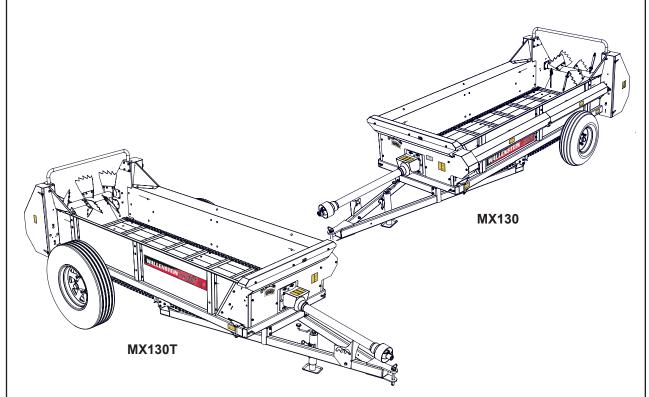


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www.wallensteineguipment.com



# MX130 / MX130T MANURE SPREADER OPERATOR'S MANUAL



#### Before putting the Spreader into service:

Do not attempt to operate the Spreader without receiving full safety training and instruction in its features, operation and maintenance. See page 4 for Pre-Delivery Procedure.

## **Keep this manual with the Machine at all times**

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PART NUMBER: Z97104

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#### WARRANTY

Effective on products retailed on or after January 1, 2015.

## Register your product online at www.wallensteinequipment.com within 30 days of purchase to activate warranty.

This product is warranted to be free of defects in materials and workmanship under normal use and service, for a period of

## Five (5) Years for Consumer Two (2) Year for Commercial/Rental

from the date of purchase, when operated and maintained in accordance with the Operating and Maintenance Instructions supplied with this unit. Warranty is limited to the repair of the product and/or replacement of parts.

#### This warranty does not cover the following items:

- 1) Machines or parts lost or damaged during shipment,
- 2) Normal maintenance or adjustments after initial pre-service and set up is completed
- 3) Normal replacement of service items.
- 4) Accessory items / parts not supplied by EMB MFG INC.
- 5) Damages resulting from:
  - · misuse, negligence, accident, theft or fire
  - · use of improper or insufficient fuel, fluids or lubricants
  - · use of parts or after market accessories other than genuine EMB MFG INC. parts
  - modifications, alteration, tampering or improper repair performed by parties other than an authorized dealer
  - · any device or accessories installed by parties other than an authorized EMB dealer or distributor

Engines are covered by the manufacturer of the engine and covered by the warranty period specified by that manufacturer. **Engine warranty must be registered at the engine manufactures website.** For service contact your local engine dealer.

Under no circumstances will the manufacturer be liable for any consequential damage or expense of any kind, including loss of profits. The manufacturer is under no circumstances liable for tow vehicle of any kind. The manufacturer is not liable for the maintenance of the product.

This warranty is extended only to the original purchaser and is not transferable. Warranty is void if repairs are attempted by anyone other than a Wallenstein Authorized Service Centre.

If a difficulty develops with the product, contact the local dealer from which you purchased the unit. Only Wallenstein authorized dealers are authorized to make repairs to the product or affect the replacement of defective parts, which will be done at no charge within a reasonable time after the receipt of the product. Unit or parts shall be returned at the customer's expense to the Authorized Service Centre. Damage in transit is not covered by warranty. Include the original purchase receipt with any claim (keep a copy of the receipt for your files).

The distributor's liability under warranty is limited to the repair of the product and/or replacement of parts and is given to the purchaser in lieu of all other remedies including incidental and consequential charges. There are no warranties, expressed or implied, other than those specified herein.

EMB MFG Inc

4144 Boomer Line, St Clements, ON N0B 2M0 Canada Phone: 519-699-9283 Fax: 519-699-4146 : attention to Warranty Dept

Email: warranty@embmfg.com

rev.170216

**WARRANTY IS VOID IF NOT REGISTERED** 

## WALLENSTEIN MX130 / MX130T Manure Spreader DELIVERY INSPECTION REPORT

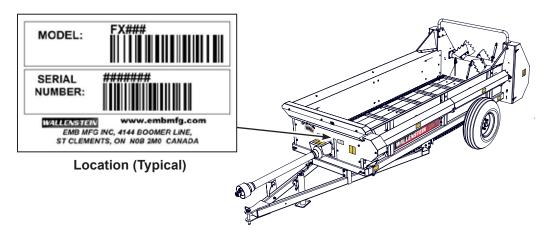
## To activate warranty, register your product online at www.wallensteinequipment.com

	✓	Pre-Delivery Inspection
Customer's Name		Inspect for damage from shipping, immediately contact the shipping company if damage is found.
	MX1	130 / MX130T MANURE SPREADER
	IVI/X	Check Oil Level in Gearbox
Contact Name		Apron Chain Moves Freely
		Belt Tension Checked
		Apron Chain Clutch System Moves Freely
De der News		Beaters Turn Freely
Dealer Name		Hydraulic Connections
		Pulleys Aligned
(		Fasteners Tight
Phone Number		Grease Zerks / Lubricate Pivot Points
r none number		Review Operating and Safety Instructions
	Acce	essories
		Fines Pan - Hydraulic
Serial Number		End Gate - Hydraulic
		Upper Beater
		Review Operating and Safety Instructions
	Safe	ety Checks
		All Safety Decals Installed
Delivery Date		All Lock Pins Align & Move Freely
		Guards and Shields Installed and Secured
		Check Function of Brake and Signal Lighting
		Safety Chain on Hitch
I have thoroughly instructed the buyer on the equip-		Retainer Installed Through Ball Hitch
ment care, adjustments, safe operation and applica-		Tire Pressure / Wheel Lugs at Proper Torque
ble warranty policy and reviewed the manual.		Review Operating and Safety Instructions
Dealer's Rep. Signature		
Date //		
The product manuals have been received by me and safe operation and applicable warranty policy.	l have	e been thoroughly instructed as to care, adjustmen
Owner's Signature		
///		

#### SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Wallenstein manure spreader when ordering parts or requesting service or other information.

The serial number plates are located where indicated. Please mark the numbers in the spaces provided for easy reference.



Model Number	 	
Serial Number		

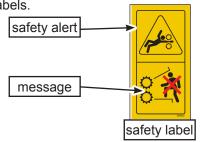
#### LABEL INFORMATION

As you begin to get familiar with your Wallenstein product, you will notice that there are numerous labels located on the machine. Here is a brief explanation of what they are for and how to read them.

There are three different types of labelling: safety, informative and product labels.

**Safety Labels** are pictorial with a yellow background and generally 2 panel. The top panel shows the safety alert (the potential hazard) and the bottom panel shows the message (how to avoid the hazard).

**Safety Notice Labels** are pictorial with a blue background and generally rectangular with single or multiple symbols. The label illustrates requirements for safe operation (safety equipment, housekeeping etc). These labels are accompanied by detailed instructions in the owners manual, with the label illustrated along side.



**Informative Labels** are generally pictorial with a white background and can vary to the number of panels. The label will illustrate the function of a feature and is accompanied by detailed instructions in the owners manual, with the label illustrated along side.

Product Labels are associated with the product and carry various messages (model, serial, etc).

**Maintenance Labels** are associated with the product and carry various messages. They are generally pictorial. They may be round or rectangular, have a green background and can vary to the number of panels. The label may illustrate the type maintenance and frequency in time between services. Labels are accompanied by detailed instructions in the owners manual, with the label illustrated along side.

See the section on safety signs for safety label definitions. For a complete illustration of labels and label locations, download the parts manual for your model product at www.wallensteinequipment.com.

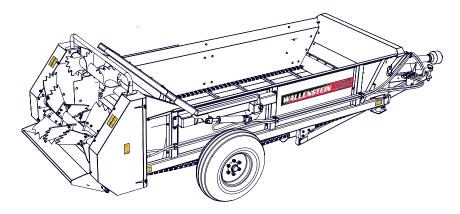
#### 1 INTRODUCTION

Congratulations on your choice of the Wallenstein MX series Manure Spreader to compliment your operation. This equipment has been designed and manufactured to meet the needs of a discerning land owner, timber or landscaping industry.

This manual covers the MX130 and MX130T. Both models feature 130 Bushel Heaped capacity, 2 speed apron control with a clean out function, replaceable lower paddles and powder coated corrosion resistant Cor-Ten panels.

The MX130T in addition, features heavier axle and hubs to mount 8 bolt large diameter retread tires designed for bigger tractors and smoother towing/spreading.

Safe, efficient and trouble free operation of your Wallenstein Spreader requires that you and anyone else who will be using or maintaining the spreader, read and understand the Safety, Operation, Maintenance and Trouble Shooting information contained within the Operator's Manual.



#### MX130 shown with options:

- End Gate
- Fines Pan
- Upper Beater

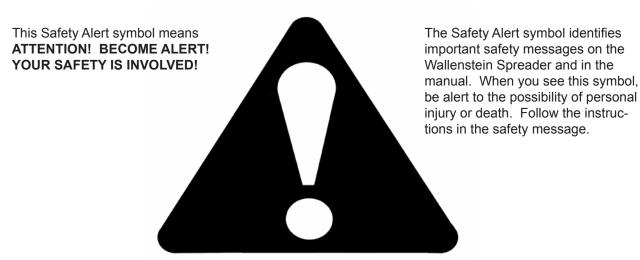
Use the Table of Contents or Index as a guide to locate required information.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Wallenstein dealer or the Distributor if you need assistance, information or additional copies of the manuals.

**OPERATOR ORIENTATION** - The directions left, right, front and rear, as mentioned throughout this manual, are determined when sitting on the tractor seat and facing the direction of travel.

#### **SAFETY**

#### SAFETY ALERT SYMBOL



Why is SAFETY important to you?

3 Big Reasons

**Accidents Disable and Kill Accidents Cost** Accidents Can Be Avoided

#### **SIGNAL WORDS:**

Note: the use of the signal words **DANGER**, WARNING and CAUTION with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

**DANGER** - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

#### WARNING -

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

#### CAUTION -

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or Wallenstein, 4144 Boomer Line, St. Clements, ON, N0B 2M0. Phone (519) 699-9283 or Fax (519) 699-4146.

#### **SAFETY**

**YOU** are responsible for the SAFE operation and maintenance of your Wallenstein MX Series Manure Spreader. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the spreader be familiar with the use and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be used while using the spreader.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** using this equipment is familiar with the recommended use and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

#### 2.1 SAFETY DO'S & DON'TS'

- DO give operating instructions to operators or employees before allowing them to operate the machine, and REVIEW annually thereafter.
- DO read and understand ALL Safety and Operating instructions in the manual and follow them. Most accidents can be

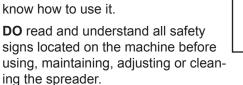


avoided. The most important safety device on this equipment is a SAFE operator.

- DO NOT expect a person who has not read and understood all use and safety instructions to operate the machine. An untrained operator is not qualified and exposes himself and bystanders to possible serious injury or death. It is the owners responsibility to the operator to ensure familiarity and understanding of the machine.
- DO wear suitable ear protection for prolonged exposure to excessive noise.
- DO NOT modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- DO NOT allow riders.
- DO NOT risk injury or death by ignoring good safety practices.
- DO review safety related items annually with all personnel who will operating or maintaining the MX Spreader.
- DO have a first-aid kit available for use should the need arise and know how to use it.



 DO have a fire extinguisher available for use should the need arise and know how to use it.



- DO inspect and secure all guards before starting.
- DO wear appropriate PPE (personal protective equipment). This includes but is not limited to:



- A hard hat
- ·Heavy gloves
- Hearing Protection
- Respirator or filter mask
- Protective shoes with slip resistant soles
- · Protective glasses, goggles or face shield
- DO set Safe Condition procedure before any service, maintenance work or storage preparation.

Safe Condition involves the following procedure:

- · shut off hydraulics
- · shut off the engine
- ensure all components have stopped moving
- · rope is free and no tension applied
- · remove and pocket the ignition key
- · set the parking brake
- · block & chock the tractor wheels
- DO check cables, chains and pulley's, that they are clear of debris prior to starting the machine
- DO think SAFETY! Work SAFELY!

#### 2.2 EQUIPMENT SAFETY GUIDELINES

Safety of the operator and bystanders is one of the main concerns in designing and developing equipment. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you to follow them.

- In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be used in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
- Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while using this equipment. Consult your doctor about using this machine while taking prescription medications.
- 4. Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to use or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works. Review the safety instructions with all users annually.
- 5. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with machinery and trained in this equipment's operations. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.
- 6. Operate the machine only with a tractor equipped with an approved Roll-Over-Protective-Structure (ROPS). Always wear your seat belt when operating the tractor. 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 or the tractor.

- Never exceed the limits of a piece of machinery.
   If its ability to do a job, or to do so safely, is in question - DON'T TRY IT.
- 8. Do not modify the equipment in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the equipment.
- 9. 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 machine manuals. Pay close attention to the Safety Signs affixed to the tractor and the machine.
- 10. Safe Condition involves the following procedure:
  - · shut off hydraulics
  - belt drive control is in stop position
  - · disengage PTO
  - · ensure all components have stopped moving
  - · shut off the engine
  - · remove and pocket the ignition key
  - · set the parking brake on the tractor

Safe Condition procedure should be performed before any service, maintenance work or storage preparation.

CAUTION
Operation Hazard

Wallenstein MX series spreaders are designed to work at PTO speed of 540 RPM Operating the spreader above 540 RPM will cause damage to the spreader and will void the warranty.

#### 2.3 SAFETY TRAINING

- Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.
- In addition to the design and configuration of 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 this equipment.
- 3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL
  - Safety and Using instructions in the manual and to follow these. Accidents can be avoided.
- 4. Working with unfamiliar equipment can lead to careless injuries. Read this manual before assembly or using, to acquaint yourself with the machine. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to using:
  - Reads and understands the operator's manuals.
  - Is instructed in safe and proper use of the equipment.
  - Understands and knows how to perform the "Safe Condition" procedure:
  - shut off hydraulics
  - belt drive control is in stop position
  - · disengage PTO
  - · ensure all components have stopped moving
  - · shut off the engine
  - remove and pocket the ignition key
  - set the parking brake on the tractor
- 5. Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will use the machinery. A person who has not read and understood all use and safety instructions is not qualified to use the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with the work, their physical limitations need to be recognized and accommodated.

6. Know your controls and how to stop tractor and machine quickly in an emergency. Read this manual and the one provided with tractor.

#### 2.4 HYDRAULIC SAFETY

 Make sure that all the components in the hydraulic system are kept in good condition and are clean.



 Before applying pressure to the system, make sure all components are tight, and that lines, hoses and couplings are not damaged.



- Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tapes, clamps or cements. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.
- Wear proper hand and eye protection when searching for a high pressure hydraulic leak.
   Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.
- If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.
- 6. Relieve pressure on hydraulic system before maintaining or working on system.

#### 2.5 STORAGE SAFETY

- 1. Store the unit in an area away from human activity.
- 2. Do not children to play on or around the stored machine.
- 3. Store the unit in a dry, level area. Support the frame with planks if required.
- 4. Park on level ground and block wheels to prevent spreader from rolling.

#### 2.6 PREPARATION

- Never use the machine until you have read and completely understand this manual, the tractor Operator's Manual and each of the Safety Messages found on the safety signs on the tractor and machine.
- Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation,



operation, adjustment, maintaining, repairing, removal, cleaning, or moving the unit. Do not allow long hair, loose fitting clothing or jewellery to be around equipment.

3. PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!

Power equipment with or without equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on

a full-time basis if the noise in the Operator's position exceeds 80db. Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, 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.

- 4. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.
- 5. Use only in daylight or good artificial light.
- 6. Be sure machine is properly mounted, adjusted and in good operating condition.
- Ensure that all safety shielding and safety signs are properly installed and in good condition.
- 8. Gases produced by decomposing manure in storage can be fatal. Give adequate training and provide ventilation to manure storage.

#### 2.7 MAINTENANCE SAFETY

- 1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- 2. Follow good shop practices.
  - Keep service area clean and dry.
  - Be sure electrical out lets and tools are properly grounded.
  - Use adequate light for the job at hand.



- Make sure there is plenty of ventilation.
   Never operate the engine of the tractor in a closed building. The exhaust fumes may cause asphyxiation.
- 4. Before working on this machine, shut off the engine, set the brake, and turn fuel valve off.
- 5. Never work under equipment unless it is blocked securely.
- Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy or leather gloves when handling rope or clutch.
- 7. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
- 8. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.
- Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a Safe Condition.
- When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

#### 2.8 OPERATING SAFETY

- Please remember it is important that you read and heed the safety signs on the Compact Manure Spreader. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
- All things with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices. Wallenstein has designed this MX Manure Spreader to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.
- 3. Close and secure all guards, deflectors and shields before starting and operating.
- 4. Read and understand operator's manual before starting. Review safety instructions annually.
- Personal protection equipment (PPE) including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving.
- 6. Do not allow long hair, loose-fitting clothing, or jewellery to be around moving parts.
- 7. Do not allow anyone within 6m (20 ft) of machine while loading or operating the spreader. Keep children away.
- Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintenance, repairing, unplugging or moving.
- 9. Set **Safe Condition** before servicing, repairing or maintaining.
  - shut off hydraulics
  - belt drive control is in stop position
  - · disengage PTO
  - ensure all components have stopped moving
  - · shut off the engine
  - remove and pocket the ignition key
  - · set the parking brake on the tractor
- Never operate controls from the ground. Operate only from the operator's seat to prevent accidents
- 11. Always spread up or down a slope. Avoid spreading across a slope.

- 12. When operating the spreader, be aware of surroundings or obstructions such as:
  - bystanders
  - trenches
  - rocks
  - fences
- 13. Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- 14. Do not allow riders on this machine at any time. There is no safe place for any riders.
- 15. Keep loading area clean and free of debris to prevent tripping.
- 16. Stop engine when leaving unattended.
- 17. For safety ensure your tractor is equipped with a ROPS.
- 18. Do not start the spreader until you know everyone is clear of the machine and have made sure no tools are lying on or inside the spreader.
- Use caution when shifting apron speeds on the spreader, PTO must be disengaged when returning to first position from clean out position.

## CAUTION Operation Hazard

Wallenstein MX series spreaders are designed to work at PTO speed of 540 RPM Operating the spreader above 540 RPM will cause damage to the spreader and will void the warranty.

#### 2.9 TIRE SAFETY

- Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death.
- Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.
- 3. Have a qualified tire dealer or repair service perform required tire maintenance.
- 4. When replacing worn tires, make sure they meet the original tire specifications. Never undersize.

#### 2.10 TRANSPORT SAFETY

- Comply with state and local laws governing safety and transporting of machinery on public roads.
- Always adjust the driving speed to suit the driving conditions. Avoid fast turning when driving uphill, downhill or across a slope.
- Braking performance and turning ability will be affected when spreader is loaded and hitched to the tractor - allow extra time for turning and braking
- Be sure the machine is hitched positively to the tractor and a retainer is used through the mounting pins.
- 5. Do not drink and drive.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.
- 7. Never allow riders on the machine.
- 8. The use of a slow moving vehicle sign is required unless equipped with flashing hazard lights. Obey all applicable highway safety laws and rules.
- Do not exceed a safe travel speed when transporting. Use safety chain around hitch and drawbar cage to prevent unexpected separation.
- Maintain proper tire air pressure at all times, check wheel nuts on a regular basis and torque as required.0

#### 2.11 MANURE SPREADER SAFETY

- BEFORE unclogging, cleaning, adjusting, lubricating or servicing, but the spreader into Safe Condition:
  - shut off hydraulics
  - · belt drive control is in stop position
  - disengage PTO
  - ensure all components have stopped moving
  - · shut off the engine
  - remove and pocket the ignition key
  - · set the parking brake on the tractor
- A tractor or loader scraping or dumping at a push-off ramp could slide over the edge of the ramp. This might happen because of operator error, mechanical failure, or simply a too-slick surface. This can result in fatal crushing or entrapment of the operator.

- Use caution when loading the manure spreader with a skidsteer or tractor, be aware of objects around you and any by standers. Never exit a tractor or skidsteer with the bucket raised.
- Do not load the spreader unless it is hitched to the tractor and do not unhitch a loaded spreader from the tractor leaving it supported by only the jack
- 5. Ensure there is plenty of ventilation in the loading area, gases produced by decomposing manure in storage can be fatal.
- Ensure safety shields are in place, moving parts on manure spreaders, such as power take-off drivelines, side shafts, pulleys and sprockets are hazardous if not shielded. Becoming entangled in unshielded rotating shafts may result in amputations, spinal injuries and death.
- Always remove loose manure or soil from tires and other parts of the equipment before entering the roadway. Manure or wet soil left on the roadway by your tractor and spreader is a hazard to other vehicles.
- 8. Do not allow anyone within 6 m (20 ft) of spreader during operation. Objects thrown from the rear of the spreader could cause injury.
- 9. Do not use a tractor unless it is equipped with a ROPS.
- 10. Never operate any controls from the ground. Remain seated to while operating machinery. It is extremely dangerous to attempt to make adjustments around the spreader when it is operating. Spinning beater paddles, and other moving parts can cause injury or death.
- Do not attempt to scape or clean the inside of the spreader when the PTO is engaged. Falling into spinning paddle of the spreader could be fatal.
- 12. When finished spreading, park your spreader on level ground and place blocks ahead of and behind the wheels before unhooking. This will prevent unexpected rolling of the spreader when separated from the tractor.

## WARNING Operation Hazard

Never operate any controls from the ground. Remain seated to while operating machinery. Spinning beater paddles, and other moving parts can cause injury or death.

#### 2.12 SIGN-OFF FORM

Wallenstein follows the general Safety Standards specified by the American Society of Agricultural and Biological Engineers (ASABE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be using and/or maintaining the spreader must read and clearly understand ALL Safety, Usage and Maintenance information presented in this manual.

Do not use or allow anyone else to use this spreader until such information has been reviewed. Annually review this information before the season start-up.

Make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. We feel that an untrained operator is unqualified to use this machine.

A sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

#### **SIGN-OFF FORM**

	SIGN-OFF FURIVI							
DATE	EMPLOYEES SIGNATURE	EMPLOYERS SIGNATURE						

#### 3 SAFETY SIGNS

- 1. Keep safety signs clean and legible at all times.
- 2. Replace safety signs that are missing or have become illegible.
- 3. Replaced parts that displayed a safety sign should also display the current sign.
- 4. Safety signs in Section 3 each have a part number displayed with it. Use this part number when ordering replacement parts.
- 5. Safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

#### 3.1 HOW TO INSTALL SAFETY SIGNS:

- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Determine exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

#### 3.2 SAFETY SIGN EXPLANATIONS:



Caution: read and understand ALL safety and operating instructions in the manual, read and understand ALL safety labels located on the machine. The most important safety device on this equipment is an informed SAFE operator.



Caution: Hydraulic fluid under pressure, do not check for leaks with your hand or fingers when the system is pressurized. Serious injury will result. Concealed hydraulic connection: use caution when removing panels or guards.



**Caution:** flying objects. Be aware of and Stay clear of material discharge chute. Machine can expel wood chips fast enough to cause injury.

Do not point discharge at people, animals or buildings.



**Caution:** beater paddle entanglement danger present, keep hands, loose clothing, and long hair away from beater paddles while it is operating.



Caution: rotating driveline, entanglement danger present. Keep hands, loose clothing, and long hair away from driveline while it is rotating.



**Caution:** moving / rotating parts are exposed or under a guard, do not attempt to reach in while parts are moving / turning. Keep hands, loose clothing, and long hair away. Serious injury will result.



**Caution:** when performing any maintenance on the chipper ensure you stop and disengage the PTO. Potential for serious injury or death if the PTO is not stopped and disengaged.



**Caution:** Do not operate machine without shields in place . failure to do so may cause serious injury or death .



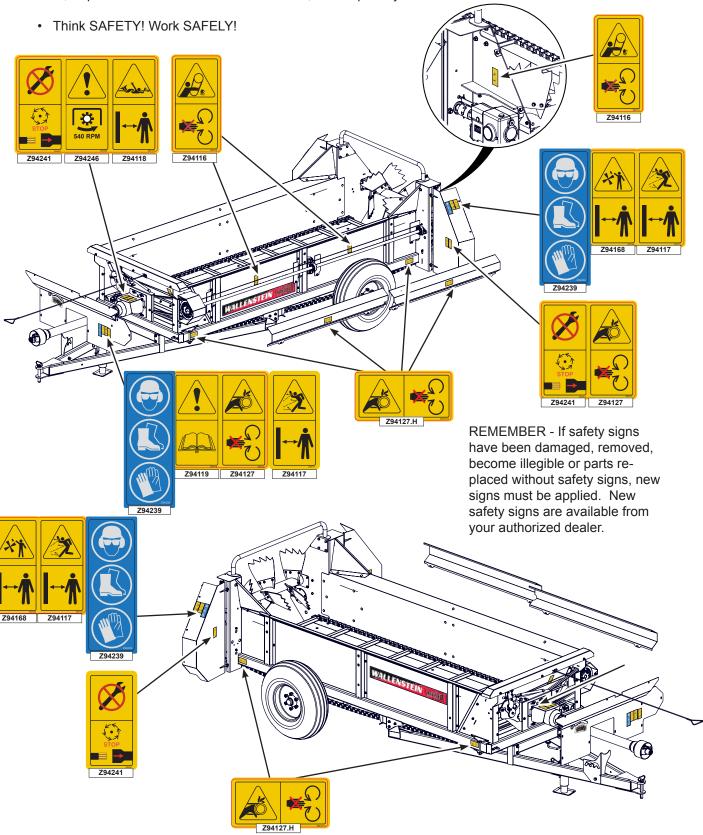
**Caution:** Ensure the drive line is rotating in the proper direction at the rated 540 RPM



**Caution:** Personal Protection Equipment (PPE) is required when operating this machine. Failure to wear PPE will result in personal injury

#### 3.3 SAFETY SIGN LOCATION

The types of safety signs and locations on the equipment are shown in the illustrations that follow. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.



#### 4 OPERATION

## A

## **OPERATING SAFETY**

- 1. Close and secure all guards, deflectors and shields before starting and operating.
- Read and understand operator's manual before starting. Review safety instructions annually.
- Personal protection equipment (PPE) including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving.
- 4. Do not allow long hair, loose-fitting clothing, or jewellery to be around moving parts.
- 5. Do not allow anyone within 6m (20 ft) of machine while loading or operating the spreader. Keep children away.
- Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintenance, repairing, unplugging or moving.
- Never operate controls from the ground. Operate only from the operator's seat to prevent accidents

- 8. Always spread up or down a slope. Avoid spreading across a slope.
- 9. When operating the spreader, be aware of surroundings or obstructions such as:
  - bystanders
  - trenches
  - rocks
  - fences
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- 11. Do not allow riders on this machine at any time. There is no safe place for any riders.
- 12. Keep loading area clean and free of debris to prevent tripping.
- 13. Stop engine when leaving unattended.
- 14. For safety ensure your tractor is equipped with a ROPS.
- 15. Do not start the spreader until you know everyone is clear of the machine and have made sure no tools are lying on or inside the spreader.

#### 4.1 TO THE NEW OPERATOR OR OWNER

Wallenstein Manure Spreaders are designed to haul and spread manure over fields as fertilizer. The operator should be familiar with the machine prior to starting.

It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to use the machine.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to use the spreader safely and how to set it

to provide maximum field efficiency. By following the using instructions in conjunction with a good maintenance program, your Manure Spreader will provide many years of trouble-free service.

#### 4.1.1 IMPORTANT

**Ensure all operators understand how to** put the machine in Safe Condition before working with this machine,

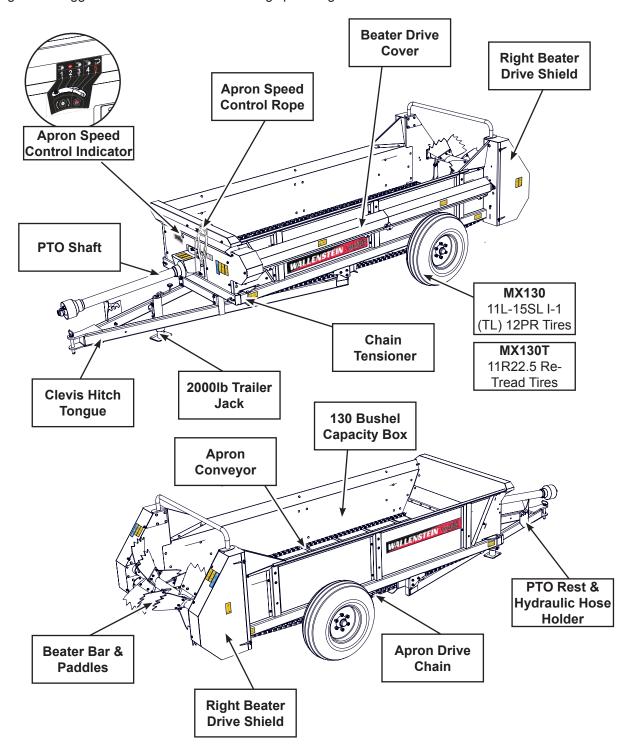
- shut off hydraulics
- · belt drive control is in stop position
- disengage PTO
- · ensure all components have stopped moving
- · shut off the engine
- remove and pocket the ignition key
- · set the parking brake on the tractor

#### 4.2 MACHINE COMPONENTS

The Wallenstein MX130 & MX130T has a 130 bushel box with a sliding apron powered by a PTO driven (540 rpm max) multi speed gear assembly. The apron delivers the manure to the paddles that do the job of spreading effectively and efficiently.

The apron features heavy duty 667X pintle chain, driven by a fully enclosed gearbox (2 speed plus clean out speed settings) The heavy duty beater bar is made up of 10 replaceable paddles. Shear pins protect apron and beater drives from damage caused by jamming.

The MX130T in addition, features heavier axle and hubs to mount 8 bolt large diameter retread tires designed for bigger tractors and smoother towing/spreading.



#### 4.3 MACHINE BREAK-IN

Although there are no operational restrictions on the Compact Manure Spreader when used for the first time, it is recommended that the following mechanical items be checked:

A. After operating for 1 hour:

- 1. Check that the apron chain and drive system move freely.
- 2. Check that the beater and drive system move freely.
- 3. Torque all fasteners and hardware.
- 4. Check oil level in the gearbox (PTO models). Top up as required.
- 5. Check for entangled material. Remove all entangled material before resuming work.
- 6. Check wheels: tire pressure, torque wheel lugs.
- B. After operating for 10 hours:
- Repeat steps 1 through 6 listed above. (Section A)
- Go to the normal servicing and maintenance schedule as defined in the Maintenance Section.



Use Your Personal Protection Equipment

#### 4.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the Wallenstein Spreader requires that each operator reads and understands the using procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining good mechanical condition that this checklist is followed.

Before operating the Spreader and each time thereafter, the following areas should be checked off:

Pre-Operation Checklist	$\checkmark$
MX Series Manure Spreader	
Check that the machine is properly attached to the	
tractor. Be sure retainers are used on the mounting	
pins and mounting hardware is tightened to their specified torque.	
Check all parts for entangled material. Remove	
entangled material.	
Lubricate the machine per the schedule outline in the Maintenance Section.	
Check that the beater and drive system move freely.	
Check oil level in the gearbox. Top up as required	
Check tire pressure. Inflate as required	
If equipped, check that hydrualic hoses are not	
rubbing, pinched or crimped. Re-route as required.	
If equipped, check for leaks in the hydraulic system.	
Tighten leaking fittings, check cylinders. Repair or replace any damaged components.	
Make sure that all guards and shields are in place,	
secured and functioning as designed	
Check all fasteners and hardware, re-torque if required.	

#### 4.5 PTO DRIVELINE

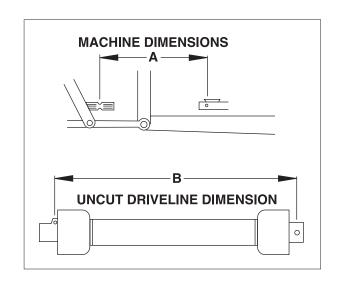
A PTO drive line is supplied with the machine. To accompany the variety of 3 point hitch geometry available today, the drive line can be too long for most machines or too short for others. It is very important that the drive line be free to telescope but not to bottom out when going through its working range. If the drive line bottoms out, the bearings on both the machine and tractor PTO shaft will be overloaded and fail in a short time.

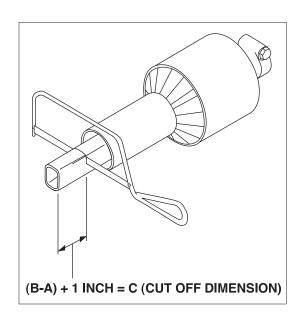
## 1. To determine the proper length of the drive line, follow this procedure:

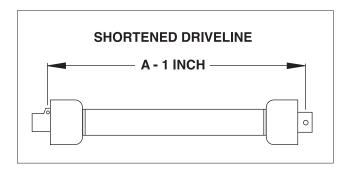
- a. Clear the area of bystanders, especially small children.
- b. Attach the spreader to the tractor (see section 4.6) but do not attach the drive line.
- c. Raise the machine until the input shaft is level with the tractor PTO shaft.
- d. Measure the dimension (A) between the locking grooves on the tractor PTO shaft and the machine input shaft.
- e. Measure the same dimensions on the compressed drive line.
- f. If the compressed drive line dimension (B) exceeds the machine dimension (A), the drive line will have to be cut.

## 2. When cutting the drive line, follow this procedure:

- a. Subtract the machine dimension (A) from the uncut drive line dimension (B) or (B-A=C).
- b. Add one inch (25 mm) to dimension (C) to determine the cut off dimension.
- c. Use a hacksaw to cut dimension (C) from both ends. Cut both the plastic tubes and the metal cores.
- d. Use a file to remove the burrs from the edges that were cut.
- e. Assemble the 2 ends of the shaft.
- f. Make sure the shaft can telescope freely. If it does not, separate the 2 parts and inspect for burrs or cuttings on the shaft ends. Be sure it telescopes freely before installing.
- g. Drive around, a correctly sized shaft should not bottom out or come apart.







## NOTE Telescoping shaft Should overlap at least 6" under load.

#### 4.6 ATTACH TO TRACTOR

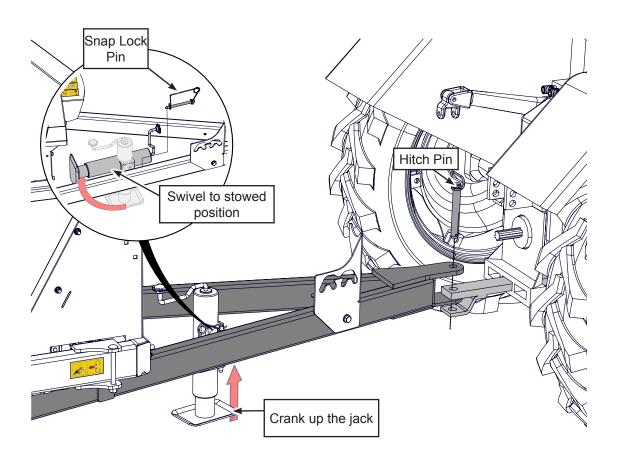
Review the transport safety section (2.7) before proceeding.

When coupling or uncoupling the trailer to a tow vehicle, the trailer should always be located on a level, dry area that is free of debris and other foreign objects.

#### 4.6.1 CLEVIS HITCH

Follow this procedure:

- 1. Make sure that all bystanders, especially small children, are clear of the working area.
- 2. Make sure there is enough room and clearance to safely back up to the machine.
- 3. Use the trailer jack to raise the clevis to the height of the tow vehicle draw bar
- 4. Slowly back the tow vehicle until the draw bar and clevis are aligned.
- 5. Attach the clevis:
  - place hitch pin through the clevis and draw bar.
  - install the snapper pin to secure the hitch pin
- 6. Stow the jack:
  - crank the jack up,
  - pull the jack pin, swivel to its stowed position
- 7. Reverse the above procedure when uncoupling.



#### 4.7 CONTROLS

Please review this section to familiarize yourself with the location and function of each control before starting. Familiarizing yourself with the controls will enable you to take advantage of all the features available on the GX130 series and apply them as conditions demand.

#### 4.7.1 APRON / BEATER CONTROL

This 5-position apron / beater function selector is remotely controlled from the tractors driver seat by a nylon rope.

Pull and release the rope the rope to select a function in sequence from 1 to 5.



**Low**: beater is spinning and apron speed is set at a steady speed, for an even application of manure



**Stop**: beater is spinning and apron is stopped.



**High**: beater is spinning and apron is set at fast speed, for a heavy application of manure



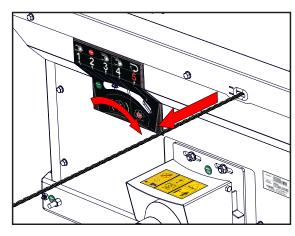
Clean out: beater is not spinning and apron is set at a rapid speed, to quickly clean out the box

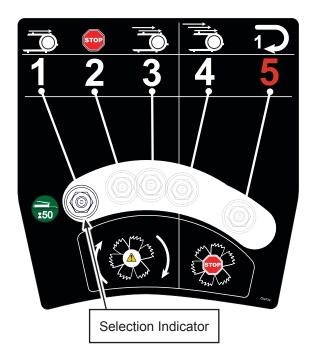


**Return**: when the indicator reaches this point, selector returns to Low (1).

Be aware: when switching from 5 (return) to 1 (low), ensure

your **PTO** is shut off. Damage will result to the gearbox when the PTO is running and return (5) is selected.







CAUTION
Operation Hazard:
Apron / Beater Control

Ensure your **PTO** is **shut off**, when switching from 5 to 1. **DAMAGE will result** to the gearbox when the PTO is running and return (5) is selected.

#### 4.8 FIELD OPERATION



## **OPERATING SAFETY**

- 1. Close and secure all guards, deflectors and shields before starting and operating.
- 2. Read and understand operator's manual before starting. Review safety instructions annually.
- 3. Personal protection equipment (PPE) including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving.
- 4. Do not allow long hair, loose-fitting clothing, or jewellery to be around moving parts.
- Do not allow anyone within 6m (20 ft) of machine while loading or operating the spreader. Keep children away.
- Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintenance, repairing, unplugging or moving.
- Never operate controls from the ground.
   Operate only from the operator's seat to prevent accidents

- 8. Always spread up or down a slope. Avoid spreading across a slope.
- 9. When operating the spreader, be aware of surroundings or obstructions such as:
  - bystanders
  - trenches
  - rocks
  - fences
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- 11. Do not allow riders on this machine at any time. There is no safe place for any riders.
- 12. Keep loading area clean and free of debris to prevent tripping.
- 13. Stop engine when leaving unattended.
- 14. For safety ensure your tractor is equipped with a ROPS.
- 15. Do not start the spreader until you know everyone is clear of the machine and have made sure no tools are lying on or inside the spreader.

## The operator has the responsibility of being familiar with all operating and safety procedures and following them.

Although the MX130 is easy to use, each operator should review this section to familiarize himself with the detailed safety and operating procedures. These procedures can be applied to all versions of the MX Spreader. After following all operating safety and preparation procedures the spreader should be set up and ready to run (4.8). Tractor manual should also be reviewed. When preparing this machine for use, follow this procedure:

#### 4.8.1 PREPARE

- Clear the area of bystanders, especially small children.
- Each operator must be trained and familiar with the set up and operation of the Spreader and its components.
- Review the machine components (see Section 4.2)
- Review and follow the Pre-Operation Checklist (see Section 4.4).
- Review operation and function of the controls (see section 4.7)

- Survey the work site, move to a clear, level work area and position at the work site. Do not start the spreader until it is in position.
- · Set up the machine.
- Understand how to put the machine into Safe Condition before working with this machine,
  - shut off hydraulics
  - belt drive control is in stop position
  - disengage PTO
  - ensure all components have stopped moving
  - shut off the engine
  - remove and pocket the ignition key
  - set the parking brake on the tractor

#### 4.8.2 TRACTOR

- Ensure all the access covers are secured
- Inspect hydraulic connectors (models with accessories only) for positive connection.
- Start tractor.
- Run the engine for a few minutes to allow it to warm.
- Ensure machine is stable, with no unusual vibration.
- Set apron speed and start spreading

#### 4.8.3 STOPPING:

- Set apron speed to 1 (Low)
- · Slow engine RPM.
- Disengage the PTO
- Stop engine, remove ignition key and place in your pocket and wait for all moving parts to stop.

#### 4.8.4 EMERGENCY STOPPING:

If an emergency occurs:

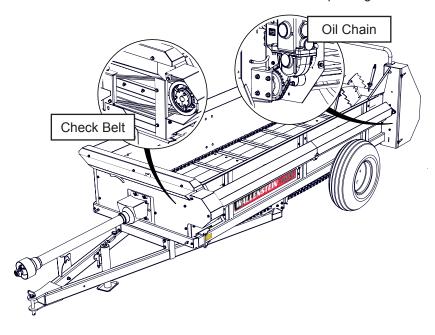
- Disengage the PTO
- Shut off the engine
- Correct emergency situation before restarting engine and resuming work.

#### 4.8.5 BEFORE LOADING:

- In freezing weather, make certain the apron chain is not frozen to the spreader floor or web slides, make sure there are no lumps of manure frozen to the floor.
- Do not store manure in the spreader between unloading times during freezing weather months: a frozen load could result in severe equipment damage (i.e. torn floor apron chain).
- Do no store wet manure in the spreader or keep the spreader outdoors with manure in it
- Inspect machine for damaged or loosened parts, repair or replace parts as required before beginning work.
- Inspect the box interior that no tools, parts remain inside the box while loading manure
- Inspect all moving parts be sure to grease if required (refer to lube section).
- Oil the beater drive chain and inspect pulley belt, remove any standing manure or debris.

**Ensure all operators understand how** to put the machine in **Safe Condition** before working with this machine.

- · shut off hydraulics
- · belt drive control is in stop position
- · disengage PTO
- · ensure all components have stopped moving
- shut off the engine
- · remove and pocket the ignition key
- · set the parking brake on the tractor



#### 4.9 SPREADING OPERATION:

The MX130 spreader is a strong, rugged machine that is built to a straight-forward design which provides a strong, reliable tool for spreading.

MX130 - Capacity: (ASAE S324.1 heaped)

- 130 Bushels (4.5 cu m / 162 cu ft)
- 106cm (42") load Height

Use the following the procedures as guidelines to prepare your spreader for the spreading operation.

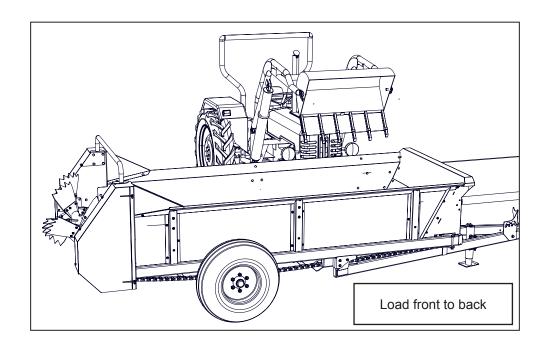
#### **4.9.1 LOADING:**

Always wear personal protective equipment (PPE) whenever operating the machine. This includes but is not limited to a hard hat, protective shoes with slip resistant soles, protective goggles or face shield, heavy gloves, hearing protection and protective clothing.

- Clear the area of bystanders, especially small children.
- Ensure the spreader is securely attached to the tractor.
- Choose a flat, open, solid area for loading the spreader. Avoid loading at steep angles, tipping is a hazard.

- Load the spreader from front to back. Loading this way permits the material to be spread uniformly.
- Do not over load, maximum load height should be no higher than 42".
- Break up any large chunks
- Be cautious of foreign objects in the manure that could jam the beaters and potentially damage the spreader. Smaller objects could be thrown forward toward the driver.
- If loading in freezing weather beware of frozen chunks of manure

WARNING
Operation Hazard:
spinning beaters could fling foreign objects
in the manure towards the driver. Ensure no foreign
objects are in the manure and wear appropriate PPE.



#### 4.9.2 SPREADING:

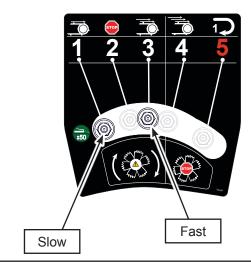
Follow this procedure when the spreader is loaded and ready to go.

- a. With the PTO off move from the loading area to the field to be spread.
- b. Clear the area of bystanders, especially small children, remain in the drivers seat.
- c. Set the apron chain speed to slow (1), or fast (3).
- d. Set engine speed to low idle, and slowly engage the PTO, the beater will start spinning and the apron will begin to move.
- e. Drive ahead to begin unloading the spreader
- f. Increase PTO speed as required, to 540 RPM maximum.
- g. When unloaded, stop the PTO, return to loading area and repeat loading procedure.

#### **4.9.3 CLEAN OUT:**

Follow this procedure when spreading operation is complete

- h. Stop the tractor, shut off the engine and put the spreader into **safe condition**
- i. Scrape down the in side of the box. Be extra cautious if doing so from inside the box.
- When done scraping, ensure the box is empty, start the tractor at idle.
- k. Set the controls to clean out (4), slowly engage the PTO, increase speed to 540 rpm
- The beaters will not be spinning, apron speed will increase to quickly clean out any remaining manure.
- m. When the manure is cleaned out, disengage the PTO, shut off the engine and put the spreader into safe condition
- n. Pressure wash the the spreader inside and out, to remove any remaining manure.

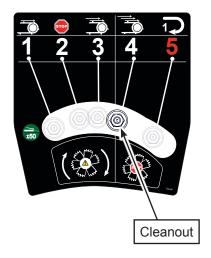




## CAUTION Operation Hazard:

Apron / Beater Control

Ensure your **PTO** is shut off, when switching from 5 to 1. **DAMAGE** will result to the gearbox when the PTO is running and return (5) is selected.







Moving parts are exposed, entanglement hazard is present. Ensure engine is shut off and PTO is disengaged when working in or around the spreader.

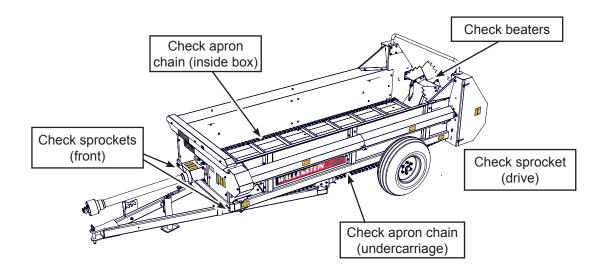
#### 4.9.4 UNPLUGGING:

Follow this procedure when a jam or plug has occurred. Be aware that if spreading in freezing weather frozen chunks could cause a jam.

Stop the tractor, shut off the tractor and put the spreader into **safe condition** 

- a. Check to see if the beater or apron drive shear pins have broken, replace if necessary. (see maintenance section for info on replacing shear pins)
- b. Remove manure from around the paddles and inspect to determine what has caused the jam or plug.
- c. Remove the jam or plug and ensure the box is free of hard or frozen chunks and foreign objects, start the tractor at idle.
- d. Slowly engage the PTO, if the paddles fail to turn, disengage the PTO and shut off the tractor.

- e. Inspect the apron drive and chain,
  - inside the box
  - undercarriage
  - sprocket (rear)
  - sprockets (front)
- f. Find the jam and remove, start the tractor at idle.
- g. Slowly engage the PTO, if the paddles spin, bring the PTO up to speed and continue spreading.
- h. If the jam persists you may have to manually unload the spreader to determine what is causing the jam.







Moving parts are exposed, entanglement hazard is present. Ensure engine is shut off and PTO is disengaged when working in or around the spreader.

#### 5 TRANSPORTING



### TRANSPORT SAFETY

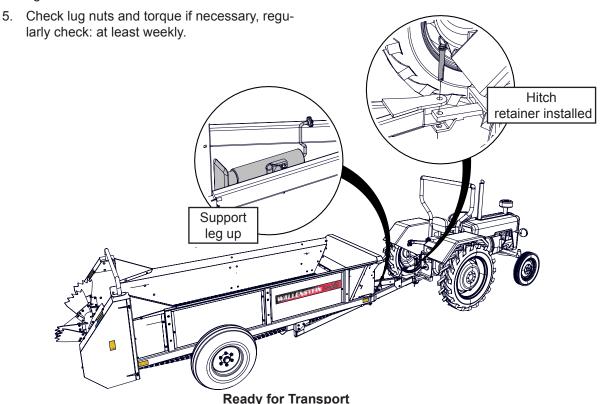
- Comply with state and local laws governing safety and transporting of machinery on public roads.
- Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.
- Do not exceed a safe travel speed. Slow down for rough terrain and cornering.
- · Never allow riders on the machine.

- Be sure the spreader is hitched positively to the tractor and retainers are used through the mounting pins.
- Do not drink and drive.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.
- Never allow riders on the machine

When transporting the machine, review and follow these instructions:

- Clear the area of bystanders, especially small children.
- 2. If travelling on a highway, check that all the lights and reflectors required by the highway authorities are in place, clean and working.
- 3. Insure that the machine is securely attached to the tractor with a mechanical retainer through the drawbar pin.
- 4. Check tires for correct pressure, cuts or damaged rims.

- 6. Inspect and replace any axle dust caps that are damaged or leaking.
- 7. Ensure the support leg is up and locked.
- 8. Ensure the PTO disconnected
- 9. Do not allow riders.
- Never exceed a safe travel speed. Slow down when encountering rough road conditions and cornering.
- 11. Do not drink and drive.



**STORED** 

#### 6 STORAGE



### **STORAGE SAFETY**

- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Store the unit in a dry, level area. Place the machine on a skid / planks if required.

#### 6.1 PLACING IN STORAGE

After the season's use or when the machine will not be used for a period of time, completely inspect all major systems of the spreader. Replace or repair any worn or damaged components to prevent any unnecessary down time at the beginning of the next season. Touch up any scratches or dents.

ATTENTION: NEVER store manure in the spreader between unloading times during cold weather months when a frozen load could result in equipment damage (i.e. torn floor apron chain).

DO NOT store wet manure in the spreader (or keep the spreader outdoors with manure in it doing so could accelerate rusting of some steel parts.

Follow this procedure for storing:

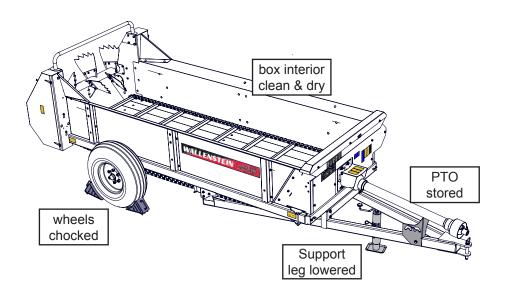
- 1. Ensure support leg is lowered and locked in position.
- 2. Rest the PTO shaft on the PTO holder
- 3. Chock wheels to prevent movement.

- 4. Remove all material from the machine.
- 5. Thoroughly wash the machine with a pressure washer to remove all manure and debris.
- During winter freezing temperatures remove access moisture from moving parts (apron chain, beaters)
- 7. Inspect all rotating parts for entangled material. Remove all entangled material.
- 8. Check the condition of:
  - · control rope,
  - lineshaft
  - bearings,
  - apron chain (check sag & adjust)
  - sprockets
  - belts
  - pulleys.
- 9. Lubricate, replace or adjust as required.
- It is best to store the machine inside. If that is not possible, cover with a waterproof tarpaulin and tie down securely.

#### 6.2 REMOVING FROM STORAGE

When removing this machine from storage, follow this procedure:

- 1. Remove the tarpaulin if covered.
- 2. Review and follow the pre-operation checklist.



#### 7 SERVICE AND MAINTENANCE



#### **MAINTENANCE SAFETY**

- Good maintenance is your responsibility.
   Poor maintenance is an invitation to trouble.
- · Follow good shop practices.
  - •Keep service area clean and dry.
  - ·Be sure electrical outlets and tools are
  - · Properly grounded.
  - •Use adequate light for the job at hand.
- Make sure there is plenty of ventilation. Never operate the engine of the tractor in a closed building. The exhaust fumes may cause asphyxiation.
- Put the machine in Safe Condition
  - shut off hydraulics
  - •belt drive control is in stop position
  - disengage PTO
  - ensure all components have stopped moving
  - •shut off the engine
  - •remove and pocket the ignition key
  - •set the parking brake on the tractor
- Never work under equipment unless it is blocked securely.
- Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy gloves when handling sharp components.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.
- Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a Safe Condition.
- When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

#### 7.1 SERVICE

#### 7.1.1 FLUIDS AND LUBRICANTS

#### 1. Grease:

Use an SAE multipurpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE multipurpose lithium base grease.

#### 2. Storing Lubricants:

Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

#### 7.1.2 GREASING

Use the Maintenance Checklist provided to keep a record of all scheduled maintenance.

- 1. Use a hand-held grease gun for all greasing.
- 2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
- 3. Replace and repair broken fittings immediately.
- 4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fittings if necessary.

#### 7.1.3 SERVICING INTERVALS

See service record and service illustration for service interval information. The period recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication or oil changes.

**IMPORTANT** Do Not over grease. One shot of grease is sufficient



Look for this label on your machine, it indicates a grease point and the number of hours between greasing.

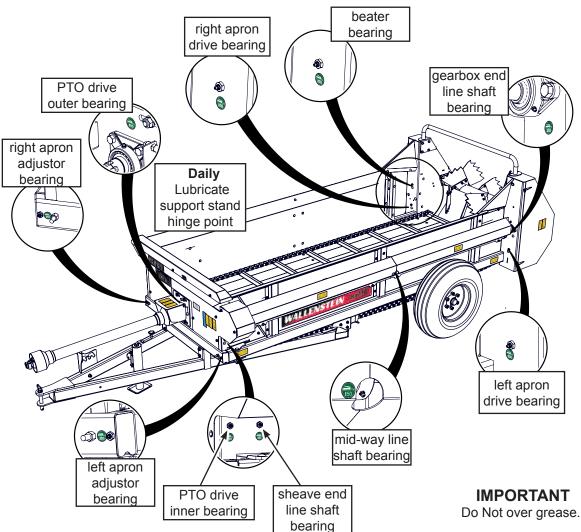
#### 7.2 SERVICE ILLUSTRATION

See Service Record Chart

This illustration shows the general location of service points for all models in this manual.

After each use, wash and clean, remove entangled material, small debris. Look for this label on your machine, it indicates a grease point and the number of hours between greasing.





On a regular basis check the condition of drive belts, chain and pull rope. Replace any that are damaged or worn. Ensure all ropes and chains are clean and free of debris.

#### 7.3 GENERAL MAINTENANCE

By following a careful service and maintenance program for your machine, you will enjoy many years of trouble-free operation.

- Check tightness of all nuts and bolts on a regular basis and retighten if required.
- Grease the machine including the PTO at the interval stated in the lubrication chart.
- Check chain tension at the lubrication intervals and tighten if necessary.
- Clean and wash the machine at the end of every use; manure can rapidly cause rusting of components so it is especially important to keep the machine clean and well lubricated.
- Put the machine in **Safe Condition** before working on this machine,
  - · shut off hydraulics
  - · belt drive control is in stop position
  - disengage PTO
  - · ensure all components have stopped moving
  - · shut off the engine
  - · remove and pocket the ignition key
  - · set the parking brake on the tractor

#### 7.4 DRIVELINE MAINTENANCE

The PTO drive line is designed to telescope to allow for dimensional changes as the machine goes through its operational range.

A heavy duty plastic tubular guard encloses the driving components and is designed to turn relative to the driving components.

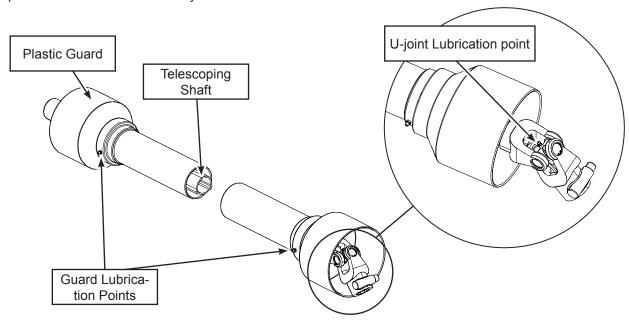
The drive line should telescope easily and the guard turn freely on the shaft at all times. Annual disassembly, cleaning and lubrication is recommended to insure that all components function as intended.

Ensure that the universal joints are lubricated, inspect and lubricate every 8 hrs.

When reassembling the driveline, ensure that the driveline is assembled "in phase", to avoid unnecessary vibration when the machine is running.

#### **7.4.1 SHEAR PIN:**

The PTO drive line is designed with a shear pin at the input yoke to prevent overloading the drive system. Remove the broken parts from the yoke when the pin shears and replace with genuine Wallenstein parts. The drive system is designed to function well without failing the shear pin. If it does fail, generally it is being fed too fast or something very hard has been jammed into the rotor or between the blades. Always unplug the system and determine the cause of the problem and correct it before resuming work. Shear pin replacements are available from your dealer



#### 7.5 DRIVE BELT TENSION / REPLACEMENT:

The machine is designed with a sheave on the PTO shaft, which is used to drive the line shaft sheave through a pair of drive belts.

When the belt is in disrepair or loose, the ability to efficiently drive the line shaft may be affected.

Therefore it is important to periodically check the condition as well as the tension of the belt.

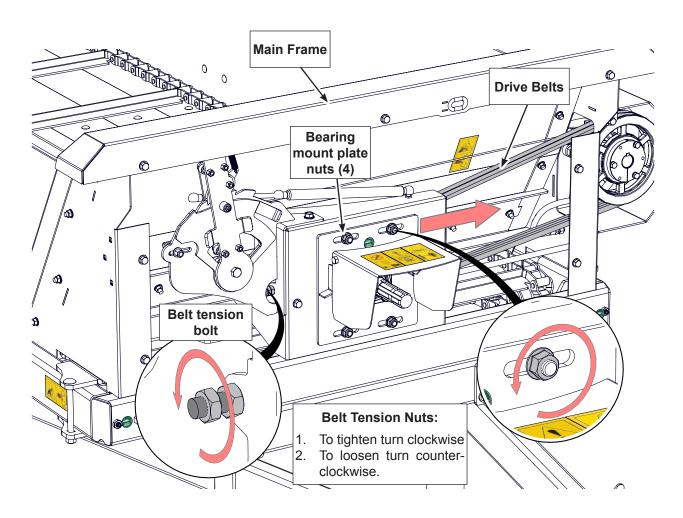
Frayed, cracked or worn drive belts should be replaced. Drive belt should deflect no more than 3/4 to 1.0" (19 mm to 25 mm).

For accurate measurement use a drive belt tension gauge. Contact your dealer for more information on belt tension.

To replace the belt follow this procedure

- 1. Ensure the machine is set in safe condition
- 2. Remove the bolts that secure the front shield, and remove the shield.
- 3. Loosen (do not remove) the 4 x bearing mount plate nuts that hold the PTO bearing/ shaft assembly to the main frame (located at the front main frame)
- 4. Find the belt tensioning bolt with 2 jam nuts on the bolt (located between the PTO input shaft and the ratchet assembly)
- 5. Turn the belt tensioning nuts counter clockwise, until the drive belts are loose enough to remove, then remove the belts (see below)

- 6. Replace with the new belts (B76 style)
- 7. Turn the belt tensioning nuts clockwise, to tighten the belt.
- 8. Check the tension by pushing on the belt with your fore finger and measure its defection. Drive belt should deflect no more than 3/4 to 1.0" (19 mm to 25 mm).
- When tension is correct, check pulley alignment then tighten up all four PTO bearing/ shaft assembly bolts, and replace the belt shield, cover and reinstall the bolts.
- 10. Recheck tension after 10 hrs of use.



#### 7.6 APRON CHAIN

The apron chain is used to convey manure into the beaters for spreading. It must be oiled frequently and kept properly tensioned to obtain the expected life.

#### 7.6.1 APRON CHAIN TENSION

Check the chain tension: The chain should sag 3 to 5 inches (76 - 127 mm) below the frame to indicate a proper setting. Chain tension should be checked every 25 hrs of use To adjust the apron chain, follow this procedure:

- 1. Ensure the machine is set in **safe condition**
- 2. Go to the front of the spreader, and locate the apron adjusters, in the bottom front corners of the box.
- 3. On one side, with a wrench, turn the adjusting nut clockwise to tighten the apron chain.
- 4. Make a few turns then check the chain sag: correct setting is 3 to 5 inches (76 127 mm) below the frame.
- Continue to make adjustments till the sag is correct

#### 7.6.2 APRON CHAIN LUBRICATION

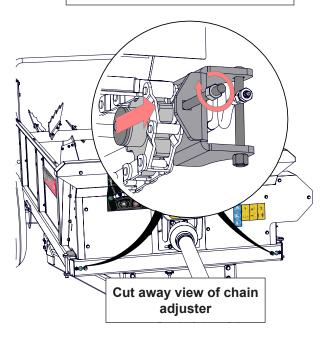
The apron chain must be oiled on a regular basis to obtain the expected life.

- Lubricate the apron chain every 25 hours or monthly.
- Use a good quality chain lube for best performance, other lubrication (used oil) may be used but must be applied more often.
- Under heavy use inspect the chain and lubricate as required.

- 6. Once the sag is correct on one side, make adjustments on the opposite side.
- 7. Finally, double check the sag on both sides to ensure they are even.

#### **Apron Chain Tension Nuts:**

- 1. To tighten turn clockwise
- 2. To loosen turn counter-clockwise.



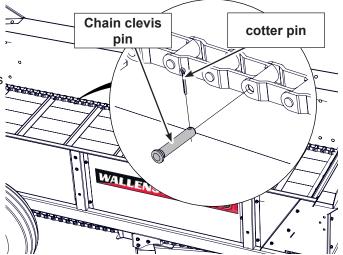
#### 7.6.3 APRON CHAIN LINKS

Over a period of time the chain will become stretched to a point where no further adjustment is available,

at this point links should be removed from the chain to allow for further tensioning.

- At the chain adjusters, completely loosen tension on both sides of the apron chain.
- Determine how many links to remove.
- Remove the cotter pins from the chain clevis pins, separate the chain links.
- Use a chain breaker and carefully remove the chain pin
- Remove the link, and repeat for the other side.
- Reassemble the links with the clevis pin, install and secure cotter pins.

Note: when removing links from apron chain ensure the same number is removed from each side.

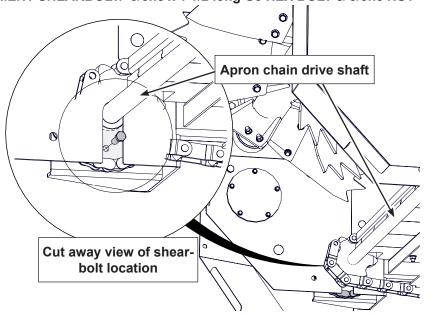


#### 7.6.4 APRON CHAIN SHEARBOLT

The apron chain drive features a shear bolt on the apron sprocket and the apron hub. If the apron chain becomes jammed the shearbolt will break, saving the apron chain and the apron chain drive components from being damaged. **REPLACEMENT SHEARBOLT:** 3/8nc x 1 1/2 long G8 HEX BOLT & 3/8nc NUT

To replace a broken shear bolt, follow this procedure.

- Open the beater drive door
- You will have to rotate the hub and the sprocket so that the bolt mounting hole aligns with the slot in the beater side panel.
- Once they are alligned, insert the new shear bolt thru the slot into the mounting hole in the sprocket and hub.
- tighten up the assembly, set torque recommended in the torque chart.



#### 7.7 BEATER BAR

The beater bar and paddles perform the function of spreading the manure as the apron moves the load into the paddles. Follow the maintenance schedule for greasing to maximize bearing life.

#### 7.7.1 BEATER BAR PADDLE

Occasionally the paddles may require replacement. Replacement paddles can be purchased from your dealer.

To replace a paddle follow this procedure.

- Ensure the machine is set in safe condition
- Rotate the beater to get the best access to the paddle you are replacing.
- Remove the three 3/8" x 1 1/4" long bolts and 3/8 serrated nuts that hold the paddle on to the beater bar, remove the old paddle.
- Install the new paddle, use new hardware if required and fasten the new paddles to the beater bar, torque the hardware as recommended on the torque chart.

#### 7.7.2 BEATER BAR SHEARBOLT

The beater bar features a shear bolt on the

beater bar and gear box drive shaft. If the beater bar becomes jammed the shearbolt will break, saving the beater bar and drive components from being damaged.

#### REPLACEMENT SHEARBOLT: 3/8nc x 4-1/2 HEX BOLT & 3/8nc NUT

To replace the shearbolt follow this procedure.

- Ensure the machine is set in safe condition
- Find the shearbolt hole in the beater bar.
- Rotate the beater bar to line up the hole in the gear box drive shaft
- replace the shearbolt, tighten up the assembly, set torque recommended in the torque chart.

#### 7.8 DRIVE CHAIN

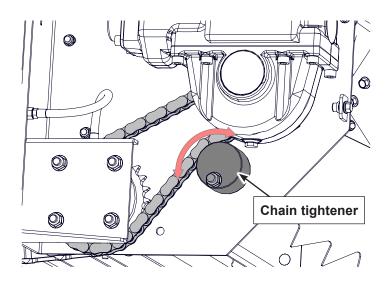
The drive chain is used to drive the apron chain drive shaft. It must be oiled frequently and kept properly tensioned to obtain the expected life

#### 7.8.1 DRIVE CHAIN TENSION

Check the chain tension: The chain should defect 1/4" to 3/8" inches (6 - 9.5 mm) Chain tension should be checked after every 50 hrs of operation.

To adjust the drive chain, follow this procedure:

- Ensure the machine is set in safe condition
- · Open the left beater access door
- Loosen the nut that holds the offset chain tightener.
- Rotate the tightener until the chain deflects to 1/4" to 3/8" inches (6 9.5 mm)
- Tighten the chain tightener nut.
- Close and secure the beater access door



#### 7.8.2 DRIVE CHAIN LUBRICATION

The drive chain must be oiled on a regular basis to obtain the expected life.

- · Lubricate the drive chain every 25 hours or monthly.
- Use a good quality chain lube for best performance.
- Under heavy use inspect the chain and lubricate as required.

#### 7.9 GEAR BOX

The gear box receives power from the PTO, and is used to drive the apron chain and beater. It must be periodically checked and gear box oil changed to obtain trouble free operation.

#### **GEARBOX OIL: SAE.140EP**

Follow these procedures for gearbox maintenance:

#### **7.9.1 OIL LEVEL**

Check the oil level every 50 hrs:

- Ensure the machine is set in safe condition
- Open the left beater access door
- remove the oil level check plug
- · top up if required, replace the check plug

#### 7.9.2 CHANGE OIL

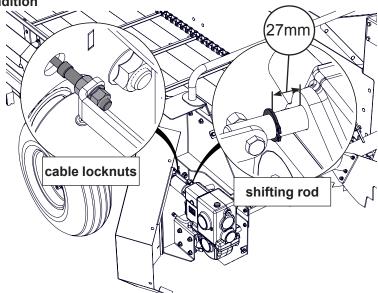
Oil change: The first oil change should be done after the first 50 working hours. Subsequent changes should take place after 500-800 hours or at least once a year in order to avoid sludge deposits. It is best to change the oil while it is still warm:

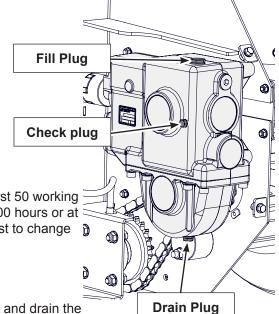
- Ensure the machine is set in safe condition
- Open the left beater access door.
- Remove the fill and check plugs.
- Remove the oil drain plug a the bottom of the gear box and drain the oil.
- Clean then replace the drain plug, and begin filling with oil.
- Oil level should be to the bottom of the oil check hole.
- Clean check and fill plugs, and replace them.
- Close and secure the beater access door

#### 7.9.3 SHIFTING CABLE

Over a period of time the shifting cable may come out of adjustment. If the gear box is not shifting properly then the cable may need adjustment:

- Ensure the machine is set in safe condition
- Set the apron / beater control to 1 (low)
- · Open the left beater access door.'
- Find the cable that attaches to the gearbox shifting rod.
- Loosen the two locking nuts on the end of the cable
- Adjust the cable so that the shift rod retaining ring is approximately 27 mm (1 1/16") from the gearbox housing.
- Tighten the cable lock nuts.





#### 7.10 SERVICE RECORD CHART

8 Hours or Daily					50 Ho				
Lubricate Hinge	Check Secure fact	Check Clean Mach.	Adjust Shift	Check Press	Check Drive Chain	Check  Apron Chair  Tensing	Check Sear Box O		Sheck Studio S

#### 8 TROUBLE SHOOTING

The Wallenstein Manure spreader is designed with a PTO powered apron bed feeding a 10 paddle beater bar to efficiently spread manure. It is a simple and reliable system that requires minimal maintenance.

In the following chart, we have listed many of the problems, causes and solutions to the problems that you may encounter.

If you encounter a problem that is difficult to solve, even after having read through this trouble shooting section, please call your local distributor or dealer. Before you call, please have this Operator's Manual from your unit and serial number ready.

PROBLEM	CAUSE	SOLUTION	CAUTION
	Obstructed	Clear debris from paddle area	Ensure machine is off
Beater does not turn	PTO not engaged.	Engage PTO	
	Broken shear pin	Replace shear pin.	Ensure machine is off
	Low engine speed.	Set throttle to specified speed (540RPM)	
	Slow apron speed selected	Select fast speed	
Clausen no feedbar	Broken shear pin	Replace shear pin.	Ensure machine is off
Slow or no feeding.	Apron frozen to floor	Free up with hot water: Always be sure apron is not frozen before starting PTO	Ensure machine is off
	Drive Chain is broken or has jumped off sprockets	Repair chain and adjust adjust tension	Ensure machine is off
	Drive Belt slipping	Adjust or replace drive belt	Ensure machine is off
	Broken or missing paddle .	Replace broken/missing paddle	Ensure machine is off.
Unusual vibration while running.	PTO driveline out of phase	Align driveline	Ensure machine is off.
	Debris in paddle	Clean paddles, check for frozen debris	Ensure machine is off
	Return spring is weak.	Replace spring	Ensure machine is off
Apron / Beater Control	Cable not adjusted broken, stretched	Adjust cable replace if required.	Ensure machine is off
not working	Control mechanism dirty	Clean & lubricate mechanism	Ensure machine is off
	Rope broken	Inspect and replace rope if required	Ensure machine is off

### 9 SPECIFICATIONS

## 9.1 MECHANICAL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

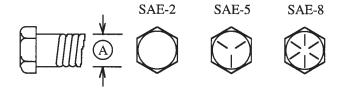
		MX25	MX50G	MX50P	MX80G	MX80P	MX130	MX130T	
Recommended HorsePower		15-25	15-30	18-30	20-45	25-45	45-75	45-75	
Drive	Туре	Ground	Ground	PTO @ 540	Ground	PTO @ 540	PTO @ 540	PTO @ 540	
Beate	r Drive	Chain & Sprocket	Chain & Sprocket	Belt / Worm Gearbox	Chain & Sprocket	Belt / Worm Gearbox	Belt / Worm Gearbox	Belt / Worm Gearbox	
Apron	Drive				Chain & Spro	cket			
Capacity	Bushels	25 Bushels	50 Bushels	50 Bushels	80 Bushels	80 Bushels	130 Bushels	130 Bushels	
ASAE S324.1 heaped	Cubic Feet	31.25	62.5	62.5	100	100	162.5	162.5	
Overall	Length	9.9'	13'	13'	14'	14'	214"	214"	
Overal	I Width	48"	57"	57"	63"	63"	79"	90"	
Loading	g Height	29"	35.5"	35.5"	37"	37"	42"	48"	
Box Flar	ed Width	34"	42"	42"	48"	48"	55"	55"	
Box \	Width	26"	32"	32"	38"	38"	48"	48"	
Box H	Height	15"	17"	17"	20"	20"	23"	23"	
Box L	ength	72"	89"	89"	102"	102"	130"	130"	
Tires	/bolts	6 x 12 / 5	7.6 x 15 / 5	7.6 x 15 / 5	7.6 x 15 / 5	7.6 x 15 / 5	11L-15SL / 6	11R22.5 / 8 (Retread Tires)	
Number o	of Paddles	8	10	10	10	10	10 (replaceable)	10 (replaceable)	
Weight w/Tires (lbs)		510	795	795	920	920	2180 (est)	2500 (est	
Tongue Weight (lbs)		34	50	50	56	56	330 (est)	330 (est)	
Flo	oor	Rust Proof Tongue-and-Groove Poly Floor							
Box Con	Box Construction		Corrosion Resistant Carbon Steel - Powder Coated					Corrosion Resistant Cor-Ten Weathering Steel - Powder Coated	
Apron ch	nain type	662	662	662	662	662	667X	667X	
Selectable Apron Speed		- Fast - Medium - Slow	- Fast - Medium - Slow	- Fast - Medium - Slow	- Fast - Medium - Slow	- Fast - Medium - Slow	- Cleanout* - Fast - Slow - Off	- Cleanout* - Fast - Slow - Off	
		- Off	- Off	- Off	- Off	- Off	*Cleanout = Fast Speed with beaters off		
	Fines pan	Optional	Optional	Optional	Optional	Optional	Optional (Hydraulic)	Optional (Hydraulic)	
Dealer Installed	End Gate		Optional	Optional	Optional	Optional	Optional (Hydraulic)	Optional (Hydraulic)	
Accessories	Jack Stand	Optional	Standard	Standard	Standard	Standard	Standard	Standard	
	Upper Beater	-	-	-	-	-	Optional	Optional	

#### 9.2 BOLT TORQUE

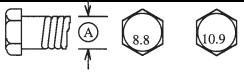
#### **CHECKING BOLT TORQUE**

The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

	ENGLISH TORQUE SPECIFICATIONS					
Bolt			Bolt T	orque*		
Diamter "A"	SA (N.m)	E 2 (lb-ft)		E 5 (lb-ft)	SA (N.m)	E 8 (lb-ft)
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970



METRIC TORQUE SPECIFICATIONS							
Bolt	Bolt Torque*						
Diameter	8	.8	10	).9			
"A"	(N.m)	(lb-ft)	(N.m)	(lb-ft)			
M3	0.5	0.4	1.8	1.3			
M4	3	2.2	4.5	3.3			
M5	6	4	9	7			
M6	10	7	15	11			
M8	25	18	35	26			
M10	50	37	70	52			
M12	90	66	125	92			
M14	140	103	200	148			
M16	225	166	310	229			
M20	435	321	610	450			
M24	750	553	1050	774			
M30	1495	1103	2100	1550			
M36	2600	1917	3675	2710			



Torque figures indicated are valid for nongreased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

\* Torque value for bolts and capscrews are identified by their head markings.

#### 9.3 WHEEL LUG TORQUE

It is extremely important safety procedure to apply and maintain proper wheel mounting torque on your trailer axle. Torque wrenches are the best method to assure the proper amount of torque is being applied to a fastener.

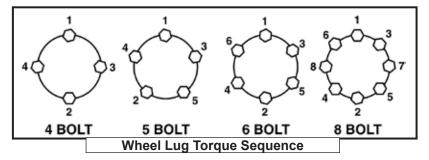
Wheel lugs should be torqued before first road use and after each wheel removal. Check and re torque after the first 16Km (10 miles), 40Km (25 miles), and again at 80Km (50 miles). Check periodically thereafter.

Note: Wheel lugs must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle.

•	Start all lugs by hand to prevent cross
	threading.

- Tighten lugs in sequence, per wheel lug torque sequence chart.
- The tightening of the fasteners should be done in stages. Following the recommended sequence, tighten fasteners per wheel torque requirements chart.

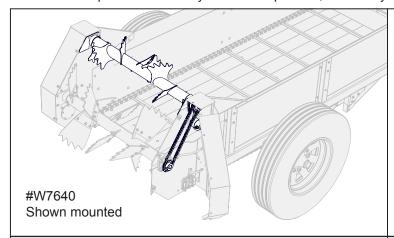
Wheel Torque Requirements					
Wheel Size	Torque Unit	1st Stage	2nd Stage	3rd Stage	
8"	ft-lbs	12 - 20	30 - 35	45 - 55	
	Nm	16 - 26	39 - 45.5	58.5 - 71.5	
12"	ft-lbs	20 - 25	35 - 40	50 - 60	
	Nm	26 - 32.5	45.5 - 52	65 - 78	
13"	ft-lbs	20 - 25	35 - 40	50 - 60	
	Nm	26 - 32.5	45.5 - 52	65 - 78	
14"	ft-lbs	20 - 25	50 - 60	90 - 120	
	Nm	26 - 32.5	65 - 78	117 - 156	
15"	ft-lbs	20 - 25	50 - 60	90 - 120	
	Nm	26 - 32.5	65 - 78	117 - 156	
16"	ft-lbs	20 - 25	50 - 60	90 - 120	
	Nm	26 - 32.5	65 - 78	117 - 156	



#### 10 ACCESSORIES

Call your dealer for pricing and availability

For replacement parts, go to **www.wallensteinequipment.com/** and click on "Parts and Manuals" to download the latest parts manual for your model spreader, then call your dealer to order.

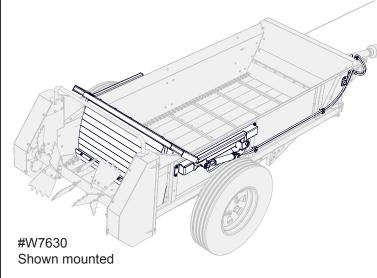


#### M7640 Upper Beater

The optional Upper Beater helps to break up the manure even more and improves overall shredding action.

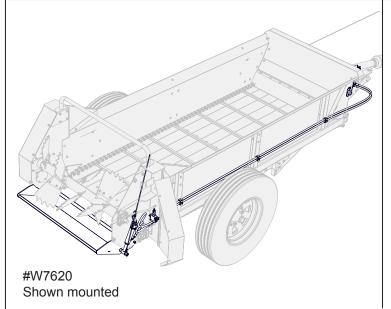
Kit consists of upper beater bar, drive chain, sheave and hard-ware.

Must be dealer installed.



#### M7630 Hydraulic End Gate

The optional endgate is the ultimate way to control delivery. Close the endgate to eliminate spills during filling or on the way from stable to pasture. Kit consists of end gate, hardware, hydraulic cylinder, hoses and components. Must be dealer installed.



#### M7620 Fines Pan

A must have add on kit, the hydraulically controlled Fines Pan provides a more consistent spread of manure by causing all manure to be discharged by the beater paddles.

Kit consists of fines pan, hardware, hydraulic cylinder, hoses and components.

Must be dealer installed.

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