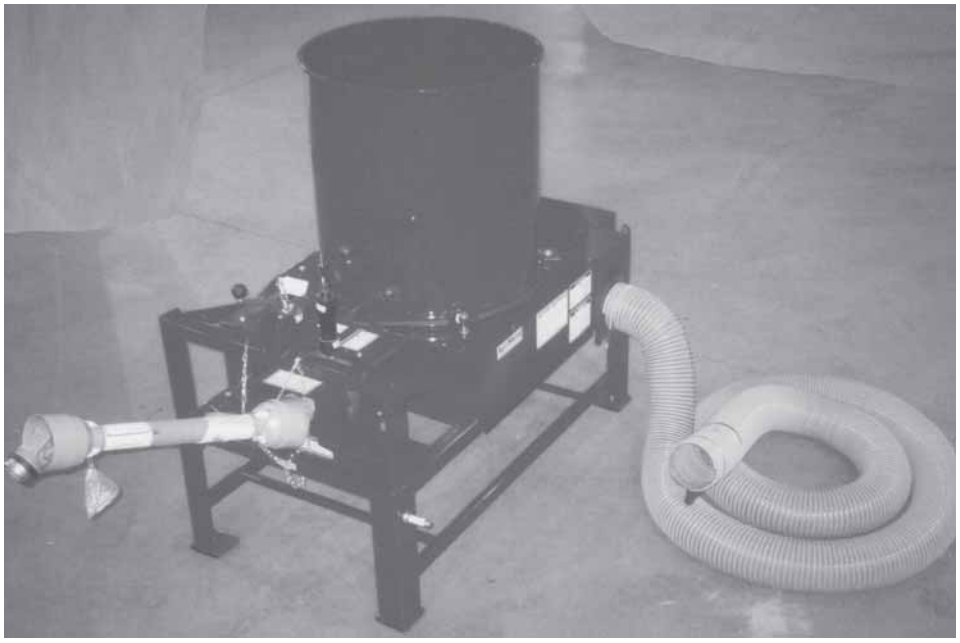
1 INTRODUCTION

Congratulations on your choice of an AgriMetal PTO Bale Chopper to complement your landscaping operation. This equipment has been designed and manufactured to meet the needs of a discerning landscaping industry.

Safe, efficient and trouble free operation of your AgriMetal PTO Bale Chopper requires that you and anyone else who will be operating or maintaining the machine, read and understand the Safety, Operation, Maintenance and Trouble Shooting information contained within the Operator's Manual.



This manual covers the Model PTO LS Bale Chopper. Differences are covered where appropriate. Use the Table of Contents or Index as a guide to locate required information.

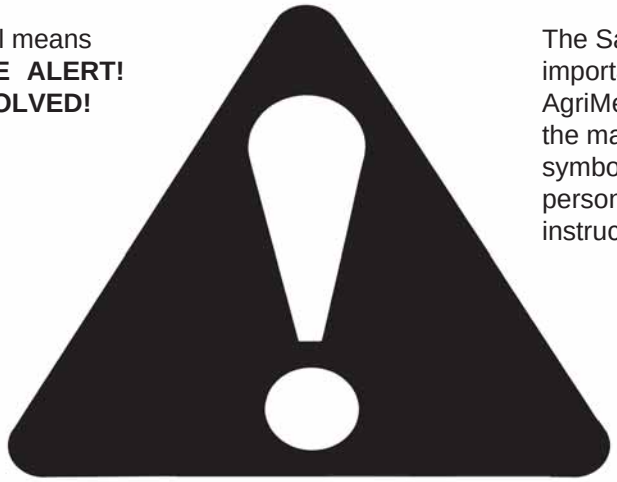
Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your AgriMetal Dealer or Distributor if you need assistance, information or additional copies of the manuals.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are as seen from behind the tractor driver's seat and facing in the direction of travel.

2 SAFETY

SAFETY ALERT SYMBOL

This Safety Alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



The Safety Alert symbol identifies important safety messages on the AgriMetal PTO Bale Chopper and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

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.

SI NO LEE INGLES, PIDA AYUDA A AIGUIEN QUE SI LO LEA PARA QUE LE TRADUZCA LAS MIDIDAS DE SEGURIDAD.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer at AgriMetal Inc., 1006 Rue Principale, Wickham, Quebec, Canada, J0C 1S0. Phone (819) 398-6883 or fax (819) 398-5311.

SAFETY

YOU are responsible for the SAFE operation and maintenance of your AgriMetal PTO Bale Chopper. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the Bale Chopper be familiar with the operating 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 adhered to while operating the Bale Chopper.

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** operating this equipment is familiar with the recommended operating 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.

- Bale Chopper owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter per OSHA (Occupational Safety and Health Administration) regulation 1928.57.

- The most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Most accidents can be avoided.

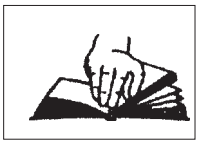
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.

- 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.

- Think SAFETY! Work SAFELY!

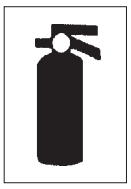
2.1 GENERAL SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, adjusting or unplugging the Bale Chopper.



2. Have a first-aid kit available for use should the need arise and know how to use it.

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



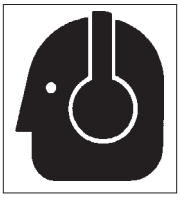
4. Do not allow riders.

5. Wear appropriate protective gear. This list includes but is not limited to:

   - A hard hat
   - Protective shoes with slip resistant soles
   - Protective glasses or goggles
   - Heavy gloves
   - Wet weather gear
   - Hearing protection
   - Respirator or filter mask

6. Install and secure all guards before starting.

7. Wear suitable ear protection for prolonged exposure to excessive noise.



8. Place all controls in neutral, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.

9. Clear the area of people, especially small children, before starting the unit.

10. Review safety related items annually with all personnel who will operating or maintaining the Bale Chopper.

2.2 EQUIPMENT SAFETY GUIDELINES

1. Safety of the operator and bystanders is one of the main concerns in designing and developing a machine. 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, follow them.

2. 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 operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

3. Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.

4. 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.

5. **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to operate 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.

6. 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.

7. 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 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 engine and machine Manuals. Pay close attention to the Safety Signs affixed to the engine and the machine.

2.3 SAFETY TRAINING

1. 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.

2. 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 Operating 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, and the manual for your engine, before assembly or operating, to acquaint yourself with the machines. 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 operating:**

   a. Reads and understands the operator's manuals.

   b. Is instructed in safe and proper use.

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

6. Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will operate the machinery. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.

2.4 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 are available from your authorized Distributor or Dealer Parts Department or the factory.

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.

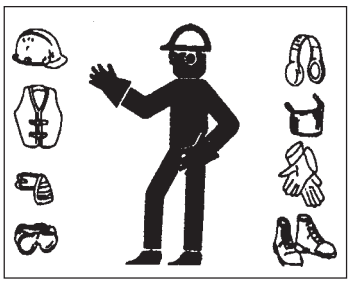
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.

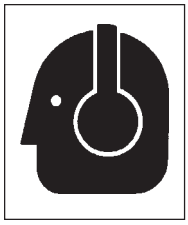
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.

- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

2.5 PREPARATION

1. Never operate the transport vehicle and machine until you have read and completely understand this manual, the engine Operator's Manual, and each of the Safety Messages found on the safety signs on the engine and machine.

2. 
Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving the implement. Do not allow long hair, loose fitting clothing or jewelry to be around equipment.

3. 
PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!
Gas engines 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. Operate only in daylight or good artificial light.

5. Be sure machine is properly mounted, adjusted and in good operating condition.

6. Ensure that all safety shielding and safety signs are properly installed and in good condition.

2.6 OPERATING SAFETY

1. Please remember it is important that you read and heed the safety signs on the Bale Chopper. 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.

2. 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. The manufacturer has designed this Bale Chopper 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. If a safety shield or guard is removed for any reason, it must be replaced before the machine is again operated.

4. When the use of hand tools is required to perform any part of assembly, installation, adjustment, maintaining, repairing, removal, or moving, be sure the tools used are designed and recommended by the tool manufacturer for that specific task.

5. Personal protection equipment including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving. Do not allow long hair, loose fitting clothing, or jewelry to be around moving parts.

6. Always use two people to handle heavy, unwieldy components during assembly, installation, removal or moving.

7. Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintaining, repairing, removal or moving.

8. Place all controls in neutral, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.

9. 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.

10. Do not allow riders on the machine or tractor at any time. There is no safe place for any riders.

11. Before you operate the machine, check over all pins, bolts, and connections to be sure all are securely in place. Replace any damaged or worn parts immediately.

12. Do not allow anyone who is not familiar with the safety rules and operation instructions to use this machine.

13. Never allow children to operate or be around this machine.

14. Do not reach into blower or tub openings when the engine is running. Keep others away also.

15. Clear the work area of objects which might be picked up and snagged or entangled in the machine.

16. Keep hands, feet, hair, jewelry, and clothing away from all moving and/or rotating parts.

17. Do not direct the air stream toward people, animals or buildings to prevent injury or damage.

18. Do not place hands, feet or other body parts into air stream.

19. Do not enter tub unless engine has been stopped and disabled.

20. Always wear heavy canvas or leather gloves when handling blades.

2.7 TRANSPORT SAFETY

1. Comply with state and local laws governing highway safety and movement of vehicles on public roads.

2. Plan your route to avoid heavy traffic.

3. Do not drink and drive.

4. 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.

5. Never allow riders on tractor or on machine.

2.8 STORAGE SAFETY

1. Store the unit in an area away from human activity.

2. Do not permit 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.

2.9 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 outlets and tools are properly grounded.
   - Use adequate light for the job at hand.

3. Make sure there is plenty of ventilation. Never operate an engine in a closed building. The exhaust fumes may cause asphyxiation.

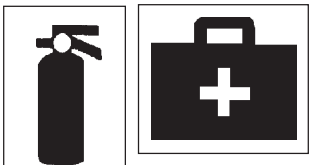
4. Before working on this machine, shut off the engine, and remove the ignition key.

6. Never work under equipment unless it is blocked securely.

7. Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Always wear heavy canvas or leather gloves when handling blades.

8. 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.

9. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



10. Periodically retighten all fasteners.

11. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

2.10 SIGN-OFF FORM

AgriMetal follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the PTO Bale Chopper must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment 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 operate 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.

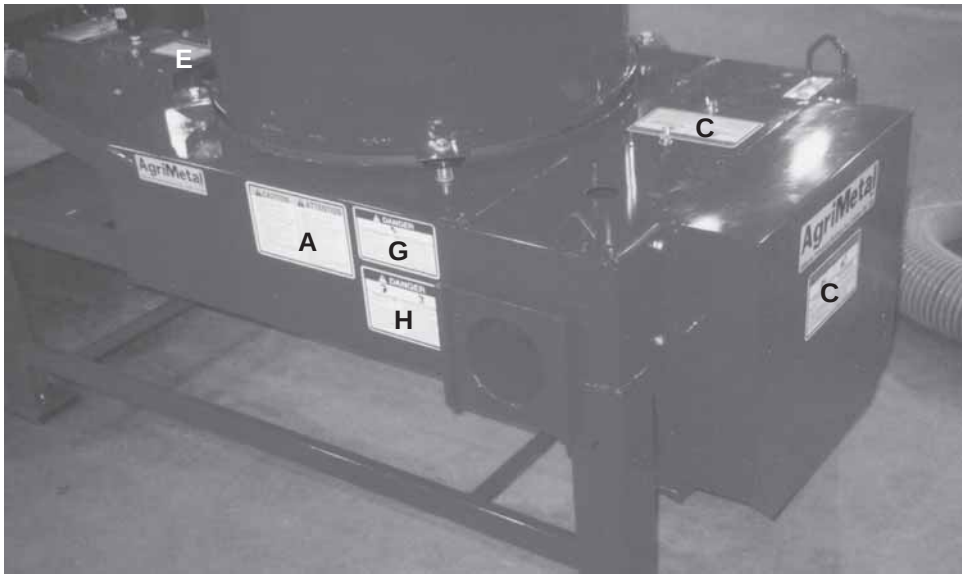
SIGN-OFF FORM

DATE	EMPLOYEES SIGNATURE	EMPLOYERS SIGNATURE

3 SAFETY SIGN LOCATIONS

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.

- Think SAFETY! Work SAFELY!



A

CAUTION

1. Read Operator's Manual before starting.
2. Keep guards and shields in place and access doors closed.
3. Keep hands, feet, hair and clothing away from moving parts.
4. Stop engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging the machine.
5. Do not climb on the machine or place hands in any opening when the engine is running.
6. Keep people and pets a safe distance from the machine.
7. Do not smoke when refuelling.
8. Block up machine securely before working under it.
9. Keep all electrical wires and connections dry and in good repair.
10. Do not direct discharge duct or hose toward people, animals or property to prevent being hit by fast moving objects. Always wear appropriate safety gear during operation.
11. Review safety instructions annually.

ATTENTION

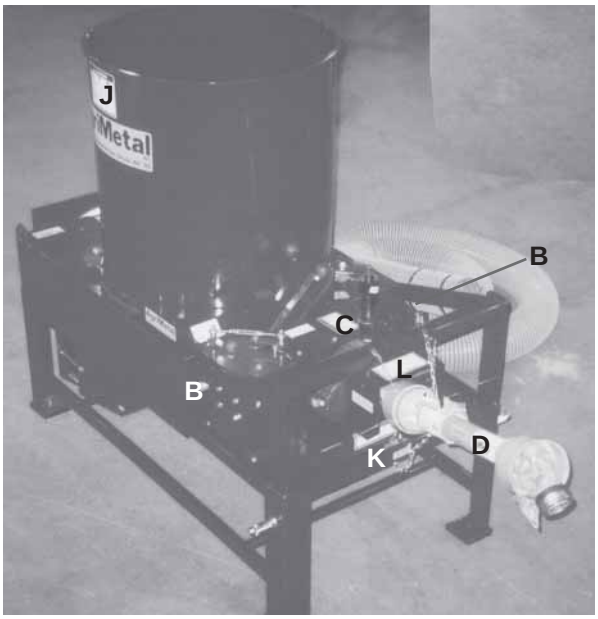
1. Lire attentivent le manuel d'opération avant la mise en marche.
2. Garder tous les écrans protecteurs in place.
3. Garder les mains, pieds, cheveux et vétements éloignés des éléments mobiles.
4. Arréter le moteur, placer tous les contrôles à la position "neutre", enlever la clé du contact et attendre que toutes les places soient au point mort avant de faire tout ajustement, réparation ou de débloquer la machine.
5. Ne pas grimper sur la machine et ne jamais se placer les mains dans toute ouverture lorsque celle-ci est en marche.
6. Garder les gens et les animaux à une distance sécuritaire de la machine.
7. Ne jamais fümer lors du plein d'essence.
8. Immobiliser la machine de façon sécuritaire avant de travailler sous celle-ci.
9. Garder toute connection et fil électrique au sec et en bonne condition.
10. Afin d'éviter tout risque d'accident grave, ne jamais souffler en direction des gens, animaux ou vers les propriétées. Le port des équipements de sécurité est obligatoire lorsque vous opéré la machine.
11. Reviser annuellement le manual d'opération.

NC13-33-0108

REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

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.

- Think SAFETY! Work SAFELY!



B

WARNING

MISSING SHIELD HAZARD

To prevent serious injury or death from exposed hazard:

1. Install and secure shields before operating.
2. Keep hands, feet, hair and clothing away from moving parts.

AVERTISSEMENT

GARDE ABSENT

Á défaut de suivre ces instructions, cela pourrait entraîner de sérieuses blessures ou même la mort.

1. Installer les gardes de façon sécuritaire avant la mise en marche de la machine.
2. Garder les mains, pieds, cheveux et vêtements éloignés des éléments mobiles.

01-60-0070

C

WARNING **AVERTISSEMENT**

ROTATING PART HAZARD
KEEP AWAY

To prevent serious injury or death from rotating parts:

1. Place all controls in neutral or off, stop engine or motor, set park brake, remove ignition key or disable power source and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
2. Install and secure all guards before operating.
3. Do not operate with rotating parts exposed.

PIÉCES EN MOUVEMENT
RESTER ÉLOIGNÉ

Á défaut de suivre ces instructions, cela pourrait entraîner de sérieuses blessures ou même la mort.

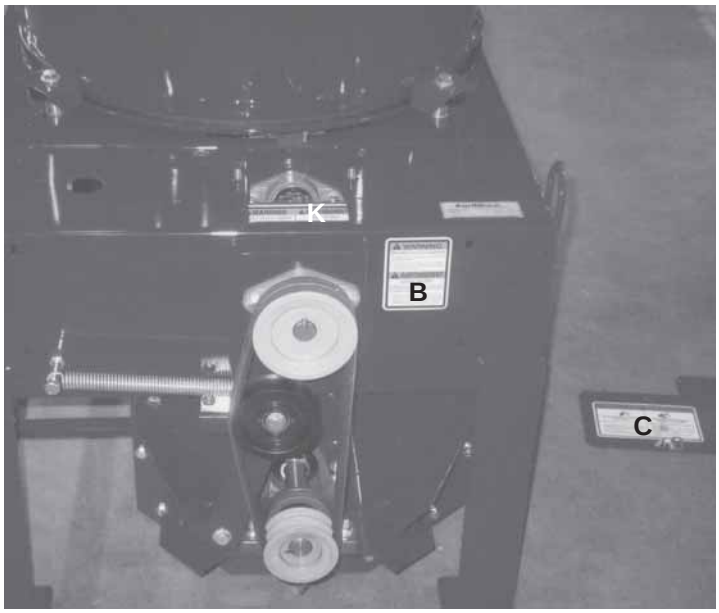
1. Arrêter le moteur, placer tous les contrôles à la position "neutre" enlever la clé du contact et attendre que toutes les places soient au point mort avant de faire tout ajustement, réparation ou de débloquer la machine.
2. Installer tous les écrans protecteurs avant de mettre la machine en fonction.
3. Ne jamais opérer la machine sans écran protecteur.

01-60-0115

REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

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.

- Think SAFETY! Work SAFELY!



D

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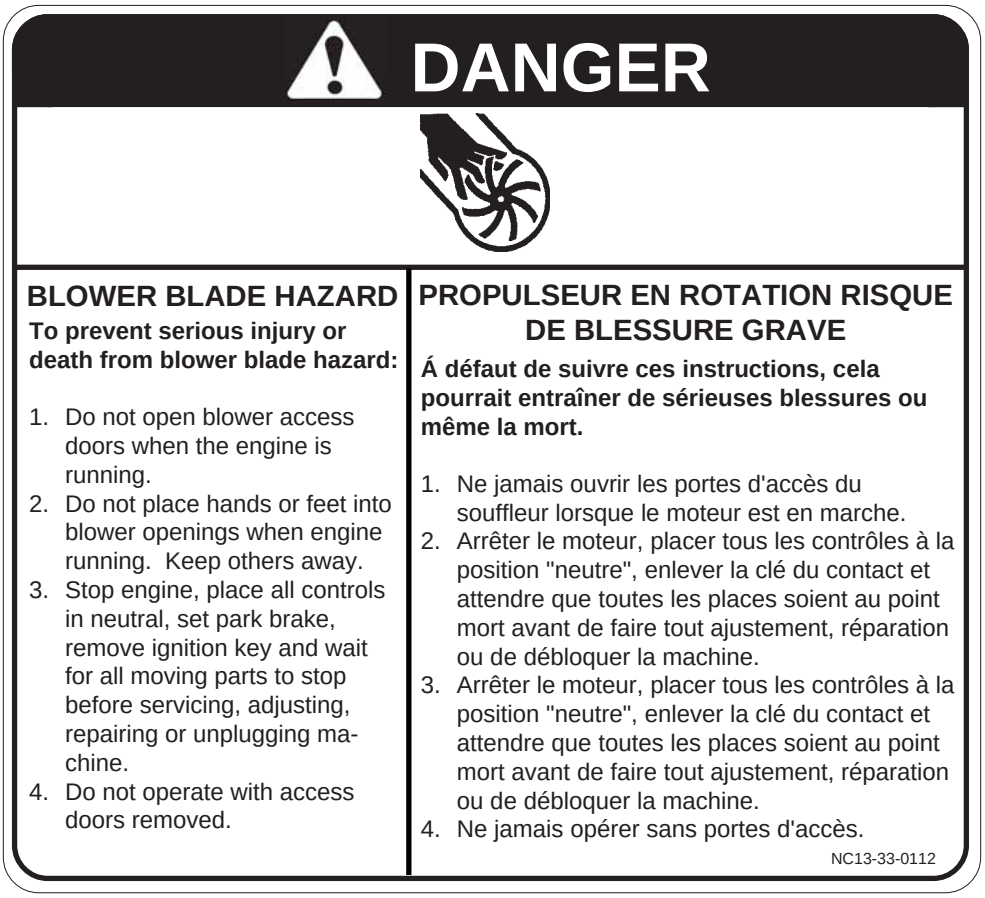
- Think SAFETY! Work SAFELY!

G



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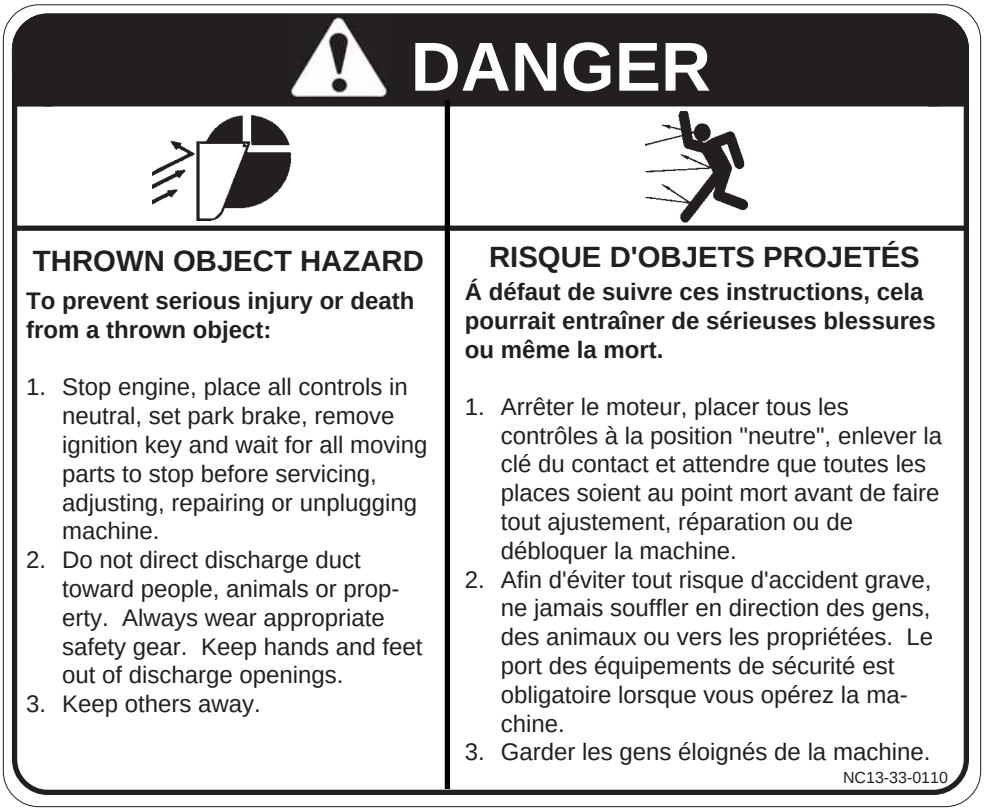
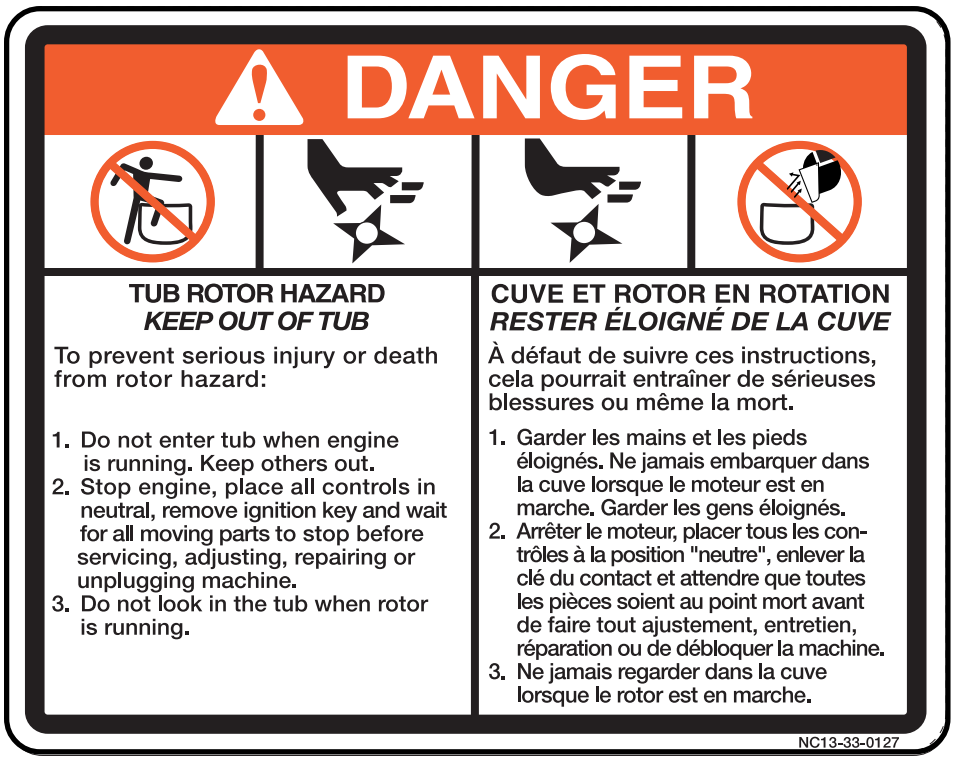
- Think SAFETY! Work SAFELY!

H



J



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- Think SAFETY! Work SAFELY!

REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

K

WARNING / AVERTISSEMENT

MISSING SHIELD HAZARD

To prevent serious injury or death from exposed hazard:

1. Install and secure shields before operating.
2. Keep hands, feet, hair and clothing away from moving parts.

GARDE ABSENT

Á défaut de suivre ces instructions, cela pourrait entraîner de sérieuses blessures ou même la mort.

1. Installer les gardes de façon sécuritaire avant la mise en marche de la machine.
2. Garder les mains, pieds, cheveux et vêtements éloignés des éléments mobiles.

NC-13-33-0113

L

DANGER

ROTATING DRIVELINE HAZARD
KEEP AWAY

To prevent serious injury or death from rotating driveline:

1. Keep all guards in place when operating.
2. Operate at 540 RPM.
3. Keep hands, feet, hair and clothing away from moving parts.
4. Keep U joint angles equal and small as possible.
5. Do not exceed driveline manufacturer's recommended operating length.

PRISE DE FORCE IN ROTATION
RESTER ÉLOIGNÉ

À défaut de suivre ces instructions, cela pourrait entraîner de sérieuses blessures ou même la mort.

1. Garder tous les écrans rpotecteurs en place.
2. Operer à 540 Tours/minute.
3. Garder les mains, pieds, cheveux et vêtements éloignés des éléments mobiles.
4. Garder les angles de joint en U égales et le plus petit possible.
5. Ne pas excèder la longueur d'opération de la prise de force recommandé par le manufacturier.

01-60-0125

4 ASSEMBLING

4.1 MACHINE ASSEMBLY

The machine is shipped from the factory in a partially disassembled configuration and attached to a pallet that provides for easy moving and handling. Always use tools, equipment and forklifts of appropriate size and capacity for the job. Always use 2 men when lifting, moving and assembling the machine.

When the machine is shipped, follow this procedure when preparing for the customer:

1. Clear the area of bystanders especially small children before starting.

2. Remove the pallet tie-downs.

Fig. 1 SHIPPING CONFIGURATION

3. Use a forklift to lift the pallet/machine from the truck. Carry the load close to the ground as it is moved to the assembly area and positioned.

4. Remove plastic wrap.

Fig. 2 UNWRAPPED

5. Remove the components from inside the tub and lay-out.

Fig. 3 LAYOUT (TYPICAL)

6. Bring a discharge hose to assembly area along with the mounting hardware.

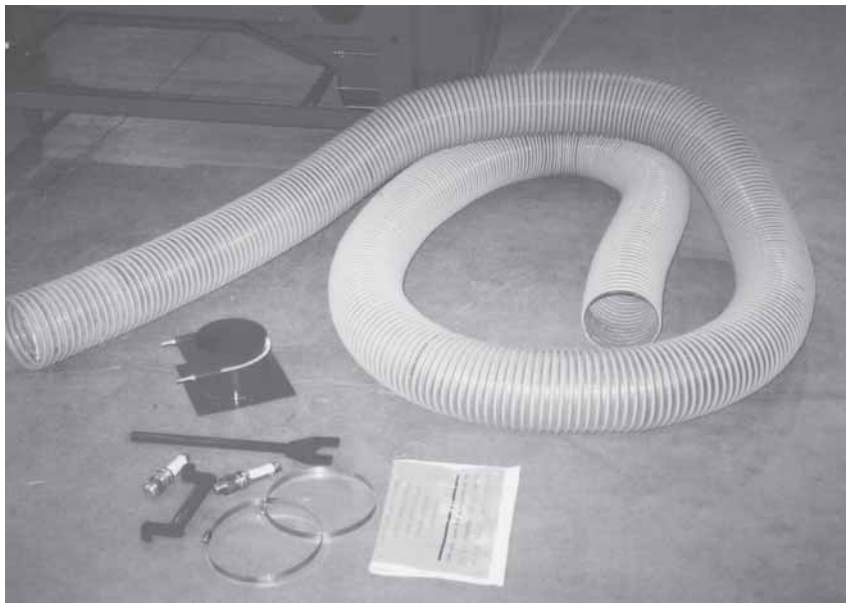


Fig. 4 DISCHARGE HOSE

7. **Attach the hose to the discharge outlet bracket:**

   a. Remove clamp from discharge bracket.

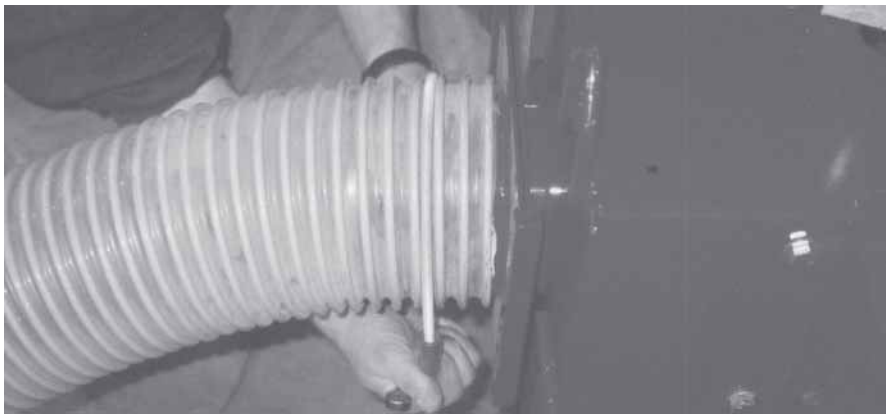
   b. Mount discharge bracket over outlet.

Discharge Bracket

   c. Slide clamp over hose end.

Clamp

   d. Slide hose end over discharge bracket.



Tightening

   e. Tighten clamp to secure hose.

Hose Installed

Fig. 5 HOSE ATTACHMENT

8. **Mount the handle on the end of the hose:**

   a. Slide one clamp strap over the hose.

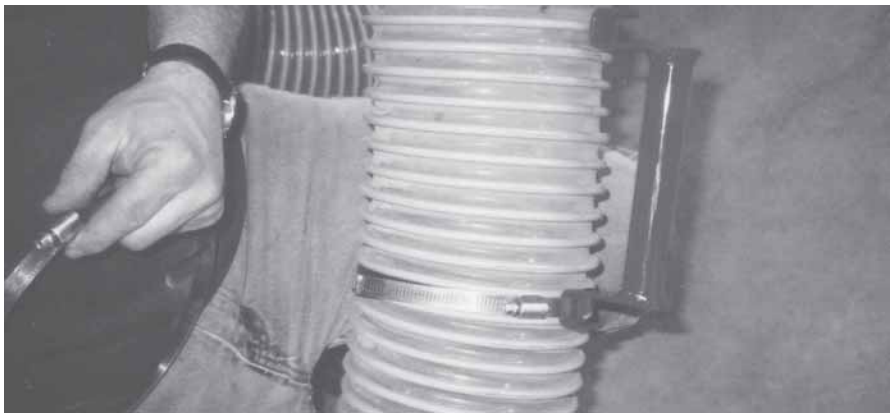
   b. Position the handle close to the end of the hose and slip one end under the clamp strap.

   c. Snug up clamp.

   d. Install the second clamp strap.

   e. Position the handle a few inches from the end of the hose.

   f. Tighten clamp straps to secure the handle.



Handle/Strap

Tightening

Tightening Second Strap

Mounted

Fig. 6 HANDLE

9. **Install the 3 point hitch mounting pins:**

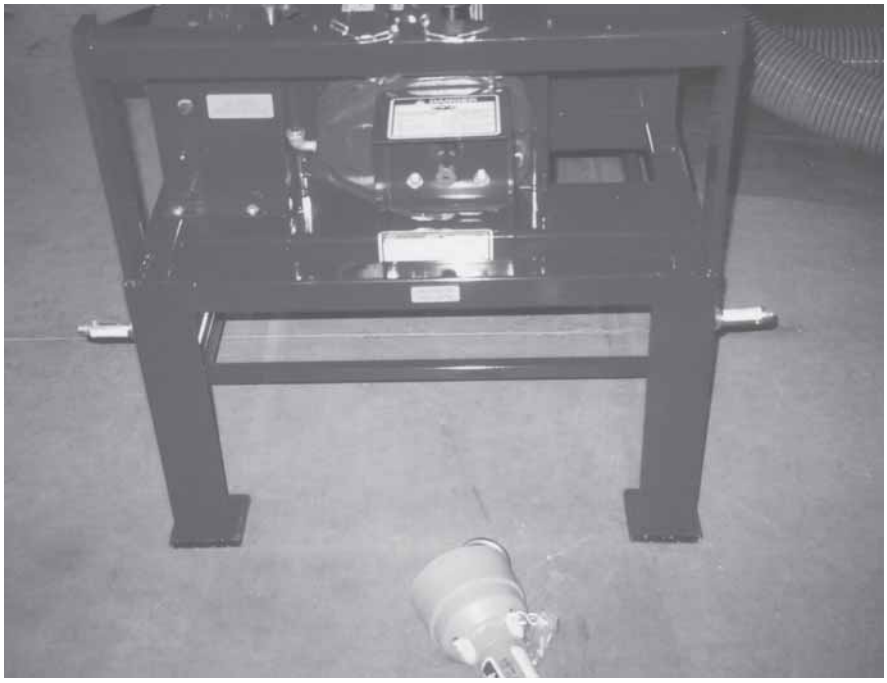
   a. Install the left pin.

Left

   b. Install the right pin.

Right

   c. Tighten fasteners to their specified torque.



Tightened

Fig. 7 MOUNTING PINS

10. **Connect PTO driveline to the input shaft:**

    a. Depress the locking pin and push the yoke over the shaft.

    b. Pull on the yoke to be sure the lock pin has seated in the groove.

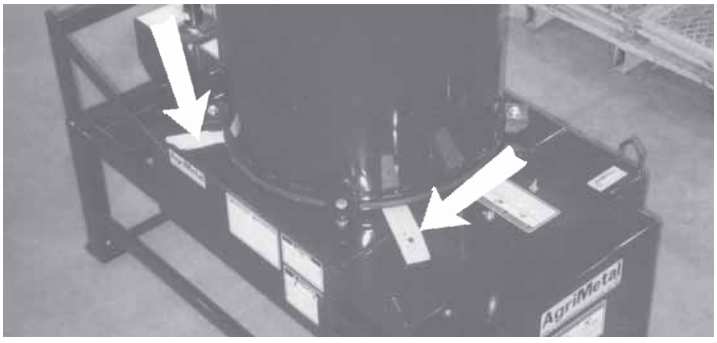
    c. Attach the anchor chain on the guard to an adjacent frame component to keep the guard from rotating.

Input

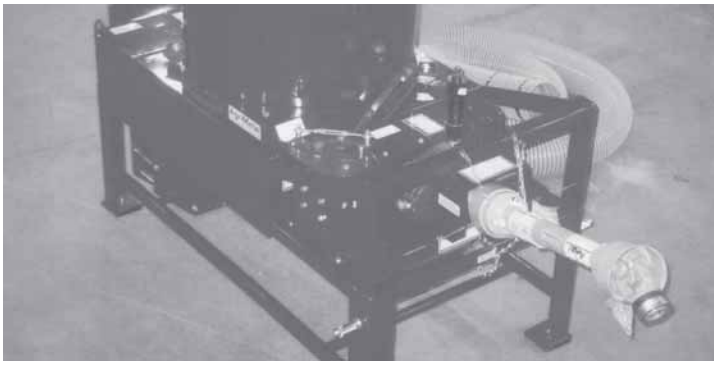
Attached

Fig. 8 PTO DRIVELINE

3. Remove the wooden shims for shipping from under tub.



Shipping



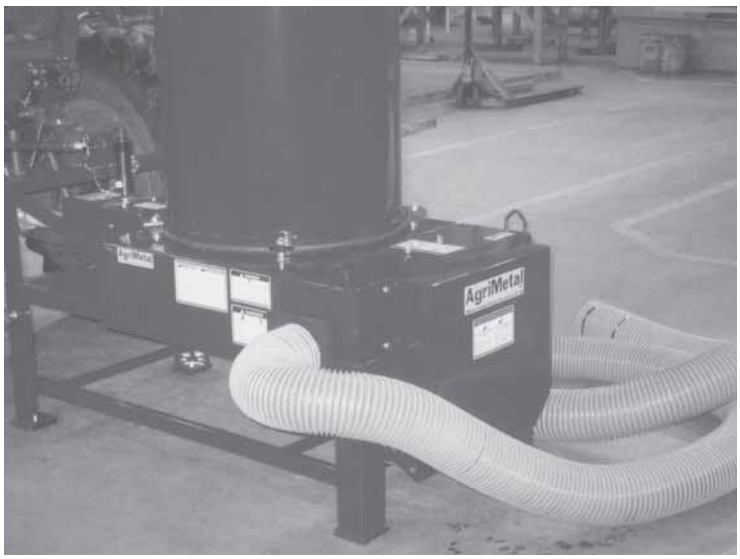
Removed

Fig. 9 SHIMS

11. **Optional Spout:**

a. Remove the hose bracket from the discharge opening.

b. Install the discharge pipe elbow.

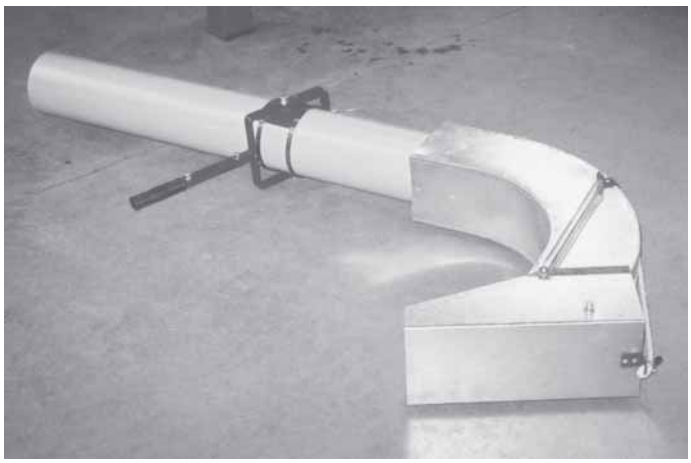


Hose

Pipe Elbow

Fig. 10 OUTLET

12. Slide the spout over the discharge pipe:



Spout

13. Tighten all fasteners to their specified torque.

Mounted

Fig. 11 DISCHARGE SPOUT

5 OPERATION

OPERATING SAFETY

- Please remember it is important that you read and heed the safety signs on the Bale Chopper. Clean or replace all safety signs if they cannot be clearly read and understood.
- If a safety shield or guard is removed for any reason, it must be replaced before the machine is again operated.
- Always use two people to handle heavy, unwieldy components during assembly, installation, removal or moving.
- Place all controls in neutral, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Do not allow anyone who is not familiar with the safety rules and operation instructions to use this machine.
- Never allow children to operate or be around this machine.
- Do not reach into blower or tub openings when the engine is running. Keep others away also.
- Keep hands, feet, hair, jewelry, and clothing away from all moving and/or rotating parts.
- Do not direct the air stream toward people, animals or buildings to prevent injury or damage.
- Do not place hands, feet or other body parts into air stream.
- Do not enter tub unless engine has been stopped and disabled.
- Always wear heavy canvas or leather gloves when handling blades.

5.1 TO THE NEW OPERATOR OR OWNER

AgriMetal Bale Choppers are designed to quickly and efficiently shred compacted straw material and to distribute and spread it evenly over a surface. The compacted material is loaded into a tub that has rotating knives on the bottom to shred the material. The shredded material is conveyed to a blower and distributed evenly over the desired area.

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 equipment. 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.

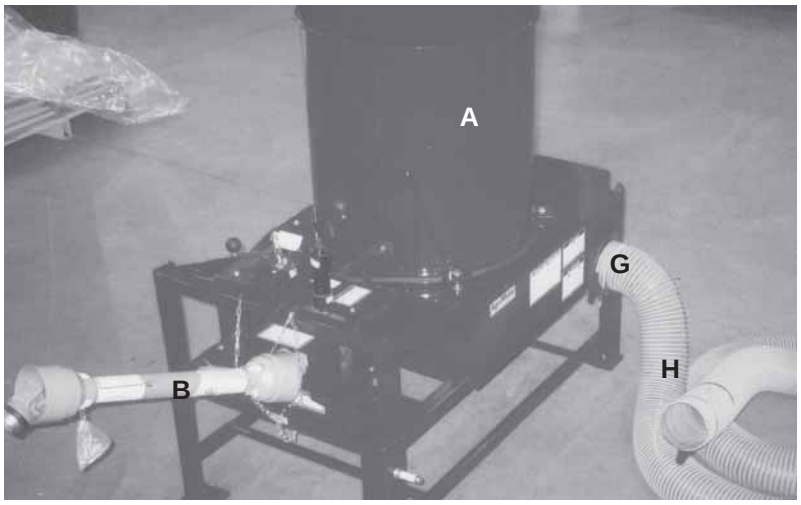
Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to operate the machine.

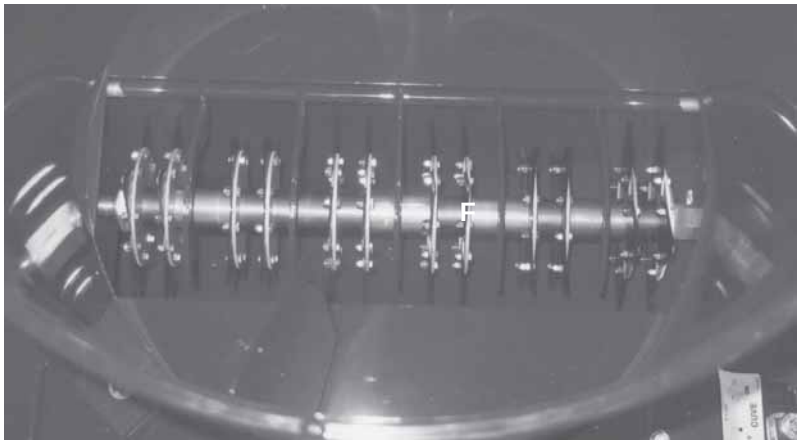
Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to operate the machine safely and how to set it to provide maximum field efficiency. By following the operating instructions in conjunction with a good maintenance program, your Bale Chopper will provide many years of trouble-free service.

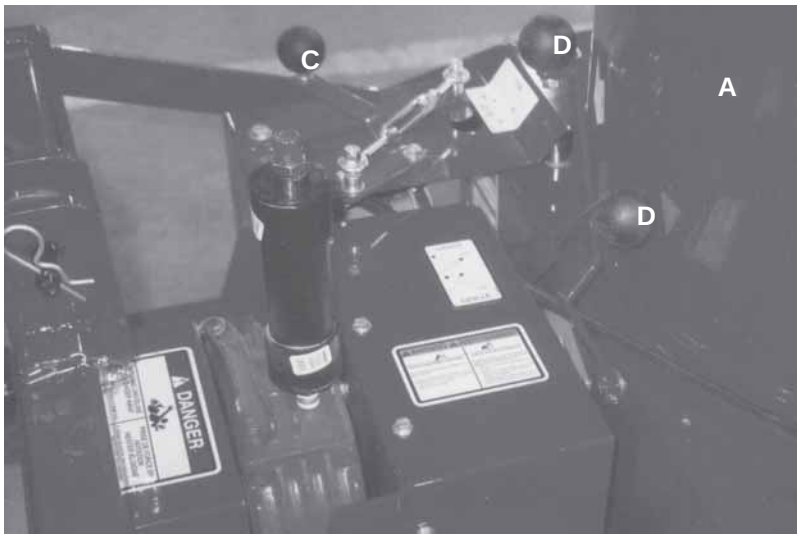
5.2 PRINCIPLE COMPONENTS

The AgriMetal Bale Chopper has a large rotating tub that is filled with compacted straw used for bedding or covering large surfaces. A adjustable grate in the bottom of the tub allows the material into a set of rotating knives for shredding. The shredded material moves into the blower at the back and is distributed evenly over the adjacent area through a large flexible hose.

The unit is attached to a 3 point hitch on a tractor. Power is provided by a PTO driveline from the tractor.







A Tub
B PTO Driveline
C Tub Rotation Control
D Grate Height Control
E Blower
F Chopping Knives
G Material Outlet
H Discharge Hose
J Discharge Spout

Fig. 12 PRINCIPLE COMPONENTS

5.3 BREAK-IN

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

A. **After operating for 1 hour:**

1. Retorque all fasteners and hardware.
2. Check that the driveline shield turns freely on the shaft and that it can telescope easily without bottoming out.
3. Check belt tension. Adjust as required.
4. Check condition of knives.

B. **After operating for 10 hours:**

1. Retorque all fasteners and hardware.
2. Check the tension of the drive belts. Adjust as required.
3. Check condition of knives.
4. Go to the normal servicing and maintenance schedule as defined in the Maintenance Section.

5.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the AgriMetal PTO Bale Chopper requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both personal safety and for maintaining the machine in good mechanical condition that this checklist be followed.

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

1. Lubricate the machine per the schedule outline in the Maintenance Section.
2. Use only a tractor with appropriate power and specifications to operate the unit.
3. Ensure that the machine is properly attached to the tractor 3 point hitch and that mechanical retainers such as Klik pins are installed.
4. Ensure that the PTO driveline is securely attached on both ends and can telescope easily.
5. Check that the PTO driveline shield rotates freely and is securely anchored to an adjacent component.
6. Check the tension and alignment of all belts and pulleys. Tension and align as required.
7. Check the grate and rotor. Remove any twine, wire or other material that has become entangled.
8. Check the condition of the knives on the rotor. Repair or replace any bent or broken sections.
9. Check that all bearings turn freely. Replace any that are rough or seized.
10. Make sure that all guards and shields are in place, secured and functioning as designed.
11. Clean all straw, chaff and debris from machine and around the engine.

5.5 EQUIPMENT MATCHING

The AgriMetal PTO Bale Chopper is designed to be used on a small agricultural tractor with a Category I - 3 point hitch and 1 3/8 inch 6 spline PTO shaft . It is recommended that a tractor of between 24 and 45 horsepower be used.

The operator must insure that the following recommendations are followed:

1. Use an accurate hand held tachometer to verify the PTO speed of the tractor. Do not run the machine faster than 540 RPM. Over speeding can affect the mechanical integrity of the rotor or blower and lead to failures.

2. Never run the tractor at maximum RPM. Most tractors can run 15% more faster at wide open throttle than when set at rated PTO speed. Always set the throttle to give the rated PTO speed.

3. Be very careful when using some of the imported tractors on the machine. Some of these tractors have variable speed PTO's with a 6 spline shaft that can be set at speeds faster than 540 RPM. We do not recommend using these power units on the machine to eliminate the possibility of over speeding the unit.

5.6 DRIVELINE DIMENSION

A PTO driveline is supplied with the machine. To accommodate the variety of 3 point hitch geometry available today, the driveline can be too long for some machines or too short for others. It is very important that the driveline be free to telescope but not bottom out when going through its working range. If the driveline 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 driveline, follow this procedure:**

    a. Clear the area of bystanders, especially small children.

    b. Attach the Blower to the tractor (see Section 5.8) but do not attach the driveline.

    c. Raise the machine until the input shaft is level with the tractor PTO shaft.

    d. Measure the dimension between the locking groove on the tractor PTO shaft and the attaching bolt on the Blower.

    e. Measure the same dimensions on the compressed driveline.

    f. If the compressed driveline dimension exceeds the machine dimension, the driveline will have to be cut.

2. **When cutting the driveline, follow this procedure:**

    a. Subtract the Machine Dimension (A) from the Uncut Driveline Dimension (B) or (B-A). This dimension determines how much too long the driveline is.

    b. Add another inch (25 mm) to the dimension to be sure it doesn't bottom out to determine C 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 two ends of the shaft.

    f. Make sure that the shaft can telescope freely. If it does not, separate the two parts and inspect for burrs or cuttings on the shaft ends. Be sure it telescopes freely before installing.

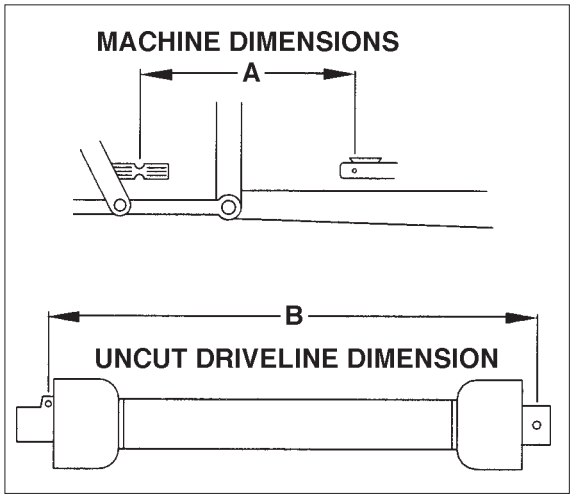


Fig. 14 DRIVELINE DIMENSIONS

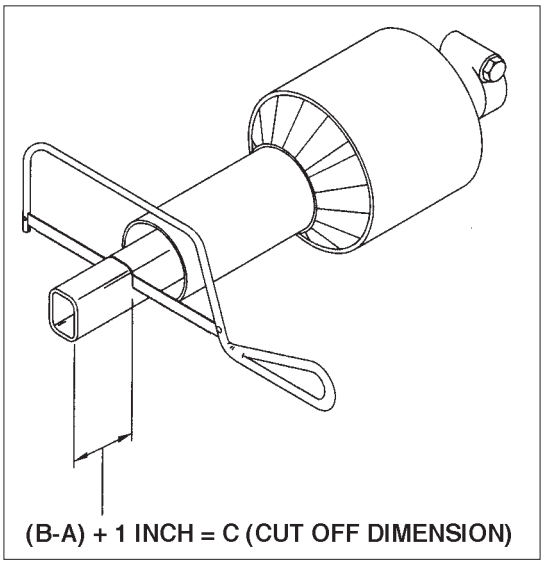


Fig. 15 CUT OFF DIMENSION

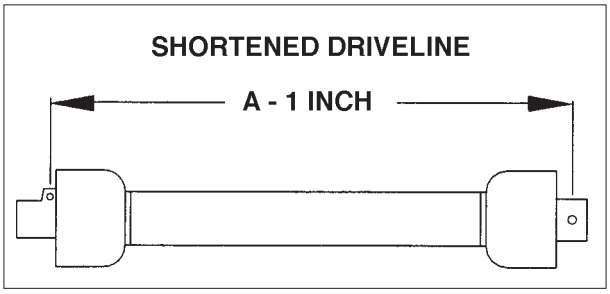


Fig. 16 SHORTENING

    g. Make sure the plastic covering shield is free to rotate on the shaft before installing on the machine.

    h. Lubricate male end of shaft.

5.7 MOUNTING AND UNHOOKING TRACTOR

When attaching Chopper to a tractor, follow this procedure:

1. Clear the area of bystanders, especially small children.

2. Make sure there is enough room and clearance from obstacles to safely back up to the Chopper.

3. Back slowly up and align the lower link arms to the pins on the machine.

4. Mounting without a Quick Hitch.

   a. Align the left lower link arm with the left Chopper pin.

IMPORTANT

It may be necessary to add weight to the lower lift arms to bring them to the required height.

   b. Insert the left pin through the ball and install the retainer.

   c. Align the right arm to the pin by turning the jackscrew on the arm.

   d. Insert the right pin through the ball and install the retainer. Return the jackscrew to its starting position.

   e. Remove the top pin and install the top link. Use the turnbuckle to align the top link. Insert the pins and install the retainers. Return the turnbuckle to its original length and lock.

Machine

Top Link

Fig. 16 MOUNTING

5. Mounting without a Quick Hitch.

   a. Align the claws on the Quick Hitch slightly below the mounting pins on the Chopper.

IMPORTANT

It may be necessary to add weight to the lower lift arms to bring them to the required height.

   b. Back up until the pins are above the claws.

   c. Use the turnbuckle on the top link to adjust the position of the top claw.

   d. Raise the 3 point hitch until the pins seat in the claws.

   e. Be sure the retainers are released to hold the pins in the claws.

6. Set the 3 point hitch in the non-sway position (see tractor manual for details).

7. **Install the PTO driveline:**

NOTE

Be sure the telescoping portion of the shaft is greased and free of dirt.

a. Slide the collar back on the yoke, align the splines and slide the yoke on the tractor.

b. Release the collar and make sure the locking pin clicks into position.

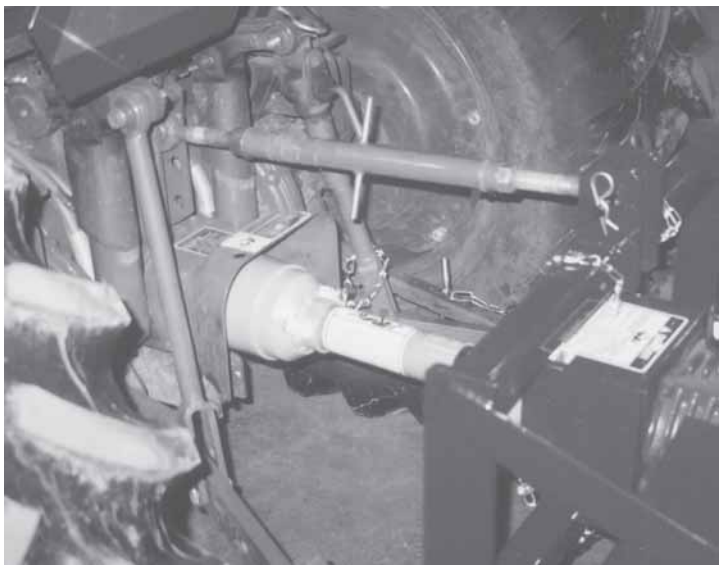


Fig. 17 PTO SHAFT

NOTE

The driveline should already have been cut to the required length.

c. Attach the driveline shield anchor chain to an adjacent component to hold it in position.

8. Slowly raise the machine through its working range to make sure the telescoping portion of the PTO shaft doesn't bottom out.

9. Level the machine front and rear, and side to side using the jackscrew on the right arm and the turnbuckle on the top link.

   The Chopper should always be level with the ground in its working position.

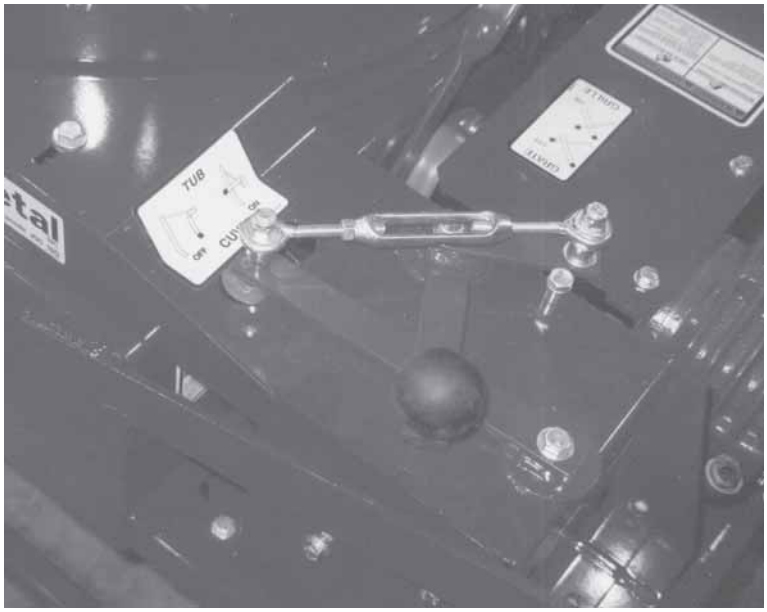
10. To unhook from the tractor, reverse the above procedure. Always park the machine in a dry, level area. If vandalism is a problem, remove the PTO driveline and store in a secure place.

Fig. 18 LEVELING ADJUSTMENTS

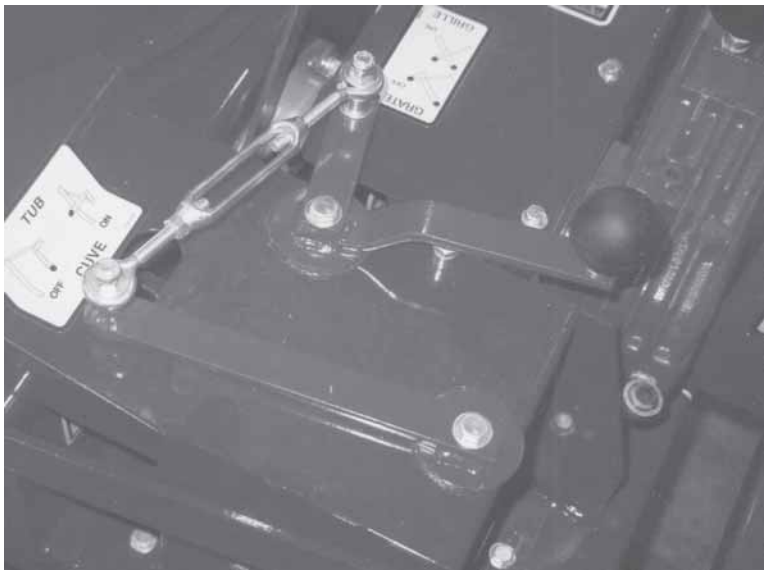
5.8 CONTROLS

All controls are conveniently positioned next to where the operator would stand when starting the machine to provide for easy operation. Review this section to familiarize yourself with the location and function of each control before starting.

1. **Tub Rotation Control:** Located on the left corner of the machine. Move the control lever to the right in a clockwise motion to engage the tub rotation drive. Move the control left in a counter-clockwise direction to disengage the drive.



Engaged



Disengaged

Fig. 19 TUB ROTATION CONTROL

2. **Grate Height Control:**
Two intermeshing levers, located in the center next to the rotating tub, control the height of the grate over the knives. Position the levers in their top slot to lift the grate and stop the shredding process. Position the levers in their lowest slot to lower the grate to allow the material in the tub into knives for shredding.

Grate Up

Grate Down

Fig. 20 GRATE HEIGHT CONTROL

3. **PTO Control:**
If you are not familiar with the location of the PTO control on your tractor, review your tractor Operator's Manual. Always engage the PTO control slowly when the engine is running at low idle RPM. Disengage the PTO control slowly at low RPM to allow the machine to slow and stop before engaging the PTO brake. Remember the PTO drives the knife. When the PTO is engaged the knives also start to turn.

4. **Spout Position (Optional):**

This optional spout is controlled by a lever on the vertical tube.

a. Raise and lower the lever to set the position of the deflector.

b. Use the lever to turn the pipe and set the angle of deflector.

Spout

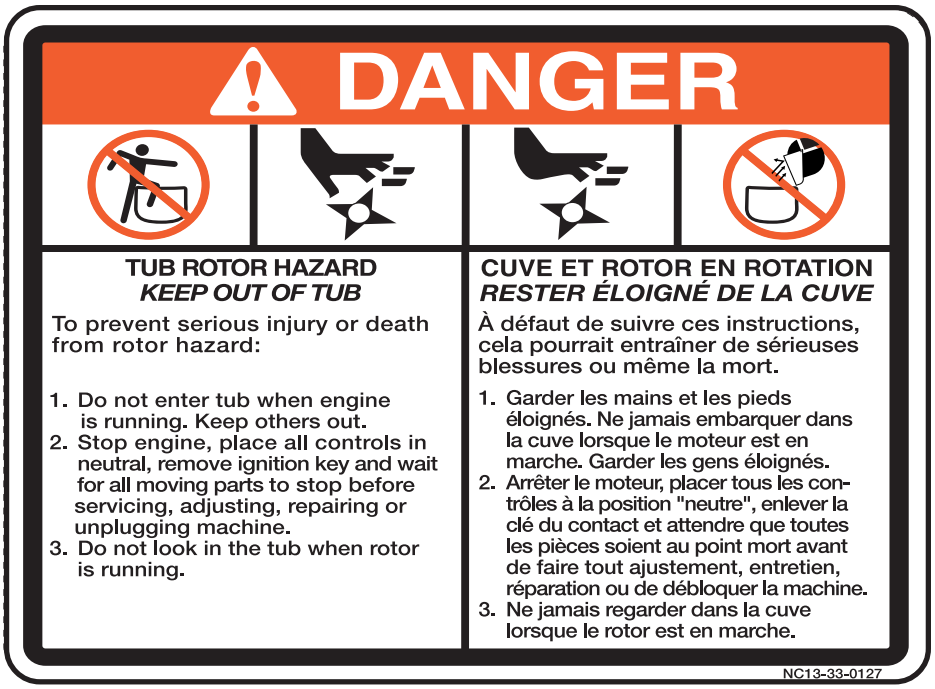
Lever

Turned

Fig. 21 SPOUT POSITION

5.9 OPERATING

Although the PTO Bale Chopper is easy to use, each operator should read this section to review the recommended operating procedure. When using the Chopper, follow this procedure:



1. Clear the area of bystanders, especially small children before starting.

2. Review and follow the Pre-Operation Checklist (See Section 5.4).

3. Do not operate the machine in a closed building unless there is adequate ventilation.

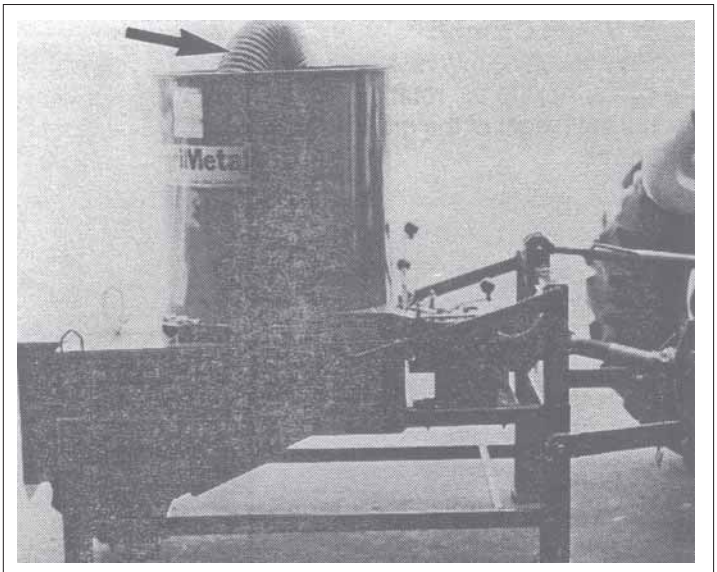
4. Be sure that all guards and access doors are in place and secured before starting.

5. Do not climb into the Chopper or place hands in any openings when the engine is running.

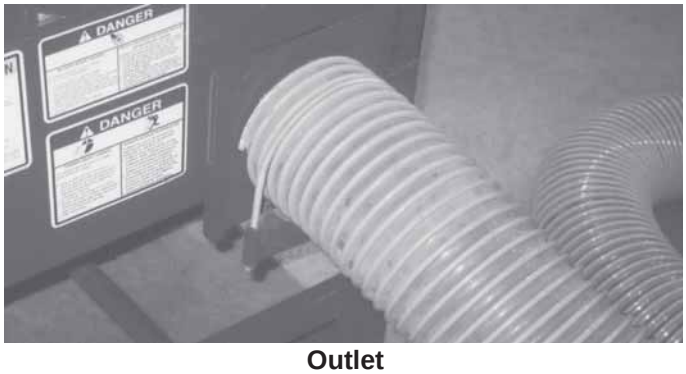
6. Do not look inside tub when motor is running.

7. Be sure that the tub rotation control id disengaged and the tub grate is in its highest position.

8. Remove the hose from around the tub and install it in the blower outlet mounting.



Storage



Outlet

Fig. 22 HOSE

8. While the bale is laying on the ground, cut the strings or wire.

9. Remove the strings or wire and dispose of them away from the machine and working area.

10. Pick up sections of the bale and load into the tub.

11. If required, load an extra bale or two on the rear rack so they will be available later, if required.

12. **Start the tractor engine:**

    a. Be sure all controls are in neutral before starting.

    b. With the engine at low idle RPM, slowly engage the PTO control.

    c. Slowly increase the engine speed until the PTO is at rated speed.

13. Move the machine to the working area.

14. Engage the parking brake.

15. Before material starts coming out of the hose, use the air flow to blow all the straw, chaff and debris from the machine. Use this method to keep the machine clean while working.

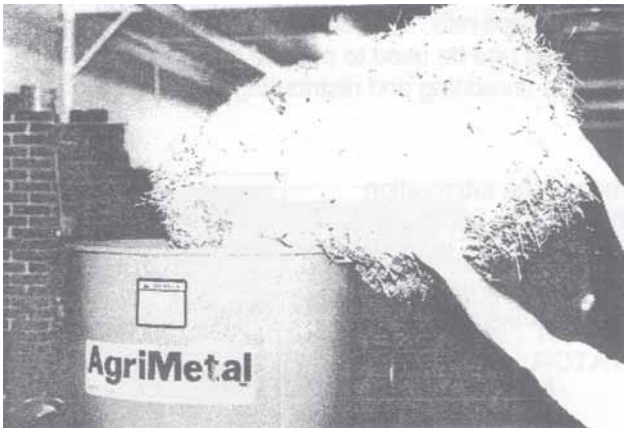


Fig. 23 TUB LOADING

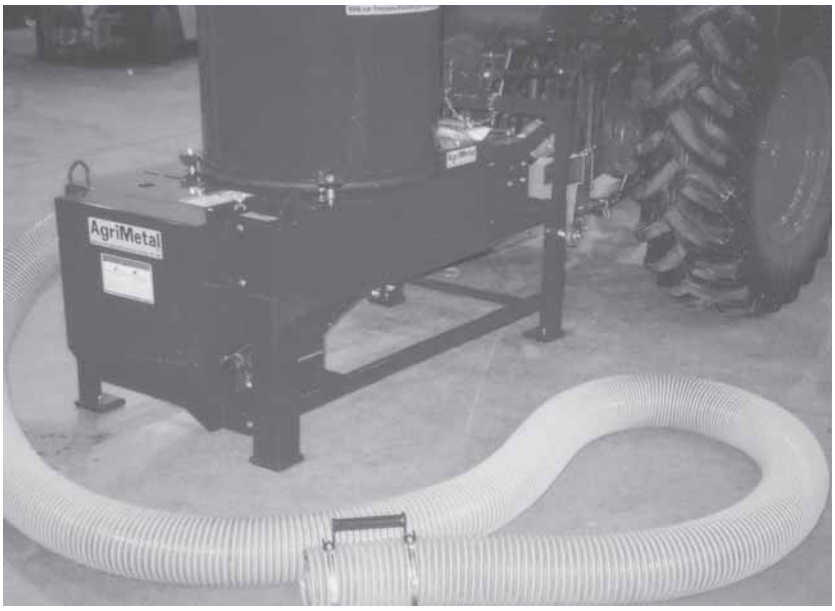


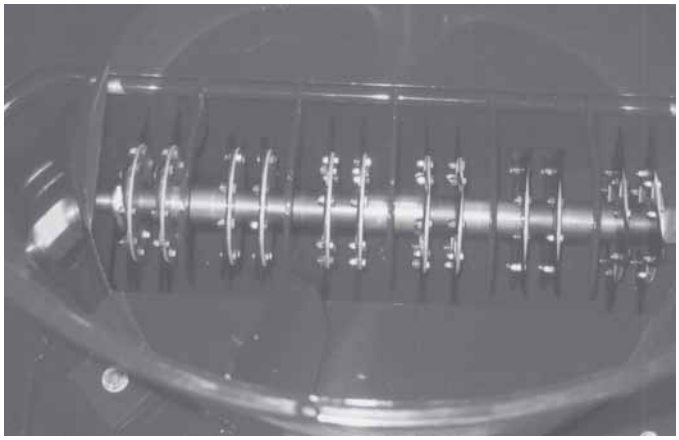
Fig. 24 CLEANING

16. **Start the chopping:**

    a. Set the grate control levers to give the desired material feed rate. It is recommended that a slow feed rate be used to provide good control over the shredding and distributing of material.

    b. Engage the tub rotation control. The vanes inside the tub will turn the bale and feed the material into the rotating knives.

Controls



Vanes

Fig. 25 CHOPPING

17. Use the handle on the end of the flexible hose to direct the material to the location desired.

18. By varying the material feed rate and how fast the operator moves the hose, a thick or thin layer of material can be distributed. With a little practice, the operator will quickly learn what rates give best coverage.

19. At the highest feed rate, the machine can shred and distribute a bale in about a minute. Be sure you are aware of how thick the layer of material is that you are distributing. It can lay down a thick layer very quickly.

20. When the material in the tub is gone, raise the grate to its highest position.

Fig. 26 HANDLE

21. **Unplugging:**
The chopper and blower components are designed with sufficient capacity to almost never plug. However in the unusual situation where something plugs, follow this procedure:

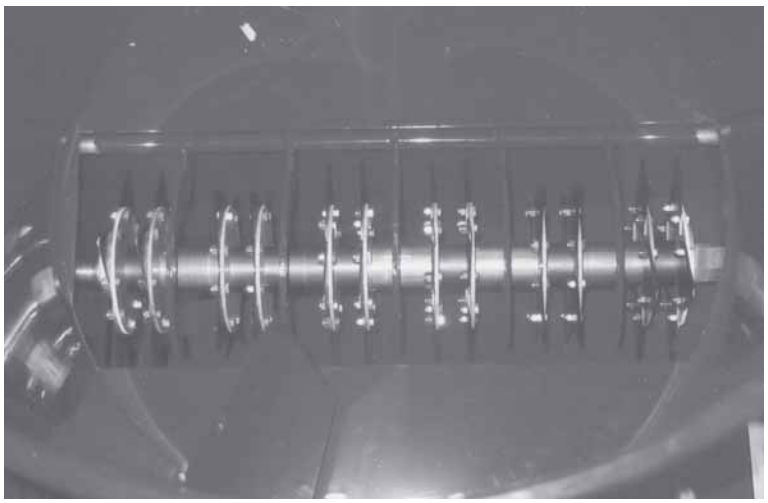
a. Disengage tub rotation.

b. Raise grate to its highest position.

c. Stop and disable engine.

d. Pull the compressed material out of the tub and clean the rotor.

e. If rotor duct is plugged, tip or lift machine to expose access door. Close and secure access door when duct is unplugged.



Rotor

Access Door

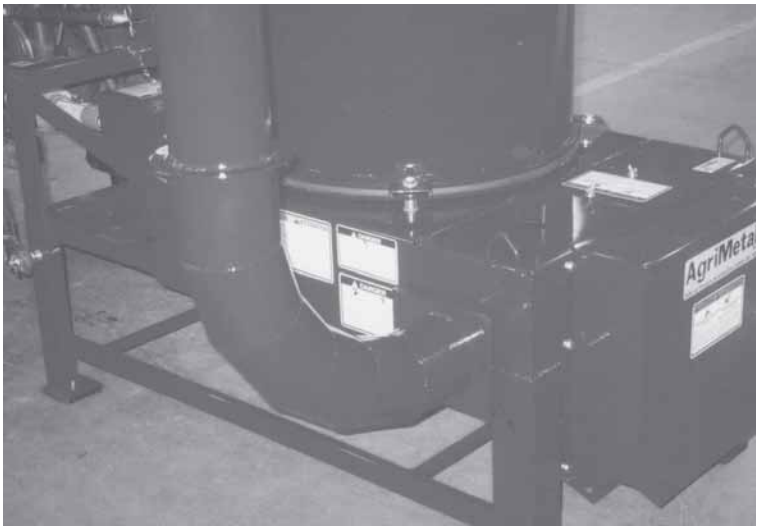
Fig. 27 UNPLUGGING

22. **Optional Spout:**
An optional spout is available to mount on the discharge outlet.

a. Remove the hose and install the elbow.

b. Mount the spout on the spout.

c. Use the handle to turn the deflector to its required direction and angle.



Elbow

Mounted

Fig. 28 SPOUT

23. **Operating Hints:**

a. Do not feed the material too fast into the knives. A slower feed rate allows the operator to distribute the flow more evenly.

b. Move the hose outlet in a large area to evenly cover the work area. Repeat the pass several times to obtain the desired thickness.

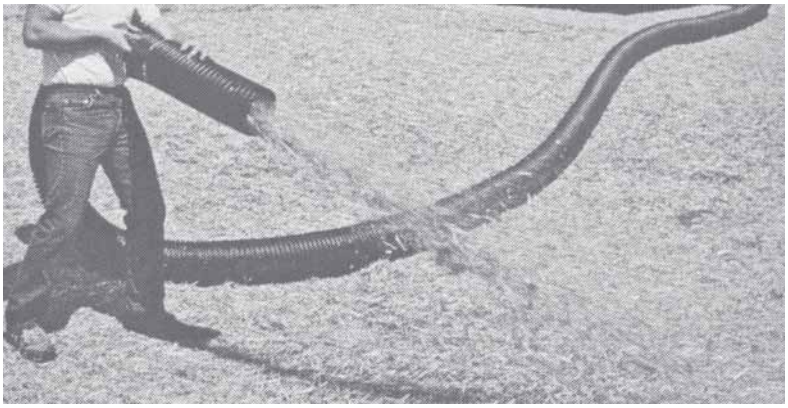


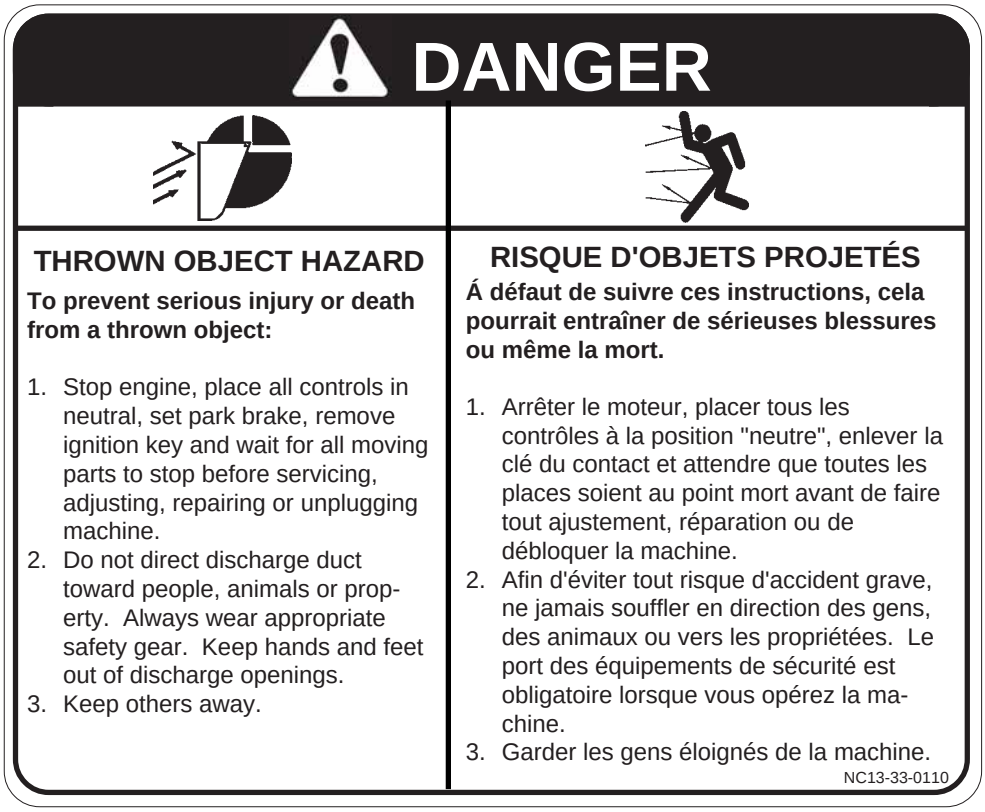
Fig. 29 WORKING

c. It is recommended that 2 men be used to distribute material. One adds bales to the machine and the other directs the hose.

d. Keep the machine and engine area clean at all times by using the air flow from the hose.

e. Keep a fire extinguisher close the machine in case of fire.

f. Do not direct the hose outlet towards people, pets or animals. Objects can be thrown out of the machine at a high enough rate of speed to injure someone.



5.10 TRANSPORTING

TRANSPORTING SAFETY

- Make sure you are in compliance with all local regulations regarding transporting equipment on public roads and highways.
- Ensure that the SMV (Slow Moving Emblem) and all reflectors and lights required by the local highway and transport authorities are in place and are clean and visible by overtaking and oncoming traffic.
- Do not allow anyone to ride on the Bale Chopper or tractor during transport.
- Do not exceed 32 km/h (20 mph). Reduce speed on rough roads and surfaces.

AgriMetal Choppers are easily and conveniently moved from place-to-place. To prepare for transport, follow this procedure:

1. Clear the area of bystanders, especially small children before starting.
2. Raise the 3 point hitch.
3. Do not run the Chopper when raised to its maximum height. At the highest position, the driveline angles are severe and can cause machine vibration.
4. Remove hose and flange from blower outlet and place around the tub.
5. Be sure that all lights and reflectors required by the local highway and transport authorities are in place and are clean and visible by overtaking and oncoming traffic.
6. It is not recommended that the machine be transported faster than 20 mph (32 km/h). Slow down for corners or rough roads and terrain. Always retain control of the vehicle.

5.11 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. Support the frame with planks if required.

5.11.1 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 Chopper. Replace or repair any worn or damaged components to prevent any unnecessary down time at the beginning of the next season.

Follow this procedure before storing:

1. Remove all material from the machine.
2. Open the engine cover.
3. Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud, straw, chaff or debris.
4. Inspect all rotating parts for entangled material. Remove all entangled materials such as twine, wire, etc.
5. Check the condition of the belts and pulleys. Replace or adjust as required.
6. Check the condition of the knives. Repair or replace any bent or broken sections.
7. Touch up all paint nicks and scratches to prevent rusting.
8. Remove ignition key and store in a secure place.
10. It is best to store the machine inside. If that is not possible, cover with a waterproof tarpaulin and tie down securely.
11. Store in an area away from human activity.
12. Do not allow children to play around the stored unit.

5.11.2 REMOVING FROM STORAGE

When removing the machine from storage, follow this procedure:

1. Remove the tarpaulin if covered.
2. Install and connect the battery.
4. Review and follow the Pre-Operation Checklist (Section 5.4).

6 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 an engine in a closed building. The exhaust fumes may cause asphyxiation.
- Before working on this machine, shut off the engine, set the brakes, and remove the ignition keys.
- 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.
- 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 cotter pins are properly installed 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.

6.1 SERVICE

6.1.1 FUELS, FLUIDS AND LUBRICANTS

1. **Grease:**
   Use a SAE multi-purpose high temperature grease with extreme pressure (EP) performance. Also acceptable is a SAE multi-purpose lithium base grease.

2. **Gear Box Oil:**
   Use an automotive engine oil in both gear boxes.

   Input Gear Box
   Capacity: 4 fl. oz.

   Tub Rotation Gear Box
   Capacity: 4 fl. oz.

3. **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.

6.1.2 GREASING

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

1. Use only a hand-held grease gun for all greasing. Air powered greasing systems can damage the seals on bearings and lead to early bearing failure.

IMPORTANT

Over-greasing may damage bearing seals. If seals are damaged, replace bearing immediately.

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 a fitting will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

6.1.3 SERVICING INTERVALS

8 Hours or Daily

1. Lubricate PTO driveline at the (4) lcoations shown.

2. Clean the machine.

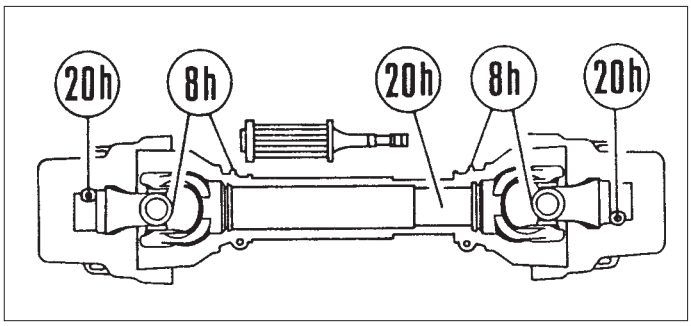


Fig. 30 DRIVELINE LUBRICATION

20 Hours

1. Lubricate PTO driveline at the specified locations (3).

40 Hours

1. Clean the machine.

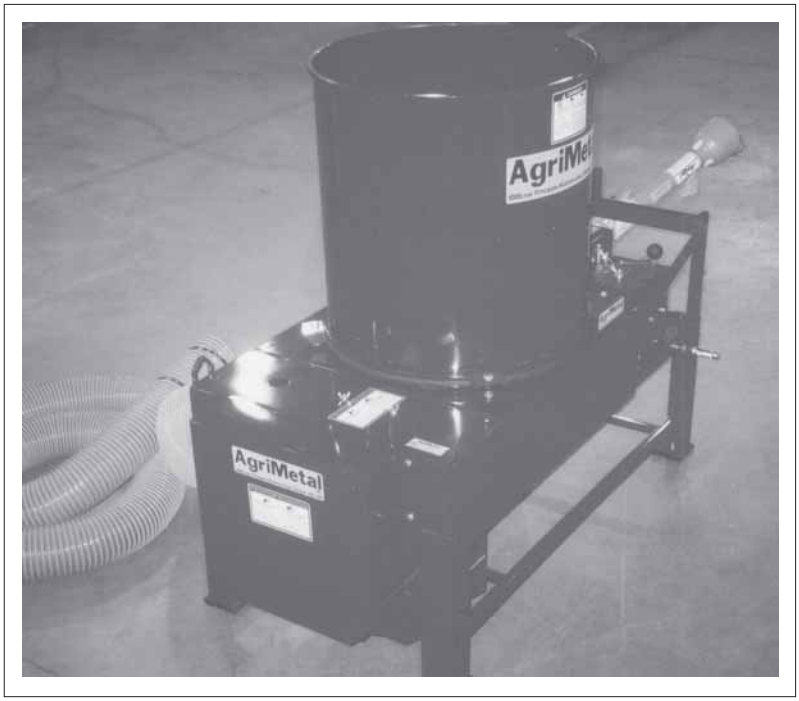


Fig. 31 CLEAN MACHINE

1 Month

1. Check the oil level in the gear boxes:
    a. Input
    b. Tub rotation
2. Clean the machine.

a. Input **b. Tub Rotation**

Fig. 32 OIL LEVEL

6.1.4 SERVICE RECORD

See Lubrication and Maintenance sections for details of service. Copy this page to continue record.

ACTION CODE: š CHECK CL CLEAN
G GREASE CH CHANGE

HOURS / SERVICED BY / MAINTENANCE																							
8 Hours or Daily																							
G PTO Driveline (4)																							
CL Machine																							
20 Hours																							
G PTO Driveline (3)																							
40 Hours																							
CL Machine																							
1 Month																							
š Oil Level in Gear Boxes																							
CL Machine																							

6.2 MAINTENANCE

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

6.2.1 CLEANING MACHINE

Dirt, straw and trash can build up on and around the machine. Use the air hose to keep the machine clean. Clean more often if operating in very dirty conditions.

A clean machine runs better and eliminates the chance of fire.

Fig. 33 MACHINE

6.2.2 DRIVE BELTS

The machine is designed with 3 sets of drive belts to transmit power to the various systems. Each must be maintained at the correct tension and with the pulleys aligned to obtain the expected life.

6.2.2.1 TUB ROTATION GEAR BOX BELT

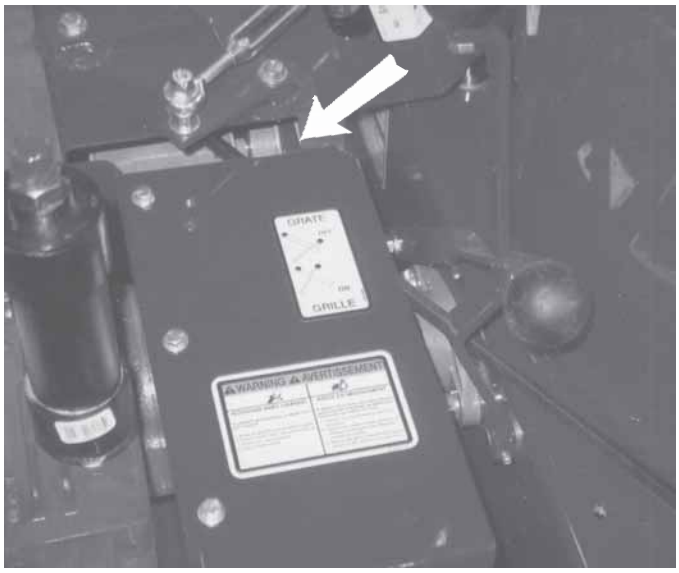
A belt transmits power between the rotor shaft to the tub rotation gear box drive.

WARNING

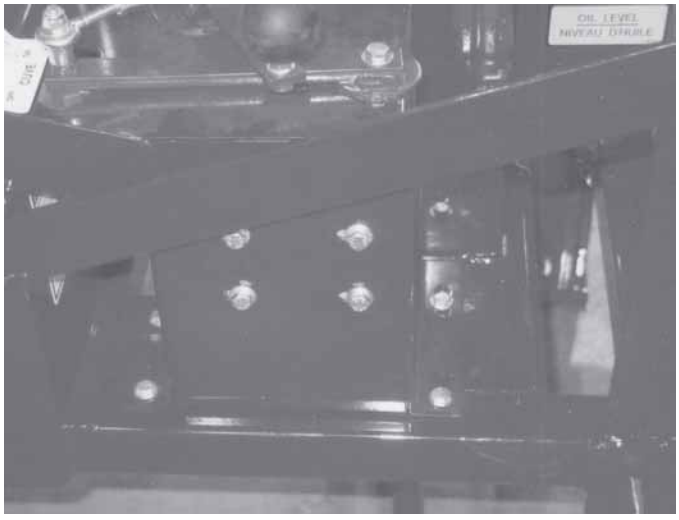
Machine is shown with guard removed for illustrative purposes only. Never operate machine with guard removed.

To adjust the belt tension as the belt wears or stretches, follow this procedure (or replace it):

1. Clear the area of bystanders, especially small children.
2. Remove PTO driveline from tractor.
3. Loosen the tub rotation gear box mounting frame bolts.
4. Slide or move the gear box mounting frame over until the belt is at the required tension.
5. Check the belt tension by applying a nominal force at the center of the belt span. The belt can deflect from 1/2 to 1 inch (12 to 25 mm) in either direction.
6. Tighten the gear box mounting frame bolts to their specified torque.
7. To replace belt, slide gear box frame to remove tension from belt.
8. Replace belt.
9. Move gear box frame to properly tension belt and tighten the mounting bolts.



Belt



Mounting Bolts

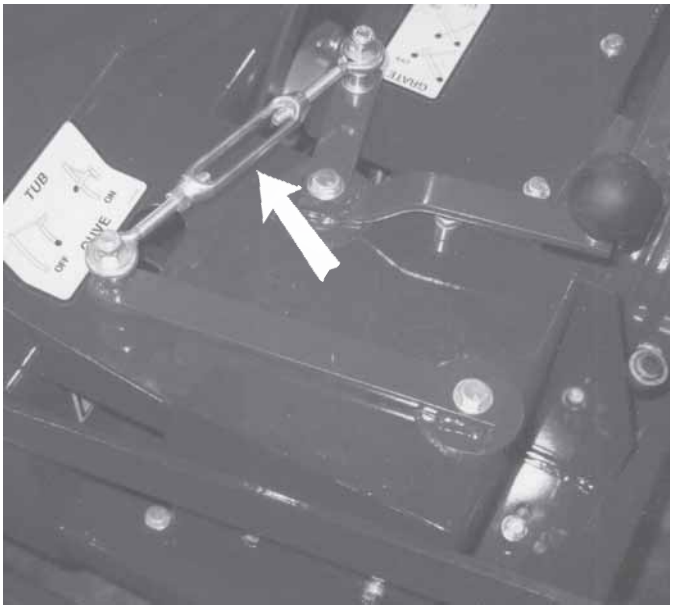
Fig. 34 TUB ROTATION GEAR BOX BELT

6.2.2.2 TUB ROTATION DRIVE

6.2.2.2.1 BELT TIGHTENING

When the tub rotation drive is engaged, an idler pulley is moved into position to tighten the belt and transmit power. As the belt wears and stretches, it will be necessary to move the belt adjuster pulley to maintain proper tension. To set belt tension, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Remove PTO driveline.
3. Engage the tub rotation drive control.
4. Check the belt tension by applying a nominal force at the center of the belt span. The belt can deflect from 1/2 to 1 inch (12 to 25 mm) in either direction.
5. If the belt deflection is greater than 1 inch (25 mm), the idler should be adjusted to provide more movement.
6. Turn the turnbuckle on the control lever to provide more movement on the idler pulley.
7. Recheck the belt tension. If the turnbuckle does not provide sufficient adjustment to tighten the belt, the belt will have to be replaced.



Disnegaged

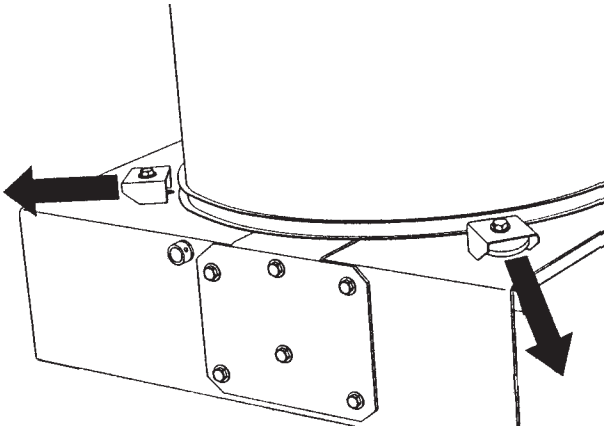
Engaged

Fig. 35 TUB ROTATION TURNBUCKLE

6.2.2.2.2 BELT REPLACEMENT

To replace the belt, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Stop engine, shut off fuel supply lever, remove ignition key, disengage all drives, remove spark plug wire and wait for all moving parts to stop.
3. Loosen the bolts holding outer tub guide wheels.
4. Slide the wheels back in their slots.
5. Slide the belt down the lower edge of the tub and raise the tub to slide the belt under it.
6. Slip the belt out from around the gear box and tightener pulleys.
7. Move the turnbuckle to provide minimal movement on the idler pulley.
8. Reverse the above procedure to install the new belt.
9. Tighten the tub guide wheels.
10. Adjust the turnbuckle to provide the required belt tension.
11. Check the belt tension after running for 10 hours.



Schematic

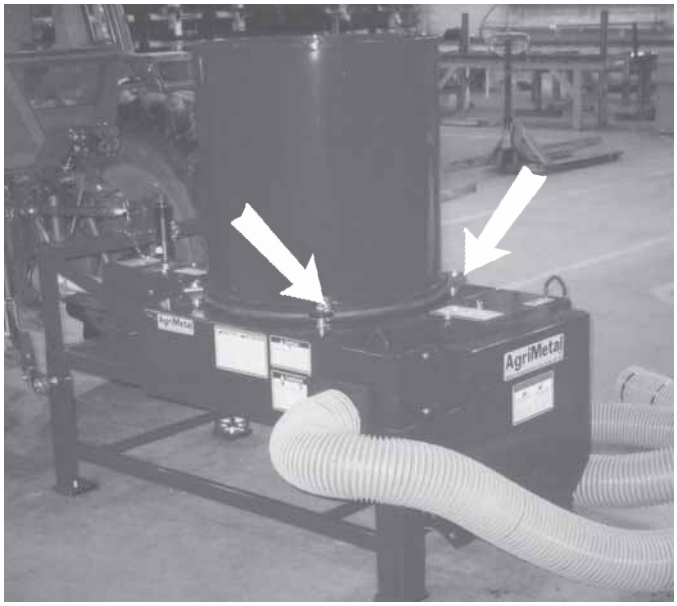


Fig. 36 OUTER TUB WHEELS (TYPICAL)

6.2.2.3 BLOWER DRIVE BELT

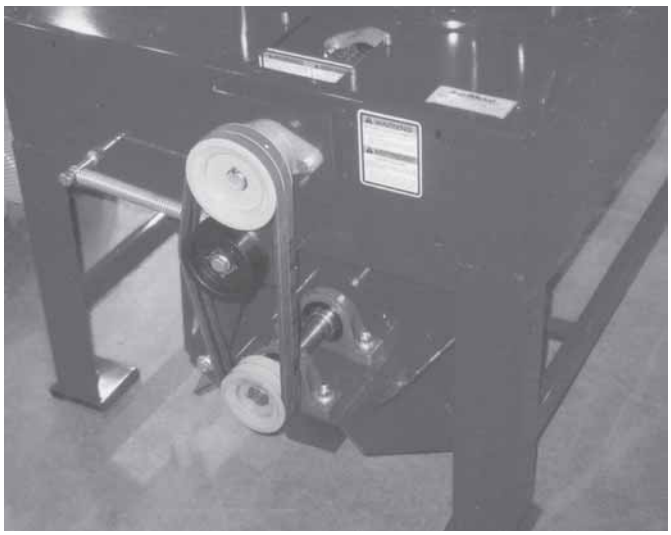
The blower is driven by a set of belts from the knife rotor shaft. The belts are tightened with a spring loaded idler. Maintain the coil spacing at 1/4 inch (6 mm) at all times.

Release the idler when replacing the belts. Always install and secure the covers before resuming work.

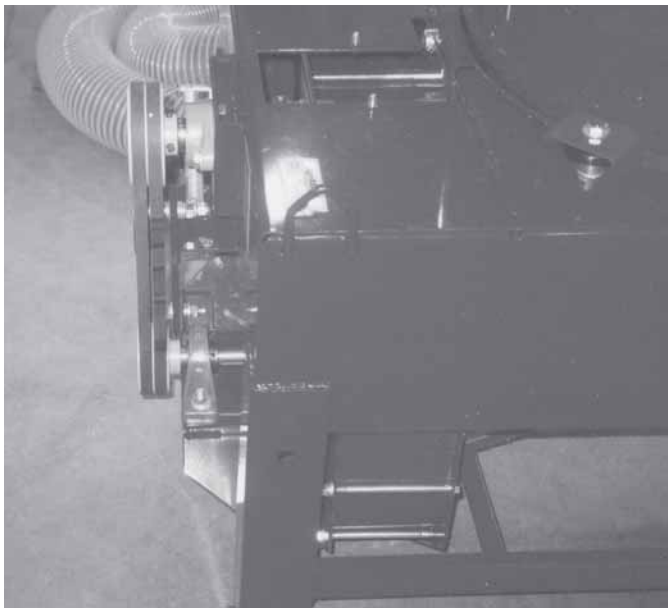
WARNING

Machine is shown with guard removed for illustrative purposes only. Never operate machine with guard removed.

Always check the alignment when replacing the belt.



Belt



Alignment (Typical)

Fig. 37 BLOWER BELT

6.2.3 UNPLUGGING

If material stops flowing out of the machine and the engine begins to bog down, the machine has plugged. To unplug, follow this procedure:

1. Clear the area of bystanders, especially small children.

2. Stop engine, shut off fuel supply lever, remove ignition key, disengage all drives, remove spark plug wire and wait for all moving parts to stop.

3. Remove hose/flange from blower discharge outlet.

WARNING

Never put hands into knife or blower openings unless the PTO is disconnected.

4. Remove any material that has built up in discharge outlet.

5. Open access door to blower inlet throat.

6. Remove any material that has built up in the throat.

WARNING

If you tilt the machine to get to the access door, support frame on stands before going under frame.

7. Replace and secure access door.

8. Install hose/flange to blower discharge outlet.

9. Remove all the material from the tub and rotor.

10. Install PTO shaft, start engine and resume work.

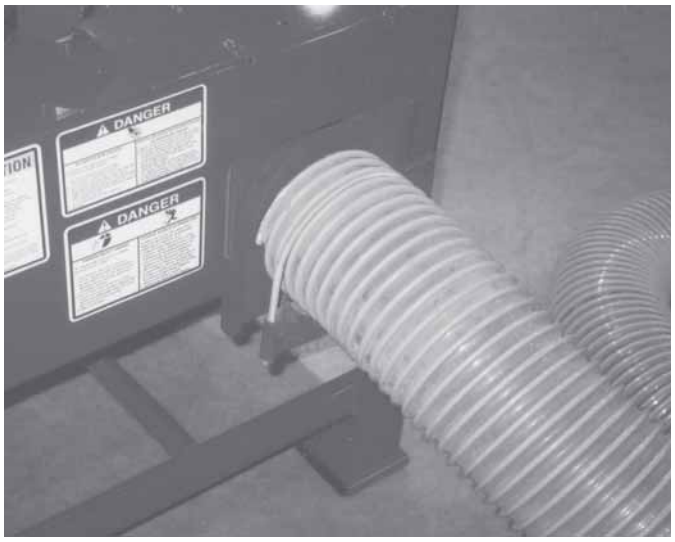


Fig. 38 DISCHARGE OUTLET

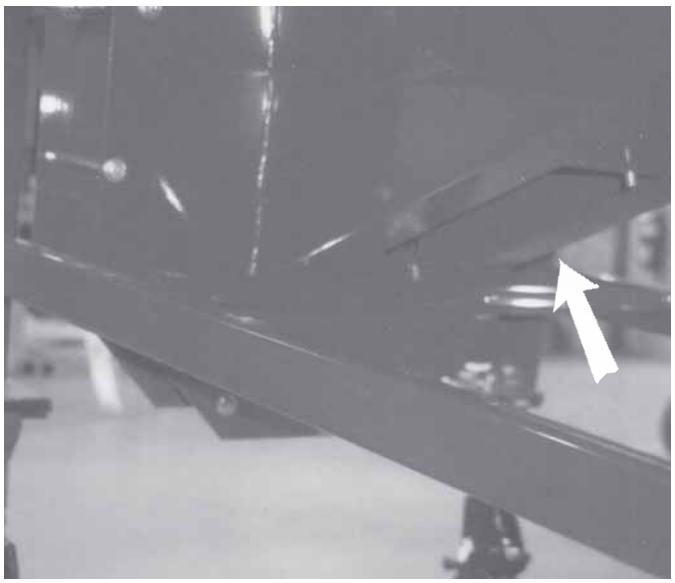


Fig. 39 ACCESS DOOR

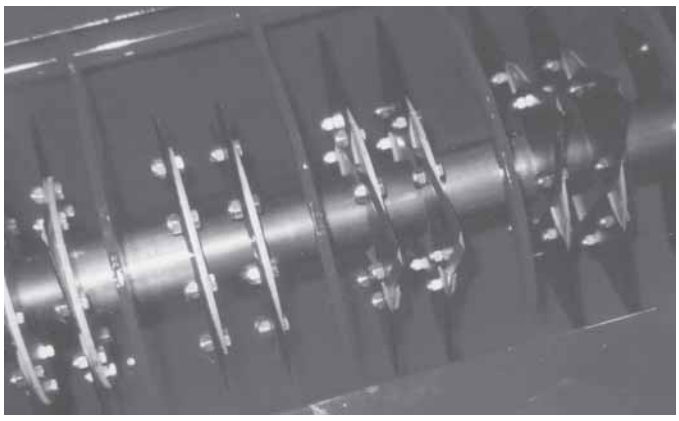


Fig. 40 ROTOR

6.2.4 SHEAR BOLT

A shear pin is provided in the drive shaft at the machine input gear box to protect the drive system during an overload.

To change the shear pin, follow this procedure:

1. Stop engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before dismounting.

2. Remove the driveline from the tractor.

3. Turn PTO shaft by hand to locate the shear pin hole.

4. Carefully remove remaining shear bolt using a hammer and punch if necessary. Be careful not to enlarge the holes.

5. Install the new shear bolt and tighten. Do not overtighten.

IMPORTANT

Use only genuine AgriMetal repair parts to maintain machine.

6. Do not operate at more than recommended horsepower. Exceeding this power level, exceeds the shearing strength of the bolt and will result in frequent bolt failures.

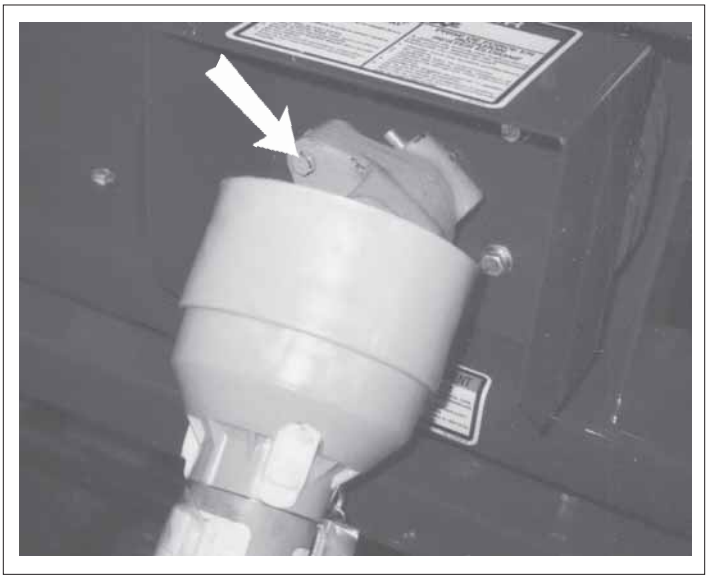


Fig. 41 SHEAR BOLT

6.3 REPAIRS

Knives are bolted to discs on the rotor. They must be kept straight and in good condition for best results.

Replace knives by removing bolt and installing a new knife section. Always use a lock nut (prevailing torque) on the mounting bolt.

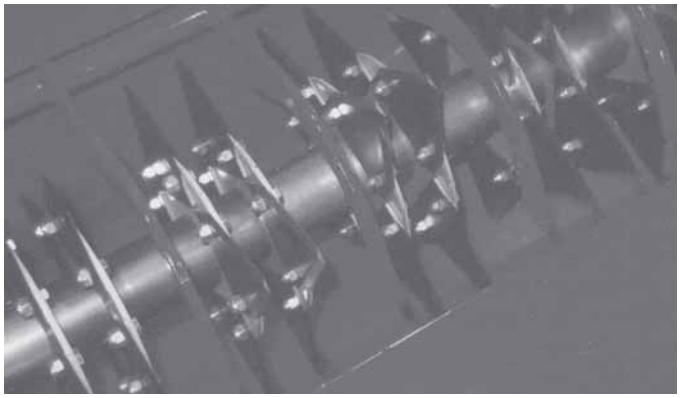


Fig. 42 KNIVES

WARNING

1. Always wear heavy canvas or leather gloves when working with the knives on the rotor.
2. The knives are sharp and can give serious cuts.
3. Never use your hands to keep the rotor from turning.

IMPORTANT

During normal operation, the only component that normally will require replacement is the knife assembly on the shredding rotor. Read this section carefully before attempting to remove the rotor for repair.

6.3.1 KNIFE REPLACEMENT

To replace a knife section, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Disconnect the PTO driveline.
3. Remove the tub:
   a. Loosen the rear tub guide wheels.

IMPORTANT

Never loosen the 2 front tub guide wheels.

b. Slide the guides out to release the tub as shown below.

c. Slide the belt off the bottom of the tub.

d. Remove the tub from the machine.

4. Remove the bolt from the grate height lever and raise the grate to its highest position.

5. Loosen the set screw on the shaft bearing.

NOTE

Do not loosen the rotor bearing block moutning bolts as this will alter the drive pulley alignment.

IMPORTANT

Use only genuine AgriMetal parts for all repairs to the machine. Special non-standard knife sections are used in this machine. If the special sections from AgriMetal are not used, the rotor will not be balanced and the knives will contact other parts of the machine.

6. When reversing the cutting edges on the knives:

   a. Remove the knife section from the rotor.

   b. Replace any chipped, bent or broken sections before reassembling.

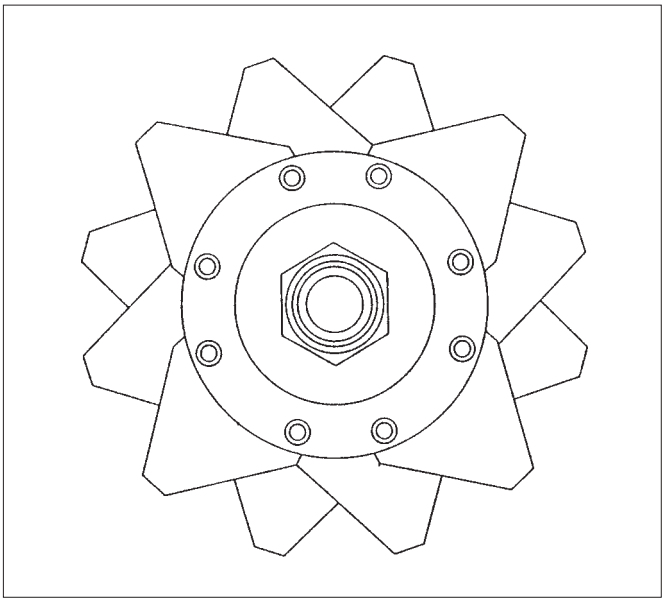


Fig. 43 KNIFE PATTERN

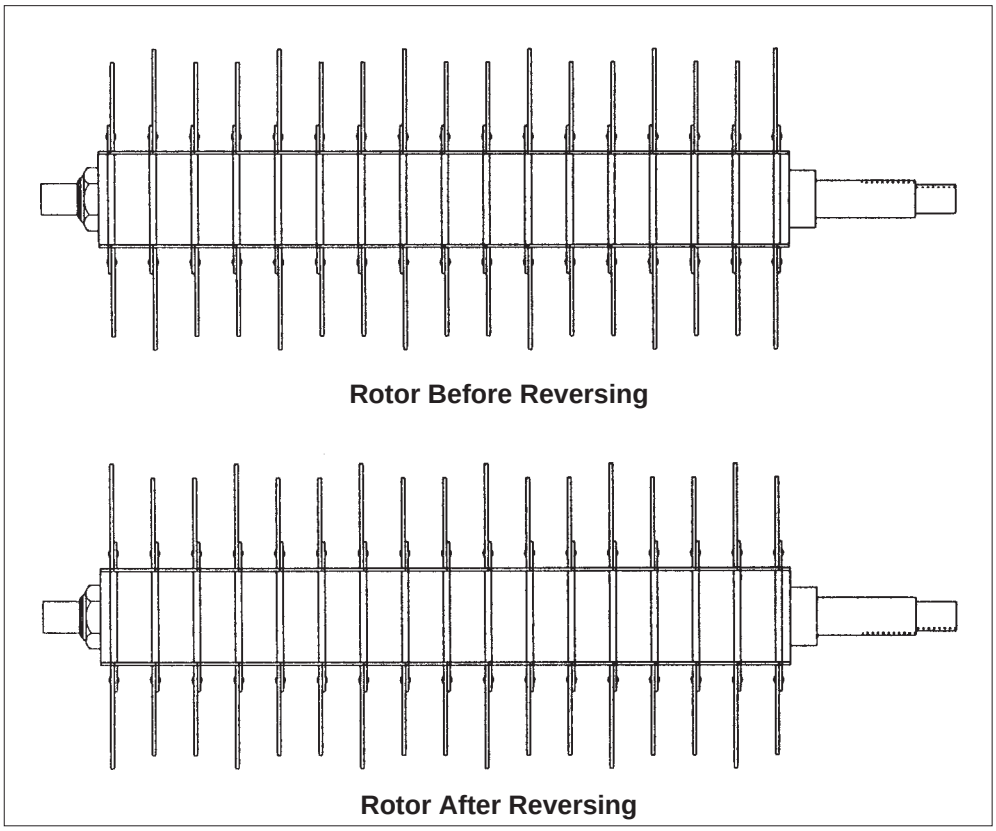


Fig. 44 ROTOR REVERSING

7. Place a block of wood between the knife and the bottom of the machine to keep the rotor from turning.

8. Tighten the clamping nut using the wrench supplied with the machine. Be sure that all discs and retaining rings seat properly.

9. Lower the grate into working position and install the control lever bolt. Be sure the grate moves freely through its adjustment span.

10. Install the tub on the machine.

11. Thread the belt on the lower lip of the tub.

12. Slide the 2 rear tub guide wheels up against the tub.

13. Use a hammer and brass rod to tap the bushings under the tub guide wheels to move the wheels against the tub. Tighten securely in position.

IMPORTANT

Use only genuine AgriMetal parts for all repairs to the machine. Special non-standard knife sections are used in this machine. If the special sections from AgriMetal are not used, the rotor will not be balanced and the knives will contact other parts of the machine.

7 TROUBLE SHOOTING

The AgriMetal PTO Bale Chopper is a PTO powered machine that shreds the compacted straw in bales and spreads it out over a controlled area.

In the following Trouble Shooting section, we have listed many of the problems, causes and solutions that can help you to solve the problems that you might 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 and the serial number of your machine at hand.

PROBLEM	CAUSE	SOLUTION
Bale won't feed. the	Grate plugged.	Remove all material from tub. Clean grate.
	Rotor plugged.	Remove all material from the tub. Clean all debris, twine and wire from the rotor.
	Blower plugged.	Clean blower inlet and out-let areas.
	Tub or rotor won't turn.	Adjust belt tension. Replace belt if worn or stretched.
	Hose plugged.	Run machine in full throttle and shake hose.
Machine vibrates.	Rotor out of balance.	Replace all broken knife sections.
	Bale twine wrapped around rotor.	Remove twine from rotor.
Machine does'nt run.	Drive line shear pin broken.	Reaplace shear pin.

IMPORTANT
Use only genuine AgriMetal parts for all repairs to the machine.

8 SPECIFICATIONS

8.1 MECHANICAL

DIMENSIONS	LENGTH	WIDTH	HEIGHT	WEIGHT
PTO LS	64 1/2" (164 cm)	32 1/2" (83 cm)	58" (147 cm)	697 lbs (317 Kg)

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

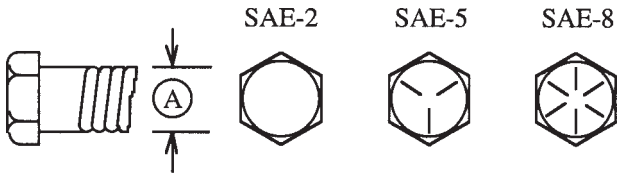
8.2 BOLT TORQUE

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.

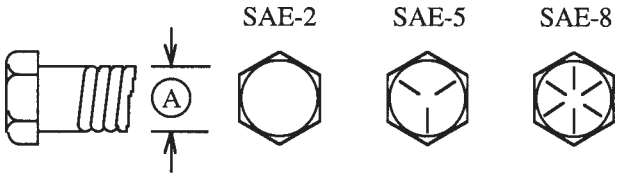
ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque * SAE 2 N.m	SAE 2 (lb-ft)	SAE 5 N.m	SAE 5 (lb-ft)	SAE 8 N.m	SAE 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	(70)	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 Diameter "A"	Bolt Torque* 8.8 (N.m)	8.8 (lb-ft)	10.9 (N.m)	10.9 (lb-ft)
M3	.5	.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 above are valid for non-greased 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.

10 INDEX