forward until the forks extend all the way through the fork pockets. The heels of the forks should contact the ends of the fork pockets so that the tine lock brackets project behind the heel of each fork.

(B) (B) Secure the plow to the forks by reinstalling the tine lock pins and hitch pins (see frame B below).

[NOTE: It might not be possible to lock the tines in the tine locks until step 2 on the following page has been completed.]

FIG. 2: Attach plow to forklift

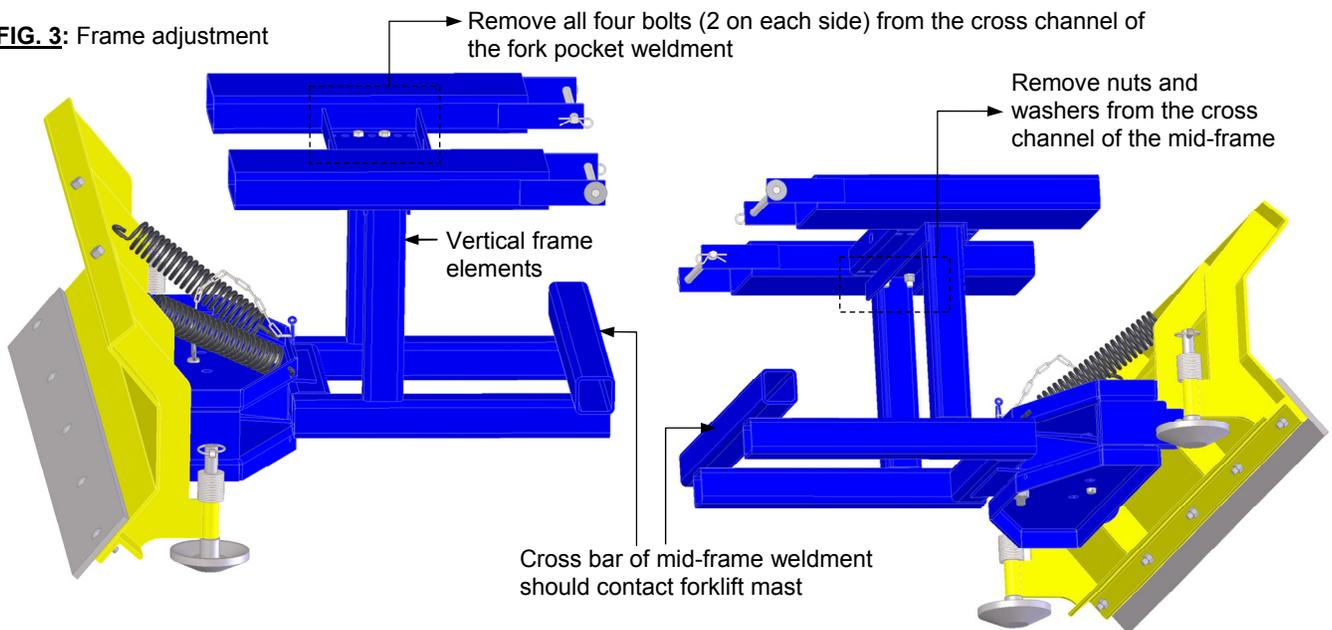


Step 2: Adjust the position of the mid-frame.

When properly adjusted, the cross bar of the mid-frame will contact the mast of your forklift. The fork pocket weldment fastens to the mid-frame via 4 bolts (only 2 are shown in FIG. 3 below). To adjust the position of the mid-frame, remove the nuts and washers from all 4 bolts; then remove the bolts. If necessary, complete the mounting process of Step 1 now. Adjust the position of the mid-frame to bring the cross bar into solid contact with the mast of your forklift; then reinstall the bolts, washers and hex nuts and tighten the connections.

[NOTE: The cross bar **MUST** solidly contact the forklift mast otherwise the vertical frame elements might be damaged while using the plow.]

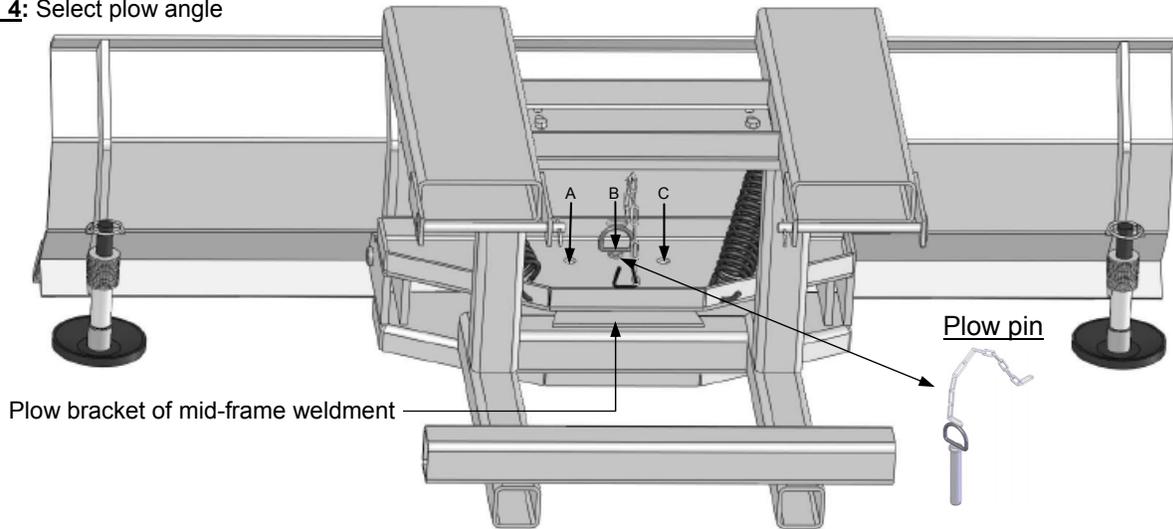
FIG. 3: Frame adjustment



Step 3: Select the desired plow angle.

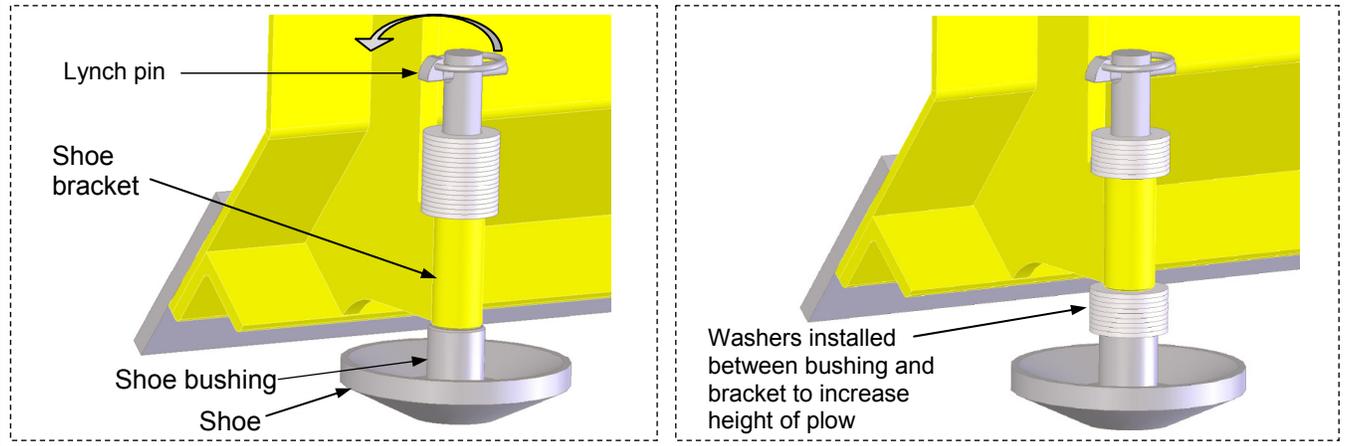
The plow can be set to any of three angles as shown by setting the plow pin in the appropriate holes identified with arrows A-C in the illustration below. In the diagram, the plow pin is inserted in position B. To change the plow position, remove the plow pin and rotate the plow until hole A, B or C aligns with the hole in the plow bracket of the mid-frame weldment (see FIG. 1 on p. 3). The pin must project through both sides of the plow attachment frame weldment (see item no. 13 on p. 3).

FIG. 4: Select plow angle



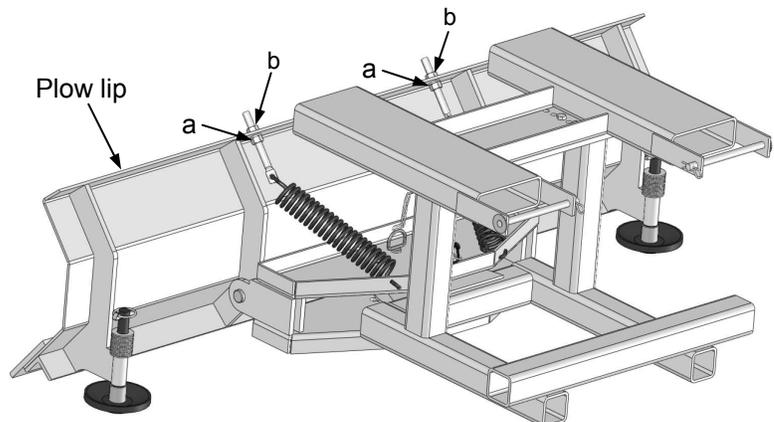
Step 4: Adjust plow height (above ground level).

Plow weight is determined by the number of washers between the shoe bushing and the shoe bracket. To adjust the height, first remove the lynch pin; then pull the shoe out of the bracket. Leave the shoe bushing in place. Put the appropriate number of washers on top of the shoe bushing; then insert the shoe through the bracket and reinstall the lynch pin.



Step 5: Adjust plow spring tension.

Two coil springs control the pitch of the plow (whether the bottom edge is in front or behind the top edge of the plow. For instance, greater spring tension brings the bottom edge of the plow farther forward.) To adjust spring tension, loosen the hex nuts on the inside of the plow lip (nuts labeled "a" below); then adjust the position of the nuts on the outer side of the lip (labeled "b") to achieve the desired spring tension. Tighten the inside nuts against the lip to complete the adjustment.



Inspections & Maintenance:

[Item numbers referred to correspond to numbering in FIG. 1 on p. 3]

Before each use, inspect the plow to confirm that it is in normal condition. DO NOT use the plow unless or until it is in normal operating condition.

1. Tine lock pins (item no. 5): confirm that both lock pins are straight and undamaged. Also confirm that the pin holes in the tine lock brackets (see FIG. 2, frame A) are not enlarged and that the brackets are not cracked, warped, etc. DO NOT use the plow if the tine lock (pins and brackets) are damaged or worn sufficiently to prevent normal function. Each lock pin must be secured with a hitch pin every time the plow is used.
2. Product labels: all labels should be readable and located in the places shown in the "Label Placement diagram" below. If a label(s) is unreadable or missing, contact Vestil to order a replacement.

At least 1 time per month, inspect the following components:

1. Hardware: bolts, nuts, washers, pins, hinge pins; pay particular attention to the 5½ in. hex cap screw (Item no. 9) that fastens the plow attachment frame weldment (item no. 13) to the mid-frame weldment (item no. 12); also closely inspect the fasteners (item nos. 2, 3, & 18) that connect the fork pocket weldment to the mid-frame weldment.
2. Shoes (item no. 19) and shoe brackets: both shoes should be securely fastened to the shoe brackets with lynch pins, should not be bent or worn so substantially that they do not perform their function, i.e. providing a contact that glides across the ground and supports the plow.
3. Fork pockets: confirm that each pocket is structurally sound, uncorroded and free of rust. Do not use the plow if the fork pockets are structurally compromised, e.g. significantly rusted or corroded.
4. Welds: confirm that all welds are intact. ONLY use the plow if all welds are in normal, undamaged condition.
5. Weldments (item nos. 12, 13, 14): examine each weldment for abnormal shape, looseness must be in normal condition no structural deformation, warps, or cracks.
6. Overall condition of the plow: the structure should be clean, square and rigid, and free of rust and corrosion. Remove dirt and debris. Grease pivot points.
7. Springs: examine the two springs that control plow pitch (item no. 11). The springs should resist forward rotation of the plow and should securely attach to the plow blade (item no. 15) and plow attachment frame weldment (item no. 13). Examine the springs for rust, cracks, etc. that might compromise function.

Label placement diagram:

A: label 287

MODEL/MODÉLO/MODELE _____	
CAPACITY _____	lbs.
CAPACIDAD/CAPACITÉ _____	kgs.
SERIAL/SERIE/SÉRIE _____	

B: label 218

▲ WARNING	▲ ADVERTENCIAS
Improper use might result in death or serious personal injury. Attach device to fork carriage with safety chain/strap.	El uso inapropiado puede resultar en muerte o heridas personales. Atar aparato al mástil del montacargas con cadenas/correas.
• Drive lift truck forward until forks contact ends of fork pockets	• Maneje el montacargas para adelante hasta que las cuñas hagan contacto con la orilla del bolsillo de las cuñas.
• Chain/straps must not be able to disconnect (slide free) from carriage.	• La cadenas y correas no deben de deslizarse (soltarse) del mástil del montacargas.
• Safety chain/strap must be taut. Connect chain/strap to carriage via shortest line.	• La cadena/correa de seguridad debe de estar apretado. Asegure la cadena/correa al mástil via la ruta mas corta.
218 rev 09/10	

C: label 208

▲ WARNING	▲ ADVERTENCIA	▲ AVERTISSEMENT
KEEP CLEAR OF PINCH POINT	MANTENGASE ALEJADO DEL PUNTO DE CORTE	SE TENIR À DISTANCE DU POINT DE PINCEMENT

LIMITED WARRANTY

Vestil Manufacturing Corporation (“Vestil”) warrants this product to be free of defects in material and workmanship during the warranty period. Our warranty obligation is to provide a replacement for a defective original part if the part is covered by the warranty, after we receive a proper request from the warrantee (you) for warranty service.

Who may request service?

Only a warrantee may request service. *You are a warrantee if* you purchased the product from Vestil or from an authorized distributor AND Vestil has been fully paid.

What is an “original part”?

An original part is a part used to make the product as shipped to the warrantee.

What is a “proper request”?

A request for warranty service is proper if Vestil receives: 1) a photocopy of the Customer Invoice that displays the shipping date; AND 2) a written request for warranty service including your name and phone number. Send requests by any of the following methods:

Mail
Vestil Manufacturing Corporation
2999 North Wayne Street, PO Box 507
Angola, IN 46703

Fax
(260) 665-1339
Phone
(260) 665-7586

Email
sales@vestil.com

In the written request, list the parts believed to be defective and include the address where replacements should be delivered.

What is covered under the warranty?

After Vestil receives your request for warranty service, an authorized representative will contact you to determine whether your claim is covered by the warranty. Before providing warranty service, Vestil may require you to send the entire product, or just the defective part or parts, to its facility in Angola, IN. The warranty covers defects in the following *original* dynamic components: motors, hydraulic pumps, electronic controllers, switches and cylinders. It also covers defects in *original* parts that wear under normal usage conditions (“wearing parts”): bearings, hoses, wheels, seals, brushes, batteries, and the battery charger.

How long is the warranty period?

The warranty period for original components is 30 days. The warranty period begins on the date when Vestil ships the product to the warrantee. If the product was purchased from an authorized distributor, the period begins when the distributor ships the product. Vestil may extend the warranty period for products shipped from authorized distributors by *up to* 30 days to account for shipping time.

If a defective part is covered by the warranty, what will Vestil do to correct the problem?

Vestil will provide an appropriate replacement for any *covered* part. An authorized representative of Vestil will contact you to discuss your claim.

What is not covered by the warranty?

1. Labor;
2. Freight;
3. Occurrence of any of the following, which automatically voids the warranty:
 - Product misuse;
 - Negligent operation or repair;
 - Corrosion or use in corrosive environments;
 - Inadequate or improper maintenance;
 - Damage sustained during shipping;
 - Collisions or other incidental contacts causing damage to the product;
 - Unauthorized modifications: DO NOT modify the product IN ANY WAY without first receiving written authorization from Vestil. Modification(s) might make the product unsafe to use or might cause excessive and/or abnormal wear.

Do any other warranties apply to the product?

Vestil Manufacturing Corp. makes no other express warranties. All implied warranties are disclaimed to the extent allowed by law. Any implied warranty not disclaimed is limited in scope to the terms of this Limited Warranty.

