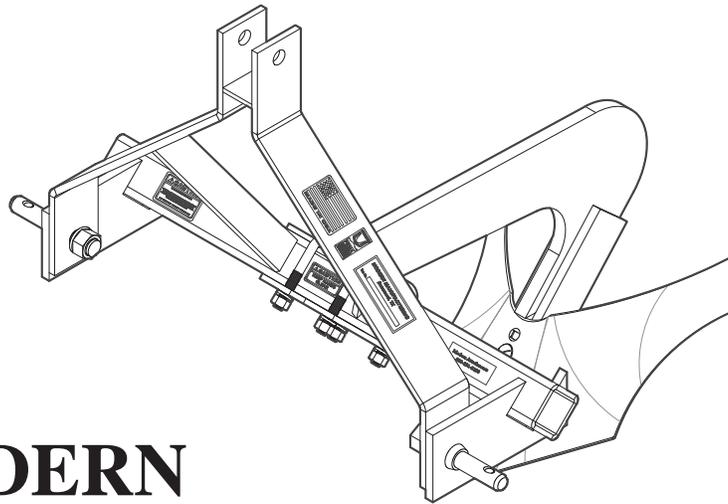


SPRING  
2017

# MIDDLE BUSTER PLOW

## *Operator's Manual*



**MODERN**  
AG PRODUCTS, LTD.

**YOU'RE ALWAYS AHEAD... WITH A MODERN BEHIND.**

P.O. BOX 790 • BEAUMONT, TX 77704  
409.833.2665 • 1.800.231.8198 FAX: 409.726.8333  
[www.modernusa.com](http://www.modernusa.com)

008-5986  
008-4972

*Go Galvanized!*

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# INTRODUCTION

It is recommended that all operators of this implement read this manual or be instructed of its contents as to safety, proper operation, and maintenance before beginning operation.

Our 3-Point Equipment will provide many years of service when maintained by the operator and used in accordance with the capabilities of the product.

When ordering parts for the middle buster, be sure to specify the serial number located on the aframe.

# INTRODUCTION

This Middle Buster Plow is designed with care and built with quality materials by skilled workers. Proper assembly, maintenance, and operating practices, as described in this manual, will help the owner/operator get years of satisfactory service from the implement.

The purpose of this manual is to familiarize, instruct, and train. The Assembly Section instructs the owner/operator in the correct assembly of the Middle Buster using standard and optional equipment. The Parts Listing section is designed to familiarize the owner/operator with replaceable parts on the Middle Buster. This section provides exploded assembly drawings of each component illustrating each piece and the corresponding part number.

Careful use and timely service save extensive repairs and costly downtime losses. The Operation and Maintenance Sections of the manual train the owner/operator how to work the implement correctly and attend to appropriate maintenance. The Trouble Shooting Guide helps diagnose difficulties with the cutter and offers solution to the problems.

Safety is of primary importance to the owner/operator and to the manufacturer. The first section of this manual includes a list of Safety Messages, that, if followed, will help protect the operator and bystanders from injury or death. Many of the Safety Messages will be repeated throughout the manual. The owner/operator/dealer should know these Safety Messages before assembly and be aware of the hazards of operating this implement during assembly, use, and maintenance. The Safety Alert Symbol combined with a Single Word, as seen below, is intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this implement.



Indicates an imminently hazardous situation that, if not avoided, **WILL** result in **DEATH OR VERY SERIOUS INJURY**.



Indicates an imminently hazardous situation that, if not avoided, **COULD** result in **DEATH OR SERIOUS INJURY**.



Indicates an imminently hazardous situation that, if not avoided, **MAY** result in **MINOR INJURY**.

Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

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# **SAFETY SECTION**

# SAFETY SECTION

A safe and careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The safety section of this manual includes a list of guidelines that, if followed, will help protect the operator and bystanders from injury or death. READ, UNDERSTAND, and FOLLOW the following safety guidelines before assembling, operating or servicing this implement. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in these Safety guidelines. Practice all usual and customary safe working precautions and above all remember safety is up to YOU.

Only YOU can prevent serious injury or death from unsafe practices.

This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know to do so safely and responsibly.

Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.

## **General Safety Guidelines**

- Never operate the tractor or implement until you have read and completely understand this manual and the tractor operator's manual. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the tractor and implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation.
- The operator and all support personnel should wear hard hats, safety shoes, safety glasses, and proper hearing protection at all times for protection from injury including injury from items that may be thrown by the equipment.
- Never allow children to operate, ride on, play on or around, or come close to the tractor or implement. Children can slip or fall off the equipment and be injured or killed. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the operator's manuals, been trained in proper operation of the tractor and implement, and are physically large enough to reach and operate the controls easily.
- NEVER use drugs or alcohol immediately before or while operating the tractor and implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the tractor or implement, and operator on prescription or over-the-counter medication must consult a medical professional regarding and side effects of the medication that would hinder their ability to operate the equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol.

## SAFETY SECTION

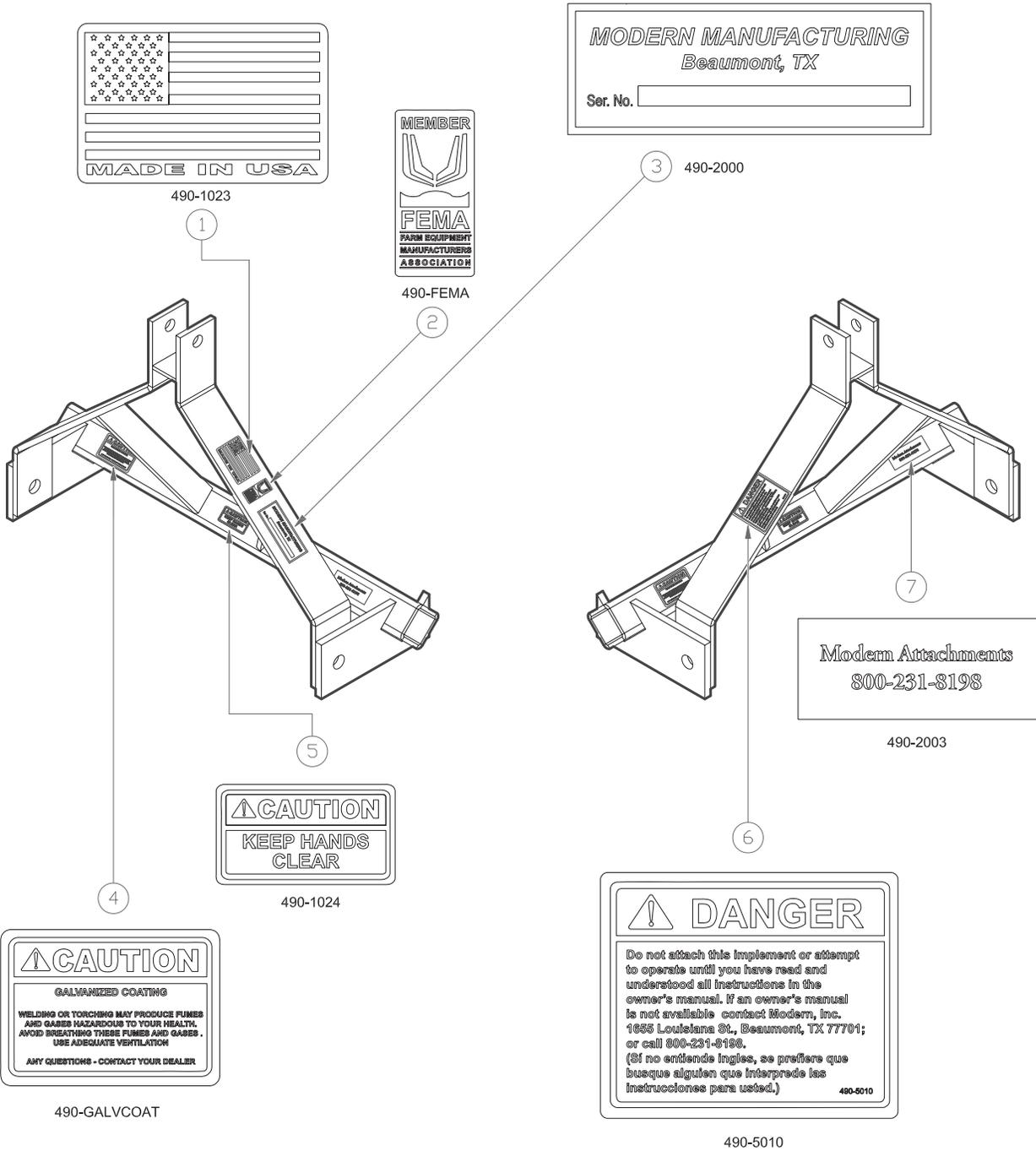
### **General Safety Guidelines Continued**

- Select an area for assembly that is clean and free of any debris which might cause persons working on the assembly to trip.
- Do not lift heavy parts or assemblies. Use crane, jack, tackle, fork trucks or other mechanical devices.
- Preview the assembly instructions in your operator's manual before proceeding further.
- If the assembly instructions call for parts or assemblies to be blocked up, use only blocking material that is in good condition and is capable of handling the weight of the assembly to be blocked. Also insure that the blocking material is on a clean, dry surface.
- Never put hands, or any part of body, under blocked up assemblies if at all possible.
- After completing assembly, thoroughly inspect the machine to be sure that all nuts, bolts, hydraulic fittings or any other fastened assemblies have been thoroughly tightened.
- Before operating the machine, thoroughly read the operation section of your operator's manual.
- Before operating, read the maintenance section of your operator's manual to be sure that any parts requiring lubrication, such as gearboxes, are full, to avoid any possible damage.
- Before operating equipment – If you have any questions regarding the proper assembly or operation, contact your dealer or representative.
- Prolonged tractor operation may cause operator boredom and fatigue affecting safe operation. Take scheduled work breaks to help prevent these potentially impaired operating conditions. Never operate the implement and tractor in a fatigued or bored mental state which impairs proper and safe operation.
- Tractors with or without an implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss.

***Note: Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery.***

# SAFETY SECTION

## SAFETY DECALS



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# **OPERATION SECTION**

## OPERATION SECTION

### **Assembly and Mounting**

Refer to the repair parts drawing in this manual to get an idea of how the parts need to be assembled for implement.

Back the tractor up to the implement. Adjust the tractor lift arms so they are wide enough to go over the two lift pins on each side of the implement. Make sure that the two 1/2" x 3-1/2" bolts that connect the 3 pt. mount to the shank of your implement are grade 2 ONLY. The lower bolt is a shear bolt and protects the tractor and the implement in case an obstruction is hit or that the operating conditions are too severe. A grade 2 bolt is a "soft" common hardware bolt.

**NOTE: USE OF A GRADE 5 OR HIGHER BOLT MAY RESULT IN DAMAGE TO THE IMPLEMENT.**

The Middle Buster plow shanks are shipped assembled. Make sure the lower draw pins (pull pins) are installed correctly for your tractor. Insert the draw pins into the ball sockets in the lower lift arms of the tractor's 3-Point hitch, and lock into place with lynch pins. Attach the mast of the 3-Point main frame by installing the tractor top link with the top link pin. Adjust the top link assembly to obtain the correct angle of the implement. Check the tractor's 3-Point lift arms and adjust to level the implement from side to side. The deeper you set the implement the slower you will need to go with your tractor because of increased stress on the implement as well as the tractor.

It is recommended that ONLY tractors with wide front axles be used with either the Middle Buster. Tricycle front wheel arrangements are inherently unstable and can cause rollover accidents. This unit is designed to be pulled by your tractor. Using any other means will void the warranty.

### **Underground Utilities**

**Contact appropriate agencies to determine if hazardous items are buried under the digging site BEFORE DIGGING! Be certain Underground Utilities have been called to locate underground electric, gas, telephone and other lines. Check your telephone book for calling instructions. Be sure the operator is properly informed. WHEN IN DOUBT, DO NOT DIG!**

For proper operation, level the Middle Buster by adjusting the tractor linkage. This will assure that the shank will run straight. The tractor 3-Point hydraulic lift system should be set to transfer most of the Middle Buster's weight and draft to the tractor to maximize traction. There may not be a 3-Point draft control on some tractors. Refer to tractor owner's manual. The Middle Buster plow can be used to plant and dig potatoes, form ridges for other crops, and make drainage ditches. Set your 3-Point depth control to operate the Middle Buster plow at the desired depth. The deeper you operate, the greater the amount of soil you will plow or "hill up". In dry or hard soil conditions, you may need to make several passes. The faster you drive, the further you will "throw" the soil from both sides of the plow shovel. Operate at a speed that forms the furrow or "hilling" operation you desire. By adjusting the length of the 3-Point top link, you can adjust the pitch of the plow shovel. In most soil conditions, the bottom of the shovel should be level or with the point down slightly. This "pitch angle" will also determine how much soil is moved.

## TROUBLE-SHOOTING GUIDE

### **PROBLEM:** **TRACTOR WILL NOT PULL IMPLEMENT**

#### Possible Solutions:

- Insufficient horsepower - use larger, heavier tractor.
- Soil too wet - allow soil to dry.
- Soil too hard - wait for rain or irrigate.
- Points too dull - replace points.
- Insufficient traction - see tire slippage problem below.
- Attempting to operate too deep - reduce depth setting and make several passes, gradually increasing depth.

### **PROBLEM:** **EXCESSIVE TRACTOR TIRE SLIPPAGE**

#### Possible Solutions:

- Tractor too small - use larger, heavier tractor.
- Insufficient traction - add dual rear tire or more ballast. Increase draft control. Operate at a shallower depth.
- Ground was tilled prior to subsoiling (soil too loose - subsoil first).

### **PROBLEM:** **LARGE CLODS**

#### Possible Solutions:

- Soil too hard and dry - wait for rain or irrigate.
- Wire or foreign object on shank - remove object.

### **PROBLEM:** **SHEARING PINS**

#### Possible Solutions:

- Wrong size shear bolt - use ½" Grade 2 Only.
- Too much load - reduce speed or operating depth.
- Hitting rocks or obstructions - remove (if possible).
- Soil too hard and dry - wait for rain or irrigate.

### **PROBLEM:** **EXCESSIVE POINT WEAR**

#### Possible Solutions:

- Soil too hard and dry - wait for rain or irrigate.
- Abrasive soil - consider having points hard surfaced by local welder.

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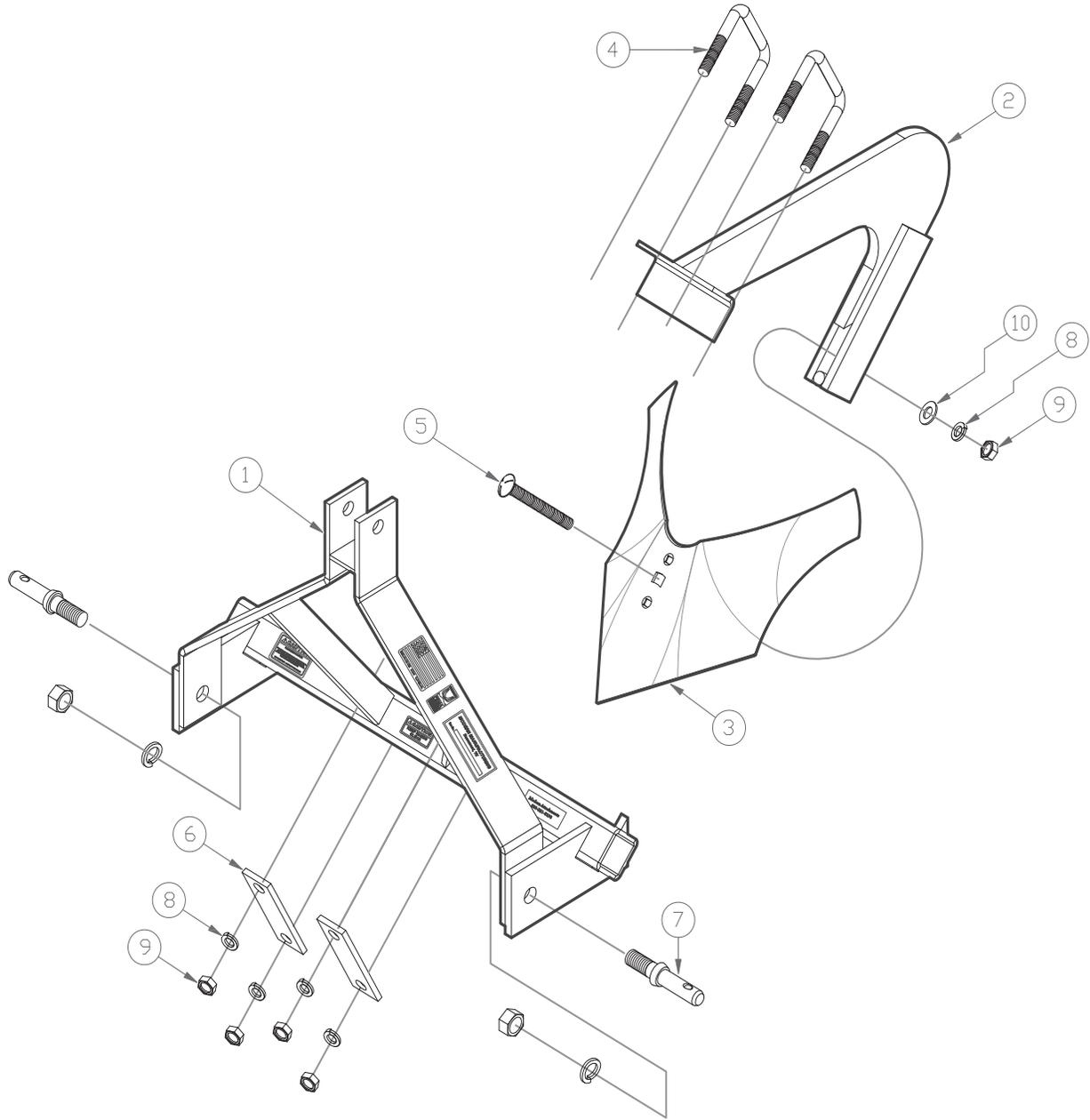
# **MAINTENANCE SECTION**

### **Cleaning and Storage**

1. Make certain any safety or instruction decals are attached to the implement's 3-Point hitch. If they are lost, damaged, or painted over, order replacements from the dealer.
2. Clean unit of dirt and debris to minimize rusting and wear.
3. Keep cutting edges sharp. Sharp cutting edges work easier and better. Check more often if working in rocky soil conditions.
4. Replace any worn or damaged parts immediately.
5. Check all bolts and nuts to make sure they are tight.
6. Store the unit in a shed or under a tarp to protect it from the weather. The blade or shank should rest on boards or some other object. Keep out of soil when storing. Store in a clean, dry place away from human activity or livestock.

# **ASSEMBLY/PARTS SECTION**

# MIDDLE BUSTER ASSEMBLY/PARTS SECTION



## MIDDLE BUSTER ASSEMBLY/PARTS SECTION

<b>Item</b>	<b>Part Number</b>	<b>Description</b>	<b>Single M/B Qty</b>	<b>Double M/B Qty</b>
1	109-4765	Single Middle Buster Toolbar	1	--
	109-4764	Double Middle Buster Toolbar	--	1
2	103-4972	Middle Buster Shank Weldment	1	2
3	408-7858	Lister Bottom, 14"	1	2
4	412-7900	SQ. U-Bolt, 5/8" X 3-1/8" X 4-3/4"	2	4
5	412-21673	Carriage Bolt, 5/8" X 5" GR5	1	2
6	416-4926	Mounting Strap	2	4
7	150-10	Lift Pin, 7/8" X 5-1/2", CAT 1	2	2
8	412-0073	Lock Washer, 5/8"	5	9
9	412-0059	Hex Nut, 5/8"	5	9
10	412-0076	Flat Washer, 5/8"	1	2

# LIMITED WARRANTY POLICY

Modern, Inc. warrants its products for a period of one year after date of sale by authorized dealer to be free from defects in material and workmanship, and will replace at its factory, any parts that will be returned, with shipping charges prepaid, and when examined by us, will disclose it to be defective. This warranty will not apply to implements or parts that have been subjected to misuse, negligence, accident, or that have been altered or repaired.

1. Parts may not be returned without authorization by ModernAg Products.
2. All products returned under warranty inspection claim must be returned PREPAID to our factory.
3. Our obligation under the above warranty is limited to repair or replacement at our factory of any part or parts which Modern, Inc. decides to be defective.
4. Products or parts that have been examined by Modern, Inc. and determined to be improperly operated, damaged by accident or negligence, field repaired or altered, are not covered by this warranty.
5. Modern, Inc. reserves the right to change our specification and designs at any time.
6. This warranty will not obligate Modern, Inc. to bear any cost of labor for field replacement, testing, or adjustment.

## LIMITED WARRANTY POLICY & REGISTRATION

DEALER: I hereby certify that:

1. The machine has been correctly assembled in accordance with manufacturers instructions.
2. All bolts have been checked and zerks filled with grease.
3. All other pre-delivery checks have been completed as per operators manual.
4. Purchaser was given operators manual and instructed in safe and correct usage of machine and on limitation of warranty.
5. All safety guards and safety signs have been placed on machine.
6. Purchaser was given operator's manual and instructed in safe and correct usage of machine and on limitation of warranty.
7. Machine was tested and operates correctly.

PURCHASER: I hereby certify that:

1. The machine is correctly assembled.
2. Receipt of the operators manual which I have read and clearly understood.
3. I have a clear understanding of the warranty limitations.
4. I have a clear understanding on the correct and safe operation of the machine
5. That the machine needs regular maintenance as per instructions in operators manual.
6. I have a clear understanding on the capacity of this machine and am aware of its limitations.

MODEL \_\_\_\_\_ SERIAL # \_\_\_\_\_

DEALER \_\_\_\_\_ DATE DELIVERED \_\_\_\_\_

DEALER'S STAMP

MAIL TO:

PURCHASERS ADDRESS: