

ROUND BALERS 4 x 4

Published 09/01

Part No. 4904WC

OPERATOR'S MANUAL



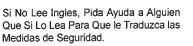
This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. <u>READ</u>, <u>UNDERSTAND</u>, and <u>FOLLOW</u> the Safety and Operation Instructions contained in this manual before operating the equipment.

MODEL 4407 & 4497

SERIAL NUMBERS 20000 - CURRENT

ATTENCIÓN!

LEA EL INSTRUCTIVO





M&W

1020 South Sangamon Ave. Gibson City, Illinois 60936 217-784-4261



TO THE OWNER/OPERATOR/DEALER

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

BEFORE YOU START!! Read the safety messages on the implement and shown in your manual. Observe the rules of safety and common sense!



WARRANTY INFORMATION:

Read and understand the complete Warranty Statement found in this Manual. Fill out the Warranty Registration Form in full and return it within 30 Days. Make certain the Serial Number of the Machine is recorded on the Warranty Card and on the Warranty Form that you retain. The use of "will-fit" parts will void your warranty and can cause catastrophic failure with possible injury or death.





In order to reduce accidents and enhance the safe operation of mowers, *Alamo Group Ag Division*, in cooperation with other industry manufacturers has developed the AEM/FEMA Industrial and Agricultural Mower Safety Practices video and guide book.

The video will familiarize and instruct mower-tractor operators in safe practices when using industrial and agricultural mowing equipment. It is important that <u>Every Mower Operator</u> be educated in the operation of their mowing equipment and be able to recognize the potential hazards that can occur while operating a mower. This video, along with the mower operator's manual and the warning messages on the mower, will significantly assist in this important education.

Your Authorized *Alamo Ag* Dealer may have shown this video and presented you a DVD Video when you purchased your mower. If you or any mower operator have not seen this video, **Watch** the **Video, Read** this **Operator's Manual**, and **Complete** the **Video Guidebook** before operating your new mower. If you do not understand any of the instructions included in the video or operator's manual or if you have any questions concerning safety of operation, contact your supervisor, dealer or *Alamo Group Ag*.

If you would like a VHS video tape of the video, please email AEMVideo@alamo-group.com or Fax AEM VHS Video at (830) 372-9529 or mail in a completed copy of the form on the back of this page to AEM VHS Video 1502 E Walnut Street, Seguin, TX 78155. and request the VHS video version. Please include your name, mailing address, mower model and serial number.

Every operator should be trained for each piece of equipment (Tractor and Mower), understand the intended use, and the potential hazards before operating the equipment.

Alamo Group Ag. Division is willing to provide one (1) AEM Mower Safety Practices Video

Please Send Me:		VHS Format – AEM/FEMA Mower Operator Safety Video				
		DVD Format – AEM/FEMA Mower Operator Safety Video				
		Mower Operator's Manual				
		AEM Mower Operator's Safety Manual				
Requester Name:		Phone:				
Requester Address:						
(City					
State						
Zip Code						
Mower Mod	el:	Serial Number:				
Date Purchased:		Dealer Salesperson:				
Dealership Name:		Dealership Location:				
Mail to: AEM Video Services 1502 E Walnut street Seguin, TX 78155						
Or Fax to:	(830) 37	72-9529				
Or Email to:		deo@alamo-group.com				

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RIGHT AND LEFT IDENTIFICATION

The reference to the right (RH) and left (LH) is identified by the operator standing at the rear of the baler, looking toward the front of the machine.



THIS IS A SAFETY ALERT SYMBOL USED TO ALERT YOU TO POSSIBLE DANGER TO YOUR OR SOMEONE ELSE'S PERSONAL SAFETY. WHEN YOU SEE THIS SYMBOL, BE ALERT TO THE ACCOMPANYING MESSAGES IN THIS MANUAL.

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 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. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the Manual, who are responsible and trained, and who know how to do so safely and responsibly.

The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment..

Practice all usual and customary safe working precautions and above all---remember safety is up to <u>YOU</u>. Only <u>YOU</u> can prevent serious injury or death from unsafe practices.

CAUTION! The lowest level of Safety Message; warns of possible injury. Decals located on the Equipment with this Signal Word are Black and Yellow.



WARNING! Serious injury or possible death! Decals are Black and Orange.



DANGER! Imminent death/critical injury. Decals are Red and White. (SG-1)



<u>READ</u>, <u>UNDERSTAND</u>, and <u>FOLLOW</u> the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards.



(SG-2)

PELIGRO!

Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)



iLEA EL INSTRUCTIVO!



Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel too operate the Tractor and Implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation. (SG-4)





Always maintain the safety decals in good readable condition. If the decals are missing, damaged, or unreadable, obtain and install replacement decals immediately. (SG-5)





Make certain the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights. Before transporting the equipment on public roads make sure the Implement warning lights are connected, visible and working. Always follow all local traffic regulations. (SG-6a)







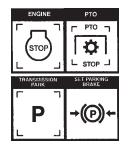
Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)



Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)



BEFORE leaving the tractor seat, always engage the brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)





Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death.

(SG-10)





Never allow children to operate or ride on the Tractor or Implement.



Do not mount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)





Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in injury or death. Read the Tractor operators manual for proper starting instructions. (SG-13)



DANGER!

Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)

able and skilled in this procedure. (SG-15)













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 thrown by the equipment. (SG-16)

Do not operate this Equipment with hydraulic oil leaking. Oil is expensive and its presence could present a hazard. Do not check for leaks with your hand! Use a piece of heavy paper or cardboard. Highpressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. If oil does penetrate the skin, have the injury treated immediately by a physician knowledge-



PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PER-**MANENT HEARING LOSS!** 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. (SG-I7)







WARNING!

Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. Make sure the tractor engine is off before working on the Implement. (SG-20)

Periodically inspect all moving parts for wear and replace when

necessary with authorized service parts. Look for loose fasteners,







worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)

WARNING!

Before transporting the Tractor and Implement, determine the safe transport speeds for you and the equipment. Make sure you abide by the following rules:

and brakes are in good condition and operate properly.

Transport only at safe speeds. Serious accidents and injuries can result from operating this equipment at unsafe speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering

- 1. Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum safe transport speed for you and this Equipment.
- 2. Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that it is safe to operate at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum safe turning speed for you and this equipment before operating on roads or uneven ground.
- 3. Only transport the Tractor and Implement at the speeds that you have determined are safe and which allow you to properly control the equipment.

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)

WARNING! Always read carefully and comply fully with the manufacturers' instructions when handling oil, solvents, cleansers, and any other chemical agent. (SG-22)

Never run the tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health.



DANGER!

DANGER!

KEEP AWAY FROM ROTATING ELEMENTS to prevent entanglement and possible serious injury or death. (SG-24)

Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be injured or killed. Children can cause the Implement to shift or fall crushing themselves or others. (SG-25)





(SG-23)





WARNING!

DANGER!

Do not exceed the rated PTO speed for the Implement. Excessive PTO speeds can cause Implement driveline or blade failures resulting in serious injury or death. (SG-26)

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, an operator on prescription or over-the-counter medication must consult a medical professional regarding any 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. (SG-27)



DANGER!

Operate the Tractor and/or Implement controls only while properly seated in the Tractor seat with the seat belt securely fastened around you. Inadvertent movement of the Tractor or Implement may cause serious injury or death. (SG-29)



There are obvious and hidden potential hazards in the operation of this Baler as in all power-driven or pulled equipment. REMEMBER! This machine is often operated in rough terrain conditions that include tall grass, weeds, gullies, holes, slopes, hidden obstructions and the like. Serious injury or even death may occur unless care is taken to assure the safety of the operator and bystanders in the area. Do not operate this machine with anyone in the immediate area. Stop baling if anyone comes within 25 feet of the equipment. (SBA-1)

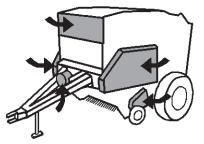
WARNING!

Operate the baler only in conditions where you have clear visibility, either in daylight or with adequate artificial lighting. Never bale in darkness or foggy conditions where you cannot clearly see at least 100 yards in front, to the sides, and to the rear of the Tractor and Baler. Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects. If you are unable to clearly see these types of items discontinue operation of the Baler. (SBA-2)

DANGER!



All Safety Shields, Guards and Safety devices including (but not limited to) - the Deflectors, Intake Guards, Steel Guards, Gearbox Shields, PTO Integral Shields , and Retractable Door Shields should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from entanglement or being crushed. (SBA-3)



WARNING!



Operate the Baler only at the speeds that allow you to safely operate and control the Tractor and Baler. Safe Baling speed depends on terrain condition and grass type, density, and height of windrow. Normal ground speed range is from 2 to 8 mph. Use slow speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris or obstructions are to be avoided. (SBA-4)

DANGER!



Never attempt to open the rear door of the Baler unless the Baler is properly attached to the Tractor drawbar. Opening the door when the Baler is not attached can result in the baler tipping to the rear which could cause serious injury or death. (SBA-5)



Baler 4407 & 4497 09-01

Never walk or work under the rear door unless it is securely locked in place. Make sure the door lock valve is switched to the lock position, locking the door lift cylinders before working under the rear door. Serious injury or death could result from being crushed by the door. (SBA-6)

Never attempt to clear, dislodge or remove material from the intake area of the Baler while the Tractor engine is running. Make sure the Tractor engine is off and all rotating motion has completely stopped, and the parking brake is engaged before working on the Baler. (SBA-7)

Only transport the Baler at speeds that are safe and which allow you to maintain control and safely stop the equipment. Do not tow the Baler at speeds in excess of 25 mph. (SBA-9)

Do not put hands or feet under the Baler. Intake roller contact could cause serious hand or limb injury. Entanglement in the feed rollers could result in serious injury or even death. Stay away until all motion has stopped and the Baler is securely blocked up. (SBA-8)

Make sure that no bystanders or animals are behind or in the area of the Tractor and Baler when backing up. The Baler is large and may block the vision of the operator when backing. Use extreme caution and care to make sure no person or structure is contacted while backing. Serious injury or death could result from being crushed by the Baler. (SBA-10)

Make sure no bystanders or animals are behind or in the area of the Baler when ejecting the bale from the Baler. The ejected bale, which may weight up to 2,300 pounds, could roll out and crush a bystander or an animal resulting in serious injury or death. Use extreme caution and care to make sure no person or animal is in the area behind the Baler when ejecting a bale. (SBA-11)

Make sure no bystanders or animals are behind or in the area of the Baler when opening the rear baler door. The opening door could crush a bystander or animal resulting in serious injury or death. Use extreme caution and care to make sure no person or animal is in the area behind the Baler when opening the door. (SBA-12)

Use extreme care when ejecting a bale from the Baler on a sloping field. Make sure the bale does not roll down the slope after ejecting the bale. The bale rolling down the slope uncontrolled could crush a bystander or animal resulting in serious injury or death. Only eject the bale in an area where the bale will not roll when ejected from the Baler. (SBA-13)

DANGER!



DANGER!







WARNING!

DANGER!

DANGER!















Use extreme care when using a Tractor and Front end Loader to transport a bale. Make sure the area is clear of obstruction and power lines.

- -Use extreme care when transporting with a bale. Transport at a slow and safe speed. Your forward vision may be reduced by the size of the bale.
- -Never raise the loader unless you can clearly see all overhead structures. Make sure you stay well clear of all electrical lines.
 -Use long tines and make sure the bale is securely retained in the front end loader.

-Raise the loader only as high as necessary. Do not raise the loader and tilt the bucket back allowing the bale to roll backwards onto the tractor and crushing the operator. Serious injury or death could result from being crushed. (SBA-14)







Stack the bales in a manner that will prevent them from rolling. Do not stack the bales on top of each other unless they are properly supported and secured to prevent them from accidently rolling or falling. Serious injury or death could result from being crushed by a rolling or falling bale. (SBA-15)

DANGER!

Never attempt to change or insert the Baler twine or netting while the Tractor engine is running. Make sure the Tractor engine is off and all rotating motion has completely stopped before changing or replacing the baling twine and netting. Entanglement in the twine or netting rollers can result in serious injury and dismemberment. (SBA-16)





Be particularly careful when transporting the Implement using the tractor. Turn curves or go up or down hills only at a low speed and at a gradual steering angle. Make certain that at least 20% of the tractor's weight is on the front wheels to maintain safe steerage. Slow down on rough or uneven surfaces. (STI-1)

WARNING!

Never unhitch without using the Tongue Jack. The Tongue is very heavy. Attempting to lift the Tongue without using the Tongue Jack could cause **strains or other injury**. Allowing the tongue to fall **suddenly and unexpectedly** could result in **crushing injury**. Use the Tongue Jack for **lifting the Implement only**. Overloading the Tongue Jack can cause failure with possible **serious bodily injury or even death**. (STI-4)

WARNING!

Only tow the Implement behind a properly sized and equipped Tractor which exceeds the weight of the Implement by at least 20%. DO NOT tow the Implement behind a truck or other type of vehicle. Never tow the Implement and another Implement connected in tandem. Never tow the Implement at speeds over 20 MPH. (STI-6)

In addition to the design and configuration of this Implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)

PARTS INFORMATION

M&W implements use matched system components for blades, hangers, rollers, and bearings. These parts are made and tested to M&W specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce an implement's performance, void warranties, and present a safety hazard. Use genuine M&W parts for economy and safety. (SPMW-1)

SEE YOUR M&W DEALER

DECAL LOCATION GUIDE

(21)

21

9

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NOTE: M&W supplies safety decals on this product to promote safe operation. Damage to the decals may occur while in shipping, use, or reconditioning. M&W cares about the safety of its customers, operators, and bystanders, and will replace the safety decals on this product in the field, free of charge (Some shipping and handling charges may apply). Contact your M&W dealer to order replacement decals.

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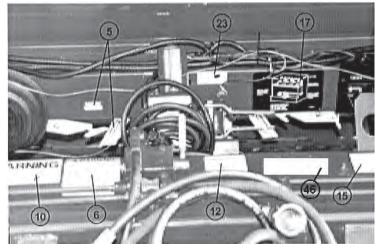
M & W

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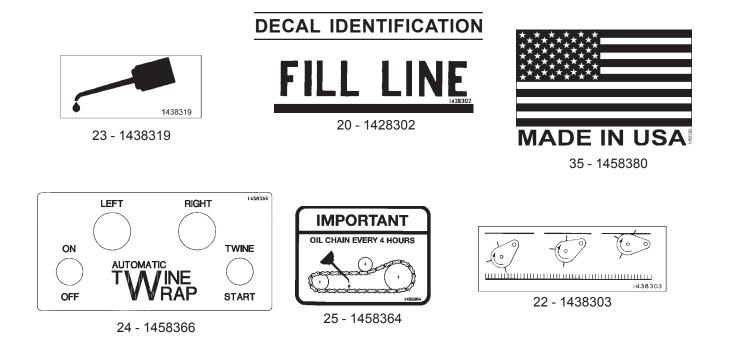
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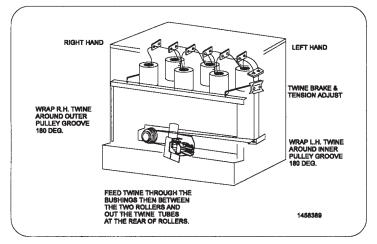
DECAL LOCATION GUIDE



ITEM PART NO.

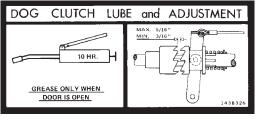
QTY. DESCRIPTION





17 - 1458389





15 - 1438326



- Read and understand the Operator's Manual.
 Stop the tractor engine before leaving the opera-
- tor's platform.
- 3. Keep riders off the machine.
- Make certain everyone is clear of the machine before starting the tractor engine and operating.
- 5. Keep all shields in place.
- 6. Never lubricate, adjust, unclog or service the machine with tractor engine running.
- Wait for all movement to stop before servicing.
 Keep hands, feet and clothing away from moving parts.
- Use flashing warning lights when operating on highways except when prohibited by law,

11 - 1438330

1438330





Si No Lee Ingles, Pida Ayuda a Alguien Que Si Lo Lea Para Que le Traduzca las Medidas de Seguridad.

DECAL IDENTIFICATION



540 RPM TRACTOR PTO SPEED ONLY

Overspeeding PTO may cause component failure with resulting injury. D103

12 - D103

WARNING

02962764

PINCH POINTS

9-02962764



8-00725746

LINEA DE CONDUCCION GIRATORIA EL CONTACTO PUEDE CAUSAR LA MUERTE ¡MANTENERSE LEJOS! NO FUNCIONE SIN QUE-

00725748

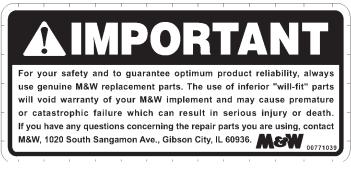
- Todos los protectores de la línea de Conducción, alimentador y blindajes del Equipo estén en su
- Las líneas de conducción estén conectadas con seguridad en ambos extremos

Los protectores de la línea de conducción den vuelta libremente en la línea de Conducción 00773723

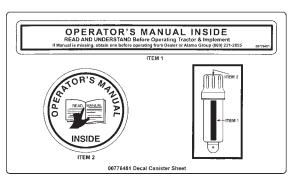
46 - 00773723



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44 - 00771039



52-00771039

Baler 4407 & 4497 09-01

LEA EL INSTRUCTIVO





DECAL LOCATION GUIDE - OPTIONAL WIDE PICK-UP



ITEM	PART NO.	QTY.	DESCRIPTION	LOCATION
1	02962764	2	Pinch Points	R & L Sides
2	1438319	2	Oil	R & L Sides
4	1458382	2	Warning Hand Pinch	R & L Sides
5	1458396	2	Danger Auger	R & L Sides
6	1458397	1	Gauge Wheel Adjustment	Left Side Only
7	1438333	2	Grease 10 Hrs.	R & L Sides
8	1438333	1	Grease 10 Hrs.	Left Side Only

DECALS - OPTIONAL WIDE PICK-UP

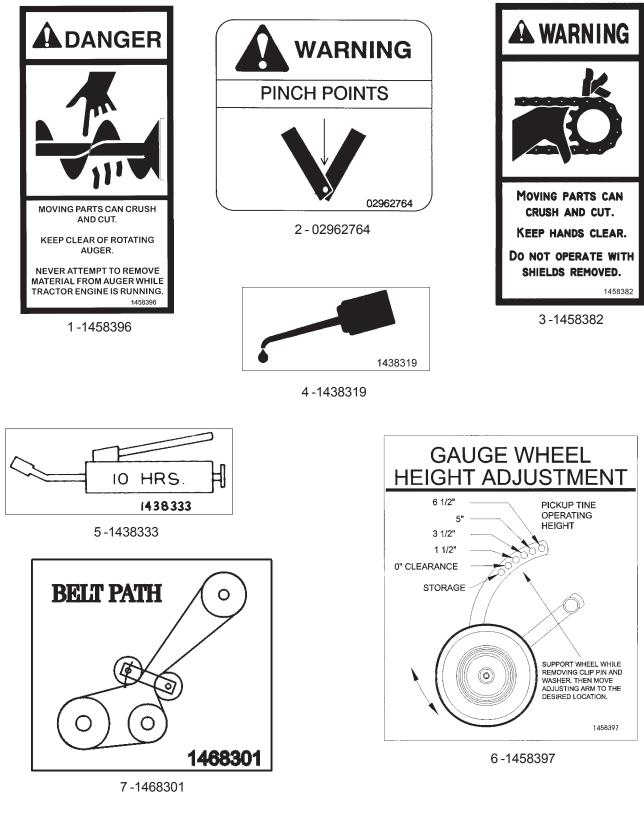


DECAL LOCATION GUIDE - OPTIONAL SILAGE MASTER



ITEM	PART NO.	QTY.	TYPE	DESCRIPTION
1	1458396	2	DANGER	Auger
2	02962764	3	WARNING	Pinch Points
3	1458382	3	WARNING	Hand Pinch
4	1438319	3	INSTRUCT	Oil
5	1438333	5	INSTRUCT	10Hr. Grease
6	1458397	1	INSTRUCT	Gauge Wheel Adjustment
7	1468301	1	INSTRUCT	Belt Path
8	1468302	2	NAME	Silage-Master

DECALS - OPTIONAL SILAGE MASTER





SAFETY DECALS

These decals are installed on the baler for your safety. They must be visible at all times and kept in good condition. The owner of this machine assumes responsibility for maintaining these warning decals. If they become damaged or unreadable for any reason, replace immediately. A full set of replacement decals are available. Order part number 1410413 for a Safety Decal Kit. For a complete Machine Decal Kit, order part number 1410426 for Model 4407, 1410427 for Model 4497, 1410432 for Wide Pick-Up or 1410431 for Silage Master. You must include the model number and serial number of your baler when ordering. Individual decals may be purchased. Refer to Decal Identification and Location Pages for part numbers.

INTRODUCTION

The M&W Round Baler has been engineered and built for ease of operation and long service life. It is most important that you thoroughly understand the operation of the baler before use. Read through this manual completely, watching especially for safety symbols (See Illustration 1) which alert you to possible hazards. The word "NOTE" will alert you to special information such as specifications, techniques, reference information and other supplementary information. The word "IMPORTANT" is used to point out a note which is of an immediate and urgent nature.



Illustration 1- Safety Symbol

It is the user's responsibility to read the operator's manual and comply with all instructions pertaining to operation and maintenance. It is also the user's responsibility to inspect the machine at regular intervals and repair or replace worn or damaged parts when continued use would cause damage or excessive wear to other parts. Delivery of the machine to the M&W dealer for repairs under the warranty is also the user's responsibility.

The manufacturer reserves the right to make changes, specifications or improvements without incurring obligations to add them to balers sold before the changes.

When Ordering parts for your baler, please specify the part number and the name of the part as shown in the parts section. Please include the serial number of the baler, which is located on the front of the crossbeam, in all correspondence when referring to the baler. Record the serial number and purchase date here for future reference.

Serial No. _____ Model _____ Purchase Date _____

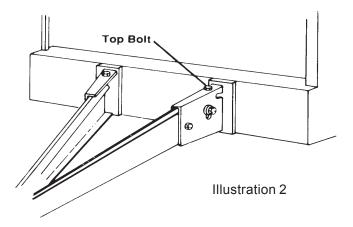
SAFETY & ACCIDENT PREVENTION

- 1. Read and understand this manual and use in accordance with instructions.
- 2. Keep the slow moving vehicle emblem, reflectors and decals clean and visible. Replace if they are damaged or unreadable.
- 3 Always tow the baler at speeds less than 25 MPH.
- 4 Always switch the tractor engine off and remove ignition key when working on the machine.
- 5 Always keep safety guards in place during operation accordance with instructions.
- 6. Stay clear of baler when in operation!
- 7 Baler must be hitched to tractor whenever rear door of baler is opened.
- 8. Always place valve in safety lock position before standing under the rear door or if access into the bale chamber is required.
- 9. Daily clean off all build up of loose hay that may collect in different locations on the baler. This hay build up is a fire hazard.
- 10. **CAUTION!** Avoid using hands to remove hay from the bale chamber area or behind the chopper feeder wheel in the Silage Master baler. There are many very sharp hay cutting knives in this area.
- 11. **WARNING!** Never attempt to remove or disconnect the elevator chain without the proper equipment to support it. This elevator assembly is too heavy to hold by hand and can fall and cause serious injury to nearby persons.
- 12. **WARNING!** Avoid putting hands in the area of the twine and net feeding conveyor belt while it is running. This belt has cross lugs, which can drag your hands and arms into the twine cutoff knives or other parts of the baler which may have sharp edges. Any work in this area must be done WITH THE TRACTOR ENGINE SHUT OFF AND THE PARKING BRAKE SET.
- 13. **ATTENTION!** Blockages in the inlet area must be removed WITH THE TRACTOR ENGINE SWITCHED OFF! (See troubleshooting section.)
- 14. Avoid entering the area behind the baler when the bale is ejected. Be sure that no one is positioned behind baler when ejecting bale.
- 15. On sloping fields, round bales must be deposited and secured so they cannot roll downhill.
- 16. When transporting bales with a front loader:
 - a. Be sure that the area is clear of obstructions.
 - b. Use long tines.
 - c. Raise the loader only as high as necessary.

- 17. Stack the bales so that they cannot roll off or tilt.
- 18. **WARNING!** Never smoke or use an open flame in proximity to the baler. Dry hay poses a potential fire hazard, which could cause serious injury or death. Damaged or worn bearings may be a potential ignition source when in close proximity to dry hay. Always perform routine maintenance, lubrication, and frequently inspect bearings to prevent a fire hazard. Carry a fire extinguisher where it can be reached easily when baling or performing maintenance. Do not use a tractor with an under frame exhaust for baling.

CONNECTING TO A TRACTOR

1. Connect the machine to the tractor drawbar so that the front edge of frame side panels are vertical. If necessary, adjust the angle of the tongue (See Illustration 2). With the jack supporting the baler, loosen the four side bolts on the tongue. Turn the top adjusting bolts clockwise to lower the tongue or counter clockwise to raise it. Turn these bolts the same amount to keep the bolts from binding. The front two bolts may be moved to another set of holes in the tongue to obtain more height adjustment. Tighten the four side bolts after the baler is level.



2. Move the tongue jack to the jack support tube on top of the baler front crossbeam.

3. Connect the hydraulic hoses.

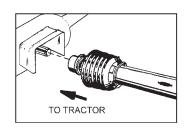
4. Adjust the drawbar so the center of the hitch pin holes is 14" (540 RPM) behind the end of the PTO shaft (according to ASAE Specifications). Connect the IID shaft to the tractor PTO shaft. (See Illustration 3).

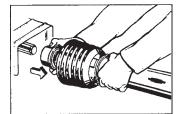
NOTE: The IID shaft will get shorter as the tractor turns!

Connecting To The Tractor:

Clean PTO Shaft. Depress slide collar and slide onto PTO shaft. Release slide collar and pull or push coupling to seat lock.

Check swivel range.





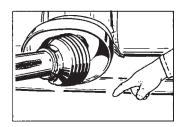


Illustration 3

CAUTION! Keep the PTO shaft guard(s) in place. Never operate without the IID shaft guard in place!



5. Install the control panel on the tractor where it is easily seen and can be reached by the operator. Connect the red wire(+) from the panel to the tractor's 12 volt battery (See Illustrations 4 & 4A). Connect the black wire (-) to ground, using the tractor frame.

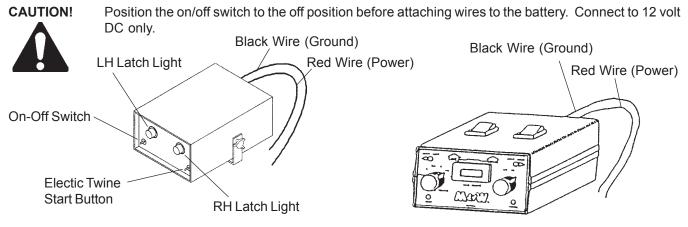


Illustration 4

Illustration 4A

Route the wiring harness to the tractor. Plug into the control panel. Secure the wiring harness with beaded ties to the hydraulic lines. If the tractor is disconnected from the baler later, simply disconnect the harness at the control panel.

PRE-SEASON PREPARATION

- 1. Check that all lubrication points have been greased or oiled (See Lubrication Instructions).
- 2. Check and retighten all nuts and bolts.

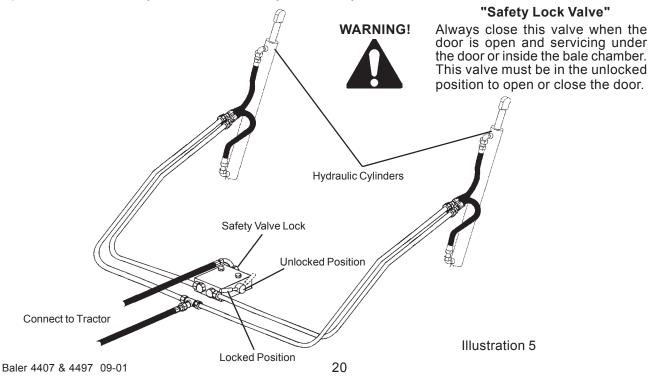
3. After following instructions on connecting the baler to a tractor, start the baler and run for a few minutes at 2/3 to 3/4 full PTO speed. Check the baler once again after this test run. Tighten any nuts and bolts, if necessary, and check the tension of all chains.

4. Open and close the rear door. Check that oil lines and fittings are not leaking. The elevator chain can be lubricated by opening and closing the rear door and advancing chain.

HYDRAULICS

The baler is equipped with two hoses which connect to the tractor and two 2-way cylinders for opening and closing the rear door (See Illustration 5).

The rear door cylinders have a "safety lock valve" installed between them and the tractor for locking the door open or closed. Both cylinders are locked by this "Safety Lock Valve".



PICK-UP SETTINGS



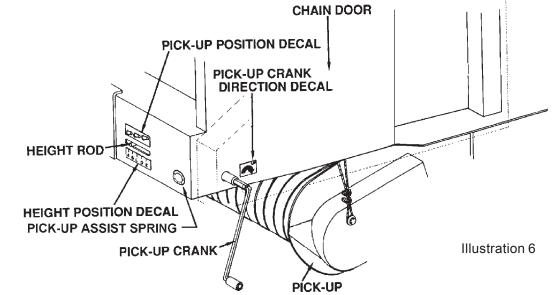
S! Never adjust pick-up height while tractor is running. Stop engine and set parking brake.

The pick-up is raised by a one-way hydraulic cylinder (See Illustration 6). The crank adjusts the lower height stop for the pick-up. The stops limits how far the pick-up can be lowered. Turn the crank counter-clockwise to lower the stop and clockwise to raise it, as shown by the decal above the crank. The decal below the height rod labels several height positions for the pick-up. This rod moves as the crank turns. The crank can be used to raise and lower the pick-up when the hydraulics are in the "float" position. When the cylinder is not connected to the tractor, the crank can only raise the pick-up.

To lower the pick-up, first turn the crank counter-clockwise until the pick-up height rod is in the A to E range. The pick-up can now be raised or lowered hydraulically.

The pick-up has two lift assist springs (one on each side) to help carry its weight. Adjust the springs so that the pick-up can be lifted by hand in the operating position. First, raise the pick-up. Turn the weld nut tensioner on each side of the front crossbeam clockwise to increase spring tension and counter-clockwise to decrease tension. Turn each side an equal number of turns.

When leaving the field, always completely raise the pick-up. In the transport position, the pick-up should be firmly underneath the frame and out of the way of obstacles. If not, shorten the cables on both sides of the pick-up.

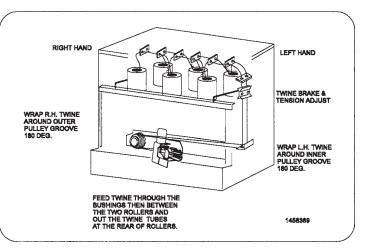


TWINE INSTALLATION



Never install twine when tractor is running. Stop engine and set parking brake.

1. Place the balls of twine in the twine box in an upright position (See Illustration 7). Slide the rubber strap back against the balls to prevent them from tipping over. Route the twine through the twine guides and tie the balls together as shown in Illustration 7. Make knots small enough to pass through the twine guides.





2. For the front three balls, run the twine towards the left side of the baler using the front series of guide holes, and the rear series of guide holes for the rear balls. Pull the twine tensioner plates apart and put the twine through the tensioner and the two holes in the twine box floor. Next route the twine through the twine guide below the twine box floor inside the left side wall before routing to the step pulley at the right.

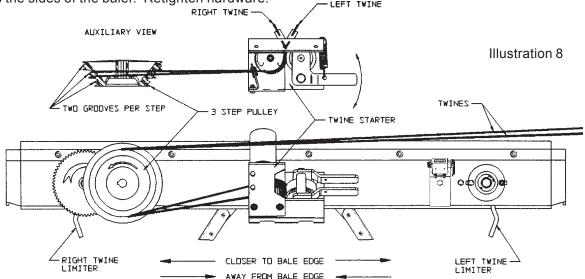
CAUTION! Knife blades are very sharp. Use caution when working near twine cut-off knives.



3. Wrap the right and left twines around the two grooves of one of the pulley steps 180° counter-clockwise (the twine will come off the bottom of the pulley). Each pulley step represents a different twine spacing on the bale. Using the large pulley step will result in a close spacing between the twine wraps (maximum amount of twine on the bale), excellent for baling short material like wheat stubble. Using the smallest pulley step will result in the widest spacing between the twine on the bale), suitable for baling long material. **NOTE:** Each twine must be in separate grooves, but in the same step. (See Illustration 8).

4. Run the right and left twines through the bushings on the twine starter and then between the two rollers and out the twine tubes at the rear of the rollers. (See Illustration 8). The twine pick-ups should be placed in line with the twine cut off knives for their initial starting position. They must move in toward the starters when the step pulley is turned counter-clockwise. They can easily be checked and set by manually turning the step pulley counter-clockwise.

5. The distance of the twine from the bale edges can be adjusted by means of the twine limiters. (See Illustration 8). To adjust the twine closer to the outside of the bale, loosen the hardware and move the limiters towards the sides of the baler. Retighten hardware.



NET WRAP INSTALLATION (Model 4497)



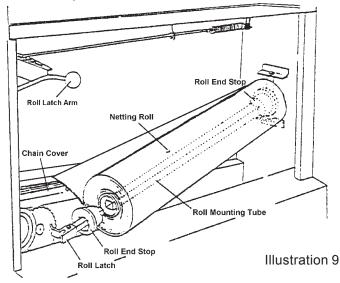
Never install netting while tractor engine is running. Stop engine and set parking brake.

1. Compare the netting roll core length to the dimension on the specifications page. If it is longer, cut to the proper length. If only netting or plastic is to be used, an extra roll can be stored in the twine box. First remove any balls of twine. Move the rubber strap forward on the twine divider rods. Place the roll in the twine box and move the strap back to help hold the roll in place.

2. To install a roll of netting, move the roll latch arm handle to the right and rotate the roll mounting tube out (See Illustration 9). Pull the roll latch out, and a roll end stop off the tube. Place a roll of netting over the tube. Make sure that the netting comes off the roll on the bottom, towards the rear (See Illustration 10). Put the left end over the left end stop. Put the other end stop inside the right end of the roll. Replace the latch arm. Move the roll latch arm handle to the right and rotate the roll mounting tube in. Release the handle to secure the tube. Pull on the roll to verify that the tube is locked in position. For a more detailed drawing, see the Wrap Roll Mounting System section in the Parts Listing Section.

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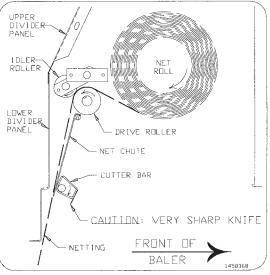
3. Check the range of movement of the roll latch arm handle. It should be nearly centered in the available movement it had when no roll was installed. If it isn't, the position of the end stops has to be changed. On each end of the tube are square keys which act as stops to the roll end stops. The end stops have four inner notches with different depths. The keys extend a different amount into each notch, thereby changing the spacing of the end stops. Rotate the mounting tube out. Rotate one end stop at a time, 90°, to control the position of the end stops on the tube. Use of up to three spacer washers may be necessary.





Knife blades are very sharp. Use caution when working near twine cut-off knives and net wrapping cut-off knives.

4. Manually feed netting between rollers and behind net chute (See Illustration 10). This may be easier if roll latch is open. Cut off bottom of netting level with knives on cutter bar. If roll latch is not in a closed position already, secure it now. Rotate net roll to remove any slack in the netting.



BALE COMPACTION SETTING

Illustration 10

The bale compaction is controlled by spring tension holding the rear door latches locked (See Illustration 11). This spring tension is easily changed by positioning the compaction control levers in one of five different hole locations. Use the top hole for the most lightly compacted bale and the bottom hole for the most heavily compacted bale.



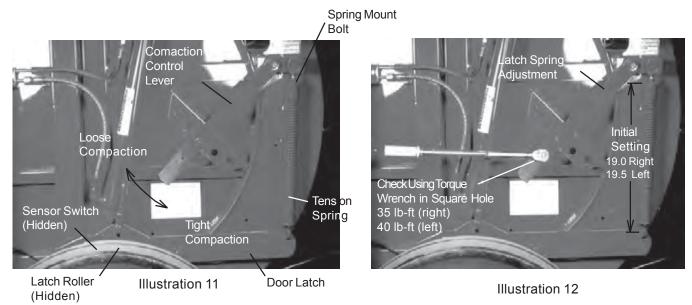
Levers under spring tension. Never adjust with door open.



NOTE: The levers on each side of the baler must be positioned in the same location. If more or less spring tension is required, adjust the spring mount bolt. Adjust both sides the same amount.

Normal spring length should be 19" on right side and 19-1/2" on left side from the spring bottom to the spring end plug with the adjusting lever in the center position. The elevator chain disconnect spring provides enough resistance to require more spring tension on the left side lever.

A more accurate check of the spring tension can be made using a torque wrench. Place the torque wrench in the square hole on the end of the lever (See Illustration 12). With the lever bolt unlatched and even with the center hole, the torque wrench should read 35 FT-LB (Right) and 40FT-LB (Left), keeping wrench approximately parallel to the lever. Adjust the spring length if required.



All crops will not compact the same. Light, dry, crops can be compacted more than heavy, moist crops. You will have to match the tension setting to your crop and desired compaction. Start with the compaction control levels in the top holes for the first bale, then move them down one hole at a time until you have a bale with the desired compaction. (See Illustration 11).

After the compaction of the bale reaches the tension setting of the compaction control levers, a rear door latch will start to rise, activating a sensor switch and turning an indicator light on, indicating that the bale is formed. There is a sensor switch on both sides of the baler and two lights in the control panel. When the right sensor switch is activated, it will turn on the right control panel light. These lights indicate which side of the bale is compacted more or less than the other side.

SENSOR SWITCH ADJUSTMENT

The sensor switch should turn the lights on after the door latch bar rises 1/8" to 3/16" above the latch roller (See Illustration 11). If not, adjust the switch by moving the compaction levers all the way up past their adjusting holes. This will remove the spring tension on the latch bar. Insert a 1/8" allen wrench through the opening just above the latch roller (See Illust. 11). Center the wrench on top of the latch roller then pinch the wrench in position by moving the compaction lever to its center hole position. Loosen the two sensor switch mounting bolts and slide the switch back against the latch bar until the light goes out. Slowly slide the switch back away from the latch bar until the light comes back on. Tighten the two mounting bolts at this position, making sure the switch does not move when tightening bolts. Remove the allen wrench and recheck the setting by raising the latch bar manually above the switch.

NOTE: The 1/8" to 3/16" setting is when the light comes on, not when it goes out. Set the switch on each side the same.





1/8" Allen Wrench

OPERATION

1. The pick-up should be positioned next to the ground so it will pick up all the crop, DO NOT operate the baler if the tines are running in the ground. Adjust the gauge wheels just above the ground when the pick-up is set at the proper operating height.



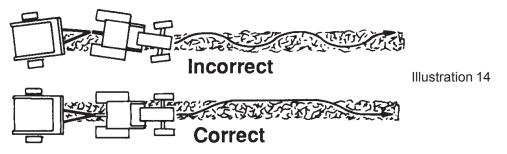
Incorrectly adjusted pick-up may throw rocks & debris toward operator causing injury. Do not set too low.

2. Switch on the controller. If using a 4497 Baler also set the material selector to twine, or the number of wraps if using netting. Using the tractor hydraulics, close the rear door until the latch bars lock the rear door closed and the indicator lights go out.

3. Engage the PTO and bring the baler up to full PTO RPM.

4. Position the tractor over the windrow centrally. The windrow should be straight, consistent, and not too thick. The ideal windrow width is the same as the bale width. If the windrow is too wide, the bale will be forced against the side of the chamber and will be difficult to eject.

5. In the case of a narrow windrow, it is advisable to weave the tractor from side-to-side (See Illustration 14). This will ensure that the bale has the same amount of hay on both ends and is evenly compacted. Do not drive in a zig-zag, but drive on one side for a distance, then change to the other side for the next distance. Do not spend a lot of time with the windrow in the center or the bale will have a tight center and loose ends.



6. Start moving slowly at full RPM until the crop has started rolling inside the baler. Then increase ground speed. Forward speed will be determined by crop conditions and the size of the windrow. The norm is 5 MPH, when conditions permit, with a range of 3 to 8 MPH.

7. Continue baling until a rear door latch activates an indicator light signaling that the bale is formed. When one light stays on for at least a few seconds (right or left), that side is full. Move over to the other side and put more crop into it until that light comes on. Continue this procedure until the lights on both sides stay on. You are now ready for the wrapping operation.

BALER WRAPPING OPERATION (Model 4407)

Push the electric twine start button for approximately **3/4 second**. Do not hold the button in too long or the twine pick-ups will go past the twine and will have to go one complete round before it will pick the twine up and wind it across the bale.

The twine will fall into the windrow and will be carried into the baling chamber with the windrow. Once the twine is caught by the rotating bale, stop the forward motion of the tractor. Do not disengage the PTO or throttle down. After the twine pick-ups have moved in toward the twine starters and picked up the twine, they will wind the twine across the bale.

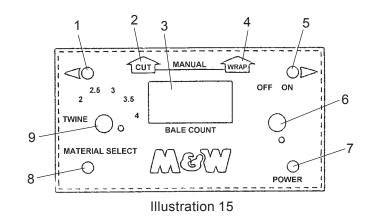
The twine will start at the center of the bale, wrap toward both edges and back to the center, where the knives will automatically cut the twine. The wrapping mechanism is then ready for the next bale.

NOTE: The knife blades are replaceable. If blades become dull, remove the screws securing each blade and replace with new blades.

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4497 Controller functions: (See Illustration 15)

- 1. Left hand full chamber light.
- 2. Manual cutter knife switch.
- 3. Bale counter.
- 4. Manual wrap switch
- 5. Right hand full chamber light.
- 6. On/Off switch.
- 7. Power light.
- 8. Wrap light.
- 9. Wrap material selector switch.



The controller also has an audio beeper which will sound each time a full chamber light comes on or the cut clutch is engaged. The cut clutch beeper will only sound in the net mode.

When wrapping with netting it is possible to cut the netting by depressing the cut switch. To determine the desired number of wraps merely look for the crossbars with reflective tape once the netting has begun to feed into the baler. Each bar with reflective tape will represent approximately one wrap of netting on the bale.

BALER WRAPPING OPERATION (Model 4497)

Net Wrapping - Continue to fill the baler until the indicator lights on both sides glow. The wrap cycle must be started manually by pressing the WRAP button. The baler should be centered over the windrow when the wrapping process begins. When the WRAP button is depressed the feed clutch will engage advancing the wrapping material into the windrow. The wrapping material is carried into the bale chamber with the windrow. When the wrapping material is started into the bale chamber, stop the tractor's forward motion.

If the baler is a **4497 Silage Master**, the wrapping material does not fall onto the windrow coming into the baler. Instead the wrapping material falls onto a belt conveyer which carries it into the area between the hay chopper and the rotating bale. Hay must still be coming into the baler to carry the wrapping material into the baling chamber. When the rotating bale starts pulling the wrapping material, stop the tractor's forward motion.

When the pre-selected number of wraps have occurred, the cut-off clutch will engage, rotating the cut-off knife into the wrapping material automatically.

The controller also has an audio beeper which will sound each time a full chamber light comes on or the cut clutch is engaged. The cut clutch beeper will only sound in the net mode.

When wrapping with netting it is possible to cut the netting by depressing the cut switch. To determine the desired number of wraps merely look for the crossbars with reflective tape once the netting has begun to feed into the baler. Each bar with reflective tape will represent approximately one wrap of netting on the bale.

Twine Wrapping - Continue to fill the baler until the indicator lights on both sides glow. The twine wrap cycle must be started manually by pressing the WRAP button. The baler should be centered over the windrow when the wrapping process begins. When the WRAP button is depressed the twine starter will engage, advancing the twine into the windrow. The windrow will carry the twine into the bale chamber. When the twine has entered the bale chamber stop the forward motion of the tractor. The twine hook guides the twine across the bale and automatically cuts when wrapping is complete.

If the baler is a **4497 Silage Master**, the twine does not fall onto the windrow coming into the baler. Instead the twine falls onto a belt conveyer which carries it into the area between the hay chopper and the rotating bale. Hay must still be coming into the baler to carry the twine into the baling chamber. When the rotating bale is pulling the twine, stop the tractor's forward motion.

Twine Limiter Adjustment - Adjustment to the twine limiters can be made at the RH and LH bottom corners of the chain beam. This will allow you to adjust the limits of the twine wrap on the bale.

The bales may not roll clear of the door. If this happens, reverse for approximately 10 feet while the bale is being wrapped.

Discharge the bale after wrapping is completed.

IMPORTANT: OPEN THE DOOR ALL THE WAY. The elevator chain is automatically disengaged when the door is opened.



Rear door damage may result if these instruction are not followed.

NOTE: Before closing the door, drive forward so that the door does not touch the discharged bale. Close the door until the indicator lights go out. The process is now complete and ready to start a new bale.

OVERLOAD SLIP CLUTCHES

The baler is equipped with an overload ratchet slip clutch.



Never touch the clutch housing. Heat is generated which may cause burns.

The overload slip clutch on the IID shaft will slip and make a loud noise if the baler is filled too full or the bale is too tight. When this happens, disengage the PTO immediately. To restart the baler, slow the engine RPM, then engage the PTO slowly.

The 4497 Silage Master is equipped with an overload friction plate clutch. If the clutch slips enough to start smoking, wait two to five minutes for clutch to cool before engaging the PTO.

There is also an optional overload breakaway clutch available for the 4497 Silage Master, which does not overheat and can be restarted immediately after disengaging the PTO and lowering the RPM.

The clutch may also slip on the 4497 Silage Master if the feeding wheel behind the pick-up tines is overloaded or some foreign object is lodged in the feeding wheel.



Never clean out or dislodge baler pick-up or feeding wheel while tractor engine is running. Stop the engine and set parking brake.

The 4497 Silage Master is equipped with a special long-handled wench, which can be used to reverse the feeding wheel for dislodging it (right side drive).



Never operate baler with shields removed.

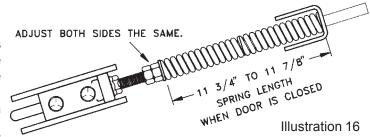
1. Elevator Chain - The elevator chain rear sprockets are spring tensioned to keep the chain tight. These springs (one on each side of baler) are to be measured only when the baler door is closed. Adjustment may require that the door be opened a little, then closed again to re-measure spring length. (See Illustration 16). **THE BALER MUST BE EMPTY!**

2. Roller Drive Chain - The middle sprocket on the chain is spring tensioned. This tension is by a torsion spring on idler arm and has no adjustment. (Not Illustrated).

3. Pick-Up Drive Chain - A leaf spring and coil spring (See Illustration 17) tensions the chain. To adjust the tension, tighten or loosen the locknut at the rear of the leaf spring tensioner. If further tension is needed, loosen the adjusting hex bolts on the pickup mount. Reposition to desired tension and retighten fasteners.

NOTE: Both sides of the pick-up must be adjusted the same amount to keep chain sprockets in line with each other. (See Illustration 17).

The **4497 Silage Master** pick-up has two drive chains on the right side and one on the left. Each has a center sprocket on the chain that is spring tensioned by an extension spring pulling on an idler arm and requires no adjustment.



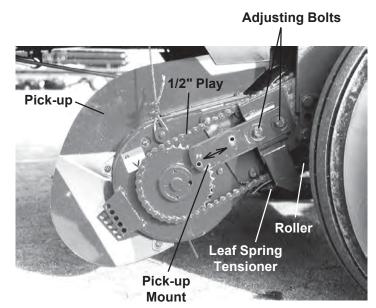


Illustration 17

4. Elevator Drive Chain - The middle sprocket on the chain is spring tensioned. This tension is by a torsion spring on idler arm and has no adjustment. (Not Illustrated).

5. Feeder Wheel Drive Chain - 4497 Silage Master Only - - The middle sprocket on the chain is spring tensioned. This tension is by a torsion spring on idler arm and requires no adjustment. (Not Illustrated).

6. Stripper Roller Drive Chain - 4497 Silage Master Only - - This drive has an idler bar above the top drive chain strand between the two sprockets. This idler bar is guided and fastened through a slot in its mount.

To adjust, loosen the fastening bolt, slide the bar in the slot until correctly adjusted then retighten the fastening bolt. For correct adjustment there should be between 1/4 - 1/2 inch of movement remaining in the lower strand of the drive chain.

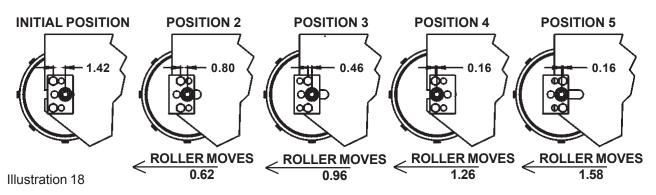
BALER LOWER ROLLER POSITION

The lower roller may need to be moved forward if the elevator chains have stretched enough to contact the lower roller.

At each side of the baler the lower roller shaft is fastened in place by a positioner plate. These positioner plates are secured by two bolts on each side.

To move the roller forward, remove the two bolts fastening each positioner plate, slide each end of the roller forward the same amount and only enough, less than one inch, to move to the next setting. This setting may require removing the nut and lockwasher on each end of the roller shaft and relocating the positioner plate on the shaft ends. (See Illustration 18).





BALE RAMP INSTALLATION

- 1. If bale ramp extension is not in operating position (Illustration 19) remove it form shipping location on baler.
- 2. Remove cotter pins and clevis pins from end of ramp mount.
- 3. Place bale ramp mounts into correct postions on lower cross axle, so that holes are aligned. Compression springs should be facing the ground.
- 4. Insert clevis pins through lower cross axle and bale ramp mounts, and secure by placing cotter pins into ends of clevis pins.
- 5. Open and close rear door slowly to check for clearance of ramp. If there is any interference between door and bale ramp, check spring length. (Illustration 19)

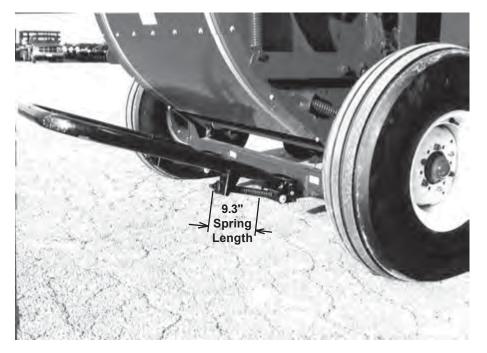
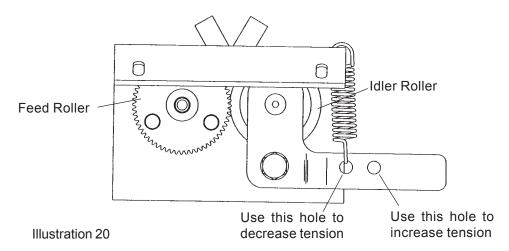


Illustration 19

TWINE STARTER TENSION ADJUSTMENT

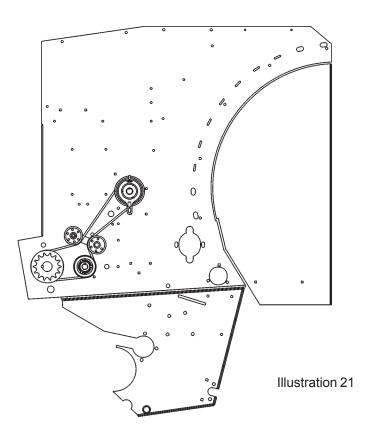
1. The twine starter idler roller is spring tensioned against the starter feed roller (See Illustration 20). Increase the spring tension if the string slips in the rollers. Decrease the spring tension if the string is being cut by the rollers.



2. To change the spring tension, note the position of the spring end and reposition the spring end in a different hole in the arm as shown.

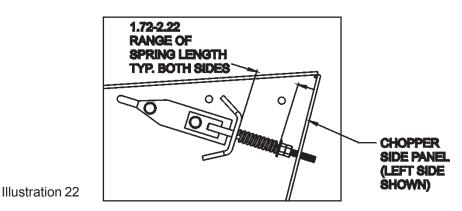
BELT TENSIONING ADJUSTMENT (4497 Silage Master Only)

Net Wrap and Wrap Conveyer Belt Drive Belt Adjustment - This drive belt has five pulleys in it. The belt must wrap on the outside of three V-Pulleys and between two flat idler pulleys. One of the flat idler pulleys is spring tensioned by a torsion spring on idler arm and has no adjustment. (See Illustration 21).



Wrap Conveyor Belt Adjustment - This wide flat belt has a crowned driving roller and a crowned idler roller. The idler roller is mounted in slots in the chopper housing side panels and fastened in place by two fastening bolts on each side of the chopper housing.

To adjust the alignment and tension on this conveyer belt, loosen the two fastening bolts on each side at the idler roller and adjust the two draw bolts, one on each side. Adjust at different tensions on each side to track the belt in the center of the crowned idler roller, while maintaining the proper tensioning by keeping the compression springs on each draw bolt within the dimensioned length. (See Illustration 22).



The drive roller is adjustable on the right side, only if necessary, to track the belt in the center of the drive roller. To make this adjustment, loosen the two bolts fastening the roller's right bearing to the baler side panel. Move the top of the bearing by adjusting the draw bolt until the belt tracks on center.

Recheck the length of the compression springs on the idler roller adjusting draw bolts. Make the proper corrections if needed at the idler roller. Tighten all fastening bolts on both sides of the idler roller and on the right side of the drive roller.

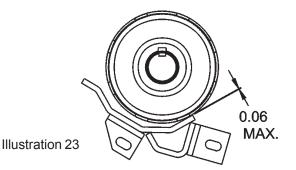
STRIPPER ROLLER SCRAPER ADJUSTMENT (4497 Silage Master Only)

This adjustment must be done inside the bale chamber with the rear door open.



Always Close the Door Lock Valve before entering bale chamber. Never make adjustments while tractor engine is running. Stop engine and set parking brake.

The stripper roller scraper is fastened with two bolts on each side through angle brackets with slotted holes and through holes in the baler side panels. To adjust, loosen these bolts (the nuts are on the outside of the baler). Slide or tap rear edge of scraper up against stripper roller. Rotate roller to assure no severe interference between roller and scraper. A slight rubbing is acceptable. Disconnecting drive chain might be helpful in rotating roller. There should not be more than 1/16-inch between scraper and roller bars all the way across the roller. Retighten fastening bolts and reconnect drive chain. (See Illustration 23)

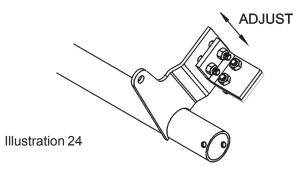


FEEDER WHEEL SPUR GEAR ALIGNMENT (4497 Silage Master Only)

For correct spur gear alignment, adjust the mounting bracket for the outer bearing of the feeder wheel drive jackshaft. This adjustment should not be needed unless bracket is removed for repairs. Move the bracket up, down, left or right to align the spur gears as parallel as visibly possible by loosening the four fastening bolts and adjusting the three draw bolts. Rotate gears to check for backlash. There needs to be some noticeable backlash during full rotation of gears. It may be necessary to remove the drive chains for this adjustment. Retighten four fastening bolts and secure all nuts on the three draw bolts.

HAY HOLD DOWN TINES AND FRONT BAFFLE ADJUSTMENT (4497 Silage Master Only)

The height of the hay hold down tines above the pick-up can be adjusted by changing the height of the bumper pad mounting angles, one at each end of the hold down tine cross tube. This can be done by loosening bolts and moving angles in slots of brackets welded to the cross tube to the desired height. Retighten the bolts. (See Illustration 24).



The normal height of the hold down tines should be with approximately 2 inches between tines and pick-up bands. This clearance is required to keep short crops from bunching at the end of the hold down tines.

The height of the front baffle is adjusted by moving to a different link of the supporting link chains through a key-hole slot in mounting brackets, one on each side of the baler tongue channels.

The normal height of the baffle should be just high enough to keep the hold down arm stops off of their supports when pick-up is down. This should be approximately 8 to 10 inches from the bottom edge of the baffle to the ground. Some crops may require a higher setting.

PICK-UP GAUGE WHEEL HEIGHT ADJUSTMENT (4497 Silage Master Only)

After setting the pick-up to the desired running height, the pick-up gauge wheel should be set to just run on the ground or set in the nearest height adjustment hole when wheel is on the ground.

BALER SPINDLE MOUNT HEIGHT ADJUSTMENT (4497 Silage Master Only)

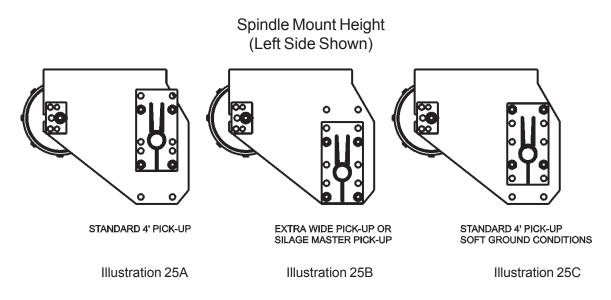
WARNING!

Always use safety blocks under frame of baler after lifting with jack or overhead crane. Never make adjustment while tractor is running. Stop engine and set parking brake.

The standard setting of the spindle mount height with the Standard 4' Pick-Up is to align the bottom holes of the spindle mount weldment (single gusset down) with the second set of holes from the bottom on the baler frame. (See Illustration 25A)

The standard setting of the spindle mount height with the Extra Wide Pick-Up or Silage Master is to align the bottom holes of the spindle mount weldment (single gusset down) with the bottom set of holes on the baler frame. (See Illustration 25B).

For soft ground conditions where the baler tires are sinking into the ground 1-2 inches the spindle mount weldment can be lowered 2 inches from the standard setting by using the second set of holes from the bottom of the spindle mount weldment instead of the bottom set of holes. This setting may help in the discharge of the bale with the standard 4' pick-up baler. (See Illustration 25C).



AUGER SCRAPER BAR ADJUSTMENT (4497 Silage Master Only)

The height of the auger scraper bar above the auger flighting should be between 1/16 and 1/8 inch. To adjust loosen bolts fastening scraper bar to frame above auger (two bolts in each right and left bar). Slide bar to obtain correct setting. Retighten the bolts.

CHOPPER KNIFE MANUAL ENGAGEMENT AND DISENGAGEMENT (4497 Silage Master Only)

The location of the manual engagement or disengagement is at the lower rear corner on the left side of the chopper housing. Also at this place is the knife engagement positioner bracket. When the knives are engaged, the position arm is aligned with the lower hole in the positioner bracket and when the knives are disengaged, it is aligned with the upper hole. During baling the position arm needs to be locked in place with a clevis pin and hairpin cotter.

To manually engage or disengage the chopper knives use the hand crank stored in the twine box (also used to manually lower or raise the pick-up). Insert end of crank into square end of tube on knife engagement shaft, remove the clevis pin and hairpin cotter, and turn counterclockwise 90° (1/4 turn) to engage, or clockwise to disengage the knives. Lock in place with clevis pin and the hairpin cotter.

The knife engagement positioner bracket is adjustable for more or less breakaway force on the individual knives. For maximum force, position the knife engaging arm rollers so they are just in contact with the backside of the knives in the disengaged position. To adjust, loosen bolts fastening the positioner bracket and slide up to reduce the breakaway force and down to increase the breakaway force. Retighten the bolts.

CHOPPER KNIFE REMOVAL OR REPLACEMENT (4497 Silage Master Only)

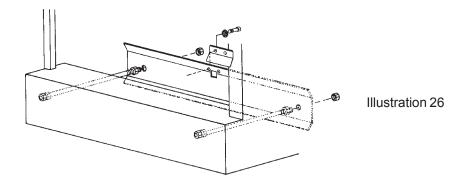
The chopper knives are locked in place by a special round shaft with two parallel flat sides. This shaft is locked in place by a clevis pin and hairpin cotter. These pins are located at the lower front corner on the left side of the chopper housing.

To remove the knives, remove the pins and use the hand crank stored in the twine box to rotate the flat-sided shaft 90° (cross hole in shaft for clevis pin will be horizontal). This will allow the knives to be lifted up through slots in the chopper wheel pan. To replace knives, reverse the sequence. If baling without the knives installed, the shaft should be locked in place with the clevis pin and hairpin cotter. If baling with the knives installed, the shaft should be locked in place with the clevis pin and hairpin cotter in the vertical position.

LUBRICATION

1. All Roller Chains- If not equipped with an automatic chain oiler, lubricate daily with light oil. For longer service life, lubricate at the end of each day. The oil will penetrate into the rollers when the chain is still warm. Fill the chain oiler reservoirs as needed with light motor oil.

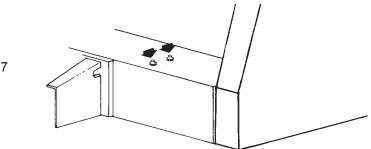
2. Gearbox - Remove the cover (held by two nuts) on the rear of the front crossbeam (See Illustration 26). The gearbox top filler plug has an oil level stick. This should be used to check oil level. Operating level should be kept between grooves on level stick. Fill this gearbox with approximately 1-3/4 quarts of SAE 90 EP oil. Change the oil after the first 500 bales or at the end of the first season, whichever comes first. Then, change the oil after every 2,000 bales or every 2 years, whichever comes first.



3. U-Joint on Silage Master Front RH Drive Shaft - Remove the cover mentioned in Item 2 to grease the RH driveshaft U-joint every 50 hours of use and at the end and beginning of the season.

4. Dog Clutch - (Elevator chain disengage clutch) Grease every 10 hours of operation. Grease only when rear door is open and safety valve is locked in position. (See Illustration 27).

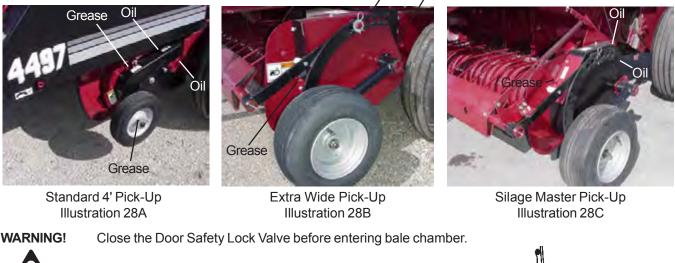
Illustration 27



5. Pick-up - Grease pick-up cam track and rollers (left side) and oil pick-up mount pivots (both sides) every 10 hours of operation. Note the different locations for oiling the drive chains to the pick-up reel and the augers for the three different styles of pick-ups. (See Illustration 28A, 28B, & 28C).

Oil

Oil





 Elevator Drive Shaft Bearing - Located inside of bale chamber. Grease every 10 hours of operation. (See Illustration 29).

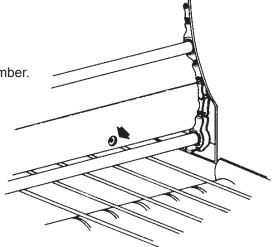
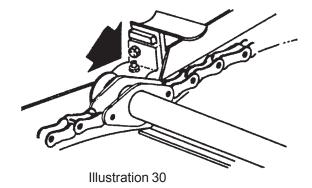


Illustration 29

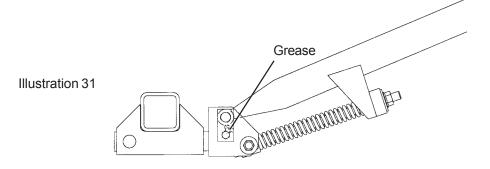
7. Outer Right & Outer Left Elevator Drive Shaft Bearings - Also grease daily the front LH driveshaft bearing on balers with the Standard 4' Pick-Up and the Extra Wide Pick-Up. On the Silage Master baler grease both the front LH and RH driveshaft bearings daily.

8. Rear Door Hinge - Grease daily (See Illustration 30)



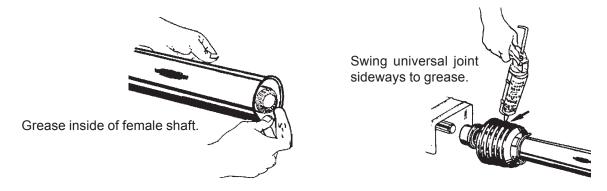
9. Gauge Wheels - Grease gauge wheels on the Standard 4' Pick-up daily. (See Illustration 28A, above). The gauge wheels on the Extra Wide Pick-up and the Silage Master Pick-up use sealed non-relube bearings and require no grease or oil.

10. Bale Ramp Extension - Grease every 10 hours of operation (See Illustration 31) 2-Fittings.



11. IID Shaft - Lubricate the shaft at the areas shown at the times indicated (See Illustration 32A, B & C).

Standard 4' Pick-Up & Extra Wide Pick-Up



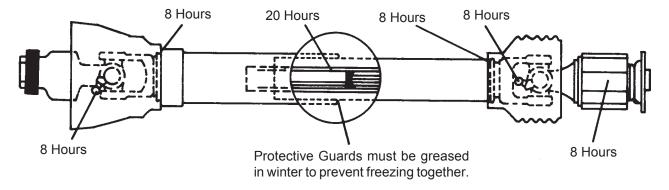


Illustration 32A

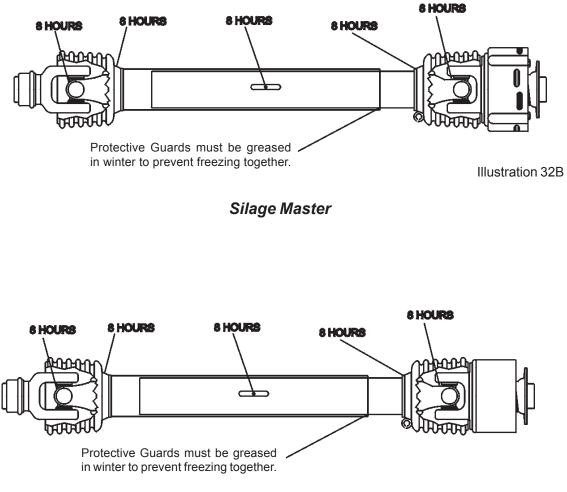


Illustration 32C

Optional Clutch for Silage Master

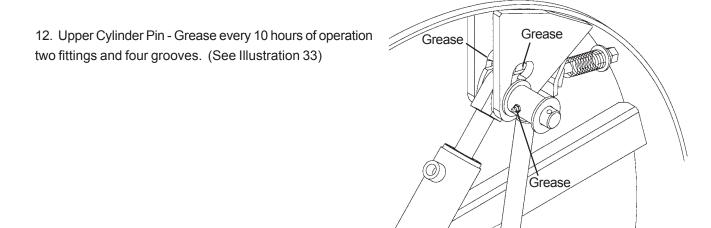


Illustration 33

13. Chopper Drive Jackshaft Outer Bearing - Grease bearing every 10 hours of operation. Grease fitting may be reached through round hole in top of chopper drive cover shield. (See Illustration 34).



Illustration 34

14. Pick-Up and Auger Drive Overrunning Clutch - Grease overrunning clutch every 50 hours of use and at the end and beginning of each season.

15. Chopper Feeder Wheel RH Drive Bearings - These bearing are behind the chopper feeder wheel drive spur gears mounted in a large steel block. Extended grease fittings are located on a shield near the upper rear edge of the bearing mounting block and can be reached from the top and rear of the chopper drive. Grease these bearings every 10 hours of operation.

STORING THE BALER

- 1. If possible, shelter the machine in a dry place.
- 2. Disconnect the hydraulic hoses.
- 3. Block tires to prevent baler from rolling after unhitching from tractor.

4. Secure the tongue jack in the highest hole setting possible. Wind the jack pad down until the tongue no longer rests on the tractor drawbar and unhitch the baler.

5. Clean and check all components after the harvesting season. Tighten all nuts and bolts. Check moveable parts for correct positioning and free running. Replace damaged parts.

6. Lubricate in accordance with the lubrication instructions. Apply corrosion inhibitor to the elevator chain and all exposed areas, particularly inside the bale chamber. Touch-up paint work, if necessary.

ATTENTION CUSTOMER

NOTE: For additional repair and adjustment information, contact your dealer to order a bale repair guide manual. Baler repair guide manual Part Number is 4932W.

PROBLEM	PROBABLE CAUSE	SOLUTION
No lights on controller.	No power to controller.	Check that power cord is properly connected to battery.
Tailgate fails to latch.	Trash accumulated between front and rear housings.	Clear trash.
	Latch spring is broken.	Replace spring.
	Hydraulic line is damaged.	Repair hydraulic line.
	Tailgate misaligned to front housing.	Re-align housings at hinge.
The pick-up cannot be lowered.	Cable pulleys rusted.	Lubricate the cable suspension system.
	Screw crank assy. is rusted or binding.	Lubricate
	Hydraulic cylinder doesn't work.	Check tractor hydraulic system for one-way operation
	Pick-up lift assist spring improperly adjusted.	See PICK-UP Setting
	Pick-up mounting pivot is rusted or binding.	Lubricate with oil or grease.
The hay inlet area becomes blocked.	Blockages in the inlet area are caused by uneven and excessively large windrows.	Stop immediately to prevent the crop from being taken up by the elevator chain and lodging between the twine box and the baler shell.
		Remove the blockage by raising and lowering the pick-up with the implement running at a low speed. In case of large obstacles, switch off tractor engine, remove tine bar and remove blockage by hand.
Pick-up stops operating.	Pick-up tines touching ground.	Raise pick-up.
	Pick-up drive chain or lower roller drive chain broken.	Replace drive chain
	Large windrow slugging pick-up assembly.	Slow ground speed while maintaining PTO speed.
Bale stops turning.	Door is open.	Eject bale and be sure door latches when it closes.
	Elevator chain is not operating.	Check drive chain, sprockets and rollers.
	The slip clutch in the PTO drive line has come into operation due to high torque.	Stop forward operation and PTO. Bale is sufficiently compressed. Start PTO slowly and start wrapping. Harvest the next bale with a lower compaction setting.
Low voltage to start motor		Check wire harness

PROBLEM	PROBABLE CAUSE	SOLUTION
Drive chain jumps sprocket teeth.	Large windrows are overloading the machine.	Slow ground speed while maintaining PTO speed.
	Chain is too loose or over-tensioned.	Check tension and alignment.
	Excessive wear on chain & sprockets	Replace worn parts with new.
Twine will not start.	Twine has kinks.	Remove kinked portion or start with other twine end.
	Twine does not extend far enough away from the feed rollers.	Pull twine out by hand.
	No crop flow to engage twine end.	Move machine forward to pick up crop to take twine in.
	Ball of twine is not positioned and produces a resistance on the twine.	Check twine installation.
	Too much tension on twine. Twine tensioners are too tight.	Lower spring tension.
	Twine is jammed in starter motor.	Free the twine.
Twine motor does not operate.	One or more electrical connections is	Check controller connection to battery.
	loose or disconnected.	Check ground wire connection.
		Check that wiring harness has not been disconnected from the baler.
	Circuit breaker tripped.	Wait until breaker cools.
Twine is not cut.	Twine frays; should cut clean.	Clean blades. Check sharpness and installation.
		Check twine installation.
	Gum from plastic twine or hair from hemp collects on knives.	Clean blades. Check sharpness and installation.
		Check twine installation.
	Cutter blades are dull.	Sharpen or replace cutter blades.
The bale will not discharge.	Baler was overfilled.	Reduce pressure setting.
	Windrows are too wide.	Make narrower windrows.
	Crop has too high moisture.	Dry crop more.
The elevator chain continues to run when the door is open.	The dog clutch coupling in the front drive shaft does not stop elevator chain.	Adjust clutch (See Illustration 35)
Max. 5/16''	The cable from the disengaging lever to the coupling is too long.	Shorten the cable by means of the cable near the lever until the coupling is separated at a distance of 3/16" to
	Illustration 35	5/16" with the door in the opened position. (See Illustration 35).

PROBLEM	PROBABLE CAUSE	SOLUTION
Not enough twine on bale.	Twine wrapped around a pulley groove that has too small a diameter.	Wrap the twine around a larger diameter pulley groove.
		Traverse windrow to fill bale ends evenly so twine will not slide off an end.
Twine is loose on bale.	Tension on twine clamps insufficient.	Increase tension. If twine does no feed, tension is probably too tight.
	Not enough wraps.	Use coarser twine or closer windings (See Twine Installation).
The twine slips off the edges of the bales.	The side stops are too wide.	Set side stops inward.
		Traverse windrow to fill bale ends evenly so twine will not slide off an end.
Bale out of round.	Baler filled quickly on one side.	Drive slower and make more even windrows.
		Drive slower during the last few feet or stop the tractor and let bale roll more before wrapping.
	Twine is loose on bale.	See problem above.
	Windrow too light.	Rake two or more windrows together.
	Crop extremely dry, grinding up and falling out of bale chamber	Bale crop in early morning or late evening, when there is dew on the windrow.
Bale is "cone" shaped.	Not feeding enough hay into small end of cone.	Drive in weave pattern to distribute crop evenly.
		Rear door latch tensions or latch sensors not evenly set.
		See bale compaction setting and sensor switch adjustment.
Bale ends are small (crowned).	Windrow is wide and crop is scattered.	Make windrows narrower.
		Increase ground speed to force more crop into ends of bale.
	Overfilling center of bale chamber.	Concentrate filling the sides only by prolonged "weaving".
Pick-up does not clean up window.	Pick-up assembly raised too high.	Lower pick-up (See Pick-up Setting).
	Ground speed is too fast.	Slow ground speed while maintaining PTO speed.
	Traveling the wrong direction for the lay of the crop.	Pick up crop in opposite direction.
Bad Bearing on elevator chain cross bar.	Improper chain tensioning or foreign material (rock or stick) on bearing track.	Turn chain until brg. to be replaced is at the top of the baler at rear door hinge. Remove the snap ring and replace the bearing. Check chain tension. Clear track of trash.
Bale sticks in rear half of baler during bale ejection.	Bale edges packed too tight.	Fill baler evenly.

PROBLEM	PROBABLE CAUSE	SOLUTION						
Netting will not start.	Too much resistance on the net roll. setting.	Set roll resistance at lower						
	Electric feed clutch not engaging.	Check electrical connections.						
		Check clutch clearance. (.015")						
	Belt Slipping.	Check belt tension.						
		Check for positive pulley drive.						
	Netting near end of roll.	Set roll resistance at a lower setting.						
Netting will not feed.	No crop flow to engage netting.	Feed enough crop into baler to engage netting.						
	Too much resistance on net roll.	Set roll resistance at a lower setting.						
Netting will not cut.	Not enough resistance on net roll.	Set roll resistance at a higher setting.						
	Knife blades are dull or improperly installed.	Check blades for sharpness and and proper installation.						
	Electric cut clutch not engaging.	Check electrical connections.						
	Belt slipping.	Check belt tension and verify positive pulley drive.						
	Electric cut clutch engaging but cam wheel does not complete a	Check belt tension.						
	full revolution.	Check knife arm adjustment for proper wheel clearance. Should allow 1/8" extra arm movement past cam wheel.						
Net goes to one side of bale.	Obstruction in pickup/chamber opening.	Clear obstructions from pickup/ chamber opening.						
	Bale chamber not full on one side.	Fill baler evenly.						
Net does not cover edges of bale.	Windrow too wide, more material on sides than center.	Make windrows smaller.						
		Fill baler evenly.						
	Obstruction in pickup/chamber opening.	Clear obstructions from pickup/ chamber opening.						
The following for Silage Master Baler ONLY!	The following for Silage Master Baler ONLY!	The following for Silage Master Baler ONLY!						
Windrow pushing forward.	Hold down baffles too low for bunched windrow.	Raise baffles. (See adjustments)						
Windrow kicking forward.	Hold down baffles too high.	Lower baffles. (See adjustments)						
	Ground speed too slow or RPM too fast for ground speed.	Increase ground speed or slow RPM.						
Hay kicking over baffles.	Hold down baffles too low.	Raise baffles. (See adjustments)						

TROUBLESHOOTING Addition for Silage Master

PROBLEM	PROBABLE CAUSE	SOLUTION						
Short hay bunching on pick-up.	Hold down tine ends too low.	Raise tines. (See adjustments)						
Hay wrapping auger	Scraper misadjusted.	Adjust scraper. (See adjustments						
	Bent auger flighting.	Straighten or replace auger.						
Feeder wheel plugged.	Foreign object lodged.	Reverse feeder wheel and remove object. (See overload in Operation section)						
	Overload	Reduce ground speed.						
	Uneven windrow.	Avoid raking bunches.						
		Reduce ground speed.						
Chopper knives will not engage or disengage.	Buildup of dried crop juices on sides of knives.	Scrape off buildup.						
	Crop stems lodged in knife slots.	Remove or cut stems from slots.						
Conveyor belt not turning.	Drive belt slipping.	Check drive belt tension.						
	Conveyor belt slipping.	Check conveyor belt tension. (See Adjustments Section)						
	Foreign object lodged at rear of conveyor belt.	Remove foreign object and check for damage to conveyer belt or drive belt						
Wrap or twine will not feed.	Conveyer belt not turning.	See above troubleshooting item.						
	Loose hay buildup at rear of conveyor belt.	Shut off tractor engine and use handle of reversing wrench to push wrap or twine past belt.						
Hay continues to buildup on top of conveyer belt.	Hay lodging between stripper roller and its scraper.	Remove lodging and adjust scraper. (See adjustments)						
	Bent shield around stripper roller or lower roller.	Straighten shield or replace.						
	Crop very light and short grass.	Drive faster or bale into middle of bale, not at bale beginning or end.						
Wet scrubbing of bale outer diameter.	Hay lodging between stripper roller and its scraper.	Remove lodging and adjust scraper. (See adjustments)						

PROPER TORQUE FOR FASTENERS (See Next Page)

The chart lists the correct tightening torque for fasteners. When bolts are to be tightened or replaced, refer to this chart to determine the grade of bolts and the proper torque except when specific torque values are assigned in manual text.

NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphited or molydisulphide greases or other extreme pressure lubricants are used. This applies to both UNF fine and UNC coarse threads.

RECOMMENDED TORQUE IN FOOT POUNDS UNLESS OTHERWISE STATED IN THE MANUAL *

Proper Torque values for bolts that are measured in Inches

Proper Torque values for Metric bolts

Bolt Diameter	Head Marking No Marks Grade Two	Head Marking Three Lines Grade Five	Head Marking Six Lines Grade Eight	Bolt Diameter	4.8 Head Marking 4.8	8.8 Head Marking 8.8 or 9.8	10.9 Head Marking 10.9	12.9 Head Marking 12.9
	Pound - Foot Value Dry	Pound - Foot Value Dry	Pound - Foot Value Dry		Pound - Foot Value Dry	Pound - Foot Value Dry	Pound - Foot Value Dry	Pound - Foot Value Dry
1/4"	5.5	9	12.5	6mm	4.5	8.5	12	14.5
5/16"	11	18	26	8mm	11	20	30	35
3/8"	20	33	46	10mm	21	40	60	70
7/16"	32	52	75	12mm	37	70	105	120
1/2"	50	80	115	14mm	60	110	165	190
9/16"	70	115	160	16mm	92	175	255	300
5/8"	100	160	225	18mm	125	250	350	410
3/4"	175	280	400	20mm	180	350	500	580
7/8"	175	450	650	22mm	250	475	675	800
1"	270	675	975	24mm	310	600	850	1000
1-1/8"	375	850	1350	27mm	450	875	1250	1500
1-1/4"	530	1200	1950	30mm	625	1200	1700	2000
1-3/8"	700	1550	2550					
1-1/2"	930	2100	3350					

To get Newton-Meters multipy pound-foot of torque by 1.356

BALER SPECIFICATIONS

MODEL	MODEL 4407	MODEL 4497	SILAGE MASTER								
Length		154"									
Width	8	102"									
Height	7	81"									
Track	7	78"									
Pick-Up Width	5	4"	70"								
Drawbar Weight	575 Lbs.	620 Lbs.	1170 Lbs.								
Approximate Weight	4050 Lbs.	4300 Lbs.	5480 Lbs.								
Approximate Power Requirement	40	HP	60 HP								
PTO Speed		540 RPM	1								
Tires	10.00x15-8 Ply Rated Sto	d. / 31x13.5x15-8 Ply Opt.	31x13.5x15-8 Ply								
Tire Pressure		40 psi									
Bale Diameter	50"										
Bale Width	48"										
Twine Capacity	6 Balls										
Twine Size	Sisa	al: 16,000 Ft./Bale Maxir	num								
		_bs. Minimum Tensile Str									
		tic: 20,000 Ft./Bale Max									
	,	bs. Minimum Tensile Str									
Netting Roll	N/A	2 Rolls	2 Rolls								
Netting Roll Width	N/A	48"	48"								
Netting Roll Diameter	N/A	10"	10"								
Core Inner Diameter	N/A	3"	3"								
Core Width	N/A	49"	49"								
Number of Hay Cutting Knives	N/A	N/A	14								
Number of Hay Feeding Fingers	N/A	N/A	96								
Knife Engagement	N/A	N/A	Manual/Opt. Hydraulic								
Knife Spacing	N/A	N/A	2.71"								

Baler 4407 & 4497 09-01

M&W LIMITED WARRANTY Baler

1. LIMITED WARRANTIES

1.01.M&W warrants for one year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for six months to the original commercial or industrial purchaser ("Purchaser") that the goods purchased are free from defects in material or workmanship.

1.02.Manufacturer will replace for the Purchaser any part or parts found, upon examination at one of its factories, to be defective under normal use and service due to defects in material or workmanship.

1.03. This warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong fuel, oil, or lubricants, or which has served its normal life. This warranty does not apply to any part of any internal combustion engine, or expendable items such as blades, shields, guards, or pneumatic tires except as specifically found in your Operator's Manual.

1.04.Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

2. **REMEDIES AND PROCEDURES.**

2.01.This warranty is not effective unless the Purchaser returns the Registration and Warranty Form to Manufacturer within 30 days of purchase.

2.02.Purchaser claims must be made in writing to the Authorized Dealer ("Dealer") from whom Purchaser purchased the goods or an approved Authorized Dealer ("Dealer") within 30 days after Purchaser learns of the facts on which the claim is based. 2.03. Purchaser is responsible for returning the goods in question to the Dealer.

2.04.If after examining the goods and/or parts in question, Manufacturer finds them to be defective under normal use and service due to defects in material or workmanship, Manufacturer will:

- (a) Repair or replace the defective goods or part(s).
- (b) Reimburse Purchaser for the cost of the part(s) and reasonable labor charges (as determined by Manufacturer) if Purchaser paid for the repair and/or replacement prior to the final determination of applicability of the warranty by Manufacturer. (c) The choice of remedy shall belong to M&W.
- 2.05.Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by Manufacturer and for returning the goods to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for

the goods or part(s) from the Dealer to the designated factory. LIMITATION OF LIABILITY.

- 3.01.MANUFACTURER DISCLAIMS ANY EXPRESS (EXCEPT AS SET FORTH HEREIN) AND IMPLIED WARRANTIES WITH RESPECT TO THE GOODS INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- 3.02.MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.
- 3.03.EXCEPT AS PROVIDED HEREIN, MANUFACTURER SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO PURCHASER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS, OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY THE GOODS INCLUDING, BUT NOT LIMITED TO, ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE GOODS OR ANY BREACH OF THIS WARRANTY. NOTWITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.
- 3.04.NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS WARRANTY OR TRANSACTIONS UNDER THIS WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.

MISCELLANEOUS. 4.

3.

- 4.01. The laws of the State of Texas shall govern the construction of this agreement. Venue for any lawsuits shall be in Guadalupe County. Texas.
- 4.02. Manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.03.If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.04.Applicable law may provide rights and benefits to purchaser in addition to those provided herein.

KEEP FOR YOUR RECORDS

ATTENTION: Purchaser should fill in the blanks below for his reference when buying repair parts and/or for proper machine identification when applying for warranty.

M&W Implement Model ______ Serial Number ______

Date Purchased ____

Dealer

ATTENTION: READ YOUR OPERATOR'S MANUAL

M&W An Alamo Group Company 1020 South Sangamon Ave. Gibson City, Illinois 60936 217-784-4261



^{1.05.}Some parts are covered by an extended warranty. Refer to the inside back cover of your Operator's Manual for extended coverage, if any.



M&W Extended Elevator Chain & Roller Warranty

M&W warrants the elevator chains and rollers to be free from defects in materials or workmanship for 3 years (1 year for commercial/industrial user), starting from the date of delivery to the first user.

TO THE OWNER/OPERATOR/DEALER

To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this Manual. The Table of Contents clearly identifies each section where you can easily find the information you need.

The OCCUPATIONAL SAFETY AND HEALTH ACT (1928.51 Subpart C) makes these minimum safety requirements of tractor operators:

REQUIRED OF THE OWNER:

- 1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
- 2. Provide Seatbelts that meet the requirements of this paragraph of this Standard and SAE J4C; and
- 3. Ensure that each employee uses such Seatbelt while the tractor is moving; and
- 4. Ensure that each employee tightens the Seatbelt sufficiently to confine the employee to the protected area provided by the ROPS.

REQUIRED OF THE OPERATOR

- 1. Securely fasten seatbelt if the tractor has a ROPS.
- 2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
- 3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
- 4. Stay off slopes too steep for safe operation.
- 5. Watch where you are going especially at row ends, on roads, and around trees.
- 6. Do not permit others to ride.
- 7. Operate the tractor smoothly no jerky turns, starts, or stops.
- 8. Hitch only to the drawbar and hitch points recommended by the tractor manufacturer.
- 9. When the tractor is stopped, set brakes securely and use park lock, if available.

Keep children away from danger all day, every day...

- Equip tractors with rollover protection (ROPS) and keep all machinery guards in place...
- Please work, drive, play and live each day with care and concern for your safety and that of your family and fellow citizens.



MARRANTY REGISTRATION CARD IS ON FILE. WILL BE REFUSED UNTIL COMPLETED, SIGNED ® ANDRENUS ANY CLAIM SUBMITTED TO SERVIS-RHINO®

TO PLACE THIS WARRANTY IN EFFECT, THIS WARRANTY REGISTRATION MUST BE PLILED OUT, SIGNED, AND MAILED WITHIN 30 DAYS OF DELIVERY DATE OF THIS MACHINE. DEALER AND PURCHASER MUST SIGN.

Please fold (do not tear), tape, and drop in any mailbox. PLEASE FILL OUT OWNER WARRANTY REGISTRATION INFORMATION SIGN, AND DROP LAST COPY IN ANY MAILBOX.

> 1020 S. Sangamon Ave. Gibson City, IL 60936-9907

> > [®]W&M



An Alamo Group Company

BEFORE MAILING WARRANTY CARD, MAKE SURE ALL INFORMATION IS LEGIBLE M&W[®] WARRANTY REGISTRATION INFORMATION

					 				 	 	 1				MON	TH		DA	ΔY		YE	EAR	
M&W	Mod	lel				Se	rial	No.			Ρι	ırcha	ase I	Date			—			-			
Purcha Last Na											Fire	st Na	ame									M.I.	
Street & Box, &	& No 2/or /	o., R Apt.	FD, No.																				
City													tate o rovir					ZIP					
Dealer																							
City													tate o rovir					ZIP					

• I have informed the Purchaser of this product of Warranty terms, provisions, and procedures that are applicable, reviewed the contents of the Operator's Manual including safety equipment, safe operation, and maintenance, reviewed the Safety Signs on implement (and tractor if possible), shown the AEM Mower Safety Practices Video, and reviewed Purchaser's responsibility to train his operators in safe operation.

• **IMPLEMENTS**: I have explained that Deflectors, Chain Guards, or Solid Skirts must be maintained in good repair and installed except in areas where persons, vehicles, livestock, or other property will not be endangered by thrown objects and where such safety equipment would prevent the mower's reasonable performance of its assigned task.

• DRIVELINES: I have made certain that all driveline, gearbox, and other shields are in good repair and fastened securely in place to prevent injuries from entanglement or thrown objects.

• HYDRAULIC MACHINES: I have explained the necessity of using clean hydraulic oil, changing filters as instructed, stopping leaks, damage caused by operating with over-heated oil, caring for hoses, using hoses of proper rating, the necessity of maintaining the specified operating pressure, and the potential hazard of oil's penetrating the skin.

• BOOM-TYPE or FOLDING-TYPE IMPLEMENTS: I have explained that it is not possible to guard against thrown objects when the head is lifted off ground and that operator is responsible to watch out for persons in the area. I have explained that the lifted mower head or boom can contact overhead obstructions with damage to cables and telephone lines and possible injury. I have explained that the extended head or boom or retracted boom can contact power lines with resulting electrocution injury or death and that operator is responsible for keeping clear of such hazards.

Dealer's Signature _

I have been instructed on the paragraphs above, received and have been shown the AEM Mower Safety Practices Video and have been instructed in the contents of the Operator's Manual including safety signs, safety equipment, safe operation, maintenance, and the potential hazards of unauthorized alteration or modification of the product. I have been informed of the warranty provisions and know that the warranty is not in effect until this form is received by Alamo Group. I understand the Implement Guarding statements above and the potential hazards of operating without such guards. I understand that the operator is responsible for the safety of others in the area. I have examined the product and accept it as being complete and in satisfactory condition with all required guards.

Do not tear.

Purchaser's Signature

____ Date ____ Do not tear.

Date

PRE-DELIVERY SERVICE

CHECK AND ADJUST OR LUBRICATE AS REQUIRED

See Operator's Manual for Details

Inspection Performed - Warranty and Safety Procedures Explained - Installation Complete

LUBRICATION & HYDRAULICS

- □ Gearboxes & Speed Increaser (Oil Levels)
- □ Hydraulic Oil Level (External. Tank)
- □ Tractor Hydraulic Oil Level
- Hydraulic Hoses (No Kinks, Binds, or Leaks)
- □ Hydraulic Hose Connections are Tight (No Leaks)

MOWER

- □ Spindle And Motor Bolts Properly Torqued
- □ Spindle Housing Bearings are lubricated
- D Blade Carrier Bolts Properly Torqued / Retaining Pin In Place
- □ Mower Cutting Height And Level Adjusted
- □ Belt Alignment And Tension Adjusted
- Driveline Clutch (Torque Limiter) (Adjust And Run In)
- □ All Hardware Properly Torqued
- □ Tire Air Pressure / Lug Nuts (Correct Torque)
- □ Wheel Bearings (Check, Grease, And Preload)

ATTACHMENTS & INSTALLATION

- □ Thrown Object Deflectors Front And Rear
- □ Correct Blade Rotation Direction
- □ Wing transport locks and latches
- □ Mower head transport support bracket
- □ All Bolts Pins And Nuts (Proper Torque)

MOWER TO TRACTOR CONNECTION

- Draw Bar Length (Check And Set)
- Axle Height (Adjusted)
- □ Cutting Height (Adjust)
- $\hfill\square$ Mount Kit Pre-Operation Check Complete
- □ Mower Wing (Adjust Level With The Center)
- □ Mower Wing (Check For Proper Raising Operation)
- D Pull Type Hitch (Height Adjustment)
- $\hfill\square$ Mounting Hardware Properly Torqued

SAFETY ITEMS

- D Protective Shields (Operation And Installation)
- □ S.M.V. Emblem (Installed)
- □ Neutral Safety & Cut Off Switches work properly
- □ Safety Decals (Installed in good condition)
- □ Operator's Manual (Supplied in Canister)
- □ AEM Mower Safety Manual (Supplied in Canister)
- □ AEM Mower Safety Video has been shown to Purchaser

□ AEM Mower Safety Video has been presented to Purchaser _

Pur. Intitials

TEAR • TE

Date _____

M&W[®] WARRANTY REGISTRATION INFORMATION

												MON	ITH		DA	Y		YE	AR	
M&W Model			Sei	rial N	Jo.			Pu	ircha	ise D	Date			-			-			
Purchaser Last Name								Firs	st Na	ame									M.I.	
Street & No., RF Box, &/or Apt. N	FD,																			
City										ate c ovin				2	ZIP					
Dealer																				
City										ate c ovin					ZIP					

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• IMPLEMENTS: I have explained that Deflectors. Chain Guards, or Solid Skirts must be maintained in good repair and installed except in areas where persons. vehicles, livestock, or other property will not be endangered by thrown objects and where such safety equipment would prevent the mower's reasonable performance of its assigned task.

• DRIVELINES: I have made certain that all driveline, gearbox, and other shields are in good repair and fastened securely in place to prevent injuries from entanglement or thrown objects.

• HYDRAULIC MACHINES: I have explained the necessity of using clean hydraulic oil, changing filters as instructed, stopping leaks, damage caused by operating with over-heated oil, caring for hoses, using hoses of proper rating, the necessity of maintaining the specified operating pressure, and the potential hazard of oil's penetrating the skin.

• BOOM-TYPE or FOLDING-TYPE IMPLEMENTS: I have explained that it is not possible to guard against thrown objects when the head is lifted off ground and that operator is responsible to watch out for persons in the area. I have explained that the lifted mower head or boom can contact overhead obstructions with damage to cables and telephone lines and possible injury. I have explained that the extended head or boom or retracted boom can contact power lines with resulting electrocution injury or death and that operator is responsible for keeping clear of such hazards.

Dealer's Signature _

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the safety of others in the area. I have examined the product and accept it as being complete and in satisfactory condition with all required guards.

DEALER COPY

Purchaser's Signature

Date

Date

PRE-DELIVERY SERVICE

CHECK AND ADJUST OR LUBRICATE AS REQUIRED

See Operator's Manual for Details

Inspection Performed - Warranty and Safety Procedures Explained - Installation Complete

LUBRICATION & HYDRAULICS

- □ Gearboxes & Speed Increaser (Oil Levels)
- □ Hydraulic Oil Level (External. Tank)
- □ Tractor Hydraulic Oil Level
- □ Hydraulic Hoses (No Kinks, Binds, or Leaks)
- □ Hydraulic Hose Connections are Tight (No Leaks)

MOWER

- □ Spindle And Motor Bolts Properly Torqued
- □ Spindle Housing Bearings are lubricated
- D Blade Carrier Bolts Properly Torqued / Retaining Pin In Place
- □ Mower Cutting Height And Level Adjusted
- Belt Alignment And Tension Adjusted
- Driveline Clutch (Torque Limiter) (Adjust And Run In)
- □ All Hardware Properly Torqued
- □ Tire Air Pressure / Lug Nuts (Correct Torque)
- □ Wheel Bearings (Check, Grease, And Preload)

ATTACHMENTS & INSTALLATION

- □ Thrown Object Deflectors Front And Rear
- □ Correct Blade Rotation Direction
- □ Wing transport locks and latches
- □ Mower head transport support bracket
- □ All Bolts Pins And Nuts (Proper Torque)

Purchaser's Signature

Date

□ Mount Kit Pre-Operation Check Complete □ Mower Wing (Adjust Level With The Center)

- □ Mower Wing (Check For Proper Raising Operation)
- □ Pull Type Hitch (Height Adjustment)

MOWER TO TRACTOR CONNECTION

Draw Bar Length (Check And Set)

□ Axle Height (Adjusted)

□ Cutting Height (Adjust)

□ Mounting Hardware Properly Torqued

SAFETY ITEMS

- □ Protective Shields (Operation And Installation)
- □ S.M.V. Emblem (Installed)
- □ Neutral Safety & Cut Off Switches work properly
- □ Safety Decals (Installed in good condition)
- □ Operator's Manual (Supplied in Canister)
- □ AEM Mower Safety Manual (Supplied in Canister)
- □ AEM Mower Safety Video has been shown to Purchaser
- Pur. Intitials □ AEM Mower Safety Video has been presented to Purchaser

Pur. Intitials

M&W[®] WARRANTY REGISTRATION INFORMATION

												MON	ITH		DA	Y		YE	AR	
M&W Model			Sei	rial N	Jo.			Pu	ircha	ise D	Date			-			-			
Purchaser Last Name								Firs	st Na	ame									M.I.	
Street & No., RF Box, &/or Apt. N	FD,																			
City										ate c ovin				2	ZIP					
Dealer																				
City										ate c ovin					ZIP					

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Dealer's Signature _

Date

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CUSTOMER COPY

Purchaser's Signature

PRE-DELIVERY SERVICE

CHECK AND ADJUST OR LUBRICATE AS REQUIRED

See Operator's Manual for Details

Inspection Performed - Warranty and Safety Procedures Explained - Installation Complete

LUBRICATION & HYDRAULICS

- □ Gearboxes & Speed Increaser (Oil Levels)
- □ Hydraulic Oil Level (External. Tank)
- □ Tractor Hydraulic Oil Level
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- □ Spindle Housing Bearings are lubricated
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- □ Mower Cutting Height And Level Adjusted
- Belt Alignment And Tension Adjusted
- Driveline Clutch (Torque Limiter) (Adjust And Run In)
- □ All Hardware Properly Torqued
- □ Tire Air Pressure / Lug Nuts (Correct Torque)
- □ Wheel Bearings (Check, Grease, And Preload)

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- □ Correct Blade Rotation Direction
- □ Wing transport locks and latches
- □ Mower head transport support bracket
- □ All Bolts Pins And Nuts (Proper Torque)

□ Mower Wing (Adjust Level With The Center)

- □ Mower Wing (Check For Proper Raising Operation)
- □ Pull Type Hitch (Height Adjustment)
- □ Mounting Hardware Properly Torqued

MOWER TO TRACTOR CONNECTION

□ Mount Kit Pre-Operation Check Complete

Draw Bar Length (Check And Set)

□ Axle Height (Adjusted)

□ Cutting Height (Adjust)

SAFETY ITEMS

- □ Protective Shields (Operation And Installation)
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- □ AEM Mower Safety Video has been presented to Purchaser

Pur. Intitials

Purchaser's Signature

Date